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MARKETING OF STAPLE FOODS  
IN WESTERN NIGERIA

Volume 1

Summary and Conclusions

Prepared for:

THE UNITED STATES AGENCY FOR  
INTERNATIONAL DEVELOPMENT



STANFORD RESEARCH INSTITUTE  
MENLO PARK, CALIFORNIA

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**DRAFT REPORT**

March 1968

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By: Alan R. Thodey

Contract No. AID/csd-801  
SRI Project No. IU-5586

## PREFACE

This draft report presents the findings of a study of the Marketing of Staple Foods in Western Nigeria which was conducted by Stanford Research Institute for the United States Agency for International Development. It is part of a larger project covering the whole of tropical Africa, field teams also being located in Sierra Leone, Eastern Nigeria and Kenya by the University of Illinois, Michigan State University, and West Virginia University respectively. The final report covering tropical Africa is being proposed by the Food Research Institute of Stanford University.

The basic research design for the study was developed primarily at a seminar at Stanford led by Professor William O. Jones during the first two months of 1966. The seminar was attended by members of the four field teams destined for Africa, and members of the Food Research Institute including Mr. Elon H. Gilbert, and Professors John A. Jamison and Bruce F. Johnston.

The scope of work for all field teams was embodied in a "basic research outline." Although it was recognized that no one outline could completely meet the needs of all areas, it did provide a common approach. It had the further advantage of allowing each team flexibility to concentrate on those areas found most productive after work had begun in Nigeria. The scope of the project was so broad that only selected items could be covered in depth while the remainder had to be treated more generally.

The methodology to be used in the collection and analysis of data was discussed extensively at the Stanford Seminar, although the exact methods to be employed were left to the discretion of each field team, based on its own environment and experience. However, from the paucity of the existing relevant information, it was apparent that most data would have to be obtained by means of direct observation and inquiry. Among other items, price series were to be collected for a central market-- Ibadan in Western Nigeria--and for selected markets within the distribution area of Ibadan. Questionnaires were to be developed and used where appropriate, and in-depth interviews were to be held.

The field work in Western Nigeria was divided into six phases and lasted from March 1966 to July 1967. However, the most intensive period of field work was from June 1966 to April 1967, during which time all of the questionnaires were administered. The first phase required collection of a weekly price series for five staple food commodities in two Ibadan markets. The second surveyed the Ibadan markets to obtain detailed knowledge about market facilities and traders. The third extended this data collection to urban centers and rural markets outside Ibadan. The fourth sampled producers to obtain information directly about production patterns and producer marketing habits. The fifth involved a return to Ibadan to fill the most apparent gaps, particularly in relation to ready-to-eat-food sellers, wholesale traders and consumers. The last constituted the collection of relevant data from secondary sources.

With the exception of certain in-depth interviews, the pre-testing of questionnaires and the training of research assistants, all interviewing throughout the project was conducted by research assistants. In

addition to the problem that most market traders can only communicate in their local language, Yoruba, it was found that the cultural differences as well as the appropriate interviewing techniques could best be handled by assistants who have always lived and worked in the local system.

The success of the data collection phase is due to the diligence and enthusiasm of these research assistants. Mr. Emanuel A. Bamgboye was responsible for the execution of the field work at the market level. He was assisted by Messers. Alphonsus O. Alonge, Eyeowa Johnson, and Joseph Ladipo, and three short-term interviewers, Miss Marian Y. Oladapo, and Messers. Adegboyega Jibowo and Kunle Oyeleja. Others assisted in various ways, particularly the driver of the project car, Mr. Kolawole Adedipe.

All field work was closely supervised. Assisting in this task were Mr. Christopher O. Ilori and the graduate research assistant assigned to the project by the University of Ife, Mrs. Tomilayo Adeyokunnu. The Producer Survey was formulated and supervised in conjunction with the late Dr. William A. Tompkins of the University of Wisconsin and serving with the University of Ife. Dr. Frederick W. Stratman, also of the Universities of Wisconsin and Ife, supervised the field work after the author returned to the United States in June 1967.

The SRI price data and minor surveys were analyzed by hand, mostly by Mr. A. O. Alonge and Mrs. T. Adeyokunnu. The six larger surveys and the market sellers enumeration were all analyzed by computer. The checking of the questionnaires and their coding and check-coding were completed in Nigeria. The main additional personnel assisting were Mrs. Mary E. Ferraro, Miss Elizabeth Haslam, Mr. J. O. Olorunfemi, Mrs. Mikki Stebbings, Mrs. Bonnie Stettler, and Mr. R. S. Umohette.

The programming and computer work was undertaken at Stanford Research Institute by Mrs. Irene Longwell and Mr. Vincent Lauricella. Stanford Research Institute's "Multiple Table Processor Program" was used for all cross-tabulations. A limited amount of analysis was done at the University of Ibadan Computing Center by Mr. O. Ogunsua.

The analysis of the secondary price data was undertaken by computer at Stanford Research Institute using the Institute's "Regression Program-- Revised" and special programs written by Mrs. I. Longwell and Mrs. Kirsten Aamand.

The cartographical work was begun in Ibadan by Messers. T. K. S. P. Amachree and D. S. Faoye. At the Institute, Mrs. Mary Townsend, assisted by Mr. Jose Lerma, was responsible for the final preparation of all of the cartographical and art work.

During the analysis and write-up phase in California, Mrs. Jeannie Kimber, Research Assistant, rendered invaluable assistance, particularly in improving the readability of the original manuscript.

In Nigeria, Mr. T. A. B. Salami performed all typing services while in California many typists assisted in the conversion of the manuscript and tables into legible form.

This report is only in draft form and has not been extensively edited. It is comprised of four volumes. Volume 1 contains a summary of the principal research findings and the suggestions for improving the existing system of marketing staple foods. Volume 2 embodies the details of the research methodology, a brief description of the relevant environmental, production and consumption characteristics of Western Nigeria, on account

of staple food flows, and an outline of the organization of the marketing system. Volume 3 incorporates the description and evaluation of the behavior and performance of the marketing system and includes the analysis of price behavior. Volume 4 is a statistical appendix containing the analysis of the price data incorporated into Chapter X.

This study was greatly assisted by other researchers and individuals involved in the project. Particular mention should be made of the support provided within the Institute by the project's manager, Dr. Alfred S. Cleveland, Director of Economic Development Research; the discussions of mutual problems with Mr. E. H. Gilbert of Stanford University who was conducting a similar study in Northern Nigeria, Dr. Anita McMillan of the Eastern Nigeria project and Dr. R. J. Mutti of the Sierra Leone project were particularly helpful; and Professor W. O. Jones's untiring interest and guidance. Valuable assistance was also received from the project's Coordinating Committee both at its May 1966 meeting in Ibadan and June 1967 meeting in Accra, which were attended by Dr. Homer Evans of West Virginia University, Dr. Harold G. Halcrow of the University of Illinois, Dr. Glenn L. Johnson of Michigan State University, and Dr. Harry C. Trelogan of the U.S. Department of Agriculture, and Drs. Cleveland and Jones. The last two members also visited Lagos in November 1966 for discussions on the progress of the project.

Sincere thanks and appreciation are extended to all those, both mentioned and unmentioned, who assisted the author both in Nigeria and in the United States. Special thanks are due to the three Nigerians who were most responsible for acculturating and familiarizing the author with the

Yoruba Culture in general and food marketing in particular--Messrs. Adedipe, Alonge, and Bamgboye.

Thanks are also due to U.S. AID Mission personnel, especially Dr. William E. Reed, Mr. George E. Hanna and Mr. Meredith H. Mackusick in Ibadan and Dr. Russell W. Bierman and Dr. Roy S. Beck in Lagos, for their cooperation and assistance in establishing and operating the project in Western Nigeria and for the services and facilities provided.

In Nigeria the project was under the joint sponsorship of the Nigerian Institute of Social and Economic Research and the University of Ife in Ibadan. The offices were located in the Faculty of Agriculture at the latter institution. The assistance provided by these institutions, both in establishing and operating the project, was invaluable.

Great interest was shown in the project by friends in Nigeria, particularly members of the University of Wisconsin staff located in the Faculty of Agriculture at the University of Ife. A special debt of gratitude is due the late Dr. W. A. Tompkins and Dr. F. W. Stratman.

Finally the project is indebted to the thousands of traders, consumers, producers, transporters, government officials and other people who were involved in myriad ways. The willingness of these people to provide information, and this usually involved some inconvenience to them, made it a pleasure to be in Western Nigeria and to be associated with this project. Without their cooperation, meaningful data collection would have been impossible.

February 1968

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## CONVERSION FACTORS

### WEIGHT

1 long ton (2,240 lbs.) = 1.12 short tons.

### CURRENCY

1 Nigerian pound (£N.1) = US\$2.80.

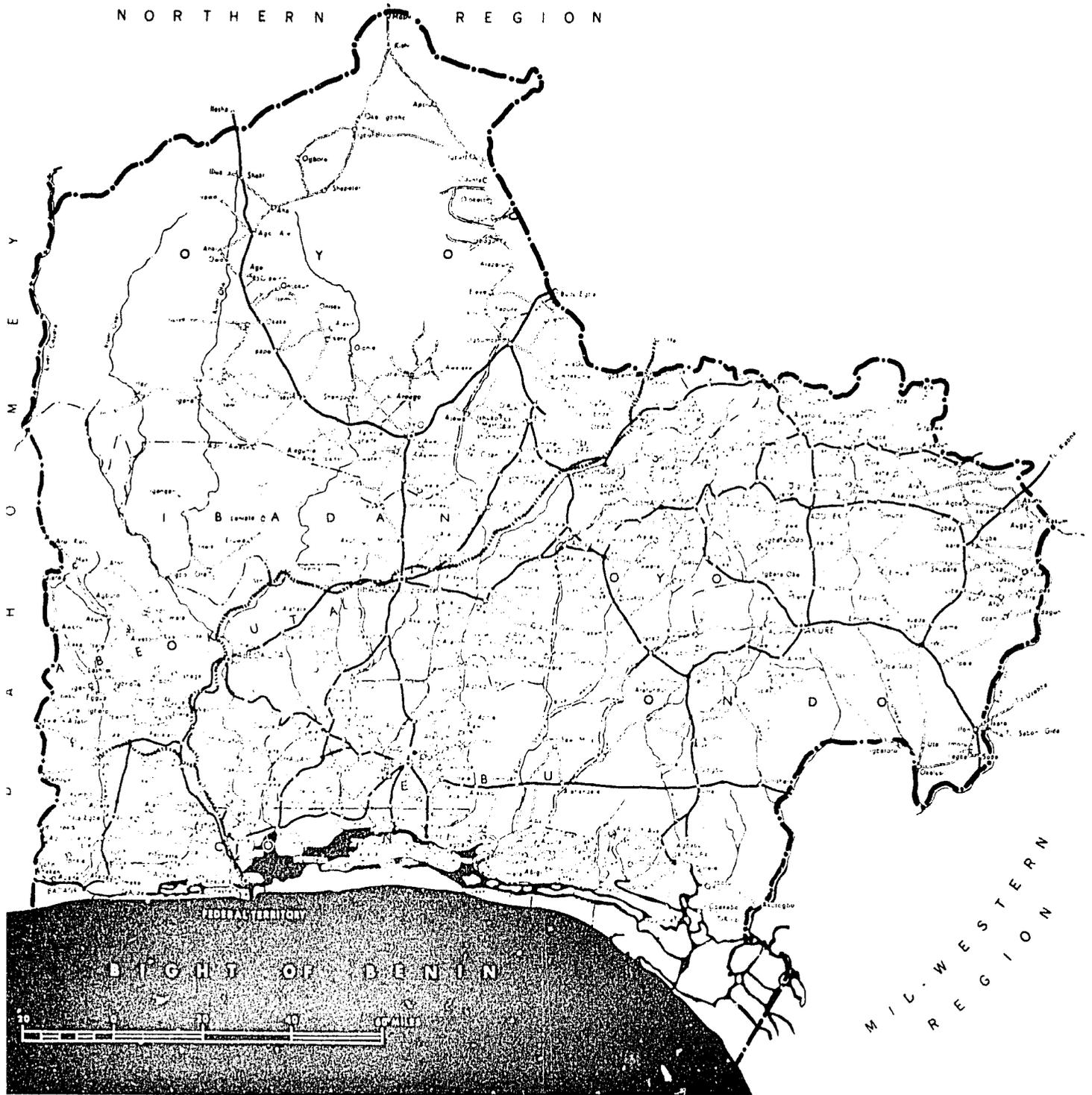
1 pound = 20 shillings (s.).

1 shilling = 12 pence (d.).

# Chapter I

## SUMMARY AND CONCLUSIONS

N O R T H E R N R E G I O N



M I L - W E S T E R N  
R E G I O N

Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1963.  
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S/C 188 3 66

## I SUMMARY AND CONCLUSIONS

The continued economic development of Western Nigeria is dependent upon, among other things, an adequate and inexpensive supply of foodstuffs to feed a rapidly growing non-agricultural population. Integral to this is an efficient low-cost marketing system linking agricultural producers and consumers. It is the structure, conduct and performance of this marketing system for staple foods in Western Nigeria that is the subject of this report.

### A. OBJECTIVES

The specific objectives of this study were (1) to understand the organization and operation of the existing marketing system; (2) to determine the extent to which it affords an efficient low-cost outlet for staple foods; (3) to identify inefficiencies in the system; and (4) to make suggestions for eliminating these inefficiencies.

### B. METHODOLOGY

The dearth of relevant and reliable information about staple food marketing in Nigeria was a major reason for this study. It was therefore necessary to collect a large volume of primary data by direct observation and inquiry. Eleven major questionnaires were used to obtain information from traders, market officials, consumers and producers: Over 3,000 questionnaires were completed, nearly 120,000 market sellers enumerated, and about 90 markets visited. Furthermore, retail prices were collected throughout the 14-month field work phase by observing and weighing

purchases: over 5,200 observations weighing in excess of 30 long tons were made in Ibadan alone. Wholesale and rural market prices were also obtained. Finally, the government price data collected for consumer price index purposes were extensively analyzed for temporal (seasonal, cyclical and trend), spatial (between 9 urban centers) and inter- and intra-commodity characteristics.

## C. SCOPE

### 1. Location

The focus of this study is Ibadan and the part of its supply hinterland which lies within Western Nigeria. However, other urban centers and supply areas within the Region were studied, particularly as they inter-relate with Ibadan. Ibadan, with a population of two-thirds of a million people, is the largest indigenous city in Africa south of the Sahara. It is the commercial, political and administrative center of the Region. Its markets and trade in staple foods are the largest and most important in the Region. Only the contiguous Federal Territory of Lagos rivals the influence of Ibadan in southwestern Nigeria.

### 2. Staple Foods

The hot and humid climate of the Region particularly favors the production of root crops. Consequently, yams and cassava contribute more than one half of the total calories consumed in Western Nigeria. Maize (corn) is the third most important staple food, contributing about one-sixth of the total calories consumed, while rice and cowpeas (beans)

URBAN MARKET - SELLING AT RETAIL



Bean Sellers



Rice Sellers



Gari Sellers

Oritamerin Market, Ibadan

each make a small but significant contribution, particularly in the urban centers. Processed forms of both yam and cassava are important. However, except in Ibadan, yam flour is considerably less important than (fresh) yam tubers: hence, in this study emphasis was placed on the tuber form. Although both gari and cassava flour are produced, gari was stressed because of its predominance.

The ready-to-eat form was also included because a sizable proportion of these five staple foods sold through the marketing system is finally purchased by consumers in ready-to-eat (prepared) form. However, the fresh, dried and processed forms of these commodities are of overwhelming importance and were emphasized.

#### D. COMMODITY MOVEMENTS

##### 1. Sources of Supply

In general, the less densely populated savanna areas of the Region are the main surplus food-producing tracts, while the more densely populated and more highly urbanized forest zone is the main area of food deficit. The major market-related agricultural activities of the forest zone are the production of cocoa, kola nuts and other tree crops.

For all commodities, Map 1.1 indicates the major areas of supply to Ibadan.

The main sources of supply of yam, gari and maize for Ibadan are all located within the Region.\* Some supplies are drawn from the area

---

\* Shown in more detail in Map 7.2 for yam, Map 7.3 for gari and Map 7.4 for maize (Volume 2).

**RURAL MARKETS - ASSEMBLING SUPPLIES**



**Yam, Obada Market,  
Odo Oba, Oshun Division**



**Headload of Dried Yam  
Olo Market**



**Assembling Dried Yam, Obada Market  
Oshun Division**



contiguous to Ibadan, while much of the remainder comes from the savanna area (principally Oyo Division) up to 100 miles north of Ibadan. The savanna area in the extreme northeast of the Region (Owo Division) is a secondary source of supply for all three locally-produced staple foods, while the savanna area in the extreme southwest (Egbado Division) is important for maize.

In each of these areas, traders supplying Ibadan must also compete for supplies with traders from other deficit consuming centers, such as Lagos and Ilesha. It is through competition in these supply areas that the major markets in Western Nigeria are linked. In fact, it is the factor most unifying the staple food marketing system throughout the Region, due principally to very imperfect communication and to the cost and difficulty of moving supplies between towns.

Imports of yam, gari and maize through inter-regional trade are relatively minor, except for an important seasonal movement of yams. The poor storability of yams, particularly under humid conditions, and the later yam harvest in the southern part of Northern Nigeria makes this drier and more remote area a major source of supply for Western Nigeria during the last four or so months before new season yams become available from within the Region.

The production and marketable surplus of both rice and cowpeas within the Region is small and relatively unimportant. The main sources of supply of rice<sup>\*</sup> are the swamp-rice areas of Eastern Nigeria (Abakaliki

---

\* Shown in more detail in Map 7.5 in Volume 2.

Province) and the middle Niger River area of Northern Nigeria (Niger and Ilorin Provinces). The ability of the marketing system to adjust to a major change in the relative availability of supplies in the various supply areas is demonstrated by the response to the prohibition on inter-regional food movements by the Government of Eastern Nigeria during 1966-67. Within a few months, Eastern Region rice was replaced almost entirely by increased supplies from the other areas.

Like rice, cowpeas are mostly imported into the Region. The principal source of supply\* is the extreme north of Nigeria up to 1,000 miles from Ibadan. The relatively few Yoruba traders involved in assembling and transporting cowpeas to Western Nigeria (and Lagos) mostly have large businesses and are not typical.

## 2. Importance of Ibadan

The relative importance of Ibadan as a consuming center for its supply areas varies considerably. Within its major supply areas, Ibadan is a relatively important market for yam, gari and maize, and of considerably less importance for rice and cowpeas. As a percent of the marketable surplus within its major supply areas, it is estimated that Ibadan consumes 35 percent of the yam, 25 percent of the gari and maize and a very small fraction of the rice and cowpeas.† To its many minor supply areas Ibadan is mostly quite unimportant, due mainly to a large local demand from surrounding villages and towns.

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\* Shown in more detail in Map 7.6 in Volume 2.

† Pages VII-18, VII-20 and VII-22 (Volume 2).

Ibadan, like the other urban centers in the Region, is not an important source of supply of staple foods to other areas, except for rice and cowpeas wholesaled to traders in some of the rural and smaller urban markets in close proximity. Extremely little of the foodstuff entering the wholesale level in Ibadan is transhipped on to other urban centers.

### 3. Levels of Flow - Intermediaries

Excluding prepared food sellers, three types of intermediaries are involved in moving marketable surplus staple foods from producers to consumers. First, assemblers who are predominantly resident in producing areas, where they assemble supplies from producers and other assemblers and sell in bulk quantities to other traders, either in rural markets or through agents in urban markets. Second, wholesalers who operate selling facilities in urban centers, where they sell in bulk quantities to other traders. They may or may not procure their own supplies in the supply area; furthermore, they frequently act as agents--for example, 70 percent of the wholesalers interviewed in one survey in Ibadan were acting as agents, mostly for assemblers.\* And third, retailers who are located in all markets and sell in small units to final consumers. Generally, they procure their supplies in rural markets from assemblers and in urban markets from wholesalers.

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\* Table 9.39 (Volume 3).

Based on the estimated flow of marketable surplus in Ibadan's major supply areas and excluding prepared food sellers, yam passes through an average of about four transactions between producer and consumer, gari through an average of about three transactions between the gari processor and consumer--although most cassava is also exchanged before it is processed--and maize through three to four transactions between producer and consumer. \* Imported supplies of both rice and cowpeas generally pass through two levels--wholesalers and retailers--once they are in the Region. However, between producer and consumer an average of about four or five transactions probably occur.

The estimated number of average transactions is not particularly high. Except for assemblers, relatively little trading occurs between intermediaries within levels. Most transactions occur between different types of traders or between traders and producers or consumers. In general, most exchanges take the commodity one level closer to the consumer, although levels are frequently skipped, especially for locally-produced foodstuffs outside of the larger urban centers.

#### 4. Levels of Flow - Exchange Points

Parallel to the types of intermediaries, the exchange points used in flow of commodities also represent a progression from producer to consumer. Three major types of locations are important in rural areas and four in the larger urban centers. In the rural areas, first, the farm itself (place of production) is frequently important, especially for

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\* Pages VII-18, VII-20 and VII-22 (Volume 2).

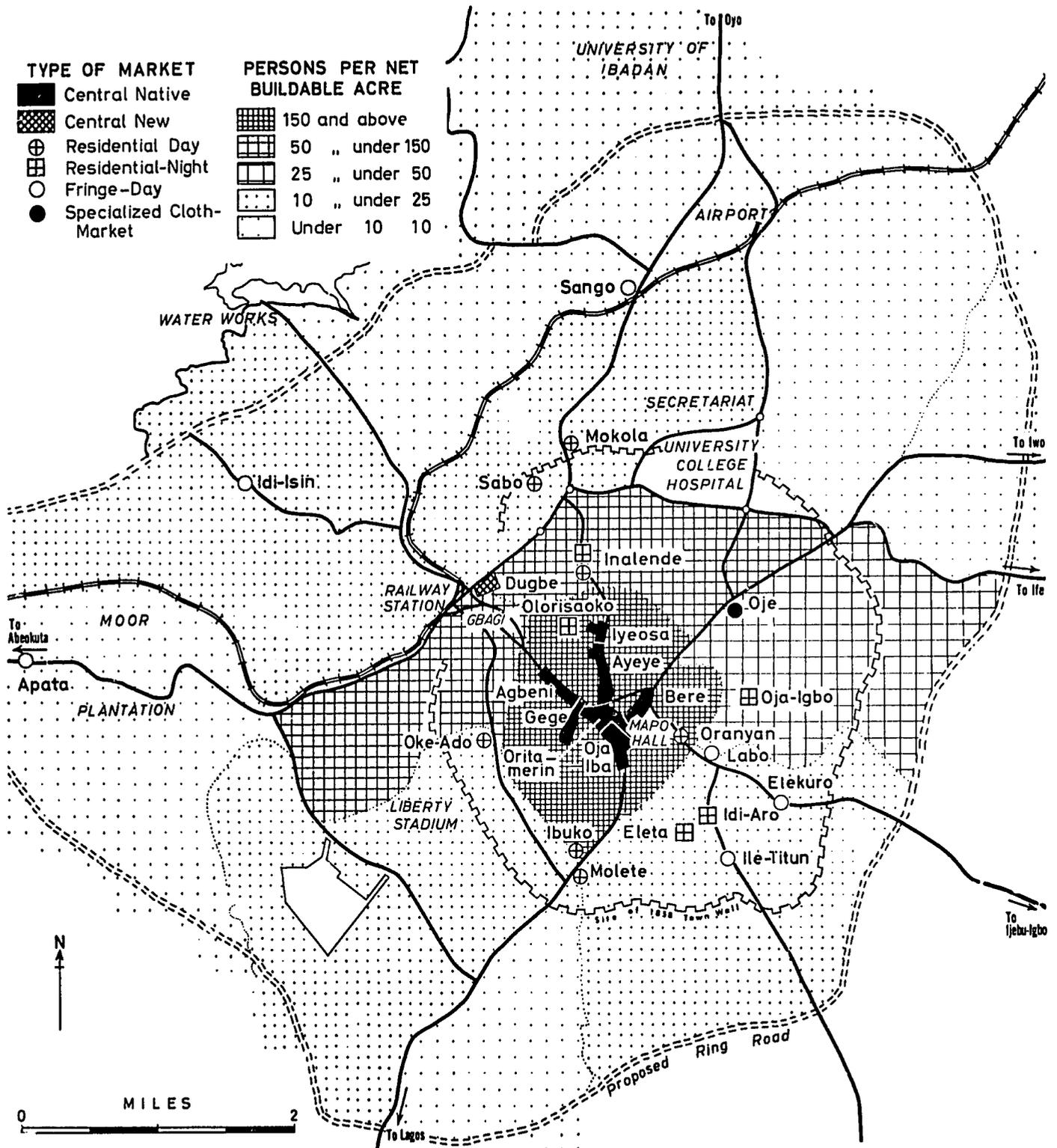
bulky commodities like yam and cassava. Secondly, village houses are used both by farmers and traders, particularly when they are used to store the commodity, as is frequently the case for yam, maize, rice, and cowpeas, and as a place for processing gari. And thirdly, organized markets are the most important places of exchange in rural areas for all commodities and for all types of buyers and sellers. Transactions rarely take place with any regularity in rural areas between the farm and the village or market, except where a path and a road or several roads intersect.

Four major types of exchange points exist for staple foods in the larger urban centers of the Region such as Ibadan. First, old central markets which contain both wholesaling and retailing facilities. Second, new central markets such as Dugbe Market in Ibadan, located in the new commercial sector of the urban center, which have been constructed and are maintained by the local government authority and have both wholesaling and retailing facilities. Third, residential markets which function almost exclusively as retail outlets. Hawkers and retailers who sell from their homes in a residential location also essentially fall into this category. And fourth, fringe markets located on the perimeter of the urban sprawl and which function similarly to rural markets by performing both assembling and retailing functions.

The locations of the various types of markets in Ibadan are illustrated in Map 1.2 in relation to population density. The old central markets are of overwhelming importance, most especially at the wholesale level. In the major survey of wholesalers in Ibadan, for example, those in the old central markets sold essentially all of the yam, dried yam, dried cassava and maize

Map 1.2

MARKETS IN IBADAN



Source of Population Densities:  
Ministry of Land and Housing

sold in Ibadan, as well as 72 percent of the gari, and 64 and 56 percent of the rice and cowpeas, respectively.\* Nevertheless, the quantity handled by the new central market is very significant, particularly at the retail level. The other types of exchange locations are also of considerable importance in Ibadan.

In more detail, Table 1.1 shows the estimated importance of the various types of exchange points at the different levels of the marketing system both as a source of supply and as a place of sale for marketable surplus yam, gari and maize in Ibadan's major supply area. The gross total for each level represents the total percent of the marketable surplus commodity handled and is the summation of the exchanges involving that level, including sales to the same type of intermediary. The net total, on the other hand, indicates only the percentage of the marketable surplus commodity that passes through that level and does not include exchanges within that level.

From Table 1.1, it is apparent that most exchanges of staple food occur in markets, of which there are at least 550 in Western Nigeria. Most of these markets are shown in Map 1.3 by periodicity and day of holding. In all, 11 percent meet daily, an overwhelming 76 percent meet every fourth day, and another 11 percent meet every eighth day, the remaining few meeting either every two days or every week. Most of the larger urban centers have at least some daily markets: periodic markets are usual in rural areas and frequently in urban centers. Overall, there is an average of one market

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\* Appendix Table 7.19 (Volume 2).

Table 1.1

**IMPORTANCE OF EXCHANGE POINTS IN IBADAN'S MAJOR SUPPLY AREA  
AT DIFFERENT LEVELS OF MARKETING SYSTEM  
(Estimated Percent of Marketable Surplus)**

| Location of<br>Exchange Point | Level of Marketing System |                  |           |      |            |      |          |      |                 | Total |
|-------------------------------|---------------------------|------------------|-----------|------|------------|------|----------|------|-----------------|-------|
|                               | Processor/<br>Process     | Producer<br>Sell | Assembler |      | Wholesaler |      | Retailer |      | Consumer<br>Buy |       |
|                               |                           |                  | Buy       | Sell | Buy        | Sell | Buy      | Sell |                 |       |
| <u>YAM</u>                    |                           |                  |           |      |            |      |          |      |                 |       |
| Outside Ibadan                |                           |                  |           |      |            |      |          |      |                 |       |
| Farm                          |                           | 45               | 35        | Tr.  | 10         | --   | Tr.      | --   | --              | 45    |
| Roadside                      |                           | Tr.              | Tr.       | Tr.  | Tr.        | --   | Tr.      | Tr.  | Tr.             | Tr.   |
| House in village              |                           | 5                | 10        | 10   | 5          | --   | Tr.      | Tr.  | Tr.             | 15    |
| Rural market                  |                           | 45               | 55        | 50   | 20         | --   | 20       | 15   | 15              | 110   |
| Town                          |                           | 5                | --        | 20   | 30         | 50   | 40       | 45   | 50              | 120   |
| Ibadan markets                |                           |                  |           |      |            |      |          |      |                 |       |
| Old central                   |                           | Tr.              | --        | 20   | 25         | 40   | 35       | 25   | 25              | 85    |
| New central                   |                           | --               | --        | --   | --         | Tr.  | --       | 5    | 5               | 5     |
| Residential                   |                           | --               | --        | --   | --         | --   | --       | --   | 5               | 5     |
| Fringe                        |                           | Tr.              | --        | Tr.  | --         | --   | Tr.      | Tr.  | Tr.             | Tr.   |
| Total (gross)                 |                           | 100              | 100       | 100  | 90         | 90   | 95       | 95   | 100             | 385   |
| Total (net)                   |                           | 100              | 70        | 70   | 80         | 80   | 85       | 85   | 100             | 335   |
| <u>GARI</u>                   |                           |                  |           |      |            |      |          |      |                 |       |
| Outside Ibadan                |                           |                  |           |      |            |      |          |      |                 |       |
| Farm                          | 10                        | 5                | 5         | --   | --         | --   | Tr.      | --   | --              | 5     |
| Roadside                      | Tr.                       | Tr.              | Tr.       | --   | --         | --   | --       | --   | --              | Tr.   |
| House in village              | 80                        | 20               | 10        | Tr.  | Tr.        | --   | Tr.      | Tr.  | 10              | 20    |
| Rural market                  | --                        | 65               | 55        | 40   | 25         | --   | 25       | 20   | 20              | 125   |
| Town                          | 10                        | 10               | --        | 15   | 15         | 30   | 25       | 30   | 45              | 85    |
| Ibadan markets                |                           |                  |           |      |            |      |          |      |                 |       |
| Old central                   | --                        | --               | --        | 15   | 15         | 20   | 15       | 10   | 15              | 45    |
| New central                   | --                        | --               | --        | Tr.  | Tr.        | 5    | 5        | 5    | 5               | 10    |
| Residential                   | --                        | --               | --        | Tr.  | --         | Tr.  | Tr.      | 5    | 5               | 5     |
| Fringe                        | Tr.                       | Tr.              | --        | Tr.  | --         | --   | Tr.      | Tr.  | Tr.             | Tr.   |
| Total (gross)                 | 100                       | 100              | 70        | 70   | 55         | 55   | 70       | 70   | 100             | 295   |
| Total (net)                   | 100                       | 100              | 50        | 50   | 55         | 55   | 70       | 70   | 100             | 275   |
| <u>MAIZE</u>                  |                           |                  |           |      |            |      |          |      |                 |       |
| Outside Ibadan                |                           |                  |           |      |            |      |          |      |                 |       |
| Farm                          |                           | 15               | 15        | --   | Tr.        | --   | Tr.      | --   | --              | 15    |
| Roadside                      |                           | 5                | 5         | Tr.  | Tr.        | --   | Tr.      | --   | --              | 5     |
| House in village              |                           | 20               | 10        | 5    | 5          | --   | 10       | 5    | 5               | 30    |
| Rural market                  |                           | 55               | 60        | 50   | 20         | --   | 25       | 20   | 20              | 125   |
| Town                          |                           | 5                | --        | 20   | 25         | 40   | 30       | 40   | 50              | 105   |
| Ibadan markets                |                           |                  |           |      |            |      |          |      |                 |       |
| Old central                   |                           | Tr.              | --        | 15   | 15         | 25   | 20       | 15   | 20              | 75    |
| New central                   |                           | --               | --        | Tr.  | Tr.        | Tr.  | Tr.      | 5    | 5               | 5     |
| Residential                   |                           | --               | --        | --   | --         | --   | --       | Tr.  | Tr.             | Tr.   |
| Fringe                        |                           | Tr.              | --        | Tr.  | --         | --   | Tr.      | Tr.  | Tr.             | Tr.   |
| Total (gross)                 |                           | 100              | 90        | 90   | 65         | 65   | 85       | 85   | 100             | 340   |
| Total (net)                   |                           | 100              | 65        | 65   | 65         | 65   | 85       | 85   | 100             | 315   |

Note: Tr. = Trace (less than 5 percent).

Source: Stanford Research Institute.



to every 55 square miles serving 19,000 persons based on the 1963 population census for the Region of 10.3 million.

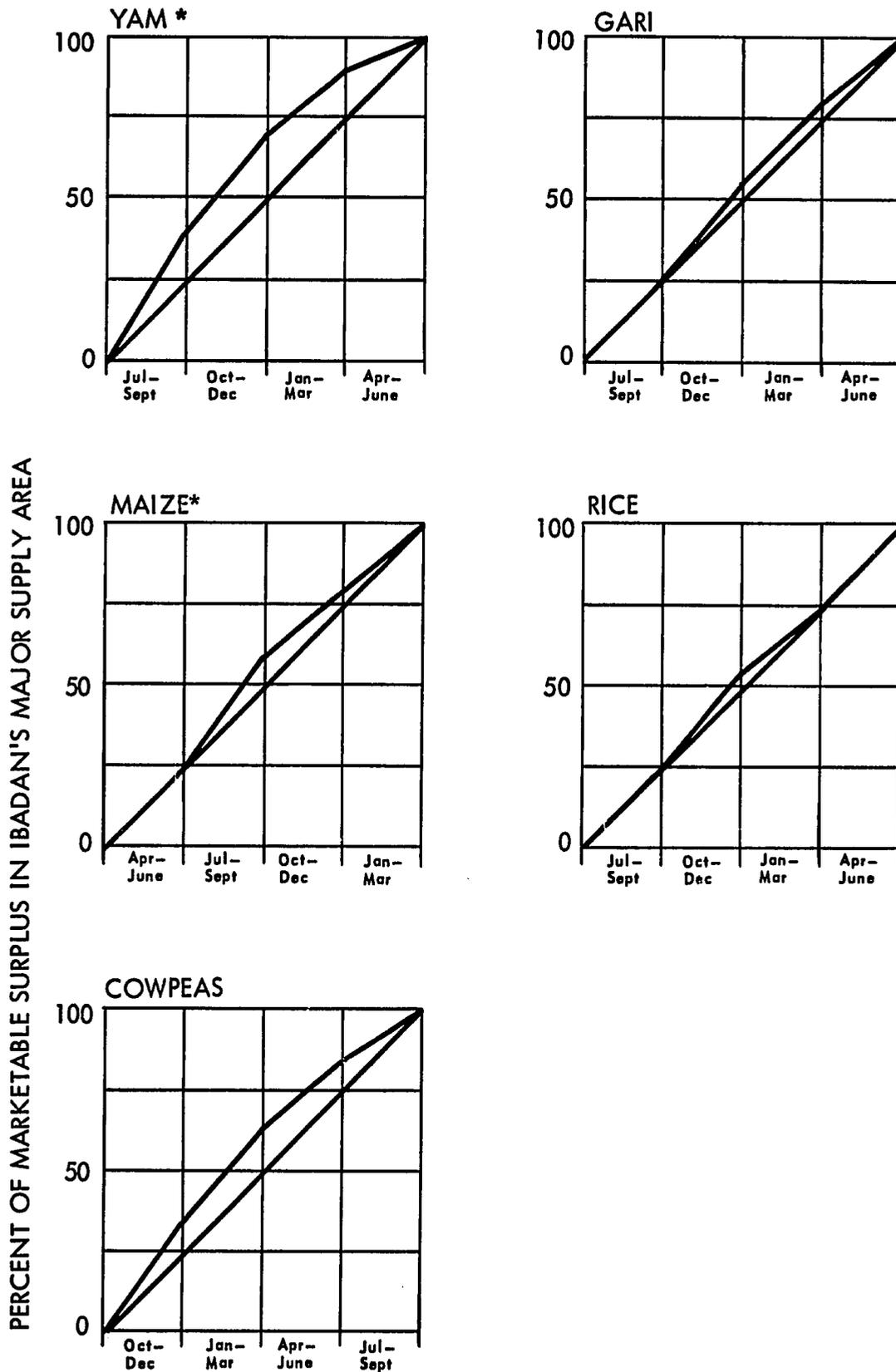
These markets are traditional in several senses. First, they are the main and often only link between the traditional and market economies. Secondly, they were mostly organized and are operated by the traditional power structure. And thirdly, foodstuffs are predominant: in rural markets, foodstuff sellers account for three-quarters of all sellers and for two-thirds in urban markets. Cash crops such as cocoa, are not marketed through these markets. The facilities available are generally rudimentary, particularly in rural areas. Stalls, where they exist, are seldom more than roofed covers with open sides and dirt floors. However, either in or in close proximity to most markets, a lock-up facility, often a room in a house, is available at a price for storing unsold commodities between market days. In very few markets are such facilities as sealed pavements, formed drains, water, latrines, garbage disposal and electricity generally available.

##### 5. Timing of Flows

In Western Nigeria, extremely few producers sell their marketable surplus foodstuffs before harvest. Most sell the majority of their surplus in the months following the harvest, the remainder being stored by the producer for sale later in the season. The distribution of marketable surpluses throughout the year is quite seasonal for yams, maize and cowpeas in particular, although the seasonal effect is reduced to some extent due to different harvest seasons in the forest zone and the (North Guinea) savanna zone and by storage undertaken by producers. Figure 1.1 presents an estimate of the proportion of marketable surplus commodity in Ibadan's

Figure 1.1

TIMING OF CONSUMPTION OF MARKETABLE SURPLUS  
COMMODITY IN IBADAN'S MAJOR SUPPLY AREA



\* Includes both fresh and dried forms.

SOURCE: Stanford Research Institute.

major supply area consumed in each quarter. Most striking, perhaps, is that 70 percent of the marketable surplus of yam is consumed between July and December.

Very little storage is undertaken by traders to capitalize on the seasonal rise in prices. Mostly, traders hold stocks to insure a regular flow of transactions, the amount of each commodity being determined primarily by the level of sales, available capital, storage capacity, and procurement costs. As can be expected, traders handling rice and cowpeas generally maintain a larger average inventory and hold it longer than traders dealing in foodstuffs procured locally. For example, at the time of interview, the average value of the inventories of wholesalers of rice and cowpeas in Ibadan was £233 (\$652) and £128 (\$358), respectively, and they had been held for an average of 12 and 10 days. This compares with an average inventory of £30 (\$84) for yam, £27 (\$76) for gari and £37 (\$94) for maize, which had been held for an average of 3, 5 and 7 days respectively.\*

An important implication of this inventory policy of intermediaries is that relatively little seasonal storage occurs in the marketing system. This means that, except for the one to four weeks that commodities usually take to pass through the system, the pattern of seasonal consumption essentially describes the seasonal flow of commodities through all levels of the marketing system.

#### 6. Form of Commodity

Producers and traders seldom change the form of staple foodstuffs. Producers mostly sell yam and cassava in (fresh) tuber form, maize is

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\* Tables 9.40 and 9.41 (Volume 3).

initially sold fresh on the cob but as dried shelled maize once it matures, rice as paddy, and cowpeas in dried shelled form.

Processors are usually local residents specializing in processing. They mostly buy directly from producers and process and sell locally. This is particularly true for yam and cassava flour and gari. However, marketable surplus rice is frequently milled in the area of production by traders who sell elsewhere.

Table 1.2 presents an estimate of the form of purchase of each commodity by consumers in Ibadan's major supply area. Ready-to-eat-food sellers are generally sedentary, undertaking very little transportation and storage of commodities.

Table 1.2

FORM OF PURCHASE OF VARIOUS STAPLE FOODS BY CONSUMERS  
IN IBADAN'S MAJOR SUPPLY AREA  
(Estimated Percent Distribution)

| Form          | Commodity |           |           |           |           |
|---------------|-----------|-----------|-----------|-----------|-----------|
|               | Yam       | Cassava   | Maize     | Rice      | Cowpeas   |
| Fresh         | 60        | Tr        | 15        | --        | --        |
| Dried         | 25        | 5         | 10        | Tr        | 25        |
| Hulled        | --        | --        | --        | 90        | --        |
| Flour         | 5         | Tr        | --        | --        | --        |
| Gari          | --        | 85        | --        | --        | --        |
| Ready-to-eat  | <u>10</u> | <u>10</u> | <u>75</u> | <u>10</u> | <u>75</u> |
| Total percent | 100       | 100       | 100       | 100       | 100       |

Note: Tr = trace.

Source: Stanford Research Institute.

## 7. Terms of Sale

Although it is customary to demand cash at time of sale, credit is frequently extended, particularly at the wholesale level. It is estimated that 20 percent of wholesale transactions are financed by credit.\* Larger wholesalers tend to sell a higher proportion of their goods on credit than smaller wholesalers. Also, for the assembler selling through agents, credit is effectively granted until the commodity is sold by the agent (wholesaler) and also frequently thereafter. Retailers and ready-to-eat-food sellers sell very infrequently on credit, except to established customers who are suffering temporary hardships. Some producers sell on credit to processors and assemblers, on the understanding that as soon as the buyer has sold the commodity he will pay the amount outstanding.

## 8. Transportation Used

The movement of marketable surplus staple foods in Ibadan's supply area is accomplished mainly by truck. Only in the inter-regional movement of rice and cowpeas is the railway used. Here it accounted for just over 10 percent of the volume of these commodities sold in Ibadan in 1967;† in more normal times the percentage is somewhat higher. Canoes and other lagoon transportation are not used to move goods to Ibadan, although it is important for foodstuffs moving to Lagos from Mid-Western Nigeria and the Niger-Benue River area. Animals, bicycles and handcarts are insignificant in all locations. Supplies are usually head-carried over relatively short distances and from the farm to other means of transportation.

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\* Table 7.6 (Volume 2).

† Appendix Table 7.28 (Volume 2).

## E. INTERMEDIARIES

### 1. Business Structure

The marketing of staple foods is performed almost entirely by sole-proprietor businesses, partnerships being secondary. In the second market trader's survey in Ibadan, for example, 99 percent of the traders who were performing only retail functions were sole proprietors, along with 85 percent of the traders who were performing both retail and wholesale functions and 77 percent of the wholesalers: the remainder were in partnership.\* The only corporate entities involved are those importing rice from external sources; these companies operate entirely outside the traditional marketing system, although they do supply wholesalers who are part of the system. Food marketing cooperatives exist but are few in number and small in size.

### 2. Personnel

At first sight, the food marketing system appears to be almost entirely in the hands of women. However, men are important, particularly in the assembling and wholesaling of supplies. For example, in the survey of wholesale traders in Ibadan, 79 percent of those interviewed were men and 85 percent of the total value of sales recorded was attributable to them.† This means that men have a considerable degree of control over the major movement of foodstuffs, particularly at the points where they are bulked from rural areas and finally enter the distributive system in urban centers.

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\* Page VIII-52 (Volume 2).

† Page VIII-57 (Volume 2).

During the survey period, a total of 119,448 sellers were enumerated in 84 markets for an average of 1,422 sellers per market: the average for the 48 rural markets was 1,170; 2,235 for the 16 markets in Ibadan; and 1,375 for the 20 markets in urban centers outside Ibadan. Of the 35,759 sellers enumerated in the markets in Ibadan, 25 percent were dealing in staple foods, and of these 53 percent were female retailers, 10 percent female wholesalers, 5 percent male retailers, and 32 percent male wholesalers. Most (94 percent) of the male retailers were handling fresh and dried yam.\*

In the rural markets again, 25 percent of the total number of sellers enumerated were trading in staple foods. However, although men were particularly important in the fresh yam trade, where they comprised 35 percent of the total fresh yam sellers, they were relatively minor for the other staples accounting for only 13 percent of all staple food sellers.† This results from the fact that men usually by-pass rural markets and deal directly with the larger farmers and also that they sell their assembled supplies mostly in urban rather than rural markets.

Traders mostly (75 percent in one survey‡) enter into the business of staple food trading only after they have learned the art of trading through a formal period of apprenticeship for from one to two years. This is usually served with a relative, often a mother or a sister in the case of a woman. About the earliest age that traders enter into business on their own account is 20 years of age. However, most traders begin when they are considerably older; in the first survey of traders in Ibadan, the average

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\* Tables 2.5 and 8.29.

† Table 8.30 (Volume 2).

‡ Page IX-1 (Volume 3).

age at which they began trading was 32 years. Starting capital is generally low at about £5 to £15 (\$14-\$42) and is usually borrowed.

Once established in their businesses, traders tend to take their trade seriously and to work hard at it. Although free to move to other markets, they generally remain in the market(s) where they first established themselves. This applies to traders in both urban and rural markets. In the first survey of market traders in Ibadan, for example, the traders interviewed had been selling in the same market for an average of 9.8 years, while they had been trading altogether for an average of only 10.0 years.\*

Overall, traders generally trade for the full 8 to 12 hours of every market day. However, days are frequently taken off to attend to private business and to participate in ceremonies and festivals. This is more common among women and among retailers than among men and among wholesalers. Other days are also lost to sickness.

The level of literacy among traders is very low, most being able to speak only Yoruba. Even in Ibadan, 58 percent of the men and 87 percent of the women had never attended school.† For the most part, only the larger wholesalers trading in rice and cowpeas were generally literate.

Although the practice of employing one or more assistants is common, especially in urban markets, it is still far from general. For instance, in the first survey of market traders in Ibadan, 23 percent of the retailers and 44 percent of the retailer-wholesalers and wholesalers employed assistants. Most of these assistants were related and were provided the basic necessities of life rather than being paid a cash wage. In the more detailed survey of wholesalers in Ibadan, only 28 percent employed assistants, one employee being usual. Although 72 percent were related to the proprietor in some way, 53 percent of the assistants were paid a regular cash wage.‡

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\* Table 9.1 (Volume 3).

† Table 8.32 (Volume 2).

‡ Tables 8.39, 8.35 and 8.36.

### 3. Size

By all measures, most staple food traders conduct very small businesses. First, in terms of the average value of monthly sales, the second survey of market traders in Ibadan showed that retailers had average sales of £61 (\$171) per month, retailer-wholesalers £106 (\$297), and wholesalers £237 (\$664). Second, in terms of number of transactions per day, the observation of retailers for one day each in Ibadan produced an average of 9.3 transactions per day for retailers. For wholesalers in Ibadan, an average of 2.3 transactions per day was obtained. Many traders will frequently go for a whole day without any transactions at all. And third, in terms of the average quantity handled in Ibadan, retailers generally sell from 5 to 10 bags per month, while wholesalers handle around 45 bags per month.\*

For the major survey of wholesalers in Ibadan, the average quantity of each commodity handled per month varied considerably, ranging from 15.5 long tons for dried yam, through 23.0, 29.4 and 35.2 long tons for gari, maize, and yam, respectively, to 35.4 and 47.0 long tons for rice and cowpeas, respectively.† Figure 1.2 shows this variation for each commodity in terms of the value of monthly sales. The fact that rice and cowpea wholesalers usually have bigger businesses may be attributed to the high cost of importing these commodities into the Region, including the time spent travelling. Significant savings can be effected by buying in quantity, as per unit costs are generally lower for large volumes.

Although most wholesale businesses are very small, some relatively large wholesalers do exist. In fact, a considerable proportion of all wholesale transactions are handled by these businesses. As Figure 1.3 indicates, based on the total value of staple food sales by the wholesalers interviewed in Ibadan, less than 20 percent of the wholesalers handle one-half

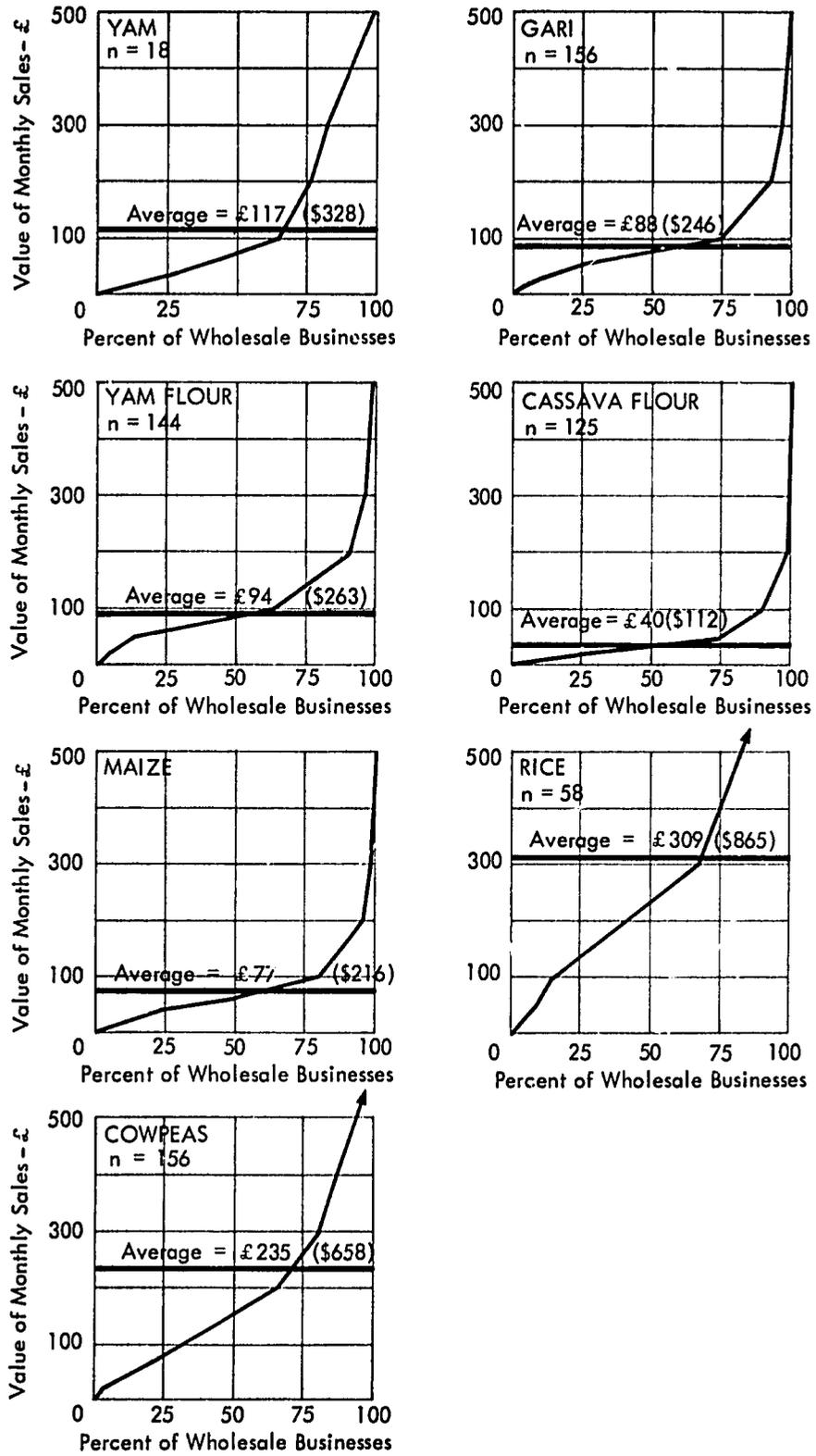
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\* Tables 9.24, 9.25, 9.28, 9.33 and 9.34 (The last two tables were adjusted for the fact that for each wholesaler included, there was stocked an average of 1.5 staple food commodities.)

† Page IX-54 (Volume 3).

Figure 1.2

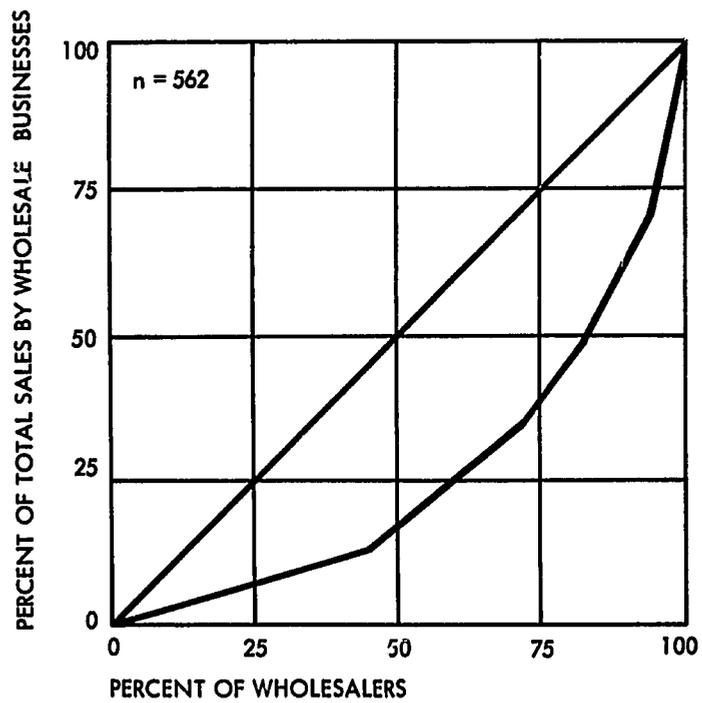
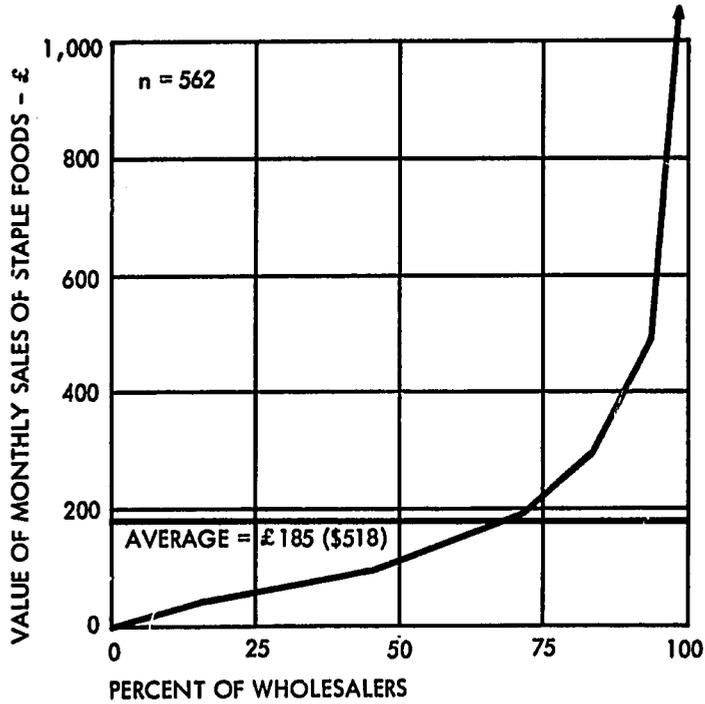
MONTHLY SALES BY WHOLESALE BUSINESSES IN IBADAN FOR SEVEN STAPLE FOODS



SOURCE: SRI Wholesale Traders Questionnaire.

Figure 1.3

SIZE OF WHOLESALE STAPLE FOOD BUSINESSES IN IBADAN



SOURCE: SRI Wholesale Traders Questionnaire

of all wholesale sales. A disproportionate share deal in rice and cowpeas and actually procure their own supplies from the supply areas. On the other hand, wholesalers dealing in the locally-produced commodities are generally smaller because a large number are merely acting as agents for assemblers from the supply areas. Additionally, there are few economies of scale in assembling locally-produced commodities.

Retailers generally have relatively low selling costs, for the same reason. Consequently, those retailers selling the relatively cheaper locally-produced staple foods sell more in weight but about the same in value as those selling the more expensive foodstuffs, particularly rice and cowpeas. The almost unrestricted possibility for retailers to change from one commodity to another reinforces the tendency for returns to be comparable regardless of the commodity, so that the quantity sold varies with relative prices and returns. Mostly, only a small movement of traders from one commodity to another is required to achieve this effect, although for the more seasonal commodities, the large fluctuation in the quantity of supplies forces a relatively large number of traders to change commodities. Nevertheless, a large variation exists in the sales of retailers although somewhat less marked than that for wholesalers.

#### 4. Costs and Returns

Both gross and net returns to traders are quite low, particularly for retailers and others with a low level of sales. Table 1.3 presents average revenue statements for a one-month period for the various types of traders in Ibadan interviewed with the second market trader's questionnaire. As these interviews took place during a period of high cyclical prices when

Table 1.3

## AVERAGE MONTHLY REVENUE STATEMENT OF VARIOUS TYPES OF STAPLE FOOD TRADERS IN IBADAN

| Item                    | Retail Only |         | Retail-<br>Wholesale |         | Wholesale<br>Only |         | All Sellers |         |
|-------------------------|-------------|---------|----------------------|---------|-------------------|---------|-------------|---------|
|                         | Value       | Percent | Value                | Percent | Value             | Percent | Value       | Percent |
| Sales                   | £61         | 100     | £106                 | 100     | £237              | 100     | £119        | 100     |
| Less cost of goods sold | 56          | 91      | 93                   | 88      | 207               | 87      | 106         | 89      |
| Gross margin            | 5           | 9       | 13                   | 12      | 30                | 13      | 13          | 11      |
| Less selling expenses   | 1           | 2       | 8                    | 7       | 15                | 7       | 6           | 5       |
| Rent                    | .4          | .6      | 1.6                  | 1.5     | 2.0               | .8      | 1.1         | .9      |
| Transport               |             |         |                      |         |                   |         |             |         |
| Lorry                   | .2          | .3      | 5.1                  | 4.8     | 11.5              | 4.9     | 4.4         | 3.7     |
| Headcarrier             | .4          | .6      | .7                   | .7      | 1.1               | .5      | .6          | .5      |
| Wages                   | *           | *       | .4                   | .4      | .4                | .2      | .2          | .2      |
| Other                   | *           | *       | *                    | *       | .4                | .2      | .1          | .1      |
| Net margin              | £ 4         | 7       | £ 5                  | 5       | £ 15              | 6       | £ 7         | 6       |
| Number of responses     | 131         |         | 55                   |         | 70                |         | 256         |         |

\* Less than 0.05.

Source: Stanford Research Institute, Market Traders Questionnaire #2--Ibadan - August-September 1966.

traders' margins are usually relatively low, the margins shown in Table 1.3 are probably considerably smaller than those obtaining during more normal times.

The major cost incurred by traders, after investment in the commodity, is transportation. Table 1.3 shows this to be in excess of five percent of the selling price for the traders actually procuring commodities from the supply areas. However, in the later survey of wholesalers in Ibadan when prices were somewhat lower, an average of 10 percent of the wholesaler's selling price was spent for transportation, although by commodity this varied from under 7 percent for maize to 13 percent for cowpeas and 17 percent for yam. Although considerably smaller, rent is also an important item of expense. Wages and other costs are generally insignificant.

The net return, particularly to the small trader, is small. For example, as Table 1.2 indicates for the respondents in the second survey of market traders in Ibadan, the average net margin was £7 (\$19) per month although this varied from an average of £4 (\$12) for retailers to £15 (\$42) for wholesalers.

Among these sellers, 7 percent claimed that they had either made no gain at all or had incurred a loss on the previous month's trading activities. Based on these margins, this means that for about a 10-hour day, retailers in Ibadan receive a net return for their labor, capital and management of about two to four shillings (\$0.28-\$0.56) per day, while wholesalers receive about five to ten shillings (\$0.70-\$1.40) per day. Wholesalers are generally as well off as, if not better off than manual laborers, while retailers are not as well off. However, the alternative employment opportunities for women, who comprise the overwhelming majority of food traders, are few. Many of the other occupations in the traditional economy have higher prestige and

are more lucrative but require more skills.

## 5. Capital

The staple food marketing system is entirely financed by the private sector of the economy. An estimated 60 percent of the capital employed by assemblers, 65 percent by wholesalers and 40 percent by retailers is actually provided by the trader himself. Relatives, friends and suppliers provide most of the remainder. Suppliers are particularly important for retailers, to whom they supply an estimated 20 percent of the total capital used: for wholesalers who own their own supplies, they provide an estimated 5 percent, while for wholesalers who only act as agents, their own trading capital is extremely small.\*

Relatively little short term capital is borrowed by staple food traders. For example, in the second survey of market traders in Ibadan, only 21 percent had borrowed money during the previous year. For retailers, the amount was generally less than £20 (\$56), while wholesalers mostly borrowed less than £50 (\$140). The source of these funds for 91 percent of the retailers was relatives, mostly spouses but also brothers and sisters. For wholesalers, relatives accounted for only 30 percent of the loans, while friends provided 52 percent. It is also significant that a trade association, a commercial bank and a cooperative thrift and loan society provided short term loans to several wholesalers. Commercial credit sources are not usually open to traders in the traditional marketing system.†

Customarily, interest is not paid when money is borrowed from relatives, and in many cases friends do not expect interest on funds borrowed from

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\* Table 9.47.

† Tables 9.50 and 9.51.

them. Frequently, however, the lender does expect to receive some share of the profit derived from trading activities that result from the loan. For the 11 percent of the traders who borrowed money and who were paying interest, the annual rate of interest paid ranged up to 70 percent.

The major uses of capital are to finance the procurement and holding of supplies and, for those traders who do so, to finance credit extended to customers. For example, in the major survey of wholesalers in Ibadan, an average of £100 (\$280) (or 54 percent of average monthly sales of £185) was invested in inventories and an average of £41 (\$115) in debtors. Relatively little capital is invested in fixed physical facilities and usually even less in equipment. Cash reserves are generally small or non-existent. The only other major asset may be an initiation fee paid to a trade association as a prerequisite for entry into the trade.

#### 6. Trade Associations

Trade associations are a common feature among staple food traders in most markets. In the first survey of market traders in Ibadan, for example, 72 percent of the traders interviewed belonged to one of the ten trade associations identified. These associations are usually specific to one market and often to one commodity and one type of trader. However, several large and more general associations exist. One in particular was found to be quite effective in much of the major supply area to Ibadan.

Three main factors are responsible for the existence and functioning of trade associations. First, they assure social obligations, such as giving protection and assistance to members encountering unusual personal hardship. This is particularly important to women retailers. They also help to organize the traditional ceremonies and festivals associated with

the market. Secondly, they regulate trading activities and present a unified "front" to safeguard group interests. In some cases, such regulation includes the requirement that new traders be approved by the trade association, after which membership is obligatory; the withholding of the new crop until all of the old crop has been cleared at the prevailing price; price setting; and the petitioning of local government councils and other agencies for such items as improved facilities and extra services, as well as for tax, stallage and other financial relief. And third, trade associations may be used by the political parties as a "tool" to gain the support (control?) of traders.

For the most part, retailer trade associations perform primarily social functions. Wholesaler and assembler trade associations, on the other hand, are significantly more effective in performing their economic functions and frequently have a considerable degree of control over their members which allows them to affect the economic behavior of their members. Except in these cases, the ability of most trade associations to directly control the business activities of members (and non-members where they are important) is strictly limited. Seldom, for instance, can prices be effectively regulated by most associations. The major effect of the injection of politics into these organizations has been to cause disunity and in some cases disintegration.

#### F. BEHAVIOR AND PERFORMANCE OF THE MARKETING SYSTEM

##### 1. Price Response

Prices in the staple food marketing system in Western Nigeria are remarkably prompt in reacting to changed supply and demand conditions. Traders are keenly aware of price spreads and margins and seize every opportunity to take advantage of them. Not only do the intermediaries respond to changed conditions, but the system itself encourages rapid price response,

consisting as it does in most places of a large number of small traders in competition with each other. Capital requirements are small; commodities are essentially homogenous, unpackaged, and only informally graded. There are few locational advantages for traders. Production is in the hands of small producers and there are no food plantations. Many small consumers represent the final market for foodstuffs.

Already mentioned is the point that the markets of Western Nigeria are linked through the competition of traders who supply the urban centers and assemble their supplies in the major areas of marketable surplus supplies. The price they are willing to pay for supplies is directly related to their latest information on the wholesale price in the urban center in which they sell. As most of these traders are investing their own capital in procuring supplies, they are hesitant to buy unless the price spread is sufficiently attractive. In general, the more attractive the price spread, the greater the amount spent on procuring supplies. Essentially, then, traders performing the assembling function vary their demand with the relative prices in the two markets in which they trade and hence vary the supply of the commodity to the urban center.

In the urban center, traders compete with others selling supplies from many different sources. It is the interaction of the wholesalers selling these supplies, particularly the small number of large wholesalers, that establishes the price in the urban center. Wholesalers will sell for a lower price when they become particularly anxious to clear their supplies; this frequently happens with assemblers selling through wholesaler agents who wish to return to the supply area but are not willing to leave until they have received the money from the sale of their commodity. Similarly,

wholesalers less anxious to sell will attempt to sell for a slightly higher price. It is principally the overall current supply and demand situation of the commodity in the urban center itself that determines its price. Anticipated supplies from the supply areas and potential wholesale supplies from other urban centers are not particularly important factors at present, due to very imperfect communication of such information and the present negligible movement of commodities between urban centers.

Retailers buy almost exclusively from other traders and for the most part are price takers. They have only a limited influence on selling prices, which are based on the prices they have to pay. This limitation is compounded by the relatively small margins that exist for retailers. The real price charged for small units of sale is determined by the quantity heaped into the measure (the price remaining constant), whereas price is the major competitive element in sales of larger units. In general, this means that prices are set not by the large number of small, competitive retail traders but by the few, usually large, traders who supply the urban centers.

There are few institutional rigidities, although traders are controlled to some extent by trade associations, particularly with regard to the entry of new traders, price agreements, permitted supply areas, and so forth. Particularly for some of the wholesaler and assembler trade associations, their collusive behavior constitutes a departure from the model of a perfectly competitive marketing structure.

Government involvement in the system consists mainly of regulating and providing trading facilities and producing, selling and buying comparatively small quantities of foodstuffs. When circumstances

dictate, this is supplemented by emergency measures, such as the embargo by several local governments on the export of surplus foodstuffs during the period of scarcity in 1966. However, enforcement of these measures is not often effective.

## 2. Temporal Price Behavior

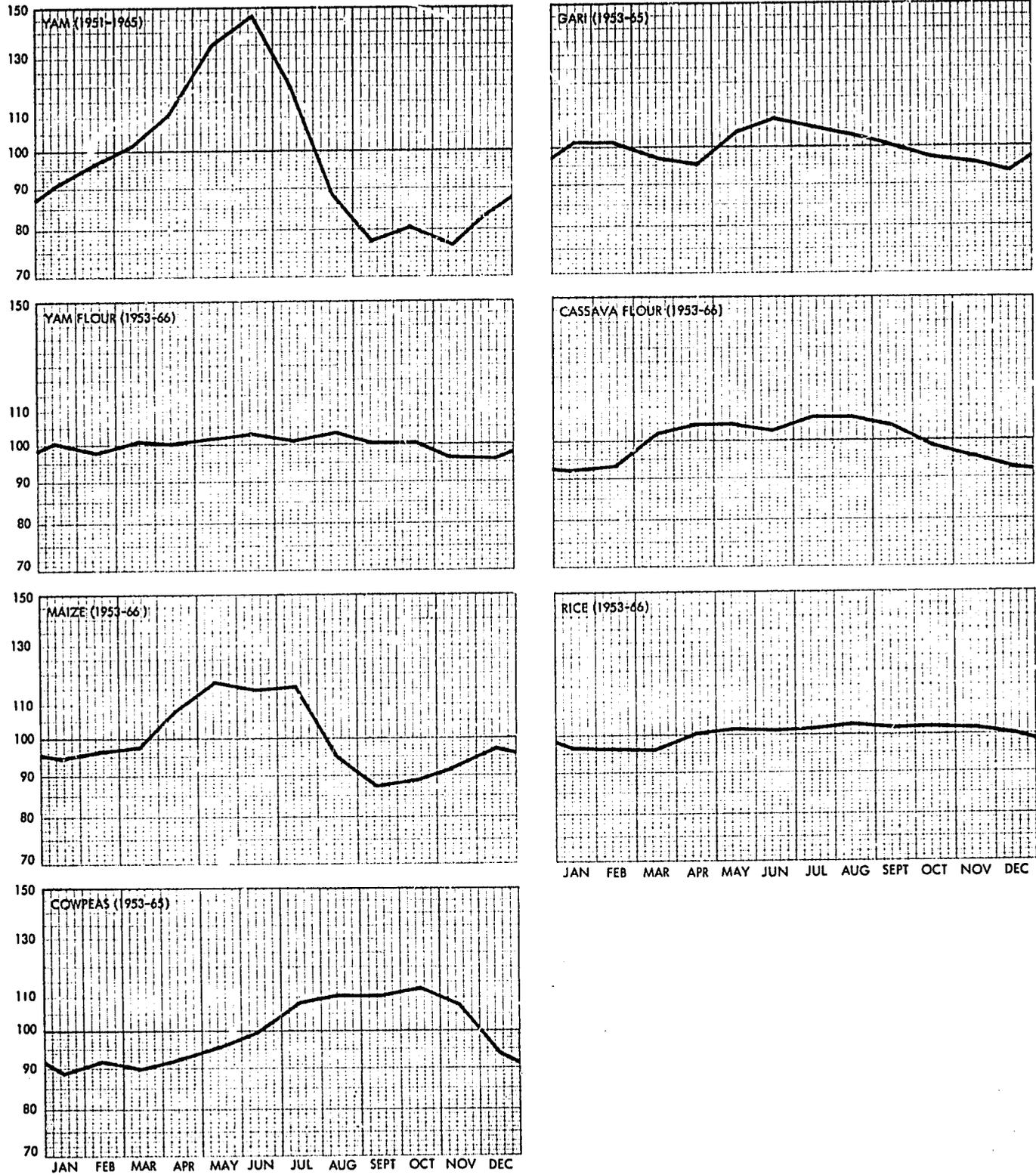
Temporal price behavior can be divided into short-term and long-term aspects. The former relate to allocation of the commodity throughout the crop season, including storage practices, and the latter to price movements between crop seasons, for which cyclical and secular changes in the conditions of supply and demand are important.

There are marked seasonal price patterns for all staple foods in Western Nigeria. For example, those calculated for seven staple foods for Ibadan are illustrated in Figure 1.4. These seasonal variations relate closely to the agricultural production patterns of the major supply areas. The extent of the seasonal price fluctuation is determined by the seasonality of production, the perishability of the commodity, and current storage practices. Prices of the more perishable commodities (yam, maize and cowpeas) fluctuate more than those of the less perishable commodities (yam and cassava flour, gari and rice).

The average percentage seasonal retail price rise in Ibadan for the seven major staple foods illustrated in Figure 1.4 and calculated from the seasonal price indexes for the period 1953-65 (1951-65 for yam tubers), were:

Figure 1.4

IBADAN: SEASONAL INDEXES FOR SEVEN STAPLE FOODS



NOTE: BASED ON MONTHLY DATA SUPPLIED BY FEDERAL OFFICE OF STATISTICS

| <u>Commodity</u> | <u>Number of months<br/>between seasonal<br/>low and high prices</u> | <u>Average percent<br/>Seasonal price rise</u> |                  |
|------------------|----------------------------------------------------------------------|------------------------------------------------|------------------|
|                  |                                                                      | <u>Total</u>                                   | <u>Per Month</u> |
| Yam - tubers     | 7                                                                    | 91.4                                           | 13.1             |
| - flour          | 6                                                                    | 8.0                                            | 1.3              |
| Cassava - gari   | 6                                                                    | 15.9                                           | 2.6              |
| - flour          | 7                                                                    | 16.2                                           | 2.3              |
| Maize            | 8                                                                    | 33.7                                           | 4.2              |
| Rice             | 6                                                                    | 8.0                                            | 1.3              |
| Cowpeas          | 9                                                                    | 27.4                                           | 3.0              |

All commodities except gari, cassava flour, and maize have only one major harvest season each year, after which the price rises until the appearance of new season supplies. Cassava may be harvested throughout the year, but there are two short periods of major price increase for both gari and cassava flour. Maize has two crop seasons per year and two major periods of seasonal price increase. The two seasonal price rises occurring within each year for gari, cassava flour and maize, are the price rises which must be compared with the cost of storage.

The most spectacular seasonal price rise occurs in yam tuber prices. However, nearly two-thirds of this rise occurs in the last three months before the appearance of new season yams. Given the risks and costs of storing yam tubers, particularly those attributable to weight losses which, under normal conditions are at least 10-20 percent after three months and 20-40 percent after five months' storage, the average return is probably closer to three percent per month.\* Furthermore, the price risks inherent in storing yam are frequently quite substantial, as there are very

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\* Page XI-44 (Volume 3).

considerable fluctuations in the seasonal price pattern from year to year. The average return for yam flour from storage during the same period was one percent per month.

Stored properly under reasonable conditions, gari will maintain its original quality for several months. Despite this, it is apparent that there is relatively little speculative storage of gari to take advantage of seasonal price fluctuations. Gari prices tend to follow yam tuber prices during periods of more extreme yam tuber price fluctuations. The rise in gari prices is generally short-lived, lasting only about two months. Nevertheless, these short-term fluctuations are somewhat predictable, occurring most often during January-February and May-June. These seasonal price rises mostly reflect the relative increase in demand for gari that occurs as the availability of close substitutes, particularly yam tubers, declines and their prices rise.

Commodity losses suffered in the storage of maize and cowpeas are frequently high, particularly when they are stored under traditional methods. The average seasonal rise in price is considerable and is probably in excess of direct storage costs. Rice is the only major staple food for which the seasonal pattern of distribution is reasonably well assured by the marketing system. Based on these seasonal price indexes, rice and dried yam have the lowest average gross return to storage. The major factors contributing to this fairly stable pattern of seasonal rice prices are the existence of several major supply areas, the storability of rice, and the relatively large quantities in storage both in the supply and consuming areas.

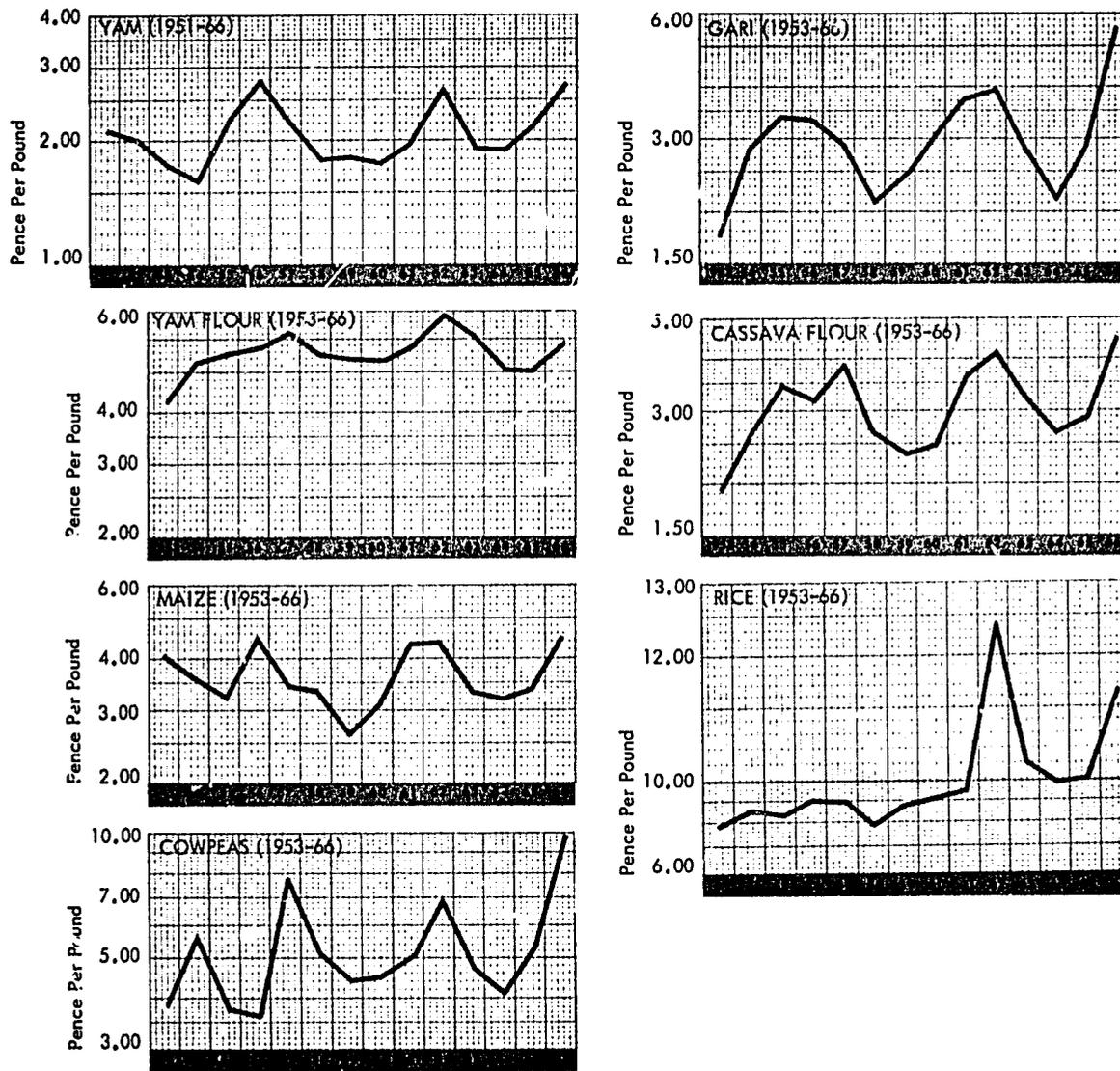
As Figure 1.5 demonstrates for all seven staple foods in Ibadan, based on annual average prices from 1953 to 1966 (Yam; 1951-66), a pronounced cyclical pattern is present in all staple food prices. This pattern is particularly striking in gari prices where the cycles are about five to six years in length. The general existence of this type of cyclical price behavior throughout the Region is shown for gari in Figure 1.6, where the annual average prices for seven urban centers are illustrated. Because a of these staple foods are substituted for one another to a great extent by consumers to offset price changes, cyclical behavior especially of the locally-produced staple foods, is closely related.

This cyclical price behavior is closely associated with similar movements in both the quantity of marketable surplus staple foods and the level of consumer demand. Relatively small variations in the overall level of food production are magnified in the quantity of marketable surplus available because most food production is for subsistence purposes. For example, the average percent of production which was marketable surplus for farmers in the Producer Survey was:

| <u>Commodity</u> | <u>Average Marketable Surplus<br/>As Percent of Output</u> |                                           |
|------------------|------------------------------------------------------------|-------------------------------------------|
|                  | <u>(For Responding<br/>Farmers)</u>                        | <u>(Adjusted for<br/>Non-Respondents)</u> |
| Yam              | 21                                                         | 18                                        |
| Cassava          | 38                                                         | 25                                        |
| Maize - early    | 47                                                         | 42                                        |
| Maize - late     | 42                                                         | 30                                        |
| Rice             | 50                                                         | 47                                        |
| Cowpeas          | 33                                                         | 24                                        |

Figure 1.5

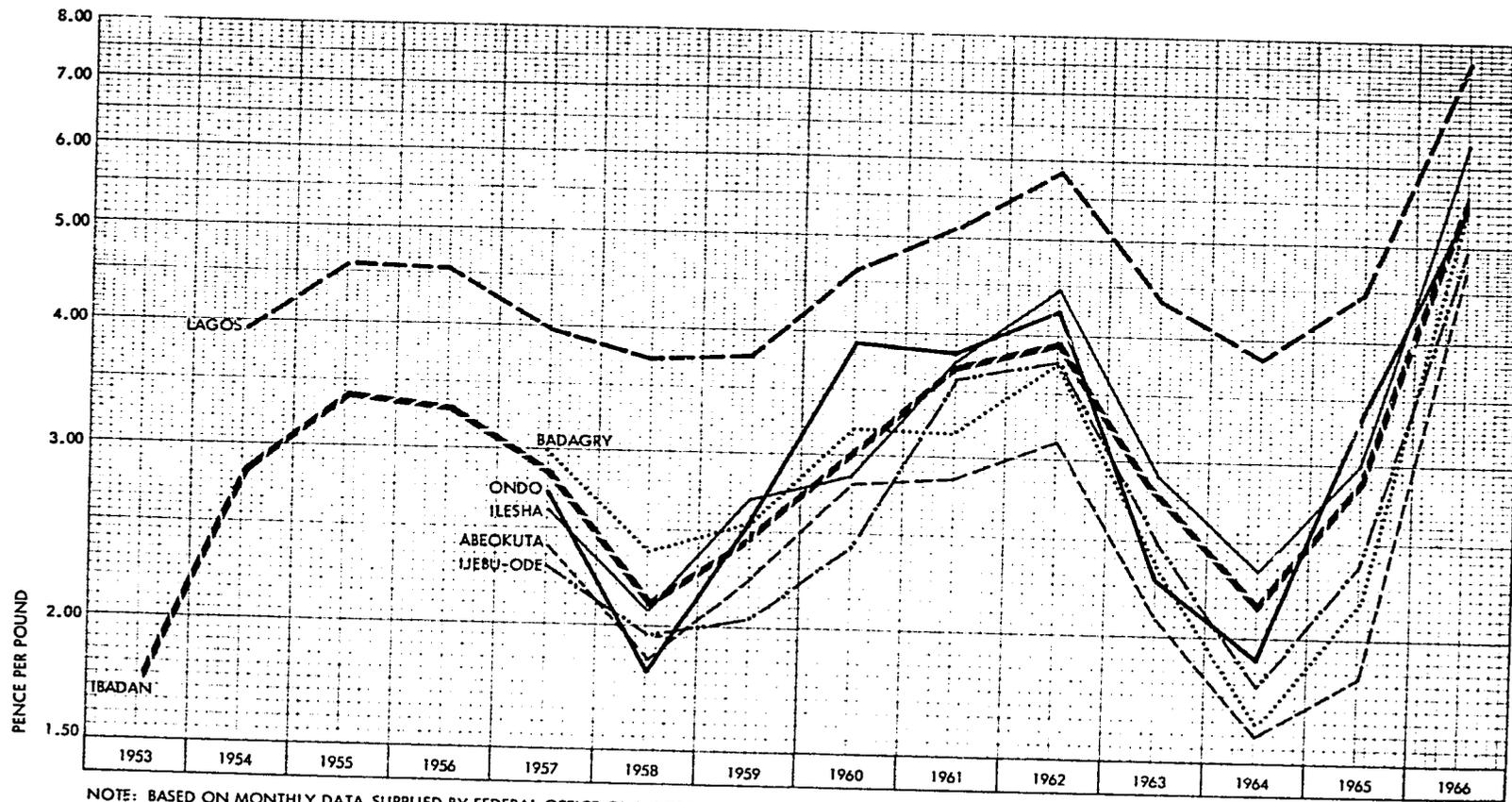
IBADAN: ANNUAL AVERAGE PRICES FOR SEVEN STAPLE FOODS



NOTE: Based on Monthly Data Supplied by Federal Office of Statistics

Figure 1.6

GARI: ANNUAL AVERAGE RETAIL PRICES FOR SEVEN URBAN CENTERS



NOTE: BASED ON MONTHLY DATA SUPPLIED BY FEDERAL OFFICE OF STATISTICS

For most producers, the major share of all fluctuations in output are reflected in the amount marketed rather than that retained for private consumption.

The two most recent periods of cyclically high prices coincide with periods of major political activity and civil disturbance. This is generally credited with having resulted in a reduction in agricultural activity and a decrease in available supplies. However, it is more likely that farmers just withheld supplies of foodstuffs from the market when they learned of disruption of internal security. Other factors are also important in determining the level of marketable surplus. Principal factors are:

- (a) the profitability of cultivating food crops relative to cash crops, particularly cocoa;
- (b) variations in seasonal conditions, particularly the rainy season in the savanna areas;
- (c) variations in incidence of crop pests and diseases;
- (d) the general availability of transportation; and
- (e) the general level of economic activity and income, particularly that associated with the major cash crops.

The demand for marketable surplus staple foods is determined by the level of economic activity which affects both per capita income and the proportion of the population dependent upon the marketing system as a source of foodstuffs. In periods of high cash crop prices,

for example, cash crop farmers may tend to rely on the marketing system for a higher percentage of their food supplies than at other times.

The response of prices to these changes in the overall supply and demand situation of staple foods is magnified to a certain extent by a form of price rigidity. Where relatively large changes in this relationship occur, the maximum amount the price is allowed to change is somewhat constrained by prices and by the bargaining position of each level in the system in relation to the previous season. This is particularly true for producers, as both the prices they receive relative to urban retail prices and their bargaining power are positively related to the cyclical movement of prices, which tends to accentuate these cyclical price movements. Although major changes in price occur, they are modified to some extent by the existence of this factor.

Gari is an especially interesting case. In general, it is the least preferred, cheapest, and most supply-responsive of all the staple foods. In periods of scarcity, its demand increases relative to the other staple foods, while in periods of abundance, the opposite is true. This fact underlies the more pronounced cyclical behavior associated with gari prices.

A small upward secular trend was found in several commodities but it was relatively unimportant compared with the magnitude of the cyclical price movements.

### 3. Spatial Price Behavior

Spatial price differences which can only be partly explained by transportation costs exist between the various areas. These differences continually fluctuate in magnitude, although major price movements throughout the Region tend to be roughly parallel over time; this can be seen for annual average prices in Figure 1.6.

Based on the price series data collected in the two central market complexes in Ibadan, where price differences considerably in excess of transportation costs were found to exist, it can be expected that the same imperfect spatial price behavior exists throughout the Region. The correlation and other analysis of monthly retail prices from 1957 to 1965 in nine urban centers supports this expectation. Significantly, from the correlation coefficients for two-year periods, it seems that the degree of price consonance between areas has increased to some extent during the past few years and was especially high during the period of rapid cyclical price movements in 1965-67.

The closest price relationships were generally those existing between Ibadan and Lagos. For gari and cowpeas, for example, the bivariate correlation coefficients obtained were in excess of 0.9, which suggests a high degree of association for these commodities. For yam and maize, a moderately strong association exists, with the values in excess of 0.8. Rice and cassava flour were only loosely associated, while yam flour prices showed almost no association.

As Table 1.4 indicates, a high to moderately high degree of association exists in the prices of gari and cowpeas throughout most of the Region. In contrast, the markets for the other commodities are mostly only rather weakly associated.

The shorter the time span and the less marked the price change, the less likely are prices in other areas to respond to a price change somewhere in the system; however, the system tends to be quite responsive to fairly major price movements, although usually only with a time lag of several weeks or more.

Between urban centers, wholesale prices are considerably more closely related than retail prices. Figure 1.7 shows monthly wholesale prices for gari and cowpeas in Ibadan, Lagos and Akure. The general similarity between wholesale price movements of these commodities in these urban centers is readily apparent. Nevertheless, even here considerable price discrepancies exist. For example, between 1962-1967, wholesale prices were higher in Lagos than Ibadan by an average of 12 percent for gari, 8 percent for maize, 18 percent for rice, and 3 percent for cowpeas; only about one half of this difference is made up of higher transportation costs\*. The difference in retail prices is even greater, Lagos being from 30 to 50 percent higher than Ibadan†. The existence of significantly higher margins for staple foods

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\* Page X-138.

† Based on data from the Federal Office of Statistics.

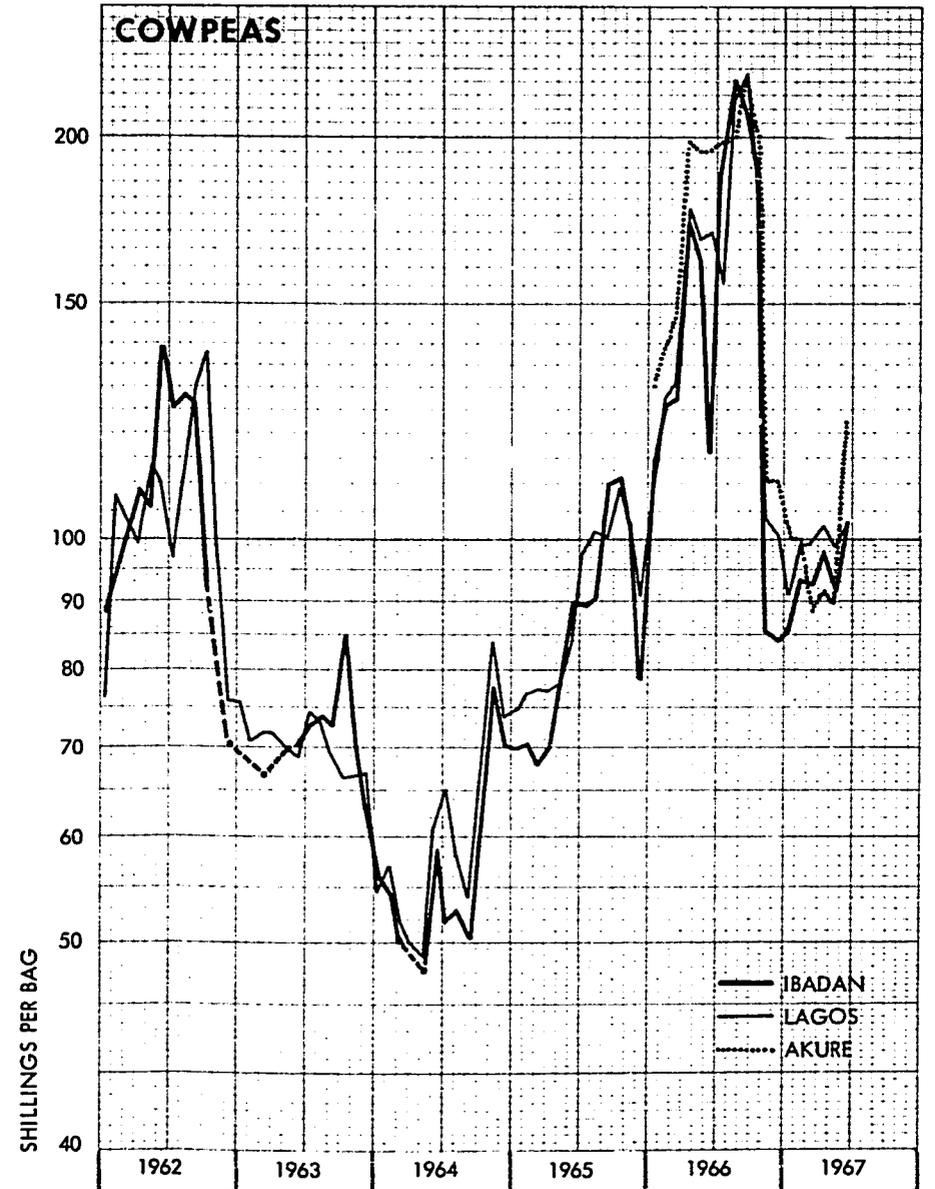
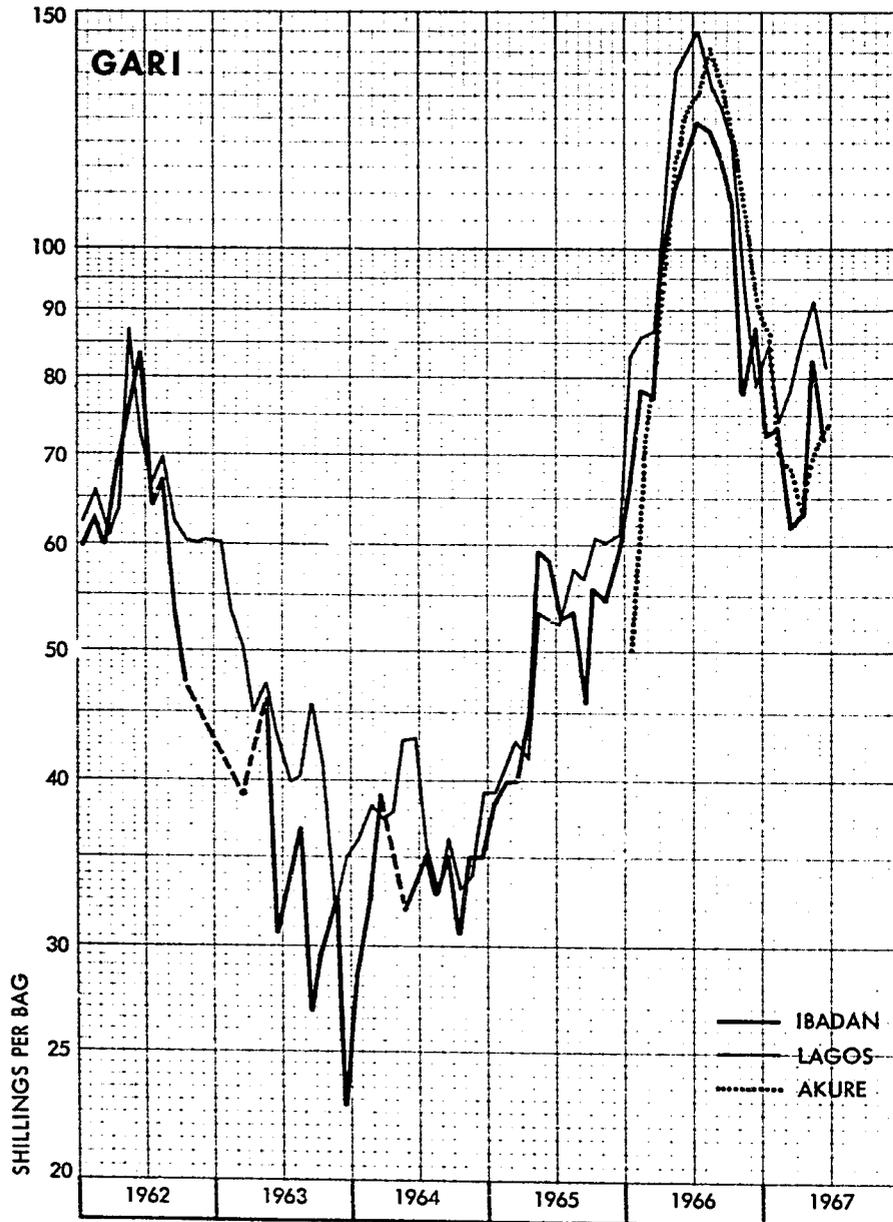
Table 1.4

**BIVARIATE CORRELATION COEFFICIENTS OF SYNCHRONOUS  
RETAIL PRICE SERIES FOR 9 SELECTED URBAN  
CENTERS FOR YAM, GARI, MAIZE AND COWPEAS  
1957-1966**

| <u>Commodity and<br/>Urban Center</u> | <u>Ibadan</u> | <u>Lagos</u> | <u>Badagry</u> | <u>Ejinrin</u> | <u>Ijebu-<br/>Ode</u> | <u>Abeokuta</u> | <u>Ilesha</u> | <u>Ondo</u> | <u>Akure</u> |
|---------------------------------------|---------------|--------------|----------------|----------------|-----------------------|-----------------|---------------|-------------|--------------|
| <u>Yam</u>                            |               |              |                |                |                       |                 |               |             |              |
| Lagos                                 | .83           | 1.00         |                |                |                       |                 |               |             |              |
|                                       | .67           | .69          | 1.00           |                |                       |                 |               |             |              |
|                                       | .70           | .75          | .74            | 1.00           |                       |                 |               |             |              |
|                                       | .59           | .59          | .37            | .43            | 1.00                  |                 |               |             |              |
|                                       | .49           | .52          | .28            | .31            | .58                   | 1.00            |               |             |              |
|                                       | .38           | .33          | .26            | .17            | .33                   | .25             | 1.00          |             |              |
|                                       | .43           | .46          | .37            | .39            | .46                   | .21             | .50           | 1.00        |              |
| Akure                                 | .45           | .40          | .30            | .21            | .37                   | .36             | .46           | .42         | 1.00         |
| Mean price<br>(d/lb)                  | 2.09          | 2.82         | 2.61           | 2.57           | 2.12                  | 2.20            |               |             |              |
| <u>Gari</u>                           |               |              |                |                |                       |                 |               |             |              |
| Lagos                                 | .93           | 1.00         |                |                |                       |                 |               |             |              |
|                                       | .88           | .87          | 1.00           |                |                       |                 |               |             |              |
|                                       | .94           | .94          | .91            | 1.00           |                       |                 |               |             |              |
|                                       | .93           | .89          | .83            | .89            | 1.00                  |                 |               |             |              |
|                                       | .91           | .86          | .88            | .89            | .89                   | 1.00            |               |             |              |
|                                       | .93           | .91          | .84            | .89            | .87                   | .83             | 1.00          |             |              |
|                                       | .86           | .83          | .77            | .77            | .85                   | .80             | .81           | 1.00        |              |
|                                       | .96           | .92          | .87            | .93            | .90                   | .92             | .80           | .85         | 1.00         |
| Mean price<br>(d/lb)                  | 3.15          | 4.74         | 2.97           | 2.74           | 2.78                  | 2.56            | 3.31          | 3.19        | 2.85         |
| <u>Maize</u>                          |               |              |                |                |                       |                 |               |             |              |
| Lagos                                 | .82           | 1.00         |                |                |                       |                 |               |             |              |
|                                       | .75           | .79          | 1.00           |                |                       |                 |               |             |              |
|                                       | .76           | .81          | .81            | 1.00           |                       |                 |               |             |              |
|                                       | .82           | .70          | .68            | .71            | 1.00                  |                 |               |             |              |
|                                       | .61           | .60          | .67            | .60            | .64                   | 1.00            |               |             |              |
|                                       | .76           | .66          | .61            | .59            | .63                   | .39             | 1.00          |             |              |
| Ondo                                  | .65           | .58          | .46            | .37            | .53                   | .43             | .66           | 1.00        |              |
| Mean price                            | 3.49          | 4.51         | 3.77           | 3.77           | 3.50                  | 3.36            | 4.08          | 2.94        |              |
| <u>Cowpeas</u>                        |               |              |                |                |                       |                 |               |             |              |
| Lagos                                 | .91           | 1.00         |                |                |                       |                 |               |             |              |
|                                       | .90           | .85          | 1.00           |                |                       |                 |               |             |              |
|                                       | .88           | .85          | .87            | 1.00           |                       |                 |               |             |              |
|                                       | .91           | .88          | .83            | .86            | 1.00                  |                 |               |             |              |
|                                       | .78           | .80          | .74            | .81            | .81                   | 1.00            |               |             |              |
|                                       | .85           | .84          | .83            | .82            | .87                   | .82             | 1.00          |             |              |
| Ondo                                  | .88           | .84          | .85            | .84            | .85                   | .72             | .87           | 1.00        |              |
| Mean price                            | 5.72          | 8.35         | 6.43           | 6.39           | 5.74                  | 6.40            | 8.28          | 6.77        |              |

Figure 1.7

GARI AND COWPEAS: MONTHLY AVERAGE WHOLESALE PRICES FOR THREE URBAN CENTERS



SOURCE: Federal Office of Statistics



in Lagos compared with Ibadan reflects not only the higher costs of trading but also the ability of traders to obtain higher prices as consumer incomes rise. A similar situation exists in Ibadan between the lower-priced indigenous markets and the higher-priced more "modern" markets.

Prices are generally as low or lower in Ibadan than in most of the other urban centers of the Region. This results from Ibadan's role as a traditional center of trade and transportation with strong links with most of Western Nigeria (including the major areas of supply of locally-produced foodstuffs), the relatively large demand, and the well-developed market system with a large number of competitive traders.

Three principal factors are responsible for the relatively imperfect spatial price behavior which exists in Western Nigeria. First, the lack of relevant and current information. Second, the relative independence of urban centers with interaction only occurring in competitive supply areas. And third, the absence of a class of traders willing to speculate on price differences between urban centers.

#### 4. Commodity Price Relationships

Using an index of relative prices based on the annual retail price for 1,000 calories, Table 1.5 indicates that gari and maize are generally the cheapest sources of calories, with a price generally between 40 and 60 percent of the average annual price of yam. Rice is mostly 30 to 50 percent more expensive, while cowpeas are about 20 percent less expensive

Table 1.5

INDEX OF RELATIVE PRICES IN IBADAN BY COMMODITY  
1960-66

| Commodity                                    | Conversion Factor*                  |                                  | Index of Relative Prices† (Yam Tubers = 100) |      |      |      |      |      |      | Sept.<br>1966 |
|----------------------------------------------|-------------------------------------|----------------------------------|----------------------------------------------|------|------|------|------|------|------|---------------|
|                                              | Calories/lb<br>of Edible<br>Portion | Moisture<br>Content<br>(percent) | 1960                                         | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |               |
| Yam                                          |                                     |                                  |                                              |      |      |      |      |      |      |               |
| - tuber                                      | 471.7                               | 73                               | 100                                          | 100  | 100  | 100  | 100  | 100  | 100  | 100           |
| - flour                                      | 1,439.9                             | 18                               | 96                                           | 98   | 86   | 102  | 89   | 76   | 70   | 151           |
| Cassava                                      |                                     |                                  |                                              |      |      |      |      |      |      |               |
| - gari                                       | 1,551.3                             | 12                               | 52                                           | 57   | 46   | 44   | 34   | 40   | 62   | 113           |
| - flour                                      | 1,551.3                             | 12                               | 42                                           | 55   | 47   | 50   | 42   | 41   | 50   | 71            |
| Maize                                        | 1,646.6                             | 12                               | 50                                           | 60   | 46   | 49   | 47   | 44   | 46   | 39            |
| Rice                                         | 1,605.7                             | 12                               | 152                                          | 143  | 138  | 155  | 154  | 134  | 122  | 192           |
| Cowpeas                                      | 1,542.2                             | 10                               | 80                                           | 78   | 80   | 74   | 67   | 74   | 108  | 223           |
| Price of yam tubers<br>(d/1,000<br>calories) |                                     |                                  | 3.71                                         | 4.18 | 5.55 | 4.09 | 4.03 | 4.64 | 5.79 | 3.83          |

\* After B. S. Platt, *op. cit.* Note: The calories per lb of edible portion are based on the percent moisture contents as shown.

† Index of relative prices: Average d/1,000 calories as a percent of the value for yam tubers.

Note: Based on annual retail price data supplied by Federal Office of Statistics, except September 1966 data which are based on wholesale prices and samples collected by Stanford Research Institute (see Table 11.19).

than yam for a comparable number of calories. By season, however, this pattern will tend to fluctuate quite widely. For example, this can be seen in the September 1966 prices in Table 1.5 where yam and maize prices were seasonally low while the other prices were seasonally high and still under the influence of high cyclical prices.

Inter-commodity price movements are seldom strongly associated because the temporal price characteristics of each commodity differ; for example, the peculiar seasonal features of yam, maize and cowpea prices and the greater cyclical movement in gari prices due to its being substituted for higher-priced staples when food prices rise cyclically. The substitution of staple foods for one another is rarely based on price alone.

The prices of the two forms of yam (tuber and dried [flour]) are particularly weakly related. For example, Table 1.5 shows that the relative price of yam flour is frequently less than that of yam tubers, even though considerable processing is required to produce yam flour. However, savings are affected in transportation because the processed form contains only about one-third of the bulk, and in storage because it is considerably less perishable than the tuber form. Furthermore, with the major exception of Ibadan, fresh yam is definitely preferred to yam flour so that it is likely to have a more elastic demand schedule

The processes used in the transformation of the two cassava products are roughly the same, although the gari product requires more labor and other inputs. While prices tend to be about the same, large swings in price, lasting several years, are common. Processors tend to specialize in one

commodity only, so that prices may deviate substantially before a supply adjustment is effected. Compared with the unprocessed commodities, processing and marketing margins are considerably higher, farmers receiving probably about 20 to 40 percent of the retail price for their cassava.

Although a formally organized system of commodity grading does not exist, quality differences are recognized by traders and consumers. In general, the present marketing system tends to penalize below "average" quality produce, while better quality produce is inadequately rewarded primarily because the market for it is strictly limited.

#### 5. Marketing Margins

Traders chiefly perform assembling, transporting and distributive functions, while seasonal storage is undertaken mostly by producers and processing by specialist processors. For locally-produced staple foods, excluding the processed commodities, producers receive an estimated 60 to 70 percent of the retail price in Ibadan and 40 to 50 percent of the retail price in Lagos.\* The marketing margin for processed commodities and those moving in inter-regional trade are significantly higher.

Coincident with the fact that considerably fewer marketing services are rendered than in the more industrialized countries is the fact that marketing margins are also generally smaller. For example, in the United States the farmer's share of the retail price for a fresh bulky product, potatoes, is 38 percent, for a dried unprocessed pulse (Michigan dry navy

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beans) 40 percent and for highly processed grain in the form of white bread, 16 percent.\*

In general, marketing margins in Western Nigeria cannot be considered high or excessive. Excluding the cost of transportation, the average gross marketing margin received by each trader handling the commodity is approximately 10 percent of his selling price. For the wholesalers surveyed in Ibadan, this is shown in Table 1.6 to average 10 percent,

Table 1.6  
AVERAGE MARGINS OF WHOLESALERS IN IBADAN

| Commodity     | As Percent of Wholesale Selling Price |                            |                                    |
|---------------|---------------------------------------|----------------------------|------------------------------------|
|               | Gross Margin<br>(1)                   | Transportation Cost<br>(2) | Adjusted Gross Margin<br>(1) - (2) |
| Yam           | 31.5                                  | 17.7                       | 13.8                               |
| Yam flour     | 13.6                                  | 7.4                        | 6.2                                |
| Gari          | 17.0                                  | 7.4                        | 9.6                                |
| Cassava flour | 26.6                                  | 13.1                       | 13.5                               |
| Maize         | 17.3                                  | 9.7                        | 7.6                                |
| Rice          | 15.5                                  | 8.3                        | 7.2                                |
| Cowpeas       | <u>24.7</u>                           | <u>10.6</u>                | <u>14.1</u>                        |
| Average*      | 20.9                                  | 10.6                       | 10.3                               |

\* Weighting each commodity equally.

Source: SRI Wholesale Traders Questionnaire.

\* Marketing and Transportation Situation, ERS, US' A, MTS-160, February 1966, p. 29.

although by commodity it varied from 6 percent for yam flour to 14 percent for cowpeas. Using an estimate of four for the average number of times a locally-produced commodity is exchanged in the marketing system on its way from producer to consumer, this means that traders receive a total of just over 30 percent of the retail price. Further, for foodstuffs sold in Ibadan the average cost of transportation is about 10 percent of the retail selling price. Table 1.6 shows an average transportation cost of 11 percent of the wholesale selling price for wholesalers interviewed in Ibadan, although this varied by commodity from 18 percent for yam to 7 percent for yam flour and gari. Overall, at least for the locally produced commodities, producers are receiving about 60 percent of the retail price.

## G. INEFFICIENCIES IN THE MARKETING SYSTEM

On the basis of the research results, the existing marketing system for staple foods in Western Nigeria is considered to be functioning quite effectively and at a reasonable cost given its technical, economic and institutional environment and the degree of risk involved. Nevertheless, inefficiencies do exist in the present system, although many of the criticisms leveled at African food marketing systems in general do not apply to Western Nigeria.

### 1. Intermediaries

The number of traders involved in staple food marketing is conspicuously large, particularly at the retail level. However, in the movement of locally-produced commodities through the marketing system, only about four exchanges are involved. Most traders have very small businesses by any definition. Margins are usually not large so that absolute returns are generally quite meager. Although most traders are underemployed and have a low level of labor productivity, little evidence was found to support the contention that this causes the system to operate more expensively or inefficiently. In fact, at the producer level and for the movement of supplies between urban centers, there may well be too few traders. Furthermore, few traders are influential in setting prices, most being essentially price takers. The problem of "too many intermediaries in the marketing system" is therefore of little importance, and given the limited alternatives available, trading is probably the most productive career open to many people. The best means of reducing the number of intermediaries would be to create employment opportunities in the other sectors. Collusion among intermediaries through trade associations was found to exist only at the assembler-wholesaler level, and even then it was not general. Overt collusion among assemblers was encountered in that part of Ibadan's major supply

area which lies immediately to the north and centers on Iseyin and Ogbomosho. In Ibadan itself, trade associations were found to be most effective among wholesalers of the imported commodities--rice and cowpeas--where they have been able to enforce an agreement by cowpea wholesalers in Dugbe Market not to sell new season supplies until all the stocks of old cowpeas have been cleared at the prevailing price.

In addition to the economic control exerted by trade associations, more subtle forms of collusion are possible among small groups of intermediaries. This is particularly the case in rural areas where there are relatively few assemblers or where assemblers come mainly from the same urban center. Furthermore, in the smaller urban centers where there are comparatively few major suppliers (wholesalers) of staple foods, tacit collusion is possible, although no positive evidence was obtained either of such collusion or its detrimental effect.

In general, group decisions are seldom strictly adhered to and are frequently violated by individuals for their own gain, with the result that collusive behavior is seldom a workable proposition except in the few instances where small numbers of traders are involved. With the few exceptions mentioned earlier, collusion is not prevalent in the marketing system and rarely leads to excessive trading profits and major price distortion or misallocation of resources.

The ability of traders to bargain with producers depends upon circumstances such as supply and demand conditions, the farmer's need for money, how well informed either side is on prevailing prices, and so on. In general, only when supplies are relatively scarce and each farmer can sell to only a small number of traders is the bargaining position of producers weak. Most farmers certainly

are not as knowledgeable about market conditions as traders, but for the larger farmers constantly involved in marketing activities, this is usually not a major impediment in obtaining a "reasonable" price. Nevertheless, for the majority of producers, the very imperfect market information presently available to them, their need for cash, the small volume of their sales, and the cost and effort involved in carrying unsold goods home from the market all tend to reduce their bargaining position at the time of sale. However, these disadvantages are mainly due to environmental and production factors and not to the structure of the marketing system. For the most part, traders are only taking advantage of the opportunities available to them and no evidence was found of a general attempt to exploit farmers. This does not mean, however, that an effort should not be made to increase producer bargaining strength.

Although cheating and deception are practiced to some extent by traders, the need for continuing good relationships between traders and their market prevents this from becoming a serious problem.

Given their resources and environment, traders in Western Nigeria are very competent and understand the function of the market economy very well. Their trading activities are restricted by their limited capital resources more than any other factor. Relatively few economies of scale exist in staple food marketing, except in the assembling of supplies, because trading costs other than for transportation are small. Thus the large number of traders is not a major impediment to the efficient functioning of the marketing system, as it really only affects the level of return to individual traders.

The custom of extended family relationships makes trading easier for women, who can delegate their domestic duties to other members of the family. It

does place greater financial obligations on the men, although the need to have sufficient trading capital always in reserve is clearly recognized. These financial obligations are generally not a major problem.

## 2. Market Facilities

The physical organization of markets usually follows a rational pattern. Traders selling the same commodities are grouped together, and a trader who can afford either the construction cost or the rent will have a stall. The present poor condition of most markets is mainly indicative of the low level of returns to traders and their inability to pay for improved facilities. Local governments have made few investments in market facilities because capital loans to local government councils are strictly limited.

Expanded and improved facilities, such as water, latrines, garbage disposal, and stalls, would insure better selling conditions and help to raise the level of hygiene and sanitation. Physical losses of commodity caused by exposure to weather would be reduced and markets made more attractive to consumers. The low level of government investment in facilities has certainly prevented the marketing system from attaining its full development. However, to assess the effect on the economic performance of the system, a cost-benefit study of such investments would have to be made.

As most supplies are increasingly being assembled in a relatively small number of markets, it is important that these have adequate facilities as well as the necessary transportation and, if possible, communication facilities. The present lack of public recognition of these markets means they perform less effectively and are less instrumental in the movement of food than if they were better developed. Increased throughput in selected rural markets would be a

major factor in improving producer bargaining power.

### 3. Price Behavior

Seasonal price variations are large and generally exceed the cost of storing commodities under improved storage conditions. However, relatively little seasonal storage occurs and storage facilities are at present used almost exclusively by producers. Improved storage techniques and more seasonal storage would doubtless improve the performance of the marketing system, although the lack of seasonal storage does alleviate the problem of traders extorting an excessive profit from the service.

The movement of commodities between urban centers to take advantage of price differences is extremely small. As a result, prices in urban centers are only loosely connected through the supply areas and are frequently quite divergent, often far in excess of transportation costs. This somewhat important deficiency arises from inadequate information, poor communication facilities, the tendency of assemblers/wholesalers to trade with/or in only one urban center, the cost of transportation, limited capital resources, and the risks involved in trading in a new market, where any price difference may have disappeared before supplies arrive.

In terms of basic conditions of supply and demand, the present marketing system is very responsive. However, the spatial and temporal horizon of the area of supply and demand taken into consideration in price determination is strictly limited. For the most part, only rather localized areas are considered, with the possible consequence that erratic and wide price variations associated with the overall basic supply and demand position of the Region may occur.

The present informal system of commodity grades and lack of standard weights and measures places a severe restriction on the ability of the marketing system to improve its performance and lower its costs. With a generally recognized set of grades and standards, considerably greater economies of scale would be possible in both the procurement and sale of supplies; storage and commodity movements between urban centers would also be improved. Furthermore, consumer preferences would probably be more accurately relayed back to producers in the form of price incentives.

#### 4. Capacity for Expansion

The present underemployment of traders indicates that the system could be expanded considerably to meet the increasing demand of the rapidly growing urban centers.

#### H. SUGGESTED IMPROVEMENTS IN STAPLE FOOD MARKETING

Despite the many deficiencies of the present staple food marketing system discussed above, the research results do not indicate that a major exchange in structure is necessary at this time. The lack of alternative employment opportunities for traders and the scarcity of development capital makes staple food marketing a particularly low priority sector for large-scale government investment and participation.

Better results could be obtained at less cost if the government were to direct its efforts toward aiding the system to function more efficiently. Assistance in eliminating a few minor structural deficiencies is needed, but the principal need is for an infrastructure conducive to more efficient functioning. Some deficiencies, such as lack of market information and inadequate facilities, are very directly related to the marketing system; while

others, such as education and public investment, are associated more with the overall level of development and income in Western Nigeria.

The costs of and returns to any proposed government expenditure on staple food marketing should be carefully evaluated. Barring non-economic public objectives, an expenditure is only justified when the rate of return exceeds any possible return from alternative investments.

## 1. Structural Modifications

### a. Producer Level

The most serious weakness in the present structure is the tendency toward oligopsony that occurs at the producer level. In general, a producer has access to a limited number of traders, with the result that trader competition is frequently either weak or nonexistent. This low level of producer bargaining power is compounded by the common need for immediate cash, poor storage and transportation facilities, and very imperfect market information. Moreover, where trade associations exist and are effective, they foster overt trader collusion. In addition to attempting to regulate producer prices, such associations frequently prevent all but their own members from trading in "their" area. For the producers concerned, the unfortunate result is often a very discouraging price--certainly lower than they would obtain under more competitive conditions.

It is essential that the marketing system reward the producer with a "fair" share of the retail price for his surplus output, as it is the price received by the producer that determines the supply of staple foods available in the long term. However, as production is planned on a seasonal basis, it may be several seasons before producers have fully responded to major price changes (and this contributes to cyclical price behavior in the Region).

Both to encourage production and reduce price instability, the producer-trader link in the marketing chain should be considerably improved. It can be assumed that the pattern of agricultural production will not change markedly in the foreseeable future. This means that the present pattern of marketing, in which supplies are provided by a very large number of small producers, will essentially remain unchanged. However, several trends are already apparent. As the producer increases his surplus output, he tends to take a greater interest in marketing. Initially, this means a search for better marketing channels. He tends to leave the small assembler who buys on the farm or in the village and headloads his purchases to a small nearby rural market in favor of the larger rural markets, where the assembler usually has command of a lorry. He also sells directly to or through wholesalers in the urban centers or at rural buying stations. The larger producers often do their own assembling, or it is done by larger assemblers. However, producer cooperatives could achieve the same result with no increase in the producer's surplus output.

Most of the suggestions aimed at improving the producer-assembler link relate to modifications in the infrastructure at all levels and will be discussed separately later. The following suggestions relate to structural modifications in the marketing system itself which, if successfully implemented, could significantly raise the bargaining power of procedures.

- Producer Bargaining Associations could bargain jointly in addition to keeping producers informed about current prices and trader practices. It is unlikely that such associations would be very effective unless they also undertook other marketing functions.

- Producer Marketing Cooperatives, if properly managed, could market the combined surpluses of many small producers more advantageously through well-established contacts or through secondary cooperative outlets located in the main urban consuming areas. Such cooperatives would not only have to assume the risks inherent in the perishability of the various staple foods, they would also have to reward their personnel, whether producers or employees, as members would not necessarily be involved in proportion to their marketed surplus. Some individual cooperatives might perform very well but the problem of supervising the stewardship function might be tedious and not always successful.

- Increased Trader Competition at the producer level could come from either or both of two sources: (1) conditions more conducive to better contact between traders and producers under more competitive conditions such as adequate information and transportation; and (2) direct government control over trade associations practicing collusion, to prevent price-fixing and enforce free and open competition.

The organizational problems associated with the first two alternatives are such that a major contribution cannot be expected from them in the foreseeable future.

The second part of the last alternative would not only be difficult to administer effectively but makes no attempt to correct the underlying conditions which foster collusion. For the present, then, improvement in market infrastructure is undoubtedly the approach to be emphasized.

The F.A.O. suggested that "government consider a scheme for providing protection against undue seasonal fluctuations of supplies and prices by

maintaining a buffer stock and buying and selling grains alongside established traders.\* This essentially substitutes government intervention for a major improvement in the infrastructure, but the one cannot be really effective without the other. Moreover, yam tubers and gari are very perishable and gari production follows a regular pattern, these two most important staple foods could not be included in a buffer stock scheme. A government-operated buffer stock scheme for the remaining commodities is not so urgently needed as a major improvement in several items of infrastructure, which would of itself reduce the need for such a scheme.

b. Wholesaler - Assembler Level

Another serious weakness in the present structure is the lack of intermediaries who speculate on extraordinary price spreads. Space arbitrating in particular should be encouraged, as greater interconnection and interaction between market areas would result in Western Nigeria forming a more unified and perfect market. In this case, price differences between areas would reflect mainly transportation costs ( and between seasons, storage costs).

Again, the major reasons for this weakness are mostly related to the infrastructure. With improved information, communications, skill and capital, a class of traders engaging in such arbitrage activities would probably emerge. These factors will be discussed in the next section.

c. Retailer Level

Eventually, small multi-product retail stores will probably replace the tremendous number of traditional retailers selling small quantities

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\* F.A.O., Agricultural Development in Nigeria, 1965-1980, Food and Agriculture Organization of the United Nations, Rome, 1966, p. 535.

of a single commodity. However, such stores will be possible only when improved methods of handling and packaging have been introduced and traditional retailers have ceased to undercut prices.

The underemployment situation is likely to persist, so that the present structure will be the most desirable for quite some time. However, major improvements should be made in such items as market facilities, so as to eradicate some of the worst operating conditions of the present structure. The establishment of retail stores selling staple foods, among other commodities, should be facilitated but not actively encouraged.

## 2. Infrastructure

### a. Market Facilities

Traditional markets will continue to be important in the sale of staple foods. Two reasons justify investment in their development. First, in rural areas the larger and more important rural markets will become even more important as assembly points for surplus staple foods. The development of these markets should be encouraged and the construction of permanent short-term storage (warehouse) facilities with convenient and easy loading facilities should be undertaken wherever feasible. The establishment of permanent buying stations in these markets by larger wholesaler-assemblers appears probable once a system of grades and standards is accepted and communications are improved. With increased supplies, large markets will meet more regularly. The smaller rural markets will tend to function even more as retail outlets serving limited neighborhoods.

Secondly, as incomes rise in urban areas, consumers will be able to demand the better facilities they now desire. This trend is already clearly established in Ibadan.

In all markets, irrespective of consumer income, better sanitation and more hygienic conditions should be observed in the sale of staple foods. Adequate and convenient latrines, water, and garbage disposal facilities should be provided wherever feasible. Drains and sealed pavements throughout the market, as well as stalls with sealed floors, are also desirable. In urban markets especially, more convenient consumer parking is needed. The installation of electric lighting, particularly in night markets, and of better communication facilities should be given serious consideration. Loading facilities convenient to each stall must also be provided or larger-volume wholesalers and assemblers may eventually be driven away from the traditional markets to more accessible locations.

b. Grades and Standards

Modernization of the staple food marketing system is contingent upon the adoption of a formal set of commodity grades and the acceptance of a standard system of weights and measures. Until this occurs, buying by description will be virtually impossible. Moreover, a formal set of grades will help raise the quality of production by providing a mechanism whereby quality differences can be recognized and rewarded at all levels.

Grades should be based on the more easily recognizable quality differences, such as size, condition, and color. Variety needs to be given more prominence and a standard nomenclature developed. The use of bags which will hold a minimum amount of a commodity at an established

level of moisture content should be made customary in handling bulk quantities. At all levels, sales by weight, using regularly checked scales, should be encouraged.

c. Information

The dearth of adequate and reliable information at all levels is a primary cause of unequal bargaining power and lack of competition among traders. Information about supplies, stocks, and prices at various locations is essential to the smooth working of an efficient and competitive marketing system.

Collection of this type of data needs to be perfected and more emphasis placed on reliability and relevance. Such information should be widely disseminated while still current, so that producers, traders, and consumers are kept constantly advised. For example, newspapers could print commodity information several times a week, if not daily, and radio bulletins could be issued--the radio can penetrate into villages even more easily than Yoruba language newspapers. These bulletins could emanate regularly from government sources and should include information about the principal commodities in the major urban areas and in several of the larger rural markets. Initially, the availability of supplies and wholesale prices should be emphasized; later, market intelligence and supply and price outlook data should be included.

d. Storage

The methods of storage presently in use are traditional, inefficient, and wasteful compared with modern techniques. However, storage facilities designed to reduce losses caused by moisture, bacteria, insects, and

rodents generally require a substantial investment, which must be carefully planned as to size, location, type, and auxiliary facilities so that maximum return to capital and skills is obtained. Nevertheless, improved facilities are urgently needed to reduce losses and encourage storage. Consumption would no longer be concentrated in the immediate post-harvest period but would be spread over the whole year. Seasonal and cyclical price fluctuations would also decrease.

Although more central storage facilities such as those used for maize by the Ministry of Agriculture and Natural Resources are desirable, the main emphasis must be placed on improving storage facilities and practices of producers and traders. These should require low capital investment and yet be designed to reduce losses during storage. Proper drying and fumigation techniques must be learned and their use encouraged. Compulsory fumigation of cowpeas before they enter into inter-regional trade should be seriously considered.

Research should be undertaken to develop more efficient ways of storing relatively small quantities under Nigerian conditions. Knowledge of existing facilities and techniques, such as a low-cost bush maize dryer and storage bin, should be disseminated widely by demonstration. The economic feasibility of such improved storage techniques as storing yam tubers under refrigeration should be investigated. Early season maize has a much higher yield than late-season maize and should be encouraged, together with cheaper and more effective storage of maize for longer periods.

e. Processing

Considerable scope exists for improving and expanding present methods of processing. This would result in better quality, less labor-intensive techniques, and less waste. More processing would reduce bulk and hence transportation costs, regularize supplies throughout the year, and possibly increase the range of available products.

Like other aspects of the system, processing is undertaken by a large number of small, independent entrepreneurs. Any modification of the present labor-intensive techniques would increase the cost of purchased inputs and often necessitate a capital outlay. For this reason, many innovations are impracticable. For example, large-scale gari processing employing hired help cannot at present compete with gari produced by traditional methods: moreover, an adequate and regular supply of cassava must be assured before such methods can be economically feasible. However, some innovations, such as machine grating of peeled cassava tubers, appear feasible.

Research into present processing and milling practices is urgently required. As presently carried out, maize milling results in a poor quality product as well as excessive waste of both product and nutritional value. The same is true to a lesser extent of rice. Furthermore, the merits of wet-versus dry-milling should be investigated, together with improved methods of processing yam and cassava.

f. Packaging

The introduction of a formal system of grades and standards will encourage the marketing of prepackaged staple foods, primarily those now

processed, such as gari, yam flour and cassava flour, and to a lesser extent maize, rice and cowpeas. As a first step, some traders will probably supply sacks or bags for after-sale packaging and will charge for them until such time as the practice becomes more general.

The sale of staple foods in sacks should be encouraged, as it will help to eliminate the prevailing rather unhygienic methods of retailing and to implement any system of grades and standards which may evolve. Furthermore, the demand for packaging materials would provide an important market for a paper industry based on Nigerian timber. Balance of payments considerations demand that government encouragement of packaging be somewhat restrained until locally-produced packaging material is available in sufficient quantity.

g. Credit

The present system of staple food marketing is not dependent on external sources of credit. However, this creates several major weaknesses in the system which should be corrected. First, lack of credit and a constant need for cash forces producers to sell a disproportionately high share of their surplus output immediately after harvest.

An improved system of producer credit would obviate this; the seasonal pattern of supplies and prices would be less erratic, and the producer would receive a higher average price for his total output. His bargaining position would almost certainly be improved.

Secondly, to encourage greater efficiency in the assembling function, adequate short-term credit should be made accessible to carefully selected traders. With supervision and improved record keeping, these traders

would probably be good credit risks, as well as being more successful personally. This would almost certainly lead to higher producer prices through more effective trader competition.

Thirdly, short-term credit should be granted to traders who are competent to engage in storage and spatial arbitrage. The credit should be equivalent to a high proportion of the value of the goods, provided the trader has some equity invested in the commodities financed to cover the loan. Again supervision and a complete set of records should be required by the financing agency. Such financing would reduce seasonal price fluctuations, as well as major price differences between the more important consuming areas.

And lastly, many of the suggestions for improving the marketing environment involve capital expenditure. If the suggestions prove economically feasible, credit (capital) will generally be necessary for successful implementation. For example, local government councils will have to obtain loans if substantial improvements are to be made in marketing facilities. Major improvements in storage and processing facilities may also depend on outside sources of credit (capital).

No attempt should be made to extend credit facilities to small traders, particularly retailers.

### 3. Transportation

Although transportation is one of the more satisfactory features of the system, improvements in the transportation network and rolling stock are still very necessary. A cheap and more effective means of assembling and moving staple foods is required to bring producers closer to the

marketing system, to encourage the production and marketing of greater quantities of produce, and to reduce marketing costs and eliminate imperfections.

The cost of providing these benefits must be weighed carefully against the economic returns. Nevertheless, it is likely that the construction of certain new roads, especially feeder roads, and the upgrading of some existing roads to all-weather roads would be feasible. Furthermore, measures designed to increase transportation or reduce costs should be encouraged; this applies specifically to the level of import duties on motor vehicles, the availability of finance (hire-purchase), the cost of such items as insurance, spare parts, gasoline and licenses, and also to non-economic items such as bribes and collusion.

#### 4. Public Policy in Other Sectors

The marketing system for staple foods is a small but very important part of an interdependent economic system. In fact, the overall development of the agricultural economy and hence the total economy of the Region depends in large part upon proper support being given to staple food marketing. Any improvement in the operating efficiency of the marketing system will lead to benefits in other sectors, while the reverse is also true to some extent. The more important aspects of this interdependence are discussed briefly below.

##### a. Agricultural Production

Hitherto, the emphasis has been on improving the marketing system so as to increase producer bargaining power and trader competition, in anticipation that producers will receive a "fairer" price for their

product and some measure of price stability will be achieved. However, with the market demand for staple foods outpacing population growth, largely as a result of urbanization and rising incomes, it is essential that agricultural production be expanded and production techniques improved. Public encouragement of agricultural production can manifest itself in several ways.

- By the development of higher-yielding, improved varieties, the seeds being made available to producers through public seed multiplication programs. Some varieties have already been developed and released, although mass multiplication is still in its infancy. Much research remains to be done. Consumer acceptance of new varieties should be tested early in the research program.

- By wide dissemination of new and improved techniques, including better land preparation, planting, crop care, and harvesting methods.

- Where economically justifiable, by encouragement of the use of purchased inputs, such as fertilizers, insecticides, and mechanical cultivation equipment. The advantages of subsidies might be explored and their use possibly expanded. An effective system for distributing technical knowledge to farmers should be set up.

- By making supervised short- and long-term credit available to agricultural producers, both for the purchase of inputs and for financing marketing activities.

- By closer integration of producers into the society as a whole. Rural areas can be made less remote by improved communications and increased services, and producers can become more directly involved in

public development plans. Ways must be found of convincing producers that they play a vital part in the development of the economy. As long as they feel that they belong to a backward and primitive sector which offers little hope of personal development, agriculture will retain its low professional status and rural life will continue to hold little attraction.

This last item perhaps constitutes the most important incentive to increasing the level of agricultural production and productivity.

b. General Economic Development

The market for staple foods depends to a large extent on the general level of economic development. With development comes a larger urban population and a rise in cash incomes. Moreover, direct development activities have a multiplier effect throughout the economy resulting from an increased demand for purchased inputs (materials and services) on the part of producers, and for goods and services on the part of consumers. There are numerous other market stimuli inherent in resource development, infrastructure, government revenue and services, and foreign trade.

Increased incomes will allow consumers to raise their standard of living, thereby reducing their dependence on staple foods (although better quality products will then be consumed), and will enable them to demand more and better marketing services. In fact, the development of the marketing system is contingent upon a generally rising level of economic development.

c. Population Control

The problem of a high and increasing birth rate and a decreasing mortality rate as they affect food supplies, investment in human development, and related social and private costs needs to be more clearly recognized. For development planning, to ignore the problem is to accept its consequences implicitly. This results in a large proportion of the development resources being devoted to merely maintaining present levels, while the remainder must be distributed over a steadily increasing population.

If population control is accepted as an integral part of public policy and development plans, then a program for changing human values, combating ignorance, and removing certain superstitions must be introduced. One rather obvious way of reaching the traditional sector of the society is through the marketing system. The possibility of linking this educational campaign to the four-day market cycle should be seriously explored.

d. Human Nutrition

The fact that present diets are generally lacking in the important nutrients, except carbohydrates, may be attributed largely to the very great dependence on staple foods. This is compounded by the high consumption of roots and tubers, which are even more deficient in nutrients than grains. Protein deficiency is particularly serious in children.

The technology and materials now exist to overcome most of these deficiencies. For example, the synthetic fortification of wheat and rice

with amino acids is now economically feasible.\* In Western Nigeria, the granular and flour products processed from yam and cassava are amenable to the addition of a protein supplement; groundnut (peanut) meal is already available, and soybean meal and fish protein concentrate might also be used. The economic feasibility of such food supplements should be seriously investigated, although any such program would have to be publicly subsidized. The marketing system has been successfully adapted to handle nontraditional foodstuffs, such as canned and packaged foods, and could probably also handle proteins and other food supplements, provided the commercial demand was big enough. However, until incomes rise sufficiently to make a considerable increase in the consumption of high-protein foods possible, the problems of malnutrition, poor resistance to disease and general debility will remain. Measures to raise the general level of human nutrition are not only humanitarian but contribute to general economic development, and they should be investigated and supported.

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\* Orville L. Freeman, "Help for Developing Countries in Waging War on Hunger," Foreign Agriculture, December 4, 1967, p. 3.

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MARKETING OF STAPLE FOODS  
IN WESTERN NIGERIA

Volume 2

Prepared for:

THE UNITED STATES AGENCY FOR  
INTERNATIONAL DEVELOPMENT



STANFORD RESEARCH INSTITUTE  
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By: Alan R. Thodey

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## CONVERSION FACTORS

### WEIGHT

1 long ton (2,240 lbs.) = 1.12 short tons.

### CURRENCY

1 Nigerian pound (£N.1) = US\$2.80.

1 pound = 20 shillings (s.).

1 shilling = 12 pence (d.).

## QUESTIONNAIRE ABBREVIATIONS

|        |                                         |
|--------|-----------------------------------------|
| HS     | Household Survey                        |
| MBQ    | Market Buyers Questionnaire             |
| MTQ #1 | Questionnaire on Markets #1             |
| MTQ #2 | Questionnaire on Markets #2             |
| MTQ-RF | Questionnaire on Markets - Revised Form |
| MSE    | Market Sellers Enumeration              |
| PS     | Producer Survey                         |
| QOM    | Questionnaire on Markets                |
| RPS-I  | SRI Retail Price Series for Ibadan      |
| RTEFSQ | Ready-to-eat-food Sellers Questionnaire |
| SRS    | 110 Selected Retail Sellers             |
| WPS-I  | SRI Wholesale Price Series for Ibadan   |
| WTQ    | Wholesale Traders Questionnaire         |

# Chapter II

## INTRODUCTION



## II INTRODUCTION

The present system of marketing agricultural commodities in tropical Africa is often considered one of the most serious impediments to that region's agricultural development. Serious inefficiencies are thought to exist throughout, from producer to ultimate consumer, and from the technique of exchange to the processing, storage and transportation of the commodities marketed. These inefficiencies are thought not only to result in a real loss of product but also to create a disincentive for increased agricultural production. If this is true, then improved marketing facilities and practices are essential to agricultural development.

### A. OBJECTIVES

Using Western Nigeria as an example, the objective of this study is to test the above hypotheses for the major staple food crops and to make general recommendations concerning possible improvements.

More specifically, as originally formulated the objective is (1) "to obtain by direct observation and inquiry an understanding of the extent to which the existing market system (in Western Nigeria) affords an efficient low-cost outlet for staple food products," and (2) "to identify inefficiencies when they exist, and their causes, in the expectation that such knowledge will provide a firmer basis for the formulation of policies to reduce these inefficiencies."<sup>(1)</sup>

## B. SCOPE

The scope of the study, as embodied in the "basic research outline" prepared at the Stanford Seminar, <sup>(2)</sup> was extremely broad and all-inclusive of every facet of marketing. This outline was intended as a general listing of the relevant items to be studied, with the more important items in the marketing of staple foods in Western Nigeria being covered in depth while the remainder were to be treated more cursorily.

Summarized from the basic research outline, the overall scope of the project was as follows:

### I. Description of General Setting

- Limitation of study
- Agricultural production patterns
- Food consumption patterns
- Areas of food deficit or surplus
- Essential demographic characteristics

### II. Organization of the Marketing System

- Product flow and exchange levels
- Personnel--agents
- Facilities
- Use of market facilities
- Behavior of marketing agents

### III. Forces Affecting the Operation of the Marketing System

- Incentives to enter the market
- Barriers to market participation
- The price setting process
- Competition by market agents
- Observance of ethical or behavioral standards
- Profitability of marketing activities
- Evidence of recent changes in these forces

### IV. Governmental Policies in Other Sectors which have Major Impact on Market Organization and Performance

- National plans
- Taxation
- Price control

## V. Evaluation of Marketing Performance

Performance in the eyes of the participants  
Accuracy with which prices reflect all information about supply and demand that is part of the system  
Possibility for significantly improving the technical efficiency of the marketing system by a reallocation of existing resources, including labor and ancillary facilities  
Points of new investment in the marketing system which would contribute most to its effectiveness in allocating supplies and in stimulating increased productivity  
Satisfaction by the marketing system of extra-economic social goals

## VI. Alternative arrangements to Improve Performance at the Various Stages in the Marketing Process that Merit Special Consideration

Part I, "Description of General Setting," provides the frame of reference for the study and the background information essential to an understanding of the marketing system as it now exists. Further, it sets the constraints within which change is economically feasible and the rate at which it can be achieved.

In setting the scope of the study it was decided to include only the major staple food crops, selected on the basis of their contribution to the total food calories consumed within the Region. Only estimates of this exist but there is little doubt that yams, cassava products and maize occupy a prominent place in the local diet. After viewing the local situation, five commodities were selected for study: yams (in fresh tuber form), gari (a processed form of cassava), maize (corn), rice and cowpeas (beans).

An estimate by F.A.O.<sup>(3)</sup> for Western and Mid-Western Nigeria for 1963-64 gave the following percentage contribution of the major food crops to total calorie supplies.

| <u>Commodity</u> | <u>Percentage Contribution<br/>to Total Calorie Supplies</u> |            |
|------------------|--------------------------------------------------------------|------------|
| Roots            |                                                              | 53.3       |
| Yams             | 26.5                                                         |            |
| Cassava          | 25.0                                                         |            |
| Cereals          |                                                              | 21.7       |
| Maize (corn)     | 16.1                                                         |            |
| Rice             | 3.7                                                          |            |
| Pulses and nuts  |                                                              | 5.1        |
| Cowpeas (beans)  | 2.4                                                          |            |
| Oils and fats    |                                                              | 13.2       |
| Palm oil         | 13.2                                                         |            |
| Other            |                                                              | <u>6.7</u> |
|                  |                                                              | 100.0      |

This estimate ranks yams slightly higher than cassava but the order of importance is not firmly established. Maize is a very important third crop.

Although both rice and cowpeas make a comparatively small contribution to total calorie supplies, their importance on three other grounds seemed to justify their inclusion.

1. Both are high-value prestige foodstuffs with a positive income elasticity: possibly between 0.5 and 0.6.<sup>(4)</sup> This suggests that they are going to assume more importance in the future as sources of calories.

2. In the larger urban areas, especially Ibadan, both are already important sources of calories. Consequently rice and cowpea traders are quantitatively important in these areas.

3. As little of either commodity is produced within the Region, both have to be imported from the other regions of Nigeria. The resultant

long-distance trade not only relies entirely on the exchange economy but has led to the development of a significantly different marketing system for these commodities.

Although it is estimated that palm oil accounts for 13.2 percent of total calories, it was not included among the commodities studied as it derives its calories from fats rather than from carbohydrates. Furthermore, it is not a staple in the sense of being a "principal element" in the meal: it is consumed in conjunction with a starchy staple, usually in a liberally peppered soup.

The area to be studied had to be defined at an early stage. To obtain a good knowledge of a large and important trading area, it was decided to concentrate on Ibadan and that portion of its supply hinterland located within Western Nigeria. Ibadan is the most important central market in Western Nigeria. With a population of two-thirds of a million people, it is the largest town in tropical Africa and has a relatively large supply area associated with it.

Part II of the basic research outline concerns the structure of the marketing system and behavior of the various elements. Accurate and detailed knowledge of both structure and behavior is necessary in order to be able to make an evaluation of the marketing system, which is the heart of this study. Part III of the outline relates to the forces within and surrounding the marketing system that help to determine (explain) its operation. These include not only the economic factors but also the related socio-cultural forces. Actual performance of the elements of the system is also evaluated here. The role of public policy and programs as an influencing force is covered in Part IV of the outline.

Part V of the outline seeks an evaluation of marketing performance and specifies five possible criteria for measuring market efficiency. However, "because this is essentially an economic study rather than a technical or socio-cultural one, it is the second criterion that weighs most heavily. It is expressed here as an appraisal of how accurately prices reflect all information about supply and demand that is in the system (or that might be in the system); that is, the extent to which this system approximates a perfect market in which prices reflect all such information instantly."<sup>(5)</sup>

The first criterion is intended to provide helpful insights into market imperfections while "the third and fourth criteria both have to do with technical efficiency, but are separated in order to isolate the question about new investment in physical facilities, which essentially lies outside the competence of the economists engaged in the study. But questions about new investment are also intended to provide a basis for governmental decisions to intervene in the market for increased efficiency. The fifth criterion recognizes that in every state there may be extra-economic goals of a social or political character which prevent exclusive reliance on economic criteria when appraising the functioning of the market system."<sup>(6)</sup>

The final section in the outline, Part VI, provides scope for the presentation of rather generalized policy recommendations. These are based on the evaluation of present marketing performance and on the major factors determining this performance. Improved performance may result from a change in the present structure or environment of the system or

in the behavior of any of its components. Where these seem desirable and feasible, they are outlined in some detail.

### C. DATA COLLECTION AND ANALYSIS

Although Nigeria is perhaps the most researched country in tropical Africa, there is nevertheless a paucity of available data. This is frequently compounded for the social scientist by the tremendous problems of data collection among predominantly illiterate and uneducated people. Obviously, methods appropriate to a similar study in the United States would be totally inadequate and probably misleading if used in tropical Africa.

The collection of primary data by means of direct observation and inquiry was accorded priority. Following the initial contacts with the marketing system, questionnaires and in-depth interviews were conducted and direct price observations were made. Relevant and reliable secondary data was obtained wherever possible.

The method of collection and analysis of the data included in the study are discussed in detail in the following six sections. These follow the major phases of the field work which were as follows.

1. A system was set up for the collection of retail and wholesale price data in Ibadan on a weekly basis, and outside Ibadan on a less regular basis.
2. A survey of the Ibadan markets was made to obtain detailed knowledge about market facilities and traders.
3. Data collection pertaining to market facilities and traders was extended to urban centers and rural markets outside Ibadan.

4. Villages were selected and producers surveyed to obtain information directly about production patterns and producer marketing habits.

5. The Ibadan markets were revisited to fill the most apparent gaps in the earlier work and a survey of households conducted to learn of consumption patterns and consumer purchasing habits.

6. The collection of data from secondary sources, principally the Federal Office of Statistics in both Ibadan and Lagos.

#### D. PHASE ONE--PRICE COLLECTION

The development of a system for collecting price information was given priority throughout the study and was the most central and lasting element of the field work. It began in the last week of May 1966, and in all covered a period of fourteen months.

##### 1. SRI Retail Price Series for Ibadan

The collection of price data was begun in Dugbe Market on an experimental basis. The method adopted and applied during the last week of May 1966 proved most suitable and was used to the end of the collection period, July 31, 1967. Basically, the method involved the observation of the transaction by two people: a research assistant and a helper. The price of the measure used was ascertained by listening, the number of measures purchased by observation, and the weight of the purchase by weighing it with the buyer's permission on portable spring scales. The assortment of containers and wrappers made it more convenient to weigh all purchases loose. Information was then recorded as to variety, time of purchase, type and sex of seller, sex of buyer, quantity, price and name of local measure used, and price and weight of purchase.

Analysis of these observations showed that in the same market on one day the price paid (in pence per pound) varied tremendously. In fact, the high price was usually at least 30 percent, and frequently over 100 percent, above the low price. With such price spreads, certainly caution must be used in the analysis and use of these data. Through training and rigorous supervision, the possibility of errors by the research assistants was minimized but not eliminated. Faulty observation and recording or a slight maladjustment of the spring scales was an everpresent danger, particularly in the hot and tiring conditions under which they had to work.

It was decided, therefore, that a minimum of seven transactions for each commodity should be observed, and the two extreme values excluded from the computed simple average. Observations were recorded irrespective of size of measure used, because early analysis could not establish any definite relationship between price and quantity purchased. Although the objective was seven observations, they were not always obtained, particularly in the case of maize.

From the second week of July 1966, regular price collection was also undertaken in the very important markets in the central section of native (old) Ibadan. Several markets merge in this area, but one in particular, Oritamerin Market, was made the major collecting market, although adjacent parts of Oja Iba Market were also occasionally included. Price data collected in the major markets in Ibadan by both this project and the Federal Office of Statistics show that a significant price difference exists between Dugbe and the central native markets. Moreover, there is a greater variation in price in one day in any one of the central markets than between these markets. For this reason, and because of budget limitations, only Dugbe and Oritamerin Markets were included in a regular price series.

Experience also failed to reveal any consistent price pattern related to day of the week or time of day. Therefore, Friday<sup>(7)</sup> was chosen as the day for price collection, as it is one of the busiest market days. With a few exceptions, Dugbe Market was visited in the mornings for about four hours and Oritamerin Market for about the same time in the afternoons.

Prices were collected for all the major commodities included in the study: i.e., yam tubers, gari, maize, rice and cowpeas. With the exception of rice, one variety is predominant for each commodity, which facilitated price collection. Rice presented a problem that was never completely mastered. Variety depended mostly on source of supply and this differed by market and often by time of year within a market. The embargo on the exportation of Eastern Nigeria rice caused supplies of this formerly predominant variety in Dugbe Market to fluctuate widely and finally disappear.

As the collection of this price series took place on Fridays only, it had to be included in the overall schedule of the field staff. An effort was made to assign it to one individual, but due to other commitments and ill-health, this was not always possible. Interviewer bias is suspected in a few cases.

The magnitude of the task involved in observing and weighing so many transactions is indicated by the following table, which gives the number of observations and total weight of each commodity included in the price series for each market.

|         | Dugbe Market        |                     | Oritamerin Market   |                     |
|---------|---------------------|---------------------|---------------------|---------------------|
|         | <u>Observations</u> | <u>Weight (lbs)</u> | <u>Observations</u> | <u>Weight (lbs)</u> |
| Yam     | 652                 | 12,323              | 617                 | 19,935              |
| Gari    | 683                 | 5,621               | 668                 | 7,742               |
| Maize   | 192                 | 1,515               | 359                 | 4,976               |
| Rice    | 493                 | 3,269               | 625                 | 6,231               |
| Cowpeas | 492                 | 3,090               | 459                 | 4,085               |
|         | <hr/>               | <hr/>               | <hr/>               | <hr/>               |
| Total   | <u>2,512</u>        | <u>25,818</u>       | <u>2,728</u>        | <u>42,969</u>       |

Over 5,200 people with purchases of over 30 long tons cooperated with the research assistants. One pleasing feature was the cheerful acceptance by both buyer and seller of the inconvenience involved. In fact, sellers became so accustomed to the procedure that they would frequently hand the purchase to the assistant without reference to the buyer - often creating a situation that required considerable tact. Considering the number of people involved, there were very few refusals.

The entire analysis of the retail price series was made on a desk calculator for each market. In addition to calculating average price per pound (lb.) on a weekly basis, all observations were analyzed on a monthly basis for the number of observations and average price based on sex of buyer, size (weight) of sales and size of measure used, as well as calculating the average weight of observations, the average weight of measure used and average number of measures purchased.

## 2. SRI Wholesale Price Series for Ibadan

Sales in bulk are an important element in the marketing of staple foodstuffs in Ibadan. All commodities are handled in bags at the wholesale level except yam tubers, which are dealt with loose. During the last week of July 1966, the regular collection of wholesale prices was initiated for Dugbe and Oritamerin Markets, Ibadan, in conjunction with the retail price series that was already been collected. On Fridays, inquiries as to price and variety were made from three separate traders for the major variety of each commodity. Generally, little variation in price existed within each market on the same day so that from these observations a representative price for the day could be selected.

Except for the few weeks when the assistants omitted to collect wholesale prices or there were no supplies in the market, the series runs from July 30, 1966 to July 29, 1967. Supplies of the minor varieties of each commodity were too irregular to obtain a continuous series. Yam tubers were excluded because of the lack of a convenient measure and the burdensome task of weighing large quantities of yams. The varieties included are listed on the next page:

| Commodity | Importance     | Color       | Variety              |                                             | Grade   |
|-----------|----------------|-------------|----------------------|---------------------------------------------|---------|
|           |                |             | Local Name           | Source of Supply                            |         |
| Gari      | Major          | White       | Iteko                | Western Nigeria                             | Second  |
|           | Minor          | Yellow      | Iteko                | Mid-Western Nigeria                         | Second  |
| Maize     | Major          | White       | Dried-shelled        | Western Nigeria                             | Average |
|           | Minor          | Yellow      | Dried-shelled        | Western Nigeria                             | Average |
| Rice      | Major (Dugbe)  |             |                      |                                             |         |
|           | Minor (Orita.) | Brown       | Abakaliki            | Eastern Nigeria                             | Average |
|           | Major (Orita.) |             |                      |                                             |         |
|           | Minor (Dugbe)  | Brown       | Tapa                 | Niger & Ilorin Prov.<br>in Northern Nigeria | Average |
|           | Minor          | Brown       | Ofada                | Western Nigeria                             | Average |
|           | Minor          | Brown       | Wiri-wiri            | Benuue Province<br>in Northern Nigeria      | Average |
|           | Minor          | White       | Uncle Bens,<br>Ghana | Imported                                    | First   |
| Cowpeas   | Major          | White       | Black-eye            | Northern Nigeria                            | Average |
|           | Minor          | White-Brown | Pewu                 | Northern Nigeria                            | Average |
|           | Minor          | Brown       | Brown                | Northern Nigeria                            | Average |

### 3. Price Collection Outside Ibadan.

In Phase Three of the field work, price collection in rural markets and other urban centers outside of Ibadan was undertaken. However, no attempt was made to collect a continuous price series for any one market. Instead, 52 different rural markets and 20 different urban markets outside Ibadan were visited at least once and the prices of the major staple food commodities were collected. The names of markets and dates visited are included in the discussion under Phase Three.

The objective was to use these prices in conjunction with the series being collected in Ibadan, using the latter as a base for comparison. The method of collection and analysis was identical to that used for Ibadan.

#### E. PHASE TWO - MARKETS IN IBADAN

As Ibadan was to be the central focus of the study, it was clear that an early understanding of the structure and operation of its marketing system was essential. Accordingly, May to September 1966 was devoted to acquiring this information in Ibadan. This phase ended with the preparation of an interim report during August - September 1966.

Field work during this phase involved several aspects. Two major questionnaires directed toward traders were developed and administered. An attempt was made to collect detailed and accurate records of the sales and costs of individual traders. Traders in the Ibadan markets were enumerated, but the method was not perfected until Phase Five. The investigation into market facilities and their mapping was begun. A collection of food samples for moisture determination was made, the wholesale price and weight of a bag

URBAN MARKET - SELLING AT RETAIL



Bean Sellers



Rice Sellers



Gari Sellers

Oritamerin Market, Ibadan

being obtained. Also, the preparatory work for the Third Phase, including the development of an extensive system of questionnaires and the selection of additional assistants, was carried out.

The major efforts at data collection undertaken during this and the later phases will be discussed in chronological sequence. Those begun in this phase but completed during a later phase will be discussed in the later phase. Map 2.1 shows the location of the major food markets in Ibadan.

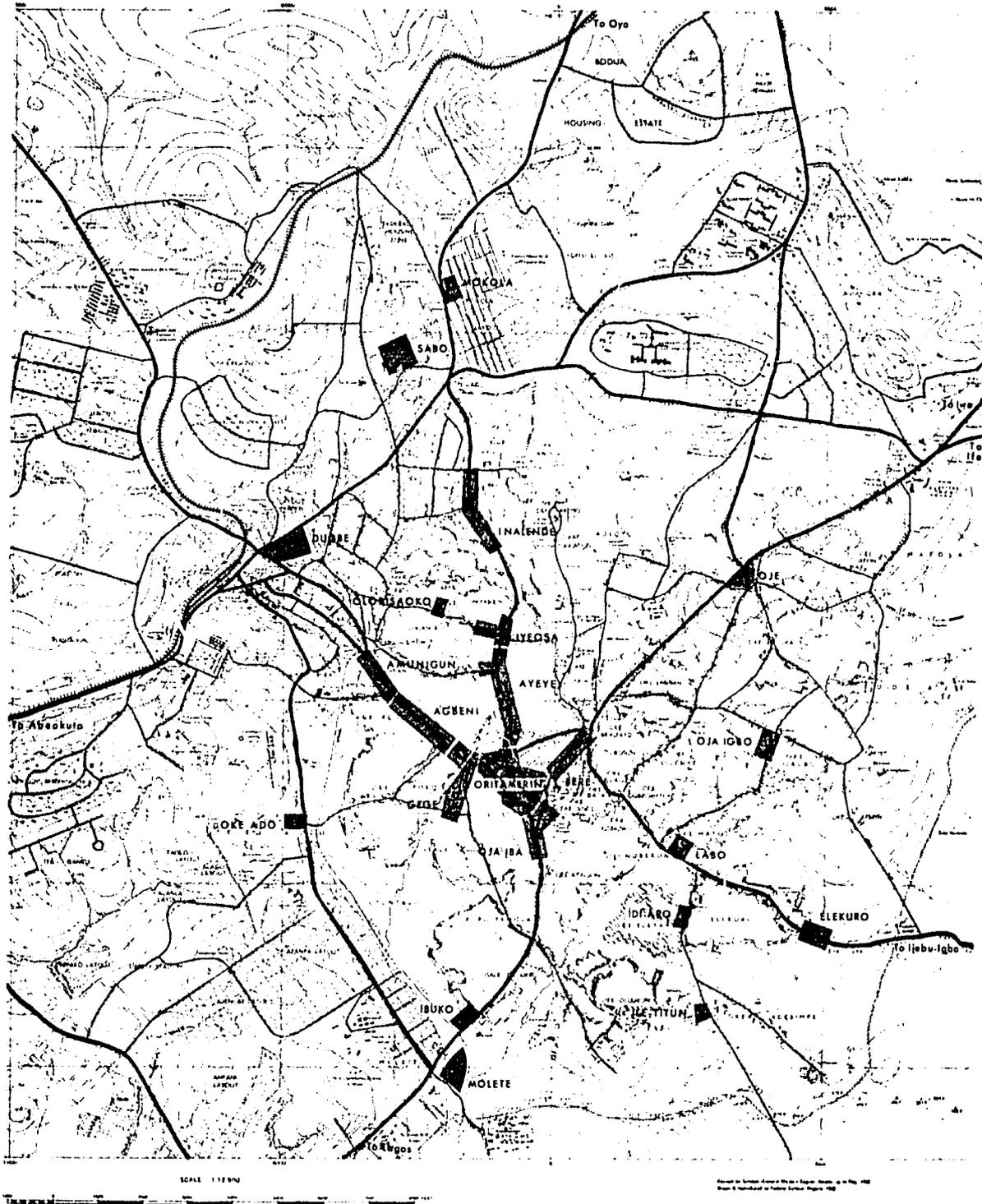
1. Market Traders' Questionnaire #1

Conducted during June - July 1966, Market Traders' Questionnaire #1 was designed to acquire fairly general and impersonal information about the staple food traders in the Ibadan markets. It included behavioral as well as structural questions and was divided into three parts: (1) facts which could easily be answered by the interviewer, such as type of seller, type of stall, sex, and staple foods being sold; (2) fifteen questions relative to the trader and the business that required trader response, such as years selling, use of credit, sources of capital, rent, membership in a trade association, education, and so on; and (3) twelve questions concerning the different varieties of each commodity being sold. These included place of purchase, place of production, method of buying, cost and method of transportation, usual quantity and frequency of purchase, and changes made in form of product.

The sample was selected in the market by the research assistant and involved interviewing every tenth staple food trader as he moved systematically through the market. A refusal was to be replaced by the eleventh trader. The

Map 2.1

IBADAN: MAJOR FOOD MARKETS STUDIED IN DEPTH



sample was not structured for a defined distribution between retail, retail-wholesale, and wholesale traders. Later counts of all market sellers showed that the sample of 264 traders was considerably less than the 10 percent objective. It is considered, nevertheless, that this has not caused an undue bias in the sample selected.

Table 2.1 shows the distribution by market and by type of seller of the 264 traders for whom completed questionnaires were obtained. It will be noticed that 106, or 40 percent of the sample, sold at retail only; 122, or 46 percent, sold at both retail and wholesale; while the remaining 36, or 14 percent, sold exclusively at wholesale. Of the 264 traders, 67, or 25 percent, were male and 197, or 75 percent, were female. The location of these markets can be observed in Map 2.1.

## 2. Market Traders' Questionnaire #2

The success of the first Market Traders' Questionnaire showed that traders were willing to give the interviewer more direct and personal information than had been expected. To capitalize on this situation, a follow-up questionnaire was prepared, pretested, and administered to staple food traders in Ibadan markets during August - September 1966.

As the purpose of this second questionnaire was to obtain information complementary to that obtained with the first questionnaire, the structure was approximately the same: (1) basic facts that could be observed by the interviewer; (2) eight questions regarding the business, such as owner of

Table 2.1

NUMBER OF SELLERS BY MARKET AND BY TYPE OF SELLER - DISTRIBUTION  
OF 264 STAPLE FOOD TRADERS INCLUDED IN MARKET TRADERS  
QUESTIONNAIRE #1 - IBADAN - JUNE-JULY 1966

| <u>Market</u>                     | <u>Type of Seller</u>  |                              |                           | <u>All<br/>Sellers</u> |
|-----------------------------------|------------------------|------------------------------|---------------------------|------------------------|
|                                   | <u>Retail<br/>Only</u> | <u>Retail-<br/>Wholesale</u> | <u>Wholesale<br/>Only</u> |                        |
| <u>Central New Markets</u>        | 36                     | 8                            | 5                         | 49                     |
| 1. Dugbe                          | 36                     | 8                            | 5                         | 49                     |
| <u>Central Native<br/>Markets</u> | 55                     | 114                          | 31                        | 200                    |
| 2. Gege                           | 8                      | 23                           | -                         | 31                     |
| 3. Oritamerin                     | 16                     | 32                           | 14                        | 62                     |
| 4. Oja Iba                        | 14                     | 29                           | 5                         | 48                     |
| 5. Ayeye                          | 17                     | 30                           | 12                        | 59                     |
| <u>Residential Markets</u>        | 15                     | -                            | -                         | 15                     |
| 6. Inalende                       | 4                      | -                            | -                         | 4                      |
| 7. Mokola                         | 5                      | -                            | -                         | 5                      |
| 8. Ibuko                          | 6                      | -                            | -                         | 6                      |
| <b>Total</b>                      | <u>106</u>             | <u>122</u>                   | <u>36</u>                 | <u>264</u>             |

stock, type of organization, money borrowed, losses suffered, and expenses incurred; and (3) questions relating to the commodities being sold, including the actual quantity of sales over the last month, buying and selling prices, source of supply, and distribution of sales throughout the year. The last item demanded an unusually long recall span but some useful relative data was obtained. The shorter the time span covered by a question, the more reliable the answer is likely to be. In Western Nigeria, about one month constituted the maximum period for which most respondents could furnish reliable information of the type required.

In selecting the sample, the stall number and other data collected in the first questionnaire were used to identify the traders and were copied onto the second questionnaire. As with the first questionnaire, traders in Dugbe Market were interviewed first. Although several traders were either now selling non-staple food commodities or had entirely left the market, most could be located and re-interviewed. The situation in the other markets was not as favorable however, and it soon became evident that replacements would lead to a substantially different sample. It was, therefore, decided to eliminate the residential markets included previously and to replace those traders no longer eligible with selected representative traders of the categories considered numerically weak.

In all, 256 interviews were conducted. The distribution of respondents between markets by type of seller is presented in Table 2.2; a change in the structure of the sample meant that retailers now accounted

for 51 percent and wholesalers 28 percent, leaving only 20 percent of the sample as mixed retailers-wholesalers. As the number of wholesalers was doubled and most wholesalers are male (92 percent in this survey), the number of males included was 94, or 37 percent.

Table 2.2

NUMBER OF SELLERS BY MARKET AND BY TYPE OF SELLER - DISTRIBUTION OF 256 STAPLE FOOD TRADERS INCLUDED IN MARKET TRADERS QUESTIONNAIRE #2 - IBADAN - AUGUST-SEPTEMBER 1966

|                               | Type of Seller |                  |                | All Sellers |
|-------------------------------|----------------|------------------|----------------|-------------|
|                               | Retail Only    | Retail Wholesale | Wholesale Only |             |
| <u>Central New Markets</u>    | 28             | 10               | 2              | 40          |
| 1. Dugbe                      | 28             | 10               | 2              | 40          |
| <u>Central Native Markets</u> | 102            | 45               | 60             | 216         |
| 2. Gege                       | 11             | 23               | 10             | 44          |
| 3. Oritamerin                 | 32             | 4                | 20             | 56          |
| 4. Oja Iba                    | 46             | 12               | 25             | 83          |
| 5. Ayeye                      | 13             | 6                | 14             | 33          |
| Total                         | 130            | 55               | 71             | 256         |

As each trader may sell more than one commodity, the number of traders selling the five commodities as relatively major items is 325. The questionnaire also revealed that traders with more than one commodity usually deal in each commodity to the same extent. Table 2.3 presents the distribution of sellers by type and by major staple foods sold. The actual number handling each commodity is higher if traders dealing in small quantities are included.

Table 2.3

NUMBER OF SELLERS BY TYPE AND BY STAPLE FOODS SOLD - DISTRIBUTION  
OF 256 STAPLE FOOD TRADERS INCLUDED IN MARKET TRADERS  
QUESTIONNAIRE #2 - IBADAN - AUGUST-SEPTEMBER 1966

| <u>Type of Seller</u> | <u>Staple Foods Sold</u> |             |              |             |                | <u>All Sellers</u> |
|-----------------------|--------------------------|-------------|--------------|-------------|----------------|--------------------|
|                       | <u>Yam</u>               | <u>Gari</u> | <u>Maize</u> | <u>Rice</u> | <u>Cowpeas</u> |                    |
| Retail only           | 7                        | 53          | 30           | 27          | 54             | 171                |
| Retail - wholesale    | 13                       | 21          | 13           | 9           | 11             | 67                 |
| Wholesale only        | 15                       | 23          | 20           | 5           | 24             | 87                 |
| <b>Total</b>          | <b>35</b>                | <b>97</b>   | <b>63</b>    | <b>41</b>   | <b>89</b>      | <b>325</b>         |

As can be seen, compared to the other commodities, less yam and rice sellers are included.

3. Observation of 110 Selected Retail Sellers in Oritamerin Market, Ibadan

An approximate idea of the quantity and value of retail sales can be gained from the buying price and the number of bags of a commodity sold. However, margins, number of transactions, number of inquiries not resulting in sales, and similar information about retailers can only be obtained by direct observation and recording of all transactions over a certain time period. For this reason, 110 selected retail sellers and two retail-wholesalers in Oritamerin Market, Ibadan, were each observed for one day between September 20 and October 6, 1966.

It was soon found that a day is generally too short a period in which to determine retail margins with any accuracy. Even though opening and closing inventory could have been accurately measured with little extra effort, the

resulting margins would have been of rather dubious reliability. Hence, it was decided to continue the daily observation of sellers in terms of sales and potential buyers only.

The sample was selected on the basis of convenience and representativeness. The small volume of individual sales and the tendency of many sellers to sell from the same stall, particularly those selling the same commodity, meant that one assistant could usually observe several sellers concurrently. The assistants were stationed in selected locations from where they observed as many sellers as they could easily and accurately handle. As Table 2.4 indicates, 18 different locations were used with an average of 6.2 observations in each. Two retail-wholesale sellers of yams were also observed at two different locations.

Table 2.4

NUMBER OF DIFFERENT LOCATIONS USED AND SELLERS OBSERVED BY COMMODITY AND BY TYPE OF SELLER - DISTRIBUTION OF 112 SELECTED SELLERS OBSERVED FOR DAY IN ORITAMERIN MARKET, IBADAN - SEPTEMBER - OCTOBER 1966

| <u>Commodity</u> | <u>Retail Only</u>              |                         | <u>Retail - Wholesale</u>       |                         |
|------------------|---------------------------------|-------------------------|---------------------------------|-------------------------|
|                  | <u>Different Locations Used</u> | <u>Sellers Observed</u> | <u>Different Locations Used</u> | <u>Sellers Observed</u> |
| Yams             | 4                               | 26                      | 2                               | 2                       |
| Gari             | 6                               | 24                      |                                 |                         |
| Maize            | 8                               | 26                      |                                 |                         |
| Rice             | 4                               | 22                      |                                 |                         |
| Cowpeas          | 4                               | 12                      |                                 |                         |
| <b>Total</b>     | <b>17*</b>                      | <b>110</b>              | <b>2†</b>                       | <b>2</b>                |

\* Does not add to 26 because in 8 locations either 2 or 3 different commodities were observed concurrently

† One location was the same as that used to observe gari retailers.

The observation of retailers required rather simple but continuous and diligent record keeping. The observers remained with the sellers for the 10-12 hours they were selling and recorded each transaction or inquiry as it was made. It is considered that all observers did a reliable job, although the possibility of a few omissions and hence a slight understatement cannot be entirely dismissed.

#### 4. Record Keeping

In addition to the direct observation of sales just mentioned, two other attempts were made to obtain accurate and detailed sales information from traders in Ibadan. Both were well conceived and planned; however, both required more supervision than was possible, with the result that they failed to live up to expectations.

The first involved regular daily contact with a selected group of traders in Iba and Oritamerin Markets, Ibadan. The objective was to keep a record of daily sales, purchases and selling costs over several months and to record inventory weekly for about 30 traders. These records would then be used to prepare a weekly and monthly summary of trading activities showing all sales, costs and margins. This information was to be collected by having an assistant visit the trader every day to inquire about the preceding day's business.

A cross-section of traders was selected whose main characteristic was a willingness to cooperate (at least initially). Although many techniques were applied during the three months (September 1 - November 30, 1966) in which records were kept, it proved virtually impossible to obtain a response from every trader every day. They were frequently

away from their stalls either momentarily or for the day. Further, as traders objected strenuously (or habitually excused themselves as the assistant arrived at the stall) they had to be dropped; some were replaced but others resumed after a period "of not being bothered" by the assistant. Unflagging and honest cooperation from traders required materially more reinforcement and support than was available. Consequently, the period of collection as well as the analysis and use of these records was considerably less than originally intended.

The second attempt involved only wholesalers and was an effort aimed at capitalizing on a need and a promise expressed by several of them. That is, the need for a system of record-keeping for their business and the assurance that they would be willing either to keep such records themselves or employ a literate to do it for them, provided they were shown how. In addition to providing invaluable information for this project, such a scheme would in fact leave the traders with a new and valuable management tool.

It was decided to develop a simple system of record keeping and to instruct the trader in its use. A research assistant was then to provide sustained supervision and to prepare a summary of all recorded business transactions on a monthly basis, giving one copy to the trader and keeping one for the project. In pursuit of this objective, general purpose account books were designed, printed and distributed to about 25 wholesale traders, in Dugbe Market and the central native markets, during September 1966. The distribution of the books and explanation of their use were met with appreciation by all the recipients. Although a few began regular

use of the record system, most decided to put it off to a later date.

On follow-up visits, it became apparent that this later date meant a later year. Increased project effort would probably have stimulated a higher response, but the demands of other and more productive aspects of the field work prevented this. Again the records collected as well as their analysis and use were less than originally planned.

#### F. PHASE THREE - MARKETS OUTSIDE IBADAN

The third phase of the field work extended not only its scope but also its spatial bounds. The objective of this phase was to study in depth a selected group of representative urban areas outside Ibadan together with several of the more important rural markets associated with each area. In each market, questionnaires were to be administered on market facilities and their operation, all sellers were to be counted and classified, a selection of buyers and sellers was to be interviewed, and prices were to be collected. In all, 16 different forms were prepared for the systematic collection of data.

The survey of markets outside Ibadan began on October 3, 1966 and was to last six months. Four research assistants in two teams were trained and deployed. It was expected that one to two weeks in each center would be required to complete the given assignments. Therefore a tentative selection of 36 urban areas was made, based on size and location.

**RURAL MARKETS - ASSEMBLING SUPPLIES**



**Yam, Obada Market,  
Odo Oba, Oshun Division**



**Headload of Dried Yam  
Olo Market**



**Assembling Dried Yam, Obada Market  
Oshun Division**

Experience, however, soon forced a revision of the original plans.

1. It soon became apparent that not all the centers included in the list for intensive study were actually relevant, especially those not directly part of or dependent upon Ibadan's supply hinterland. Consequently, most of the less relevant of these centers were removed from the list.

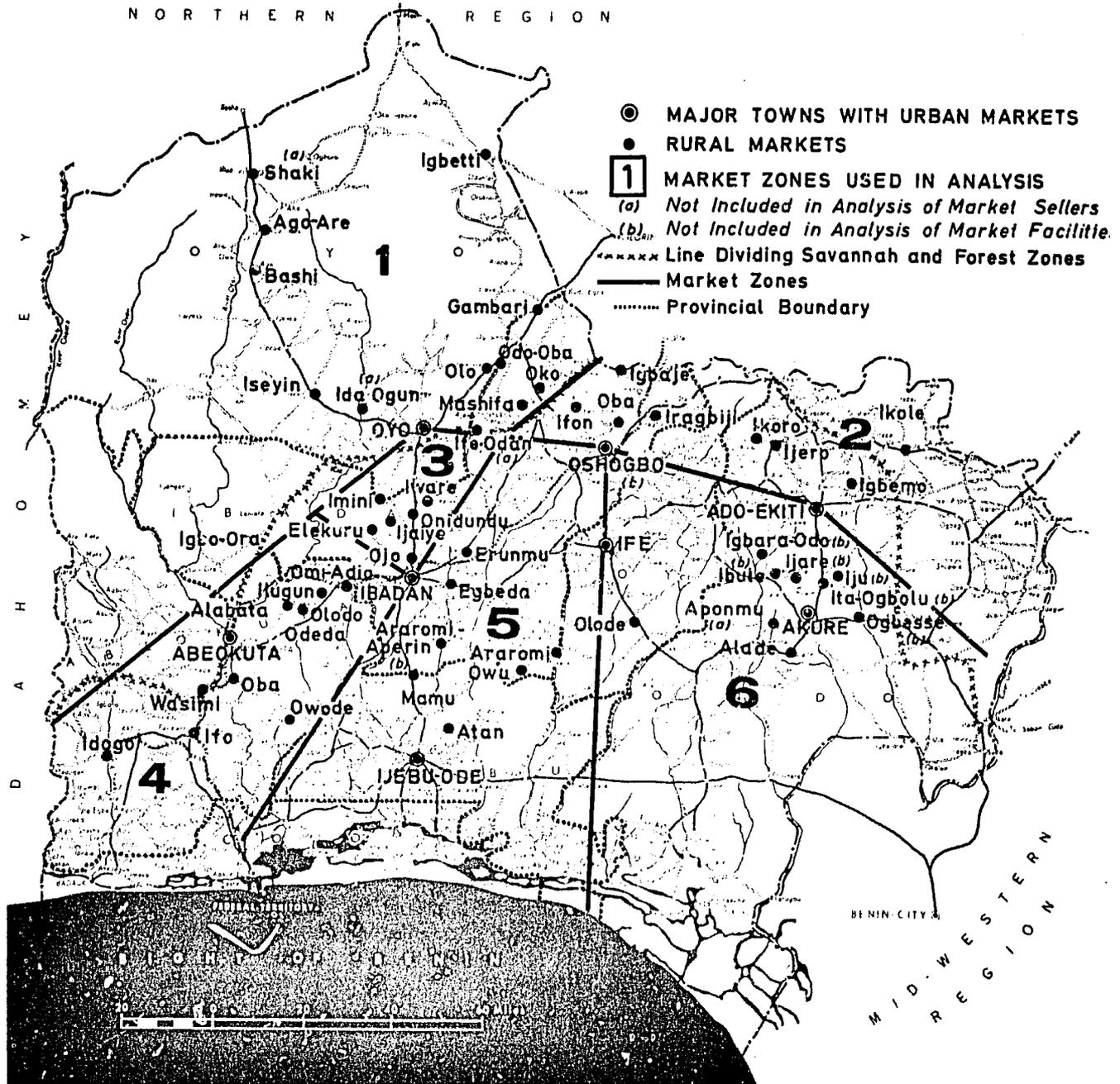
2. In the larger of these urban areas the existent marketing systems seemed to be structurally similar to that of Ibadan. That is, they were central markets in their right and were not dependent upon Ibadan for supplies of foodstuff with the possible exception for some of them of rice and cowpeas. Consequently, only seven major towns were selected for intensive study. They were: Abeokuta, Ado Ekiti, Akure, Ile-Ife, Ijebu-Ode, Oshogbo, and Oyo. Their location is illustrated in Map 2.2.

3. The satisfactory completion by the assistants of the profusion of forms as originally intended was found to require either more time or more personnel than was available. The program was, therefore, trimmed to include only the following:

- a. Questionnaire on markets.
- b. Enumeration and classification of all market sellers.
- c. Price taking of only the predominant staple foods on sale.
- d. Interviewing only a few selected seller in each market.

Map 2.2

LOCATION OF MARKETS STUDIED IN DEPTH



e. Interviewing as many traders as possible who were buying in rural markets for resale elsewhere.

f. Other forms only as time permitted or as instructed.

4. To achieve the required degree of reliability, intensive supervision of the assistants proved mandatory. This, perhaps more than any other factors, caused a basic shift in the method employed. At the start, each team was taken to the selected town where markets were located and contacts made. Once the work was programmed and clearly understood, the assistants were left to its execution although several visits were usually made to check on progress and reliability. This system was replaced after several months with a new and more reliable system. Specific urban and rural markets were selected for in-depth study based on their relevance to the scope of the project. A visit by two to four of the research assistants was then arranged to coincide with its holding. In this way, more direct control over the execution of the field work outside Ibadan was possible.

5. Sickness of the assistants also caused some dislocation of plans, particularly the loss of a month to yellow fever by the senior assistant. Other fevers were also quite frequently suffered.

At the cessation of field activities outside of Ibadan at the end of April 1967, a total of 52 different rural markets and 20 different urban markets had been studied in depth and numerous other markets summarily surveyed. The names and dates of the markets studied in depth are listed in Appendix Table 2.1 and their location can be seen in Map 2.2. This selection of markets certainly cannot be considered random and probably ended up being biased in favor of the larger and more important markets, particularly in 30 rural areas. Nevertheless

the data derived from this phase can be considered to be sufficiently representative for the purposes of this project.

The individual components of this phase will now be discussed in more detail.

#### 1. Questionnaire on Markets

An earlier version of the Questionnaire on Markets was developed and pretested in both Ibadan and rural markets during June 1966, to obtain information on the location, magnitude, condition, use, control and history of the facilities available. The questions were to be asked of the most appropriate person available, such as the local council employee responsible for the collection of market fees (if present), the relevant bale or oba (native ruler), the market elders, and well established and reliable traders.

This questionnaire was completed in all the urban markets selected for in-depth study and in all but 7 of the rural markets. The exceptions (listed in Appendix Table 2.1 and shown in Map 2.2) were mostly in the south east market zone around Akure; as these markets were found not to be supply markets to Ibadan, a repeat visit was not made.

The administration of this questionnaire required considerably more initiative and skill on the part of the assistant than the other questionnaires. Although many questions in this questionnaire were left unanswered, little could be done about it. Answers to certain questions were difficult to obtain and when obtained were often suspect. Further, additional "no responses" resulted from the assistants' administration of the questionnaire. Nevertheless, the data obtained is considered to give a reasonable portrayal

of the markets of the Region

Analysis of the questionnaires for the 16 Ibadan markets was undertaken concurrently with those for the 65 markets outside Ibadan. As only 81 questionnaires were involved, they were hand-tabulated in three parts (urban markets in Ibadan, urban markets outside Ibadan, and rural markets).

## 2. Market Sellers Enumeration

To know the structure of a market accurately in terms of sex of seller, type of seller and commodities sold, it is necessary to actually count and classify the sellers present. This was done for all the urban markets and for all but four of the rural markets that were studied in depth. As the 84 markets averaged 1,423 persons each, this resulted in a total of 119,448 people being enumerated. Table 2.5 contains the number of markets, number of sellers, and average number of sellers per market by major town or market zone included in the enumeration. The market zones used in the analysis of rural markets can be located on Map 2.2. Although many of the markets were counted several times, these figures represent the last count only for each market: recounts were made either when the market day was considered exceptional, for example, when many sellers were attending festival, or when the enumeration appeared unreliable.

The enumeration of market sellers began relatively early in the field work. In fact, food sellers were counted in Gege and Oritamerin Markets, Ibadan on May 31, 1966, and all sellers in Dugbe Market were enumerated the next day. With this and additional experience gained in enumerating sellers in the central native markets in Ibadan, a standardized system was evolved.

Table 2.5

NUMBER OF MARKETS, NUMBER OF SELLERS, AND AVERAGE NUMBER OF SELLERS PER MARKET BY MAJOR TOWN OR MARKET ZONE- DISTRIBUTION OF 119,448 SELLERS ENUMERATED IN 84 MARKETS

| <u>Major Town<br/>or<br/>Market Zone</u> | <u>Number<br/>of<br/>Markets</u> | <u>Number<br/>of<br/>Sellers</u> | <u>Average<br/>Number of<br/>Sellers<br/>Per Market</u> |
|------------------------------------------|----------------------------------|----------------------------------|---------------------------------------------------------|
| Ibadan                                   | 16                               | 35,761                           | 2,235                                                   |
| Other towns                              | 20                               | 27,505                           | 1,375                                                   |
| Abeokuta                                 | 5                                | 14,773                           | 2,954                                                   |
| Ado - Ekiti                              | 1                                | 1,051                            | 1,051                                                   |
| Akure                                    | 2                                | 2,441                            | 1,220                                                   |
| Ijebu - Ode                              | 5                                | 4,953                            | 991                                                     |
| Ile - Ife                                | 3                                | 982                              | 327                                                     |
| Oshogbo                                  | 2                                | 1,610                            | 805                                                     |
| Oyo                                      | 2                                | 1,695                            | 848                                                     |
| Rural Markets*                           | 48                               | 56,182                           | 1,170                                                   |
| 1. North West                            | 10                               | 10,235                           | 1,024                                                   |
| 2. North East                            | 8                                | 5,330                            | 666                                                     |
| 3. North Central                         | 6                                | 6,566                            | 1,094                                                   |
| 4. South West                            | 10                               | 22,422                           | 2,242                                                   |
| 5. South Central                         | 6                                | 5,148                            | 858                                                     |
| 6. South East                            | 8                                | 6,481                            | 810                                                     |
| Total                                    | 84                               | 119,448                          | 1,422                                                   |

\* Listed by Market Zone Number and by direction from Ibadan.

Each seller was counted only once and listed by major commodity; sellers generally concentrate on one commodity. Minor commodities were listed separately, once for each item, so that the same seller may figure several times with minor commodities. Altogether, seven commodity groups and 48 major sub-groups were provided for. These groups, together with the number of sub-groups associated with them, are as follows:

|                         | <u>Number of<br/>Sub-groups</u> |
|-------------------------|---------------------------------|
| Staple foods            | 14                              |
| Fruit, vegetables, nuts | 8                               |
| Dry provisions          | 1                               |
| Meat, fish, poultry     | 10                              |
| Cooked food             | 1                               |
| Hawkers <sup>(8)</sup>  | 1                               |
| Non-food                | <u>13</u>                       |
| Total sub-groups        | 48                              |

Details of the sub-groups, together with the results of the analysis, are presented in Chapter VIII of the report.

For the analysis, the markets in Ibadan were grouped by type of market; i.e., central native, central new, residential, and specialized cloth. The other urban centers outside of Ibadan, were grouped by town only. For the rural markets, the region was divided into six reasonably homogeneous areas in terms of major agricultural production patterns, type and quantity of surplus agricultural products, and markets studied. These were then called "Market Zones" and subsequently described in terms of their location in relation to Ibadan. (See map 2.2.)

Although mistakes are liable to occur in such an enumeration, it is felt that the final results, particularly as they relate to market structure, are generally quite reliable. Nevertheless a few exceptions do exist: the classification into wholesale and retail categories is probably only reliable for Ibadan, Abeokuta, and Akure. Some inaccuracies may be due to the omission of traders because of obscure locations or absence from the market when the count was made. It is also possible that some assistants were included as traders and some traders were excluded because they appeared to be assistants. These and the other errors of classification were considered to be minimal. Discontinuities in the recording of minor commodities led to the analysis of only the major commodity.

### 3. Market Traders Questionnaire - Revised Form

Although a few traders were interviewed outside Ibadan with the Market Traders Questionnaire #1 during Phase Two, a revised and expanded version of that questionnaire was used for all the interviews conducted during Phase Three. The number of different topics to be inquired into in relation to the trader was increased to 41, the rest remaining nearly the same except for format. This questionnaire was, in essence, a combination of Market Traders Questionnaires #1 and #2; its purpose was identical. The few additional questions concerned speculative and other storage and the trader's opinion of the status of marketing, and also his assessment of marketing performance and suggested improvements.

The sample was intended to be composed of 1 in 10 of all staple food sellers in the markets visited. This, however, soon proved to be an impossible objective, particularly if the other assignments were to be completed in the allotted time. Only in Ado-Ekiti and Ile-Ife was the original objective seriously attempted, and even here there was a disproportionate concentration on wholesalers. In fact, it soon became apparent that in the other urban areas the scope should be narrowed to concentrate mainly on wholesalers, as these traders were found to be the best source of information about sources of supply. As a result, 49 of the 103 questionnaires administered in urban areas outside Ibadan were with wholesalers.<sup>(9)</sup> The remaining 54 were with retailers. The details are shown in Table 2.6. In the rural markets it was decided to devote more effort instead to the use of the Market Buyers' Questionnaire. However, as Table 2.6 shows, a total of 34 of these questionnaires was administered in rural markets.

It is recognized that this sampling base is exceedingly small and that generalizations cannot possibly be based solely upon this source of information. However, from the in-depth interviewing of traders it did seem that where traders were performing a similar function their structure and behavior was basically analogous. As nearly all types of traders were abundantly present and already sampled in Ibadan, it seemed prudent to concentrate on those other aspects of the scope that could not be as easily covered.

Table 2.6

NUMBER OF RESPONDENTS TO MARKET TRADERS QUESTIONNAIRE-REVISED FORM  
BY TOWN OR RURAL MARKET ZONE AND TYPE OF SELLER - MARKETS  
OUTSIDE IBADAN - OCTOBER-DECEMBER 1966

| Location by<br>Town or Market Zone | Type of Seller |           | All<br>Sellers |
|------------------------------------|----------------|-----------|----------------|
|                                    | Retailer       | Wholesale |                |
| <u>Urban Areas Outside Ibadan</u>  | 54             | 49        | 103            |
| Abeokuta                           | 2              | 2         | 4              |
| Ado Ekiti                          | 29             | 17        | 46             |
| Akure                              | 8              | 13        | 21             |
| Ijebu Ode                          | --             | --        | 29             |
| Ile - Ife                          | 15             | 14        | 2              |
| Oshogbo                            | --             | 2         | 1              |
| Oyo                                | --             | 1         | --             |
| <u>Rural Market Zones</u>          |                |           | 34             |
| 1. North west                      |                |           | 6              |
| 2. North east                      |                |           | 11             |
| 3. North central                   |                |           | 1              |
| 4. South west                      |                |           | 7              |
| 5. South central                   |                |           | --             |
| 6. South east                      |                |           | 9              |
| Total                              |                |           | 137            |

The one major type of seller important in rural markets but not common in Ibadan is the "farm-level assembler." This type of seller assembles supplies at the producer level, either as producer, trader or agent (including women selling for their farming husbands), and sells either in a local market or from a private location. When he sells in a local market, his supplies are usually disposed of rapidly in bulk, whereupon he disappears or emerges as a buyer. The Market Traders' Questionnaire was not designed for this type of trader, and in fact these traders were never systematically covered. However, the survey of producers conducted during Phase Four was intended to throw some light on them.

#### 4. Market Buyers Questionnaire

This questionnaire was designed specifically to collect information from the traders who attend rural markets and assemble bulk quantities of a commodity for shipment and sale elsewhere. The objective was to learn the details of his movements, purchases, expected costs and returns, usual business behavior, and business structure. In addition to the information that could be observed by the assistant, there were questions on 36 topics to be asked of the respondent.

Throughout the in-depth study of rural markets, the so-called market buyers were to be interviewed as time and conditions permitted. The most difficult problem was holding the attention of market buyers long enough to get a questionnaire started. Generally they were too busy transacting their business or arranging transportation to give a formal interview. The best time for interviews proved to be the idle time just before buyers left the market.

Altogether, 128 interviews were conducted in 26 rural markets using this questionnaire. Because of the concentration of effort in the major supply markets to Ibadan, 56, or 44 percent, were conducted in the North-West Zone of the Region with a further 31, or 24 percent, in the South-West Zone. Table 2.7 shows the breakdown of interviews by commodity and by market zone. A heavy concentration in yams will be noticed. Women accounted for 110, or 86 percent, of the 128 interviews.

Table 2.7

NUMBER OF RESPONDENTS TO MARKET BUYERS QUESTIONNAIRE  
BY COMMODITY AND BY RURAL MARKET ZONE  
OCTOBER 1966-APRIL 1967

| Commodity                     | Rural Market Zone  |                    |                       |                    |                       |                    | Total    |
|-------------------------------|--------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|----------|
|                               | 1<br>North<br>West | 2<br>North<br>East | 3<br>North<br>Central | 4<br>South<br>West | 5<br>South<br>Central | 6<br>South<br>East |          |
| Yams                          | 38                 | 8                  | 2                     | 1                  | -                     | 2                  | 51       |
| Dried Yam                     | 6                  | -                  | -                     | -                  | -                     | -                  | 6        |
| Gari                          | 4                  | -                  | -                     | 14                 | 8                     | 2                  | 28       |
| Dried Cassava                 | 1                  | -                  | 1                     | -                  | -                     | -                  | 2        |
| Maize                         | 5                  | 2                  | -                     | 9                  | 4                     | -                  | 20       |
| Rice                          | -                  | 8                  | -                     | 7                  | -                     | 3                  | 18       |
| Beans                         | <u>2</u>           | <u>-</u>           | <u>-</u>              | <u>-</u>           | <u>-</u>              | <u>1</u>           | <u>3</u> |
| Total                         | 56                 | 18                 | 3                     | 31                 | 12                    | 8                  | 128      |
| Number of<br>Markets Involved | 8                  | 4                  | 2                     | 7                  | 3                     | 2                  | 26       |

One pertinent fact that emerged from the analysis of this questionnaire was that only 27, or 21 percent, of the buyers interviewed were from Ibadan. Most of the others came from large urban centers closer to the market than Ibadan. Most of the exceptions to this were from Lagos, but the most notable was from Kano (over 600 miles away to the north).

Although the method of sampling was far from random, every effort was made to insure that the results were representative of this type of buyer in the major supply areas to Ibadan. Again, because of the limited number of questionnaires involved, analysis was by manual tabulation.

#### G. PHASE FOUR - AGRICULTURAL PRODUCTION

##### 1. Producer Survey

A survey of 399 farmers in 13 villages in Western Nigeria was made during December 1966-January 1967.<sup>(10)</sup> The objective was to collect information directly from farmers that, like the information on market traders, was not available from secondary sources. The questionnaire was structured in three parts: (1) facts about the farmer and his business such as age, acreage, major source of income, major food crop and its price at three levels, markets attended, sources of information, assistance rendered by wife (wives), and membership in organizations; (2) opinions and attitudes of the farmer with regard to such things as contemporary and prospective marketing facilities and practices, profitability of food crops, acceptability of advance sales, and anxiety caused by cultural and environmental circumstances; and (3) facts about each commodity produced, such as acreage, production, month of planting and harvesting, disposition of output, seasonal distribution and value of sales, storage habits, and marketing procedure.

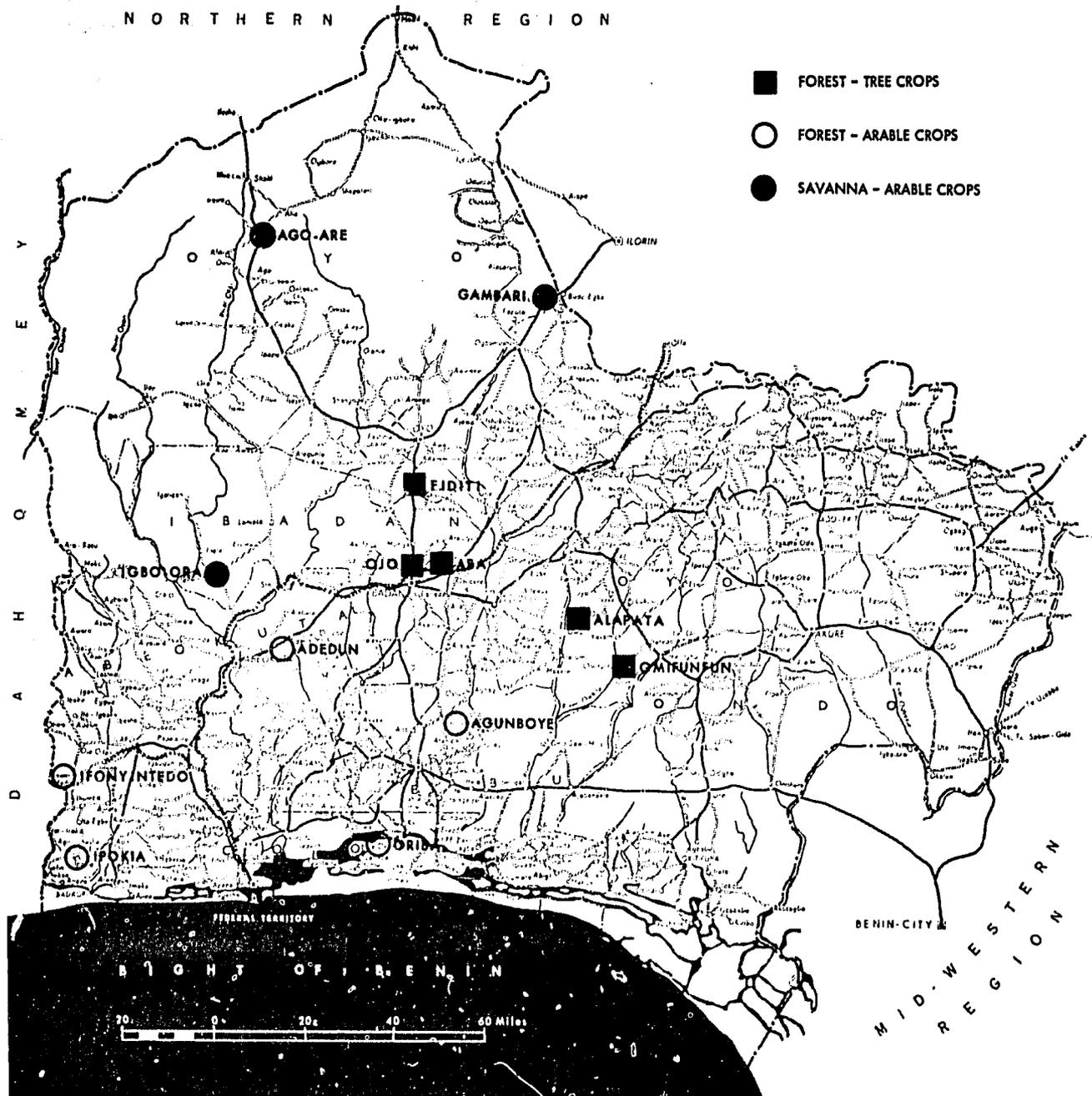
The questionnaire was long: 52 questions were to be asked in connection with (1) and (2) above, each question having up to 23 subquestions, while 22 facts were sought in relation to each commodity produced. It was to be administered to a sample of 30 randomly selected farmers in the villages selected for study. A team of two interviewers was to be placed in each village for the time required for successful completion. Initially, there were three teams but the problem of supervision quickly reduced the number to two.

All 13 of the villages selected already had two interviewers from other surveys located in them. Four were being used in a project concerned with agricultural productivity in Western Nigeria.<sup>(11)</sup> The four villages were Ipokia and Ifonyitedo in Egbado Division and Alapata and Omifunfun in Ike Division.<sup>(12)</sup> The remaining 9 were selected from the 36 villages in Western Nigeria included in the Rural Economic Survey being conducted by the Federal Office of Statistics. They were selected so as to give coverage to all farming types. Importance as a supply area to Ibadan was also considered. Map 2.3 shows the location of these villages.

In each village, the same sample of farmers as has already been selected by the other surveys was used. These farmers were randomly selected from a list of farmers compiled when the interviewers were located in the village. Both of these other surveys were attempting to use a sample of 30 farmers per village. However, in many of the Rural Economic Survey villages the number was considerably below this. Replacements were selected from the same original list of farmers, using random numbers given to the assistants. It cannot be expected that all farmers were enumerated

Map 2.3

LOCATION OF VILLAGES INCLUDED IN PRODUCER SURVEY



Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1965.  
Approved by Federal Survey Report No. 1965  
SOO 1861/3 66

by the original interviewers; nevertheless, the resulting sample of 30 to 32 farmers can be considered to suit the purposes of this survey. The interviewers were taken to each village and properly established with the existing interviewers and village leadership. All problems that could be anticipated at this point were handled by the supervisors. No serious subsequent problems arose. The reliability of the survey was considerably enhanced by the knowledge of the farmers and local conditions that these other interviewers<sup>(13)</sup> shared with the field team.

The actual number of farmers and their distribution by village and by single most important source of income is presented in Table 2.8; 235, or 59 percent of the farmers, gave one of the staple food crops being studied, while cocoa accounted for an additional 127, or 32 percent of the total.

For the purposes of analysis, these villages were divided into three groups, based on area and type of farming: (1) The northwest savanna area contained three villages; arable crops, particularly yams, were dominant. (2) The northern forest area, where cash crops were dominant, contained five villages; tree crops, mostly cocoa, provided the main source of income. (3) The southwest forest and coastal area, where arable crops were again dominant, accounts for the remaining five villages; cassava and maize were each dominant in two, and cassava (with maize secondary) in the other. This last group is somewhat mixed. Adedun and Agunboye are both located in the high rain forest area which constitutes the cocoa belt of the Region; the importance of cocoa in these villages has declined markedly in recent years. Ifonyintedo is in the lowland rain forest zone, where arable crops have always been important. Both Ipokia and Oriba are in the

Table 2.8

NUMBER OF FARMERS BY VILLAGE AND BY SINGLE MOST IMPORTANT SOURCE OF INCOME--  
 DISTRIBUTION OF 399 FARMERS INCLUDED IN PRODUCER SURVEY--WESTERN NIGERIA--  
 DECEMBER 1966-JANUARY 1967

| Village                          | Single Most Important Source of Income |           |           |          |                   |            |             |          | No. Sales | Total      |
|----------------------------------|----------------------------------------|-----------|-----------|----------|-------------------|------------|-------------|----------|-----------|------------|
|                                  | Staple Food Crops                      |           |           |          | Other Food Crops* | Cash Crops |             |          |           |            |
|                                  | Yams                                   | Cassava   | Maize     | Rice     |                   | Cocoa      | Other Tree† | Arable‡  |           |            |
| <b>I SAVANNA - Arable Crops</b>  |                                        |           |           |          |                   |            |             |          |           |            |
| Gambari                          | 27                                     |           | 1         |          |                   |            | -           | 1        | 1         | 30         |
| Ago-Are                          | 30                                     |           |           |          |                   |            | -           | -        | -         | 30         |
| Igbo-Ora                         | 16                                     | 1         | 6         | -        | 6                 | 1          | -           | -        | -         | 30         |
| <b>II FOREST - Tree Crops</b>    |                                        |           |           |          |                   |            |             |          |           |            |
| Omifunfun                        |                                        |           |           |          |                   | 32         | -           | -        | -         | 32         |
| Alapata                          | 1                                      |           | 1         |          |                   | 28         | -           | -        | -         | 30         |
| Aba                              | 2                                      | 8         | 1         |          |                   | 19         | 1           | -        | 1         | 32         |
| Ojo                              |                                        | 11        |           |          |                   | 18         | 1           | -        | -         | 30         |
| Fiditi                           |                                        | 2         |           |          | 2                 | 17         | 11          | -        | -         | 32         |
| <b>III FOREST - Arable Crops</b> |                                        |           |           |          |                   |            |             |          |           |            |
| Adedun                           |                                        | 14        |           | 6        | -                 | 10         | -           | -        | -         | 30         |
| Agunboye                         |                                        | 21        | 9         |          | -                 | 1          | 1           | -        | -         | 32         |
| Ifonyintedo                      |                                        | 2         | 27        |          | -                 | 1          | 1           | -        | -         | 31         |
| Ipokia                           |                                        |           | 29        |          | -                 | -          | -           | 1        | -         | 30         |
| Oriba                            |                                        | 20        |           |          | 10                | -          | -           | -        | -         | 30         |
| <b>TOTAL</b>                     | <b>76</b>                              | <b>79</b> | <b>74</b> | <b>6</b> | <b>18</b>         | <b>127</b> | <b>15</b>   | <b>2</b> | <b>2</b>  | <b>399</b> |

\* Melon (6), pepper (12)

† Kola (3), coffee (7), palm (2), citrus (3)

‡ Tobacco (1), kenaf (1)

coastal zone surrounded by lagoon waters. In fact, Oriba can only be reached by canoe, as it is on an island.

The length of the questionnaire, combined with a desire on the part of both interviewer and respondent to complete it quickly, prevented some topics from being dealt with in depth. This applies particularly to the details of minor commodities which were felt to be unimportant. One question, which was misinterpreted by most interviewers, was not analyzed. In general, however, once the farmer was located (often after a walk of up to 12 miles from the village) his response was good. Only in one village (Adedun) did the interviewers consider the respondents uncooperative. In fact, in some of the other villages some farmers who had not been selected asked to be interviewed.

#### H. PHASE FIVE - IBADAN

The fifth phase of the field work constituted a return to Ibadan and the development and administration of the final three major questionnaires. Investigations into trade associations in Ibadan and the institutional demand for foodstuffs were also made. In addition, many other smaller tasks were undertaken, such as the mapping of markets, the collection of food samples for moisture determination, the analysis of local measures used by retail sellers, and the interviewing of operators of food-milling facilities.

This Phase began in December 1966 with the Household Survey and reached its peak during February-March 1967. Although interviewing with the wholesale traders questionnaire was concluded during May 1967, many lesser tasks were undertaken until July 1967. The earlier part of this Phase coincided with the later parts of the Third and Fourth Phases of the work outside Ibadan.

## 1. Household Survey

A survey of 504 households was conducted in Ibadan during December 1966 to obtain systematically pertinent details of food marketing and consumption not obtainable from other sources, particularly marketing habits, sources of foodstuffs, consumption habits, and the consumer's assessment of the marketing system.

This survey developed from an earlier and less successful attempt in Phase Two to obtain somewhat similar information from buyers as they were leaving the market. This earlier attempt was soon abandoned in favor of interviewing the housewife in the more leisurely setting of her own home, which would also enable the number and depth of questions to be expanded.

The questionnaire was in two parts. (1) Questions soliciting general facts and opinions on 14 topics. These include: major market used for buying foodstuffs, frequency of shopping, use of hawkers, gifts of foodstuffs, own-production of foodstuffs, use of credit, monthly expenditure on food, occupation, number of people fed, and satisfaction with present marketing system. (2) Six questions directed specifically at each of 14 foodstuffs, including frequency and seasonality of consumption, place, quantity, frequency and value of purchases, varieties preferred, and income. Each of the staples were listed separately with yam (fresh and dried flour) and cassava (gari and dried-flour) being listed in two forms. The other foodstuffs were wheat (bread and flour), plantain, other staples (such as cocoyam and guinea corn), vegetable oil, meat and fish, poultry and eggs, and prepared (cooked) food.

The objective was to interview 20 households each in 25 selected areas. As the purpose of this sample was to obtain data classified by area and

income, no attempt was made to obtain a random sample. The most representative areas were selected.<sup>(14)</sup> Based on apparent income levels in Ibadan, there were approximately four high, nine medium and twelve low-income areas in the sample. They are shown in Map 2.4.

The selection of the actual households was left to the interviewers, although there were to be five from each of the four quarters of each area. Availability and cooperativeness were therefore the main criteria for selection.

In the execution of the survey, 55 questionnaires were inadvertently administered in one area instead of the intended 20. To compensate, one comparable area was dropped and the number in another reduced to ten. No major problems arose in the field work, although access to many Moslem households was either barred or restricted.

Only African women were interviewed, 95 percent being Yoruba. In polygynous families, the woman is considered the center of the household. This is reinforced by the tendency, particularly among low-income families, for the woman to live her life relatively independently of her husband and in most cases to be at least partially self-supporting.

The distribution of the 504 households surveyed is shown in Table 2.9 by area and by estimated monthly income of the wife. The latter was made by the interviewer at the end of the interview and was cross-checked before analysis. It is an estimate of the income received and available to the respondent on a regular monthly basis, based on the respondent's estimate of (1) her expenditure on food per month, (2) her expenditure on everything per month, (3) her occupation and the related income, and (4) her husband's occupation and his income. It was adjusted, if necessary, as a result of any other information gleaned during the interview.



NUMBER OF HOUSEHOLDS BY AREA AND BY ESTIMATED MONTHLY INCOME OF WIFE:  
 --DISTRIBUTION OF 504 HOUSEHOLDS INCLUDED IN HOUSEHOLD SURVEY--IBADAN--  
 DECEMBER '6

| Area            | Income Group |          |          |           |            | Total     |
|-----------------|--------------|----------|----------|-----------|------------|-----------|
|                 | Low          |          | Medium   |           | High       |           |
|                 | Under £5     | £5 - £8  | £8 - £12 | £12 - £20 | £20 & Over |           |
| Abebi           | 6            | 8        | 4        | 2         | --         | 20        |
| Adeoyo          | --           | 7        | 9        | 4         | --         | 20        |
| Agbokojo        | 5            | 5        | 6        | 2         | 2          | 20        |
| Agodi           | 19           | 9        | 7        | 15        | 5          | 55        |
| Apanpa          | 1            | 7        | 6        | 5         | 1          | 20        |
| Bodija          | --           | --       |          | 2         | 8          | 10        |
| Ekoṣedo         | 4            | 5        | 8        | 3         | --         | 20        |
| Elekuro         | 7            | 7        | 3        | 2         | 1          | 20        |
| Inalende        | 5            | 8        | 4        | 3         | --         | 20        |
| Isale Ijebu     | 4            | 4        | 2        | 4         | 5          | 19        |
| Isale Osi       | 5            | 8        | 5        | 2         | --         | 20        |
| Jericho         | 6            | 3        | --       | 3         | 8          | 20        |
| Mokola          | 5            | 10       | 2        | 3         | --         | 20        |
| Molete          | 3            | 8        | 4        | 3         | 2          | 20        |
| Oke Adebimpe    | 15           | 3        | 1        | 1         | --         | 20        |
| Oke Ado         | 2            | 5        | 3        | 9         | 1          | 20        |
| Oke Bioku       | 17           | --       | 3        | --        | --         | 20        |
| Oke Foko        | 6            | 5        | 6        | 2         | 1          | 20        |
| Oke Irefin      | 18           | 2        | --       | --        | --         | 20        |
| Oke Mafo        | 15           | 2        | --       | 3         | --         | 20        |
| Oke Ofa         | 8            | 10       | 2        | --        | --         | 20        |
| Oke Ogbeoriefon | 15           | 2        | --       | 1         | 2          | 20        |
| Oniyanrin       | 12           | 6        | 2        | --        | --         | 20        |
| Popoyemoja      | <u>4</u>     | <u>6</u> | <u>5</u> | <u>4</u>  | <u>1</u>   | <u>20</u> |
| Total           | 182          | 130      | 82       | 73        | 37         | 504       |

From this estimate of monthly income, three major income groups were derived: low (under £8 per month), medium (£8-£20 per month) and high (£20 and over per month). As can be seen from Table 2.9, 312, or 62 percent of the sample, fell into the low, 155, or 31 percent, into the middle and 37, or 7 percent, into the high income category.

Some of the early interviewing was found to be unreliable, and the results involved were not included in the analysis. Also it proved difficult to obtain answers to some questions and these were frequently left unanswered.<sup>(15)</sup> These two facts account for most of the "no responses" that are present in the analysis of this questionnaire. As many of the exact values obtained in this survey were of doubtful reliability, the questionnaires were coded in terms of frequency groups only. However, the overall results are considered to be generally reliable.

## 2. Survey of Ready-to-Eat-Food Sellers

A substantial portion of all food in Western Nigeria is sold through ready-to-eat-food sellers. These sellers operate the restaurants of Nigeria. Most have small and simple facilities, although a few are quite large and complex. They are located wherever adequate sales can be made; hawkers abound in places too small to support a seller in a fixed location. In general, their importance seemed to justify their inclusion in this study as a last but not universal link in the marketing chain.

With this in mind, a survey of 547 ready-to-eat-food sellers in Ibadan and 98 in rural markets outside Ibadan was conducted, mostly during February-March 1967, and a few in April 1967. Personal and business details, food on sale, facilities and labor used, and an estimate of sales were

inquired into. From this it was hoped to learn not only their structure but also their relative importance in the marketing chain.

A short and simple questionnaire containing only 28 questions was used. Of these, more than half could be answered directly by the interviewers by themselves. These concerned foods on sale (in order of importance), type of location, type of stall, type of packaging, number and function of staff, busiest time of day, and so on.

In Ibadan, it was hoped to obtain a 100 percent coverage of these sellers in the main markets and motor parks. In the other business and residential areas, such a coverage would be impossible, so full coverage in a limited number of selected areas was substituted. In the rural markets, the plan was to interview all ready-to-eat-food sellers in a few selected markets.

The number, name of area and type of location of the interviews conducted in Ibadan is shown in Table 2.10. Of the 547 conducted, 218, or 40 percent, were in markets, 42, or 8 percent, in motor parks, 37, or 7 percent in business areas, and 250, or 46 percent, in residential areas. The location of the markets can be seen in Map 2.1, while the residential areas were nearly all included in the Household Survey and can be located in Map 2.4.

The 10 rural markets selected and the number of questionnaires administered in each can be seen in Table 2.11. As all these markets were studied in depth in Phase Three, their location is included in Map 2.2. The number of sellers varied from 5 to 16 for each market.

Table 2.10

NUMBER OF SELLERS BY AREA AND BY TYPE OF LOCATION-  
DISTRIBUTION OF 547 SELLERS INCLUDED IN READY-  
TO-EAT-FOOD SELLERS QUESTIONNAIRE--IBADAN  
FEBRUARY-APRIL 1967

| Area        | Type of Location |               |                  | Total    |
|-------------|------------------|---------------|------------------|----------|
|             | Market           | Motor<br>Park | Business<br>Area |          |
| Agbeni      | 15               |               |                  | 15       |
| Ayeye       | 31               |               |                  | 31       |
| Dugbe       | 54               |               |                  | 54       |
| Gege        | 15               |               |                  | 15       |
| Mokola      | 5                |               | 5                | 9        |
| Oja Iba     | 42               |               |                  | 42       |
| Oritamerin  | 40               |               |                  | 40       |
| Agodi       |                  | 17            | 8                | 25       |
| Ogunpa      |                  | 22            | 4                | 26       |
| Scala       |                  | 3             |                  | 11       |
| Gbagi       |                  |               | 20               | 20       |
| Adamasingba |                  |               |                  | 20       |
| Eko Tedo    |                  |               |                  | 20       |
| Inalende    |                  |               |                  | 52       |
| Isale-Osi   |                  |               |                  | 21       |
| Iyeosa      |                  |               |                  | 58       |
| Oke Bioku   |                  |               |                  | 16       |
| Oke Oba     |                  |               |                  | 20       |
| Oniyanrin   |                  |               |                  | 20       |
| Other       | <u>16</u>        | —             | —                | <u>3</u> |
| Total       | 218              | 42            | 37               | 250      |

Table 2.11

NUMBER OF SELLERS BY MARKET AND BY MARKET ZONE  
DISTRIBUTION OF 98 SELLERS INCLUDED IN READY-  
TO-EAT-FOOD SELLERS QUESTIONNAIRE--RURAL MARKETS  
FEBRUARY-APRIL 1967

| Market          | Market Zone        |                       |                    |                       | Total     |
|-----------------|--------------------|-----------------------|--------------------|-----------------------|-----------|
|                 | 1<br>North<br>West | 3<br>North<br>Central | 4<br>South<br>West | 5<br>South<br>Central |           |
| Bashi           | 7                  |                       |                    |                       | 7         |
| Igbetti         | 9                  |                       |                    |                       | 9         |
| Odo-Oba         | 12                 |                       |                    |                       | 12        |
| Ojanla (Iseyin) | 5                  |                       |                    |                       | 5         |
| Imini           |                    | 16                    |                    |                       | 16        |
| Iware           |                    | 11                    |                    |                       | 11        |
| Owode           |                    |                       | 6                  |                       | 6         |
| Araromi-Owu     |                    |                       |                    | 10                    | 10        |
| Egbeda          |                    |                       |                    | 12                    | 12        |
| Erunmu          | —                  | —                     | —                  | <u>10</u>             | <u>10</u> |
| Total           | 33                 | 27                    | 6                  | 32                    | 98        |

Emphasis was on sellers in a fixed location. In fact, only five hawkers were included in Ibadan and none in the rural markets. Hawkers were found to be not only elusive but somewhat different in structure, due mainly to the hawkers' separation from their cooking facilities. Although some resembled sellers in a fixed location in terms of type of food on sale, many carried a different selection. Consequently, it was decided to ignore them for the most part.

Although the intention was to interview every seller in a fixed location in the areas selected, it is suspected that this was not actually achieved. Checks made in several areas immediately after a complete

coverage was claimed never failed to turn up at least a few overlooked sellers. Prevailing market conditions made this excusable, but it does mean that the sample underestimates the number of sellers, probably to a considerable extent.

### 3. Wholesale Traders Questionnaire

At the end of Phase Two, it was considered that sufficient information had already been obtained from retailers concerning their structure and behavior, but that more would have to be collected from wholesalers in Ibadan. This evolved particularly from the realization that wholesalers are the most important link in the marketing chain in Ibadan, and hold the answers to questions about quantities and sources of supply, price determination, and marketing costs and margins. They therefore merited some extra concentrated effort.

To obtain more such vital information from wholesalers, 562 were interviewed during February-May 1967, using the Wholesale Traders Questionnaire. In addition to details of these traders and their businesses, data on the seven commodities (dried yam and dried cassava were also included) sold by these wholesalers were obtained. Many of the wholesalers dealt in more than one of the staple foods being studied.

The questionnaire inquired into some details not formerly sought for Ibadan, such as construction, size and condition of stall, number of other traders associated with the same stall, return to respondent from other traders storing in his stall, time lost during 1966 and causes thereof, distance to nearest competitive wholesaler, losses from bad debts, amounts outstanding by debtors and to creditors, total actual value of sales of

staple foods for last month, total value of inventory at time of interview, and suggestions for improving the present marketing system. In addition, 18 questions were to be asked in relation to each of the relevant staple foods sold by the wholesaler. These included places of production and purchase, method of purchase, transportation method and cost per unit, ownership, quantity, value of inventory and length of time held, usual size and frequency of purchases, actual sales, knowledge of existence of and prices in other supply areas, knowledge of other wholesalers' prices in Ibadan, and months of most and least sales.

Many of these questions are very personal to the trader, and each questionnaire in Ibadan sought progressively more of this type of information. As rapport with the traders developed, they became more willing to answer this type of question in good faith and with reliability. All the principal wholesalers in the Ibadan markets cooperated splendidly throughout the field work: to them is due much of the credit for the fine responses received to this questionnaire.

The aim was to interview all the major wholesalers of the staple foods being studied. This was interpreted to mean all traders whose major function was wholesaling. The coverage actually achieved is thought to be quite reasonable. Of the traders to be included, those who were always "out" or refused repeatedly to cooperate (and were finally abandoned) probably numbered less than five percent.

The distribution of the 562 wholesalers interviewed by market and by value of monthly sales is shown in Table 2.12. The location in Ibadan of these markets can be found in Map 2.1. The central native markets account

Table 2.12

NUMBER OF WHOLESALERS BY MARKET AND BY VALUE OF  
MONTHLY SALES--DISTRIBUTION OF 562 STAPLE-FOOD  
WHOLESALERS INCLUDED IN WHOLESALE  
TRADERS QUESTIONNAIRE--IBADAN  
FEBRUARY-MAY 1967

| Market                | Value of Monthly Sales |               |               |               |               |                | Total    |
|-----------------------|------------------------|---------------|---------------|---------------|---------------|----------------|----------|
|                       | Under<br>£100          | £100-<br>£199 | £200-<br>£299 | £300-<br>£499 | £500-<br>£999 | Over<br>£1,000 |          |
| <u>Central New</u>    |                        |               |               |               |               |                |          |
| Dugbe                 | 47                     | 30            | 12            | 12            | 3             | 4              | 108      |
| <u>Central Native</u> |                        |               |               |               |               |                |          |
| Gege                  | 16                     | 3             | 2             | --            | 6             | --             | 27       |
| Oritamerin            | 112                    | 67            | 24            | 20            | 6             | 1              | 230      |
| Oja Iba               | 20                     | 28            | 23            | 22            | 9             | 2              | 104      |
| Ayeye                 | 21                     | 12            | 5             | 2             | --            | --             | 40       |
| Beri                  | 6                      | 4             | 2             | --            | --            | --             | 12       |
| Iyeosa                | 18                     | 3             | 1             | 2             | --            | --             | 24       |
| Agbeni                | 4                      | 5             | --            | --            | --            | --             | 9        |
| <u>Residential</u>    |                        |               |               |               |               |                |          |
| Mokola                | <u>7</u>               | <u>1</u>      | <u>--</u>     | <u>--</u>     | <u>--</u>     | <u>--</u>      | <u>8</u> |
| Total                 | 251                    | 153           | 69            | 58            | 24            | 7              | 562      |

for 446 or 79 percent of the wholesalers. Two of the markets, Oritamerin and Oja Iba, are particularly important. Dugbe Market, in the central new area of Ibadan, is also important. The value of monthly sales has been extensively used in the analysis as a classifying characteristic. It represents the wholesaler's total sales in the month preceding the interview and is the summation of his sales of each commodity (calculated from the quantity sold and the unit selling price). Only the staple food commodities are included. Most wholesale businesses are comparatively small, 201, or 45 percent of the sample, having sales of less than £100

(\$280) per month: a further 153, or 27 percent, fell in the £100 and under £200 category. Only 7, or one percent, had sales of £1,000 or more in month before the interview.

The distribution of commodities sold by these 562 wholesalers by market and by commodity, is presented in Table 2.13. Perhaps the most impressive fact is the lack of yam wholesalers (18 or 2 percent of the sample). This can partly be accounted for by the fact that fresh yams

Table 2.13

NUMBER OF WHOLESALERS SELLING EACH COMMODITY BY MARKET AND BY  
COMMODITY-DISTRIBUTION OF COMMODITIES SOLD BY 562 STAPLE  
FOOD WHOLESALERS INCLUDED IN WHOLESALE TRADERS  
QUESTIONNAIRE--IBADAN  
FEBRUARY-MAY 1967

| Market                | Commodity |           |      |               |       |      |         | Total |
|-----------------------|-----------|-----------|------|---------------|-------|------|---------|-------|
|                       | Fresh Yam | Dried Yam | Gari | Dried Cassava | Maize | Rice | Cowpeas |       |
| <u>Central New</u>    |           |           |      |               |       |      |         |       |
| Dugbe                 | --        | 2         | 37   | 3             | 2     | 27   | 60      | 131   |
| <u>Central Native</u> |           |           |      |               |       |      |         |       |
| Gege                  | --        | 3         | 14   | 6             | 5     | 5    | --      | 33    |
| Oritamerin            | 9         | 95        | 64   | 81            | 104   | 5    | 25      | 383   |
| Oja Iba               | 6         | 12        | 6    | 10            | 18    | 20   | 65      | 137   |
| Ayeye                 | 3         | 19        | 10   | 15            | 21    | 2    | 5       | 75    |
| Beri                  | --        | 5         | 6    | 5             | 7     | --   | 1       | 24    |
| Ivosa                 | --        | 9         | 6    | 5             | 10    | --   | 2       | 32    |
| Agbeni                | --        | --        | 9    | --            | --    | --   | --      | 9     |
| <u>Residential</u>    |           |           |      |               |       |      |         |       |
| Mokola                | --        | --        | 7    | --            | 1     | --   | --      | 8     |
| Total                 | 18        | 145       | 159  | 125           | 168   | 59   | 158     | 832   |

are generally scarce during this period: dried yams, however, are readily available. About the same number of sellers (145-168) of dried yam, gari, maize and cowpeas are included in the sample. Dried cassava had slightly fewer wholesalers (125) while rice had considerably less (59).

In terms of insights into some of the more difficult and important questions to be answered by this study, the Wholesale Traders Questionnaire has probably been the most rewarding. Fortunately, it is also probably the most reliable of the trader questionnaires. Being the final major field-undertaking of the project, it benefited from the experience already acquired.

#### 4. Study of Trade Associations in Ibadan

The in-depth interviewing of officials and members of nine trade associations in both the central native and central new markets, Ibadan, was undertaken during December 1966-January 1967. From this, a summary of purpose, structure, behavior and performance was prepared for each association. An overall report was also written.

In addition, a less rigorous and more impressionistic report was prepared, on experience during the project and earlier. From these and other sources, a knowledge of the purpose and functioning of trade associations was gained. A formal questionnaire would have been unsuitable in this instance, particularly in view of the ban by the Military Government on all political activities and its impact on behavior.

#### 5. Institutional Demand for Foodstuffs

The demand for foodstuffs by public, educational, and other institutions in Western Nigeria is very considerable. They consume large quantities,

generally bought under contract from professional suppliers. Not only do these institutions keep records, but the system of procurement suggests ways in which the traditional system of food marketing might meet the demands of a more organized and developed society.

In all, over 30 schools were visited throughout the Region although detailed records were collected from only a selected number. In most of the rest, school officials promised to have the records copied and sent on. The wide variance as to form, content and time covered by these records led to a virtual abandonment of the attempt to tabulate them. Nevertheless, from the principals, bursars, matrons and contractors met during this study, much was learned about the institutional demand for foodstuffs.

#### I. PHASE SIX - SECONDARY SOURCES

A considerable quantity of valuable and relevant secondary data was available, mostly from the Federal Office of Statistics. However, as the majority of this was in unpublished form, a substantial amount of time was necessary for its acquisition. Even if copying machines had been available, the condition of the originals would have made photo copying difficult. All copying was therefore done manually.

##### 1. Sources of Data

Three major sources of data existed at the Federal Office of Statistics (FOS) in both Ibadan and Lagos.

a. Urban Prices - The data copied were mainly price series collected by FOS for use in the computation of Consumer Price Indexes. The longest and apparently most reliable were the series for Ibadan and Lagos. These were mostly monthly series with retail data beginning in 1951 for Ibadan (although the collecting measure was changed in 1953) and 1954 for Lagos. Wholesale data began in 1961 for Ibadan and 1962 for Lagos. Monthly prices for five markets in Ibadan were available from 1959. Weekly prices for Ibadan and Lagos were available from March 1966. Monthly retail prices in 13 other towns in Western Nigeria were also available from 1957 for most commodities, although often for sporadic periods and with dubious reliability. Yam flour and cassava flour were also collected where available.

b. Rural Economic Surveys - From the 1964-65 RES, acreage, production and yield values were copied for each of the 36 villages in an effort to obtain more definite information not only about production characteristics but also the geographical distribution of these characteristics. The 1966-67 RES supplied rural market prices for the period May-December 1966. (Price data previous to the 1966-67 survey were collected from the farmer and hence were quite inaccurate. Nevertheless the summarized data for 1964-65 were copied.)

c. Urban Consumer Surveys - Detailed data on food expenditures by income group were acquired for Ibadan (1961-62), Oshogbo-Ife-Ilesha (1963-64), and Ondo-Akure-Owo (1964-65).

## 2. Description of Retail Price Data

The urban retail price data were analyzed in considerable depth and hence deserve some discussion. All prices are collected in the market by

FOS in fixed but relatively large local measures (mostly around 7-10 lbs). The exception to this is fresh yams, both price and weight of which are obtained from cooperating housewives. This system in essence removes quantity as a factor in determining the real price paid. Although this will tend to reduce price fluctuations, analysis of the SRI series did show that as the size of the measure increased, the quantity became less important and price more important as competitive elements.

Prices are collected several times a month in several markets in each town. For example, in Ibadan prices are currently collected at least weekly from five different markets. The monthly (now weekly) price for Ibadan is determined by taking the arithmetic means of all the observations for four of the markets (Dugbe, Gege, Oritamerin and Mokola Markets): one market (Oja Iba) is excluded. Perusal of the records show, however, that formerly the distribution of observations between markets was very uneven, with the result that the weighting of markets in the average was constantly changing.

In the analysis, three major problems arose in using these retail price series.

a. Missing Data. For some towns, the data for the whole series were relatively complete. Ibadan, Lagos, Abeokuta, Badagry, Ejinrin, Ijebu-Ode and Ilesha are cases in point. Where data for a month were missing, an average of the preceding and following months was used. In Akure and Onḡo, however, sufficient months were unrecorded between July 1962 and June 1963 for the complete 12 months to be omitted from the series for all commodities except rice for Akure, and gari, maize and cowpeas for Ondo. As Table 2.14

Table 2.14

NAMES AND WEIGHTS OF MEASURES USED TO CONVERT FEDERAL OFFICE OF  
STATISTICS PRICES TO PENCE PER POUND--  
BY TOWN AND BY COMMODITY

| Town      | Name<br>of<br>Measure* | Commodity |              |      |                   |                   |                   |                    |
|-----------|------------------------|-----------|--------------|------|-------------------|-------------------|-------------------|--------------------|
|           |                        | Yams      | Yam<br>Flour | Gari | Cassava<br>Flour  | Maize             | Rice              | Cowpeas<br>(Beans) |
| Ibadan    | Olodo                  | 5.00      | 5.13         | 7.75 | 5.19              | 7.50              | 9.25              | 8.75               |
| Lagos     | Oloruka                | 5.00      | 4.25         | 4.50 | 4.50              | 7.50 <sup>†</sup> | 9.25 <sup>†</sup> | 6.25               |
| Abeokuta  | Olodo                  | 5.00      | 5.775        | 8.50 | 3.50 <sup>‡</sup> | 8.25              | 10.30             | 9.625              |
| Akure     | Olodo                  | 5.00      | §            | 8.70 | §                 | §                 | 10.20             | §                  |
| Badagry   | Olodo                  | 5.00      | §            | 7.80 | §                 | 7.50              | 9.30              | 8.75               |
| Ejinrin   | Olodo                  | 5.00      | §            | 7.80 | §                 | 7.50              | 9.30              | 8.75               |
| Ijebu-Ode | Olodo                  | 5.00      | 5.30         | 8.00 | 5.37              | 7.75              | 9.60              | 9.05               |
| Ilesha    | Dana                   | 5.00      | 4.16         | 6.30 | §                 | 6.10              | 8.10              | 7.10               |
| Ondo      | Dana                   | 5.00      | §            | 8.00 | §                 | 7.75              | §                 | 9.00               |

\* Local measures do not apply to yams as they were weighed with prices being in terms of pence per 5 lbs.

† Olodo.

‡ Erebe.

§ No series available or series not used.

shows for five of these nine towns enough observations were either missing or unreliable enough to cause from one to four commodities not be analyzed further. The sporadic data available for Ado Ekiti, Ile-Ife, Owo and Wasimi for the years 1958-62 were not analyzed.

b. Weight of Local Measure. Only for Ibadan and Lagos was an official estimate of the weight of the measure used in collecting the price generally available. However, for gari and rice an official estimate was available for the other urban centers as well. Although the accuracy of some of the quoted weights was doubted, they were nevertheless used in calculating a comparable unit (pence per pound or d./lb) for these towns. For the remainder of the commodities in towns other than Ibadan and Lagos an estimate was made of the weight of the measure.<sup>(16)</sup> These weights are shown in Table 2.14 for the towns and commodities analyzed. Further, as the measure used for collecting retail prices in Ibadan was changed in 1953, only the data for yams for the years 1951-52 are used.

c. Reliability. Although no series appeared to be grossly unreliable throughout their length, many appeared to be questionable for certain periods. Of those analyzed, the data for Akure and Ondo seemed to be particularly questionable. Although data for some individual months in some of the other series seemed doubtful, they were nevertheless left unadjusted except for Ilesha during April-June 1957 where different measures had probably been used.

### 3. Analysis of Retail Price Data

The analysis of the 51 retail price series selected was essentially done in four parts.

a. Seasonal Index. Seasonal indexes were imputed for all of the selected retail price series. In computing them, 1966 data were excluded because of the abnormally large cyclical price rise during that year. The method employed was to find an arithmetic mean for each of the twelve months of the original monthly values as a percent of the centered twelve-month moving average values. The twelve monthly averages were then adjusted so that the arithmetic mean of the seasonal index summed to 100.

In addition to derivation of a seasonal index, several other computations were also made. From the original data as percent of centered twelve-month moving average, an average, standard deviation, and coefficient of variation were obtained for each month, each year, and all months in the series.<sup>(17)</sup> The seasonal index was also used to deseasonalize the original data, including 1966.

b. Trends, Cycles and Irregular Fluctuations. From each of the seven series for Ibadan and Lagos, the analysis was carried further to find trends and cycles. The data for 1966 was not included in the calculation of the trend equation but it was used in the analysis of cycles. Trends were calculated by means of a straight-line regression equation.<sup>(18)</sup> The "t" values of the trend (b) coefficients were used to test their significance at both the 5 and 1 percent levels of significance. The correlation coefficients of the trend equations were also computed (see also Appendix X-81).

One measure of cyclical price movements was obtained by calculating the cyclical deviations in terms of standard deviations. The combined

cyclical-irregular movements were derived by dividing the deseasonalized values by the straight line trend values.<sup>(19)</sup> After reducing the irregular fluctuations to some extent by obtaining a 5-month binomial moving average<sup>(20)</sup> for each month, the standard deviation of the values around 1.00 (100 percent) was calculated. This was then used to obtain the cyclical deviation in terms of the standard deviation.

The centered twelve-month moving average price eliminates seasonal and almost all irregular influences from monthly prices, so that it also indicates trend and cyclical price movements. It is extensively used in this report to indicate these price movements, particularly as they relate to Ibadan.

c. Inter-Town Price Comparisons. Inter-town comparisons were made in two ways. First, to find the degree of association between urban centers of price movements for each commodity, bivariate correlation coefficients were obtained for synchronous retail price series data for each pair of urban centers for which data were available. To provide a comparable time span for all series, data for the ten-year period, 1957-1966, were used. In addition, bivariate correlation coefficients were also obtained for two-year periods. In an effort to find whether a strong time-lag relationship existed in the price movements of the various urban centers, bivariate correlation coefficients for non-synchronous data, each series being lagged in relation to the other by one month, were calculated for one commodity, yam. As the degree of association was appreciably less than for synchronous data, the values for other commodities were not calculated.

Second, the absolute (in pence per pound) and relative (in percent of the Ibadan price) price differences of the other urban centers from Ibadan were obtained. For each of these other urban centers and for each commodity, the average, standard deviation, and coefficient of variation of these price differences for each of the twelve months, each year and for all months were obtained.

d. Inter-Commodity Price Comparisons. Two approaches to the analysis of inter-commodity price comparisons were employed. First, to find the degree of association between the various commodities of the price movements in both Ibadan and Lagos, bivariate correlation coefficients were obtained for synchronous retail price series data for each pair of commodities.

Second, taking just the two forms of yam (fresh tuber and dried) and cassava (gari and dried cassava), the absolute (in pence per pound) and relative (in percent of the yam tuber and gari price, respectively) price differences of dried yams from yam tubers and of dried cassava from gari were obtained for five urban centers for yam and four for cassava. For each of these comparisons, the average, standard deviation, and coefficient of variation of these price data for each of the twelve months, each year, and for all months were obtained.

## FOOTNOTES--CHAPTER II

- (1) Stanford Research Institute, "Marketing of Staple Foods in Africa: Report on the Training Seminar and Related Activities Conducted by the Food Research Institute, Stanford University," Stanford Research Institute, July 1966, pp. 3-4.
- (2) Conducted by the Food Research Institute of Stanford University during January-February 1966 and attended by the field teams destined for Africa. The objective of this seminar was to plan the conduct of this study.
- (3) F.A.O., Agricultural Development in Nigeria: 1965-1980, Food and Agriculture Organization of the United Nations, Rome, 1966, p. 396.
- (4) F.A.O., Ibid., p. 398.
- (5) Stanford Research Institute . . . op. cit., p. 4.
- (6) Stanford Research Institute . . . op. cit., p. 4.
- (7) One notable exception to the Friday price collection occurred on July 29, 1966. About noon . . . just as the collection in Dugbe Market was being completed, news spread with lightning speed by "bush telegraph" of the Army mutiny, and kidnapping in Ibadan of the Supreme Military Commander, Major General Aguiyi Ironsi and the Western Military Governor Lt. Col. Fajuyi. The immediate effect of the news was to cause an almost complete disbandonment of the market for that day as traders fled with their wares. Prices were then collected the next day for even after a bloody coup d'état, business had returned to near-normal with the prices in Dugbe Market, at least, being about the same.
- (8) Hawkers were generally listed by major commodity except in Ibadan where it was found expedient to list most separately as hawkers.
- (9) The 14 traders who were originally classified by the assistants as retail-wholesale sellers were later reclassified as either retailers or wholesalers. The 7 who never or not usually sold by the bag (weighing around 2 cwts) were reclassified as retailers while the 7 who usually or always sold by the bag were reclassified as wholesalers.
- (10) This survey was planned and executed in conjunction with the late Dr. W. A. Tompkins of the University of Wisconsin and serving with the University of Ife, who was conducting research on the role played by socio-cultural factors in determining agricultural productivity and income in Western Nigeria. Therefore many additional questions were asked seeking information about the farmers way of life, his

family, his social position, his anxieties and his opinions. To date, the only part of this data that has been analysed is that which relates directly to the production and marketing of agricultural commodities.

- (11) This was part of a larger project sponsored by the Economic Development Institute, Enugu and directed toward a determination of factors associated with variations in farm productivity and income among selected peasant farmers in Nigeria. Dr. Tompkins was field supervisor of this project in Western Nigeria.
- (12) These four villages are described in considerable detail in R. C. Clark, I.A. Akinbode and Y.O.K. Odebunmi, "Case Studies of Four Nigerian Villages," Department Research Monograph No. 2, Department of Extension Education and Rural Sociology, University of Ife, Ibadan, 1967.
- (13) It is to the credit of the other survey teams that success was achieved in this Phase. Without their cooperation and experience, this survey would have been impossible. Not only did they provide a sample of 30 random farmers, but they allowed their guides to be used to locate the farmers or accompanied the interviewers themselves. In nearly all villages, they also provided accomodation in their own homes for the interviewers.
- (14) The areas were selected from those shown on a Federal Surveys map entitled "Ibadan and Environs" and drawn in 1960. The areas are mostly family compounds and therefore rather compact although some new areas are becoming important such as the Government reservations.
- (15) For example, 99 percent of the wives responded to the question on their husband's occupation but only 33 percent were able to give an estimate of his income.
- (16) Where estimates of the weights of measures were not available from F.O.S., they were made by use of simple relatives employing the data already available. That is, using the weight of a known measure (Y) for both the other town (A) and Ibadan (I) as a base, the weight (lbs) of the missing commodity (X) was obtained as follows:

$$X_A = \left( \frac{X_I}{Y_I} \cdot Y_A \right) \text{ lbs.}$$

This was done in all possible combinations with gari and rice for Ibadan and Lagos. The most representative value was then selected.

- (17) The standard deviation is the same as that used throughout this study and is more precisely, the standard deviation of the population mean. It was computed using the formula:

$$\bar{\sigma}_x = \sqrt{\frac{n \sum_{i=1}^n x_i^2 - \left( \sum_{i=1}^n x_i \right)^2}{n(n-1)}}$$

- (18) That is,  $Y_c = a + bX$   
Where

$Y_c$  = the computed (predicted) price

$X$  = time (in units of one-month)

$a$  = the predicted price for the month used as the origin  
(January 1960)

$b$  = the monthly trend in price.

- (19) That is,  $C + I = \frac{T + C + I}{T}$

- (20) That is, 1 : 4 : 6 : 4 : 1.



Appendix Table 2.1

NAMES OF MARKETS STUDIED IN-DEPTH BY CLASSIFICATION USED  
IN ANALYSIS AND DATES OF MARKET SELLERS ENUMERATION

| Name of Market<br>By Classification<br>Used in Analysis | Date* of Market<br>Sellers Enumeration |                   | Name of Market<br>By Classification<br>Used in Analysis | Date* of Market<br>Sellers Enumeration |                 |
|---------------------------------------------------------|----------------------------------------|-------------------|---------------------------------------------------------|----------------------------------------|-----------------|
|                                                         | Included<br>In Analysis                | Not<br>Included   |                                                         | Included<br>In Analysis                | Not<br>Included |
| Urban Markets - Ibadan                                  |                                        |                   | Urban Markets - Outside<br>Ibadan                       |                                        |                 |
| <u>Central Native</u>                                   |                                        |                   | <u>Abeokuta</u>                                         |                                        |                 |
| Agbeni                                                  | Jan. 21                                | June 25           | Itoku                                                   |                                        | Apr. 29         |
| Bere                                                    | May 13                                 |                   | Omida                                                   |                                        | Apr. 30         |
| Gege                                                    | Jan. 21                                | June 25           | Obada                                                   |                                        | May 1           |
| Oritamerin                                              | Feb. 21 & 28                           | June 25           | Iberekodo                                               |                                        | May 2           |
| Oja Iba                                                 | Feb. 1-2                               | July 13           | Ishabo                                                  |                                        | May 3           |
| Ayeye                                                   | Jan. 28                                | July 2            |                                                         |                                        |                 |
| Iyeosa                                                  | Feb. 1                                 | July 2            | <u>Ado Ekiti</u>                                        |                                        |                 |
| <u>Central New</u>                                      |                                        |                   | Erekesan                                                |                                        | Nov. 21         |
| Dugbe                                                   | May 10-11                              | June 1<br>Jan. 26 | <u>Akure</u>                                            |                                        |                 |
| <u>Residential</u>                                      |                                        |                   | Erekesan                                                |                                        | Nov. 9          |
| Ibuko                                                   | May 13                                 |                   | Oshodi                                                  |                                        | Nov. 10         |
| Inalende                                                | Feb. 4                                 | July 2            | <u>Ijebu-Ode</u>                                        |                                        |                 |
| Oja Igbo                                                | May 21                                 |                   | Itaosu                                                  |                                        | Mar. 7          |
| Oke Ado                                                 | May 13                                 |                   | Odo-Egbo                                                |                                        | Apr. 24         |
| Mokola                                                  | Apr. 22                                |                   | Itale                                                   |                                        | Apr. 24         |
| Labo                                                    | May 13                                 |                   | Alapo                                                   |                                        | Apr. 26         |
| Molete                                                  | May 13                                 |                   | Oyingbo                                                 |                                        | Apr. 26         |
| <u>Specialized Native</u>                               |                                        |                   | <u>Ife-Ife</u>                                          |                                        |                 |
| Oje                                                     | May 20                                 |                   | Iremo                                                   |                                        | Nov. 7          |
|                                                         |                                        |                   | Itakogun                                                |                                        | Nov. 9          |
|                                                         |                                        |                   | Erunwa                                                  |                                        | Nov. 11         |
|                                                         |                                        |                   | <u>Oshogbo</u>                                          |                                        |                 |
|                                                         |                                        |                   | Oja Oba                                                 |                                        | Oct. 26         |
|                                                         |                                        |                   | Olu Ode                                                 |                                        | Oct. 24         |
|                                                         |                                        |                   | <u>Oyo</u>                                              |                                        |                 |
|                                                         |                                        |                   | Ashipa                                                  |                                        | Apr. 4          |
|                                                         |                                        |                   | Akesan                                                  |                                        | Apr. 16         |

\* Dates from June to December are 1966 and those from January to May are 1967.

| Name of Market<br>By Classification<br>Used in Analysis                        | Date* of Market<br>Sellers Enumeration |          | Name of Market<br>By Classification<br>Used in Analysis                            | Date* of Market<br>Sellers Enumeration |          |
|--------------------------------------------------------------------------------|----------------------------------------|----------|------------------------------------------------------------------------------------|----------------------------------------|----------|
|                                                                                | Included                               | Not      |                                                                                    | Included                               | Not      |
|                                                                                | In Analysis                            | Included |                                                                                    | In Analysis                            | Included |
| <b>Rural Markets</b>                                                           |                                        |          |                                                                                    |                                        |          |
| <u>North West - Western</u><br>Savanna - Oyo,<br>Ibadan and Oshun<br>Divisions |                                        |          | <u>South West - Western</u><br>Forest - Egbado,<br>Egba and Ibadan<br>Divisions    |                                        |          |
| Ago Are (Maforo<br>Market)                                                     | Dec. 26                                |          | Omi Adio                                                                           | Dec. 1                                 |          |
| Igbetti                                                                        | Mar. 17                                |          | Ilugun (Kila)                                                                      | Dec. 2                                 |          |
| Iseyin (Ojanla<br>Market)                                                      | Mar. 18                                |          | Olodo                                                                              | Nov. 30                                |          |
| Igbo-Ora (Ajegunle<br>Market)                                                  | Jan. 25                                |          | Alabata                                                                            | Nov. 3                                 |          |
| Olo                                                                            | Feb. 11                                |          | Odeda                                                                              | Nov. 2                                 |          |
| Odo Oba                                                                        | Feb. 11                                |          | Oba                                                                                | Oct. 17                                |          |
| Gambari                                                                        | Jan. 5                                 |          | Wasimi                                                                             | Nov. 19                                |          |
| Bashi                                                                          | Apr. 19                                |          | Ifo                                                                                | Nov. 20                                |          |
| Oko                                                                            | Oct. 21                                |          | Owode                                                                              | Apr. 18                                |          |
| Mashifa                                                                        | Nov. 3                                 |          | Idogo                                                                              | Apr. 27                                |          |
| Ida Ogun†                                                                      | Oct. 11                                |          | <u>South Central -</u><br>Central Forest -<br>Ibadan, Oshun and<br>Ijebu Divisions |                                        |          |
| Ife - Odan†                                                                    | Oct. 12                                |          | Araromi-Owu                                                                        | Apr. 17                                |          |
| Shaki†                                                                         | Aug. 9                                 |          | Araromi-Aperin‡                                                                    | Apr. 23                                |          |
| <u>North East - Northern</u><br>Forest - Oshun and<br>Ekiti Divisions          |                                        |          | Ernunmu                                                                            | Apr. 15                                | Mar. 22  |
| Iragbiji                                                                       | Oct. 31                                |          | Egbeda                                                                             | Apr. 5                                 | Mar. 24  |
| Igbaje                                                                         | Oct. 20                                |          | Mamu                                                                               | Mar. 6                                 | Apr. 23  |
| Oba                                                                            | Nov. 1                                 |          | Atan                                                                               | Apr. 25                                |          |
| Ifon                                                                           | Oct. 27                                |          | <u>South East - Eastern</u><br>Forest - Ife, Ondo<br>and Owo Divisions             |                                        |          |
| Ijero                                                                          | Nov. 29                                |          | Olode                                                                              | Nov. 15                                |          |
| Ikoro                                                                          | Nov. 26                                |          | Iju‡                                                                               | Nov. 2                                 |          |
| Igbemo                                                                         | Nov. 30                                |          | Alade                                                                              | Nov. 1                                 |          |
| Ikole                                                                          | Nov. 25                                |          | Igbara-Odo‡                                                                        | Nov. 4                                 |          |
| <u>North Central -</u><br>Northern Forest -<br>Oyo and Ibadan<br>Divisions     |                                        |          | Ibule‡                                                                             | Nov. 3                                 |          |
| Ojo                                                                            | Jan. 20                                |          | Ijare‡                                                                             | Nov. 8                                 |          |
| Imini                                                                          | Apr. 16                                | Mar. 19  | Ita Ogbolu‡                                                                        | Nov. 7                                 |          |
| Onidundu                                                                       | Oct. 13                                |          | Ogbesse‡                                                                           | Oct. 28                                |          |
| Ijaiye                                                                         | Jan. 23                                |          | Aponmu†                                                                            | Nov. 5                                 |          |
| Elekuru                                                                        | Jan. 30                                |          |                                                                                    |                                        |          |
| Iware                                                                          | Mar. 18                                |          |                                                                                    |                                        |          |

\* Dates from June to December are 1966 and those from January to May are 1967.

† Markets not included in analysis of market sellers.

‡ Markets not included in analysis of market facilities.

Chapter III

GENERAL  
SETTING  
OF STUDY



Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria 1963.  
 Revised by Federal Survey Nigeria 1963.

### III GENERAL SETTING OF STUDY

As everywhere, the contemporary system of marketing staple foods in Western Nigeria is the product of its physical, demographic and socio-cultural environment. In order to explain the system then, it is necessary to have an understanding of this environment. This Chapter will present a brief outline of the location, administrative structure, population, income, climate, relief and drainage, soil vegetation, and transportation network of the Region.

#### A. LOCATION

Western Nigeria lies in the southwest corner of Nigeria and occupies 30,454 square miles, or 8.5 percent of its total area.<sup>1</sup> More precisely, it lies six to nine degrees north of the equator and two to six degrees west of Greenwich. It is bounded on the west by the Republic of Dahomey, on the north by the Northern Region of Nigeria, on the east by the Mid-Western Region, and on the south by the Bight of Benin (Gulf of Guinea). At its extremes, it measures 228 miles east-west and 192 miles north-south.

#### B. ADMINISTRATIVE STRUCTURE

The Western Region is one of four Regions forming the Federation of Nigeria.<sup>2</sup> Until October 1963, it also included the present Mid-Western Region but, following a plebiscite in March of that year, a separate region was created for the two Mid-Western Provinces.

For administrative purposes, the Region is divided into six provinces: these are further divided into a total of 28 divisions. Subordinate to both of these, are 124 city, district, and local councils.<sup>3</sup> The boundaries of all of these sub-divisions generally coincide with the areas of traditional (or native) authority. This evolved from the system of Indirect Rule established by the British during the nineteenth century to administer Nigeria: the traditional rulers, in effect, administered their kingdoms in cooperation with the British officials who were located in the larger and more central towns. These towns became the provincial and divisional headquarters.

Although Lagos does not have a good natural harbor, it has the best available in Nigeria. Consequently, it was used by the British as headquarters for its colonial administration of Nigeria. Since Independence in 1960, Lagos has been used as the political and administrative capital of the Federation of Nigeria. Although socially and economically part of Western Nigeria, it is politically and administratively separate.

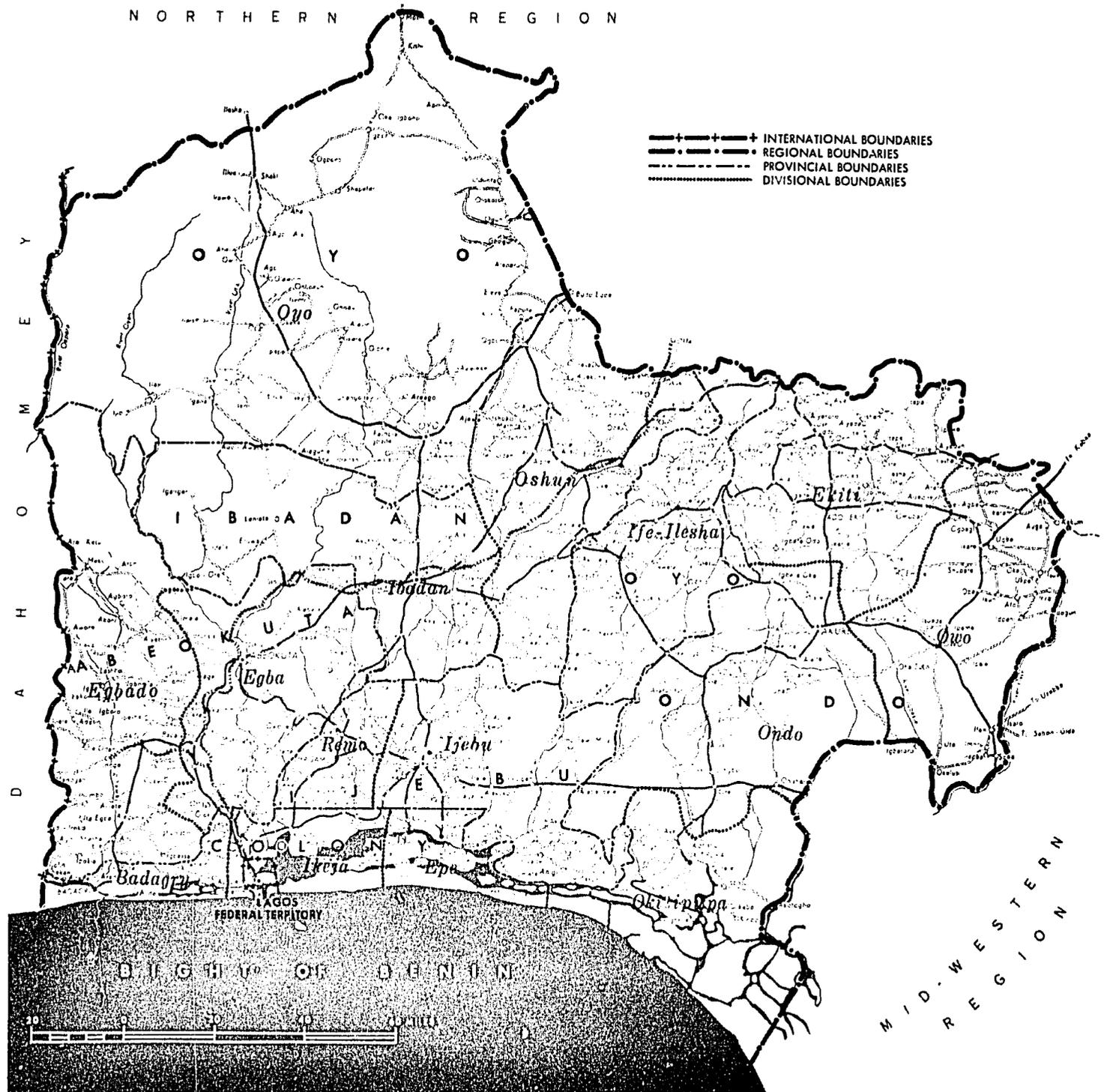
The provinces and divisions form useful sub-divisions and will be used throughout this report as areas of reference. Their names and locations can be seen in Map 3.1.

### C. POPULATION

Population is one of the foremost variables in any study on the marketing of staple foods. The size, growth rate, density, urbanization, composition, distribution and occupation of the population, together with its culture and level of national income, are the main determinants of the level and the structure of the demand for such foodstuffs.

Map 3.1

ADMINISTRATIVE STRUCTURE-PROVINCES AND DIVISIONS



## 1. Size

Based on the controversial November 1963 Population Census,<sup>4</sup> Western Nigeria contained 10.3 million persons or 18.4 percent of the total population of Nigeria. This represented an increase of 123 percent over the 1952 census figure of 4.6 million, or a net annual growth rate of 74 per thousand. Even though this figure is questionable, the Region did experience a rapid population increase during the period which is certainly continuing, if not accelerating. Table 3.1 shows this growth in the size of the population since the 1931 census and its concomitant effect on the population density of the Region. Dr. Okonjo's mid-year estimate for 1962 of 8.2 million is probably a closer estimate of the population, but even this represents a 197 percent increase in the 31-year period 1931-1962.

However, in considering the size of the population dependent upon the Region for its food supplies, mention should also be made of Lagos. As the Federal Territory of Lagos is a 27-square mile chunk of coastal swampland cut out of Western Nigeria, it relies entirely upon the rest of the Federation for its food supplies. Much of these come from Western Nigeria. Even for the remainder, it is often competitive with Western Nigeria for supplies. As a result, the population of Lagos (665,000 in the 1963 Census) should be added to that of the Region to find the population dependent upon the Region's internal exchange economy as a source of food supplies.

## 2. Growth Rate

The high population growth rate shown in Table 3.1 is a relatively recent phenomenon. Almost certainly, during the latter part of the nineteenth century and the early years of the twentieth the population of the Region

Table 3.1

POPULATION, POPULATION INCREASE OVER PREVIOUS CENSUS  
AND POPULATION DENSITY, WESTERN NIGERIA  
1931-1980

| Year                        | Population<br>(millions) | Increase<br>Over Previous<br>Census<br>(percent) | Population<br>Density<br>(persons/<br>sq. mile) |
|-----------------------------|--------------------------|--------------------------------------------------|-------------------------------------------------|
| 1931 Census                 | 2.7                      | --                                               | 90                                              |
| 1952 Census                 | 4.6                      | 68                                               | 151                                             |
| 1962 Estimate - F.O.S.*     | 5.5                      | 19                                               | 180                                             |
| 1962 Estimate - Okonjo†     | 8.2                      | 78                                               | 268                                             |
| 1963 Census                 | 10.3                     | 123                                              | 337                                             |
| 1979-80 Projection - F.A.O. | 15.9                     | 54                                               | 522                                             |

\* Federal Office of Statistics. An annual growth rate of nearly 2 percent per annum was applied to the 1952 Census figure.

† Chukuka Okonjo. An annual growth rate of about 2.8 percent per annum was applied to the 1952 figures which were considered to be an 11.7 percent under-estimate of the population.

Sources: Digest of Statistics, F.O.S., Lagos, Vol. 15, Nos. 1 & 2, January and April 1966, Table 2.1

Western Nigeria Statistical Bulletin, Ministry of Economic Planning and Community Development, Ibadan, Vol. VII, Nos. 1 & 2, June and December 1965, Table 2A.

Chukuka Okonjo, "A Preliminary Medium Estimate of the 1962 Mid-Year Population of Nigeria," First African Population Conference, January 3-7, 1966, University of Ibadan, Appendix p. x.

F.A.O., Agricultural Development in Nigeria, 1965-1980, Food and Agriculture Organization of the United Nations, Rome, 1966, Appendix 5, p. 400.

was relatively stable, due to a high death rate contributed to by predatory wars, epidemics and, in the earlier part, by slave raids. Even in the period 1925-40, Okonjo<sup>5</sup> believes that the population of Nigeria was relatively stable, with a birth rate of possibly 40.6 per thousand and a death rate of possibly 33.2 per thousand, giving a low net annual increase of only 7.4 per thousand.

From 1950 onward, however, the rate of population increase accelerated to a possible 19.9 per thousand.<sup>6</sup> This follows a rise in the birth rate to a possible 45.4 per thousand and a fall in the death rate to a possible 25.5 per thousand. The major factors contributing to this increased growth rate appear to be a general improvement in the basic level of health and in living standards.

This means that the population growth rate can, in fact, be expected to become even higher as these factors improve. Indeed, for Nigeria as a whole, FAO<sup>7</sup> has estimated that the population grew at a rate of 23 per thousand in 1961-62. From 1962-63, it has estimated that the annual population growth rate will be 25 per thousand until 1967-68, when it is expected to rise to 27.5 per thousand per annum. By 1974-75 it is expected to be around 30 per thousand per annum. Given this rate of population increase, F.A.O. expects the population of the Western Region to be approximately 15.9 million by 1979-80 or 54 percent above the 1963 Census figure.

The 1963 Census showed a significantly higher rate of growth for the Western Region than for Nigeria as a whole. The Region increased by 123 percent over the 1952 Census figures while Nigeria as a whole increased by 83 percent. Later work by the Federal Office of Statistics has tended to substantiate this relatively higher growth rate for Western Nigeria. Given the

higher general standard of living and the higher rate of development in the Western Region, it seems reasonable to expect that the population growth rate for the Region will continue to be somewhat above that for Nigeria as a whole.

Adding Lagos to the deficit consuming area of Western Nigeria gives an even higher growth rate for the area. Between 1931 and 1952, it increased from 126,000 to 272,000, or 116 percent, while by the 1963 Census it had increased to 665,000 or 144 percent, over 1952.

The further the 1963 Census figures are broken down, the less reliable do they become. Even so, it is clear that differences exist in the growth rate between the various parts of the Region. Table 3.2 shows that Colony, Ondo and Oyo (particularly Ife-Ilesha Divisions) Provinces were increasing considerably faster than Ibadan, Ijebu and Abeokuta Provinces in the period 1952-63. However, in the period 1931-52, Colony was relatively stable while Ondo and Oyo Provinces were again above the Regional average.

Table 3.2

POPULATION, POPULATION INCREASE OVER PREVIOUS CENSUS AND POPULATION DENSITY BY PROVINCE, WESTERN NIGERIA, 1931-1963

| <u>Province</u> | <u>1931<br/>Census<br/>(mil-<br/>lions)</u> | <u>Increase<br/>of 1952<br/>Over 1931<br/>(percent)</u> | <u>1952<br/>Census<br/>(mil-<br/>lions)</u> | <u>Increase<br/>of 1963<br/>Over 1952<br/>(percent)</u> | <u>1963<br/>Census<br/>(mil-<br/>lions)</u> | <u>Population<br/>Density<br/>(persons/<br/>sq. mile)</u> |
|-----------------|---------------------------------------------|---------------------------------------------------------|---------------------------------------------|---------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------|
| Abeokuta        | 435                                         | 45                                                      | 630                                         | 55                                                      | 975                                         | 229                                                       |
| Ibadan          | 990                                         | 67                                                      | 1,651                                       | 102                                                     | 3,327                                       | 736                                                       |
| Ijebu           | 306                                         | 14                                                      | 348                                         | 66                                                      | 576                                         | 235                                                       |
| Colony          | 199                                         | 20                                                      | 238                                         | 227                                                     | 778                                         | 575                                                       |
| Ondo            | 466                                         | 103                                                     | 945                                         | 189                                                     | 2,728                                       | 334                                                       |
| Oyo             | 347                                         | 126                                                     | 783                                         | 140                                                     | 1,882                                       | 194                                                       |

Source: Digest of Statistics, F.O.S., Lagos, Vol. 15, Nos. 1 and 2, January and April 1966, Table 2.1.

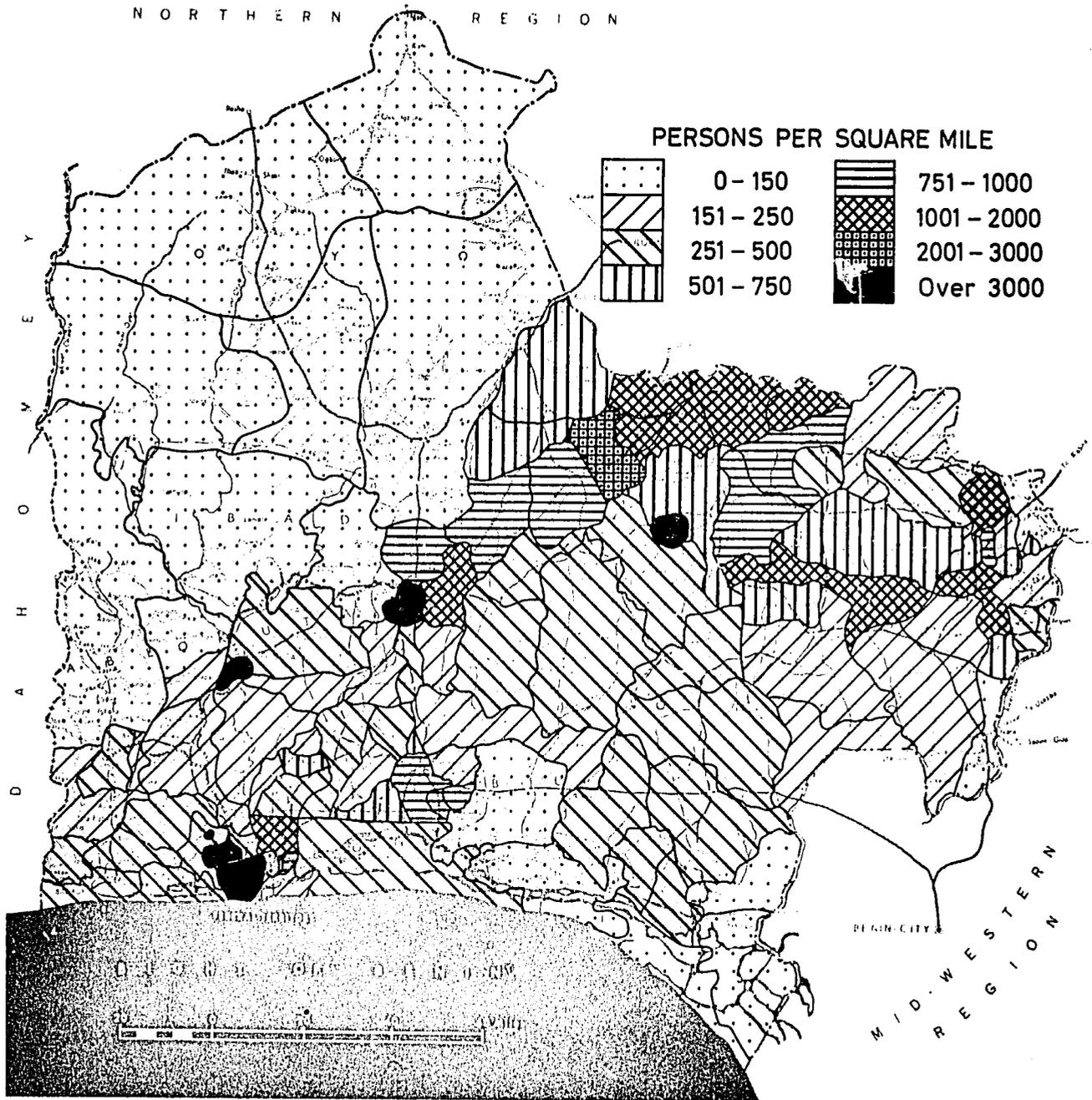
### 3. Density

The high population growth rate is having a dramatic effect on the average population density for the Region. As Table 3.1 indicates, it has risen from 90 persons per square mile in 1931 to 151 by 1952 and to 337 persons per square mile by 1963. Taking the F.A.O. population projection, it is expected to be approximately 552 persons per square mile by 1979-80. The effect of this rapid increase in population density is to exert greater pressure on existing resources so that its level in many areas is thought to have reached, if not surpassed, the 'critical density of population.'<sup>9</sup> This means that given the present methods and systems of land use, together with the physical environment of the Region, the present level of population density is approaching a point where it will become increasingly difficult to support the population.<sup>10</sup>

A considerable variation in population density exists between the various parts of the Region. As Table 3.2 shows, based on the 1963 Census data, population density ranges from an average of 736 persons per square mile in Ibadan Province down to an average of 194 persons per square mile in Oyo Province. More meaningfully, on the basis of the 1963 Census for district council areas, Map 3.2 shows that there is a high concentration of population in the center of the Region around an axis running north-east to south-west. This concentration occurs in an area of rich natural endowment and coincides with the high forest zone of Western Nigeria (see Map 3.8). Further, these areas parallel quite closely those areas with both the higher population growth rates and the higher levels of urbanization.

Map 3.2

POPULATION DENSITY, 1963 (Estimated by District Council Area)



SOURCE: Adopted from ILO Rural Development Project Survey Map based on 1963 Census Data (unpublished).

Drawn by Survey Division, Ministry of Lands and Housing, Western Region, 1963  
 Printed by Federal Survey, Nigeria, 1963  
 S/O 128-3-63

#### 4. Urbanization

Using the concentration of population into large agglomerations at compact centers as the indicator of urbanization, Western Nigeria has traditionally been highly urbanized. Although urbanization was encouraged by the favorable environmental conditions, especially in the northern margin of the high forest, it was the need for security that made it mandatory.<sup>11</sup> The intertribal conflicts and the incessant slave raiding and civil wars of the nineteenth century meant that no town was secure unless it had strong forces or was strategically placed with natural defenses or places of refuge. As a result, the focus of urbanization in Yorubaland shifted southwards out of the savanna area of what is now Oyo and Ilorin Provinces into the natural cover of the forest zone.

In 1952, the inhabitants of settlements with 10,000 persons or more accounted for 45 percent of the population of the Region. By 1963, the urban population had grown by 203 percent so that 61 percent of the Region's population resided in urban areas. During this period, the number of towns over 10,000 grew from 54 to about 150. This growth can be seen in Table 3.3. It is even more striking when the location of these towns is plotted. This can be seen by comparing Maps 3.3 and 3.4, where the location of urban centers over 10,000 for 1952 and 1963 respectively is illustrated.

Like the other aspects of population, the degree and growth of urbanization is unequal throughout the Region. Table 3.4 shows the number and proportion of the population living in settlements with 10,000 persons or more by province. It reveals that Ibadan, with 73 percent, and Ondo, with 69 percent, were the two most urbanized provinces in 1963, while Abeokuta, with 28 percent, and Ijebu, with 39 percent, were the two least urbanized

Table 3.3

## MAJOR POPULATION AGGLOMERATIONS, WESTERN NIGERIA, 1952-1963

| <u>Size of Agglomeration.</u> | <u>Census</u> |             |
|-------------------------------|---------------|-------------|
|                               | <u>1952</u>   | <u>1963</u> |
| Over 350,000 persons          | 1             | 1           |
| 100,000 - 350,000             | 4             | 12          |
| 50,000 and under 100,000      | 4             | 17          |
| 10,000 and under 50,000       | <u>45</u>     | <u>120</u>  |
| Total over 10,000             | 54            | 150         |

Source: 1952 and 1963 Censuses.

Table 3.4

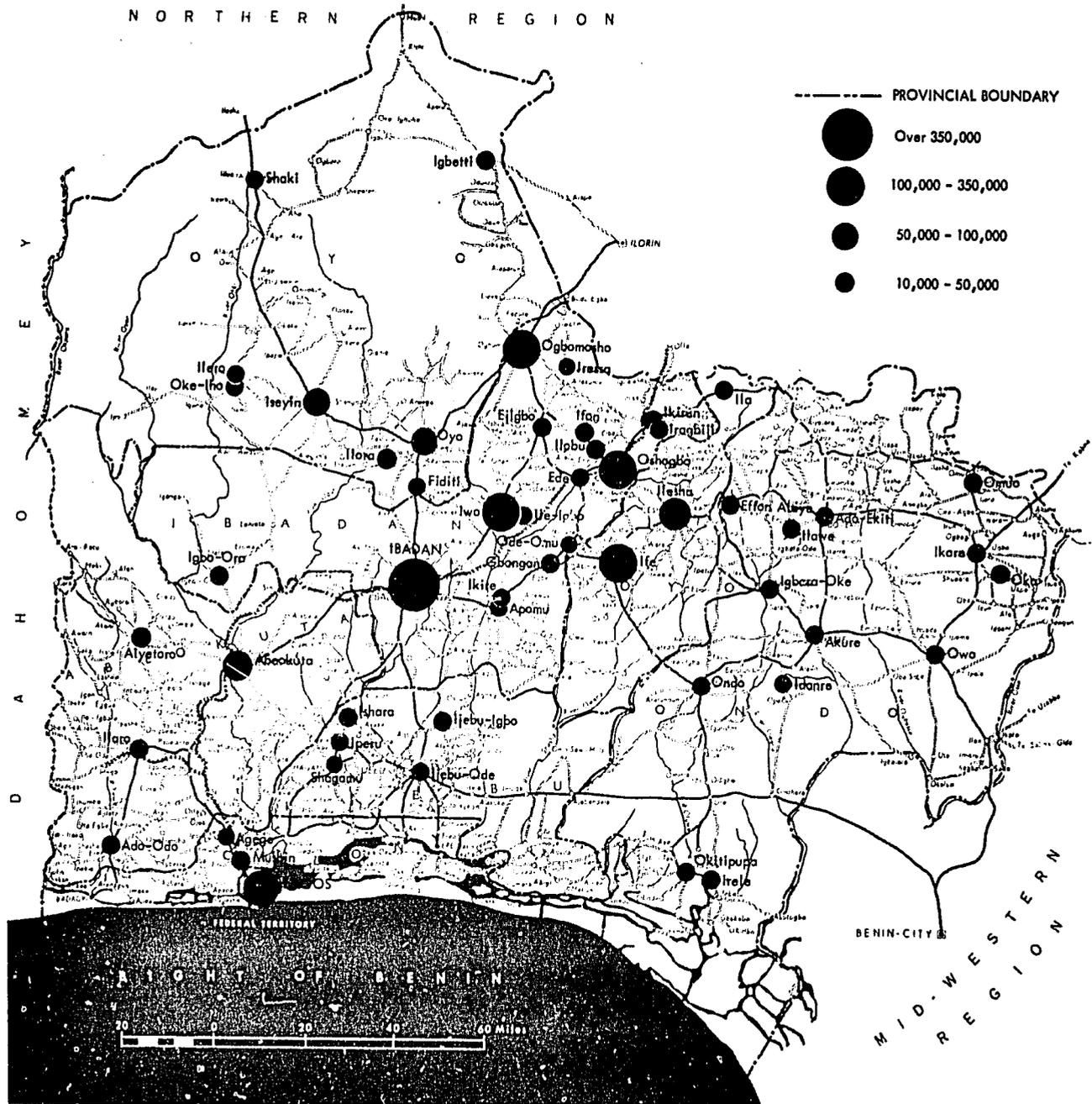
## URBAN POPULATION\* BY PROVINCE, WESTERN NIGERIA, 1952-1963

| <u>Province</u>    | <u>1952 Census</u> |                                                 | <u>1963 Census</u> |                                                 | <u>Increase of<br/>Urban Popula-<br/>tion of 1963<br/>Over 1952<br/>(percent)</u> |
|--------------------|--------------------|-------------------------------------------------|--------------------|-------------------------------------------------|-----------------------------------------------------------------------------------|
|                    | <u>Million</u>     | <u>Percent of<br/>Provincial<br/>Population</u> | <u>Million</u>     | <u>Percent of<br/>Provincial<br/>Population</u> |                                                                                   |
| Abeokuta           | 0.1                | 20                                              | 0.3                | 28                                              | 115                                                                               |
| Ibadan             | 1.1                | 65                                              | 2.4                | 73                                              | 126                                                                               |
| Ijebu              | 0.1                | 27                                              | 0.2                | 39                                              | 137                                                                               |
| Colony             | (0.04)             | 19                                              | 0.4                | 57                                              | 882                                                                               |
| Ondo               | 0.3                | 32                                              | 1.9                | 69                                              | 527                                                                               |
| Oyo                | 0.4                | 56                                              | 1.1                | 56                                              | 140                                                                               |
| Western<br>Nigeria | 2.1                | 45                                              | 6.3                | 61                                              | 203                                                                               |

\* Population of settlements with 10,000 persons or more.

Source: 1952 and 1963 Population Censuses.

**Map 3.3**  
**URBAN POPULATION, 1952 (Towns over 10,000 Persons)**



SOURCE: 1952 POPULATION CENSUS

Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1963.  
 Printed by Federal Survey Institute, 1963.  
 500-168/3-66



provinces. The degree of urbanization rose very rapidly for Colony and Ijebu Provinces between 1952 and 1963--increasing by 882 percent and 527 percent respectively. Even though the 1963 Census figures are particularly questionable, it seems certain that a net migration did occur from rural to urban areas and that the degree of urbanization did increase.

These urban centers constitute very large deficit consuming centers of foodstuffs. Even though a sizable proportion of the inhabitants of even the larger urban centers are farmers, these towns are being forced to rely more and more on foodstuffs grown away from the towns. The degree of commercialization of foodstuffs in Western Nigeria is expanding steadily and rapidly. Map 3.5, showing the degree of urbanization of Western Nigeria, is perhaps the best summary illustration of the major areas of consumption relying on the internal exchange economy for foodstuffs.

The population of the major urban centers studied in depth in this study is listed in Table 3.5.

Table 3.5

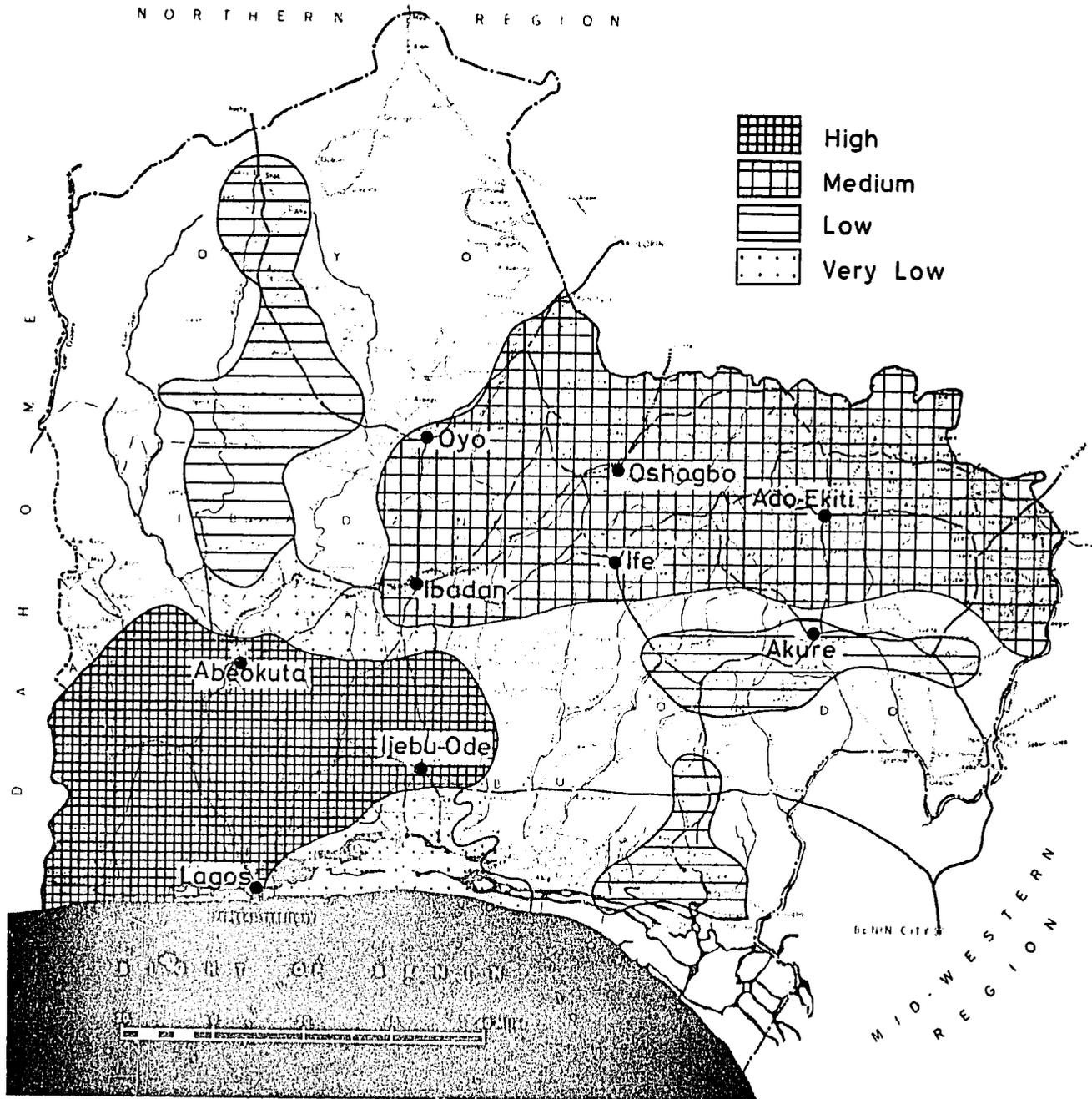
POPULATION OF THE MAJOR TOWNS STUDIED IN DEPTH,  
WESTERN NIGERIA, 1952-1963

| Town      | Census  |         | Increase of 1963<br>Over 1952 (percent) |
|-----------|---------|---------|-----------------------------------------|
|           | 1952    | 1963    |                                         |
| Abeokuta  | 84,451  | 187,292 | 122                                     |
| Ado Ekiti | 24,646  | 157,216 | 538                                     |
| Akure     | 38,853  | 71,106  | 83                                      |
| Ibadan    | 459,196 | 627,379 | 37                                      |
| Ile-Ife   | 110,790 | 130,050 | 17                                      |
| Ijebu-Ode | 27,558  | 68,543  | 40                                      |
| Oshogbo   | 122,728 | 195,132 | 59                                      |
| Oyo       | 72,133  | 112,349 | 56                                      |

Source: 1952 and 1963 Population Censuses.

Map 3.5

DEGREE OF URBANIZATION



SOURCE: Ministry of Lands and Housing.

Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1965.  
Printed by Federal Survey Agency, 1965.  
S/N: 188 3/45

## 5. Age and Sex Distribution

According to both the 1952 and 1963 Censuses, Western Nigeria has a slight preponderance of females--50.5 and 50.8 percent respectively. As Table 3.6 implies, Western Nigeria has a relatively flat population pyramid. This results from such a large proportion of the population being under 15 years of age--50 percent of males and 46 percent of females. In fact, nearly one-third of the total population is under 7 years of age. As only about 8 percent of the total population is over 50 years of age, this leaves 42 percent of the males and 46 percent of the females in the economically productive 15 to 49 age group.

Table 3.6

### POPULATION BY AGE GROUP AND BY SEX, WESTERN NIGERIA, 1952-1963

| Age Group    | Male         |        |              |        | Female       |        |              |        |
|--------------|--------------|--------|--------------|--------|--------------|--------|--------------|--------|
|              | 1952 Census  |        | 1963 Census  |        | 1952 Census  |        | 1963 Census  |        |
|              | Mil-<br>lion | %      | Mil-<br>lion | %      | Mil-<br>lion | %      | Mil-<br>lion | %      |
| Under 2 yrs  | 0.29         | 12.7%  | 0.64         | 12.6%  | 0.30         | 12.8%  | 0.66         | 12.7%  |
| 2-6 yr       | 0.41         | 18.0   | 0.91         | 18.1   | 0.40         | 17.1   | 0.88         | 17.0   |
| 7-14 yr      | 0.44         | 19.2   | 0.97         | 19.2   | 0.38         | 16.4   | 0.85         | 16.5   |
| 15-49 yr     | 0.96         | 42.1   | 2.14         | 42.2   | 1.06         | 45.5   | 2.37         | 45.5   |
| 50 yr & over | 0.18         | 8.0    | 0.40         | 7.9    | 0.19         | 8.2    | 0.43         | 8.3    |
| Total        | 2.27         | 100.0% | 5.06         | 100.0% | 2.32         | 100.0% | 5.21         | 100.0% |

Source: 1952 and 1963 Population Censuses.

## 6. Agricultural--Non-Agricultural Population

One of the major determinants of the size of the deficit food consuming population is the size and proportion of the population engaged in

occupations other than agriculture. As Table 3.7 shows, F.A.O. has estimated that 30 percent of the population was engaged in non-agricultural pursuits in 1963-64. They expect this proportion to increase to 35 percent by 1979-80 or by a total of 81 percent over the 17-year period. The agricultural population, on the other hand, is expected to increase by only 43 percent so that it will account for about 65 percent of the total population.

Table 3.7

ESTIMATED AGRICULTURAL--NON-AGRICULTURAL POPULATION BY YEAR, 1963-1980

| Year                                         | Total<br>Population<br>(million) | Agricultural<br>Population<br>(million) | Non-Agricultural<br>Population |                     |
|----------------------------------------------|----------------------------------|-----------------------------------------|--------------------------------|---------------------|
|                                              |                                  |                                         | Million                        | Percent<br>of Total |
| 1963-64                                      | 10.3                             | 7.2                                     | 3.1                            | 30.1                |
| 1967-68                                      | 11.3                             | 7.8                                     | 3.5                            | 30.1                |
| 1973-74                                      | 13.3                             | 8.9                                     | 4.4                            | 33.1                |
| 1979-80                                      | <u>15.9</u>                      | <u>10.3</u>                             | <u>5.6</u>                     | 35.2                |
| Percent-<br>age<br>growth<br>over<br>1963-64 | 54.4%                            | 43.1%                                   | 80.6%                          |                     |

Source: F.A.O., Agricultural Development in Nigeria, 1965-1980,  
Food and Agriculture Organization of the United Nations,  
Rome, 1966, Appendix 5, p. 400.

7. Occupations

In the 1952 Census, 54 percent of all males and 63 percent of all females indicated that they had some occupation at that time. Table 3.8

shows the breakdown into very broad occupational groups as a percent of occupied persons for each sex by province. Agriculture, forestry and fishing are by far the most important occupations, comprising 71 percent of all occupied males and 80 percent of all occupied women. Trade, commerce, and clerical occupations were next in importance, accounting for a further 10 percent of all occupied males and the remaining 20 percent of all occupied women.

Table 3.8

PERCENT OF MALES AND FEMALES BY OCCUPATION AND  
BY PROVINCE, WESTERN NIGERIA, 1952

| Occupation Group                 | Province    |             |             |             |             |             | Western<br>Nigeria |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------|
|                                  | Abeokuta    | Colony      | Ibadan      | Ijebu       | Ondo        | Oyo         |                    |
| <u>MALES</u>                     |             |             |             |             |             |             |                    |
| Agriculture, forestry, fishing   | 78.5%       | 54.8%       | 66.0%       | 70.9%       | 77.0%       | 74.4%       | 71.0%              |
| Skilled & semi-skilled craftsmen | 6.2         | 9.8         | 10.4        | 10.0        | 6.8         | 7.5         | 8.6                |
| Trade & commerce                 | 7.6         | 10.0        | 12.6        | 10.0        | 6.4         | 9.4         | 9.8                |
| Government & professional        | 2.8         | 8.0         | 4.0         | 2.5         | 2.8         | 2.7         | 3.5                |
| Other occupations                | <u>4.9</u>  | <u>17.4</u> | <u>7.0</u>  | <u>6.6</u>  | <u>7.0</u>  | <u>6.0</u>  | <u>7.1</u>         |
| Total                            | 100.0%      | 100.0%      | 100.0%      | 100.0%      | 100.0%      | 100.0%      | 100.0%             |
| As a % of all males              | 54.1        | 61.4        | 53.3        | 57.9        | 53.4        | 54.9        | 54.5               |
| <u>FEMALES</u>                   |             |             |             |             |             |             |                    |
| Agriculture, fishing             | 69.5%       | 66.6%       | 68.9%       | 87.6%       | 85.7%       | 86.3%       | 80.5%              |
| Trading & clerical               | <u>30.5</u> | <u>33.3</u> | <u>31.1</u> | <u>12.4</u> | <u>14.3</u> | <u>13.7</u> | <u>19.5</u>        |
| Total                            | 100.0%      | 100.0%      | 100.0%      | 100.0%      | 100.0%      | 100.0%      | 100.0%             |
| As a % of all females            | 55.1        | 56.6        | 50.2        | 69.4        | 73.8        | 71.5        | 62.9               |

Source: 1952 Census.

The distribution of occupations varies noticeably by province. For example, Abeokuta, with 78 percent, had the highest percentage engaged in agriculture, forestry and fishing, while Colony with 55 percent had the lowest. Ibadan, on the other hand, had the highest concentration of traders and clerks with 13 percent so engaged, while Ondo with 6 percent had the lowest concentration. Again for females, Ibadan Province had a high concentration of traders and clerks with 31 percent of all occupied women, although Colony was slightly higher with 33 percent, while Ondo Province with 12 percent had the lowest percent engaged in trade.

#### 8. Literacy

According to the 1952 Census, about 10 percent of the population aged seven years and above in Western Nigeria had had at least four years of schooling. In addition, a further 6 percent was also considered to be literate. With the introduction, from January 1955, of free primary education in Western Nigeria, the proportion of the population considered literate is now likely to be much higher.

The emphasis on education provides a significant omen for the future. In addition to the 4,364 primary schools in 1965, there were 636 secondary schools, 33 teacher training colleges, numerous commercial and trade centers, a technical college and two universities.

#### 9. Ethnic Groups

The Yoruba Tribe migrated into the area in and around Western Nigeria several millenia ago, although the exact time is unknown. The area now commonly known as Yorubaland includes all of Western Nigeria and some of the contiguous territory to the east, north and northeast. However, Western Nigeria contains the strongest body of Yoruba, both numerically and politically. In fact, together with Lagos, it includes all but 11 percent of the Yoruba in Nigeria.

According to the 1952 Census of Western Nigeria, 4.3 million or 93 percent of the population belongs to the Yoruba Tribe. The remaining 7 percent was quite mixed with Urhobo, Ibo, Fulani, and Hausa tribes accounting for 1 percent each. Non-Nigerian Africans numbered only 2,199 while non-Africans, mostly British, numbered 7,245.

Although the Yoruba tribe shares a common heritage, culture and language, it is divided into very distinct parts. Conveniently, each of the administrative divisions of the Region usually comprises a major part of the tribe. During the nineteenth century, these different parts of the tribe frequently waged war on one another. The enmity resulting from this hostility is still quite pervasive.

#### D. NATIONAL INCOME

When valued at factor cost, the gross domestic product of Nigeria in 1957 was rather crudely estimated at 910 million.<sup>13</sup> Using an estimated population of 33.2 million, this amounts to 27.4 per capita. Of the total value, £557 million or 61 percent was derived from agriculture, livestock, fishing and forestry. Because of the relatively high level of cash cropping, (particularly cocoa), commercialization of services, and large and small scale industry, it is safe to assume that per capita income in Western Nigeria is significantly higher than the national average.

The rate of growth in gross domestic product was estimated at an average of about four percent for the period 1950 to 1957. This growth rate is presumed to have been maintained up to and following Independence.<sup>14</sup>

#### E. CLIMATE

Western Nigeria has an equatorial type of climate with small seasonal and diurnal variations in temperature. In fact, there is relatively little variation in the temperature pattern throughout the Region, although the magnitude of both the diurnal and seasonal range does increase slightly as one goes inland from the coast.

The average daily temperature range for Ibadan is 71 to 87 degrees Fahrenheit. February is the hottest month with a daily temperature range of 71 - 93, while August is coolest with a range of 69 - 81.

Rainfall in Western Nigeria is generally abundant being between 40 and 120 inches throughout. As Map 3.6 shows, it is highest in the southeast part of the Region and declines toward the northwest. The Region has a long seven-to eight month rainy season (April to October) decreasing in duration from the coast inland. The number of months in the dry season (November to March) with less than one inch of rainfall varies from one for the coastal areas to three for the more northern areas. The distribution of the rainfall has two distinct peaks (May to July and September to October): these represent the northward and southward traverses of the rainbelt.

Ibadan has an annual average rainfall of 48.5 inches. Its monthly distribution is quite seasonal with a low of 0.3 inches in January and twin peaks of 7.5 and 6.8 inches in June and October respectively. The mean monthly rainfall and temperature distribution for Ibadan and Lagos can be seen as insets in Map 3.6.

#### F. RELIEF AND DRAINAGE

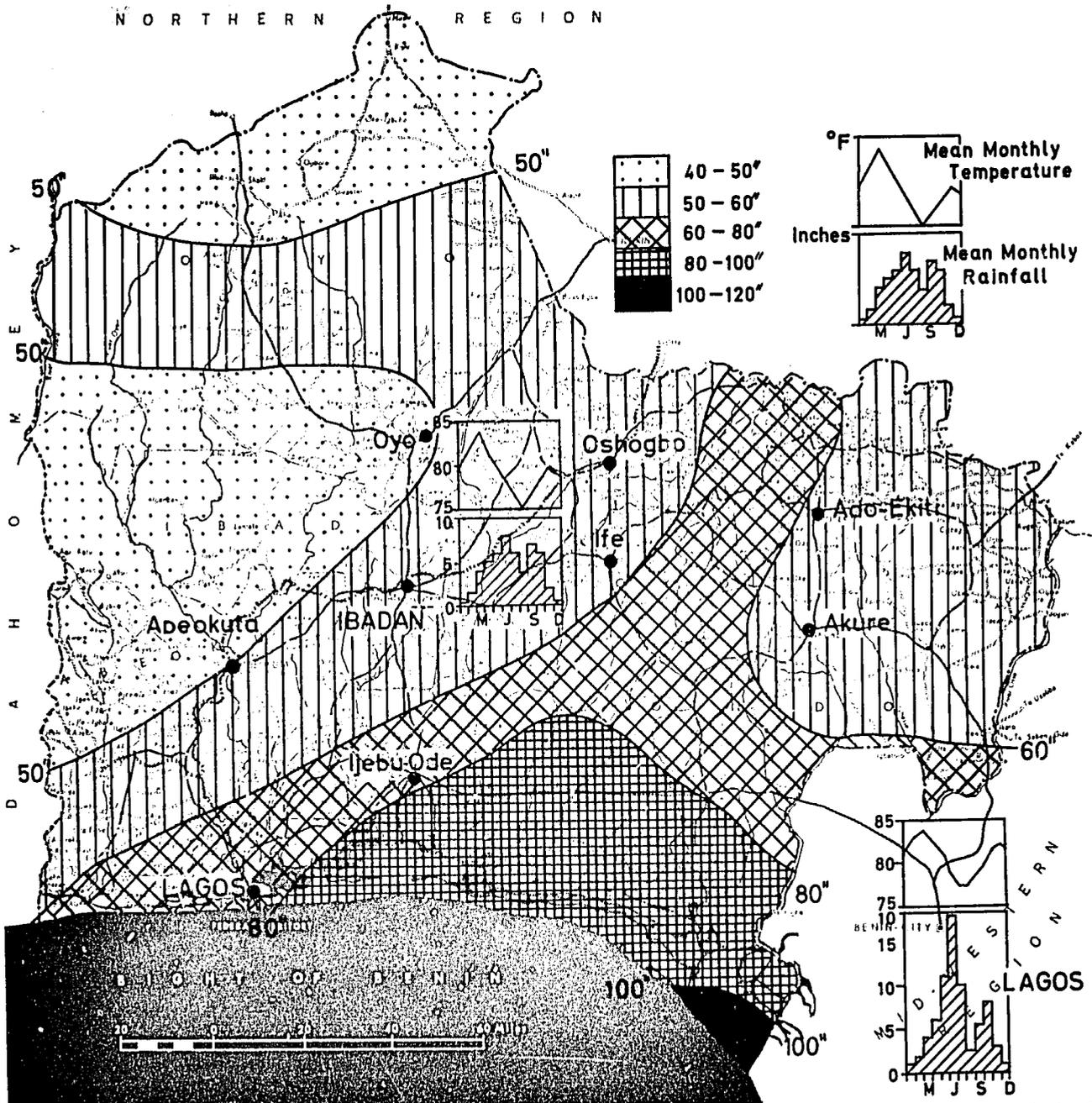
The land surface of the Western Region is generally undulating, rising from the swamplands of the coast to plains and ranges inland. These are highest in the northeast where they average about 1,600 feet in Ekiti Division. In parts of Ondo Province particularly, inselbergs or very steep-sided rock hills are quite common along with quartz ridges which tend to run north-south; these reach a maximum height east of Ilesha of about 2,400 feet.

The Region is drained almost entirely by southward-flowing rivers that rise within the Region and flow directly to the coast. As Map 3.7 demonstrates, eight main river systems can be distinguished, the Ogun and its tributaries being the most important. The Ogun rises in Oyo Division and empties into the coastal Lagoon at

Map 3.6

MEAN ANNUAL RAINFALL

(Showing Mean Monthly Temperature and Rainfall for Ibadan and Lagos)



SOURCE: Federal Surveys Nigeria 1964.

Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1965.  
 Revised by Federal Surveys Nigeria, 1965.  
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Lagos. These main rivers normally flow all the year but the lesser streams which feed them often flow only intermittently, especially during the dry season.

Except in the coastal areas, both relief and drainage, therefore, do not act as significant physical barriers to the movement either of people or of goods.

#### G. SOIL

F.A.O.<sup>15</sup> has estimated the present and potential productivity of the soil of the Region as 24 and 56 respectively where ideal soil has a rating of 100. This means that, given modern technological methods, the potential productive capability of the Region is 2.33 times its present productivity. The absolute levels are the highest of all the regions in Nigeria and compare with averages of 18 and 45 respectively for Nigeria as a whole.

Three major soil types exist in Western Nigeria. These follow the basic underlying rocks, although considerable diversity exists within these soil groups. The major soil groups are shown in Map 3.7 and may be summarily described as follows:

##### 1. Ferruginous Tropical Soils

These soils overlie metamorphic rocks of the ancient Pre-Cambrian Basement complex. The light texture and the low water-holding capacity of the surface horizon exposes these soils to drought, while the subsurface horizons may cause water-logging during the wet season. These soils are less suitable to modern agriculture than the ferralsols, as well as being more sensitive to erosion.

Even so, F.A.O.<sup>16</sup> considers these soils represent the largest under-used soil resources of the Region, particularly in the savanna zone. They



estimate that the present productivity of these soils in the savanna zone, based on the natural fertility of the soil and on the use of traditional agricultural practices, is low at about 22 percent of ideal. However, based on anticipated results from adequate soil management practices, they consider this to be an area of good potentialities with a coefficient of potential to present productivity of 2.4. In the forest zone, these soils contain most of the cocoa of the Region and are already considered to be at a level of medium productivity at 34 percent of ideal. This area has good potentiality as indicated by a coefficient of potential to present productivity of 2.2

## 2. Ferralsols

The ferralsols lie to the south of the ferruginous tropical soils and overlies a belt of tertiary sedimentary rocks. They are generally deep, well weathered, and low in plant nutrients. Within the Region, they range in color from red to reddish-yellow. In addition to being suitable for modern agriculture, they have the advantage of being fairly resistant to erosion and of being responsive to improvement by fertilizer and soil amendments.

These soils contain much of the oil palm and rubber of the Region as well as being particularly important in the production of cassava. F.A.O. considered that the ferralsols have medium potentialities, although they are presently of low productivity at about 12 percent of ideal. Their estimated coefficient of potential to present productivity is 2.8.

## 3. Alluvial Soils

The coastal areas of the Region are composed of alluvial soils formed on recent marine deposits (mangrove), while slightly inland, they are formed

on recent river line and lacustrine deposits. They are generally low in organic matter, frequently have a high saline content, and are mostly in areas with a high watertable.

The alluvial soils on marine deposits are so high in sulphides that severe acidification occurs upon drainage. The present and potential productivity of these soils is very low and falls into F.A.O.'s lowest class. The other alluvial soils on riverine and lacustrine deposits, however, have a higher present and potential productivity, depending upon the level of the watertable in the area. Where the watertable is sufficiently close to the surface to harm deep-rooting plants, it has a low productivity, although with drainage it has good potentialities. Where it is already well drained, it has a high present productivity as well as good potentialities. For the area as a whole it has a coefficient of potential to present productivity of a low 1.5.

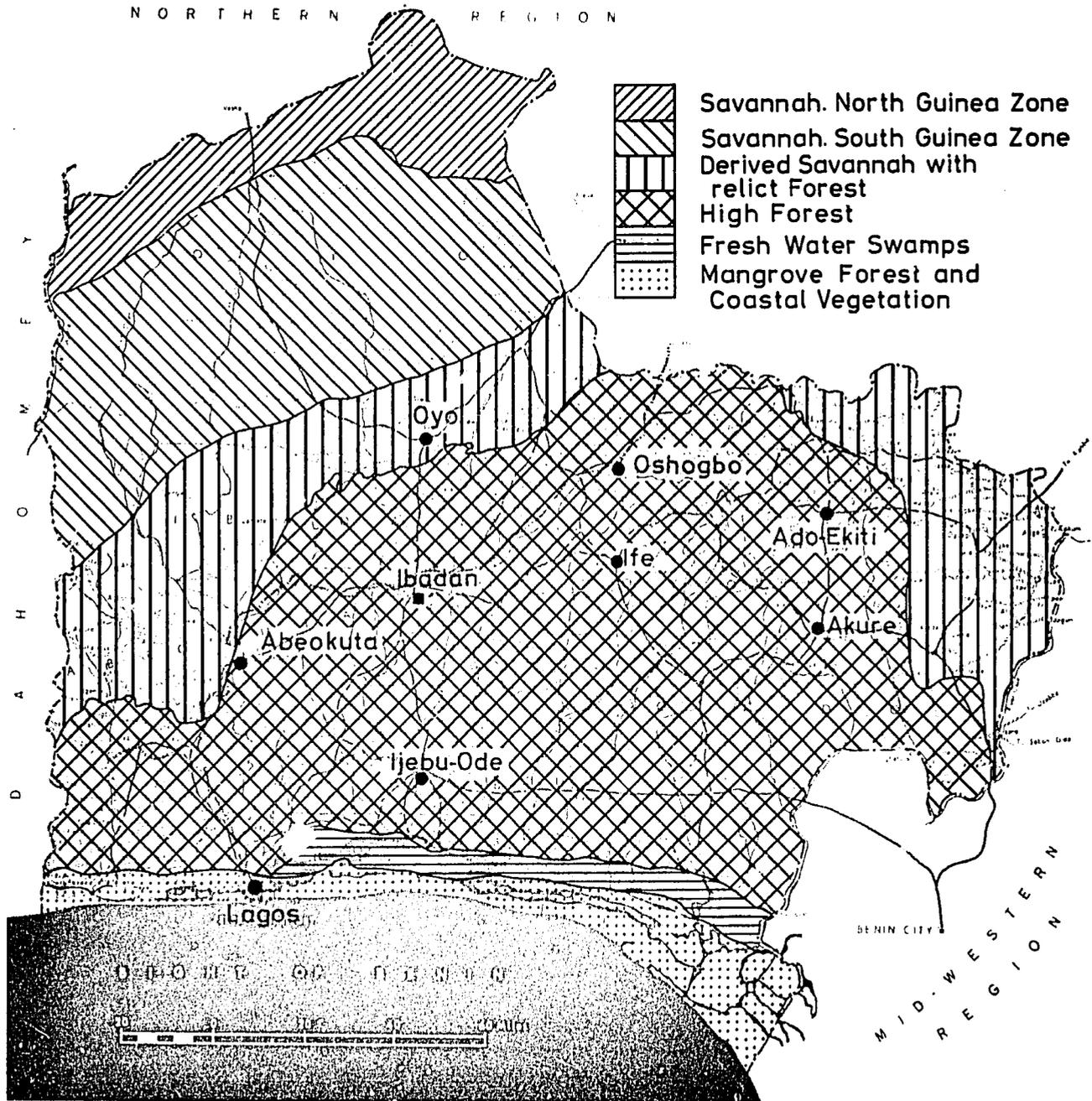
#### H. VEGETATION ZONES

The three major climax vegetation zones of Western Nigeria evolved to meet the hot and humid climatic conditions of the natural environment. They follow closely the climatic zones, particularly those of rainfall, and also run predominantly east-west. However, man's presence in the area, particularly his cultivation of the soil, has considerably altered the natural vegetation; for example, it is doubtful if any virgin forest still remains even in the Forest Reserves.

The major vegetation zones are illustrated in Map 3.8 and may be briefly described as follows:

Map 3.8

VEGETATION ZONES



SOURCE: Federal Survey Dept., Nigeria

Drawn by Survey Officer, Ministry of Lands and Housing, Western Region, 1963  
Printed by Federal Survey, Nigeria 1963  
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### 1. Coastal Swamps

These are composed of both salt-water (brackish) and fresh-water swamps and cover up to 20-30 miles of coastal land. The land is water-logged and basically unsuitable for agriculture: vegetation is usually thick and tangled, with mangrove plants and raffia palm trees being particularly common.

### 2. High Forest

This runs 60-80 miles inland from the coastal swamps on what is known as the dissected margins--that is, on the transition area of the African continental mass between the coast and higher regions inland. True rain-forest vegetation exists in the southeast; north and west of that lies the dryforest. The northern margin of the high forest has given way to derived savanna. This is an area of major agricultural production especially tree crops, and most of the export crops are produced within its bounds.

### 3. Low Forest or Guinea Savanna

This is a transitional zone running from the high forest to the northern grasslands: it covers the northern part of Western Nigeria and about half of all Nigeria. Clusters of relatively short (20 feet) trees and tall grasses are typical of this area. Their size and intensity decreases northwards from the dry forest margins. Food crops, especially root crops and maize, are particularly important in this zone; it is in fact the major surplus producing area of staple foods in the Region.

## I. TRANSPORTATION NETWORK

For the efficient movement of foodstuffs, an extensive and reliable transportation system is essential. Although much can be done to improve and extend it, Western Nigeria has a relatively well developed transportation network, particularly its road system. This can be seen from Map 3.9 which shows both the road and rail network for 1964. Also shown is the extensive system of inland waterways associated with the coastal lagoon. These waterways link Lagos with most of Colony Province, as well as Dahomey, Mid-Western Nigeria and territory along the Niger River.

In 1964, the road system of the Region totalled 9,500 miles. One measure of the reliability of the road system, particularly for the long rainy season, is the percent of all roads that are tarred. As Table 3.9 discloses, 34 percent of the Region's roads were tarred in 1964. The percent tarred varies considerably by province, ranging from 28 and 29 percent for the somewhat drier provinces of Ibadan and Abeokuta respectively to 45 and 46 percent for the wetter and marshier provinces of Colony and Ijebu respectively. Another fact that is apparently directly connected to the percentage of total road system tarred is the road density of the province. Generally, the more miles of road per 100 square miles of area, the smaller the length tarred. Ondo and Oyo Provinces are partial exceptions to this, but much of this area is either in forest reserves or otherwise sparsely settled.

The extensiveness of the road system can be roughly gauged by the density of roads; for example, by miles of roads per 100 square miles. This is also displayed in Table 3.9 by province. Ibadan and Abeokuta provinces, with 57 and 47 miles per 100 square miles respectively, are highest. Sparsely

Map 3.9

ROAD AND RAIL NETWORK, 1964



Drawn by Survey Division, Ministry of Lands and Housing, Western Region, 1963.  
Revised by Federal Survey, Nigeria, 1964.  
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Table 3.9

MILES OF ROAD, PERCENT TAPPED AND ROAD DENSITY, BY PROVINCE,  
WESTERN NIGERIA, AS AT MARCH 31, 1964

| <u>Province</u> | <u>All Roads (miles)</u> | <u>Tarred Roads (percent of all roads)</u> | <u>Road Density (miles of roads/100 square miles)</u> |
|-----------------|--------------------------|--------------------------------------------|-------------------------------------------------------|
| Abeokuta Colony | 2,021                    | 29                                         | 47                                                    |
| Ibadan          | 466                      | 45                                         | 34                                                    |
| Ijebu           | 2,582                    | 28                                         | 57                                                    |
| Ondo            | 754                      | 46                                         | 31                                                    |
| Oyo             | 2,131                    | 38                                         | 26                                                    |
|                 | <u>1,546</u>             | <u>38</u>                                  | <u>16</u>                                             |
| Western Nigeria | 9,500                    | 34                                         | 31                                                    |

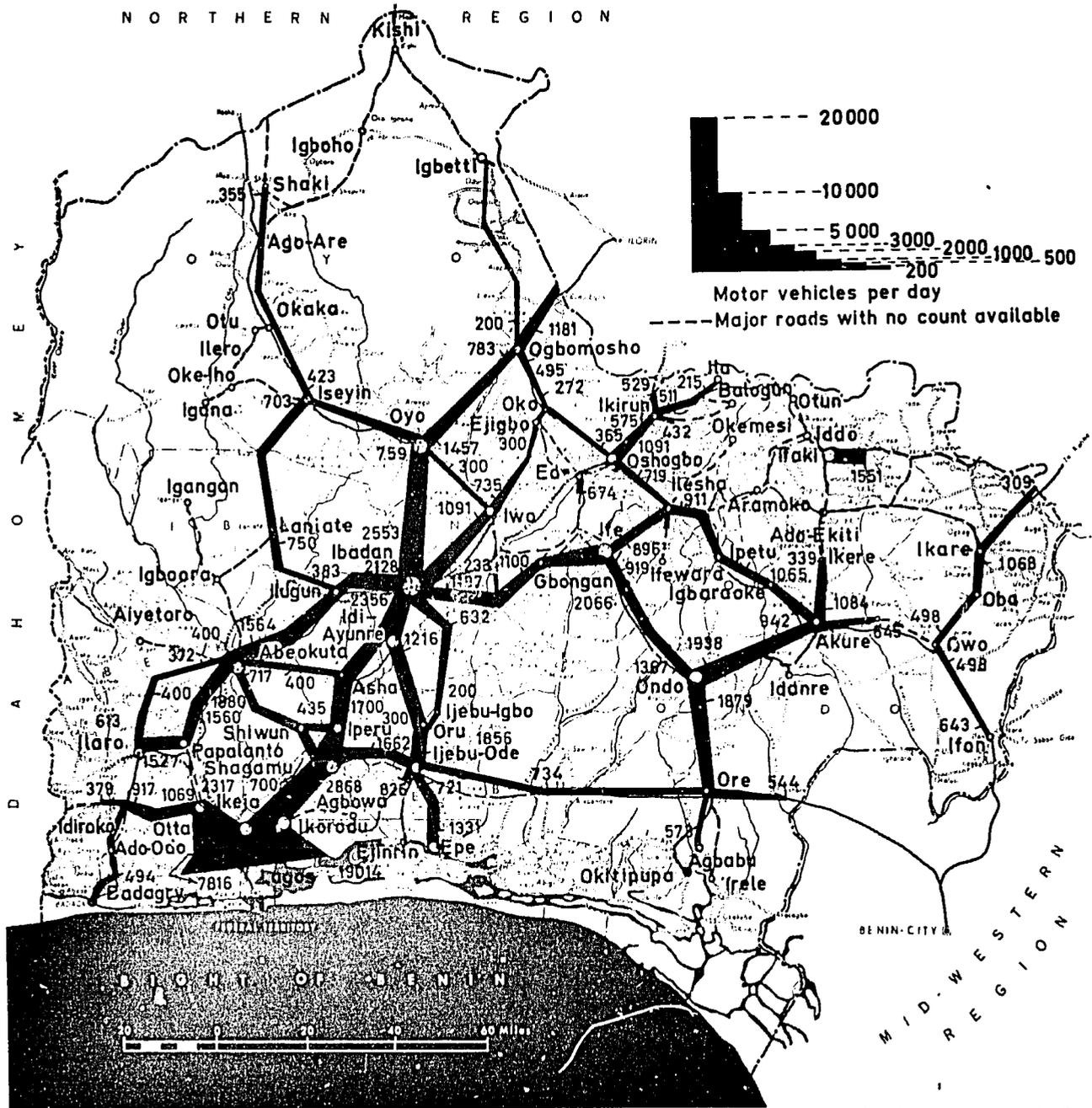
Source: Chief Statistician, Western Nigeria Statistical Bulletin, June and December 1965, Statistics Division, Ministry of Economic Planning and Community Development, Ibadan, 1965, page 119.

settled Oyo Province, with 16 miles per 100 square miles is lowest. This would be even lower if the densely settled Ife-Ilesha Divisions were excluded.

The density of road traffic in 1964 as indicated by the average daily movement of motor vehicles on most of the major roads in Western Nigeria, is shown in Map 3.10. The importance of Ibadan as a focus of the transportation network of the Region is clearly apparent.

A 3'6" gauge railway links Lagos with Abeokuta, Ibadan and Oshogbo before stretching to the far north and east of Nigeria. However, the railway system, in effect, only passes through the Region and does not have an extensive feederline system. Therefore, it cannot compete favorably with road transport in the intra-regional movement of goods and people. Even in the long distance trade, the railway is finding it difficult to compete with road transport. As a result, the railway system is relatively minor in the movement of staple foods.

Map 3.10  
ROAD TRAFFIC DENSITY, 1964



SOURCE: Ministry of Works and Transport

Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria 1965  
 Printed by Federal Survey, Nigeria 1965  
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Most of the inland waterway traffic is connected with Lagos and the coastal lagoon area. Ibadan, with an elevation of mostly about 700 feet, is understandably not directly involved in this lagoon traffic.

FOOTNOTES - CHAPTER III

1. The Western Region at Nigeria was replaced by a new Western State of Nigeria toward the end of the research period by the Federal Military Government. This was promulgated by decree on May 27, 1967. The new State includes the entire former Western Region of Nigeria, with the exception of Colony Province (1,354 square miles), which became part of the new Lagos State. The area of the Western State is, therefore, 29,100 square miles.
2. The decree of May 27, 1967 divided the Federation of Nigeria into twelve states; six in the former Northern Region, three in the former Eastern Region, two in the former Western Region and the Federal Territory of Lagos, and one in the former Mid-Western Region.
3. "The Administrative Divisions (Establishment) Edict, 1967," Western Nigeria Gazette, Ibadan, Vol. 16, No. 17 - Supplement, April 14, 1967, pp. A 29-32.
4. The November 1963 census followed an agreement by all the Governments of the Federation that the May 1962 census figures were inflated and should be rejected. However, "in order not to expose itself as being guilty of inflation in 1962, each Regional Government and indeed each district would ensure that the 1963 figures were not below those of the 1962 census." Consequently, the 1963 figures were above the unacceptable 1962 figures and in fact "it is reported that at the close of enumeration in 1963, the population of the country was put at about 60.5 million. After a few tests, the Census Board found itself unable to

- accept the actual population count for a number of census districts. Further tests and checking finally brought the figures down to 55.6 million." R. K. Ude, "Population and Politics in Nigeria," First African Population Conference, January 3-7, 1966, University of Ibadan, p. 6.
5. Chukuka Okonjo, "Patterns of Population Growth," Nigerian Journal of Economics and Social Studies, Vol. 6, No. 1, 1964.
  6. Leslie Green and Vincent Milone, Physical Planning in Western Nigeria: A Report Prepared for the Ministry of Lands and Housing, Ibadan, 1966, p. 12.
  7. F.A.O., Agricultural Development in Nigeria, 1965-1980, Food and Agriculture Organization of the United Nations, Rome, 1966, Appendix 5, p. 400.
  8. G. J. Afolabi Ojo, "Some Cultural Factors in the Critical Density of Population in Tropical Africa," First African Population Conference, January 3-7, 1966, p. 6.
  9. The concept of critical density of population (C.D.P.) has been defined by Allan to mean "the human carrying capacity of an area in relation to a given land use system, expressed in terms of population per square mile; it is the maximum population density which a system is capable of supporting permanently in that environment without damage to the land." William Allan, The African Husbandman, Oliver and Boyd, 1965, p. 89.
  10. However, the critical density of population may be either raised or lowered by changing the factors which determine its value. For example,

- anything which tends to raise the productivity of agricultural labor will also raise the carrying capacity of the land and hence its C.D.P.
11. During the whole of the nineteenth century, Yorubaland was plagued by inter- and intra-tribal warfare. In fact "The effects of plundering, devastation and slave-raiding did not die out in Ekitiland, molested by Ilorin and Ibadan, until the last decade of the nineteenth century. This countrywide decimation, occasioned not only by slave-raiding and inter-tribal feuds, but also aided and abetted by crises of subsistence farming which accompanied the social insecurity, and by epidemics (smallpox in particular), took a great toll of the population and effaced much of the past." G. J. Afolabi Ojo, Yoruba Culture: A Geographical Analysis University of Ife and University of London, London, 1966, pp. 108-109.
  12. 1952 Census of Population.
  13. Nigeria National Accounts as reported in Federal Office of Statistics Annual Abstract of Statistics, 1963, F.O.S., Lagos, 1963.
  14. Federal Office of Statistics, ibid, p. xii.
  15. F.A.O. op. cit., Appendix 3.
  16. F.A.O., op. cit., Appendix 3.

Chapter **IV**

**ECONOMIC  
CHARACTERISTICS  
OF STAPLE  
FOOD CROPS**



Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria  
 Printed by Federal Survey Nigeria 1963  
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#### IV ECONOMIC CHARACTERISTICS OF STAPLE FOOD CROPS

Essential to any understanding of the existing and probable future pattern of food production, distribution, and consumption is a knowledge of the basic characteristics of the major food crops. This section will discuss the more important of these characteristics for the three locally-produced staple food crops included in this study. Following a brief sketch of the historical importance and present consumer preference for variety of each commodity, the discussion will be divided into four parts: production, storage, processing and nutritional value.

##### A. YAMS (Dioscorea spp.)

Yams are the only staple food indigenous to West Africa which is of any consequence today. In much of the Western Region, especially in the main producing areas, such as Ekiti and Oyo, yams have always been the principal source of wealth. With wealth came status, titles and wives. Further, their traditional importance in sustaining life led to yams figuring prominently in the local customs and beliefs of the people and consequently in many of the traditional festivals. Traditionally, new yams could not be eaten until the New Yam Festival without incurring the wrath of the farm god (Òrìsà oko). Any violation of this tradition could cause crop failure or destruction for the community and even today might lead to chastisement or ostracism of the offending individual.

Yams are annual plants with climbing stems. Their nutritional value is contained in the tuberous roots, which are rich in carbohydrates.

Although fifteen species are known to exist,<sup>(1)</sup> only six of these are cultivated. One in particular, the white yam (D. rotundata), is particularly important and is preferred by the Yoruba of Western Nigeria. The discussion will therefore be confined to this one species.

#### 1. Production

Requirements - For acceptable yields, yams need good growing conditions. The soil must be fertile and friable as well as being well-drained. There must be a minimum rainfall of 40 inches, with at least 35 inches during the first four months of growth, and the temperature must be warm or hot throughout the 8-10 month growing period.

Planting - Propagation is by means of seed yam or a sett cut from a large tuber. This is a laborious and expensive task as 3/4 to 1 tons<sup>(2)</sup> of setts per acre, or 20 to 30 percent of the yield, is required for planting, depending on the size of the sett and spacing. Several characteristics deserve mention:

1. Setts vary from 8 to 24 ounces. The larger setts germinate earlier, and have a higher rate of germination, more tubers per stand, greater average weight per tuber, and higher net and gross yields.<sup>(3)</sup>
2. Although spacing varies from 8 to 6 square . . . , closer spacing gives higher net and gross yields per acre but smaller tubers.
3. Seed yams or tops of tubers are best for planting. They germinate earlier and are more reliable than the bottoms and middles of tubers.

4. Yams must be planted in well-prepared soil. This can either be in heaps (usual in native cultivation) or ridges (for mechanized cultivation), the height depending on soil type and the water table of the area.

For early-planted yams in particular, the soil must be mulched with at least a six-inch cap of grass or leaves weighted down by a hoeful of soil. This protects the sett and young shoots from being scorched by the sun, as well as preventing undue erosion.

Planting in the savanna zone is usually carried out at the end of the rainy season (between October and December), while in the forest zone it is usually between January and April. Spreading the planting time not only spreads the work but allows a higher proportion of tops to be planted while the rest of the tuber is consumed.

Cultivation - A minimum of care is necessary throughout the growing period, principally weeding. To prevent a large decrease (as much as one-third) in yield, the vines must be staked after germination, either to specially erected stakes or to stripped young trees left in the area. In the savanna zone, where stakes are often not available, yam may be interplanted with guinea corn and the haulms used to support the yam vines. Where stakes are used, as much as three fourths of an acre of Cassia Siamea scrub may be needed to supply enough stakes every year for an acre of yams. (4)

Yams are the most labor-intensive of all the major staple foods grown in Western Nigeria. T. A. Phillips (5) gives a labor requirement using hand cultivation of 150-240 man-days per acre per year. Even though yams have traditionally received intensive and devoted care by farmers, their relatively high cost of production is causing them to be gradually replaced by other staple foods, particularly cassava.

Harvesting - Maturation usually takes 8-10 months, the early crop being harvested from late June to September and the main crop from October to January. The first harvest is possible four to five months after germination when the tubers may be "topped," that is, the body of the tuber is cut from the head, which is left undisturbed to regrow and produce seed yams.

Diseases and Pests - Yams are less subject to attack by diseases and pests than most other food crops. The natural enemies of yams are principally:

1. A virus disease which affects the leaves and considerably reduces yield.
2. Eelworms (Anguillulina bradys) which attack the tubers and cause rotting both in the ground and during storage.
3. The larvae of the yam beetle (Heteroligus meles) which attack the tuber. Spraying with D.D.T. compounds, rotation, and late planting all help to lessen the ravages of this pest.
4. Fungi and bacteria which reduce the germination of setts and cause harvested tubers to rot.

Fertilizers - The demonstration fertilizer program in Western Nigeria, sponsored by F.A.O. and the Ministry of Agriculture and Natural Resources, has shown that yam responds well to inorganic fertilizers. In 119 demonstration plots in 1966, <sup>(6)</sup> the control plots without fertilizer averaged 4.6 tons per acre. With one hundredweight of ammonium sulphate (nitrogen) per acre, a yield of 5.7 tons per acre was obtained, or an increase of 25 percent. Adding one hundredweight of potash per acre did not substantially increase the yield.

Based on Ministry prices, the value of the average increased yield was 18 times the cost of the fertilizer. In 1965, using a nitrogen-potash mixture, the value-cost ratio averaged 7:6. Doubling the nitrogen application in 1965 did not further increase the yield.

From these demonstrations, it appears that yams do have an economic response to fertilizer, at least when cultivated under relatively well-managed and modern conditions. The Extension Service therefore recommended for the 1967 crop year an application of one hundredweight of nitrogen fertilizer per acre in May. Despite the probable increased yield, this is a large cash outlay for the average farmer--at least 25 shillings per acre.

Yields - This fertilizer program uses the Ministry's selected high-yielding varieties which are not yet generally available to farmers. These varieties have a yield about double that of the varieties presently grown, that is, 4 to 5 tons per acre compared with about 2 to 2-1/2 tons per acre. The best yield so far obtained is about 9 tons per acre.

Research - The Federal Department of Agricultural Research has been operating a plant breeding program for some years. The collection and selection of yams has led to the identification of higher-yielding local varieties which are acceptable to both producers and consumers. Efforts to produce a new variety by hybridization and selective breeding have so far not been successful. Yams are unisexual and continued vegetative propagation has probably made them sterile. The prospect of an acceptable new high-yielding variety being developed is therefore not good.

## 2. Storage

Storability - For several reasons, the storage of yam tubers presents a major problem.

1. At harvest, the moisture content of the tubers varies from 54 to 84 percent, usually being about 73 percent.<sup>(7)</sup> As the moisture content of the tuber becomes equal to the external humidity, a weight loss occurs.
2. The tuber is alive at harvest and its metabolic processes continue during the storage period. This results in a major loss in the dry matter weight during storage, due to respiration.

Research conducted by the West African Stored Products Research Unit has shown<sup>(8)</sup> that under normal storage conditions in southern Nigeria, the loss in weight during the storage of yam tubers is about 10 percent after three months and about 20 percent or more after five months. These figures approximately double when rotting takes place, and increase slightly when sprouting occurs by itself. Possibly more than 80 percent of this is loss of dry matter, the remainder being loss of moisture.

As the tuber loses weight in storage, it suffers a quality loss. A toughening of the tissue occurs as the tensile strength of the xylem fiber cells increases.

Methods - All three methods of storage principally used by farmers in Western Nigeria involve a good ventilation system. They are:

1. Tying the tubers on vertical stakes in shaded areas (or in yam barns).

2. Heaping the tubers on the floors of barns or houses.
3. Placing the tubers in a layer on a rock or shelf. When this method is employed, a fire may be used to fumigate them once or twice a week.

A fourth method involves the storage of yams in pits. This has been found to reduce weight losses and rotting, although germination rates have been lower<sup>(10)</sup>. It is particularly suitable for the storage of food yams.

Although far from economical at the present time, one method of storing yams that may merit investigation is cold storage. What effect a considerable reduction in temperature would have on the respiration, weight loss, and bacterial decay of the yam tuber over a period has yet to be determined.

### 3. Processing

Dried Yam - In the savanna area, yams are frequently converted to a less perishable form--dried yam. Yam flour, which is either pounded or milled from dried yam, is particularly popular in Ibadan and Oyo provinces. The traditional method of preparing the tuber for drying is by peeling, slicing, boiling, and soaking it for from two to four days. The slices are then placed on a rock, pavement, mat, or roof and exposed to the sun for a period of two to five days, depending on the season. Care must be taken to prevent molding.

Dried yam may be stored either in baskets if sliced, or in a calabash or other sealed container if in the form of flour. Flour will usually be dried again after it is pounded and sifted. Besides suffering no further weight loss by respiration, dried yam has the advantage of containing only 13 to 19 percent moisture, and yam flour even less. Provided care is taken to prevent molding

and the absorption of moisture, these forms can be stored indefinitely without deterioration.

#### 4. Nutritional Value

Yams are a starchy food, their carbohydrate content on a dry weight basis being about 89 percent. Based on 100 grams of dry matter (edible portion), B.S. Platt<sup>(11)</sup> gives the following representative values for yams:

|              |         |
|--------------|---------|
| Calories     | 385     |
| Protein      | 7.4 g.  |
| Fat          | .7 g.   |
| Carbohydrate | 88.9 g. |
| Fiber        | 1.8 g.  |
| Calcium      | 37 mg.  |
| Iron         | 4.4 mg. |

Dried yam and yam flour are basically the same as yam tubers, although they contain slightly more carbohydrate (91.5 g.) and about 40 percent less protein (4.3 g.).

#### B. CASSAVA (Manihot spp.)

Although cassava--often referred to as manioc or tapioca--is now common throughout the Region, it is of comparatively recent origin. It was probably brought to West Africa by the Portuguese during the last half of the sixteenth century<sup>(12)</sup>. However, it was not generally accepted as a food until Brazilian immigrants arrived in the nineteenth century. They processed the cassava tubers into a meal now known throughout West Africa as gari. With gari came a steady expansion in the production and consumption of cassava, but it only became really important after 1900.

Cassava and cassava products have never been a preferred item of diet among the Yoruba. "In fact, many (older) farmers claim that in their youth it was still largely regarded as food for pigs and sheep, a situation still common in the major yam areas of northern Yorubaland today."<sup>(13)</sup> Nevertheless, it gained acceptance as increased production became necessary. Cassava has now replaced yam as the principal staple food crop in much of the Region, notably Abeokuta, Colony, Ibadan, and Ijebu provinces. The reasons for this are to be found in the characteristics of the two crops.

1. Cassava will give acceptable yields on much poorer soils than yams. This is important, as the increase in population density and the expansion of the acreage planted to cash crops, such as cocoa, have shortened the fallow period and shifted the margin of cultivation to poorer soils.
2. Cassava cultivation requires only a small fraction of the labor demanded by yams. This frees time for the cultivation of cash crops.
3. Cassava is more compatible with the principal cash crops, as far as seasonal demand for labor is concerned.
4. Labor and other production costs, especially propagation costs, are considerably lower for cassava.
5. The problems of and losses from storage are negligible for cassava products as compared to yam.

Discussion of the characteristics of cassava will concern only the main species cultivated in Western Nigeria: Manihot Utilizzima. Hybrid varieties of this species are common throughout the Region.

## 1. Production

Requirements - Cassava needs no special conditions and little labor. In fact, its cultivation is generally by neglect. It grows best in areas with 45 to 75 inches of rainfall per year. However, provided the soil is well drained and free from waterlogging, it can tolerate a much higher rainfall. Moreover, it is resistant to drought and remains green throughout the long dry season of the guinea savanna zone. It does, however, need at least three wet months and a frost-free climate.

The lack of organic soil nutrients is perhaps the greatest handicap to cassava production in the Region. Nevertheless, acceptable yields are obtained even on exhausted and marginal soils. Because cassava is a tuberous plant, it produces best in light alluvial and other deep friable soils; but again it is undemanding.

Planting - The common method of propagation is by stem cuttings. The plant does produce viable seeds, but they are generally used for breeding purposes, as the roots are fewer and smaller than those of the parents. Stem cuttings not only give a higher yield, but germination is more certain and development earlier. They also require less labor. The cuttings should be from mature plants and are typically 9 to 12 inches long, longer cuttings giving higher yields. Any part of the stem may be used, although the basal portions may establish faster<sup>(14)</sup>. The cuttings are usually planted flat and entirely or at least two-thirds buried at a 45-degree angle. However, trials<sup>(15)</sup> with vertically planted cuttings have given earlier germination. Sprouting usually occurs within one or two weeks.

1. The harvest can be undertaken as and when labor is available.
2. If necessary, the harvest can be postponed until weather conditions are more favorable or prices are better.
3. Cassava an inexpensive reserve of staple food for the pre-harvest period of shortage of the other crops or a famine crop.
4. As the roots begin to rot a few days after digging, a more orderly system of processing and consumption may be followed.

Diseases and Pests - Pests are not a particularly serious threat to cassava, although losses sometimes do occur as a result of:

1. Termites attacking the cuttings and preventing germination. Control is possible with the use of insecticides.
2. Grasshoppers damaging the young plants.
3. Rodents gnawing the tubers in the field.

Very serious, however, is the virus disease, cassava mosaic. Although it has only been known in West Africa for about thirty years, it now affects all cassava grown in the Region, and may result in as much as 30 percent of the crop being lost. It causes a distortion of the leaves and stem and a mosaic discoloration of the leaves. Development of the tubers is also impaired. The vector is a white fly (Bemisia nigeriensis), but control is so far not possible. However, attempts to develop a mosaic-resistant variety appear to be meeting with some success.

Fertilizers - Improved cassava production has been obtained by the use of fertilizers but at the prevailing prices general application is not economical. However, in areas where the price of cassava tubers was in excess of three shillings per hundredweight, the Extension Service was

recommending an application of nitrogen at the rate of one hundred-weight per acre for the 1957 crop year. On the more acid soils, potash is almost essential, while an application of 10-20 hundred-weights of lime per acre will be beneficial.

Yields - Cassava grown under conditions intolerable to other crops yields approximately 3-1/2 to 4-1/2 tons per acre. However, even the common local varieties can yield up to about 10 tons per acre under better conditions. Some of the new hybrids developed by the Federal Department of Agricultural Research appear capable of giving average yields of up to 15 tons per acre. In a test at Ibadan during the 1964-65 growing season, one variety produced a yield equivalent to 22.7 tons per acre<sup>(18)</sup>.

Research - The gravity of cassava mosaic has spurred research into the development of high-yielding varieties which will resist the virus. Several resistant interspecies hybrids have been obtained from crosses between Manihot glaziovii (Cearárubber) and M. utilissima<sup>(19)</sup>. The main effort is now being concentrated on crossing these interspecies hybrids with several high-yielding M. utilissima intraspecies hybrids, as well as with the main M. utilissima variety (53101) recommended by the Extension Service. The yields to date of the resistant progeny have been low<sup>(20)</sup> but the experiments are still in an early stage.

Since 1954, about 800 varieties of cassava have been collected by the Federal Department of Agricultural Research. All showed symptoms of cassava mosaic, although a few appeared tolerant of the disease.

This collection is being used for several purposes:

1. In the breeding program mentioned above.
2. In a short-term improvement program to identify acceptable high-yielding varieties to replace the presently used local varieties.
3. As control crops in trials of hybrid varieties.
4. To study their botanical and agricultural characteristics.

Another important breeding program of the same Department concerns an attempt to raise the notoriously low protein content of cassava and thereby improve its food value. A high protein species, Manihot melanobasis, is being crossed with M. utilissima. In one analysis<sup>(21)</sup> the parents were shown to have a crude protein content on a dry matter basis of 18.5 percent and 1.8 percent respectively; the content in the progeny varied between 1.2 and 6.6 percent. With a few exceptions, these hybrids have produced low yields. However, provided a variety acceptable to consumers can be found, this program has important implications for the future.

The effect to date on the farming community of these various breeding and improvement programs is practically negligible. Even though several varieties have been released and recommended, particularly 53101, the Extension Service has failed to disseminate them widely. Even using the present techniques of cultivation, this means that the present yield of cassava may eventually be doubled.

## 2. Storage

**Storability** - The living plant is the safest and surest means of storing the starch produced by cassava. Once harvested, cassava tubers are seldom stored for more than a few days before processing. The two principal reasons for this rather rapid processing are:

1. The high moisture content of tubers, ranging from 49 to 74 percent of the edible portion, with a probable average of about 60 percent<sup>(22)</sup>. This causes the tuber to rot within a relatively short time
2. The development of a poison, (prussic [hydrocyanic] acid), once the plant is harvested. Although sufficient prussic acid is usually present in the roots to be toxic, if not lethal, it can be easily eliminated by processing. After harvest, the prussic acid is freed by an enzyme from a compound (a cyanogenetic glucoside) that exists in the roots while the plant is alive. This hydrolysis can be accelerated by soaking the tubers in water, grating or breaking them into pieces, and heating up to 165<sup>o</sup>F. As the prussic acid is highly soluble in water and decomposes when heated above 300<sup>o</sup>F, it can then be easily removed.

## 3. Processing

Before the cassava grown in Western Nigeria can be consumed or stored it must be processed. Gari is the main food produced, followed by cassava flour. Fufu and starch, are also produced but are less important.

Gari - Gari is a crisp yellow mash with a slightly sour taste. When cooked, it swells into a brown paste about three times its original volume. It may also be soaked in water and consumed as a drink.

Using traditional methods, the fresh cassava roots are washed, peeled and grated by hand, then placed in a sack and put under pressure for three or four days to remove moisture and to induce fermentation. Next the material is sieved to remove coarse fibres and fried in a flat iron pot over a slow fire until dry. Some producers add a little palm oil when frying, but most Yoruba prefer gari without. Depending on the variety of cassava used, up to 35 percent of the weight of the roots may be converted into gari the average being about 20 percent.

Gari production is almost entirely in the hands of women. Great skill is required, although the equipment used is simple and inexpensive. Production is small-scale, slow, inefficient and unhygienic. The process could be entirely mechanized, but graters are the only mechanical items used at present, and even they are not generally used. Even a simple gasoline-driven mechanical grater will increase labor productivity considerably as it can do in minutes what normally takes hours by hand. Where they are used, mechanical graters seem to arouse great enthusiasm.

A one-ton per day pilot-scale gari plant has been operated by the Federal Institute of Industrial Research for several years. This plant provides several useful examples<sup>(23)</sup> of what could be achieved by mechanizing gari production.

1. The installation of an improvised peeling machine (an old concrete mixer) increased peeling capacity by over 300 percent, allowed for a reduction in the labor force from 80 to 6 men per day and reduced peeling losses from 12 percent to 4 percent.
2. When the tops and tails of the peeled tubers were trimmed by hand, a weight loss of about 10 percent occurred. Screening the fibers before and after drying reduced this loss to about four percent.
3. A total labor force of about 31 men, spread over three shifts, and a gang of peelers were required to operate the plant. With a production of one ton per day, this gave an average output of nine pounds per hour per man. This compares with 2.4 pounds quoted by Galetti, et al.<sup>(24)</sup> for production by the traditional method.

The ability of gari to be stored depends on several factors but generally it stores well.

1. A low moisture level must be maintained. This requires storage in a dry place. Traditionally-processed gari normally contains a higher level of moisture than factory-processed gari (11-15 percent compared with 8-10 percent).
2. The palm oil used in processing will turn the gari rancid if stored too long. The smaller the quantity, the longer it will keep.

Dried Cassava - Particularly common in Ibadan, Abeokuta, and Oyo Provinces, dried cassava consists of broken and dried pieces of root which are pounded or milled into a flour. Like gari, it swells considerably when cooked with water.

Several methods of preparation are in common use in the Region. One variety, Ogidi, is prepared by placing the unpeeled roots in water (often a stagnant pool) for from three to seven days. In addition to removing the prussic acid, this loosens the skins. The roots are then broken into pieces by rubbing, placed in a basket to drain, and dried on a rack, pavement, mat or roof for from one to five days, depending on the season.

The most common method in Ijebu and Abeokuta Provinces, which is now spreading to the other areas, produces a cleaner, whiter and more hygienic variety, Lafun. The main difference in this method is that the roots are peeled and washed before they are soaked in clean drums of water.

Dried cassava, like dried yam, will store well for a considerable length of time, provided the moisture level is low enough (11-15 percent).

#### 4. Nutritional Value

Cassava also has a very high carbohydrate content. In comparison with the other staple foods, cassava and its products are very low in protein, about average in iron, and above average in calcium. Cassava products are low in vitamins, although the fresh roots contain a significant quantity of vitamin C which is lost in processing.

Using a moisture content of 60 percent of edible portion for fresh cassava and 12 percent for cassava flour, B. S. Platt<sup>(25)</sup> gives the following representative values for the nutrients of 100 grams of edible dry matter.

| <u>Nutrient</u>             | <u>Unit</u> | <u>Fresh Cassava</u> (a) | <u>Cassava Flour</u> | <u>Gari</u> (b) |               |
|-----------------------------|-------------|--------------------------|----------------------|-----------------|---------------|
|                             |             |                          |                      | <u>White</u>    | <u>Yellow</u> |
| Calories                    |             | 383                      | 389                  |                 |               |
| Protein                     | g.          | 1.8                      | 1.7                  |                 |               |
| Fat                         | g.          | 0.5                      | tr                   | .6              | 6.2           |
| Carbohydrate                | g.          | 92.5                     | 95.4                 |                 |               |
| Fiber                       | g.          | 2.5                      | 1.7                  |                 |               |
| Calcium                     | mg.         | 62.5                     | 62.5                 |                 |               |
| Iron                        | mg.         | 2.5                      | 2.3                  |                 |               |
| Asorbic Acid<br>(Vitamin C) | mg.         | 75.0                     | 0                    |                 |               |

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(a) About 15 percent (with a range of 5 to 15 percent) by weight discarded on consumption.

(b) Gari has basically the same composition as cassava flour except for the increase in fat resulting from the addition of palm oil in the frying process.

The small amount of protein in cassava is of great concern to the nutritionist. As already mentioned, an effort is being made to breed new high-yielding hybrids with a considerably higher protein content. Another approach tried with some success in Nigeria<sup>(26)</sup>, is to combine groundnut (peanut) flour with the cassava products to increase the quantity and improve the quality of the protein. A very palatable, low-fat groundnut flour containing up to 50 percent protein, which stores well and has a high amino-acid content, is reported to have been produced in Nigeria.<sup>(27)</sup> In addition to groundnut flour, other inexpensive high-protein food supplements may eventually gain consumer acceptance.

### C. MAIZE (Sea mays)

Maize (field corn in the United States) was brought to the West African coast from the Americas by the Portuguese during the sixteenth century.<sup>(28)</sup> The exact date of its spread into Western Nigeria is not known for certain, but it was a well-established and important staple food crop (along with yams and beans) in Abeokuta Province by 1851.<sup>(29)</sup> This maize was a white floury variety (var. amylaceae) which is still preferred throughout the region for most maize preparations. However, in the savanna zone of Northern Nigeria, flinty varieties of maize (var. indurata) are preferred. These are believed to have crossed the Sahara from Egypt.<sup>(30)</sup> Since 1950, however, dent (or floury-flint) varieties of maize (var. indentata) have been introduced into Western Nigeria, although they are not yet generally grown or accepted.

#### 1. Production

Requirements Maize requires a four-month hot and humid growing season, with at least 20-30 inches of rain, as it is drought-sensitive. Like

the other major crops grown in Nigeria, maize is a "short day" crop which is unaffected if not aided, by the short days of the tropics.<sup>(31)</sup>

Provided the soil contains adequate nutrients and is well aerated, maize is generally soil-tolerant. The nutrients may be provided by a system of bush fallow or by artificial fertilizers. Highly acid soils are unsuitable.

Planting Planting begins as soon after the onset of the rains as possible. This generally means mostly during March and April for the entire region, beginning with the more southernly areas, as the rains spread slowly northward from the coast. Experiments in Ibadan showed that yields per acre dropped rapidly with successive plantings over several months. Chinwuba,<sup>(32)</sup> for example, quotes a drop in yield of 45 percent when planting was delayed from early April to June.

However, even though early planted maize may yield best, it does not store well because it ripens long before the end of the rainy season in Western Nigeria. Consequently, in many areas a late crop is also planted to coincide with the second peak period of rainfall. This planting normally occurs during August and September. As this second rainy season is shorter and less dependable, crop failure is common. A second crop is generally only possible in the forest areas, as the rainy season is too short in the savanna zone.

No clear guidance is given as to seeding rate, although the Federal Department of Agricultural Research itself uses three square feet per plant, or 14,500 plants per acre. However, experiments proved that the yield of at least one introduced variety was substantially the same whether one or two plants were planted per heap in plant populations

ranging from 9,600 to 29,000 plants per acre.<sup>33</sup>

Cultivation. Maize should be thinned and weeded constantly until the plant is well established. However, because it thrives with a great deal less care, it seldom receives extensive cultivation. Furthermore, it is not usually sown as a major crop immediately after a period of fallow, so land preparation is not particularly labor-consuming. In fact, Phillips<sup>(34)</sup> considers that 45-50 man-days are required, and up to 75 if a green manure crop is grown.

Another advantage of maize is that it fits easily into rotational and intercropping patterns. For example, in the savanna zone, an early crop of maize is frequently intercropped before harvest with a late crop of guinea corn (*sorghum* spp.), which can only grow in the second season because of a mold problem. In all areas it is usually intercropped with yams.

Harvesting. Depending on variety, green (fresh) maize may be harvested from ten to fourteen weeks after planting, while mature dry maize generally requires fourteen to seventeen weeks. This means late May to August for the early crop, and November to January for the late crop.

The local varieties mature faster than the introduced varieties--about 100 days compared with 120 days. This partly explains the reluctance of farmers to plant the newly introduced varieties. The second growing season is generally too short, and they cannot be planted earlier because of the low rainfall during August.

Disease and Pests. A large number of insects infest maize, (35) but only a few appear to be of direct economic importance. However, insects are probably the vectors of the major virus diseases affecting maize in the region. The pests which attack maize in Western Nigeria are:

- Stem borers. These are nearly always present, although the damage they do varies. The larvae eat the stems and leaves, often killing the plant. As they only become numerous after the rains, the damage to the early crop is generally not serious. However, their effect on the late crop ranges from a yield loss of about ten percent to complete crop failure. In fact, in many areas a second crop is impossible. Some control has been achieved by dusting young plants with D.D.T. although this has not so far proved economically worthwhile. Control by crop sanitation (removing all remains of previous grain crops) has been somewhat effective.
- Army worms-When on the march, army worms relish maize. The larvae do the damage and, en masse, can rapidly decimate a field of maize. Their impact varies from year to year, most damage occurring during May and occasionally September. Control is possible, as the larvae are very susceptible to most common insecticides.
- Weevils-These infest a large number of ears of maize at harvest time but do little damage. It is while the maize is in store that most damage occurs. Again, the larvae are responsible,

and a new generation is bred about once a month. Although storage in a smoky atmosphere affords some control, dusting with an insecticide or proper fumigation are more effective.

An estimated loss of 40 to 50 percent of the maize crops occurred in the early 1950's as a result of a rust fungus. Presently, however, other diseases are causing more serious losses. The main diseases are:

- Rust (Puccinia polysora), a fungus which causes spotting and death of the leaves. The severe attacks of the early 1950's have subsided temporarily. The introduction of Central American maize, which is rust-tolerant, now provides alternative but generally unacceptable varieties. However, these are being used to breed more acceptable rust-resistant varieties.
- Leaf blights, mentioned by Van Eijnatten<sup>(36)</sup> as now causing more serious loss than rust. They are fungi which can cause the leaves to die.
- Leaf fleck, is also rated highly by the same expert. First recorded in 1955, it too can cause the leaves to die. It is suspected of being a virus disease. Very little is known about leaf blight of leaf fleck, but it is hoped to find resistance to these pathogens by mechanical selection from among local varieties. In the meantime, these and other diseases will continue to have an adverse effect on maize production and yields.

Fertilizer. With the present level of yields, it is doubtful whether the application of fertilizer is an economic proposition. In fact, in the F.A.O./M.A.N.R. Fertilizer Program, particularly in 1965,<sup>(37)</sup> the demonstration plots failed to yield sufficient increase even to pay for the cost of the fertilizer, despite good results in some cases. Increases ranged from 2 to 58 percent. Nevertheless, for the 1967 crop year, the Extension Services were recommending that farmers apply one hundredweight of nitrogen and phosphorous per acre in the savanna zone, and one hundredweight of nitrogen in the forest areas, where the land has already been used for two or three years.<sup>(38)</sup>

However, the application of artificial fertilizers will no doubt insure an acceptable economic return, once the improved higher-yielding varieties of maize become generally accepted and cultivation practices improve.

Yields. Although estimates of the actual average yield of maize in Western Nigeria differ, about 900 lbs per acre seems reasonable.<sup>(39)</sup> Phillips,<sup>(40)</sup> estimates a reasonable yield under the traditional system to be 1200-2000 lbs per acre for the early crop and 650-1000 lbs per acre for the second crop.

With the newly developed and released varieties, yields of up to 4000 lbs per acre are possible under improved practices. In the period 1960-63, the Federal Department of Agricultural Research in Western Nigeria has averaged about 2227 lbs per acre:<sup>(41)</sup> this has been achieved with the use of new high-yielding varieties, fertilization, and other improved practices.

An idea of the higher productivity obtained with the introduced varieties of maize and the variation in yield between different vegetation zones can be gained from Table 4.1. These tests generally used 12,000 plants per acre without fertilizers. Nevertheless, the introduced varieties yielded about 45 percent more than the local varieties. As the former apparently respond better to improved fertility conditions, their potential is even higher.

Table 4.1

AVERAGE YIELD OF MAIZE VARIETIES GROWN IN FOUR TYPES OF VEGETATION ZONES IN NIGERIA - RESULTS OF 158 YIELD TRIALS - 1952-1962. YIELDS IN POUNDS PER ACRE.

| <u>Variety</u>   | <u>Type of Vegetation Zone</u> |            |                            |                                        | <u>Average</u> |
|------------------|--------------------------------|------------|----------------------------|----------------------------------------|----------------|
|                  | <u>Rainforest</u>              |            | <u>Derived<br/>Savanna</u> | <u>Southern<br/>Guinea<br/>Savanna</u> |                |
|                  | <u>Wet</u>                     | <u>Dry</u> |                            |                                        |                |
| Local Varieties  | 914                            | 1,237      | 1,080                      | 860                                    | 1,168          |
| Mexico 5         | 1,259                          | 2,078      | 1,648                      | 1,173                                  | 1,693          |
| Trinidad         | 1,445                          | 2,078      | 1,780                      | 1,145                                  | 1,698          |
| Number of Trials | 44                             | 91         | 9                          | 14                                     |                |

Source: C.L.M. Van Eijnatten, op. cit., p 39.

In Table 4.1, the 60-inch isohyt was taken by Van Eijnatten as the dividing line between the wet and dry rain forest. The variation in yield between the different vegetation zones partly explains why the main maize-producing areas of the region are located in the drier part of the rain forest. The average yield of the local varieties seems to be about 15 to 30 percent above that actually being achieved in the region.

Research. The loss of production caused by rust in the early 1950's precipitated considerable research activity in an effort to introduce rust-resistant strains. However, the flint or dent varieties introduced as a result proved unacceptable to both farmers and consumers in Western Nigeria. As the breeding program progressed, however, better adapted varieties became available. For Western Nigeria, a floury-type synthetic variety Lagos White<sup>(42)</sup> developed mostly from local varieties, has been issued to the Extension Services by the Federal Department of Agricultural Research.

Plant improvement programs seek to develop plants with characteristics which will increase productivity and protect the plant against environmental hazards. These include resistance not only to rust but to some of the other diseases, such as leaf blight. Other improvements, such as greater drought resistance, earlier maturity, and lower moisture content of the grains at harvest are also desirable in many areas.

Much has been accomplished in the breeding of new varieties using skills and experience acquired in the United States. The release, multiplication, and general acceptance of maize cultivars especially suitable to Western Nigeria are still far in the future, but it seems inevitable that they will be achieved.

Although efforts have concentrated on the breeding program, improved agronomic practices are also vital. Something has been learned from experiments to date.

It is suggested<sup>(43)</sup> that the increased yield of early-season maize resulting from improved varieties and considerably improved cultivation practices will make the production of late-season maize too risky

and uneconomic. This will occur only if the marketing system can provide sufficient drying and storing facilities for early-season maize.

## 2. Storage

Storability. Properly prepared and carefully stored, maize may be kept indefinitely. However, the moisture content of shelled maize stored in silos under tropical conditions must be 13 percent or less. Where maize is stored on the cob in well-ventilated cribs, the moisture content may be 20 percent or higher. When harvested dry, the early maize crop has a moisture content of 20 percent or more after shelling. The second crop, harvested after the dry season has started, contains about 16 percent moisture. <sup>(44)</sup>

In effect, then, maize must be stored on the cob unless some means of drying exists. Actually, for the second crop sun drying can be adequate. However, for the early crop this method does not remove enough moisture for the shelled grain to be stored without sustaining damage.

Also essential to the proper storage of maize is the control of insect pests. As already mentioned, weevils, in particular, are a major problem. The number of grains affected by insect damage under traditional storage methods usually ranges from a small amount at harvest to more than half after a few months. However, dusting insecticides on maize stored in cribs has been shown to cause almost as much damage. <sup>(45)</sup> The fumigation of silos provides easier and even greater control.

Methods. Although maize is best stored in the form of shelled grains, very little is actually stored in this way. Most is stored on the cob, with or without husks. The main methods are:

- a. With husks: the cobs are placed in a pyramid on a raised platform; they may or may not be covered. The husk helps protect the grain against external damage. However, it is conducive to mold growth and renders insecticides ineffective.
- b. Particularly in the case of seed maize, cobs with husks will be stored on rafters in a house or hut, and smoked to help control insects.
- c. Cobs without husks are stored in a bag or a basket, which may or may not be raised off the ground, or they may be stored in a crib which is raised off the ground. A fire is frequently lit under the platform. Again, insect and rodent damage is prevalent and without good ventilation mold is also a cause of loss. Cribs have the advantage that drying occurs naturally, so they can be used to store early-season maize without the moisture content having to be reduced by artificial means. Also, a reasonable measure of insect control can be achieved. Storage of maize on the cob permits shelling to be done when the labor is available and not necessarily immediately after harvest.
- d. Grain silos are beginning to come into wider use as larger farming operations develop (for example, government farm settlements) and concern over storage needs and losses mounts.

Although silos are the safest way of storing grains, the maize must have a lower than normal moisture content. Oil-fired maize dryers (usually with electrically-powered fans) have proved suitable for drying large quantities of maize. However, in most regions maize is

grown by a large number of scattered farmers, each producing a relatively small quantity. If these producers are to be encouraged to store their maize in shelled form, a low-cost method of drying must be readily available. One such method is an integrated crop dryer and grain storage silo (holding up to 1900 pounds of dry, shelled maize) made mostly from native materials.<sup>(46)</sup> This is now being demonstrated to farmers by the Extension Services, following U.S.A.I.D. initiative.

### 3. Processing

The problem of storing early season maize has led to much of the crop being eaten fresh. The remainder is eaten in some preparation or other made from dried, shelled maize grains, which is, in essence, a semi-processed form.

The dried, shelled maize, is processed mainly by ready-to-eat food sellers or directly by consumers. Although the mortar and pestle and grinding on a stone are methods still very much in use, they are slowly giving way to power-driven grain mills<sup>(47)</sup> for the preparation of maize flours, even in small towns and villages. These same mills are used to process dried yams, dried cassava, and beans as well.

Wet and dry processing methods are used, wet processing being the more common.

- a. Wet processing occurs after the maize has been soaked in cold water for from one to three days, the water being renewed at least daily. The seed roots are generally removed before soaking. If milled, a small quantity of water is added to the maize as it enters the machine.
- b. Dry processing eliminates the initial soaking stage but makes

the task considerably more difficult. Mills, for example, will charge up to three times as much for the same quantity if dry milling is used instead of wet milling.

As prepared maize products are extremely important in Western Nigeria, brief mention should be made of the two main products involved.

1. Ogi is the basic processed product. It is usually made from wet processed maize flour after the seed roots have been removed, mostly by pounding. After further soaking, it is then sieved to remove coarse particles, and water is added until it has the consistency of thick porridge.
2. Eko is in two forms and is made by the further processing of Ogi. Eko mimu is made by boiling the ogi and keeping it liquid. Eko tutu requires that the ogi be boiled until it becomes a stiff, solid paste which is then wrapped in leaves for sale.

It is in these preparations that the Yoruba show their strong preference for the white floury varieties of maize. The claim is generally made that the (yellow) dent and flint varieties are too chaffy and do not swell to the same extent. Moreover, white maize is traditional. In preparations made from yellow flour the quality cannot be readily discerned.<sup>(48)</sup> Much of the chaffiness can be removed by using finer-mesh sieves in milling, but this means that a smaller proportion of the original weight is actually converted into usable flour. In actual consumer tests for palatability, the dent variety often equalled or even surpassed an improved local flour variety.<sup>(49)</sup> The indications are that once the real flour yield of the dent varieties is increased and tradition is overcome, consumer acceptance of these varieties will follow.

#### 4. Nutritional Value

Very little difference is reported in the composition of the several varieties of maize grown in Nigeria.<sup>(50)</sup> About 80 percent of the edible dry matter is carbohydrate.

Using an average moisture content of 12 percent for dried, shelled maize and 70 percent for fresh (immature) maize, the following representative values of the nutrients of 100 grams of edible dry matter may be given:<sup>(51)</sup>

| <u>Nutrient</u>              | <u>Unit</u> | <u>Dried Shelled</u> | <u>Fresh (Immature)</u> |
|------------------------------|-------------|----------------------|-------------------------|
| Calories                     |             | 412                  | 410                     |
| Protein                      | g.          | 11.4                 | 13.3                    |
| Fat                          | g.          | 5.1                  | 4.0                     |
| Carbohydrate                 | g.          | 80.7                 | 80.0                    |
| Fiber                        | g.          | 2.3                  | 2.7                     |
| Calcium                      | mg.         | 13.6                 | 30.0                    |
| Iron                         | mg.         | 2.8                  | 2.3                     |
| Ascorbic Acid<br>(Vitamin C) | mg.         | 0                    | 33.3                    |

It should be mentioned that although maize is next to cowpeas in terms of crude protein content, much of what is actually consumed is of extremely poor quality. Two of the essential amino acids, lysine and tryptophane, are almost entirely absent, and the content of two others is very low. Superfluous leucine, however, is present. The part of the kernel which does contain a small portion of high-quality protein is, unfortunately, generally removed with the seed coat during milling. In fact, the wet-processed maize flours used for most of the dry maize preparations in Western Nigeria contain little else of value but pure starch.

FOOTNOTES--CHAPTER IV

1. A. W. Waitt, Review of Yam Research in Nigeria, 1920-1961, Federal Department of Agricultural Research, Memorandum 31, 1961, p. 1.
2. T. A. Phillips, An Agricultural Notebook (with special reference to Nigeria), Longmans of Nigeria, Second Edition, 1964, p. 9.
3. Report by the Director of Agricultural Research, Annual Report on the Department of Agricultural Research for the Year 1962-63, Federal Ministry of Information, Lagos, 1964, p. 44.
4. T. A. Phillips, op. cit., p. 11.
5. T. A. Phillips, op. cit., p.12
6. F.A.O./M.A.N.R. Fertilizer Program, "Preliminary Research Results, Western Nigeria--1966" Report No. 2, Ibadan, March 1967.
7. B. S. Platt, Tables of Representative Values of Foods Commonly Used in Tropical Countries, Privy Council, Medical Research Council Special Report Series No. 302, M.M.S.O., London, 1962.
8. D. G. Coursey, "The Magnitude and Origins of Storage Losses in Nigerian Yams" J. Sci. Food Agric., 12, August 1961, pp. 574-580.
9. Q.B.O. Anthonio, Economic Problems of Peasant Storage, Ministry of Economic Planning and Community Development, Ibadan, 1963, p. 32.
10. Report by the Director of Agricultural Research, Annual Report on the Department of Agricultural Research for the Year, 1960-61, Federal Ministry of Information, Lagos, 1964, p. 20.
11. B. S. Platt, op. cit.

NOTE:

For yams as well as the other commodities to follow:

- (a) Calories were derived by using the factors 4, 9 and 4 per gram for protein, fat and carbohydrate respectively.
- (b) Protein was calculated from the nitrogen content by multiplying by the factor 6.25. This may lead to a 5 to 15 percent over-estimate for staple foods when compared with that obtained by the use of individual factors.

Footnotes--Chapter IV (continued)

12. W. O. Jones, Manioc in Africa, Stanford University Press, Stanford, 1959, p. 32.
13. Akin L. Mabogunje and Michael B. Gleave, "Changing Agricultural Landscape in Southern Nigeria: The Example of Egba Division, 1850-1950" in Nigerian Biographical Journal, June 1964, p. 8.
14. Report of the Director of Agricultural Research, op. cit., 1962-63, p. 49.
15. Report of the Director of Agricultural Research, op. cit., 1960-61, p. 23.
16. J. Papadakis, Crop Ecological Survey in West Africa: (Liberia, Ivory Coast, Ghana, Togo, Dahomey, Nigeria), F.A.O., Rome, 1966, Vol. 1, (PL/FFC/2), p. 58.
17. T. A. Phillips, op. cit., p. 14
18. Federal Department of Agricultural Research, Quarterly Research Bulletin, No. 12, Third Quarter, 1965, p. 22.
19. Federal Department of Agricultural Research, op. cit., p. 23.
20. Report of the Director of Agricultural Research, op. cit., 1962-63, p. 47.
21. Report of the Director of Agricultural Research, op. cit., 1962-63, p. 46.
22. B. S. Platt, op. cit.
23. G. W. A. Baumer, "Report to the Government of Nigeria on the Processing of Gari and Tapioca in Rural Industries," F.A.O. Report No. 1486, Rome, 1962.
24. R. Galletti, K. D. S. Baldwin and L. O. Dina, Nigerian Cocoa Farmers: An Economic Survey of Yoruba Cocoa Farming Families, Oxford University Press, London, 1956, p. 370
25. B. S. Platt, op. cit.
26. Bruce F. Johnston, The Staple Food Economies of Western Tropical Africa, Stanford University Press, Stanford, California, 1958, p. 164.
27. B. F. Johnston, Ibid., p. 164.

Footnotes--Chapter IV (continued)

28. B. F. Johnston, Ibid, p. 26.
29. Reported by T. King in the Journals of the Church Missionary Society, 1852 and quoted by Akin L. Mabogunje and Michael B. Gleave, op. cit., p. 5.
30. See C. L. M. Van Eijnatten, Towards the Improvement of Maize in Nigeria, H. Veenman and Zonen, N. V., Wageningen, 1965, p. 31.
31. For example, the natural day-length in Ibadan varies only by 48 minutes throughout the year.
32. P. M. Chinwuba, Problems of Expanding Maize Production in Nigeria, Federal Department of Agricultural Research, Ibadan, Memorandum No. 75, 1965, p. 4.
33. P. M. Chinwuba, Ibid, p. 6.
34. T. A. Phillips, op cit., p. 24.
35. See C. L. M. Van Eijnatten, op. cit., pp. 59-62.
36. C. L. M. Van Eijnatten, op cit., p. 83, 85
37. R. Bjerke, "FFHC Fertilizer Program, Western Nigeria: Yield Results, 1965/66," (F.A.O.) Ibadan, Sept. 1966.
38. For continuous cropping, two applications of 1-cwt per acre were recommended.
39. Based mainly on the Rural Economic Survey results 1959/60, 1963/64, and 1964/65.
40. T. A. Phillips, op. cit., p. 24.
41. P. M. Chinwuba, op. cit., p. 1.
42. A synthetic variety is basically a combination of genotypes with a high combining ability to each other: this leads to new and relatively stable genotypes, capable of reproducing themselves. This means that instead of the hybrid vigor (heterosis) being exhausted within one or two generations, it remains considerably longer. The implication of this is important to the type of farming in Western Nigeria. Once the seed is acquired, farmers can use this as their source of planting material for a considerable length of time.

43. F. A. O., Agricultural Development in Nigeria: 1965-1980, Food and Agriculture Organization of the United Nations, Rome, 1966, p. 179.
44. West African Stored Products Research Unit, Annual Report 1959, Department of Marketing and Export. Nigeria, p. 44, 45, 48, 49.
45. W.A.S.P.R.U., Ibid., pp. 44-48. Also later Reports.
46. Ministry of Agriculture and Natural Resources, "Low Cost Bush Crop Dryer and Grain Storage Silo," Publicity and Information Section, M.A.N.R., Ibadan, 1965.
47. It is interesting to note that one stage in the mechanization of flour production is being skipped in Western Nigeria. Manual grain mills for domestic or 'compound' use have not, as yet, been introduced.
48. C. L. M. Van Eijnatten and N. N. Okparanta, An Enquiry into the Use of Grain Mills for Processing Maize and into Preferences for Various Maize Types with Millers and their Customers, Federal Department of Agricultural Research, Ibadan, Memorandum No. 39, 1962, p. 4-5.
49. C. L. M. Van Eijnatten, The Acceptability of Floury, and Floury Flint (Dent) Maize Grains in Nigeria, Federal Department of Agricultural Research, Ibadan, Memorandum No. 57, 1964.
50. C. L. M. Van Eijnatten, op. cit., p. 23.
51. B. S. Platt, op. cit.



Chapter V

PRODUCER  
BEHAVIOR



## V PRODUCER BEHAVIOR

### A. AGRICULTURAL PRODUCTION PATTERNS

Food production is the most important economic activity in Western Nigeria, both in terms of employment and income. National income data by region is lacking, but for Nigeria as a whole, FAO estimates that in 1963-64 agriculture contributed 58 percent of GDP, of which 86 percent was food, 0.4 percent agricultural raw materials used domestically, and 14 percent represented the value to producers of the cash crops exported.<sup>1</sup> The development of cash crops has been recent and spectacular. For example, the export of dry cocoa beans from Nigeria rose from 200 tons in 1900 to 252,300 tons in 1965. Agricultural production has consequently shifted from a subsistence to a market orientation. Also, the ever-increasing demand of the internal exchange economy has furthered the commercialization of food crop production.

Agricultural production patterns will be discussed in three parts: (1) land use, (2) food production and (3) production characteristics.

#### 1. Land Use

According to the Sample Survey of Agriculture in Western Nigeria in 1958-59 the land-use allocation is as follows:<sup>2</sup>

| <u>Land Use</u>                                                | <u>Percent of Total<br/>Area Covered</u> |
|----------------------------------------------------------------|------------------------------------------|
| Under farm (arable) crops                                      | 5.95                                     |
| Under tree crops                                               | 4.76                                     |
| Forest reserve                                                 | 14.70                                    |
| Non-agricultural land                                          | 0.99                                     |
| Residual (plantations, fallow, uncultivated<br>bush and waste) | <u>73.60</u>                             |
| Total covered - percent                                        | 100.00                                   |
| - '000 acres                                                   | 18,396                                   |

Overall, 10.7 percent of the land area is used for agricultural production. However, this figure does not include the area under bush fallow resulting from the practice of land rotation.

The proportion of land under farm (arable) and tree crops for cash in the 1958-59 Sample Survey of Agriculture.

| <u>Province</u> | <u>Percent of Land Under</u> |                   |             |
|-----------------|------------------------------|-------------------|-------------|
|                 | <u>Farm Crops</u>            | <u>Tree Crops</u> | <u>Both</u> |
| Obeokuta        | 4.7                          | 3.3               | 8.0         |
| Ibadan          | 12.5                         | 8.6               | 21.1        |
| Ijebu           | 4.8                          | 4.0               | 8.8         |
| Colony          | 3.8                          | 4.3               | 8.1         |
| Ondo            | 6.5                          | 6.9               | 13.4        |
| Oyo             | 3.4                          | 1.3               | 4.7         |

In general, land in the drier northern part of the high forest zone is more intensively used both for arable and tree crops than in other areas; this is also an area of high population density.

The major areas of cash crop production are shown in Map 5.1. The high degree of specialization within the Region is quite apparent: Cocoa production occupies much of the dry forest zone, with kolanuts dominating its south-western fringe; oil palm, rubber and coconuts are concentrated in the coastal area, and tobacco and some cotton are grown in the north-western savanna area. North of the main cocoa area, yam is the major staple food produced, although cassava and maize are also important. In the cocoa area itself, cassava is especially important, with cocoyams, yam and maize being secondary, while south of the cocoa area, cassava is dominant. Generally speaking, the savanna zone is the only overall area where food production is considerably in excess of subsistence needs.

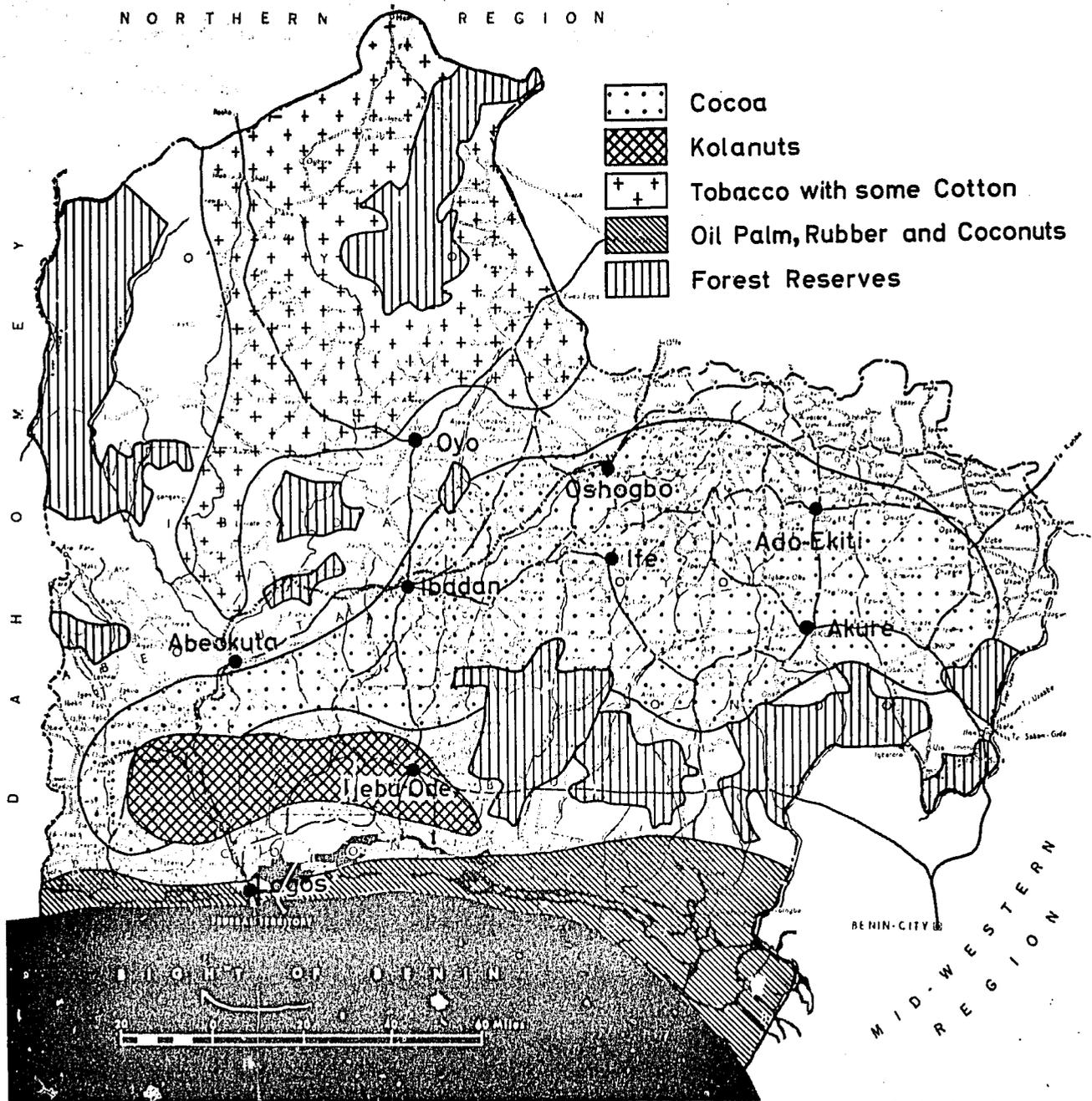
One indication of the trend toward increased specialization both by area and by type of crop is shown in Map 5.2, which represents a proposal by the Ministry of Lands and Housing for the regionalization of agricultural production. Three major areas of specialized food crop production are proposed, all located in savanna areas and all major areas of surplus food production. The increasing importance of these areas as the Region's main food supply areas is already clearly established, and the trend toward regional specialization will intensify as the economy develops.

## 2. Food Production

Accurate data on aggregate food production are not available. However, estimates based on the ongoing sample survey of agriculture (Rural Economic Survey) conducted by the Federal Office of Statistics provide some indication of total output and relative importance of the various foodstuffs.

Map 5.1

LAND USE-CASH CROPS

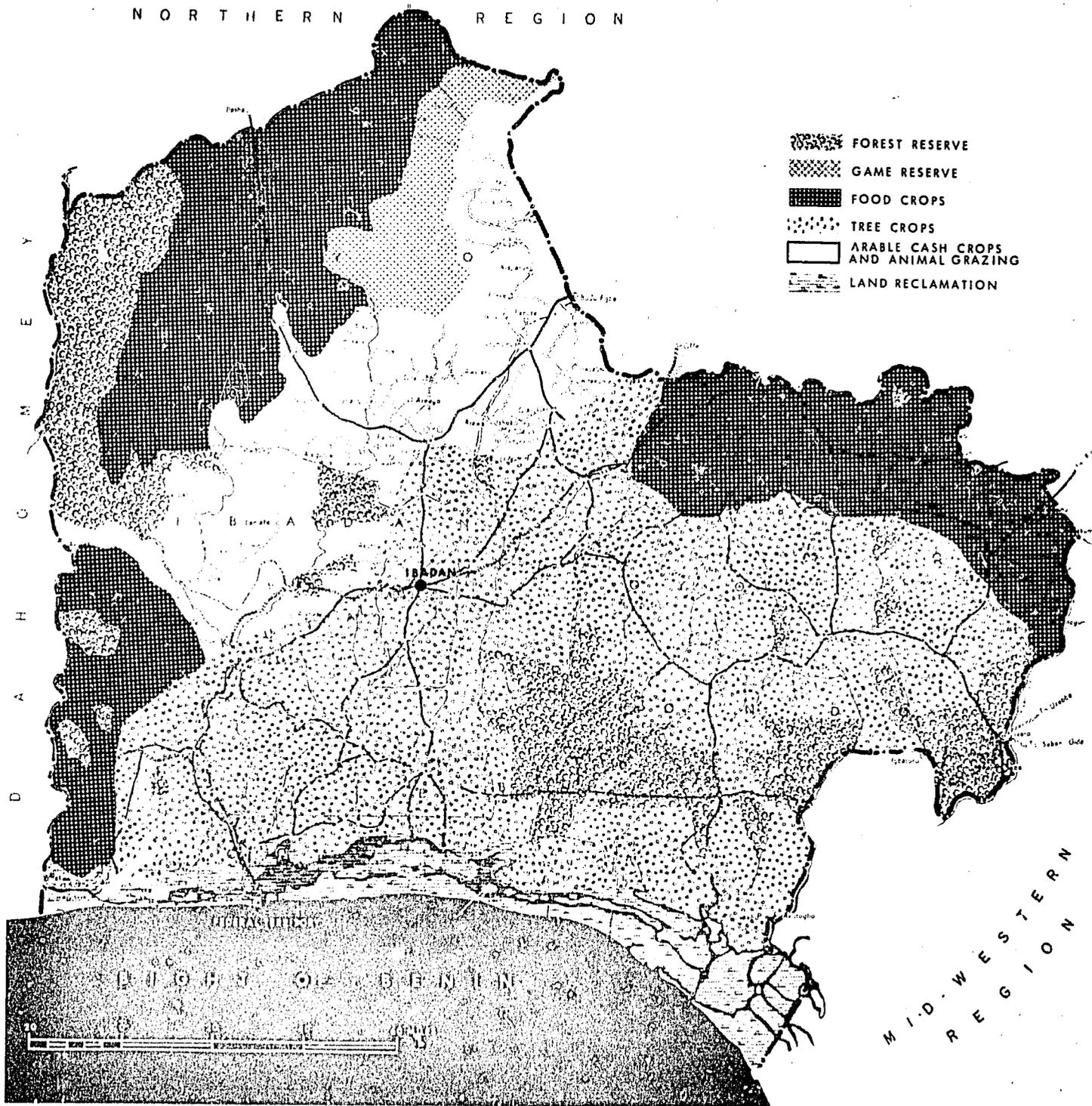


SOURCE: Ministry of Agriculture and Natural Resources; Green and Milone, Physical Planning in Western Nigeria.

Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1963.  
Printed by Federal Survey, Nigeria, 1963.  
SOI 189: 3-65

Map 5.2

LAND USE PROPOSAL-FOOD AND CASH CROPS



SOURCE: Ministry of Lands and Housing

Drawn by Suraj D-moa, Ministry of Lands and Housing, Western Nigeria.  
Planned by Federal Survey Nigeria 1963  
590-188/3-6.

Estimates of the production of staple food crops in Western Nigeria for 1958-59,<sup>4</sup> 1964-65<sup>5</sup> and 1965-66<sup>5</sup> are as follows:

| <u>Crop</u>   | <u>Production ('000 tons)</u> |                |                |
|---------------|-------------------------------|----------------|----------------|
|               | <u>1958-59</u>                | <u>1964-65</u> | <u>1965-66</u> |
| Yam           | 1,328                         | 1,219          | 2,064          |
| Cassava (old) | 1,012                         | 515            | 524            |
| Maize         | 191                           | 159            | 167            |
| Rice          | 7                             | 17             | 5              |
| Cowpeas       | 12                            | 2              | 11             |
| Cocoyam       | 119                           | 202            | 136            |
| Guinea Corn   | 6                             | 13             | 25             |

The 1958-59 estimated production is based on the 1952 population census, while that for 1964-65 and 1965-66 is based on the rather dubious 1963 population census. Furthermore, the number of plots farmed, at least in the 1964-65 Rural Economic Survey, was underestimated, which means that production estimates are biased downwards: certain other sampling methods also tend in this direction. The estimates of production for (old) cassava in 1964-65 and 1965-66 are so low that they are probably for gari; with a conversion rate of 40 percent of the weight of the tuber, cassava production in these years would be 1,288,000 and 1,310,000 tons respectively.

Production of each of the major food commodities varies considerably throughout the Region. Perhaps even more startling are the variations in yield between provinces. The following estimates for each province of production per acre are based on the 1958-59 Sample Survey of Agriculture.<sup>6</sup>

| <u>Province</u> | <u>Production (lbs/acre) 1958-59</u> |                |              |                |
|-----------------|--------------------------------------|----------------|--------------|----------------|
|                 | <u>Yam</u>                           | <u>Cassava</u> | <u>Maize</u> | <u>Cocoyam</u> |
| Abeokuta        | 46                                   | 153            | 16           | 12             |
| Colony          | 8                                    | 13             | 3            | 8              |
| Ibadan          | 154                                  | 255            | 61           | 14             |
| Ijebu           | 73                                   | 113            | 19           | 17             |
| Ondo            | 273                                  | 120            | 17           | 24             |
| Oyo             | <u>138</u>                           | <u>47</u>      | <u>13</u>    | <u>6</u>       |
| Western Nigeria | 153                                  | 116            | 22           | 14             |

Rice and cowpeas are minor crops and are not produced generally throughout the Region.

Clues to the probable direction and importance of intra-regional trade in staple foods are provided by population density and production intensity. Again, provincial estimates are quite revealing. The following estimates of per capita production in pounds (lbs) are based on the 1958-59 Sample Survey of Agriculture and the mid-year 1958 population estimates by the Federal Office of Statistics<sup>7</sup>:

| <u>Province</u> | <u>Production (lbs/capita) 1958-59</u> |                |              |                |
|-----------------|----------------------------------------|----------------|--------------|----------------|
|                 | <u>Yam</u>                             | <u>Cassava</u> | <u>Maize</u> | <u>Cocoyam</u> |
| Abeokuta        | 179                                    | 597            | 64           | 45             |
| Colony          | 26                                     | 43             | 9            | 26             |
| Ibadan          | 244                                    | 405            | 97           | 22             |
| Ijebu           | 298                                    | 461            | 76           | 70             |
| Ondo            | 1367                                   | 603            | 86           | 120            |
| Oyo             | <u>993</u>                             | <u>338</u>     | <u>99</u>    | <u>42</u>      |
| Western Nigeria | 586                                    | 446            | 84           | 52             |

The importance of Ondo and Oyo Provinces as food producing areas is unmistakable.

### 3. Production Characteristics

Food crop production is almost exclusively in the hands of peasant cultivators--no plantations exist and farm settlements specializing in food crops are few. Production is traditionally labor-intensive and capital-poor. The major implements used such as hoes, machetes and cutlasses are simple and inexpensive. As yet, purchased inputs such as fertilizer, sprays and improved seeds are quite unimportant. The land is seldom completely cleared, the soil being heaped for planting. Interplanting of crops is usual.

a. Land. Land is considered community property, the right of individuals to use the land being determined by customary usage or by authority of the land-holding community to which he belongs. As land is considered a sacred trust held by the present generation on behalf of dead ancestors of the group and unborn generations<sup>8</sup>, it is not heritable, disposable of alienable by individuals. Nevertheless, once the possession of land is

sanctioned by the group, the possessor has the right to use the land indefinitely, provided it is used in the manner most beneficial to the individual and to society. No rent or fee is paid for this land although if it is loaned to another producer the borrower is expected to make an annual gift of produce as an acknowledgement of the continuing ownership of the lender<sup>9</sup>.

Most farmers cultivate several plots of land concurrently with the plots often being in different locations. As Table 5.1 shows for the farmers interviewed in the Producer Survey, 88 percent stated that they were farming more than one plot, with 34 percent of the total farming four or more plots. Further, 47 percent of the farmers claimed that their plots were located in one place, while only 10 percent said their plots were in four or more different locations.

Table 5.1

PERCENTAGE DISTRIBUTION OF FARMERS BY NUMBER OF  
LOCATIONS OF FARMS AND DIFFERENT PLOTS  
PRODUCER SURVEY--WESTERN NIGERIA  
1966-67

| <u>Number</u>          | <u>Locations of Farms</u> | <u>Different Plots</u> |
|------------------------|---------------------------|------------------------|
| 1                      | 47                        | 12                     |
| 2                      | 32                        | 28                     |
| 3                      | 12                        | 26                     |
| 4                      | 4                         | 17                     |
| 5 & over               | <u>6</u>                  | <u>17</u>              |
|                        | 101*                      | 100                    |
| Number of<br>responses | 398                       | 376                    |

\* Rounding error.

Agricultural producers normally live in villages and travel to their farms. The distance from village to farm is usually less than five miles, although in some cases it is considerably greater. As Table 5.2 indicates, the distance of the farthest farm from the village for 82 percent of the farmers in the Producer-Survey was less than five miles: 5 percent of the farmers had farms more than 15 miles from their villages.

Table 5.2

PERCENTAGE DISTRIBUTION OF FARMERS BY DISTANCE  
OF FARTHEST FARM FROM VILLAGE  
PRODUCER SURVEY--WESTERN NIGERIA  
1966-67

| <u>Distance of Farthest<br/>Farm from Village (miles)</u> | <u>Percentage of Villages</u> |
|-----------------------------------------------------------|-------------------------------|
| Less than 1 mile                                          | 21                            |
| 1 & under 3 miles                                         | 40                            |
| 3 & under 5 miles                                         | 21                            |
| 5 & under 15 miles                                        | 14                            |
| 15 miles & over                                           | <u>5</u>                      |
|                                                           | 101 <sup>a</sup>              |

Number of responses: 334

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\* Rounding error.

The land is seldom farmed for more than three to four years before it is abandoned and allowed to revert to secondary bush growth in order to regain its fertility. As Table 5.3 indicates for the farmers interviewed during the Producer Survey, 32 percent farmed a plot after clearing only for one or two years, while a further 55 percent farmed their plots for three to four years. Of the , 80 percent left their land under bush fallow for five to eight years, although they generally considered it should be left longer; 67 percent felt that it should be left for nine years or more.

Table 5.3

PERCENTAGE DISTRIBUTION OF FARMERS BY NUMBER OF YEARS PLOTS ARE  
 FARMED, LEFT UNDER BUSH FALLOW, OR SHOULD BE LEFT UNDER  
 BUSH FALLOW--PRODUCER SURVEY--WESTERN NIGERIA  
 1966-67

| <u>Number of Years</u> | <u>Plots Farmed<br/>After Clearing</u> | <u>Left Under<br/>Bush Fallow</u> | <u>Should be Under<br/>Bush Fallow</u> |
|------------------------|----------------------------------------|-----------------------------------|----------------------------------------|
| 1-2                    | 32                                     | 1                                 | *                                      |
| 3-4                    | 55                                     | 6                                 | 1                                      |
| 5-6                    | 11                                     | 29                                | 7                                      |
| 7-8                    | 1                                      | 51                                | 24                                     |
| 9-10                   | 1                                      | 8                                 | 28                                     |
| 11 & over              | -                                      | 6                                 | 39                                     |
|                        | 100                                    | 101 <sup>†</sup>                  | 99 <sup>†</sup>                        |
| Number of responses    | 359                                    | 359                               | 357                                    |

\* Less than 0.5 percent.

† Rounding error.

The 1964-65 Rural Economic Survey estimated that for Western Nigeria the average area of land under cultivation per farmer was 1.54 acres<sup>10</sup>. As the following table indicates, the dispersion of farmers around this average size of farm is quite wide<sup>11</sup>.

| Size of Farm<br>(acres) | Percent of Farmers With |                           |                    |                |
|-------------------------|-------------------------|---------------------------|--------------------|----------------|
|                         | Farm Crops<br>Only      | Both Farm &<br>Tree Crops | Tree Crops<br>Only | All<br>Farmers |
| Less than 0.5           | 31                      | 9                         | 25                 | 24             |
| 0.5 & under 1.0         | 25                      | 20                        | 34                 | 26             |
| 1.0 & under 2.5         | 31                      | 40                        | 29                 | 32             |
| 2.5 & under 5.0         | 10                      | 23                        | 9                  | 13             |
| 50 & over               | <u>2</u>                | <u>9</u>                  | <u>3</u>           | <u>4</u>       |
| Total                   | 99*                     | 101*                      | 100                | 99*            |
| Percent of all farmers  | 60                      | 23                        | 16                 | 99*            |

\* Rounding error.

This Survey revealed that 60 percent of all farmers in the Region grew farm (arable) crops only, a further 23 percent growing farm crops in addition to tree crops. Only 16 percent grew tree crops exclusively. The area of land under cultivation by farmers growing both farm and tree crops was generally greater than that of farmers growing either type of crop solely.

The average acreage of each of the major staple food crops cultivated by all farmers in the Region was estimated for 1964-65 by the Rural Economics Survey to be <sup>12</sup> :

| Crop        | Average Acreage Per Farmer |            |       |
|-------------|----------------------------|------------|-------|
|             | Sole Crop                  | Mixed Crop | Total |
| Yam         | .22                        | .11        | .33   |
| Cassava     |                            |            |       |
| - new       | .05                        | .15        | .20   |
| - old       | .12                        | .02        | .14   |
| Maize       | .31                        | .29        | .60   |
| Rice        | .01                        | .02        | .03   |
| Cowpeas     | .01                        | .04        | .05   |
| Cocoyam     | .02                        | .11        | .13   |
| Guinea corn | .03                        | .02        | .05   |

However, because of specialized crop production, the actual acreage of each crop for farmers producing the crop is considerably greater than that shown. In fact, the percent of farmers growing each crop in 1964-65 was estimated to be <sup>13</sup>:

| <u>Crop</u> | <u>Percent of All Farmers<br/>Growing Particular Crop</u> |
|-------------|-----------------------------------------------------------|
| Yam         | 50                                                        |
| Cassava     | 39                                                        |
| Maize       | 49                                                        |
| Rice        | 4                                                         |
| Cowpeas     | 6                                                         |
| Cocoyam     | 22                                                        |
| Guinea Corn | 4                                                         |

Interplanting takes several forms: (1) interplanting of major crops where the length of the growing season differs, e.g., maize and yam; (2) interplanting of a late season crop, such as maize, just prior to an early season crop harvest; (3) interplanting of minor crops, such as cowpeas, pepper, okra, melon and tomatoes, with other crops; and (4) interplanting of food crops, especially cocoyam, with tree crops. Under current farming practices, interplanted crops frequently yield as well as or better than crops planted alone. For example, in the 1964-65 Rural Economic Survey the yield of intercropped yam was 10,070 pounds per acre, compared with 8,367 pounds per acres for sole-cropped yam <sup>14</sup>.

Crop rotation forms a definite sequence which varies by area. Yam is usually the first crop planted after the land is cleared while cassava is the last before it reverts to bush fallow.

b. Labor. Most of the labor for farming operations is provided by the farmer and his family, assisted at times by hired laborers or by other farmers repaying help given them. Wives are a particularly important source of assistance. As Table 5.4 indicates, only 8 percent of the farmers in the Producer Survey received no assistance at all from their wife/wives<sup>15</sup>. However, most (71 to 88 percent) of this assistance was for basic marketing functions of harvesting, transporting and selling, while a small proportion (9 to 14 percent) was for the production functions of land clearing, planting, and weeding.

Table 5.4

PERCENTAGE DISTRIBUTION OF FARMERS BY TYPE  
OF ASSISTANCE RECEIVED FROM WIVES  
PRODUCER SURVEY--WESTERN NIGERIA  
1966-67

| <u>Type of Assistance<br/>Received From Wives</u> | <u>Percent of All Farmers<br/>Receiving Particular Assistance</u> |
|---------------------------------------------------|-------------------------------------------------------------------|
| In clearing                                       | 10                                                                |
| In planting                                       | 14                                                                |
| In weeding                                        | 9                                                                 |
| In harvesting                                     | 88                                                                |
| In transporting                                   | 74                                                                |
| In selling farm<br>output                         | 71                                                                |
| No assistance<br>received                         | 8                                                                 |
| Number of responses                               | 399                                                               |

The demand for labor throughout the year is very uneven. Crops require most care and attention during the rainy season. The peak labor requirement time varies by crop, although the availability of sufficient labor for land clearing, preparation and planting which takes place at the onset of the rainy season is most important in determining the total area farmed.

An important characteristic of native farmers is prolonged periods of inactivity, especially during the dry season. For example, as Table 5.5 indicates, only 28 percent of the farmers in the Producer Survey claimed

Table 5.5

PERCENTAGE DISTRIBUTION OF FARMERS BY LENGTH  
OF TIME NOT WORKING DURING 1966  
PRODUCER SURVEY--WESTERN NIGERIA  
1966-67

| <u>Number of Weeks</u> | <u>Percent of Farmers<br/>Not Working During 1966</u> |
|------------------------|-------------------------------------------------------|
| None                   | 28                                                    |
| Under 5                | 18                                                    |
| 5 & under 9            | 23                                                    |
| 9 & under 14           | 16                                                    |
| 14 & under 27          | 11                                                    |
| 27 & over              | <u>4</u>                                              |
|                        | 100                                                   |
| Number of responses    | 399                                                   |

that they did not spend more than one week away from their agricultural activities during 1966. In fact, 54 percent of the farmers did not work for five or more weeks during 1966. The main reasons, shown in Table 5.6 are traditional festivals, social and religious activities, and sickness.

c. Capital. Capital requirements are relatively small and are mostly for current production activities. The major purchased input is labor, with such items as fertilizer, insecticides, and seeds being important to only a very small number of producers. However, all these items rank a very low second for most farmers to the financing of

Table 5.6

PERCENTAGE DISTRIBUTION OF FARMERS  
NOT WORKING BY REASON  
PRODUCER SURVEY--WESTERN NIGERIA  
1966-67

| <u>Reason for Not Working</u>  | <u>Percent of Farmers Not Working<br/>Giving Particular Reason</u> |
|--------------------------------|--------------------------------------------------------------------|
| Festivities                    | 45                                                                 |
| Social/religious activities    | 60                                                                 |
| Holidays                       | 20                                                                 |
| Sickness                       | 52                                                                 |
| Old age                        | 10                                                                 |
| Idleness                       | 31                                                                 |
| Number of farmers not working: | 287                                                                |
| Number of reasons given:       | 627                                                                |

their own labor; producers must have sufficient food and other resources to maintain themselves and their families throughout the production process.

Capital employed in long-term uses is relatively small. First, most farmers have neither to buy their land nor pay rent for it. Second, the implements used are rudimentary and cheap, being the products of local artisans. Third, storage and marketing facilities are also traditional and inexpensive. And fourth, neither animal nor mechanical power owned by the producer is employed in the production process or in transportation; human labor is used almost entirely, although hired mechanical means are now beginning to replace it.

d. Output and Returns. Only two of the 399 farmers included in the Producer Survey alleged that they did not sell any agricultural produce during 1966. The estimated total annual income of the remaining farmers is presented in Table 5.7, by major source of income. Although these

Table 5.7

PERCENTAGE DISTRIBUTION OF FARMERS BY ESTIMATED TOTAL ANNUAL INCOME AND BY MOST IMPORTANT SOURCE OF INCOME  
PRODUCER SURVEY--WESTERN NIGERIA  
1966-67

| Estimated Total Annual Income | Most Important Source of Income |         |       |      |                  |            | All |
|-------------------------------|---------------------------------|---------|-------|------|------------------|------------|-----|
|                               | Yam                             | Cassava | Maize | Rice | Other Food Items | Cash Crops |     |
| Under £10                     | 8                               | 39      | 9     | 50   | 10               | 6          | 15  |
| £10 & under £20               | 17                              | 14      | 14    | 17   | 15               | 16         | 15  |
| £20 & under £40               | 16                              | 16      | 23    | 33   | 10               | 18         | 18  |
| £40 & under £60               | 20                              | 16      | 24    | -    | 30               | 11         | 17  |
| £60 & under £100              | 21                              | 10      | 18    | -    | 15               | 14         | 15  |
| £100 & under £200             | 18                              | 4       | 9     | -    | 20               | 18         | 13  |
| £200 & over                   | -                               | -       | 3     | -    | -                | 17         | 7   |
| Total                         | 100                             | 99*     | 100   | 100  | 100              | 100        | 100 |
| No. of responses              | 76                              | 79      | 74    | 6    | 18               | 144        | 397 |

\* Rounding error.

figures are based on estimates of total production, it is likely that they are biased downwards to some extent because it not possible to include all of the foodstuffs consumed or given away by farmers. Nevertheless, with only 20 percent of all farmers having an estimated total annual income of £100 or over, it is readily apparent that agricultural production, income

and returns are low. Further, producers specializing in food crops, especially cassava, generally have a much lower income than those concentrating on cash crops.

The level of output per farmer and productivity of the land and labor employed in Western Nigerian agriculture is very low compared with the more developed countries, where the level of technology and the capital-labor ratio is much higher. Even in comparison with these farmers in Western Nigeria who use improved farming techniques and more purchased inputs, traditional farmers have a very low level of production. As yet, relatively few improvements in technique, equipment, seeds and other factors have been incorporated into the traditional system of farming.

## B. MARKETING PATTERNS

### 1. Disposition of Output

Despite the tremendous increase during this century in the amount of staple foods entering the internal exchange economy, production for subsistence purposes is still predominant. A major share of the output is either consumed by the farmer and his family or given to relatives. Except for yam and cocoyam, seed requirements are small. Furthermore, some of the output may be lost in storage or elsewhere. The remainder is marketable surplus and constitutes the amount of production entering the marketing system.

The disposition of yam production by producers is perhaps the most interesting because of the incidence of losses and high seed requirements; for most other commodities, what is not consumed or given away is mostly available for sale. The adjusted<sup>(16)</sup> percentage distribution of yam production, as reported by the respondents in the Producer Survey was as follows:

| <u>Disposition of Output</u> | <u>Adjusted Average Percent Per Farmer</u> |
|------------------------------|--------------------------------------------|
| Consumed by family           | 47                                         |
| Given away                   | 11                                         |
| Kept for seed                | 20                                         |
| Lost or wasted               | 5                                          |
| Sold                         | 17                                         |
| Total Output                 | 100                                        |

a. Marketable Surplus. The percent of total output sold by producers ranges all the way from none to nearly 100 percent. The percentage distribution of the proportion of each commodity sold by the respondents in the Producer Survey can be seen in Table 5.8, and also the proportion of farmers growing each commodity.

Table 5.8

PERCENTAGE DISTRIBUTION OF PRODUCERS BY PERCENT OF  
TOTAL OUTPUT SOLD AND BY COMMODITY--PRODUCER SURVEY  
WESTERN NIGERIA  
1966-67

| <u>Percent of Total Output Sold</u>      | <u>Commodity</u> |                |              |             |             |                |                |                    |
|------------------------------------------|------------------|----------------|--------------|-------------|-------------|----------------|----------------|--------------------|
|                                          | <u>Yam</u>       | <u>Cassava</u> | <u>Maize</u> |             | <u>Rice</u> | <u>Cowpeas</u> | <u>Cocoyam</u> | <u>Guinea Corn</u> |
|                                          |                  |                | <u>Early</u> | <u>Late</u> |             |                |                |                    |
| 0                                        | 50               | 34             | 21           | 34          | 6           | 42             | 71             | 22                 |
| 1 and under 20                           | 4                | 1              | 1            | 1           | -           | -              | 2              | -                  |
| 20 and under 40                          | 19               | 9              | 8            | 1           | 24          | 10             | 10             | 3                  |
| 40 and under 60                          | 20               | 32             | 34           | 26          | 41          | 26             | 11             | 46                 |
| 60 and under 80                          | 5                | 14             | 25           | 25          | 24          | 16             | -              | 10                 |
| 80 and over                              | 2                | 10             | 11           | 12          | 6           | 6              | 5              | 19                 |
| Total percent                            | 100              | 100            | 100          | 99+         | 101+        | 100            | 99+            | 100                |
| No. of responses                         | 241              | 221            | 284          | 83          | 17          | 62             | 97             | 59                 |
| No. Growing Commodity but not responding | 44               | 111            | 36           | 34          | 1           | 21             | 68             | 2                  |
| Percent of farmers growing commodity     | 71               | 83             | 80           | 29          | 5           | 21             | 41             | 15                 |

Based on the frequency groupings in Table 5.8, the average marketable surplus per farmer as a percent of the farmer's output of each commodity was calculated. However, a number of interviewees growing each commodity did not respond to the question mostly because they grew it as a relatively unimportant subsistence crop. Therefore, the calculated average marketable surplus should be adjusted downwards to allow for this fact. Both values are shown in Table 5.9.

The subsistence character of yam, cassava, cowpeas, and cocoyam production in particular can be seen in Table 5.9. Also, more than half of the production of maize, rice and guinea corn is used for subsistence purposes, although a considerably higher proportion of these crops is marketed than of the other commodities. Cocoyam is used almost entirely for subsistence: 41 percent of the sample of farmers produced cocoyam, but only an adjusted average of about 8 percent of the output per farmer was marketable surplus.

Table 5.9

AVERAGE MARKETABLE SURPLUS PER FARMER AS PERCENT OF  
OUTPUT BY COMMODITY--PRODUCER SURVEY  
WESTERN NIGERIA  
1966-67

| <u>Commodity</u> | Average Marketable Surplus per Farmer<br>as Percent of Output |                                         |
|------------------|---------------------------------------------------------------|-----------------------------------------|
|                  | <u>For Responding Farmers</u>                                 | <u>Adjusted for<br/>Non-Respondents</u> |
| Yam              | 21                                                            | 18                                      |
| Cassava          | 38                                                            | 25                                      |
| Maize-early      | 47                                                            | 42                                      |
| Maize-late       | 42                                                            | 30                                      |
| Rice             | 50                                                            | 47                                      |
| Cowpeas          | 33                                                            | 24                                      |
| Cocoyam          | 13                                                            | 8                                       |
| Guinea corn      | 48                                                            | 46                                      |

b. Example of Ifonyintedo<sup>(17)</sup>. A good, though somewhat extreme example of specialized and commercialized food-crop production is that of Ifonyintedo Village, located in the major surplus maize producing area of Abeokuta Province. All but one of the 30 farmers in the sample grew at least some maize, which accounted for about 88 percent of the total value of sales. Production is on a small scale, the average acreage planted to maize being 3.0 acres and average production 9.6 bags (about 2,300 pounds)<sup>(18)</sup>.

Among the sample of farmers only three sold no maize, and another two sold 25 percent or less of their output. In all, an average of 66 percent of production (6.3 bags) was sold for an average of £12.4. The average value of all sales was £14.1, all farmers selling at least one commodity; 50 percent of the sample sold maize only. Table 5.10 presents the percentage distribution of these farmers by quantity sold and the proportion of these sales as a percent of production.

Table 5.10

PERCENTAGE DISTRIBUTION OF SAMPLE OF 30 FARMERS AT  
IFONYINTEDO VILLAGE, ABEOKUTA PROVINCE BY QUANTITY OF  
MAIZE SOLD AND MAIZE SALES AS PERCENT OF  
PRODUCTION DURING 1966--PRODUCER SURVEY  
WESTERN NIGERIA  
1966-67

| Quantity of Maize Sold    |                       | Maize Sales<br>Percent of Production |                       |
|---------------------------|-----------------------|--------------------------------------|-----------------------|
| Quantity Sold<br>in Bags* | Percent<br>of Farmers | Percent Sold                         | Percent<br>of Farmers |
| None sold                 | 10                    | None sold                            | 10                    |
| Under 5                   | 27                    | 1-25                                 | 7                     |
| 5 and under               | 50                    | 26-50                                | -                     |
| 10 and under 15           | 10                    | 51-75                                | 47                    |
| 15 and over               | <u>3</u>              | <u>76-100</u>                        | <u>37</u>             |
| Total percent             | 100                   | Total percent                        | 101†                  |
| Average quantity          | 6.3 bags              | Average percent                      | 61                    |

\* Contains approximately 240 lb.

† Rounding error.

## 2. Marketing Procedure

a. Place. For all staple food crops, except cassava, the market is the place of sale most commonly used by producers, although the farm and farmer's house are also important points of exchange. (Appendix Table 7.8)

The local rural market is the type of market most often attended by farmers. As Table 5.11 shows, 74 percent of the farmers in the Producer Survey attended a local rural market, another 12 percent attending a rural market more than five miles away. A further four percent attended an urban market, while the remaining ten percent did not attend markets anywhere.

The attendance of producers at markets is quite irregular. As Table 5.12 shows for the Producer Survey, only 28 percent of the farmers claimed that they visited the market every day of holding, while another 20 percent attended frequently. Of the remainder, 34 percent stated that they attended irregularly

Table 5.11

PERCENTAGE DISTRIBUTION OF PRODUCERS BY TYPE OF MARKET ATTENDED AND BY LOCATION OF FARM--PRODUCER SURVEY  
WESTERN NIGERIA  
1966-67

| Type of Market Attended              | Location of Farm by Vegetation Zone |                        |                          | All Farmers |
|--------------------------------------|-------------------------------------|------------------------|--------------------------|-------------|
|                                      | Savanna<br>(arable crops)           | Forest<br>(tree crops) | Forest<br>(arable crops) |             |
| None                                 | 23                                  | 2                      | 11                       | 10          |
| Local rural market                   | 68                                  | 97                     | 54                       | 74          |
| Rural market more than 5 miles away  | 1                                   | 1                      | 29                       | 12          |
| Urban market within 10 miles         | --                                  | --                     | --                       | --          |
| Urban market more than 10 miles away | <u>8</u>                            | <u>   </u>             | <u>6</u>                 | <u>4</u>    |
|                                      | 100                                 | 99*                    | 100                      | 100         |
| Number of responses:                 | 87                                  | 152                    | 152                      | 391         |

\* Rounding error.

and 18 percent attended very seldom, if at all. In general, attendance was more regular in the tree crop area of the forest zone than elsewhere

Table 5.12

PERCENTAGE DISTRIBUTION OF PRODUCERS BY FREQUENCY OF ATTENDANCE AT MARKET AND BY LOCATION OF FARM --PRODUCER SURVEY  
WESTERN NIGERIA  
1966-67

| <u>Frequency of Attendance at Market</u> | <u>Location of Farm by Vegetation Zone</u> |                            |                              | <u>All Farmers</u> |
|------------------------------------------|--------------------------------------------|----------------------------|------------------------------|--------------------|
|                                          | <u>Savanna (arable crops)</u>              | <u>Forest (tree crops)</u> | <u>Forest (arable crops)</u> |                    |
| Always                                   | 27                                         | 38                         | 18                           | 28                 |
| Frequently                               | 9                                          | 26                         | 21                           | 20                 |
| Irregularly                              | 32                                         | 26                         | 42                           | 34                 |
| Very seldom or never                     | <u>32</u>                                  | <u>9</u>                   | <u>18</u>                    | <u>18</u>          |
|                                          | 100                                        | 99*                        | 99*                          | 100                |
| Number of responses:                     | 90                                         | 156                        | 153                          | 399                |

\* Rounding error.

b. Person. For the most part, the farmer markets his own produce, often assisted by his wife/wives and occasionally by his children or other relatives, but rarely by outsiders. Men handle nearly all of the cash crops and the majority of the staple food crops, but less maize and rice than other commodities. Women are particularly prominent in the sale of such foodstuffs as melon seeds and vegetables (Appendix Table 7.10)

c. Timing of Sales. The period immediately following harvest is undoubtedly the greatest time of sales for most producers. However, storage by producers results in sales being staggered throughout the year, although very unevenly. (The distribution of the major month of harvest of the farmers in the Producer Survey is shown in Appendix Table 7.20)

d. Terms of Transfer. The transfer of cash at the time of sale is universal. There are a few exceptions, such as: (1) use of an agent; (2) transfer of title to a local assembler on the promise of payment after the goods are sold by the assembler (non-local assemblers are seldom trusted); and (3) payment of cash in advance by an assembler for a post-harvest sale by a farmer--the price is not necessarily agreed upon in advance.

The replies to several questions put to farmers in the Producer Survey illustrate the preference for cash payment at the time of sale and the desire by the farmer to wait until the time of harvest to sell. First, producers were asked to rank the order of preference of several modes of payment by an "honest" trader offered at the time of sale. As Table 5.13 indicates, immediate cash was the first preference of 80 percent of the farmers. The rates of interest sacrificed were 300 and 200 percent per annum over two months and six months respectively.

Table 5.13

PERCENTAGE DISTRIBUTION OF PRODUCERS BY  
TERMS OF OFFER OF PURCHASE MADE BY  
AN HONEST TRADER AT THE TIME OF SALE AND  
BY ORDER OF ACCEPTANCE--PRODUCER SURVEY  
WESTERN NIGERIA  
1966-67

| Terms of Offer<br>by Honest Trader<br>at Time of Sale   | Order of Acceptance |           |           |
|---------------------------------------------------------|---------------------|-----------|-----------|
|                                                         | First               | Second    | Third     |
| £10 cash now                                            | 80                  | 2         | 17        |
| £15 in 2 months                                         | 3                   | 58        | 5         |
| £20 in 6 months                                         | 17                  | 6         | 43        |
| Refused to con-<br>sider other<br>alternative<br>offers | —                   | <u>34</u> | <u>34</u> |
|                                                         | 100                 | 100       | 100       |
| No. of Responses:                                       | 398                 |           |           |

A significant 34 percent of the farmers refused even to consider any alternative to immediate cash. Only 20 percent of the farmers were willing to accept what would normally be spectacular interest rates. The distrust of even an "honest" trader no doubt partly prompted these responses.

Second, producers were asked to rank the order of acceptance of several offers by an "honest" trader to purchase his major commodity one month before harvest. As Table 5.14 intimates, there was a general aversion on the part of respondents to making a commitment in advance of the harvest. Only 18 percent opined that they would accept money one month in advance of the harvest. Even the 38 percent who said they would accept a price at harvest time which was agreed one month before would probably not consider themselves obligated to do so--the price would probably be re-negotiated. The discount rates involved in the example are 343 and 400 percent per annum on £7 and £3 respectively for the one-month period involved.

Table 5.14

PERCENTAGE DISTRIBUTION OF PRODUCERS BY TERMS OF  
OFFER TO PURCHASE MADE BY AN HONEST TRADER ONE-MONTH BEFORE  
HARVEST AND BY ORDER OF ACCEPTANCE PRODUCER SURVEY  
WESTERN NIGERIA  
1966-67

| Terms of Offer<br>by Honest Trader<br><u>1-Month before Harvest</u>      | <u>Order of Acceptance</u> |               |              |             |
|--------------------------------------------------------------------------|----------------------------|---------------|--------------|-------------|
|                                                                          | <u>First</u>               | <u>Second</u> | <u>Third</u> | <u>Last</u> |
| £5 cash now                                                              | 16                         | 4             | 37           | 7           |
| £2 now and £4 at harvest<br>time                                         | 2                          | 42            | 7            | 1           |
| £7 at harvest time                                                       | 38                         | 6             | 7            | 4           |
| Make no commitment<br>or refused to consider<br>other alternative offers | <u>44</u>                  | <u>48</u>     | <u>49</u>    | <u>88</u>   |
|                                                                          | 100                        | 100           | 100          | 100         |

No. of responses: 396.

### 3. Market Information

A major shortcoming of the present marketing system is that market information readily available to the farmer is limited to local prices. As Table 5.15 illustrates, his main sources of price information about food crops are traders, other farmers, and his wife/wives. By contrast, there are numerous external sources of information on cash crops, such as government officials and newspapers.

From the response to questions about the producer's knowledge and expectations of prices at various locations during December 1966-January 1967, it is possible to assess the extent of their knowledge of prices. Regardless of accuracy, 48 percent could quote the price for their major crop obtained at the last meeting of their local market. Furthermore, 60 percent were able to guess what the price would probably be at the next meeting, while 30 percent were able to give a price in the urban area with which they were most familiar. The number able to predict

Table 5.15

PERCENTAGE DISTRIBUTION OF PRODUCERS BY  
SOURCE OF PRICE INFORMATION FOR FOOD CROPS  
AND CASH CROPS BY ORDER OF IMPORTANCE  
PRODUCER SURVEY - WESTERN NIGERIA - 1966-67

| Source of<br>Price Information | Food Crops          |        |       | Cash Crops          |        |       |
|--------------------------------|---------------------|--------|-------|---------------------|--------|-------|
|                                | Order of Importance |        |       | Order of Importance |        |       |
|                                | First               | Second | Third | First               | Second | Third |
| Traders who visit farm         | 10                  | 25     | 9     | 2                   | 4      | 6     |
| Traders in market/store        | 34                  | 16     | 8     | 30                  | 26     | 19    |
| Other farmers                  | 29                  | 31     | 30    | 9                   | 24     | 33    |
| Wife/wives                     | 22                  | 24     | 32    | 3                   | 8      | 11    |
| Non-farm friends               | 1                   | 2      | 15    | 2                   | 3      | 17    |
| Government officials           | -                   | -      | 3     | 26                  | 7      | 7     |
| Newspapers, magazines          | -                   | -      | -     | 3                   | 22     | 2     |
| Other, e.g. children           | 5                   | 2      | 2     | 26                  | 6      | 6     |
|                                | 101*                | 100    | 99*   | 101*                | 100    | 101*  |
| No. of Responses               | 368                 | 185    | 99    | 243                 | 118    | 54    |

\*Rounding error

a price on the farm exceeded 60 percent. Many of the prices estimated were questionable.

Finally, comparing the estimated prices in the rural and urban markets and on the farm, the producers' opinion with regard to adequate margins to cover the cost of moving the produce from the farm to the consuming area can be deduced. As Table 5.16 relates, there is often a close relationship between the price expected at the farm and the price at the last meeting of the farmers' usual rural market. However, the price expected at its next meeting is generally considerably higher. For urban markets, the price expected by 72 percent of the respondents was 150 percent or more above the expected farm price. Ibadan was the most commonly mentioned urban area, with 30 percent of the respondents.

Table 5.16

PERCENTAGE DISTRIBUTION OF PRODUCERS BY ESTIMATED PRICE AS PERCENT OF  
PRICE ON FARM, BY MOST IMPORTANT STAPLE FOOD, AND BY LOCATION OF MARKET  
PRODUCER SURVEY--WESTERN NIGERIA--1966-67

| Estimated Price<br>As Percent of<br>Price on Farm | Most Important Staple Food Crop |      |       |         |      |       |         |      |       | All Farmers |      |       |
|---------------------------------------------------|---------------------------------|------|-------|---------|------|-------|---------|------|-------|-------------|------|-------|
|                                                   | Yam                             |      |       | Cassava |      |       | Maize   |      |       |             |      |       |
|                                                   | Market                          |      |       | Market  |      |       | Market  |      |       | Market      |      |       |
|                                                   | Rural                           |      |       | Rural   |      |       | Rural   |      |       | Rural       |      |       |
|                                                   | Meeting                         |      | Urban | Meeting |      | Urban | Meeting |      | Urban | Meeting     |      | Urban |
|                                                   | Last                            | Next |       | Last    | Next |       | Last    | Next |       | Last        | Next |       |
| 90 & under 100                                    | 12                              | 2    | 2     | 7       | 1    | -     | 11      | 3    | 5     | 10          | 2    | 2     |
| Same price                                        | 1                               | -    | -     | 5       | -    | -     | 2       | 3    | -     | 2           | 1    | -     |
| 101 & under 120                                   | 38                              | 18   | 4     | 51      | 13   | -     | 53      | 44   | 15    | 46          | 24   | 8     |
| 120 & under 150                                   | 27                              | 46   | 20    | 14      | 53   | 12    | 20      | 34   | 12    | 22          | 44   | 19    |
| 150 & under 200                                   | 14                              | 27   | 30    | 7       | 11   | 22    | 5       | 10   | 36    | 10          | 17   | 28    |
| 200 & over                                        | 8                               | 8    | 45    | 17      | 22   | 66    | 9       | 5    | 31    | 10          | 12   | 44    |
| Total                                             | 100                             | 101* | 101*  | 101*    | 100  | 100   | 100     | 99*  | 99*   | 100         | 100  | 101*  |
| No. of responses                                  | 90                              | 101  | 56    | 43      | 71   | 18    | 55      | 59   | 39    | 193         | 238  | 119   |

\* Rounding error.

FOOTNOTES - CHAPTER V

- (1) F.A.O., Agricultural Development in Nigeria: 1965-1980, Food and Agriculture Organization of the United Nations, Rome, 1966, p. 381.
- (2) Chief Statistician, Western Nigeria Statistical Bulletin, June and December 1965, Statistics Division, Ministry of Economic Planning and Community Development, Ibadan, 1965, pp. 88, 89.
- (3) Ibid, pp. 88, 89.
- (4) Ibid. p. 91.
- (5) Ministry of Economic Planning and Community Development, Ibadan.
- (6) Chief Statistician . . . op. cit., pp. 9, 91.
- (7) Ibid., p. 5, 91.
- (8) H. A. Oluwasanmi, Agriculture and Nigerian Economic Development, Oxford University Press, Ibadan, Nigeria, 1966, p. 26.
- (9) ibid., p. 30.
- (10) Federal Office of Statistics, Rural Economic Survey of Nigeria: Farm Survey 1964-65, F.O.S., Lagos, RES, 1966, 5, 1966, p. 6.
- (11) Ibid., p. 15, 16.
- (12) Ibid., p. 6.
- (13) Ibid., p. 8.
- (14) Ibid., p. 9.
- (15) 42 percent of the farmers interviewed in the Producer Survey claimed that they had 2 or more wives presently living.
- (16) Calculated from frequency groupings with each category adjusted proportionately to equal 100. It is possible that the proportion calculated as being kept for seed may have been underestimated by this adjustment.
- (17) One of the 13 villages included in the Producer Survey.
- (18) This production is of dry maize. Immature (fresh) maize harvested for consumption or sale was not stated, however, in this village it is relatively unimportant



Chapter VI

CONSUMER  
BEHAVIOR



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## VI CONSUMER BEHAVIOR

### A. FOOD CONSUMPTION PATTERNS

#### 1. Typical Menu and Daily Timing of Meals

Due to the great variation between the different parts of the Region and the different occupational and income groups, it is not possible to make any valid generalizations about the typical menu or daily timing of meals for the Region as a whole. However, Table 6.1 attempts to present the typical menu and daily timing of meals for four groups of people: self-employed and employed workers in the town of Ibadan; and farmers in Ekiti and Egbe Divisions. This table should be read in conjunction with the table on page VII-27, which describes in more detail the preparation of staple foods.

In urban areas, breakfast is normally taken outside the home after the workday has begun. Prepared food sellers are abundant and are the main suppliers of breakfast foods. They fall into two main groups: those who sell from a fixed location, such as akara (cowpea balls) and moin moin (boiled peppered cowpea flour) sellers; and those who hawk, such as eko tutu (boiled solid maize pulp) and pouff pouff (fried wheat flour balls) sellers. In rural areas where the man goes to the farm, he will generally have breakfast between 9 and 10 a.m., after working for several hours. As women do not usually go to the farm, the man or a child who has followed him will prepare breakfast generally from food grown on the farm. The food varies with area and season, although some foods (for example, roasted maize) are common everywhere in the growing season. Women, on the other hand, will frequently eat the remnants of the previous day's supper, eating the staple cold and heating the soup and stew. When not enough food remains, they will frequently buy eko tutu.

Lunchtime varies considerably in urban areas. Self-employed workers will generally take theirs between 12 noon and 2 p.m. and will again buy their food

Table 6.1

**TYPICAL MENU AND DAILY TIMING OF MEALS FOR SELF-EMPLOYED AND  
EMPLOYED WORKERS IN IBADAN AND FOR FARMERS IN EKITI AND EGBA DIVISION  
(FOODS LISTED IN ORDER OF IMPORTANCE)**

| Meal             | Self-employed Workers<br>in Ibadan                                                                                                                                                | Employed Workers<br>in Ibadan                                                                                                                                               | Farmers in Ekiti Division                                                                                                                     | Farmers in Egba Division                                                                                                                                                            |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  | 6 a.m. - get up                                                                                                                                                                   | 6 a.m. - get up                                                                                                                                                             | 4.30-6 a.m. - get up                                                                                                                          | 4.30-5.30 a.m. - get up                                                                                                                                                             |
|                  | 7-8 a.m. - begin work                                                                                                                                                             | 7-8 a.m. - begin work                                                                                                                                                       | and go immediately to farm                                                                                                                    | and go immediately to farm                                                                                                                                                          |
| <b>Breakfast</b> | 7.30-9 a.m.<br>(1) Eko tutu (maize) with Akara or Moinmoin (cowpeas)<br>(2) Amala (Lafun-cassava flour)<br>(3) Rice (especially common for 1-13 year old children)                | 9-11 a.m.<br>(1) Adalu (cowpeas) with maize and gari<br>(2) Bread and tea<br>(3) Rice and woro (cowpeas)<br>(4) Pouff-pouff (wheat flour)<br>3-4 p.m.-return home from work | 9-10 a.m.<br>(1) Isu sisun (roasted yam)<br>(2) Roasted maize (in season)<br>12-1 p.m. - return home if farm close to home                    | 9-10 a.m.<br>(1) Eba<br>(2) Eko tutu<br>(3) Roasted maize (in season)<br>(4) Roasted cocoyam<br>(5) Roasted yam (occasionally,<br>11.30-12 a.m. - return home if farm close to home |
| <b>Lunch</b>     | 12-2 p.m. - (with soup & stew)<br>(1) Amala (yam flour)<br>(2) Eba (boiled gari)<br>(3) Iyan (pounded yam)<br>(4) Gari (during dry season)<br>6-7.30 p.m. - return home from work | 3.30-4.30 p.m. - (with soup and stew)<br>(1) Amala<br>(2) Eba<br>(3) Iyan<br>(4) Gari (during dry season)                                                                   | 1-2 p.m. - (with soup and stew)<br>(1) Iyan (if farmer comes home)<br>(2) Boiled yam (if farmer remains on farm)                              | 2-3 p.m. - (with soup and stew)<br>(1) Adalu<br>(2) Eko tutu<br>(3) Eba<br>(4) Fruits<br>4-4.30 p.m. - return to farm<br>7-7.30 p.m. - return from farm                             |
| <b>Supper</b>    | 8-10 p.m. - (with soup & stew)<br>(1) Amala<br>(2) Eko tutu (maize)<br>(3) Iyan<br>(4) Eba<br>(5) Fufu (fermented cassava)<br>10-11 p.m. - retire to bed                          | 7-9 p.m. - (with soup & stew)<br>(1) Amala<br>(2) Eba<br>(3) Iyan<br>(4) Eko tutu<br>(5) Fufu<br>10-11 p.m. - retire to bed                                                 | 5.30-7 p.m. - (with soup & stew)<br>(1) Iyan<br>(2) Amala (made from plantain flour)<br>(3) Eba (occasionally)<br>8-9.30 p.m. - retire to bed | 8-9 p.m. - (with soup and stew)<br>(1) Amala<br>(2) Iyan<br>(3) Fufu<br>(4) Eba<br>(5) Eko tutu<br>9-10 p.m. - retire to bed                                                        |

Source: Stanford Research Institute.

already prepared. This usually consists of a staple such as amala (boiled yam and/or cassava flour), eba (boiled gari) or iyan (boiled pounded yam), together with a soup consisting of ingredients such as palm oil, pepper, tomato, onions, vegetables and salt, and frequently including such exotic ingredients as Maggi soup cubes. In addition, there will often be a stew made from cow beef or stock fish. When the food is bought from a seller in a fixed location, the buyer usually has a choice of staple, soup, and stew, but buying from hawkers offers little selection unless one waits for the next hawker, as the capacity of the headload is strictly limited. Where the worker can leave his place of work temporarily, he will generally go to a seller in a fixed location, but where this is not possible, as is the case with market traders, hawkers will be used.

For lunch, employed workers fall into two groups: those who do not have a lunch break and therefore close early (around 3 p.m.), such as government workers; and those who do have a lunch break and close later (around 5 p.m.), such as commercial workers. The early-closing group will eat lunch prepared in the home after they return from work, while the later-closing group will generally buy from prepared food sellers at a fixed location. For both groups, the meal is about the same as for the self-employed workers. The major difference is between areas of the Region rather than between occupational groups, so that amala (yam and/or cassava flour) is particularly common in Ibadan and Abeokuta, whereas iyan (pounded yam) is particularly common in Ekiti and eba (gari) is prevalent in Ijebu.

In rural areas, lunch is usually prepared from the predominant staple of the area. It is always eaten with soup and sometimes with stew. Even when the food is prepared on the farm, some form of soup will be taken with the staple. Sometimes it is taken to the farm already prepared, but more often it is prepared on the farm. Unlike the urban areas, prepared foods are not as commonly bought in rural areas, although it is usual for some occupational groups, such as traders, to buy lunch.

In all areas, supper is the main meal of the day and is taken after the day's work is completed. Supper is generally prepared and eaten in the home, except by night workers, who again buy their food already prepared. Some urban households also prefer to buy their staples already prepared, especially when eko tutu (maize) or fufu (fermented cassava) is served. Almost invariably, however, the soup and stew (when served) are prepared in the home. In urban areas, stews are common but by no means universal, while in rural areas they are much less common. The form and content of the meal is basically similar to that described for lunch.

Table 6.2 presents the distribution of 505 households interviewed during the Household Survey in Ibadan in terms of frequency of consumption of the various staple foods. Gari, with 43 percent of all households, followed by maize (41 percent) and yam flour (37 percent) are the three staples most frequently consumed (almost daily). However, fresh yam, like yam flour and gari, is consumed by two-thirds of the households at least every other day. Maize, rice and cowpeas fall into this category for more than half of the households. Cassava flour, bread, plantain and other staples are much less frequently consumed. With the exception of maize, which is never consumed by 26 percent of all responding households, the major staple foods are consumed at least occasionally by most households.

## 2. Importance of Prepared Food Sellers

Western Nigeria is unique among developing countries in the high level of division of labor that exists in the traditional economy. A woman who buys cassava roots (not necessarily from her husband) for manufacture into gari will generally specialize in that to the exclusion of all else. This means that she will have to buy already prepared the other commodities that she requires, such as palm oil, maize preparations, and soap. Likewise a trader, even in foodstuffs, will generally devote all her time to her trade, so that she has to buy at least her

Table 6-2

PERCENT DISTRIBUTION OF HOUSEHOLDS BY FREQUENCY OF  
CONSUMPTION AND BY STAPLE FOOD--HOUSEHOLD SURVEY -  
IBADAN--DECEMBER 1966

| Frequency of<br>Consumption | Staple Food  |              |      |                  |       |      |         |       |          |                  |
|-----------------------------|--------------|--------------|------|------------------|-------|------|---------|-------|----------|------------------|
|                             | Fresh<br>Yam | Yam<br>Flour | Gari | Cassava<br>Flour | Maize | Rice | Cowpeas | Bread | Plantain | Other<br>Staples |
| 6-7 times per week          | 26           | 37           | 43   | 18               | 41    | 21   | 25      | 15    | 13       | 0*               |
| 3-5 " " "                   | 40           | 29           | 24   | 12               | 17    | 26   | 27      | 12    | 12       | 1                |
| 1-2 " " "                   | 22           | 17           | 24   | 8                | 13    | 26   | 21      | 16    | 10       | 1                |
| 1-3 " " month               | 5            | 6            | 6    | 4                | 3     | 14   | 10      | 12    | 8        | 3                |
| Less than once per month    | 1            | 1            | 1    | 1                | 1     | 4    | 4       | 13    | 3        | 2                |
| Never                       | 7            | 10           | 2    | 57               | 26    | 9    | 12      | 32    | 55       | 93               |
| Total percent               | 101+         | 100          | 100  | 100              | 101+  | 100  | 99+     | 100   | 101+     | 100              |
| Number of responses:        | 502          | 503          | 503  | 496              | 498   | 451  | 503     | 501   | 248      | 480              |

+ Rounding error

\* Less than 0.5 percent

breakfast and lunch from a prepared food seller.

When the women are away from home for so much of the day, or are otherwise engaged in their specialty, the men are forced to buy their meals from prepared food sellers. Even when a man obtains his food from a wife, sister, or other relative who is a prepared food seller, by tradition he should pay for it. Prepared food sellers are a major occupational group and fill a big demand in the society caused by a unique cultural trait of the Yorubas.

### 3. Traditional Responsibility for Feeding the Family

As in most other cultures, the man has the prime responsibility for making sure that his wife/wives and family are properly fed and housed. A man is allowed to take his first wife only when his economic position is strong enough to support her as well as to pay the "bride price" to her parents. Other wives may be taken as and when he decides, but only if his economic position will allow it.

In traditional marriages, however, particularly when the wife is successful in her occupation and often as prosperous as her husband, she will frequently take on many of the family responsibilities. Gloria Marshall found this to be true for the women traders she interviewed at Awe (near Oyo). "Women not only assume almost complete responsibility for feeding themselves and their children, they also buy their own clothes and most of their children's clothes." <sup>1</sup> In fact, she concluded, "neither sex expects the major financial responsibility for the day-to-day upkeep of a woman and her children to devolve upon the husband." <sup>2</sup> This conclusion, however true for Awe, does not seem to be equally valid for all areas. In general, the man is expected to shoulder most of the responsibilities when he can afford them. This is somewhat modified when the man lives and works away from his wife, who has her own occupation, so that he is no longer able to supervise her day-to-day activities.

In monogamous marriages under state law, the relationship between husband and wife is similar to that in European countries. The husband is expected to be much

more diligent in supporting his wife and family than under the traditional system. In this case, it is the total income of the family that determines the demand for food, rather than the total income under the wife's control, as is frequently the case in traditional marriages.

#### 4. Value of Food Consumed

Adjusting the gross production estimates from the 1958-59 sample survey of agriculture on the basis of the 1963 census of population, and by using estimates of 1957 producer prices, the FAO estimated that the value of food consumed in Western and Mid-Western Nigeria and Lagos amounted to £160.3 million in 1963-64, or £11.96 per capita.

Given FAO's estimated per capita income of £27.92 in 1963-64 and food consumption of £11.96 in the same year, the latter accounts for about 43 percent of the income of the area under study.

#### 5. Expenditure on Food

Farm Households. In the 1952 Census of the Region, 71.1 percent of all occupied males and 80.5 percent of all occupied females gave agriculture, forestry, or fishing as their primary occupation. Because of the prevalence of cash cropping in many areas of the Region, a considerable proportion of the food consumed by farm families is not self-produced but purchased from other producers, either directly or in the market. Galletti *et al.*<sup>4</sup> found that in 187 families producing cocoa in four parts of the Region in 1951-52, 62 percent of all calories consumed were purchased. Table 6-3 shows that the amount purchased ranged from 76 percent for Ibadan to 27 percent for Ondo. In seasonal terms, Table 6-3 shows that the percent purchased in each quarter for all areas remained relatively constant at 61-63 percent. On an area basis, however, the quarterly variation was more pronounced, with a range of 21 percent for Ibadan down to 4 percent for Abeokuta-Ijebu.

Table 6.3

PERCENT OF TOTAL CALORIES PURCHASED BY 187  
FAMILIES IN 1951-52, BY AREA AND BY QUARTER

| <u>Area</u>      | <u>Quarter</u>   |                   |                   |                 | <u>Average<br/>for year</u> |
|------------------|------------------|-------------------|-------------------|-----------------|-----------------------------|
|                  | <u>June-Aug.</u> | <u>Sept.-Nov.</u> | <u>Dec.-Feb..</u> | <u>Mar.-May</u> |                             |
| Abeokuta - Ijebu | 70               | 66                | 70                | 68              | 68                          |
| Ibadan           | 65               | 74                | 79                | 86              | 76                          |
| Ife-Ilesha       | 74               | 63                | 61                | 60              | 64                          |
| Ondo             | 22               | 30                | 26                | 29              | 27                          |
| Total all areas  | 61               | 62                | 62                | 63              | 62                          |

Source: Galletti, et al., Appendix Table L III.

The Galletti study appears to represent the upper extreme in the purchase of food by farm households. These households are all cocoa producers, so that food crops will generally form only a subsidiary part of their farming operations. The 1963-64 Consumption Enquiry by the Rural Economic Survey<sup>5</sup> found that in 7 villages in Western Nigeria about 51 percent of all staple foods, in terms of money value, was purchased, although 67 percent of the total value of all food consumed was purchased. This is shown in more detail in Table 6.4.

Urban Households. The 1961-62 Urban Consumer Survey in Ibadan<sup>6</sup> found for lower-income households that 27.4 shillings out of a total expenditure of 47.5 shillings per person per month, or 57.7 percent, went on food. The amount and percent varied with occupational group, but the variation probably reflected a difference in income level between groups rather than a difference in consumption habits. This is illustrated by the fact that the wage earner group as a whole spent 29.8 shillings on food out of a total expenditure of 59.2 shillings per person per month, or 50.3 percent. The self-employed group, on the other hand, spent nearly the same amount per person on food (25.2 shillings per month) but

Table 6.4

WEEKLY PER CAPITA CONSUMPTION OF FOOD IN SEVEN RURAL  
VILLAGES (OWN PRODUCTION AND PURCHASES) AS PERCENT OF  
WEEKLY VALUE BY COMMODITY - 1963-1964

|                                | Percent of Combined Weekly<br>Value |             |              | Combined Weekly  |                   |
|--------------------------------|-------------------------------------|-------------|--------------|------------------|-------------------|
|                                | Own<br>Production                   | Purchases   | Combined     | Value<br>(pence) | Quantity<br>(lbs) |
| <u>STAPLES</u>                 |                                     |             |              |                  |                   |
| Yam                            | 12.1                                | 2.2         | 14.3         | 6.1              | 4.1               |
| Cassava                        | 4.5                                 | 9.8         | 14.3         | 6.1              | 4.7               |
| Maize                          | 3.2                                 | 5.2         | 8.4          | 3.6              | 3.2               |
| Rice                           | --                                  | 1.2         | 1.2          | 0.5              | 0.1               |
| Beans                          | 0.1                                 | 3.5         | 3.6          | 1.5              | 0.3               |
| Guinea corn                    | --                                  | *           | *            | *                | *                 |
| Plantain                       | 1.2                                 | 0.1         | 1.3          | 0.5              | 0.7               |
| Cocoyam                        | 1.7                                 | 0.1         | 1.8          | 0.8              | 0.9               |
| Other                          | --                                  | 2.0         | 2.0          | 0.8              | --                |
| <b>Total Staples</b>           | <b>22.8</b>                         | <b>24.0</b> | <b>46.8</b>  | <b>20.0</b>      | <b>14.0</b>       |
| PROTEIN                        | 2.3                                 | 20.4        | 22.7         | 1.0              |                   |
| VEGETABLES, FRUITS<br>AND NUTS | 4.3                                 | 4.6         | 8.9          | 3.8              |                   |
| OILS AND FATS                  | 0.5                                 | 4.0         | 4.6          | 2.0              |                   |
| SALTS AND SPICES               | 0.1                                 | 2.3         | 2.4          | 1.0              |                   |
| DRINKS                         | 2.2                                 | 6.8         | 9.0          | 3.8              |                   |
| TOBACCO - KOLA                 | 0.5                                 | 5.1         | 5.6          | 2.4              |                   |
| <b>TOTAL</b>                   | <b>32.8</b>                         | <b>67.2</b> | <b>100.0</b> | <b>42.7 **</b>   |                   |

\* Less than 0.1

† Amounts to £9.35 per capita per annum

Source: "Rural Consumption Enquiry, Food Items, 1963-64"  
Rural Economic Survey of Nigeria, Federal Office  
of Statistics, Lagos, RES 1966/3, pp. 66-97.

had a lower average income, so that total expenditure was only 37.2 shillings per month. This meant that 67.6 percent of total expenditure was for food. However, for different occupational groups the amount spent on food varied from 44.9 percent for clerks to 76.2 percent for farmers. The results of four urban surveys can be seen in Table 6.5.

For middle-income households in Ibadan, food again proved to be the most important item of expenditure, although relatively less important than in lower-income households. Middle-income households spent 56.8 shillings per person per month on food out of a total expenditure of 166.4 shillings, or 34.2 percent.

Table 6-5

ANNUAL PER CAPITA EXPENDITURE ON FOOD AND EXPENDITURE ON FOOD AS PERCENT OF TOTAL EXPENDITURE IN LOWER- AND MIDDLE-INCOME HOUSEHOLDS-SELECTED URBAN AREAS

| Year of Survey | Urban Area                      | Lower-Income Households*                  |                                                     | Middle Income Households†                 |                                                     |
|----------------|---------------------------------|-------------------------------------------|-----------------------------------------------------|-------------------------------------------|-----------------------------------------------------|
|                |                                 | Annual expenditure per capita on food (£) | Expenditure on food as percent of total expenditure | Annual expenditure per capita on food (£) | Expenditure on food as percent of total expenditure |
| 1961-62        | Ibadan <sup>1</sup>             | 16.                                       | 58                                                  | 34                                        | 34                                                  |
| 1959-60        | Lagos <sup>2</sup>              | 22                                        | 43                                                  | 31                                        | 36                                                  |
| 1963-64        | Oshogbo-Ife-Ilesha <sup>3</sup> | 13                                        | 50                                                  | 25                                        | 29                                                  |
| 1964-65        | Ondo-Akure-Owo <sup>4</sup>     | 12                                        | 47                                                  | 25                                        | 28                                                  |

\* Lower-income households are those households whose head receives less than £400 per annum.

† Middle-income households are those households whose head receives in the range of £400-£800 per annum

Source: 1. Ibadan Urban Consumer Survey, op. cit., p. 26.  
 2. Urban Consumer Surveys in Nigeria: Report on Enquiries into the Income and Expenditure Patterns of Lower- and Middle-Income Wage-Earner Households in Lagos, 1959-60, Federal Office of Statistics, Lagos, 1963, pp. 14-27.  
 3 & 4. Federal Office of Statistics, Lagos.

The importance of food in the expenditure pattern of lower-income households in Ibadan can be seen in Figure 6.1, which shows the movement of the consumer price index for food and for all items. Since 1961-62, food has been given an average weight of 51 percent; prior to that it had been 56 percent.<sup>7</sup> Fluctuations in food prices therefore have a very marked effect on consumer purchasing power and on the level of living.

In a study made in Ibadan in August 1963, Dema<sup>8</sup> found that food expenditure per head per week amounted to 58 pence for petty traders in Oje Market, 68 pence for junior civil servants, 80 pence for intermediate civil servants, and 148 pence for senior civil servants. These figures compare favorably with those of the Federal Office of Statistics for Ibadan, as they amount to an annual rate of expenditure of £12.6.0, £17.8.0, £17.4.0. and £32.2.0. respectively per head per year.

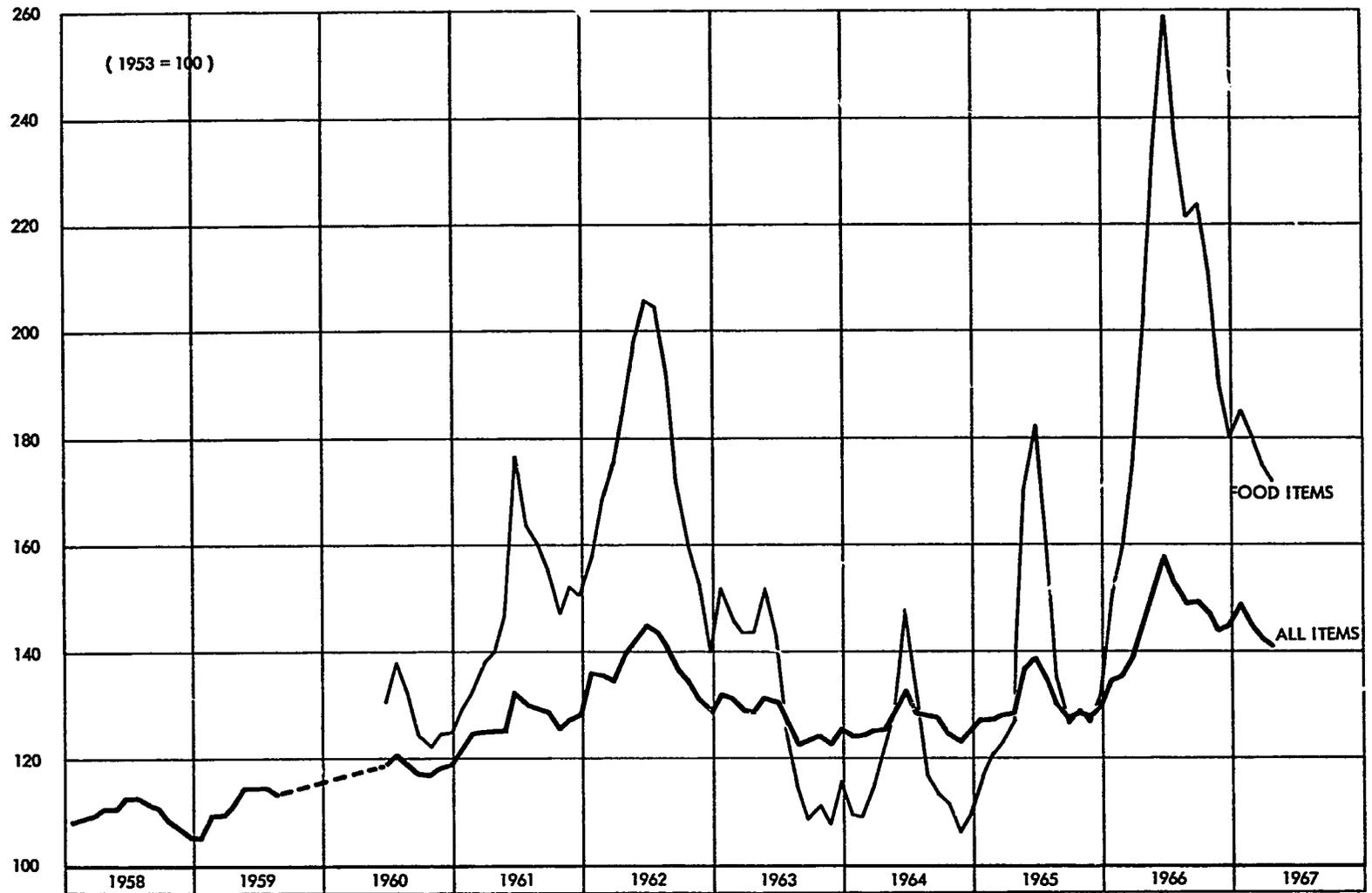
#### 6. Composition of Food Diets

Food diets can be analyzed in a number of ways. For example, they can be analyzed in terms of the nutritive value of the food consumed and the contribution of each item of food to the total diet, based on expenditure, weight, calories, protein, or some other nutritional factor, as well as in terms of value.

Composition by Value. Table 6.6 shows the FAO estimate of the relative money value of the major foods consumed in Western and Mid-Western Nigeria and Lagos in 1963-64. In terms of value, root crops accounted for 50.2 percent and cereals 15.0 percent, while meat, offal, and fish accounted for 21.2 percent. Yam, with 35.6 percent, cassava (including gari) with 12.8 percent, and maize with 9.4 percent were the major food crops consumed.

Figure 6.1

IBADAN: CONSUMER PRICE INDEX 1958-67



SOURCE: Federal Office of Statistics.

Table 6.6

VALUE OF FOOD CONSUMED IN WESTERN AND  
MIDWESTERN NIGERIA AND LAGOS, 1963-64

| <u>Food</u>                    | <u>Percent Consumed</u> |
|--------------------------------|-------------------------|
| Yam                            | 35.6                    |
| Cassava                        | 12.8                    |
| Cocoyam                        | <u>1.9</u>              |
| <u>Total Root Crops</u>        | 50.2                    |
| Maize                          | 9.4                     |
| Rice                           | 4.0                     |
| Other Cereals (mainly wheat)   | <u>1.6</u>              |
| <u>Total Cereals</u>           | 15.0                    |
| Grain Legumes (mainly cowpeas) | 1.9                     |
| Seeds & Nuts                   | .9                      |
| Fats & Oils                    | 3.7                     |
| Meat & Offal                   | 8.8                     |
| Fish                           | 12.4                    |
| Other                          | <u>7.1</u>              |
| TOTAL                          | 100.0                   |

Source: F.A.O., Agricultural Development in Nigeria: 1965-1980, Food and Agriculture Organization of the United Nations, Rome, 1966, p. 394.

Table 6.7 gives the percentage breakdown of average expenditure on individual food items for Ibadan. Among the staples, gari is the largest single item for all income groups, although yam and yam flour combined are considerably greater. Maize, cowpeas, and then rice follow for the lower-income households,

Table 6.7

AVERAGE EXPENDITURE ON INDIVIDUAL FOOD ITEMS AS PERCENT  
OF TOTAL EXPENDITURE ON FOOD IN IBADAN

| Food Item                 | Lower-Income Group        |                                 |              | Middle<br>Income<br>Group |
|---------------------------|---------------------------|---------------------------------|--------------|---------------------------|
|                           | Wage-Earner<br>Households | Self-<br>Employed<br>Households | All          |                           |
| Gari                      | 10.6                      | 10.1                            | 10.9         | 7.0                       |
| Other Cassava             | 2.1                       | 3.0                             | 2.6          | 0.5                       |
| Yam                       | 7.1                       | 6.1                             | 6.9          | 5.9                       |
| Yam Flour                 | 7.0                       | 9.7                             | 8.8          | 4.2                       |
| Rice                      | 5.7                       | 3.7                             | 4.9          | 5.0                       |
| Maize                     | 8.8                       | 12.1                            | 10.7         | 2.5                       |
| Cowpeas                   | 8.3                       | 8.9                             | 8.8          | 4.2                       |
| Plantain                  | 0.6                       | 0.6                             | 0.6          | 0.8                       |
| Potatoes                  | 0.1                       | 0.0                             | --           | 0.4                       |
| Bread                     | 3.4                       | 2.4                             | 3.1          | 3.2                       |
| Biscuits, rolls, etc.     | 0.7                       | 0.4                             | 0.4          | 1.8                       |
| Other                     | 1.2                       | 2.0                             | --           | 2.1                       |
| <b>Total Staples</b>      | <b>55.6</b>               | <b>59.0</b>                     | <b>57.8</b>  | <b>38.7</b>               |
| Meat, Fish and Eggs       | 26.3                      | 27.4                            | 20.3         | 32.6                      |
| Oils and Fats             | 4.9                       | 4.5                             | 4.8          | 7.4                       |
| Vegetables, Fruits & Nuts | 6.4                       | 6.1                             | 6.3          | 9.4                       |
| Other Food                | 6.8                       | 3.0                             | 4.8          | 11.9                      |
| <b>Total Food</b>         | <b>100.0</b>              | <b>100.0</b>                    | <b>100.0</b> | <b>100.0</b>              |

Source: Ibadan Urban Consumer Survey, op. cit., pp. 28-29

while rice, cowpeas, bread, and then maize is the order for middle-income households. It will be noticed that staples absorb about 57 percent of the total food expenditure of lower-income households, while they take only 38.7 percent in middle-income households. Meat, fish, and eggs, on the other hand, represent 27 percent of the total food expenditure of lower-income households, while they absorb 32.6 percent in middle-income households.

Composition Weight. In terms of estimated weight of per capita food supplies in Western and Midwestern Nigeria and Lagos for 1963-64, the root crops assume an overwhelming importance, accounting for 1040.6 grams per day out of a total of 1323.7 grams, or 78.6 percent. Cereals accounted for a further 116.4 grams per day, or 8.8 percent, leaving 6.7 grams per day, or 12.6 percent, for all other food items.<sup>9</sup>

Principal Sources of Calories. Whole Region: On the basis of calories provided, it was estimated for 1963-64 that of a daily total of 1909 calories, root crops provided 10/18, or 53.3 percent.<sup>10</sup> Cereals provided a further 415 calories, or 21.7 percent, palm oil 252 calories, or 13.2 percent, leaving 224 calories, or 11.8 percent, for all other food items.

Rural areas: Galletti et al.<sup>11</sup> found that in 187 farm families in 1951-52, root crops provided 1682 calories per day of a total of 3,073, or 54.7 percent. Of this amount, gari and other cassava products accounted for 933 calories per day, or 30.4 percent of the total, while yams provided 573 calories, or 18.6 percent. Cereals (chiefly maize and maize products) provided 500 calories per day, or 16.3 percent of the total, palm oil 403 calories, or 13.1 percent.

All other food items provided the remaining 488 calories per day, or 15.9 percent.

In two rural villages in Ilesha Division of Oyo Province in 1960-61, Dema<sup>12</sup> found a similar pattern. Starchy foods (root crops and plantain) provided 53.8 percent of total calorie intake in Igun village, and 59.1 percent in Abeboyun village. Cereals provided 16.1 and 10.4 percent respectively; 31.2 and 17.9 percent of total calories were provided by all food items.

**Urban Areas:** In a consumption study in Ibadan for four income groups, Dema<sup>13</sup> shows a pattern of consumption similar to that existing in the rural areas he studied. A possible exception is that of senior civil servants; among the remaining groups, starchy foods and cereals combined account for 54-55 percent of total calories per head per day. As the employment group rises, so meat and fish tend to replace pulses (mainly cowpeas and other seeds) as the protein source of calories.

Principal Sources of Protein. Whole Region: According to the FAO estimates, root crops constituted the major source of protein in 1963-64, accounting for 16.3 grams per day of a total of 39.6 grams, or 41 percent. Cereals provided an additional 10.6 grams per day, or 26.8 percent; pulses and nuts 5.0 grams, or 12.6 percent; and meat and fish 7.1 grams per day, 17.0 percent.<sup>14</sup>

**Rural Areas:** In the rural villages in Ilesha Division studied by Dema,<sup>15</sup> starchy foods (root crops and plantain) as a group again were the major single source of protein, but in a much smaller proportion. Pulses, other seeds, animal products, and fish assumed much greater importance, accounting for

about 57-59 percent of the total.

Principal Sources of Fat. Whole Region: The major source of fat in 1963-64, according to the FAO estimates, was palm oil, which supplied 28.5 grams per day of a total of 41.8 grams, or 68 percent. Cereals with 4.0 grams per day, roots with 2.1 grams, pulses with 2.3 grams, and meat and fish with 4.4 grams were all minor contributors.

#### 7. Distribution of Consumption of Staple Foods

By Season. Reliable data on the contribution of each food crop to the average diet in each season is severely limited. The study by Galletti<sup>16</sup> nevertheless provides some indication of the distribution pattern for the four rural areas included in their study in 1951-52. Only a small quarter-by-quarter variation for gari and other cassava products is evidenced--from 28 percent of total calories in December-February to a high of 32 percent in March-May. Yams, on the other hand, have a much more distinct seasonal pattern, ranging from a low of 14 percent of total calories in March-May to 23 percent in September-November. It will be observed that the six-month high for yams (September-February) coincides with the six-month low for gari and other cassava products, suggesting a complementary relationship between these two major crops. Maize, like yams, has a seasonal pattern ranging from 1 percent of total calories in September-February to 7 percent in June-August. Maize products, on the other hand, remained relatively stable between 8 percent in June-August and 11 percent in December-February.

The percent distribution of households in Ibadan by period of greater and least small consumption is shown in Table 6.8.

Table 6.8

PERCENT DISTRIBUTION OF HOUSEHOLDS BY PERIOD OF GREATEST  
AND SMALLEST CONSUMPTION OF VARIOUS COMMODITIES--HOUSEHOLD  
SURVEY-IBADAN--DECEMBER 1966

| Period<br>of Year | Commodity        |      |                 |      |       |      |                  |                  |       |      |       |      |         |      |                 |      |
|-------------------|------------------|------|-----------------|------|-------|------|------------------|------------------|-------|------|-------|------|---------|------|-----------------|------|
|                   | Fresh<br>Yam     |      | Yam<br>Flour    |      | Gari  |      | Cassava<br>Flour |                  | Maize |      | Rice  |      | Cowpeas |      | Bread           |      |
|                   | Least            | Most | Least           | Most | Least | Most | Least            | Most             | Least | Most | Least | Most | Least   | Most | Least           | Most |
| January-March     | 40               | 1    | 16              | 15   | 11    | 21   | 38               | 39               | 32    | 2    | 62    | 1    | 29      | 3    | 57              | 0    |
| April-June        | 56               | 0    | 21              | 18   | 27    | 4    | 37               | 10               | 40    | 17   | 26    | 2    | 22      | 1    | 14              | 14   |
| July-September    | 4                | 89   | 58              | 28   | 62    | 35   | 38               | 36               | 28    | 77   | 11    | 31   | 47      | 26   | 7               | 64   |
| October-December  | 1                | 10   | 4               | 34   | 0     | 40   | 7                | 16               | 0     | 4    | 1     | 66   | 2       | 70   | 21              | 21   |
| Total Percent     | 101 <sup>+</sup> | 100  | 99 <sup>+</sup> | 100  | 100   | 100  | 100              | 101 <sup>+</sup> | 100   | 100  | 100   | 100  | 100     | 100  | 99 <sup>+</sup> | 100  |
| No. of Responses: | 186              | 197  | 178             | 190  | 151   | 161  | 60               | 62               | 53    | 53   | 145   | 153  | 135     | 147  | 14              | 14   |

+ Rounding error.

4

By Area. Galletti, et al., found a very wide variation in consumption of the different food items in the four areas studied. Yams are an important source of calories in Ife-Ilesha and Ondo areas compared with Abeokuta-Ijebu and Ibadan areas, while for gari and other cassava products the order is reversed. Other roots (mostly cocoyam) are important in the Ondo area. Maize and maize products are important sources of calories in the Ibadan and Ife-Ilesha areas.

Much of this variation in consumption patterns is understandable if production and consumption patterns are considered together. Yam production is particularly important in Ondo and Oyo Provinces. For cassava, Abeokuta-Ijebu and Ondo Provinces are more important, while for maize Ibadan and Oyo Provinces generally have a higher level of per capita production. Cocoyam is most important in Ondo Province.

#### 8. Consumption of Imported Staple Foods

Wheat and wheat flour are the main staple foods imported into Nigeria. In 1962, imports of these commodities amounted to US\$12.6 million for 4.0 million bushels of grain equivalent. By 1975 it is anticipated that about 6.3 million bushels of grain equivalent will be required.<sup>17</sup> Most of this grain is consumed in the form of bread in the urban areas. It has been estimated that Lagos consumes about 20 percent of all bread manufactured, while the Western Region consumes further 38 percent of the total.<sup>18</sup>

The growing importance of imported cereals can be seen in Dema's study of Ibadan.<sup>19</sup> As the employment group rose, so the proportion of imported cereal rose, reaching a high of 39.6 percent of all cereal calories consumed by senior civil servants.

Imported rice is another staple of some importance. It is generally traded as "Ghana" rice, even though none is imported from there--the main sources of

supply are Thailand and the U.S.A. Imported rice is generally well milled and highly polished and is considered superior to the local varieties, commanding a higher price in the market.

#### 9. Food Elasticities and Future Demand

Whole Region. In the FAO projections of per capita food supplies for Western and Mid-Western Nigeria and Lagos for 1979-80<sup>20</sup> it was assumed that the income elasticity for root crops was zero and for cereals, 0.6. According to this, per capita demand for the root crops will remain as in 1963-64, while the demand for cereals will rise by 22 percent. All other food items had an assumed income elasticity ranging from 0.5 to 1.0. However, given an estimated average population growth rate in Nigeria of 2.8 percent for the period, or 55 percent over 1963-64, there will be a sizable increase in the total consumption of all staples, and particularly cereals. It is expected that food expenditure per capita at factor cost will rise at an average rate of 1.2 percent between 1963-64 and 1979-80, or a total of 4.1 percent per year. Over this period, FAO expects that food expenditure as a percent of private consumption will drop from 62 percent to 56 percent for Nigeria as a whole.

Urban Areas. The Urban Consumer Surveys give an indication of expenditure elasticities of demand for household consumer goods for low income households in several cities. Table 6.9 shows the elasticities resulting from linear regression analysis for both Lagos and Ibadan. All are positive but less than 1.0, with that for staples being 0.50 and 0.49 respectively. This means that as household expenditure increases by 1 percent, so the expenditure on staple foods will also increase, but by only one-half of 1 percent. Food in general was shown to have a household expenditure elasticity of 0.53 and 0.60 respectively. As these elasticities are for total households, part of the derived values can be accounted for by the confirmed fact that the size of the family increases as income rises.

Table 6-9

EXPENDITURE ELASTICITIES OF DEMAND FOR HOUSEHOLD CONSUMER  
GOODS FOR LOW INCOME HOUSEHOLDS--LAGOS AND IBADAN

| <u>I t e m</u>   | <u>Lagos</u><br><u>(1959-60)</u> | <u>Ibadan</u><br><u>(1961-62)</u> |
|------------------|----------------------------------|-----------------------------------|
| Staples          | 0.50                             | 0.49                              |
| Meat, Fish, Eggs | 0.52                             | 0.64                              |
| Oils and Fats    | 0.56                             | 0.81                              |
| Total Food       | 0.53                             | 0.60                              |

Source: Federal Office of Statistics, Expenditure Elasticities for Household Consumer Goods, F.O.S., 1966, O(2), Table 2.

10. Variations in Diet by Sex, Age and Marital Condition

Generally there is no difference in the diets of men and women, although men doing heavy physical work will usually eat "heavier" meals. This mainly involves eating larger quantities of such foods as iyan (pounded yam), amala (boiled yam flour) and eba (boiled gari).

Rice is a particularly common food for children and is perhaps their major staple food at breakfast time. For lunch and supper, children will generally eat the same food as adults. Children who are still being nursed by their mothers will generally be fed eko tutu (solid maize pap) as a supplement. Older people usually eat lighter foods, such as hot eko mimu (liquid maize pap) for breakfast, amala for lunch, and eko tutu for supper.

The marital condition of both men and women does not greatly affect the diet except as to source of food. When a man does not have a wife in his company or a steward to prepare his meals, he will generally buy already prepared food, which will be the same as that prepared by a wife.

## 11. Periods of High and Low Food Consumption

Periods of Fast. Under traditional Yoruba custom, there are no periods of fasting or voluntary periods of conspicuously low food consumption. Instead, frequent feasting is prevalent, as all the traditional gods "require an abundance of food." This means that fasting is an introduced phenomenon associated with the Moslem and Christian religions.

The most important fast is the 30 day Ramadan fast related to the Moslem Eid-el-Fitri, which falls in the ninth month of the Mohammedan year. During this period, fasting is practiced from dawn to sunset. Less of the heavier staples, such as iyan, amala, and eba are consumed, while the lighter and more expensive foods, such as bread, moin moin (boiled cowpea fload), akara (cowpea balls), jogi (cowpeas with melon), dodo (fried plantain), fruit, and canned foods are more common. Before dawn a meal usually of iyan, amala, or eba is taken, while after sunset eko tutu, cowpea preparations, rice, and fruit are common.

During the period of the Christian Lent, which lasts for the 40 days from Ash Wednesday to Easter, the Western Nigerian practice seems to be to miss breakfast, taking only two meals a day. People under 21 are generally not forced to fast, and only the more devout do not take fresh meat during this period. For the remainder, food consumption is regular.

Periods of High Food Consumption. All traditional festivals and ceremonies are periods of conspicuously high food consumption. The large number of gods in the traditional religion are sub-deities and must be kept mollified if they are not to bring down their wrath on the community. For this reason, followers of the traditional religion are diligent in observing the traditional festivals, which usually involve the sacrifice of a goat, sheep, ram, dog, or cock, together with an offering of a staple such as amala or iyan. The celebrants consume large quantities of prepared staples, supplemented by soup and stew. Most traditional

worshippers celebrate from one to six or more festivals a year.<sup>21</sup>

In addition to the traditional religious festivals, there are others which are celebrated by most Yoruba, although the form may vary considerably. These include naming ceremonies (which usually take place on the eighth day after birth of a child), weddings, funerals, and second burials (which usually occur six to twelve months after the original burial). At many of these ceremonies, people begin to arrive several days before the event and remain with the celebrant often for several days afterwards. During this period the guests must be fed. The staple used varies with the area, so that eba is common in Ijebu, eba and rice in Abeokuta, eko tutu and amala in Ibadan, amala and iyan in Oyo.

#### 12. Changing Consumption Habits

Perhaps the most important change now taking place in Western Nigeria is the decline in importance of the traditional staple foods. Yams and cassava especially are being increasingly supplemented by the cereal crops and cowpeas. Also, since the early 1950's bread has begun to occupy a place in the diet, and now margarine is slowly gaining in popularity.

Along with a relative decrease in the old staples, there has been an increase in consumption of animal protein. This is due mainly to an increase in the amount of cow beef and, more recently, fresh fish (often distributed in frozen form) consumed. Increased demand resulting from higher incomes has been the major stimulant, although an improved distribution system has facilitated

this increase, as the cattle are almost entirely imported on the hoof from the North, while fresh fish comes mostly through Lagos.

The traditional diet of a staple and a highly seasoned soup does not lend itself to variation. Now that a wide range of commodities is available in large quantities and people are able to afford more of them, it seems reasonable to expect that diets will become increasingly less monotonous. Cereals, fresh meat and fish, and dry provisions will almost certainly gain in importance.

## B. IBADAN: CONSUMER PROCUREMENT PATTERNS

### 1. Consumer Supply Patterns

#### 1. Marketing System

The results of the Household Survey in Ibadan gives an overwhelming impression of reliance by consumers on the marketing system for their main supply of staple foods. As Table 6.10 indicates, 90 percent of all households did not produce any staple foods themselves.

Table 6.10

PERCENT DISTRIBUTION OF HOUSEHOLDS BY PERCENT OF SELF-PRODUCED STAPLE FOODS CONSUMED AND BY ESTIMATED MONTHLY INCOME OF WIFE---  
HOUSEHOLD SURVEY - IBADAN - DECEMBER 1966

| Percent of<br>Self-Produced<br>Staple Foods<br>Consumed | Estimated Monthly Income of Wife |           |            |             |               | All<br>House-<br>Holds |
|---------------------------------------------------------|----------------------------------|-----------|------------|-------------|---------------|------------------------|
|                                                         | Under<br>£5                      | £5-<br>£8 | £8-<br>£12 | £12-<br>£20 | £20 &<br>Over |                        |
| None                                                    | 78                               | 97        | 100        | 96          | 95            | 90                     |
| 1 and under 40                                          | 1                                | 1         | --         | 1           | 3             | 1                      |
| 40 & under 60                                           | 10                               | 2         | --         | 3           | 3             | 5                      |
| 60 & under 80                                           | 7                                | --        | --         | --          | --            | 3                      |
| 80 & over                                               | 4                                | --        | --         | --          | --            | 1                      |
| Total percent                                           | 100                              | 100       | 100        | 100         | 101+          | 100+                   |
| Number of<br>Responses                                  | 182                              | 130       | 82         | 73          | 37            | 504                    |

+ Rounding error.

## 2. Home Production

Among the 10 percent of the households that mentioned they produced foodstuffs, only in 7 of the 50 households (or 15 percent) did the home-produced foodstuffs account for all or nearly all of their consumption needs. In terms of income group, only in the very low income households (with an estimated monthly income of under £3) were home-produced foodstuffs of any real importance and half of these grew 50 percent or less of the staple foods they consumed.

Of the households producing staple food, at least 90 percent grew some yam, while 66 percent grew maize and 58 percent some cassava. Other crops, such as cowpeas and rice, were grown but were of minor importance.

One-third of the households growing staple foods lived within five miles of their farms, and another 55 percent lived between 5 and 10 miles from them. Eight percent had their farm between 10 and 20 miles from the home, while 4 percent stated that their farms were over 40 miles away.

## 3. Gifts

Another important source of staple food in many households is gifts. As Table 6.11 shows, 25 percent of the households in the survey received gifts of staple food at least occasionally. These tended to be more important and more numerous in the low income households.

Table 6.11

PERCENT DISTRIBUTION OF HOUSEHOLDS BY FREQUENCY OF RECEIVING GIFTS OF STAPLE FOODS AND BY ESTIMATED MONTHLY INCOME OF WIFE--HOUSEHOLD SURVEY--IBADAN - DECEMBER 1966

| Frequency of Receiving Gifts of Staple Foods | Estimated Monthly Income of Wife |       |        |         |          | All Households |
|----------------------------------------------|----------------------------------|-------|--------|---------|----------|----------------|
|                                              | Under £5                         | £5-£8 | £8-£12 | £12-£20 | £20 Over |                |
| Frequently                                   | 5                                | 3     | 1      | 4       | --       | 3              |
| Sometimes                                    | 9                                | 2     | 1      | 5       | 5        | 5              |
| Occasionally                                 | 23                               | 13    | 9      | 18      | 14       | 17             |
| Never                                        | 63                               | 82    | 89     | 73      | 81       | 75             |
| Total percent                                | 100                              | 100   | 100    | 100     | 100      | 100            |
| Number of responses                          | 181                              | 130   | 82     | 73      | 37       | 504            |

The practice of giving foodstuffs to relatives results mostly from the system of extended family obligation operating among the Yoruba. Siblings, particularly when they are older or in better economic straits than their brothers and sisters, are expected to contribute to their sustenance when the need arises. In low income households, this need almost always exists. The importance of brothers and sisters as a source of gifts of staple foods to low income households can be seen in Table 6.12. As incomes rise, so parents and other relatives assume importance as the main source of gifts. Non-relatives constitute only three percent of the people who usually give gifts.

Table 6.12

PERCENT DISTRIBUTION OF HOUSEHOLDS RECEIVING GIFTS BY USUAL DONOR AND BY ESTIMATED MONTHLY INCOME OF WIFE--HOUSEHOLD SURVEY--IBADAN--DECEMBER 1966

| Usual Doner of Staple Food | Estimated Monthly Income of Wife |                 |        |                  |                 | All Households  |
|----------------------------|----------------------------------|-----------------|--------|------------------|-----------------|-----------------|
|                            | Under £5                         | £5-£8           | £8-£12 | £12-£20          | £20 & Over      |                 |
| Husband                    | 1                                | 4               | --     | 6                | --              | 2               |
| Parents                    | 28                               | 26              | 22     | 17               | 57              | 27              |
| Brother/Sister             | 48                               | 22              | 11     | 22               | 14              | 35              |
| Other Relative             | 18                               | 43              | 67     | 56               | 28              | 32              |
| Non-Relative               | 4                                | 4               | --     | --               | --              | 3               |
| Total percent              | 99 <sup>+</sup>                  | 99 <sup>+</sup> | 100    | 101 <sup>+</sup> | 99 <sup>+</sup> | 99 <sup>+</sup> |
| Number of responses        | 67                               | 23              | 9      | 18               | 7               | 124             |

+. Rounding error.

Another interesting difference between gifts of staple foods to lower and higher income households concerns the location of the person giving the gift. As Table 6.13 discloses, the benefactor in the case of low income households is usually resident in Ibadan or close by, whereas for the higher income households the food comes from farther away, often over 40 miles. Where the gift originates in Ibadan, it was probably purchased in the market while one coming from farther away is often sent by a farming relative.

Table 6.13

PERCENT DISTRIBUTION OF HOUSEHOLDS RECEIVING GIFTS OF STAPLE FOODS BY DISTANCE TO PLACE OF ORIGIN AND BY ESTIMATED MONTHLY INCOME OF WIFE--HOUSEHOLD SURVEY--IBADAN--DECEMBER 1966

| <u>Distance to Place<br/>of Origin (miles)</u> | <u>Estimated Monthly Income of Wife</u> |                   |                    |                     |                           | <u>All<br/>Households</u> |
|------------------------------------------------|-----------------------------------------|-------------------|--------------------|---------------------|---------------------------|---------------------------|
|                                                | <u>Under<br/>£5</u>                     | <u>£5-<br/>£8</u> | <u>£8-<br/>£12</u> | <u>£12-<br/>£20</u> | <u>£20 &amp;<br/>Over</u> |                           |
| Under 10                                       | 55                                      | 38                | 11                 | 17                  | 14                        | 41                        |
| 10 & under 20                                  | 13                                      | 5                 | 11                 | 6                   | --                        | 10                        |
| 20 & under 40                                  | 13                                      | 19                | 22                 | 17                  | --                        | 15                        |
| 40 & over                                      | <u>18</u>                               | <u>38</u>         | <u>56</u>          | <u>61</u>           | <u>86</u>                 | <u>34</u>                 |
| Total percent                                  | 99 <sup>+</sup>                         | 100               | 100                | 101 <sup>+</sup>    | 100                       | 100 <sup>+</sup>          |
| <u>Number of responses</u>                     | 67                                      | 21                | 9                  | 18                  | 7                         | 122                       |

+ Rounding error.

The distribution of commodities received by the households interviewed was as follows:

| <u>Commodity</u> | <u>Percent of<br/>Households Receiving</u> |
|------------------|--------------------------------------------|
| Yam              | 37                                         |
| Yam flour        | 15                                         |
| Gari             | 48                                         |
| Maize            | 17                                         |
| Rice             | 26                                         |
| Cowpeas          | 17                                         |
| Other            | 33                                         |

As can be seen, gari is the most important single commodity, followed by yam and rice. Part of all of these commodities would probably have been purchased in Ibadan, and most of the rice and cowpeas.

In terms of the total value of these gifts, 68 percent of the recipients claimed that they were worth less than £1 per month. However, as Table 6.14 indicates, the value of the gifts tended to rise as the estimated level of household income rose. Even though the gifts are not generally large in value, they are an important source of staple foods to many households.

Table 6.14

PERCENT DISTRIBUTION OF HOUSEHOLDS RECEIVING GIFTS OF STAPLE FOODS BY TOTAL MONTHLY VALUE OF GIFTS AND BY ESTIMATED MONTHLY INCOME OF WIFE--  
HOUSEHOLD SURVEY -IBADAN- DECEMBER 1966

| Total Monthly<br>Value of Gifts | Estimated Monthly Income of Wife |           |            |             |                 | All<br>Households |
|---------------------------------|----------------------------------|-----------|------------|-------------|-----------------|-------------------|
|                                 | Under<br>£5                      | £5-<br>£8 | £8-<br>£12 | £12-<br>£20 | £20 &<br>Over   |                   |
| Less than £1                    | 76                               | 74        | 56         | 53          | 28              | 68                |
| £1 & under £2                   | 10                               | 17        | 44         | 26          | 43              | 18                |
| £2 & over                       | 13                               | 9         | -          | 21          | 28              | 14                |
| Total Percent                   | 99 <sup>+</sup>                  | 100       | 100        | 100         | 99 <sup>+</sup> | 100               |
| Number of Responses             | 68                               | 23        | 9          | 19          | 7               | 126               |

#### 4. Shopping Habits

Some idea of the shopping habits of households in Ibadan can be gained from the analysis of the Household Survey. Very few households travelled more than two miles to the market they considered their major source of foodstuffs. As Table 6.15 shows, 86 percent of all the housewives interviewed travelled less than two miles. Only among the higher income

Table 6.15

PERCENT DISTRIBUTION OF HOUSEHOLDS BY DISTANCE TO USUAL MARKET AND  
BY ESTIMATED MONTHLY INCOME OF WIFE--HOUSEHOLD SURVEY - IBADAN -  
DECEMBER 1966

| Usual Distance<br>to Market | Estimated Monthly Income of Wife |           |                 |             |               | All<br>Households |
|-----------------------------|----------------------------------|-----------|-----------------|-------------|---------------|-------------------|
|                             | Under<br>£5                      | £5-<br>£8 | £8-<br>£12      | £12-<br>£20 | £20 &<br>Over |                   |
| Under 1 mile                | 52                               | 61        | 64              | 50          | 25            | 54                |
| 1 & under 2 miles           | 40                               | 28        | 32              | 26          | 28            | 32                |
| 2 & under 3 miles           | 8                                | 9         | 1               | 7           | 11            | 7                 |
| 3 & under 4 miles           | 1                                | -         | 1               | 17          | 30            | 5                 |
| 4 miles & over              | -                                | 2         | 1               | -           | 6             | 1                 |
| Total Percent)              | 101 <sup>+</sup>                 | 100       | 99 <sup>+</sup> | 100         | 100           | 99 <sup>+</sup>   |
| Number of Responses         | 165                              | 123       | 75              | 72          | 36            | 471               |

+ Rounding error.

households was it usual to travel more than two miles to the major supply market. This occurred in 47 percent of households where the estimated monthly income of the wife was over £20 per month. This pattern of behavior is explained to a large extent by the geographical distribution of population in Ibadan. Ibadan is most heavily populated around the central native markets, where most of the households can be considered to have low incomes. As incomes rise, households tend to move into the newer and lower density residential areas farther from the town and consequently from the central markets.

For the households interviewed in Ibadan, the central native markets were most important for the acquisition of food supplies. The percent of households in each residential area in the Household Survey buying in each of the major markets complexes is shown in Map 6.1. Although quite a few



households prefer to bypass the food market nearest to their residential area, particularly those living closer to the residential markets than to the central markets, most tend to go to the nearest market.

In general, housewives tend to use some form of transportation to return home after shopping. This is particularly true of the housewives from higher income households. However, in the lower income households (those in which the estimated monthly income of the wife was under £8), 28 percent of the housewives walked home from the market. As Table 6.16

Table 6.16

PERCENT DISTRIBUTION OF HOUSEHOLDS BY USUAL MEANS OF CONVEYANCE FROM MARKET AND BY ESTIMATED INCOME OF WIFE--HOUSEHOLD SURVEY--IBADAN - DECEMBER 1966

| Usual Means of<br>Conveyance From<br>Market | Estimated Monthly Income of Wife |                  |                  |             |               | All<br>Households |
|---------------------------------------------|----------------------------------|------------------|------------------|-------------|---------------|-------------------|
|                                             | Under<br>£5                      | £5-<br>£8        | £8-<br>£12       | £12-<br>£20 | £20 &<br>Over |                   |
| Walking                                     | 29                               | 27               | 18               | 8           | 3             | 21                |
| Bicycle                                     | 1                                | -                | -                | 1           | -             | *                 |
| Taxi & Car                                  | 60                               | 69               | 79               | 88          | 97            | 72                |
| Bus & Other                                 | 10                               | 5                | 4                | 3           | -             | 6                 |
| Total Percent                               | 100                              | 101 <sup>+</sup> | 101 <sup>+</sup> | 100         | 100           | 99 <sup>+</sup>   |
| Number of Responses                         | 172                              | 124              | 80               | 73          | 36            | 485               |

\* Less than 0.5 percent

+ Rounding error.

relates, taxi and private car transportation, (72 percent of all respondents) was certainly the most usual means of conveyance: taxis were of overwhelming importance, as private cars were only used by a few of the higher income housewives. Bicycles were rarely used, while buses and other forms were used to a limited extent by the lower and middle income households.

For the most part, housewives in Ibadan shop for foodstuffs between twice a week and twice a month. In fact, as Table 6.17 indicates, in the Household Survey these frequencies were reported by 73 percent of all respondents. Among the sample, the level of income did not seem to be

Table 6.17

PERCENT DISTRIBUTION OF HOUSEHOLDS BY FREQUENCY OF SHOPPING AND BY ESTIMATED MONTHLY INCOME OF WIFE--HOUSEHOLD SURVEY-IBADAN-DECEMBER 1966

| Number of Shopping Times Per Month | Estimated Monthly Income of Wife |       |        |         |            | All Households |
|------------------------------------|----------------------------------|-------|--------|---------|------------|----------------|
|                                    | Under £5                         | £5-£8 | £8-£12 | £12-£20 | £20 & Over |                |
| 1 or less                          | 25                               | 8     | 9      | 6       | 8          | 14             |
| 2                                  | 36                               | 27    | 23     | 28      | 25         | 29             |
| 3 - 5                              | 16                               | 29    | 23     | 15      | 28         | 21             |
| 6 - 10                             | 18                               | 23    | 35     | 26      | 19         | 23             |
| 11-15                              | 5                                | 11    | 10     | 21      | 17         | 11             |
| 16 & over                          | 1                                | 2     | -      | 4       | 3          | 2              |
| Total Percent                      | 101 <sup>+</sup>                 | 100   | 100    | 100     | 100        | 100            |
| Number of Responses                | 170                              | 124   | 79     | 72      | 36         | 481            |

+ Rounding error.

a particularly important factor in accounting for the frequency of shopping, although the very low income households tended to shop somewhat less often than the rest.

Part of the tendency for lower income households to shop in a market less often can be explained by their greater reliance on hawkers as the source of food supplies. These hawkers retail foodstuffs they headload through residential areas. Because of the nature of their business activities and the need for a high population density to support them,

hawkers are mostly limited to the central core area of Ibadan. Nevertheless, some hawkers do sell in the higher income residential areas, although these areas are generally not as well served by them. The frequency with which housewives buy from hawkers can be seen in rather general terms in Table 6.18. Although hawkers selling all of the different staple foods

Table 6.18

PERCENT DISTRIBUTION OF HOUSEHOLDS BY FREQUENCY OF BUYING FOODSTUFFS FROM HAWKERS AND BY ESTIMATED MONTHLY INCOME OF WIFE--HOUSEHOLD SURVEY - IBADAN - DECEMBER 1966

| Frequency of<br>Buying Foodstuffs<br>From Hawkers | Estimated Monthly Income of Wife |           |            |             |                 | All<br>Households |
|---------------------------------------------------|----------------------------------|-----------|------------|-------------|-----------------|-------------------|
|                                                   | Under<br>£5                      | £5-<br>£8 | £8-<br>£12 | £12-<br>£20 | £20 &<br>Over   |                   |
| Usually                                           | 34                               | 31        | 30         | 21          | 5               | 28                |
| Sometimes                                         | 32                               | 22        | 23         | 23          | 32              | 27                |
| Occasionally                                      | 26                               | 35        | 36         | 41          | 30              | 33                |
| Never                                             | 8                                | 12        | 11         | 15          | 32              | 12                |
| Total Percent                                     | 100                              | 100       | 100        | 100         | 99 <sup>+</sup> | 100               |
| Number of Responses                               | 180                              | 130       | 81         | 73          | 37              | 501               |

+ Rounding error.

are quite pervasive throughout Ibadan, those selling (cold) maize preparations are probably the most important single group.

Although the number of higher income households included in the sample is too small to permit a firm conclusion, it seems that these households do have a tendency to be less faithful to particular traders than the lower income households. Table 6.19 shows that while 25 percent of the housewives with an estimated monthly income of less than £8 usually bought from the same traders in the market, only 11 percent of

Table 6.19

PERCENT DISTRIBUTION OF HOUSEHOLDS BY FREQUENCY OF BUYING FROM  
THE SAME SELLERS AND BY ESTIMATED MONTHLY INCOME OF WIFE--  
HOUSEHOLD SURVEY - IBADAN - DECEMBER 1966

| Frequency of<br>Buying from the<br>Same Seller | Estimated Monthly Income of Wife |                  |            |                 |               | All<br>Households |
|------------------------------------------------|----------------------------------|------------------|------------|-----------------|---------------|-------------------|
|                                                | Under<br>£5                      | £5-<br>£8        | £8-<br>£12 | £12-<br>£20     | £20 &<br>Over |                   |
| Usually                                        | 25                               | 23               | 19         | 19              | 11            | 22                |
| Often (about half<br>the time)                 | 34                               | 38               | 38         | 48              | 37            | 38                |
| Not usually                                    | 40                               | 38               | 43         | 32              | 52            | 40                |
| Total Percent                                  | 99 <sup>+</sup>                  | 101 <sup>+</sup> | 100        | 99 <sup>+</sup> | 100           | 100               |
| Number of Responses                            | 161                              | 107              | 72         | 62              | 27            | 429               |

+ Rounding error.

those with an estimated monthly income of £20 or over, did so. A more significant picture is perhaps obtained by inverting the figures. Forty percent of the respondents claimed they did not usually buy from the same sellers, while 38 percent did so only about half the time. The remaining 22 percent stated that they usually bought from the same sellers.

FOOTNOTES - CHAPTER VI

1. Gloria A. Marshall, Women, Trade and the Yoruba Family, Ph.D. Dissertation, Columbia University, 1964, p. 194.
2. Gloria A. Marshall, *Ibid.*, p. 201.
3. F.A.O., Agricultural Development in Nigeria: 1965-1980, Food and Agriculture Organization of the United Nations, Rome, 1966, p. 394.
4. R. Galletti, K.D.S. Baldwin and I.O. Dina, Nigerian Cocoa Farmers: An Economic Survey of Yoruba Cocoa Farming Families, Oxford University Press, London, 1956, Appendix Table L III.
5. "Rural Consumption Enquiry, Food Items, 1963-64", Rural Economic Survey of Nigeria, Federal Office of Statistics, Lagos, RES 1966/3, pp. 66-97.
6. Report on Enquiries into the Income and Expenditure Patterns of Lower and Middle Income Households at Ibadan 1961-62, Federal Office of Statistics, Lagos, UCS/1966/2, pp. 10, 11 & 19.
7. Ibadan Urban Consumer Survey, *Ibid.*, p. 22.
8. I. S. Dema, "Implications of the Growing Demands for Imported Foods in Nigeria", paper presented to 7th International Congress of Nutrition, Hamburg, August 3-10, 1966, Figure 6.
9. F.A.O., *op. cit.*, p. 16.
10. F.A.O., *op. cit.*, pp. 396, 398, and 399.
11. Galletti, et al., *op. cit.*, Tables 259, 260, Appendix Table LIII.
12. I. S. Dema, Nutrition in Relation to Agricultural Production, F.A.O., Rome, 1965, pp. 86-87.
13. I. S. Dema, "Implications of the Growing Demands for Imported Foods in Nigeria", *op. cit.*, Table 3, Figure 6.
14. Fato, *op. cit.*, pp. 396, 398, 399.
15. I. S. Dema, Nutrition in Relation to Agricultural Production, *op. cit.*
16. Galletti, et al., *op. cit.*, Tables 259, 260, Appendix Table LIII.

17. Lyle E. Moe, "Nigeria: Projected Level of Demand, Supply, and Imports of Farm Products in 1965 and 1975; With Implications for U.S. Agriculture" Economic Research Service, U.S. Department of Agriculture, Washington, ERS - Foreign 105, 1965, p. 11.
18. Lyle E. Moe, Ibid., p. 8.
19. I. S. Dema, "Implications of the Growing Demands for Imported Foods in Nigeria, Op. Cit.
20. F.A.O., op. cit., pp. 396, 398, 399.
21. The more important festivals are those honoring:
  - Ogun (god of iron)
  - Soponna (god of smallpox--celebrated twice a year, first in the dry season (erun) and then in the rainy season (ojo) )
  - Sango (god of thunder)
  - Oya (god of water)
  - Ifa (god of the oracle)
  - Eyinle (god of beauty)
  - Oshun (god of hygiene and health)
  - Orisa-Oko (god of the forest)
  - Egungun (ancestral spirit worship)

Chapter VII

MOVEMENT OF  
STAPLE FOODS

N O R T H E R N R E G I O N



Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1963.  
Approved by Federal Survey Nigeria, 1963.  
SQC 188 3-64

## VII MOVEMENT OF STAPLE FOODS

With a population of two-thirds of a million, Ibadan is by far the largest and most important urban center in Western Nigeria, rivalled only by the contiguous Federal Territory of Lagos. The study of staple food flows centers on Ibadan and relates to the marketable surplus in Ibadan's supply area. As most of the rice and cowpea supplies are procured from outside Western Nigeria, it is not possible to treat them with the same degree of detail and accuracy as yams, gari, and maize.

### A. SUPPLY SHEDS

From its founding in about 1800, Ibadan's demand for staple foods through the internal exchange economy has continued to expand. The producing area supplying Ibadan expanded until it encroached upon the areas supplying other nearby urban centers. Beyond this margin, most of the foods found their way to the other urban centers. Although production was intensified, it was still inadequate to meet the growing demand for foodstuffs from Ibadan. As a result, Ibadan, like Lagos and Ilesha, has tended to circumvent the areas supplying the neighboring urban centers and to draw its additional food supplies from beyond them.

A general idea of this movement of surplus food supplies from the producing areas can be gained by examining the supply sheds.<sup>1</sup> Map 7.1 is the result of an attempt to map the staple food supply sheds of the major urban centers in Western Nigeria. The boundaries presented are based on observation and inquiry only and cannot be considered exact. However, they

Map 7.1

STAPLE FOOD SUPPLY SHEDS OF THE MAJOR URBAN CENTERS



Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1963.  
Printed by Federal Survey Nigeria 1963  
S00 189 / 3-66

do indicate the nature of the supply system for staple foods as it presently exists in the Region.

Several points about this map are worth noting. First, Ibadan faces a great deal of competition from the numerous other urban centers in the Region, so that it really only predominates in the areas to the north. This is due to the high population density axis which runs through the Region from southwest to northeast. Secondly, Ibadan is able to reach around the urban centers to the north because their demand does not absorb that area's output; and, thirdly, Ilesha and Lagos have a similar pattern of procurement, although much of the area controlled by Lagos lies outside Western Nigeria.

#### B. MAJOR SOURCES OF SUPPLY

Human and environmental factors, particularly as they relate to population density, degree of urbanization and agricultural production patterns, are the main determinants of sources of supply of foodstuffs.

An attempt has been made to locate the main sources of supply of each of the major staple food crops. The accompanying map essentially summarize the information obtained for each commodity from the field work, especially the trader surveys in Ibadan. Detailed information from the surveys is included in Appendix VII-A (pp. A-VII-1 - A-VII-21).

The maps for yam, cassava products, and maize relate specifically to the main supply areas for Ibadan, while those for rice and cowpeas show rather generally the major producing areas supplying Western Nigeria. The maps do not pretend to include all of the relevant supply areas; for the most part, only those considered to be of consistent importance over a

period of several years are included. Forest reserves are excluded. The places mentioned are those used by traders from Ibadan to purchase supplies and were obtained from the surveys conducted in Ibadan. Again, these places cannot be considered all-inclusive, merely indicative.

1. Yam

As can be seen from Map 7.2, the main areas supplying yams to Ibadan nearly all lie in the savanna zone. Oyo Division is a particularly major source of both fresh yam tubers and dried yam. Northeastern Ondo Province is important mostly for fresh yam tubers. The areas adjacent to Ibadan are not particularly important sources of yams sold in Ibadan, but must be included because of their contribution to local supplies: most farmers in the Ibadan area produce yams for subsistence purposes, the marketable surplus being relatively small.

In addition to the producing areas within the Region, imports from the contiguous part of the "Middle Belt" in Northern Nigeria, particularly Ilorin and Kabba Provinces, are important. Imports are heaviest during February-June, when Western Region yams have become scarce and before the new season yams are available. Imports from this area are not new, but they have increased considerably in recent years.



## 2. Cassava Products

Gari is produced throughout the Region. However, the major share of the supplies to Ibadan come from the adjacent producing areas. As shown in Map 7.3, this stretches up to perhaps 50 miles to the east and west and considerably less to the south. To the north, Ibadan obtains considerable supplies even from the far north of Oyo Division. Another significant source of supplies is the extreme northeastern perimeter of the Region.

The Yoruba of Western Nigeria generally prefers and processes white gari. However, the immigrant elements, especially those from Eastern and Mid-Western Nigeria, prefer gari fried with more palm oil, which gives it a yellowish appearance. This type of gari in particular is frequently obtained from Mid-Western Nigeria.

As the production of dried cassava is more dependent than gari on natural conditions, especially sunshine and humidity, the processing of cassava into its dried form is only important in the savanna areas. Consequently, these areas are the main source of supply to Ibadan. This can be seen in Map 7.3. The western part of Ibadan Division is unique in that it specializes in the production of dried cassava.

Several places of purchase of both gari and dried cassava outside the major supply areas to Ibadan are shown in Map 7.3. As these were small purchases and somewhat isolated, their exclusion was considered justified; field observations confirmed this judgment.



### 3. Maize

Again as Map 7.4 shows, the principal supply areas for Ibadan of dried maize are somewhat similar to those of the other two major staples. However, the supply area directly surrounding Ibadan is extended somewhat farther southward. The more important differences are the two major additions in the low forest zone in the southwest (Egbado Division) and northeast (Owo Division).

The area supplying Ibadan with dried maize is quite extensive, but the supply area for fresh maize is quite the reverse. Most fresh maize comes from a relatively small area surrounding Ibadan, the areas immediately adjoining Ibadan being the most important. Nevertheless, a considerable quantity of fresh maize does actually come from some of the more distant places which supply dried maize at a later point in the season.

Very little maize from outside the Region is sold in Ibadan.

Map 7.4

MAJOR SOURCES OF SUPPLY OF DRIED MAIZE TO IBADAN  
(Showing Frequently Used Places of Purchase)



Drawn by Survey Division, Ministry of Lands and Housing, Western Region, 1965  
Printed by Federal Survey, Nigeria 1965  
S/O 188-3-66

#### 4. Rice

The major sources of rice supplies to Western Nigeria are exhibited in Map 7.5. Although some rice from the upland rice producing areas of the Region, notably Egba and Ekiti Divisions, is sold in Ibadan, most of it is sold locally. As one indication of the importance of these areas, F.A.O. has estimated that the Region as a whole supplies only about 10 percent of its actual consumption of rice.<sup>2</sup>

Consequently, most of the Region's supplies are imported, principally from other parts of Nigeria. Although not generally preferred, "Tapa" rice from the flood-plains of the Niger River in Ilorin and Niger Provinces in Northern Nigeria is very important. This was particularly true in 1966-67, when an embargo was placed on supplies from Eastern Nigeria. Also of major importance are supplies from the predominantly swamp rice area forming the Onitsha-Abakaliki-Oturkpo triangle in the northern part of Eastern Nigeria and the contiguous part of Benue Province in Northern Nigeria. Two other producing areas in Nigeria also supply rice to the Region: Benue Plateau Provinces of Northern Nigeria and Benin Province of Mid-Western Nigeria.<sup>3</sup>

The remaining supplies consist of foreign imports. These come mostly from the U.S.A. and Thailand. For the Region as a whole, they account for about six percent of total supplies.



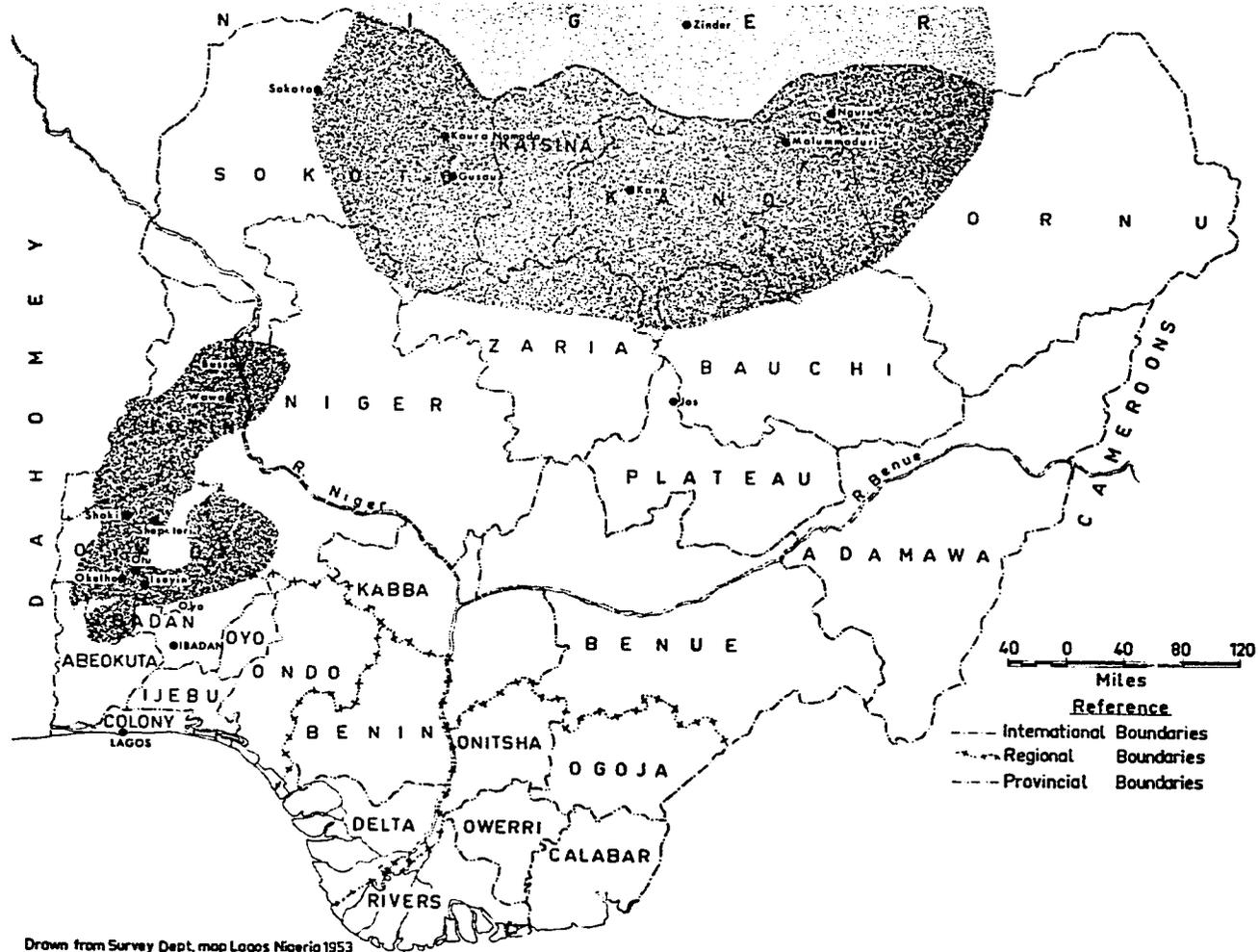
## 5. Cowpeas

The main areas supplying cowpeas to Western Nigeria are shown in Map 7.6. The Region is thought to produce about one-third of the cowpeas it consumes.<sup>4</sup> However, because of subsistence consumption, most of the cowpeas sold in the Region are imported from Northern Nigeria.

Cowpeas are principally a savanna crop, the marketable surplus within the Region coming almost entirely from Oyo Division. The remainder comes from the northern areas of Northern Nigeria. For white (black-eye) cowpeas, Kano and Sokoto Provinces are particularly important, while Plateau Province supplies most of the brown cowpeas.

Map 7.6

MAJOR SOURCES OF SUPPLY OF COWPEAS TO WESTERN NIGERIA  
(Showing Frequently Used Places of Purchase)



Drawn from Survey Dept. map Lagos Nigeria 1953

### C. FLOW OF STAPLE FOODS THROUGH EXCHANGE POINTS

Perhaps the best description of the structure of the marketing system for any commodity is provided by tracing its flow from the producer to the consumer; i.e., the place, seller, buyer, and amount of each transaction. From this description, the relative importance of each exchange point to each type of seller and buyer can be ascertained. It also indicates the average number of transactions a commodity passes through while it is in the marketing system. This gives the gross amount handled by each type of intermediary, as well as the average gross number of transactions for the commodity. Also, since traders frequently sell to other traders performing a similar function, the total (gross) amount of commodity handled by any one type of trader will be more than the total amount of the commodity controlled by that type as a whole. This gives the net amount handled by each type of intermediary as well as the average net number of transactions or levels through which the commodity passes.

In the following sections, the types of exchange points, sellers and buyers used in the description will be briefly treated, followed by estimates of the flow of marketable surplus of yam, gari and (dried) maize through the marketing system in Ibadan's major supply areas. These estimates are rather tenuous. They are based mostly on information obtained directly by the project, especially from questionnaires administered, discussions held with traders and other persons, and personal observation. The paucity of information reduces the degree of reliability. Although rather large discrete units are used (5 percent), even this degree of accuracy cannot be claimed. Because of the importance of imported supplies of both rice

and cowpeas and the almost complete lack of information about their flow through the marketing system outside of Western Nigeria, no attempt is made to describe this in any detail. Substantiating data from the questionnaires administered are presented in Appendix VII-B (pp. A-VII-22-A-VII-37).

1. Types of Exchange Points

No formal restrictions exist within the Region as to the place at which an exchange may occur. Nevertheless, because of their nature, particular types of places are conspicuously more favored as exchange points. The most important places used in the progression of the commodity from the producer to the consumer are listed and described below:

1. Outside Ibadan:

- 1.1 Farm. The point of production.
- 1.2 Roadside. A place of exchange, either on a road or path, between the point of production and the producer's village or local market. Particularly common are such locations as the intersection of a path from a village and a motor road.
- 1.3 House in village. Both producers and local assemblers may sell from their place of residence in the village, particularly when it is used for storing the commodity.
- 1.4 Rural market. A place organized specifically for the exchange of commodities in rural areas.
- 1.5 Town. Mostly markets and warehouse facilities in towns of over 10,000 inhabitants (as reported by the 1963 Census).

## 2. Ibadan:

- 2.1 Central native markets. Located in the center of the indigenous sector of Ibadan, these markets contain both wholesaling and retailing facilities.
- 2.2 Central new market. Located adjacent to the new commercial center of Ibadan, Dugbe Market has both wholesaling and retailing facilities.
- 2.3 Residential markets. Located in residential areas, these markets function almost exclusively as retail outlets.
- 2.4 Fringe markets, other. Fringe markets are located at the perimeter of Ibadan's urban sprawl and are similar to rural markets performing both assembling and retailing functions. Other marketing agents are hawkers who headload their commodity from house to house and traders who sell either from their house or have a counter, and perhaps a stall, by a road or path.

## 2. Types of Sellers

The major types of sellers involved in the movement of staple foods may be listed and described as follows:

- a. Producers. By definition, producers are the originators of all marketable surplus staple foods. Therefore, they initially handle all (100 percent) of the marketable surplus staple food exchanged.
- b. Assemblers. Assemblers are intermediaries who are predominantly resident in the producing area and who assemble the marketable surplus from producers and other assemblers. Generally they buy in small quantities,

such as by the olodo or basket, and sell in larger quantities, although these may be measured in small units at the time of sale. By definition, assemblers supplying a town, do not themselves sell from a stall in that town, though they may sell through an agent. Their major effort and contribution lies in bulking the commodity; this means that they usually sell in larger quantities than they buy in.

c. Wholesalers. Wholesalers are middlemen who have a permanent selling facility in a town and are normally resident there. They deal in large quantities and sell in bags or kerosene tins, mostly to other intermediaries. Supplies are either obtained from producers and assemblers in the producing area or delivered to the wholesaler's stall. Agents in Ibadan who sell for assemblers are classified as wholesalers; essentially, they act as if they actually hold title to the goods, and trading with them is often for their own gain.

d. Retailers. Retailers are similar in function to wholesalers, in the sense that they break down bulk quantities of the commodity into smaller parcels. However, they operate on a much smaller scale, so that any middleman selling in relatively small units to final consumers can be considered a retailer. As retailers take over where wholesalers leave off, these two types of traders are generally closely related. Retailers may be located in both urban and rural areas.

e. Prepared food sellers. Prepared food sellers prepare and sell foods for immediate consumption. These may either be consumed in the vicinity or taken away. Sales are even smaller than those of retailers, as they are usually by individual portion. In the estimates made of commodity flows they are essentially ignored.

### 3. Types of Buyers

An obvious truism is that for every seller in an act of exchange, there must be a buyer. As all intermediaries must buy to sell, the only additional type of buyer that exists is the consumer at the terminal point in the flow of the commodity. The types of buyers may be listed as follows:

- a. Assemblers
- b. Wholesalers
- c. Retailers
- d. Prepared food sellers
- e. Consumers. In the Western Nigerian context, consumers are individuals and institutions. Ignoring losses, they account for 100 percent of the consumption of the commodity marketed by producers within the Region (as well as of all imports.)

### 4. Yam

Table 7.1 indicates the estimated flow of marketable surplus yam in Ibadan's major supply areas<sup>5</sup> 35 percent of which is consumed in Ibadan 50 percent in other urban centers which procure supplies from the same supply areas, and 15 percent by consumers in rural areas.

Based on the above estimate, yam produced in Ibadan's supply area and sold through the marketing system is the object of an average of about 4 transactions between producer and consumer. However, measuring the net movement through each level of the marketing system (excluding sales to a similar type of intermediary), yam passes through an average of about 3 levels.

Table 7.1

YAM--ESTIMATED FLOW OF MARKETABLE SURPLUS IN IBADAN'S SUPPLY AREA -  
PERCENT DISTRIBUTION BY LOCATION OF EXCHANGE POINT,  
BY TYPE OF SELLER AND BY TYPE OF BUYER

| Location of Exchange Point | Type of Seller            |            |          |          |       |                            |            |          |          |       |                             |          |          |       |                           |          |       |                              |            |          |          |       |
|----------------------------|---------------------------|------------|----------|----------|-------|----------------------------|------------|----------|----------|-------|-----------------------------|----------|----------|-------|---------------------------|----------|-------|------------------------------|------------|----------|----------|-------|
|                            | Producer<br>Type of Buyer |            |          |          |       | Assembler<br>Type of Buyer |            |          |          |       | Wholesaler<br>Type of Buyer |          |          |       | Retailer<br>Type of Buyer |          |       | All Sellers<br>Type of Buyer |            |          |          |       |
|                            | Assembler                 | Wholesaler | Retailer | Consumer | Total | Assembler                  | Wholesaler | Retailer | Consumer | Total | Wholesaler                  | Retailer | Consumer | Total | Retailer                  | Consumer | Total | Assembler                    | Wholesaler | Retailer | Consumer | Total |
| <u>Outside Ibadan</u>      |                           |            |          |          |       |                            |            |          |          |       |                             |          |          |       |                           |          |       |                              |            |          |          |       |
| Farm                       | 35                        | 10         | Tr       | —        | 45    | Tr                         | Tr         | —        | —        | Tr    | —                           | —        | —        | —     | —                         | —        | —     | 35                           | 10         | Tr       | —        | 45    |
| Roadside                   | Tr                        | Tr         | Tr       | —        | Tr    | Tr                         | Tr         | Tr       | Tr       | Tr    | —                           | —        | —        | —     | —                         | Tr       | Tr    | Tr                           | Tr         | Tr       | Tr       | Tr    |
| House in village           | 5                         | Tr         | Tr       | Tr       | 5     | 5                          | Tr         | Tr       | Tr       | 10    | —                           | —        | —        | —     | —                         | Tr       | Tr    | 10                           | 5          | Tr       | Tr       | 15    |
| Rural market               | 30                        | 10         | 5        | Tr       | 45    | 25                         | 10         | 15       | Tr       | 50    | —                           | —        | —        | —     | Tr                        | 15       | 15    | 55                           | 20         | 20       | 15       | 110   |
| Town                       | —                         | 5          | Tr       | —        | 5     | —                          | 20         | Tr       | —        | 20    | 5                           | 35       | 10       | 50    | 5                         | 40       | 45    | —                            | 30         | 40       | 50       | 120   |
| <u>Ibadan</u>              |                           |            |          |          |       |                            |            |          |          |       |                             |          |          |       |                           |          |       |                              |            |          |          |       |
| Central native             | —                         | Tr         | —        | —        | Tr    | —                          | 20         | Tr       | —        | 20    | 5                           | 30       | 5        | 40    | 5                         | 20       | 25    | —                            | 25         | 35       | 25       | 85    |
| Central new                | —                         | —          | —        | —        | —     | —                          | —          | —        | —        | —     | —                           | —        | Tr       | Tr    | —                         | 5        | 5     | —                            | —          | —        | 5        | 5     |
| Residential                | —                         | —          | —        | —        | —     | —                          | —          | —        | —        | —     | —                           | —        | —        | —     | 5                         | 5        | —     | —                            | —          | —        | 5        | 5     |
| Fringe, other              | —                         | —          | Tr       | Tr       | Tr    | —                          | —          | Tr       | —        | Tr    | —                           | —        | —        | —     | Tr                        | Tr       | —     | —                            | —          | Tr       | Tr       | Tr    |
| Total - gross              | 70                        | 25         | 5        | Tr       | 100   | 30                         | 55         | 15       | Tr       | 100   | 10                          | 65       | 15       | 90    | 10                        | 85       | 95    | 100                          | 90         | 95       | 100      | 385   |
| Total - net                | 70                        | 25         | 5        | Tr       | 100   | —                          | 55         | 15       | Tr       | 70    | —                           | 65       | 15       | 80    | —                         | 85       | 85    | 70                           | 80         | 85       | 100      | 335   |

Tr = less than 5%.

Source: Stanford Research Institute.

In terms of quantity, yam sold by producers on the farm about equals yam sold in rural markets. Of minor importance is yam sold from the producer's house in the village and to or through traders in towns. Yam sold on the farm is frequently sold unharvested: the buyer must furnish the labor to harvest it and deliver it to a point of shipment or to market.

The exchange by assemblers of 20 percent of the marketable surplus yam to wholesalers located both in towns outside of Ibadan and in Ibadan indicates the proportion sold through agents by assemblers. This implies that the assemblers have delivered the yam to wholesalers located in the urban center at the time of the exchange.

#### 5. Gari

Table 7.2 presents the estimated flow of marketable surplus gari in Ibadan's major supply areas. In terms of consumption, it is estimated<sup>6</sup> that Ibadan consumes 25 percent of the marketable surplus, other urban areas 45 percent, and rural consumers 30 percent. From the point of processing, Table 7.2 shows that the marketable surplus gari undergoes about 3 transactions between processor and consumer. While some of this gari is processed by the producer's family, the majority is actually processed by women, who purchase their cassava supplies directly from producers. They usually contract to buy a certain plot of cassava or a specified number of plants, which they then harvest at their convenience. Thus, most gari passes through one more transaction than indicated in Table 7.2.

Table 7.2

GARI--ESTIMATED FLOW OF MARKETABLE SURPLUS IN IBADAN'S SUPPLY AREA -  
 PERCENT DISTRIBUTION BY LOCATION OF EXCHANGE POINT,  
 BY TYPE OF SELLER AND BY TYPE OF BUYER

| Location of Exchange Point | Processing Point | Type of Seller         |            |           |           |            |                         |            |           |           |           |                          |           |           |           |                        |           |           |                           |            |           |            |            |            |    |
|----------------------------|------------------|------------------------|------------|-----------|-----------|------------|-------------------------|------------|-----------|-----------|-----------|--------------------------|-----------|-----------|-----------|------------------------|-----------|-----------|---------------------------|------------|-----------|------------|------------|------------|----|
|                            |                  | Producer Type of Buyer |            |           |           |            | Assembler Type of Buyer |            |           |           |           | Wholesaler Type of Buyer |           |           |           | Retailer Type of Buyer |           |           | All Sellers Type of Buyer |            |           |            |            |            |    |
|                            |                  | Assembler              | Wholesaler | Retailer  | Consumer  | Total      | Assembler               | Wholesaler | Retailer  | Consumer  | Total     | Wholesaler               | Retailer  | Consumer  | Total     | Retailer               | Consumer  | Total     | Assembler                 | Wholesaler | Retailer  | Consumer   | Total      |            |    |
| <b>Outside Ibadan</b>      |                  |                        |            |           |           |            |                         |            |           |           |           |                          |           |           |           |                        |           |           |                           |            |           |            |            |            |    |
| Farm                       | 10               | 5                      | —          | Tr        | —         | 5          | —                       | —          | —         | —         | —         | —                        | —         | —         | —         | —                      | —         | —         | —                         | —          | —         | —          | —          | —          |    |
| Roadside                   | Tr               | Tr                     | —          | —         | —         | Tr         | —                       | —          | —         | —         | —         | —                        | —         | —         | —         | —                      | —         | —         | —                         | —          | —         | —          | —          | —          |    |
| House in village           | 80               | 10                     | Tr         | Tr        | 10        | 20         | Tr                      | Tr         | Tr        | Tr        | Tr        | —                        | —         | —         | —         | —                      | —         | —         | —                         | —          | —         | —          | —          | —          |    |
| Rural market               |                  | 35                     | 15         | 15        | Tr        | 65         | 20                      | 10         | 10        | Tr        | 40        | —                        | —         | —         | —         | —                      | —         | Tr        | 20                        | 20         | 10        | Tr         | Tr         | 10         | 20 |
| Town                       | 10               | —                      | —          | Tr        | 10        | 10         | —                       | 15         | Tr        | —         | 15        | Tr                       | 25        | 5         | 20        | Tr                     | 30        | 30        | —                         | 15         | 25        | 25         | 20         | 125        |    |
| <b>Ibadan</b>              |                  |                        |            |           |           |            |                         |            |           |           |           |                          |           |           |           |                        |           |           |                           |            |           |            |            |            |    |
| Central native             | —                | —                      | —          | —         | —         | —          | —                       | 15         | Tr        | —         | 15        | Tr                       | 15        | 5         | 20        | Tr                     | 10        | 10        | —                         | 15         | 15        | 15         | 15         | 45         |    |
| Central new                | —                | —                      | —          | —         | —         | —          | —                       | Tr         | —         | —         | Tr        | —                        | 5         | Tr        | 5         | —                      | 5         | 5         | —                         | Tr         | 5         | 5          | 5          | 10         |    |
| Residential                | —                | —                      | —          | —         | —         | —          | —                       | —          | Tr        | —         | Tr        | —                        | Tr        | Tr        | Tr        | —                      | 5         | 5         | —                         | —          | Tr        | 5          | 5          | 10         |    |
| Fringe, other              | Tr               | —                      | —          | Tr        | Tr        | Tr         | —                       | —          | Tr        | Tr        | Tr        | —                        | —         | —         | —         | —                      | Tr        | Tr        | —                         | —          | Tr        | 5          | 5          | 5          |    |
| <b>Total - gross</b>       | <b>100</b>       | <b>50</b>              | <b>15</b>  | <b>15</b> | <b>20</b> | <b>100</b> | <b>20</b>               | <b>40</b>  | <b>10</b> | <b>Tr</b> | <b>70</b> | <b>Tr</b>                | <b>45</b> | <b>10</b> | <b>55</b> | <b>Tr</b>              | <b>70</b> | <b>70</b> | <b>70</b>                 | <b>55</b>  | <b>70</b> | <b>100</b> | <b>100</b> | <b>295</b> |    |
| <b>Total - net</b>         | <b>100</b>       | <b>50</b>              | <b>15</b>  | <b>15</b> | <b>20</b> | <b>100</b> | <b>—</b>                | <b>40</b>  | <b>10</b> | <b>Tr</b> | <b>50</b> | <b>—</b>                 | <b>45</b> | <b>10</b> | <b>55</b> | <b>—</b>               | <b>70</b> | <b>70</b> | <b>50</b>                 | <b>55</b>  | <b>70</b> | <b>100</b> | <b>100</b> | <b>275</b> |    |

Tr = less than 5%

Source: Stanford Research Institute.

## 6. Maize

The estimated flow of marketable surplus (dried) maize in Ibadan's supply area is shown in Table 7.3;<sup>7</sup> 25 percent is consumed in Ibadan, 50 percent in urban centers outside Ibadan and 25 percent in rural areas.

Based on Table 7.3, maize passes through between 3 and 4 transactions between producer and consumer.

## 7. Rice and Cowpeas

The majority of the rice and cowpeas sold through the marketing system in Western Nigeria is imported into the Region by relatively large traders. About 67 percent of the rice and about 50 percent of the cowpea supplies are purchased in the supply area by wholesalers, while the remainder is assembled and transported by assemblers who sell to wholesalers or through agents in the towns. Except for a relatively small quantity of locally produced supplies, retailers procure their supplies directly from wholesalers in the towns, as do prepared food sellers (the latter usually in bulk).

Imported supplies of both rice and cowpeas pass through at least two levels of intermediaries--wholesalers and retailers--once they are in the Region. In the producing areas, assemblers usually link the producer to the larger trader moving the supplies in inter-regional trade. Being outside of the study area, relatively little information was obtained about the assembling process in these supply areas. However, it seems likely that imported supplies are handled by more intermediaries than are locally-produced supplies which are not bulked to the same extent.

Table 7.3

MAIZE (DRIED)--ESTIMATED FLOW OF MARKETABLE SURPLUS IN  
IBADAN'S SUPPLY AREA - PERCENT DISTRIBUTION BY LOCATION OF  
EXCHANGE POINT, BY TYPE OF SELLER AND BY TYPE OF BUYER

| Location of Exchange Point | Producer<br>Type of Buyer |            |          |          |       | Assembler<br>Type of Buyer |            |          |          |       | Wholesaler<br>Type of Buyer |          |          |       | Retailer<br>Type of Buyer |          |       | All Sellers<br>Type of Buyer |            |          |          |       |
|----------------------------|---------------------------|------------|----------|----------|-------|----------------------------|------------|----------|----------|-------|-----------------------------|----------|----------|-------|---------------------------|----------|-------|------------------------------|------------|----------|----------|-------|
|                            | Assembler                 | Wholesaler | Retailer | Consumer | Total | Assembler                  | Wholesaler | Retailer | Consumer | Total | Wholesaler                  | Retailer | Consumer | Total | Retailer                  | Consumer | Total | Assembler                    | Wholesaler | Retailer | Consumer | Total |
| <u>Outside Ibadan</u>      |                           |            |          |          |       |                            |            |          |          |       |                             |          |          |       |                           |          |       |                              |            |          |          |       |
| Farm                       | 15                        | Tr         | Tr       | —        | 15    | —                          | —          | —        | —        | —     | —                           | —        | —        | —     | —                         | —        | —     | 15                           | Tr         | Tr       | —        | 15    |
| Roadside, silo             | 5                         | Tr         | Tr       | —        | 5     | Tr                         | Tr         | Tr       | —        | Tr    | —                           | —        | —        | —     | —                         | —        | —     | 5                            | Tr         | Tr       | —        | 5     |
| House in village           | 10                        | 5          | 5        | Tr       | 20    | Tr                         | Tr         | 5        | Tr       | 5     | —                           | —        | —        | —     | Tr                        | 5        | 5     | 10                           | 5          | 10       | 5        | 30    |
| Rural market               | 35                        | 10         | 10       | Tr       | 55    | 25                         | 10         | 15       | Tr       | 50    | —                           | —        | —        | —     | Tr                        | 20       | 20    | 60                           | 20         | 25       | 20       | 125   |
| Town                       | —                         | 5          | Tr       | Tr       | 5     | —                          | 20         | Tr       | Tr       | 20    | Tr                          | 30       | 10       | 40    | Tr                        | 40       | 40    | —                            | 25         | 30       | 50       | 105   |
| <u>Ibadan</u>              |                           |            |          |          |       |                            |            |          |          |       |                             |          |          |       |                           |          |       |                              |            |          |          |       |
| Central native             | —                         | Tr         | —        | —        | Tr    | —                          | 15         | Tr       | —        | 15    | Tr                          | 20       | 5        | 25    | Tr                        | 15       | 15    | —                            | 15         | 20       | 20       | 55    |
| Central new                | —                         | —          | —        | —        | —     | —                          | Tr         | —        | —        | Tr    | —                           | Tr       | Tr       | Tr    | Tr                        | 5        | 5     | —                            | Tr         | Tr       | 5        | 5     |
| Residential                | —                         | —          | —        | —        | —     | —                          | —          | —        | —        | —     | —                           | —        | —        | —     | Tr                        | Tr       | Tr    | —                            | —          | —        | Tr       | Tr    |
| Fringe, other              | —                         | —          | Tr       | Tr       | Tr    | —                          | —          | Tr       | Tr       | Tr    | —                           | —        | —        | —     | Tr                        | Tr       | Tr    | —                            | —          | Tr       | Tr       | Tr    |
| Total - gross              | 65                        | 20         | 15       | Tr       | 100   | 25                         | 45         | 20       | Tr       | 90    | Tr                          | 50       | 15       | 65    | Tr                        | 85       | 85    | 90                           | 65         | 85       | 100      | 340   |
| Total - net                | 65                        | 20         | 15       | Tr       | 100   | —                          | 45         | 20       | Tr       | 65    | —                           | 50       | 15       | 65    | —                         | 85       | 85    | 65                           | 65         | 85       | 100      | 315   |

Tr = less than 5%.

Source: Stanford Research Institute.

In Ibadan, the central native market complex is the largest outlet for rice and cowpeas, but less so than for the other commodities. In fact, the central new market handles about 35 percent of the rice and about 45 percent of the cowpeas sold in Ibadan.

#### D. TIMING OF FLOWS

In Western Nigeria, extremely few producers sell their marketable surplus foodstuffs before harvest. Most sell the major share of their surplus in the months following the harvest, the remainder being stored by the producer for sale later in the season. The distribution of supplies throughout the year is evened to some extent by different harvest seasons in the forest and (North Guinea) savanna zones and by storage undertaken by producers.

Very little storage is undertaken by traders to capitalize on seasonal arbitrage. Mostly, traders hold stocks to insure a regular flow of transactions, the amount of each commodity being determined primarily by the level of sales, available capital, storage capacity, and procurement costs. This means, therefore, that the pattern of seasonal consumption also essentially describes the seasonal flow of commodities through all levels of the marketing system. However, storage by traders may result in a time gap between producer and consumer, which may be only a few days for locally produced commodities or as much as several months for commodities imported inter-regionally. Generally, three or four weeks elapse.

Based on data obtained from the surveys conducted and on other available sources, Table 7.4 presents an estimate of the timing of consumption of marketable surplus staple foods in Ibadan's supply area and the associated

consuming areas. The major survey results used in these estimates are included in Appendix VII-C (A-VII-38 - A-VII-44).

Table 7.4

ESTIMATED TIMING OF CONSUMPTION OF MARKETABLE SURPLUS IN IBADAN'S SUPPLY AREA--PERCENT DISTRIBUTION BY QUARTER AND BY COMMODITY

| Quarter          | Commodity |      |        |      |         |
|------------------|-----------|------|--------|------|---------|
|                  | Yam*      | Gari | Maize* | Rice | Cowpeas |
| July-September   | 40        | 25   | 35     | 25   | 15      |
| October-December | 30        | 30   | 20     | 30   | 35      |
| January-March    | 20        | 25   | 20     | 20   | 30      |
| April-June       | 10        | 20   | 25     | 25   | 20      |
| Total            | 100       | 100  | 100    | 100  | 100     |

\* Includes both fresh and dried forms.

Source: Stanford Research Institute

E. FORM OF COMMODITY

Producers seldom change the form of staple food commodities beyond that obtainable through the natural maturation of the plant. Specifically, both yam and cassava are generally sold by producers in (fresh) tuber form, maize is initially sold fresh on the cob but as it matures it is sold dried, usually shelled; rice is sold threshed but still in the hull, and cowpeas are sold in dried shelled form.

Processing occurs close to the place of production and is undertaken by a local resident specializing in processing. For example, the preparation and drying of yam and cassava and the manufacture of gari follow this pattern. Marketable surplus rice produced within the Region is usually hulled in the producing area by local assemblers, and also by a small number

of trade s from urban areas.

The movement of commodities is sufficiently specialized for traders seldom to become involved in either the processing of staple foods or its preparation for immediate consumption. Staple food traders perform primarily transportation and transference of ownership functions, the storage function being secondary. Prepared food sellers prepare and sell staple foods locally.

An estimate of the proportions in which consumers purchase the various forms of marketable surplus staple foods produced in Ibadan's supply area is shown in Table 7.5. The several forms in which each commodity is sold are listed below. With the exception of ready-to-eat foods, traders essentially handle the commodity in its natural or processed state. At the wholesale level, yam and cassava flour are usually handled in the less dried form. Maize and cowpeas are also generally handled in dried form.

Table 7.5

ESTIMATED FORM OF MARKETABLE SURPLUS COMMODITY PURCHASED BY CONSUMERS IN IBADAN'S SUPPLY AREA--PERCENT DISTRIBUTION BY FORM AND BY COMMODITY

| <u>Form</u>   | <u>Commodity</u> |                |              |             |                |
|---------------|------------------|----------------|--------------|-------------|----------------|
|               | <u>Yam</u>       | <u>Cassava</u> | <u>Maize</u> | <u>Rice</u> | <u>Cowpeas</u> |
| Fresh         | 60               | Tr             | 15           | --          | --             |
| Dried         | 25               | 5              | 10           | Tr          | 25             |
| Hulled        | --               | --             | --           | 90          | --             |
| Flour         | 5                | Tr             | --           | --          | --             |
| Gari          | --               | 85             | --           | --          | --             |
| Ready-to-eat  | <u>10</u>        | <u>10</u>      | <u>75</u>    | <u>10</u>   | <u>75</u>      |
| Total percent | 100              | 100            | 100          | 100         | 100            |

Note: Tr = trace.

Source: Stanford Research Institute

FORMS IN WHICH STAPLE FOODS ARE SOLD

| Foods   | Raw/<br>Fresh            | Dried                                     | Semi-<br>Processed         | Refined<br>End-Product                                                                                                              | Market Preparations (Ready-to-Eat)<br>By order of preference in Ibadan                                                                                                                                                                                                                                                                 |
|---------|--------------------------|-------------------------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Yam     | Fresh                    | Dried                                     | -                          | Flour                                                                                                                               | Iyan (Pounded)<br>Amala (Boiled flour)<br>Isu Sise (Boiled pieces)<br>Dundu (Fried pieces)<br>Asaro (Yam pottage)<br>Ojojo (Fried water yam)<br>Ikokore (Water yam pottage)<br>Yam Balls (Boiled, dried)<br>Epa (Koto) (Pounded, fried)                                                                                                |
| Cassava | Fresh                    | Dried                                     | -                          | Gari (grated<br>fermented<br>roasted)<br><br>Flour<br>Fufu (grated<br>fermented<br>filtered<br>and boiled)<br><br>Starch<br>Tapioca | Eba (Boiled gari)<br><br>Amala, Lafun (Boiled flour)<br>Gari (Soaked liquid gari)<br><br>Fufu<br><br>Beju (Fried gari)                                                                                                                                                                                                                 |
| Maize   | Fresh<br>ear/<br>shelled | Dried-<br>shelled                         | Ogi (Pulped<br>& Filtered) | Cornflour<br>Sekete )Li-<br>Burukutu)quid<br>fer-<br>mented<br>dried<br>maize<br>for<br>drink-<br>ing                               | Eko mimu (Boiled liquid ogi)<br>Eko tutu- (Boiled solid ogi)<br>agidi<br>Afala (Ogi lava)<br>Tuwo (Boiled Cornflour lava)<br>Agbado Sisun (Roasted ear)<br>Mosa (Fried cornflour)<br>Langbe (Boiled ear)<br>Gbugburu (Shelled roasted)<br>Adun (Roasted dried ground)<br>Sapala (Solid boiled cornflour)<br>Iyan Agidi (Pounded maize) |
| Rice    | Paddy                    | Dried-<br>threshed<br>paddy               | Hulled                     | Flour                                                                                                                               | Boiled rice<br>Tuwo (Boiled flour)<br>Rice balls<br>Jollif Rice                                                                                                                                                                                                                                                                        |
| Cowpeas | Shelled-<br>Unshelled    | Dried-<br>shelled<br>Dried-un-<br>shelled | -                          | -                                                                                                                                   | Adalu (Boiled with maize)<br>Woro (Boiled)<br>Moinmoin (Boiled flour)<br>Akara (Bean balls)<br>Ekuru (Boiled white bean flour)<br>Jogi (Boiled with melon)<br>Gbegiri (Bean soup)<br>Donboro (Ground bean lava)                                                                                                                        |

## F. TERMS OF SALE

It is customary to demand cash at the time of sale for all staple foods at all levels in the marketing system. However, some credit is extended. Table 7.6 shows the estimated percent distribution between cash and credit transactions for the marketable surplus staple foods in Ibadan's supply area for each type of seller.

Only assemblers selling through agents (usually wholesalers in urban areas) grant extensive credit and then usually only until the agent has sold the commodity. Larger wholesalers tend to sell a higher proportion of their goods on credit than smaller wholesalers. Retailers and ready-to-eat food sellers sell very infrequently on credit, except to established customers who are suffering temporary hardships. Some producers sell on credit to processors and assemblers on the understanding that as soon as the buyer has sold the commodity, he will pay the amount outstanding.

Table 7.6

ESTIMATED PERCENT DISTRIBUTION OF MARKETABLE SURPLUS STAPLE FOODS IN  
IBADAN'S SUPPLY AREA BY TYPE OF SELLER AND BY TERMS OF SALE

| <u>Type of Seller</u>     | <u>Terms of Sale</u> |               | <u>Total</u> |
|---------------------------|----------------------|---------------|--------------|
|                           | <u>Cash</u>          | <u>Credit</u> |              |
| Producers                 | 90                   | 10            | 100          |
| Processors                | 95                   | 5             | 100          |
| Assemblers                |                      |               |              |
| Selling personally        | 95                   | 5             | 100          |
| Selling through agents    | --                   | 100           | 100          |
| Wholesalers               | 80                   | 20            | 100          |
| Retailers                 | 100                  | Tr            | 100          |
| Ready-to-eat-food sellers | 100                  | Tr            | 100          |

Note: Tr = trace.

Source: Stanford Research Institute

## G. TRANSPORTATION USED

The movement of marketable surplus staple foods in Ibadan's supply area is accomplished mainly by truck. Only in the inter-regional movement of rice and cowpeas is the railway used. Here it accounted for just over 10 percent of the volume of these commodities sold in Ibadan in 1967 (Appendix Table 7.28); in more normal times the percentage is somewhat higher. Canoes and other lagoon transportation is not used to move goods to Ibadan, although it is important for foodstuffs moving to Lagos from Mid-Western Nigeria and the Niger-Benue River area. Animals, bicycles and handcarts are insignificant in all locations. Supplies are usually head-carried over relatively short distances and from the farm to other means of transportation.

The estimated relative importance of the various types of transportation in relation to the major points of sale within Ibadan's supply area is shown in Table 7.7. The importance of trucks and head-carriers is self-evident.

Table 7.7

ESTIMATED RELATIVE IMPORTANCE OF TYPE OF TRANSPORTATION IN RELATION TO LOCATION OF EXCHANGE POINT IN IBADAN'S SUPPLY AREA

| Type of<br>Transportation | Location of Exchange Point |                          |      |        |
|---------------------------|----------------------------|--------------------------|------|--------|
|                           | Farm                       | Rural Market,<br>Village | Town | Ibadan |
| Head-carrier              | A                          | A                        | A    | A      |
| Bicycle                   | C                          | C                        | C    | D      |
| Handcart                  | D                          | D                        | C    | C      |
| Truck                     | B                          | A                        | A    | A      |
| Railway                   | D                          | D                        | D    | C      |
| Bus/taxi                  | D                          | D                        | C    | C      |
| Canoe/motor boat          | D                          | D                        | D    | D      |
| Animal                    | D                          | D                        | D    | D      |

Note: A = substantial, B = significant, C = slight, D = none.

Source: Stanford Research Institute

The 3- to 7-ton covered truck with retractable canvas sides, capable of carrying both goods and passengers, is the most important form of transportation for staple foods. The smaller and more flexible "mammy wagon" is mainly used as feeder transportation, as it can usually gain access even to remote villages, often over nothing more than bush tracks. The owner of the goods or his agent will generally accompany the staple foods as they are transported to supervise the shipment and to protect it.

Human portage is very common at all levels. Men generally carry bags, while women headload such items as calabashes, baskets, and kerosene tins. One woman interviewed carried a load of over 100 pounds several times a day for a distance of about three miles, which is slightly above the average for women. Professional male headcarriers in Dugbe Market, Ibadan, charged the following rates during 1966-67 for loads carried in the market:

|             |                               |
|-------------|-------------------------------|
| Large bags  | 220-270 lbs - 9 pence per bag |
| Medium bags | 150-220 lbs - 6 pence per bag |
| Small bags  | 100-150 lbs - 4 pence per bag |

#### FOOTNOTES--CHAPTER VII

1. The supply shed of a town may be defined as the area of production over which this town has dominance. This means that this town is the main receiver of surplus food production within the resulting basin. Map 7.1 is premised on the fact that this town is only the dominant market for these surpluses and not the sole market.
2. F.A.O., Agricultural Development in Nigeria 1965-1980, Food and Agriculture Organization of the United Nations, Rome 1966, p. 394.
3. The exact importance of the Mid-Western upland rice is not known. Although several rice samples collected from retailers in Ibadan were positively identified as local Mid-Western varieties, the sellers claimed the rice was produced in Eastern Nigeria.
4. F.A.O., op. cit., p. 394.
5. Based on the estimated non-agricultural population and nonself-sufficient agricultural producers associated with or dependent upon the major supply area for Ibadan. The urban and rural populations were obtained from the 1963 Census, and the percent of agricultural producers from the 1952 Census. The areas included were Oyo and Ibadan Provinces, Owo Division, and Lagos: however, only 40 percent of the 1963 Lagos population was included because additional supply areas are used. It was assumed that all but 12 percent of the rural agricultural population in this supply area was self-sufficient in yams.
6. Estimated in the same way as yam consumption (see footnote 5 above) except that many more agricultural producers both in rural villages and urban centers (assumed here to be 33 percent), rely on the market for supplies of gari, due to the specialized processing involved.
7. Estimated in the same way as yam consumption (see footnote 5 above). However, Egbado Division was also included as a supply area, and the importance of Lagos as a consuming area was about doubled. Also, because maize is processed by specialized women, even in rural areas, it was assumed that about 25 percent of the rural agricultural population relied on the marketing system for maize supplies.

Appendix to  
Chapter **VH**

**SURVEY RESULTS  
OF FOOD  
MOVEMENTS**

## Appendix To Chapter VII

### A. SOURCES OF SUPPLY OF STAPLE FOODS TO IBADAN: SURVEY RESULTS

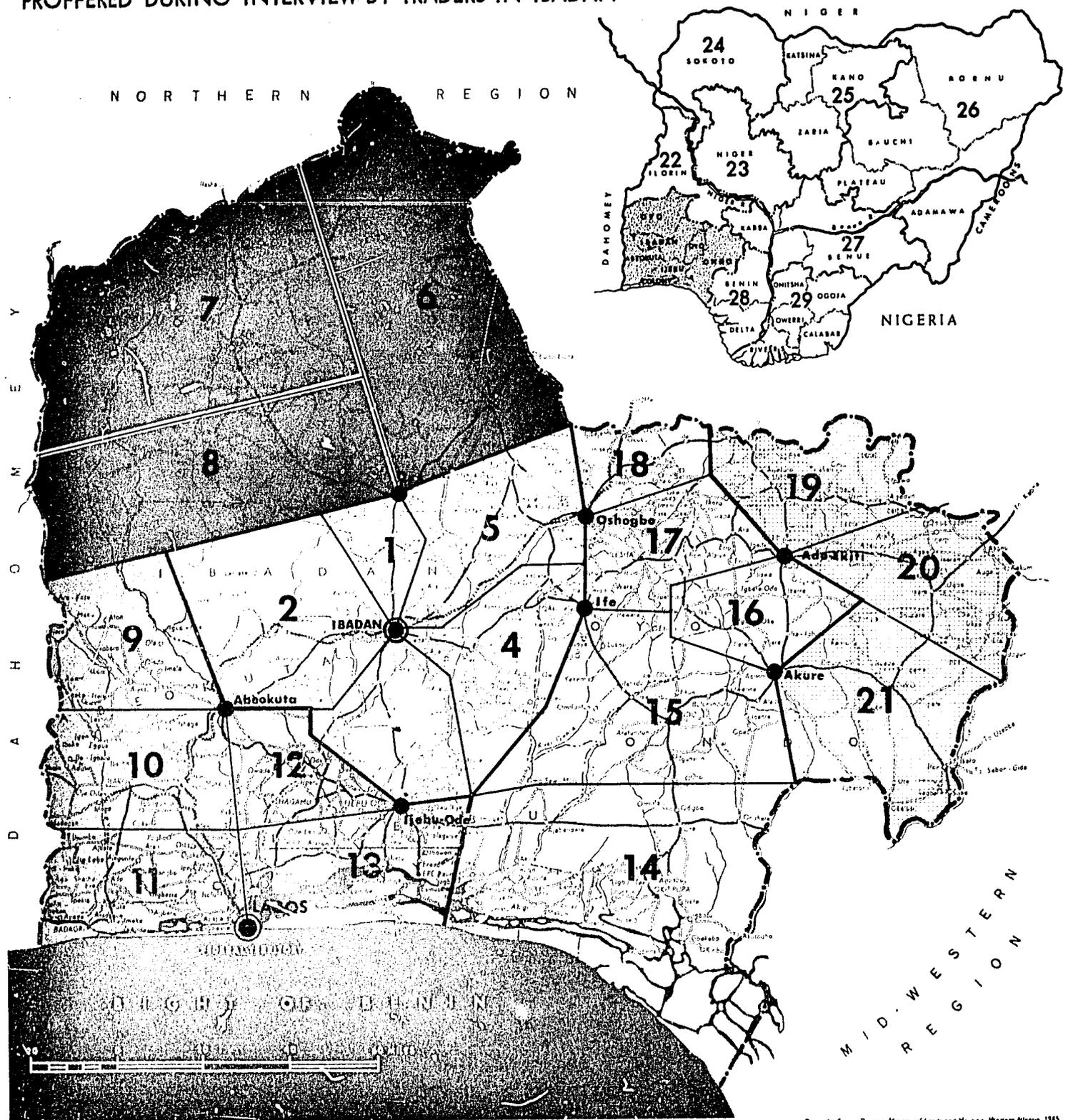
In the three surveys conducted in Ibadan and directed specifically to traders, questions were asked about the place of purchase and place of production. To make analysis of the replies easier, Nigeria was broken up into four divisions and 30 subdivisions. The divisions may be thought of as major supply zones, while the subdivisions are separately identifiable minor supply zones within these divisions which mostly surround a major road between two points. For example, the highway between Ibadan and Oyo, with its associated feeder road and track network, make up an identifiable subdivision.

The supply zones used in the presentation of data from these surveys are shown in Appendix Map 7-1. The major supply zones may be listed and characterized as follows:

- a. Surrounding Ibadan. This comprises the producing areas adjacent to Ibadan. The boundary of this zone is on a 30- to 50-mile radius from Ibadan. Its position in relation to the "first layer" of major towns surrounding Ibadan was determined mainly by connecting these towns. There are five subdivisions in this zone.
- b. Second Circle. This consists of the producing areas lying between the first and second circles of major towns surrounding Ibadan. It surrounds Ibadan and is contiguous to the first circle formed by Zone 1. This circle contains most of the other major urban centers, including the densely populated section lying on a southwest to northeast

# Appendix Map 7.1

## SUPPLY ZONES USED IN ANALYSIS OF SOURCES OF SUPPLY PROFFERED DURING INTERVIEW BY TRADERS IN IBADAN



### LEGEND

- |        |  |                    |
|--------|--|--------------------|
| ZONE 1 |  | SURROUNDING IBADAN |
| ZONE 2 |  | } SECOND CIRCLE    |
|        |  |                    |
|        |  |                    |
| ZONE 3 |  | THIRD CIRCLE       |

Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1965.  
 Corrected by Federal Survey Nigeria 1965.  
 S20 100 1 55

axis across the Region. Consequently, most of the area is unimportant as a source of staple foods for Ibadan. The exception to this is the more sparsely settled savanna zone in the northwest of the Region, essentially Oyo Division. This zone has been subdivided into 13 minor zones, which in turn have been combined into three distinctly different groups.

- c. Third Circle. Ideally, this should have been drawn as a complete ring surrounding Ibadan so as to include the producing areas on the outside of the second circle of major urban centers with an outer perimeter coinciding with the outer rim of the low density belt surrounding the high-density population core of the Region. However, only a small part of this area falls within Western Nigeria. It is this area that forms the third circle in this analysis. Three subdivisions were identified in this zone.
- d. Outside Western Nigeria. This includes all producing areas outside the Region. Much of this zone belongs more logically to the third zone, but is outside the political boundary of this project. The area was broken down by region, the North being further subdivided into six areas composed either of single provinces or groups of provinces. Supply areas outside Nigeria are also treated as a separate sub-zone.

Using this analytical framework, the results of the three surveys conducted in Ibadan with traders will now be presented in the sequence in which they were made.

1. Market Traders Questionnaire #1 - June-August 1966

Retail traders generally purchase their supplies from wholesalers in Ibadan. As a result, their knowledge of actual sources of supply is, at a minimum, second-hand. Although some retailers had precise knowledge of the place of production, most only had a vague idea. It was decided to exclude from the analysis those traders who purchased the commodity outside of the area of production, since their inclusion might lead to a duplication. This almost invariably means the exclusion of traders who procured their supplies in Ibadan.

An additional 24 questionnaires which were administered in early August 1966 after the other 264 had been prepared for computer processing were also included in this analysis. In all, 210, or 73 percent of the traders interviewed, were found to purchase at least some supplies in the actual producing area. The information on quantities purchased per month was in two parts: first, the quantity of the commodity usually obtained on each purchase (in the local measures); and second, the frequency with which supplies are usually procured.

The number of traders included and quantities purchased by commodity are shown in Appendix Table 7.1.

The percent of the total quantity of each commodity purchased in each of the supply subdivisions (see Appendix Map 7.1) is listed in Appendix Table 7.2. This information is shown graphically for Western Nigeria in Appendix Map 7.2.

Appendix Table 7.1

NUMBER OF TRADERS AND QUANTITY USUALLY PURCHASED  
PER MONTH IN THE AREA OF PRODUCTION BY COMMODITY--  
MARKET TRADERS QUESTIONNAIRE #1--IBADAN-JUNE-AUGUST 1966

| <u>Commodity</u> | <u>Number<br/>of<br/>Traders</u> | <u>Quantity Purchased per Month</u> |                      |                                        |
|------------------|----------------------------------|-------------------------------------|----------------------|----------------------------------------|
|                  |                                  | <u>In Local<br/>Measure*</u>        | <u>Long<br/>Tons</u> | <u>Percent of<br/>Sample<br/>Total</u> |
| Yam              | 33                               | 1,623                               | 325                  | 30                                     |
| Gari             | 108                              | 2,940                               | 262                  | 24                                     |
| Maize            | 56                               | 1,768                               | 190                  | 17                                     |
| Rice             | 18                               | 346                                 | 34                   | 3                                      |
| Cowpeas          | <u>90</u>                        | <u>2,852</u>                        | <u>283</u>           | <u>26</u>                              |
| Total            | <u>210<sup>+</sup></u>           |                                     | <u>1,094</u>         | <u>100</u>                             |

\* Local measures and estimated weights used to convert into long tons (2240 lbs.) are:

|             |            |          |
|-------------|------------|----------|
| Yam         | 100 tubers | 448 lbs. |
| Gari        | bags       | 200 lbs. |
| Maize       | bags       | 240 lbs. |
| Rice--local | bags       | 240 lbs. |
| --imported  | bags       | 100 lbs. |
| Cowpeas     | bags       | 210 lbs. |

+ Column adds to more than 210 because some traders purchased more than one commodity in the area of production.

Appendix Table 7.2

PERCENT OF TOTAL QUANTITY OF COMMODITY PURCHASED IN THE  
AREA OF PRODUCTION BY SUPPLY ZONE AND BY COMMODITY--MARKET  
TRADERS QUESTIONNAIRE #1--IBADAN-JUNE-AUGUST 1966

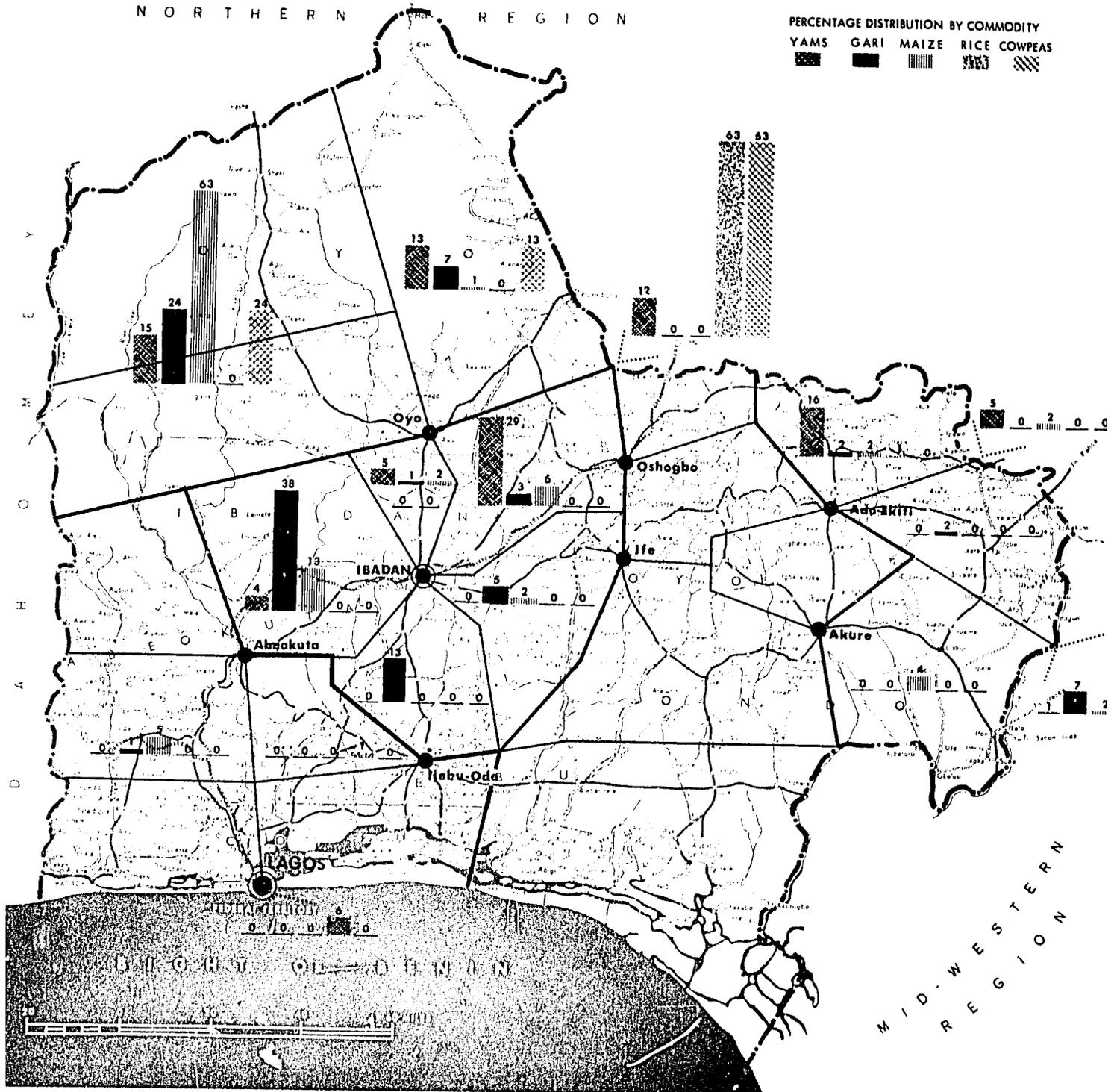
| Supply Zones         | Commodity  |            |            |            |            |
|----------------------|------------|------------|------------|------------|------------|
|                      | Yam        | Gari       | Maize      | Rice       | Cowpeas    |
| I Surrounding Ibadan | -- 38      | -- 59+     | -- 23      | -- 0       | -- 0       |
| 1.                   | 5          | 1          | 2          |            |            |
| 2.                   | 4          | 38         | 13         |            |            |
| 3.                   |            | 13         |            |            |            |
| 4.                   |            | 5          | 2          |            |            |
| 5.                   | 29         | 3          | 6          |            |            |
| II Second Circle     | -- 28      | -- 31+     | -- 63      | -- 1       | -- 37      |
| A. North             |            |            |            |            |            |
| 6.                   | 13         | 7          | *          |            | 13         |
| 7.                   | 15         | 24         | 63         |            | 24         |
| 8.                   |            |            |            |            |            |
| B. South-west        |            |            |            |            |            |
| 9.                   |            |            |            |            |            |
| 10.                  |            | 1          | 5          |            |            |
| 11.                  |            |            |            |            |            |
| 12.                  |            |            |            | 1          |            |
| 13.                  |            |            |            |            |            |
| C. East              |            |            |            |            |            |
| 14.                  |            |            |            |            |            |
| 15.                  |            |            |            |            |            |
| 16.                  |            |            |            |            |            |
| 17.                  |            |            |            |            |            |
| 18.                  |            |            |            |            |            |
| III Third Circle     | -- 16      | -- 3+      | -- 5+      | -- 1       |            |
| 19.                  | 16         | 2          | 2          | 1          |            |
| 20.                  |            | 2          |            |            |            |
| 21.                  |            |            | 4          |            |            |
| IV Outside Region    | -- 18      | -- 7       | -- 4       | -- 98      | -- 63      |
| A. North             |            |            |            |            |            |
| 22.                  | 4          |            |            |            | 3          |
| 23.                  | 8          |            |            | 63         | 2          |
| 24.                  |            |            |            |            | 32         |
| 25.                  |            |            |            |            | 24         |
| 26.                  |            |            |            |            | 2          |
| 27.                  | 5          |            | 2          |            |            |
| B. Mid-West          |            |            |            |            |            |
| 28.                  |            | 7          | 2          |            |            |
| C. East              |            |            |            |            |            |
| 29.                  | 1          |            |            | 29         |            |
| D. Imports           |            |            |            |            |            |
| 30.                  |            |            |            | 6          |            |
| Total                | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> |

+ Rounding error

\* Less than 0.5 percent

Appendix Map 7.2

SOURCES OF SUPPLY OF STAPLE FOOD TO IBADAN JUNE-AUGUST 1966  
(Percent of Total Quantity of Usual Monthly Purchases of Each Commodity)



SOURCE: MARKET TRADERS QUESTIONNAIRE NO. 1

Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1965  
Printed by Federal Survey Nigeria, 1965  
SVC 168 3.45

Mention should be made of the 18 percent of yams that were imported into the Region. These were observed during June 1966 just prior to the availability of new season yams. A considerable quantity of early season yams from the Ekiti area (supply zone 19) was observed during July 1966 particularly. The large quantity (29 percent) from the area just northeast of Ibadan also reflects mostly early season yams; the main yam harvest in the savanna areas occurs somewhat later.

## 2. Market Traders Questionnaire #2 - August-September 1966

The questions about quantities sold per month were asked very directly in this survey, as there was a strong suspicion that a general upward bias had occurred in the Market Traders Questionnaire #1, in which the question has been put in terms of usual quantity and frequency of purchases. The results of the survey confirmed this suspicion. Although 11 percent fewer traders were included (256 compared with 288), the quantity purchased in the area of production was 59 percent less. Even allowing for the fact that a higher percentage of the traders purchased their supplies in Ibadan would only reduce this discrepancy slightly.

Appendix Table 7.3 shows the total quantity sold per month of each commodity purchased either in Ibadan or in the area of production. As can be seen, the supplies purchased outside Ibadan were the most important (69 to 87 percent of the total of each commodity) for all commodities included in the survey with the exception of rice (only 41 percent of the total).

As in the Market Traders Questionnaire #1, the analysis of source of supply is based on purchases made in the area of production. The percentage of the total quantity of each commodity purchased in each supply area can

Appendix Table 7.3

QUANTITY SOLD PER MONTH BY COMMODITY AND BY LOCATION OF  
PURCHASE --MARKET TRADERS QUESTIONNAIRE #2-IBADAN-AUGUST-SEPTEMBER 1966

| <u>Commodity</u> | <u>Location of Purchase</u> |                                               |                              |                  |                        |
|------------------|-----------------------------|-----------------------------------------------|------------------------------|------------------|------------------------|
|                  | <u>In Ibadan</u>            |                                               | <u>In Area of Production</u> |                  |                        |
|                  | <u>In Local Measure*</u>    | <u>As Percent of Total Sales of Commodity</u> | <u>In Local Measure*</u>     | <u>Long Tons</u> | <u>Percent</u>         |
| Yam              | 153                         | 21                                            | 574                          | 115              | 26                     |
| Gari             | 369                         | 31                                            | 832                          | 74               | 16                     |
| Maize            | 238                         | 13                                            | 1621                         | 174              | 39                     |
| Rice             | 213                         | 59                                            | 147                          | 16               | 4                      |
| Cowpeas          | <u>279</u>                  | <u>27</u>                                     | <u>760</u>                   | <u>71</u>        | <u>16</u>              |
| Total            |                             |                                               |                              | <u>450</u>       | <u>101<sup>+</sup></u> |

\* Local measures and estimated weights used to convert into long tons (2240 lbs.) are:

|         |            |          |
|---------|------------|----------|
| Yam     | 100 tubers | 448 lbs. |
| Gari    | bags       | 200 lbs. |
| Maize   | bags       | 240 lbs. |
| Rice    | bags       | 240 lbs. |
| Cowpeas | bags       | 210 lbs. |

+ Rounding error.

be seen in Appendix Table 7.4, and the results are presented graphically for the Western Region in Appendix Map 7.3

Several points of explanation and comparison with the Market Traders Questionnaire #1 should be made.

1. Yam has about the same overall importance in terms of quantity. However, the main harvesting areas of new season yams is the savanna zone which was found to be supplying most of Ibadan's yams.
2. Gari has diminished in overall importance (from 24 to 16 percent of the total quantity). The main sources of supply also differed between surveys, the producing areas surrounding Ibadan decreasing in importance from 59 to 22 percent. Although the proportion of supplies from the area in the second circle north of Ibadan increased by 11 percent, the biggest increase was in the areas to the extreme east of the Region, in Owo Division (Zone 20) and Mid-Western Nigeria (Zone 28). Most of the production were white gari; only four percent of gari sampled was yellow.

However, the analysis of the quantities reported by all traders for the areas of production irrespective of place of purchase gives a somewhat different picture. The areas surrounding Ibadan gained 10 percent in relative importance (to 33 percent), although this is still below the value obtained in the first survey. The importance of the areas in the extreme east decreased commensurately (to 12 percent each for Owo Division and Mid-Western Nigeria).

Appendix Table 7.4

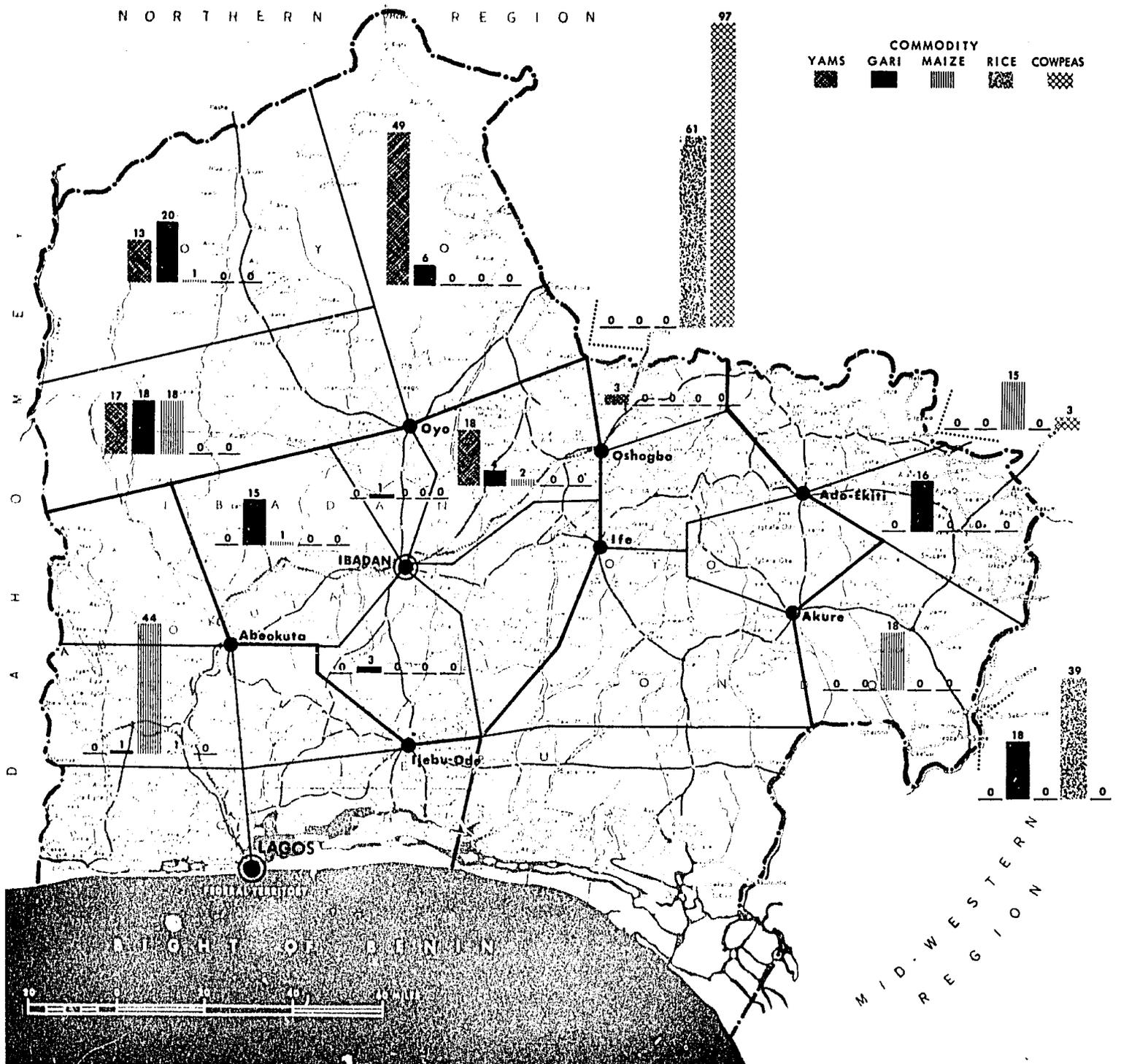
PERCENT OF TOTAL QUANTITY OF COMMODITY PURCHASED IN THE  
AREA OF PRODUCTION BY SUPPLY ZONE AND BY COMMODITY--MARKET  
TRADERS QUESTIONNAIRE #2--IBADAN-AUGUST-SEPTEMBER 1966

| Supply Zones         | Commodity  |            |            |            |            |
|----------------------|------------|------------|------------|------------|------------|
|                      | Yam        | Gari       | Maize      | Rice       | Cowpeas    |
| I Surrounding Ibadan | -- 18      | -- 22      | -- 3       | -- 0       | -- 0       |
| 1.                   |            | 1          |            |            |            |
| 2.                   |            | 15         | 1          |            |            |
| 3.                   |            | 2          |            |            |            |
| 4.                   |            |            |            |            |            |
| 5.                   | 18         | 4          | 2          |            |            |
| II Second Circle     | -- 82+     | -- 44+     | -- 64+     | -- 1       | -- 0       |
| A. North             |            |            |            |            |            |
| 6.                   | 49         | 6          |            |            |            |
| 7.                   | 13         | 20         | 1          |            |            |
| 8.                   | 17         | 18         | 18         |            |            |
| B. South-west        |            |            |            |            |            |
| 9.                   |            |            |            |            |            |
| 10.                  |            | 1          | 44         | 1          |            |
| 11.                  |            |            |            |            |            |
| 12.                  |            |            |            |            |            |
| 13.                  |            |            |            |            |            |
| C. East              |            |            |            |            |            |
| 14.                  |            |            |            |            |            |
| 15.                  |            |            |            |            |            |
| 16.                  |            |            |            |            |            |
| 17.                  |            |            |            |            |            |
| 18.                  | 2          |            |            |            |            |
| III Third Circle     | -- 0       | -- 16      | -- 18      | -- 0       | -- 0       |
| 19.                  |            |            |            |            |            |
| 20.                  |            | 16         |            |            |            |
| 21.                  |            |            | 18         |            |            |
| IV Outside Region    | -- 0       | -- 18      | -- 15      | -- 99      | -- 100     |
| A. North             |            |            |            |            |            |
| 22.                  |            |            |            |            |            |
| 23.                  |            |            |            | 60         |            |
| 24.                  |            |            |            |            | 56         |
| 25.                  |            |            |            |            | 30         |
| 26.                  |            |            |            |            | 11         |
| 27.                  |            |            | 15         |            | 3          |
| B. Mid-west          |            |            |            |            |            |
| 28.                  |            | 18         |            |            |            |
| C. East              |            |            |            |            |            |
| 29.                  |            |            |            | 39         |            |
| D. Imports           |            |            |            |            |            |
| 30.                  |            |            |            |            |            |
| Total                | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> |

+ Rounding Error

Appendix Map 7.3

SOURCES OF SUPPLY OF STAPLE FOODS TO IBADAN AUGUST-SEPTEMBER 1966  
(Percent of Total Quantity of Actual Monthly Sales of Each Commodity)



SOURCE: MARKET TRADERS QUESTIONNAIRE No. 2

Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1965  
From the Federal Survey, Nigeria, 1961  
S/C 186 1-55

3. Dried Shelled maize more than doubled in relative importance (from 17 to 39 percent) to become the most important commodity included. The survey was taken at a time when dried shelled maize supplies from the early maize season were at their peak. Once again, the major supply areas shifted away from the areas surrounding Ibadan (falling from 23 to 3 percent of the total). Very large increases occurred in supplies from Egbado Division (Zone 10--up 39 percent), Owo Division (Zone 20--up 14 percent) and Kabba Province in Northern Nigeria (Zone 27--up 13 percent). Supplies of maize from Oyo Division (Zones 6 to 8), however, fell by about 44 percent.
4. Rice was again comparatively small in absolute and relative importance. Although Northern rice remained dominant, Eastern rice became slightly more important. Analyzing the quantities sold and the places of production given by all traders in the sample yields a significantly different pattern of supply. The producing area in Abeokuta Province now becomes considerably more important, with 9 percent of the total (7 percent in Zone 10 and two percent in Zone 12). Imports also account for a surprising 17 percent, while Northern rice (from Zone 23) fell 24 percent, to account for only 37 percent of the sample total; this about equals Eastern rice.
5. Cowpeas decreased in importance from 26 to 16 percent. A major shift of supply occurred, as all cowpeas were imported into the Region from the North in the second survey, whereas 37 percent was found to come from Oyo Division (Zones 6-8) only a few months earlier.

### 3. Wholesale Traders Questionnaire - February-May 1967

This survey included most of the important procurers of staple foods exchanged in Ibadan. In comparison with the other two trader surveys in Ibadan, the coverage was certainly the most comprehensive and the results the most reliable. In addition to the five commodities included previously, dried yam and dried cassava were included. This was necessary, as the survey coincided with the dry season, when both of these commodities are considerably more important.

The question about quantities sold per month was asked in terms of both usual and actual sales. In order to obtain some indication of the possible upward bias that had occurred in the Market Traders Questionnaire #1, normal sales per month were calculated as a percent of actual sales per month--both as reported by the trader. The results of this are presented by commodity in Appendix Table 7.5. As can be seen, only 10 percent of the sample gave normal sales as being less than actual sales, while 58 percent responded with normal sales at least double their actual sales.

Actual sales were analyzed by quantity and value both for place of production and place of purchase. As can be seen from Appendix Table 7.6, except for a relatively small quantity of dried cassava, rice and cowpeas, wholesalers obtain their supplies in the producing areas. Again, to avoid duplication and error in the place of production, only the commodity actually purchased in or received from the area of production is used in the analysis of supply areas.

Appendix Table 7.5

PERCENT DISTRIBUTION OF REPORTED USUAL SALES AS PERCENT OFF  
ACTUAL SALES PER MONTH BY COMMODITY--WHOLESALE TRADERS  
QUESTIONNAIRE--IBADAN-FEBRUARY-MAY 1967

| Reported<br>Usual Sales<br>As Percent of<br>Actual Sales | Dried     |          | Dried     |          | Maize    | Rice      | Cow-<br>peas | Total    |
|----------------------------------------------------------|-----------|----------|-----------|----------|----------|-----------|--------------|----------|
|                                                          | Yam       | Yam      | Gari      | Cassava  |          |           |              |          |
| Under 50                                                 | --        | 1        | 1         | 1        | 1        | 2         | 2            | 1        |
| 50 & under 100                                           | 8         | 10       | 9         | 6        | 6        | 18        | 11           | 9        |
| 100 & under 150                                          | 8         | 11       | 25        | 11       | 11       | 29        | 23           | 17       |
| 150 & under 200                                          | 15        | 19       | 12        | 17       | 14       | 9         | 15           | 15       |
| 200 & under 300                                          | 23        | 33       | 35        | 34       | 43       | 31        | 30           | 34       |
| 300 & under 500                                          | 15        | 20       | 14        | 21       | 19       | 7         | 11           | 16       |
| 500 & under 1,000                                        | 15        | 6        | 5         | 7        | 4        | 4         | 6            | 6        |
| 1,000 & over.                                            | <u>15</u> | <u>1</u> | <u>--</u> | <u>3</u> | <u>3</u> | <u>--</u> | <u>2</u>     | <u>2</u> |
| Total                                                    | 99*       | 101*     | 101*      | 100      | 101*     | 100       | 100          | 100      |
| Number of responses                                      | 13        | 126      | 147       | 110      | 143      | 55        | 144          | 738      |

\* Rounding error.

Appendix Table 7.6

QUANTITY AND VALUE OF SALES PER MONTH BY COMMODITY  
AND BY LOCATION OF PURCHASE--WHOLESALE TRADERS QUESTIONNAIRE--IBADAN-FEBRUARY-MAY 1967

| Commodity     | Location of Purchase |                                        |                       |           |         |       |         |
|---------------|----------------------|----------------------------------------|-----------------------|-----------|---------|-------|---------|
|               | In Ibadan            |                                        | In Area of Production |           |         |       |         |
|               | Quantity             |                                        | Quantity              |           |         | Value |         |
|               | In Local Measure*    | As Percent of Total Sales of Commodity | In Local Measure*     | Long Tons | Percent | '000  | Percent |
| Yam           |                      |                                        | 322                   | 64        | 3       | 2.1   | 2       |
| Dried Yam     |                      |                                        | 3,356                 | 225       | 10      | 15.5  | 15      |
| Gari          |                      |                                        | 4,100                 | 366       | 16      | 13.9  | 14      |
| Dried Cassava | 38                   | 1                                      | 2,809                 | 201       | 9       | 4.9   | 5       |
| Maize         |                      |                                        | 4,592                 | 492       | 22      | 12.8  | 13      |
| Rice          | 84                   | 4                                      | 1,867                 | 200       | 9       | 17.2  | 17      |
| Cowpeas       | 499                  | 6                                      | 7,416                 | 695       | 31      | 34.4  | 34      |
| Total         |                      |                                        |                       | 2,243     | 100     | 100.8 | 100     |

\* Local measures and estimated weights used to convert into long tons (2240 lbs.) are:

|               |            |          |          |     |          |
|---------------|------------|----------|----------|-----|----------|
| Yam           | 100 tubers | 448 lbs. | Maize    | bag | 240 lbs. |
| Dried Yam     | bags       | 150 lbs. | Rice     | bag | 240 lbs. |
| Gari          | bags       | 200 lbs. | Cow peas | bag | 210 lbs. |
| Dried Cassava | bag        | 160 lbs. |          |     |          |

An indication of the relative importance of the various staple foods in the wholesale trade in Ibadan is given in Appendix Table 7.6. Because the commodities involved in inter-regional trade almost invariably pass through a wholesaler, rice and cowpeas in particular assume a disproportionate importance in this sample (together 40 percent by quantity, and 51 percent by value). On the other hand, much of what is produced within the first and second circles surrounding Ibadan and sold in Ibadan is actually purchased in or received from these producing areas by small traders, mostly selling as retail-wholesalers, many of whom were not included in this survey. As a result, it is felt that a bias occurred in the survey against the commodities and quantities produced in the areas surrounding Ibadan in favor of those coming from further away.

The supply zones used by the wholesalers in the survey and the relative importance of each subdivision as a source of supply for each commodity, based on the actual value of sales for the month preceding the interview, is shown in Appendix Table 7.7. This information is presented graphically for Western Nigeria in Appendix Map 7.4.

As the analysis of sources of supply is in value rather than quantity terms, the relative overall importance of each supply zone can also be presented. This is shown in the total column in Appendix Table 7.7 and visually in Appendix Map 7.5.

In terms of season, this survey was in direct contrast to the other two surveys. The contrast provides valuable seasonal information.

1. Fresh yams have obviously taken second place to dried yams, although this may be overstated to some extent in the survey

Appendix Table 7.7

PERCENT OF TOTAL VALUE OF COMMODITY PURCHASED  
IN THE AREA OF PRODUCTION BY SUPPLY  
ZONE AND BY COMMODITY--WHOLESALE TRADERS  
QUESTIONNAIRE--IBADAN-FEBRUARY-MAY 1967

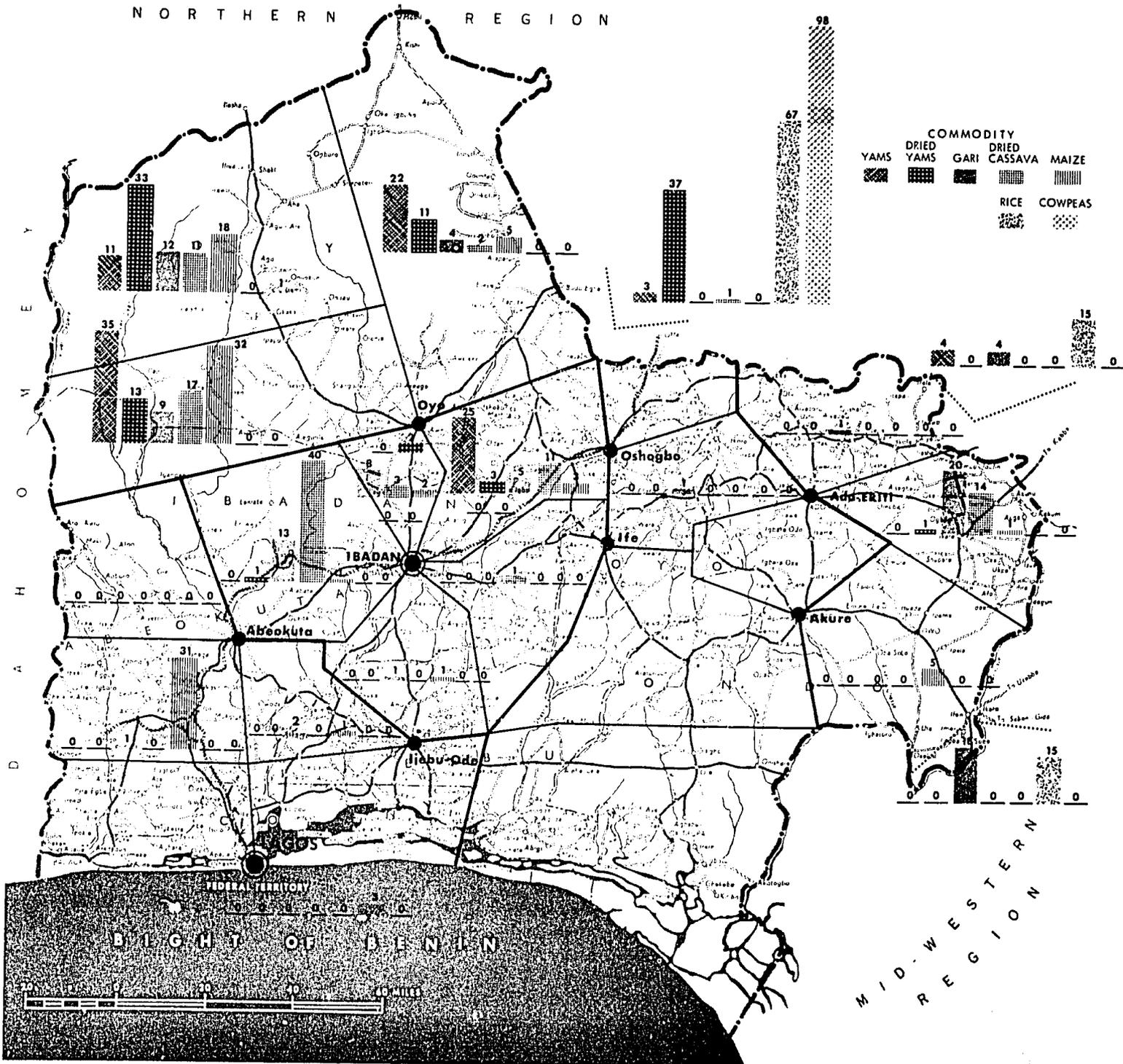
| Supply Zone          | Commodity  |            |            |               |            |            |            | Cow-peas   | Total |
|----------------------|------------|------------|------------|---------------|------------|------------|------------|------------|-------|
|                      | Yam        | Dried Yam  | Gari       | Dried Cassava | Maize      | Rice       |            |            |       |
| I Surrounding Ibadan | -- 29      | -- 5       | -- 26      | -- 54         | -- 7       | -- 0       | -- +       | -- 9       |       |
| 1.                   |            | 2          | 7          | 3             | 2          |            | +          | 2          |       |
| 2.                   |            | 1          | 14         | 38            | 1          |            | +          | 4          |       |
| 3.                   |            |            | 1          |               | 1          |            |            | +          |       |
| 4.                   |            |            |            | 1             |            |            |            | +          |       |
| 5.                   | 29         | 2          | 4          | 12            | 3          |            | +          | 3          |       |
| II Second Circle     | -- 64      | -- 55      | -- 27      | -- 29         | -- 87      | -- 0       | -- 2       | -- 26      |       |
| A. North             |            |            |            |               |            |            |            |            |       |
| 6.                   | 24         | 11         | 4          | 2             | 6          |            |            | 4          |       |
| 7.                   | 13         | 32         | 11         | 9             | 17         |            | 1          | 10         |       |
| 8.                   | 27         | 12         | 8          | 18            | 31         |            | +          | 8          |       |
| B. South-west        |            |            |            |               |            |            |            |            |       |
| 9.                   |            |            |            |               |            |            |            |            |       |
| 10.                  |            |            | 1          |               | 32         |            |            | 4          |       |
| 11.                  |            |            |            |               |            |            |            |            |       |
| 12.                  |            |            | 2          |               | 1          |            |            | +          |       |
| 13.                  |            |            |            |               |            |            |            |            |       |
| C. East              |            |            |            |               |            |            |            |            |       |
| 14.                  |            |            |            |               |            |            |            |            |       |
| 15.                  |            |            |            |               |            |            |            |            |       |
| 16.                  |            |            |            |               |            |            |            |            |       |
| 17.                  |            |            | 1          |               |            |            |            | +          |       |
| 18.                  |            |            |            |               |            |            |            |            |       |
| III Third Circle     | -- 0       | -- 1       | -- 21      | -- 16         | -- 6       | -- 0       | -- 0       | -- 5       |       |
| 19.                  |            |            | 1          |               |            |            |            | +          |       |
| 20.                  |            | 1          | 20         | 16            | 1          |            |            | 4          |       |
| 21.                  |            |            | +          |               | 5          |            |            | 1          |       |
| IV Outside Region    | -- 7       | -- 39      | -- 25      | -- 1          | -- 0       | -- 100     | -- 98      | -- 60      |       |
| A. North             |            |            |            |               |            |            |            |            |       |
| 22.                  |            | 39         |            | 1             |            | 9          |            | 7          |       |
| 23.                  | 3          |            |            |               |            | 49         |            | 8          |       |
| 24.                  |            |            |            |               |            |            | 18         | 6          |       |
| 25.                  |            |            |            |               |            | 1          | 69         | 24         |       |
| 26.                  |            |            |            |               |            | 7          | 11         | 5          |       |
| 27.                  | 4          |            | 3          |               |            | 17         |            | 4          |       |
| B. Mid-west          |            |            |            |               |            |            |            |            |       |
| 28.                  |            |            | 22         |               |            |            |            | 3          |       |
| C. East              |            |            |            |               |            |            |            |            |       |
| 29.                  |            |            |            |               |            | 17         |            | 3          |       |
| D. Imports           |            |            |            |               |            |            |            |            |       |
| 30.                  |            |            |            |               |            |            |            |            |       |
| Total                | <u>100</u> | <u>100</u> | <u>99*</u> | <u>100</u>    | <u>100</u> | <u>100</u> | <u>100</u> | <u>100</u> |       |

+ Less than 0.5 percent

\* Rounding error

Appendix Map 7.4

SOURCES OF SUPPLY OF STAPLE FOODS TO IBADAN FEBRUARY-MAY 1967  
(Percent of Total Value of Actual Monthly Sales of Each Commodity)

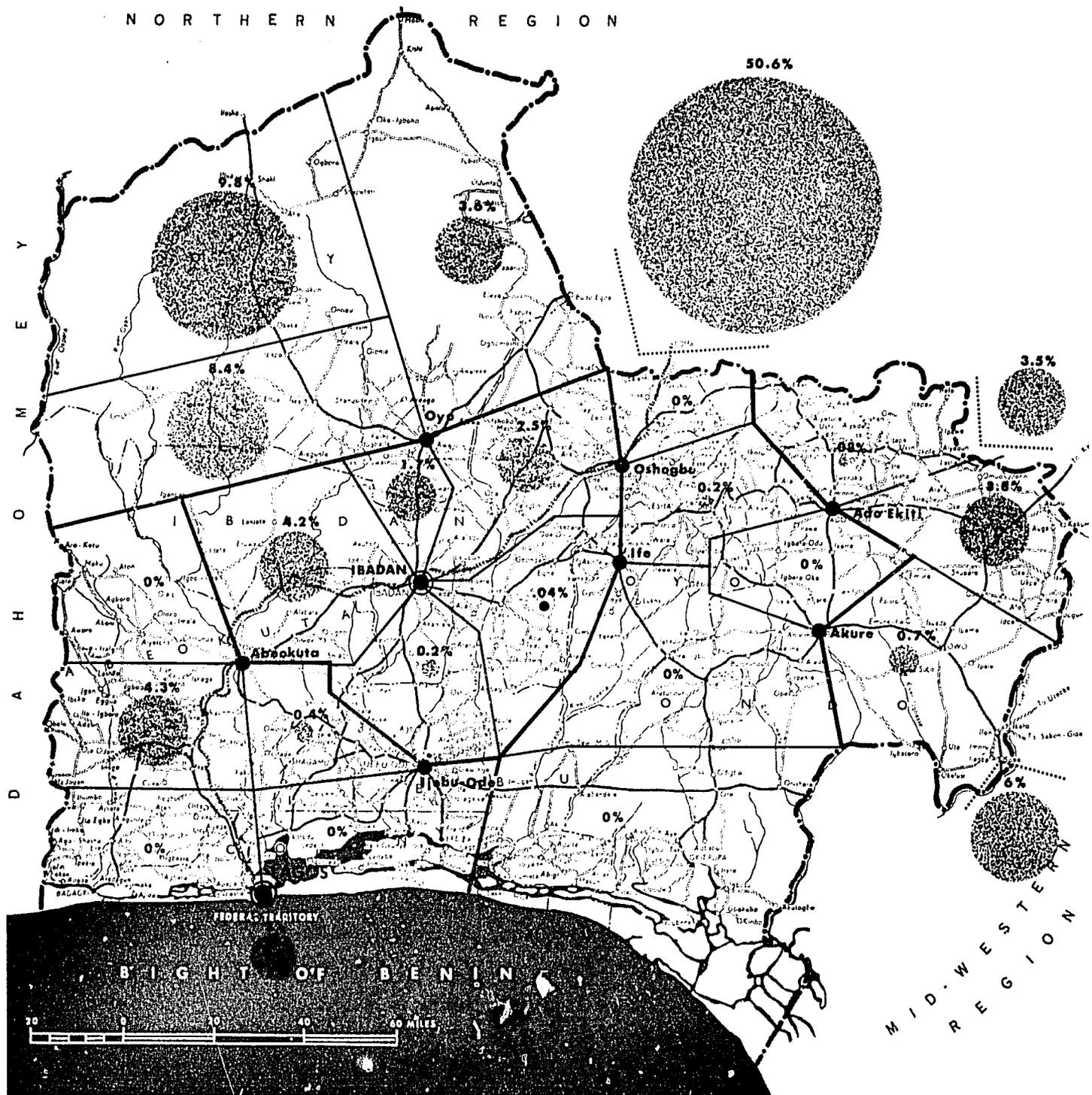


SOURCE: WHOLESALE TRADERS QUESTIONNAIRE

Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1968.  
Photos by Federal Survey, Nigeria 1965  
NO 188 3-65

Appendix Map 7.5

SOURCES OF SUPPLY OF STAPLE FOODS TO IBADAN FEBRUARY-MAY 1967  
(Percent of Total Value of Actual Monthly Sales of All Commodities)



Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1965  
Approved by Federal Survey Nigeria, 1965  
500-162-3-65

results. For fresh yams, Northern sources are beginning to be important again, although their main season occurred after the end of the survey period.

2. It is interesting to note the exact source of dried yam supplies, which is principally the more distant areas to the north of Ibadan. For example, in the three supply zones in Oyo Division (Zones 6 to 8), less fresh yam is produced in the farthestmost zone (Zone 7), which is most important as a source of dried yam.
3. The source of gari supplies has tended to shift away from the areas close to Ibadan.
4. Dried cassava, although fairly negligible overall, is very important in the western part of Ibadan Division (Zone 2).
5. Maize was still important in both quantity and value. The climate in Oyo Division is more suitable for the storage of maize than elsewhere in the Region, so it is now the most important supply area. Very little maize comes from the area around Ibadan.
6. The embargo on rice supplies from Eastern Nigeria was apparently more effective. Although 17 percent of supplies were said by traders to come from the East, probably part of these supplies was actually produced in the swamplands which continue into the North from the East. It should be mentioned that two percent of the rice sold was imported rice purchased in Ibadan.
7. For cowpeas, Kano and Katsina Provinces in Northern Nigeria (Zone 25) replaced Sokoto Province (Zone 24) as the most important source of supply for Ibadan.

## B. FLOW OF STAPLE FOODS THROUGH EXCHANGE POINTS-- SURVEY RESULTS

Much of the field work consisted of collection of data pertinent to the flow of staple foods through the various exchange points. However, each survey could only relate to the point where the interview was being made. Because staple foods are exchanged at a number of different levels, the information is somewhat fragmentary, as time and resources did not permit all levels to be covered in the same depth. Each of the more relevant questionnaires will be dealt with in sequence.

### 1. Producer Survey

In the survey of producers, farmers were asked about the main type of location used for marketing each commodity. Not all farmers who produced a commodity responded; in some cases none was sold and in others it was a relatively minor crop. Appendix Table 7.8 shows the distribution of responding producers in terms of the location of the producer's main selling point for each commodity. The responses on which this table is based, therefore, came from farmers who considered the commodity of some importance to them as a cash crop. It will be noticed that the farm is an important location of sale for yams, cassava and cowpeas. The farmer's residence in the local village is an important point of sale only in the case of late maize, while for all commodities the local village market was important. Although some farmers did sell in urban areas over 10 miles from their village (often Ibadan), it was not a particularly important location for any commodity except, perhaps, cowpeas.

Appendix Table 7.8

PERCENT DISTRIBUTION OF PRODUCERS BY LOCATION OF SELLING POINT  
AND BY COMMODITY--PRODUCER SURVEY  
December 1966 - January 1967

| Location of<br>Selling Point   | Commodity |          |                |               |           |           |
|--------------------------------|-----------|----------|----------------|---------------|-----------|-----------|
|                                | Yams      | Cassava  | Maize<br>early | Maize<br>late | Rice      | Cowpeas   |
| Farm                           | 40        | 60       | 17             | 2             | 12        | 40        |
| Roadside (and Silo)            | --        | --       | 2              | --            | --        | --        |
| House in Village               | 4         | 6        | 9              | 20            | --        | 9         |
| Market - Local village         | 48        | 32       | 65             | 67            | 87        | 37        |
| - Village over<br>5 miles away | 1         | 1        | 3              | 8             | --        | --        |
| - Urban within<br>10 miles     | 1         | 1        | *              | --            | --        | --        |
| - Urban over<br>10 miles away  | <u>7</u>  | <u>1</u> | <u>3</u>       | <u>4</u>      | <u>--</u> | <u>14</u> |
| Total                          | 101†      | 101†     | 99†            | 101†          | 99†       | 100       |
| Number of Responses            | 119       | 137      | 216            | 51            | 16        | 35        |

\* Less than 0.5 percent.

† Rounding error.

The producers in this survey were also asked about the type of person to whom they sold each commodity and where he came from. Appendix Table 7.9 represents the responses of farmers who were able to and did respond to this question. It shows the percent distribution of producers for each commodity by type of buyer and by place of residence. For all

commodities, assemblers resident in the same or a nearby village (within about five miles) were the single most important group of buyers. Assemblers from rural areas more than five miles away and wholesalers (-retailers) from urban centers more than ten miles away were also of importance, particularly for yam, early maize and cowpeas.

Appendix Table 7.9

PERCENT DISTRIBUTION OF PRODUCERS BY BUYER  
AND BY COMMODITY--PRODUCER SURVEY  
December 1966 - January 1967

| Buyer                                        | Commodity |         |       |      |      |         |
|----------------------------------------------|-----------|---------|-------|------|------|---------|
|                                              | Yam       | Cassava | Maize |      | Rice | Cowpeas |
|                                              |           |         | early | late |      |         |
| Local assembler                              | 46        | 71      | 58    | 62   | 88   | 43      |
| Assembler from more than 5 miles away        | 21        | 3       | 15    | 6    | 12   | 37      |
| Wholesaler from urban center within 10 miles | 2         | 4       | 1     | 8    | --   | --      |
| Wholesaler from urban center over 10 miles   | 23        | 11      | 16    | 15   | --   | 20      |
| Other traders                                | 3         | 4       | 3     | 4    | --   | --      |
| Non-trader e.g. consumer                     | 4         | 7       | 6     | 4    | --   | --      |
| Total                                        | 99*       | 100     | 99*   | 99*  | 100  | 100     |
| Number of Responses                          | 117       | 134     | 213   | 48   | 16   | 35      |

\* Rounding error

A third question asked of farmers related to the type of person who first sold the commodity at the producer level. That is, whether the farmer sold the commodity himself or allowed somebody to sell for him.

Appendix Table 7.10 displays the percentage distribution of producers who responded for each commodity in terms of the person who was the major seller of the commodity.

Appendix Table 7.10

PERCENT DISTRIBUTION OF PRODUCERS BY PERSON SELLING  
AND BY COMMODITY--PRODUCER SURVEY  
December 1966 - January 1967

| Person Selling                     | Commodity |         |       |      |      |         |
|------------------------------------|-----------|---------|-------|------|------|---------|
|                                    | Yams      | Cassava | Maize |      | Rice | Cowpeas |
|                                    |           |         | early | late |      |         |
| Farmer himself                     | 73        | 84      | 59    | 64   | 50   | 67      |
| Farmer's relatives--<br>Wife/wives | 24        | 16      | 40    | 36   | 50   | 28      |
| Farmer's relatives--<br>Children   | 3         | --      | 1     |      | --   | 6       |
| Farmer's relatives--<br>Other      | --        | --      | --    |      | --   | --      |
| Agent                              | --        | --      | --    |      | --   | --      |
| Total                              | 100       | 100     | 100   | 100  | 100  | 101*    |
| Number of Responses                | 119       | 139     | 217   | 50   | 16   | 36      |

\* Rounding error.

The farmer himself was the major first seller of all staple foods, except perhaps rice, for which the number of responses was too small to be conclusive. Nevertheless, the survey did indicate that a considerable number of farmers had their wife/wives do the selling for them, particularly in the case of maize and rice. A few farmers also used their children to

market their surplus for them. No other relatives, friends, or agents were used to market staple food crops, although they were used for some of the other crops.

Although all of these tables are in terms of the percentage of farmers who responded, this probably has the effect of reflecting better the behavior of the major surplus producers of staple foods. Unfortunately, this approach fails to give the relative importance of each item in terms of quantity marketed.

## 2. Market Traders Questionnaire #1--Ibadan

In the Market Traders Questionnaire #1 in Ibadan each trader was asked for the name of the place where he purchased each commodity. Taking the usual quantity of purchases per month reported by these traders and classifying the traders by type of seller, it is possible to get some broad notion as to the kinds of place used by the three types of sellers identified for the purchase of staple foods. This information is presented in Appendix Table 7.11.

The data are presented in terms of percentages of the total quantity of the commodity reportedly handled by the respondents. The relative percentage values in each column present a general pattern of retailers buying mostly from wholesalers in Ibadan, while both retailer-wholesalers and wholesalers procure their supplies mostly from sources outside Ibadan.

Appendix Table 7.11

PERCENT OF TOTAL QUANTITY USUALLY PURCHASED PER MONTH  
BY PLACE OF PURCHASE, BY COMMODITY AND BY TYPE OF SELLER  
MARKET TRADERS QUESTIONNAIRE #1--IBADAN  
June - August 1966

| Place of Purchase        | C O M M O D I T Y |                     |                |                |                |                     |                |                |                |                     |                |                |                |                     |                |                |                |                     |            |       |
|--------------------------|-------------------|---------------------|----------------|----------------|----------------|---------------------|----------------|----------------|----------------|---------------------|----------------|----------------|----------------|---------------------|----------------|----------------|----------------|---------------------|------------|-------|
|                          | Yams              |                     |                | Gari           |                |                     | Maize          |                |                | Rice                |                |                | Cowpeas        |                     |                |                |                |                     |            |       |
|                          | Type of Seller    | Type of Seller      | Type of Seller | Type of Seller | Type of Seller | Type of Seller      | Type of Seller | Type of Seller | Type of Seller | Type of Seller      | Type of Seller | Type of Seller | Type of Seller | Type of Seller      | Type of Seller | Type of Seller | Type of Seller |                     |            |       |
|                          | Retailer          | Retailer-Wholesaler | Wholesaler     | Total          | Retailer       | Retailer-Wholesaler | Wholesaler     | Total          | Retailer       | Retailer-Wholesaler | Wholesaler     | Total          | Retailer       | Retailer-Wholesaler | Wholesaler     | Total          | Retailer       | Retailer-Wholesaler | Wholesaler | Total |
| <b>1. Ibadan</b>         |                   |                     |                |                |                |                     |                |                |                |                     |                |                |                |                     |                |                |                |                     |            |       |
| Central Native Markets   | 10                | *                   | --             | 10             | 3              | --                  | --             | 3              | 3              | 3                   | --             | 6              | 4              | 1                   | --             | 5              | 5              | *                   | --         | 5     |
| Central New Market       | --                | --                  | --             | --             | *              | --                  | 2              | 2              | *              | --                  | --             | *              | 20             | 1                   | --             | 21             | 1              | *                   | --         | 1     |
| Other                    | --                | --                  | --             | --             | --             | --                  | --             | --             | --             | --                  | --             | --             | --             | --                  | --             | --             | --             | 2                   | --         | 2     |
| <b>2. Outside Ibadan</b> |                   |                     |                |                |                |                     |                |                |                |                     |                |                |                |                     |                |                |                |                     |            |       |
| In Producing Area        | 2                 | 50                  | 37             | 89             | 8              | 66                  | 22             | 95†            | 3              | 53                  | 37             | 93             | 3              | 51                  | 11             | 65             | 1              | 40                  | 51         | 92    |
| Outside Producing Area   | --                | --                  | --             | --             | --             | --                  | --             | --             | --             | --                  | --             | --             | --             | --                  | 11             | 11             | --             | --                  | --         | --    |
| <b>Total</b>             | 12                | 50                  | 37             | 100†           | 11             | 66                  | 23†            | 100            | 6              | 56                  | 37             | 100+           | 26†            | 53                  | 22             | 100†           | 7              | 42                  | 51         | 100   |
| <b>Total Quantity††</b>  |                   |                     |                | 1,793          |                |                     |                | 3,095          |                |                     |                | 1,912          |                |                     |                | 458            |                |                     |            | 3,175 |

\* . Less than 0.5 percent.

† Rounding error.

†† In bags per month except for yams which are in hundreds of tubers per month.

### 3. Market Traders Questionnaire #2--Ibadan

The question posed to traders in the first Market Traders' Questionnaire was also included in the second questionnaire, together with a question on the type of supplier actually used. The information was analyzed in terms of the actual quantity of each commodity sold by each respondent.

Appendix Tables 7.12 to 7.16 present for each of the five commodities for which interviews were made the distribution of the total quantity sold per month of each commodity in relation to kinds of place where commodity is purchased and type of supplier. The general pattern revealed was of retailer-wholesalers and wholesalers buying mostly from assemblers, with some buying from producers (especially in the case of yam and gari) in the producing areas outside Ibadan and retailers mostly from wholesalers in Ibadan.

Appendix Table 7.12

YAMS--PERCENT OF TOTAL QUANTITY SOLD PER MONTH  
 BY PLACE OF PURCHASE, BY TYPE OF SUPPLIER USED AND BY TYPE OF SELLER  
 MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August - September 1966

| Place of Purchase                             | TYPE OF SUPPLIER USED |                     |            |                |          |                     |                |       |          |                     |            |       |          |                     |            |       |
|-----------------------------------------------|-----------------------|---------------------|------------|----------------|----------|---------------------|----------------|-------|----------|---------------------|------------|-------|----------|---------------------|------------|-------|
|                                               | Wholesaler            |                     |            | Assembler      |          |                     | Producer       |       |          | All Suppliers       |            |       |          |                     |            |       |
|                                               | Type of Seller        |                     |            | Type of Seller |          |                     | Type of Seller |       |          | Type of Seller      |            |       |          |                     |            |       |
|                                               | Retailer              | Retailer-Wholesaler | Wholesaler | Total          | Retailer | Retailer-Wholesaler | Wholesaler     | Total | Retailer | Retailer-Wholesaler | Wholesaler | Total | Retailer | Retailer-Wholesaler | Wholesaler | Total |
| <b>1. Ibadan</b>                              |                       |                     |            |                |          |                     |                |       |          |                     |            |       |          |                     |            |       |
| Central Native Markets                        | 12                    | 6                   | --         | 18             | --       | --                  | --             | --    | --       | --                  | --         | --    | 12       | 6                   | --         | 18    |
| Central New Market                            | 3                     | --                  | --         | 3              | --       | --                  | --             | --    | --       | --                  | --         | --    | 3        | --                  | --         | 3     |
| Other                                         | --                    | --                  | --         | --             | --       | --                  | --             | --    | --       | --                  | --         | --    | --       | --                  | --         | --    |
| <b>2. Outside Ibadan</b>                      |                       |                     |            |                |          |                     |                |       |          |                     |            |       |          |                     |            |       |
| In Producing Area                             | --                    | --                  | --         | --             | --       | 32                  | 23             | 56*   | --       | 1                   | 22         | 23    | --       | 33                  | 46*        | 79    |
| Outside Producing Area                        | --                    | --                  | --         | --             | --       | --                  | --             | --    | --       | --                  | --         | --    | --       | --                  | --         | --    |
| <b>Total</b>                                  | 15                    | 6                   | --         | 21             | --       | 32                  | 23             | 56*   | --       | 1                   | 22         | 23    | 15       | 39                  | 46         | 100   |
| Total Quantity (Hundreds of Tubers per Month) |                       |                     |            |                |          |                     |                |       |          |                     |            |       |          |                     |            | 727   |

\* Rounding error.

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Appendix Table 7.13

GARI--PERCENT OF TOTAL QUANTITY SOLD PER MONTH  
 BY PLACE OF PURCHASE, BY TYPE OF SUPPLIER USED AND BY TYPE OF SELLER  
 MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August - September 1966

| Place of Purchase               | TYPE OF SUPPLIER USED |                     |          |                |            |                     |                |       |            |                     |          |       |            |                     |          |       |     |
|---------------------------------|-----------------------|---------------------|----------|----------------|------------|---------------------|----------------|-------|------------|---------------------|----------|-------|------------|---------------------|----------|-------|-----|
|                                 | Wholesaler            |                     |          | Assembler      |            |                     | Producer       |       |            | All Suppliers       |          |       |            |                     |          |       |     |
|                                 | Type of Seller        |                     |          | Type of Seller |            |                     | Type of Seller |       |            | Type of Seller      |          |       |            |                     |          |       |     |
|                                 | Wholesaler            | Retailer-Wholesaler | Retailer | Total          | Wholesaler | Retailer-Wholesaler | Retailer       | Total | Wholesaler | Retailer-Wholesaler | Retailer | Total | Wholesaler | Retailer-Wholesaler | Retailer | Total |     |
| <b>1. Ibadan</b>                |                       |                     |          |                |            |                     |                |       |            |                     |          |       |            |                     |          |       |     |
| Central Native Markets          | 27                    | 4                   | 2        | 34*            | --         | --                  | --             | --    | --         | --                  | --       | --    | --         | 27                  | 4        | 2     | 34* |
| Central New Market              | 2                     | --                  | --       | 2              | --         | --                  | --             | --    | --         | --                  | --       | --    | --         | 2                   | --       | --    | 2   |
| Other                           | --                    | --                  | --       | --             | --         | --                  | --             | --    | --         | --                  | --       | --    | --         | --                  | --       | --    | --  |
| <b>2. Outside Ibadan</b>        |                       |                     |          |                |            |                     |                |       |            |                     |          |       |            |                     |          |       |     |
| In Producing Area               | --                    | --                  | --       | --             | --         | 9                   | 30             | 40*   | 2          | 15                  | 7        | 25*   | 2          | 25                  | 38       | 64*   |     |
| Outside Producing Area          | --                    | --                  | --       | --             | --         | --                  | --             | --    | --         | --                  | --       | --    | --         | --                  | --       | --    |     |
| <b>Total</b>                    | 29                    | 4                   | 2        | 35*            | --         | 9                   | 30             | 40*   | 2          | 15                  | 7        | 25    | 31         | 29                  | 40       | 100   |     |
| Total Quantity (Bags per Month) |                       |                     |          |                |            |                     |                |       |            |                     |          |       |            |                     |          | 1,201 |     |

\* Rounding error.

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Appendix Table 7.14

MAIZE --PERCENT OF TOTAL QUANTITY SOLD PER MONTH  
 BY PLACE OF PURCHASE, BY TYPE OF SUPPLIER USED AND BY TYPE OF SELLER  
 MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August - September 1966

| Place of Purchase                      | TYPE OF SUPPLIER USED |                     |          |                |            |                     |                |       |            |                     |          |       | All Suppliers |                     |          |       |
|----------------------------------------|-----------------------|---------------------|----------|----------------|------------|---------------------|----------------|-------|------------|---------------------|----------|-------|---------------|---------------------|----------|-------|
|                                        | Wholesaler            |                     |          | Assembler      |            |                     | Producer       |       |            | All Suppliers       |          |       |               |                     |          |       |
|                                        | Type of Seller        |                     |          | Type of Seller |            |                     | Type of Seller |       |            | Type of Seller      |          |       |               |                     |          |       |
|                                        | Wholesaler            | Retailer-Wholesaler | Retailer | Total          | Wholesaler | Retailer-Wholesaler | Retailer       | Total | Wholesaler | Retailer-Wholesaler | Retailer | Total | Wholesaler    | Retailer-Wholesaler | Retailer | Total |
| <b>1. Ibadan</b>                       |                       |                     |          |                |            |                     |                |       |            |                     |          |       |               |                     |          |       |
| Central Native Markets                 | 11                    | 1                   | --       | 13†            | --         | --                  | --             | --    | --         | --                  | --       | --    | 11            | 1                   | --       | 13†   |
| Central New Market                     | *                     | *                   |          | *              | --         | --                  | --             | --    | --         | --                  | --       | --    | *             | *                   | --       | *     |
| Other                                  | --                    | --                  | --       | --             | --         | --                  | --             | --    | --         | --                  | --       | --    | --            | --                  | --       | --    |
| <b>2. Outside Ibadan</b>               |                       |                     |          |                |            |                     |                |       |            |                     |          |       |               |                     |          |       |
| In Producing Area                      | --                    | --                  | --       | --             | *          | 11                  | 74             | 85    | --         | 1                   | 2        | 2†    | *             | 11†                 | 76       | 87    |
| Outside Producing Area                 | --                    | --                  | --       | --             | --         | --                  | --             | --    | --         | --                  | --       | --    | --            | --                  | --       | --    |
| <b>Total</b>                           | 11                    | 1                   | --       | 13†            | *          | 11                  | 74             | 85    | --         | 1                   | 2        | 2†    | 11            | 13†                 | 76       | 100   |
| <b>Total Quantity (Bags per Month)</b> |                       |                     |          |                |            |                     |                |       |            |                     |          |       |               |                     |          | 1,859 |

\* Less than 0.5 percent.

† Rounding error.

Appendix Table 7.15

RICE--PERCENT OF TOTAL QUANTITY SOLD PER MONTH  
 BY PLACE OF PURCHASE, BY TYPE OF SUPPLIER USED AND BY TYPE OF SELLER  
 MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August - September 1966

| Place of Purchase               | TYPE OF SUPPLIER USED        |                         |          |                             |                         |            |                            |           |                         |                                 |           |           |                         |            |            |
|---------------------------------|------------------------------|-------------------------|----------|-----------------------------|-------------------------|------------|----------------------------|-----------|-------------------------|---------------------------------|-----------|-----------|-------------------------|------------|------------|
|                                 | Wholesaler<br>Type of Seller |                         |          | Assembler<br>Type of Seller |                         |            | Producer<br>Type of Seller |           |                         | All Suppliers<br>Type of Seller |           |           |                         |            |            |
|                                 | Wholesaler                   | Retailer-<br>Wholesaler | Total    | Retailer                    | Retailer-<br>Wholesaler | Wholesaler | Total                      | Retailer  | Retailer-<br>Wholesaler | Wholesaler                      | Total     | Retailer  | Retailer-<br>Wholesaler | Wholesaler | Total      |
| <b>1. Ibadan</b>                |                              |                         |          |                             |                         |            |                            |           |                         |                                 |           |           |                         |            |            |
| Central Native Markets          | 28                           | 6                       | 34       | --                          | --                      | --         | --                         | --        | --                      | --                              | 28        | 6         | --                      | 34         |            |
| Central New Market              | 17                           | 1                       | 25       | --                          | --                      | --         | --                         | --        | --                      | --                              | 17        | 1         | 7                       | 25         |            |
| Other                           | --                           | --                      | --       | --                          | --                      | --         | --                         | --        | --                      | --                              | --        | --        | --                      | --         |            |
| <b>2. Outside Ibadan</b>        |                              |                         |          |                             |                         |            |                            |           |                         |                                 |           |           |                         |            |            |
| In Producing Area               | --                           | --                      | --       | *                           | 14                      | 27         | 41                         | --        | --                      | --                              | --        | *         | 14                      | 27         | 41         |
| Outside Producing Area          | --                           | --                      | --       | --                          | --                      | --         | --                         | --        | --                      | --                              | --        | --        | --                      | --         |            |
| <b>Total</b>                    | <u>45</u>                    | <u>7</u>                | <u>7</u> | <u>59</u>                   | <u>*</u>                | <u>14</u>  | <u>27</u>                  | <u>41</u> | <u>--</u>               | <u>--</u>                       | <u>--</u> | <u>46</u> | <u>20</u>               | <u>34</u>  | <u>100</u> |
| Total Quantity (Bags per Month) |                              |                         |          |                             |                         |            |                            |           |                         |                                 |           |           |                         |            | 360        |

\* Less than 0.5 percent

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Appendix Table 7.16

COWPEAS--PERCENT OF TOTAL QUANTITY SOLD PER MONTH  
 BY PLACE OF PURCHASE, BY TYPE OF SUPPLIER USED AND BY TYPE OF SELLER  
 MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August - September 1966

| Place of Purchase                      | TYPE OF SUPPLIER USED |                     |            |                |          |                     |                |       |          |                     |            |       |          |                     |            |       |
|----------------------------------------|-----------------------|---------------------|------------|----------------|----------|---------------------|----------------|-------|----------|---------------------|------------|-------|----------|---------------------|------------|-------|
|                                        | Wholesaler            |                     |            | Assembler      |          |                     | Producer       |       |          | All Suppliers       |            |       |          |                     |            |       |
|                                        | Type of Seller        |                     |            | Type of Seller |          |                     | Type of Seller |       |          | Type of Seller      |            |       |          |                     |            |       |
|                                        | Retailer              | Retailer-Wholesaler | Wholesaler | Total          | Retailer | Retailer-Wholesaler | Wholesaler     | Total | Retailer | Retailer-Wholesaler | Wholesaler | Total | Retailer | Retailer-Wholesaler | Wholesaler | Total |
| <b>1. Ibadan</b>                       |                       |                     |            |                |          |                     |                |       |          |                     |            |       |          |                     |            |       |
| Central Native Markets                 | 23                    | 1                   | --         | 24             | --       | --                  | --             | --    | --       | --                  | --         | --    | 23       | 1                   | --         | 24    |
| Central New Market                     | 3                     | *                   | --         | 3              | --       | --                  | --             | --    | --       | --                  | --         | --    | 3        | *                   | --         | 3     |
| Other                                  | --                    | --                  | --         | --             | --       | --                  | --             | --    | --       | --                  | --         | --    | --       | --                  | --         | --    |
| <b>2. Outside Ibadan</b>               |                       |                     |            |                |          |                     |                |       |          |                     |            |       |          |                     |            |       |
| In Producing Area                      | --                    | --                  | --         | --             | --       | 7                   | 62             | 69    | --       | 2                   | 2          | 4     | --       | 9                   | 64         | 73    |
| Outside Producing Area                 | --                    | --                  | --         | --             | --       | --                  | --             | --    | --       | --                  | --         | --    | --       | --                  | --         | --    |
| <b>Total</b>                           | 26                    | 1                   | --         | 27             | --       | 7                   | 62             | 69    | --       | 2                   | 2          | 4     | 26       | 10                  | 64         | 100   |
| <b>Total Quantity (Bags per Month)</b> |                       |                     |            |                |          |                     |                |       |          |                     |            |       |          |                     |            | 1,023 |

\* Less than 0.5 percent.

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#### 4. Wholesale Traders Questionnaire--Ibadan

The Wholesale Traders' Questionnaire in Ibadan, reveals the place of purchase and owner of the supplies entering Ibadan, as well as the relative importance of the various Ibadan markets in the wholesaling of each commodity. Appendix Table 7.17 shows that, except for a small quantity of rice and cowpeas obtained in Ibadan, wholesalers obtain their supplies directly from producing areas.

Although only 30 percent of all wholesalers reported that they owned the inventory in their stalls, they accounted for about 40 percent of the value of monthly sales of wholesalers in Ibadan (see Appendix Table 7.18). By commodity, however, this varied widely, ranging from five percent for dried yam to 65 percent for rice. Except for a small quantity of yam owned by producers, assemblers owned the remainder of the 60 percent of the staple foods which wholesalers sold as agents in Ibadan. Although the wholesaler is only acting as an agent for the assembler who brought the supplies to Ibadan, the fact that he sells these supplies as if they were his own means that in effect 60 percent of the supplies sold by wholesalers in the survey were procured from assemblers in Ibadan.

Particularly for the staple food crops supplied from within the Region, the central native markets in Ibadan are of overwhelming importance in the wholesaling of staple foods. As Appendix Table 7.19 indicates, the central native markets accounted for 74 percent of the total value of sales of the wholesalers included in the survey. However, as 53 percent of these sales were of rice and cowpeas, both of which are mainly imported into the Region, the percentage of supplies produced within the Region handled by the central native markets is much higher. In fact, it ranged from 95 to 100 percent for all the other commodities except gari, 25 percent of which was handled in the central new market and three percent in the residential market.

Appendix Table 7.17

PERCENT OF TOTAL VALUE OF SALES PER MONTH BY  
 WHOLESALERS IN IBADAN BY PLACE OF PURCHASE AND BY COMMODITY  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 February - May 1967

| Place of Purchase                   | Commodity |           |        |               |        |        |         | Total   |
|-------------------------------------|-----------|-----------|--------|---------------|--------|--------|---------|---------|
|                                     | Yam       | Dried Yam | Gari   | Dried Cassava | Maize  | Rice   | Cowpeas |         |
| 1. Ibadan                           |           |           |        |               |        |        |         |         |
| Central Native Markets              | --        | --        | --     | 1             | --     | *      | *       | *       |
| Central New Market                  | --        | --        | --     | --            | --     | 1      | *       | *       |
| Railway Station                     | --        | --        | --     | --            | --     | 3      | 6       | 2       |
| 2. Outside Ibadan                   |           |           |        |               |        |        |         |         |
| Producing Area                      | 100       | 100       | 100    | 99            | 100    | 96     | 94      | 97      |
| Outside Producing Area              | --        | --        | --     | --            | --     | 1      | --      | *       |
| Total                               | 100       | 100       | 100    | 100           | 100    | 101†   | 100     | 99†     |
| Total Value of<br>Monthly Sales (£) | 2,110     | 15,543    | 13,894 | 4,944         | 12,764 | 17,921 | 36,695  | 103,871 |

\* Less than 0.5 percent.

† Rounding error.

Appendix Table 7.18

PERCENTAGE DISTRIBUTION OF TOTAL VALUE OF MONTHLY SALES OF  
 WHOLESALERS IN IBADAN BY OWNER OF COMMODITY AND BY COMMODITY  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 February - May 1967

| Owner of Commodity              | Commodity |           |        |               |        |        |         | Total   |
|---------------------------------|-----------|-----------|--------|---------------|--------|--------|---------|---------|
|                                 | Yam       | Dried Yam | Gari   | Dried Cassava | Maize  | Rice   | Cowpeas |         |
| Wholesaler All (100 percent)    | 46        | 5         | 46     | 23            | 22     | 65     | 47      | 40      |
| Wholesaler Most (50-99 percent) | --        | --        | --     | --            | --     | --     | --      | --      |
| Wholesaler Some (1-49 percent)  | --        | --        | --     | --            | --     | 2      | *       | *       |
| Assembler All (100 percent)     | 52        | 95        | 54     | 77            | 78     | 33     | 53      | 60      |
| Producer All (100 percent)      | 3         | --        | --     | --            | --     | --     | --      | *       |
| Total Percent                   | 101†      | 100       | 100    | 100           | 100    | 100    | 100     | 100     |
| Total Value of Sales (£)        | 2,110     | 15,543    | 13,894 | 4,944         | 12,764 | 17,921 | 36,695  | 103,871 |

\* Less than 0.5 percent.

† Rounding error.

Appendix Table 7.19

PERCENTAGE DISTRIBUTION OF TOTAL MONTHLY SALES OF WHOLESALERS  
IN IBADAN BY MARKET AND BY COMMODITY  
WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
February - May 1967

| Market                           | Commodity  |            |           |               |            |           |           | Total     |
|----------------------------------|------------|------------|-----------|---------------|------------|-----------|-----------|-----------|
|                                  | Yam        | Dried Yam  | Gari      | Dried Cassava | Maize      | Rice      | Cowpeas   |           |
| <u>Central Native</u>            |            |            |           |               |            |           |           |           |
| Gege                             | --         | 2          | 13        | 5             | 3          | 14        | --        | 5         |
| Oritamerin                       | 56         | 69         | 35        | 63            | 65         | 14        | 9         | 33        |
| Iba                              | 34         | 9          | 4         | 11            | 11         | 35        | 46        | 27        |
| Ayeye                            | 10         | 10         | 5         | 9             | 12         | 1         | 1         | 5         |
| Beri                             | --         | 3          | 2         | 4             | 4          | --        | --        | 1         |
| Iyeosa                           | --         | 5          | 6         | 2             | 5          | --        | *         | 2         |
| Agbeni                           | --         | --         | 7         | --            | --         | --        | --        | 1         |
|                                  | <u>100</u> | <u>99†</u> | <u>72</u> | <u>95†</u>    | <u>99†</u> | <u>64</u> | <u>56</u> | <u>74</u> |
| <u>Central New</u>               |            |            |           |               |            |           |           |           |
| Dugbe                            | --         | 1          | 25        | 5             | 1          | 36        | 44        | 26        |
| <u>Residential</u>               |            |            |           |               |            |           |           |           |
| Mokola                           | --         | --         | 3         | --            | *          | --        | --        | *         |
| Total Percent                    | 100        | 100        | 100       | 100           | 100        | 100       | 100       | 100       |
| Total Value of Monthly Sales (£) | 2,110      | 15,543     | 13,894    | 4,944         | 12,764     | 17,921    | 36,695    | 103,871   |

\* Less than 0.5 percent.

† Rounding error.

C. TIMING OF EXCHANGE OF STAPLE FOODS: SURVEY RESULTS

1. Producer Survey--December 1966-January 1967

The survey of producers revealed that the main factor determining the timing of sales was the major month of harvest. (See Appendix Table 7.20.) Generally, producers start to sell their surplus production at harvest time, varying the latter as much as possible to take advantage of the natural storage afforded by the plant itself. Most of the surplus seems to be sold in the few months after harvest, although some is usually stored for sale at a later date.

Appendix Table 7.20

PERCENT DISTRIBUTION OF PRODUCERS BY MAJOR MONTH OF HARVEST  
AND BY COMMODITY--PRODUCER SURVEY--WESTERN NIGERIA  
December 1966 - January 1967

| Major Month<br>of Harvest | Commodity |           |           |           |           |
|---------------------------|-----------|-----------|-----------|-----------|-----------|
|                           | Yam       | Cassava   | Maize     | Rice      | Cowpeas   |
| January                   | --        | 4         | 5         | --        | 2         |
| February                  | 1         | 4         | 1         | --        | --        |
| March                     | 1         | 16        | --        | --        | --        |
| April                     | --        | 8         | 1         | --        | --        |
| May                       | 1         | 1         | 5         | --        | --        |
| June                      | 3         | 4         | 12        | 6         | 2         |
| July                      | 23        | 3         | 34        | 71        | --        |
| August                    | 22        | 28        | 17        | 24        | 11        |
| September                 | 4         | 8         | 3         | --        | 5         |
| October                   | 8         | 4         | --        | --        | 5         |
| November                  | 8         | 6         | 9         | --        | 9         |
| December                  | <u>29</u> | <u>14</u> | <u>13</u> | <u>--</u> | <u>67</u> |
| Total                     | 100       | 100       | 100       | 101†      | 101†      |
| Number of responses       | 193       | 170       | 292       | 17        | 57        |

† Rounding error.

2. Market Traders Questionnaire #2--Ibadan--August-September 1966

The 256 traders included in the Market Traders Questionnaire #2 were each asked to estimate the quantity of each commodity sold in each of the four quarters following the peak month of harvest. Obviously, traders cannot give exact answers to such a question, but even an approximate answer can indicate the relative importance to the trader of each quarter.

The quarterly distribution of total annual sales, as reported by traders in this survey, is presented for each commodity in Appendix Tables 7.21 to 7.25. From these tables, a clearly marked seasonal pattern is evident for all commodities, particularly yam, and to a lesser extent maize.

3. Wholesaler Traders Questionnaire--Ibadan--February-May 1966

In the Wholesale Traders Questionnaire in Ibadan, the respondents were asked to give the months of most and least sales of each commodity. Although this only indicates the month with peak sales and that with lowest sales, the resulting distribution does provide some evidence as to the seasonality of sales at the wholesale level. The percent distribution of wholesalers by months of most and least sales of each commodity is presented in Appendix Tables 7.26 and 7.27 respectively.

4. Household Survey--Ibadan--December 1966

The question of the month of most and least consumption was put to the households interviewed in Ibadan during the Household Survey. The results of the analysis of answers to this question have already been presented in Table 6.8.

Appendix Table 7.21

YAMS--PERCENT DISTRIBUTION OF TRADERS BY  
 QUARTERLY SALES AS PERCENT OF TOTAL ANNUAL SALES BY QUARTER  
 MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August - September 1966

| Quarterly Sales<br>As Percent Of<br>Total Annual Sales | Quarter         |                 |               |                |
|--------------------------------------------------------|-----------------|-----------------|---------------|----------------|
|                                                        | July-<br>Sept.* | Oct.-<br>Dec.** | Jan.-<br>Mar. | April-<br>June |
| Under 10                                               | --              | --              | 38            | 29             |
| 10 & Under 20                                          | --              | 6               | 38            | 21             |
| 20 & Under 30                                          | 6               | 32              | 24            | 35             |
| 30 & Under 40                                          | 47              | 59              | --            | 15             |
| 40 & Over                                              | <u>47</u>       | <u>3</u>        | <u>--</u>     | <u>--</u>      |
| Total                                                  | 100             | 100             | 100           | 100            |

No. of Responses: 34.

\* Early harvest of yams is mostly July-August.

\*\* Late harvest of yams is mostly October-December.

Appendix Table 7.22

GARI--PERCENT DISTRIBUTION OF TRADERS BY  
 QUARTERLY SALES AS PERCENT OF TOTAL ANNUAL SALES BY QUARTER  
 MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August - September 1966

| Quarterly Sales<br>As Percent Of<br>Total Annual Sales | Quarter        |               |                |              |
|--------------------------------------------------------|----------------|---------------|----------------|--------------|
|                                                        | Aug.-<br>Oct.* | Nov.-<br>Jan. | Feb.-<br>April | May-<br>July |
| Under 10                                               | --             | 1             | --             | 3            |
| 10 & Under 20                                          | --             | 1             | 25             | 51           |
| 20 & Under 30                                          | 16             | 79            | 73             | 45           |
| 30 & Under 40                                          | 81             | 18            | 1              | --           |
| 40 & Over                                              | <u>3</u>       | <u>1</u>      | <u>1</u>       | <u>1</u>     |
| Total                                                  | 100            | 100           | 100            | 100          |

No. of Responses: 94.

\* The harvesting of cassava and its processing into gari occurs throughout the year, but it is heaviest around August.

Appendix Table 7.23

DRIED MAIZE--PERCENT DISTRIBUTION OF TRADERS BY  
 QUARTERLY SALES AS PERCENT OF TOTAL ANNUAL SALES BY QUARTER  
 MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August - September 1966

| Quarterly Sales<br>As Percent of<br>Total Annual Sales | Quarter        |                  |                 |              |
|--------------------------------------------------------|----------------|------------------|-----------------|--------------|
|                                                        | June-<br>Aug.* | Sept.-<br>Nov.** | Dec.-<br>Feb.** | Mar.-<br>May |
| Under 10                                               | --             | 3                | 15              | 7            |
| 10 & under 20                                          | --             | 2                | 30              | 46           |
| 20 & under 30                                          | 7              | 66               | 54              | 44           |
| 30 & under 40                                          | 70             | 25               | --              | 3            |
| 40 & over                                              | 23             | 5                | 1               | --           |
| Total                                                  | 100            | 101 <sup>†</sup> | 100             | 100          |

No. of responses: 61.

<sup>†</sup> Rounding error.

\* Early season maize is harvested mostly between June and August.

Appendix Table 7.24

RICE--PERCENT DISTRIBUTION OF TRADERS BY  
 QUARTERLY SALES AS PERCENT OF TOTAL ANNUAL SALES BY QUARTER  
 MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August - September 1966

| Quarterly Sales<br>As Percent of<br>Total Annual Sales | Quarter         |                 |              |                 |
|--------------------------------------------------------|-----------------|-----------------|--------------|-----------------|
|                                                        | Sept.-<br>Nov.* | Dec.-<br>Feb.   | Mar.-<br>May | June-<br>Aug.** |
| Under 10                                               | --              | --              | --           | 2               |
| 10 & under 20                                          | --              | --              | 37           | 71              |
| 20 & under 30                                          | 12              | 63              | 61           | 22              |
| 30 & under 40                                          | 80              | 34              | --           | 5               |
| 40 & over                                              | 8               | 2               | 2            | --              |
| Total                                                  | 100             | 99 <sup>†</sup> | 100          | 100             |

No. of responses: 41.

<sup>†</sup> Rounding error.

\* The harvesting of rice in the major supply areas to Ibadan is mostly between September and November.

\*\* The harvesting of the upland rice within the Region occurs in July-August.

Appendix Table 7.25

**COWPEAS--PERCENT DISTRIBUTION OF TRADERS BY  
 QUARTERLY SALES AS PERCENT OF TOTAL ANNUAL SALES BY QUARTER  
 MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August - September 1966**

| Quarterly Sales<br>As Percent of<br>Total Annual Sales | Quarter        |                |               |                |
|--------------------------------------------------------|----------------|----------------|---------------|----------------|
|                                                        | Oct.-<br>Dec.* | Jan.-<br>March | Apr.-<br>June | July-<br>Sept. |
| Under 10                                               | --             | --             | --            | 7              |
| 10 & Under 20                                          | --             | 1              | 33            | 61             |
| 20 & Under 30                                          | 8              | 72             | 66            | 30             |
| 30 & Under 40                                          | 76             | 24             | --            | 1              |
| 40 & Over                                              | <u>16</u>      | <u>3</u>       | <u>1</u>      | <u>1</u>       |
| Total                                                  | 100            | 100            | 100           | 100            |

No. of Responses: 88.

\* The harvesting of cowpeas in the main supply areas from the North is mostly between October and December. Within the Region, harvesting occurs mostly in December.

Appendix Table 7.26

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN  
 BY MONTH OF MOST SALES AND BY COMMODITY  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 February - May 1967

| <u>Month of<br/>Most Sales</u> | <u>Commodity</u> |                      |             |                          |              |             |                | <u>Total</u> |
|--------------------------------|------------------|----------------------|-------------|--------------------------|--------------|-------------|----------------|--------------|
|                                | <u>Yam</u>       | <u>Dried<br/>Yam</u> | <u>Gari</u> | <u>Dried<br/>Cassava</u> | <u>Maize</u> | <u>Rice</u> | <u>Cowpeas</u> |              |
| January                        | 6                | 19                   | 36          | 15                       | 47           | 6           | 5              | 24           |
| February                       | 6                | 19                   | 7           | 20                       | 2            | 4           | 8              | 10           |
| March                          | --               | 1                    | 1           | 2                        | 1            | 9           | 18             | 5            |
| April                          | --               | 1                    | 1           | 1                        | 1            | 2           | 7              | 2            |
| May                            | --               | 4                    | --          | 1                        | 1            | 4           | --             | 1            |
| June                           | --               | 1                    | --          | 2                        | 1            | 24          | --             | 2            |
| July                           | 18               | 1                    | 1           | 4                        | 4            | --          | 1              | 2            |
| August                         | 24               | 1                    | 1           | 7                        | 1            | --          | --             | 2            |
| September                      | 29               | 5                    | 2           | 4                        | 12           | --          | 3              | 6            |
| October                        | 6                | 31                   | 36          | 33                       | 13           | 13          | 30             | 26           |
| November                       | 12               | 4                    | 2           | 6                        | 10           | 19          | 9              | 8            |
| December                       | --               | <u>12</u>            | <u>14</u>   | <u>6</u>                 | <u>7</u>     | <u>20</u>   | <u>18</u>      | <u>12</u>    |
| Total                          | 101*             | 99*                  | 101*        | 101*                     | 100          | 101*        | 99*            | 100          |
| Number of<br>Responses         | 17               | 134                  | 149         | 112                      | 162          | 54          | 150            | 778          |

\* Rounding error.

Appendix Table 7.27

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY  
 MONTH OF LEAST SALES AND BY COMMODITY  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 February - May 1967

| Month of<br>Least Sales | Commodity |              |          |                  |          |           |          | Total    |
|-------------------------|-----------|--------------|----------|------------------|----------|-----------|----------|----------|
|                         | Yam       | Dried<br>Yam | Gari     | Dried<br>Cassava | Maize    | Rice      | Cowpeas  |          |
| January                 | 6         | 2            | 1        | 4                | 1        | 29        | 30       | 9        |
| February                | 6         | 2            | 6        | 8                | 2        | 4         | 1        | 4        |
| March                   | 18        | 24           | 19       | 12               | 12       | --        | 15       | 15       |
| April                   | 12        | 14           | 14       | 23               | 5        | 11        | 14       | 13       |
| May                     | 6         | 5            | 3        | 1                | 4        | 2         | 2        | 3        |
| June                    | 6         | 6            | 11       | 7                | 13       | --        | 3        | 8        |
| July                    | 6         | 16           | 32       | 19               | 52       | 4         | --       | 23       |
| August                  | 6         | 20           | 11       | 15               | 4        | 2         | 3        | 9        |
| September               | --        | 7            | --       | 8                | 3        | 5         | 14       | 6        |
| October                 | --        | --           | 1        | --               | 1        | 4         | 11       | 3        |
| November                | 12        | 4            | --       | 2                | 1        | 2         | 3        | 2        |
| December                | <u>24</u> | <u>--</u>    | <u>1</u> | <u>1</u>         | <u>2</u> | <u>38</u> | <u>4</u> | <u>5</u> |
| Total                   | 102*      | 100          | 99*      | 100              | 100      | 101*      | 100      | 100      |
| Number of<br>Responses  | 17        | 134          | 149      | 112              | 162      | 55        | 151      | 780      |

\* Rounding error.

#### D. TRANSPORTATION OF STAPLE FOODS: SURVEY RESULTS

The Wholesale Traders Questionnaire gives some indication of the relative importance of road and rail transportation in moving staple foods to Ibadan. From Appendix Table 7.28, it can be seen that only in the movement of rice and cowpeas is the railway used at all, the lorry (truck) being the principal means of transportation.

The average cost of transportation from the supply area to Ibadan in shillings per bag for all commodities except yam, which is in shillings per 100 tubers, is shown for the Wholesale Traders Questionnaire in Appendix Table 7.29.

Appendix Table 7.28

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY METHOD OF TRANSPORTATION USED AND BY COMMODITY--WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
February-May 1967

| Method of<br>Transportation Used | Commodity |              |      |                  |       |      |         | Total |
|----------------------------------|-----------|--------------|------|------------------|-------|------|---------|-------|
|                                  | Yam       | Dried<br>Yam | Gari | Dried<br>Cassava | Maize | Rice | Cowpeas |       |
| Lorry                            | 100       | 99           | 100  | 100              | 100   | 85   | 88      | 97    |
| Railway                          | --        | --           | --   | --               | --    | 12   | 11      | 3     |
| Headloading only                 | --        | 1            | --   | --               | --    | 3    | 1       | *     |
| Total percent                    | 100       | 100          | 100  | 100              | 100   | 100  | 100     | 100   |
| Number of responses              | 18        | 145          | 159  | 125              | 168   | 59   | 158     | 832   |

\* Less than 0.5 percent.

Appendix Table 7.29

AVERAGE TRANSPORTATION COST FROM PLACE OF PURCHASE TO IBADAN IN SHILLINGS  
PER BAG (PER 100 TUBERS FOR YAM) BY SUPPLY ZONE AND BY COMMODITY  
WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
February - May 1967

| Supply Zone                                    | Commodity   |            |            |               |            |             |             | Average    |
|------------------------------------------------|-------------|------------|------------|---------------|------------|-------------|-------------|------------|
|                                                | Yam         | Dried Yam  | Gari       | Dried Cassava | Maize      | Rice        | Cowpeas     |            |
| <b>I. Surrounding Ibadan</b>                   |             |            |            |               |            |             |             |            |
| 1.                                             |             | 6.2        | 4.4        | 4.6           | 4.8        |             | 4.0         | 4.6        |
| 2.                                             |             | 6.2        | 4.0        | 5.2           | 4.4        |             | 4.0         | 4.8        |
| 3.                                             |             |            | 4.0        |               | 4.8        |             |             | 4.4        |
| 4.                                             |             |            |            | 4.0           |            |             |             | 4.0        |
| 5.                                             | 23.8        | 4.0        | 4.4        | 4.0           | 3.8        |             | 4.0         | 6.0        |
| <b>II. Second Circle</b>                       |             |            |            |               |            |             |             |            |
| <b>A. North</b>                                |             |            |            |               |            |             |             |            |
| 6.                                             | 29.4        | 6.0        | 5.2        | 4.8           | 5.4        |             |             | 7.4        |
| 7.                                             | 22.4        | 5.8        | 4.8        | 4.8           | 5.6        |             | 5.4         | 5.6        |
| 8.                                             | 18.8        | 5.2        | 5.0        | 4.4           | 4.8        |             | 4.8         | 5.4        |
| <b>B. South-west</b>                           |             |            |            |               |            |             |             |            |
| 9.                                             |             |            |            |               |            |             |             |            |
| 10.                                            |             |            | 6.6        |               | 7.0        |             |             | 7.0        |
| 11.                                            |             |            |            |               |            |             |             |            |
| 12.                                            |             |            | 2.8        |               | 4.0        |             |             | 3.2        |
| 13.                                            |             |            |            |               |            |             |             |            |
| <b>C. East</b>                                 |             |            |            |               |            |             |             |            |
| 14.                                            |             |            |            |               |            |             |             |            |
| 15.                                            |             |            |            |               |            |             |             |            |
| 16.                                            |             |            |            |               |            |             |             |            |
| 17.                                            |             |            | 6.0        |               |            |             |             | 6.0        |
| 18.                                            |             |            |            |               |            |             |             |            |
| <b>III. Third Circle</b>                       |             |            |            |               |            |             |             |            |
| 19.                                            |             |            |            |               |            |             |             |            |
| 20.                                            |             | 8.0        | 5.8        | 6.2           | 6.0        |             |             | 6.0        |
| 21.                                            |             |            | 6.0        |               | 5.8        |             |             | 5.8        |
| <b>IV. Outside Region</b>                      |             |            |            |               |            |             |             |            |
| <b>A. North</b>                                |             |            |            |               |            |             |             |            |
| 22.                                            |             | 10.2       |            | 5.2           |            | 12.2        |             | 10.2       |
| 23.                                            |             |            |            |               |            | 14.4        |             | 14.4       |
| 24.                                            |             |            |            |               |            |             | 15.8        | 15.8       |
| 25.                                            |             |            |            |               |            | 8.0         | 14.0        | 13.8       |
| 26.                                            |             |            |            |               |            | 16.4        | 15.6        | 15.8       |
| 27.                                            | 35.0        |            | 7.6        |               |            | 17.6        |             | 14.6       |
| <b>B. Mid-west</b>                             |             |            |            |               |            |             |             |            |
| 28.                                            |             |            | 7.6        |               |            |             |             | 7.6        |
| <b>C. East</b>                                 |             |            |            |               |            |             |             |            |
| 29.                                            | 50.0        |            |            |               |            | 15.2        |             | 16.8       |
| <b>D. Imports</b>                              |             |            |            |               |            |             |             |            |
| 30.                                            |             |            |            |               |            |             |             |            |
| <b>Average</b>                                 | <u>24.6</u> | <u>7.4</u> | <u>5.4</u> | <u>5.0</u>    | <u>5.6</u> | <u>15.0</u> | <u>14.2</u> | <u>9.4</u> |
| <b>Total Transportation Cost Per Month (£)</b> | 395         | 1,229      | 1,117      | 708           | 1,291      | 1,402       | 5,319       | 11,460     |

Chapter VIII

ORGANIZATION  
OF MARKETING  
SYSTEM

N O R T H E R N R E G I O N



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## VIII ORGANIZATION OF MARKETING SYSTEM

### A. INTRODUCTION

The marketing system for staple food crops in Western Nigeria is operated entirely by the private sector of the economy, guided and conditioned mostly by the traditional environment. Marketing in general --and food marketing in particular--is freely open to anyone with the necessary capital and skill to start. Only in the assembling of the export crops actually controlled by government marketing boards, such as cocoa, is any control and registration attempted by the government. The ease of entry and retirement, therefore, and lack of alternative employment opportunities, has led to an extraordinarily large number of intermediaries<sup>1</sup> being involved in all of the marketing systems which are part of the traditional economy.<sup>2</sup>

As indicated in the discussion of the flow of staple foods through exchange points in the preceding chapter, transactions occur in a wide variety of locations. This applies not only to the acquisition of supplies, but also to their later distribution. In Ibadan, for example, the whole of the original indigenous part of the town may be thought of as a major market: small roadside and house stalls, supplemented by hawkers, cover the whole area. Nevertheless, major concentrations of buyers and sellers in markets can be easily identified. In fact, these markets account for the major share of the trade in staple foods in Ibadan, both in terms of numbers of sellers and quantity of sales.

A visit to any of the major markets in Ibadan will give the impression of tremendous competition. The selling areas are intricately and tightly

packed with what seem to be countless numbers of traders dealing in everything from staple foods to meat, clothing, imported goods, and herbs used in native medicine. As most traders are small (sales are generally less than £4 per day) and specialized (usually only one commodity), there are literally hundreds of traders specializing in each commodity in Ibadan. In staple foods alone, for example, in the 16 markets where sellers were enumerated in Ibadan, there were nearly 9,000 sellers. Of these, as Appendix Table 8.2 indicates, 2,300 were selling some form of yam, 2,100 cassava products, 1,200 maize, 600 rice, 1,600 cowpeas, and 1,200 other staple food crops. These staple food sellers were packed in with about 27,000 sellers of commodities other than staple food crops. Added to the impression of sheer numbers in making for competition is the fact that both the commodities themselves and services accompanying the sale are relatively standardized and undifferentiated.

The structure of the marketing system will now be described and analyzed in terms of its major components, particularly market places and personnel.

#### B. MARKET PLACES

A market place is a concentration of buyers and sellers gathered together in a compact location for the purpose of exchange. Western Nigeria has a very well developed system of traditional markets to serve the needs of the internal exchange economy. The more important urban areas have at least one daily market, while nearly all rural areas of any size have a market within relatively easy headloading distance (five miles). This is especially true for the areas with a medium to high rural population

density. In low density areas, such as Oyo and Okitipupa Divisions, markets are fewer and more sparse, and in many parts of these areas markets are not within easy walking reach. This has led to the development of an alternative system of marketing--the assembling of supplies on the farm or in the local village by traders who resell either in one of the larger local rural markets or directly in the urban areas.

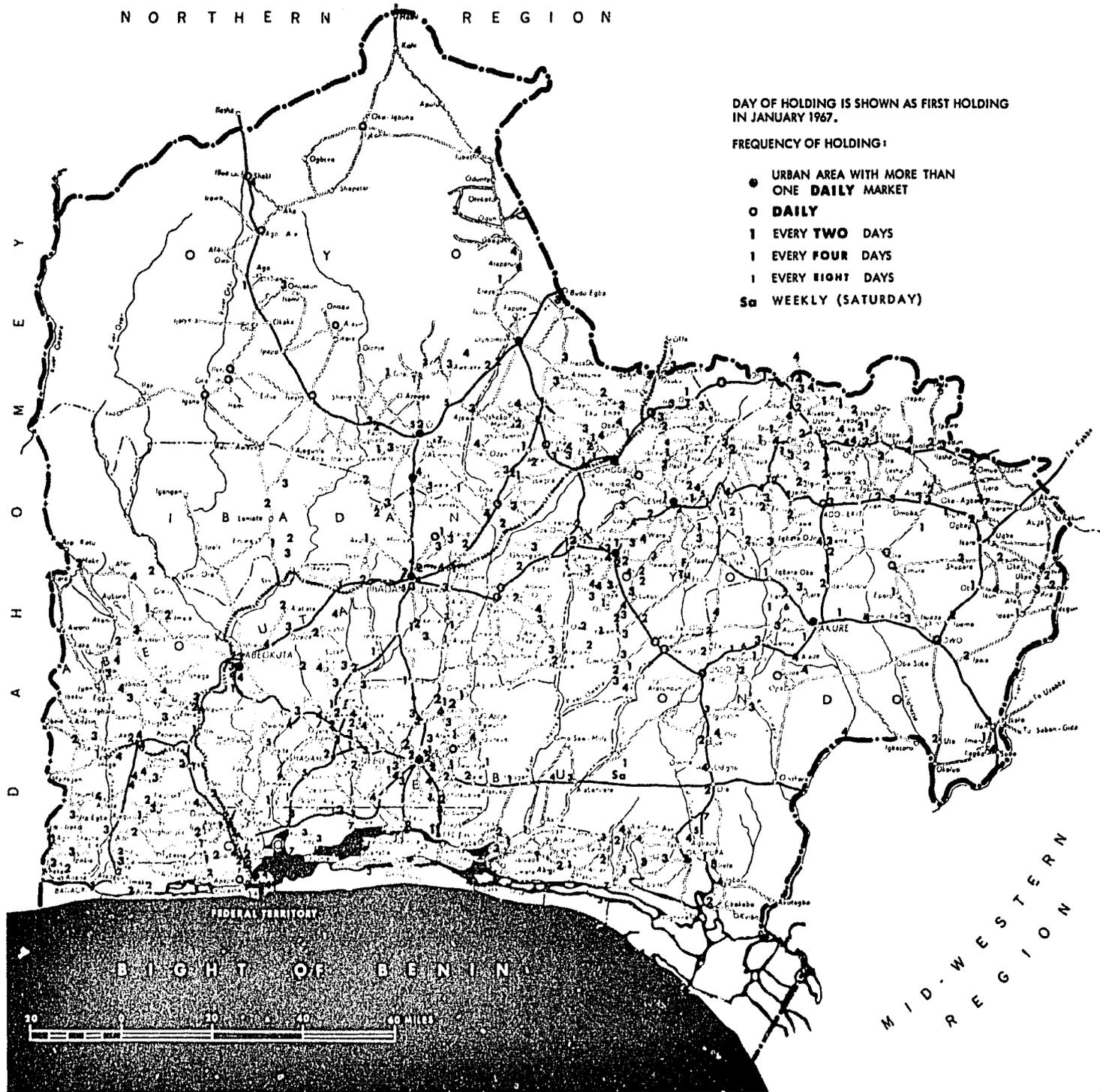
#### 1. Location and Density of Markets

According to the "Market Calendar", for 1967, published by the Regional Government, there are 550 markets in Western Nigeria.<sup>3</sup> This includes both urban and rural markets. Although many markets are not listed, particularly smaller ones,<sup>4</sup> it does provide an indication of the location and density of markets in the Region. About 510 of these markets are indicated in Map 8.1: Of the remaining 40, 16 are now defunct<sup>5</sup> and the rest could not be located<sup>6</sup> either on the divisional maps of the Region which are presently available or by inquiry.

As this map indicates, the density of markets throughout the Region is quite uneven. When compared with the map showing population density (Map 3.2), a similar distribution pattern can be seen. Table 8.1 discloses that, for the Region as a whole, there is one market for about every 55 square miles. Although the provincial figures obliterate much of the detail, particularly for Oyo Province, there is still a wide variation by province, ranging from one market to every 32 square miles in Ijebu Province to one in every 79 square miles in Oyo Province. (For Oyo Division alone, it is probably closer to 200 square miles per market, while Ife-Ilesha Divisions are probably around 22 square miles per market.)<sup>7</sup>

Map 8.1

TRADITIONAL MARKETS (Showing Frequency and Day of Holding)



SOURCE: Market Information from "Market Calendar 1967", Ministry of Economic Planning and Social Development.

Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1965.  
Printed by Federal Survey Nigeria, 1965.  
500/188/3-65

Using the population figures from the 1963 census, Table 8.1 indicates that there are about 19,000 persons per market throughout Western Nigeria. This varied from 8,000 for Ijebu Province to 34,000 for Ibadan Province. However, the actual number of persons per market is likely to be significantly less because of the inflated census of population and the under-enumeration of markets.

Table 8.1

NUMBER OF MARKETS, DENSITY OF MARKETS BY PROVINCE  
(Square Miles and Persons per Market)

| <u>Province</u> | <u>Number of Markets*</u> | <u>Persons Per Market† ('000)</u> | <u>Density of Markets (Miles per Market)</u> |
|-----------------|---------------------------|-----------------------------------|----------------------------------------------|
| Abeokuta Colony | 77                        | 13                                | 55                                           |
| Ibadan          | 32                        | 24                                | 42                                           |
| Ijebu           | 98                        | 34                                | 46                                           |
| Ondo            | 76                        | 8                                 | 32                                           |
| Oyo             | 145                       | 19                                | 56                                           |
|                 | <u>122</u>                | <u>15</u>                         | <u>79</u>                                    |
| Western Nigeria | 550                       | 19                                | 55                                           |

Source: \* "Market Calendar: 1967," Ministry of Economics Planning and Social Development, Ibadan, 1967.

† 1963 Census.

## 2. Types of Market

Based upon their location and function, it is possible to identify several types of market. The first major division exists between urban and rural markets.

Urban Markets. Urban markets are located within the geographic and economic confines of the major population agglomerations and generally meet daily. Their major function is the distribution of supplies on a wholesale and retail basis to the local consuming population. In the more major towns of Western Nigeria and Ibadan especially, at least four distinct types of markets can be identified. They are:

a. Central native markets . These are located in the center of the original native section of the Yoruba town.<sup>8</sup> These markets perform both major wholesaling and retailing functions. As Table 8.2 shows and Map 8.2 illustrates, there are seven adjoining markets making up the central native market complex in Ibadan. Oja Iba market is reported<sup>9</sup> to have started around 1810, a few years after Ibadan was settled. It is still mainly situated in front of the Iba family compound which was the traditional center of the town and which has figured very prominently in Ibadan's history. The other markets developed as business expanded beyond the capacity of Oja Iba market.

Even though the old core section of the central native market in Ibadan has proved inadequate to meet the needs of the rapidly growing population and so has expanded outwards, it has, nevertheless, continued its own growth. So much so, that by 1963 the population density in the area had grown to nearly 300 persons per acre, or 180,000 per square mile. The accompanying growth in building density in this central area of Ibadan during the 12-year period 1949 to 1961 alone is clearly evident from Maps 8.3 and 8.4. These are drawn from air photos taken in 1949 and 1961 respectively. Map 8.4 also shows how Oja Iba Market spread from its

historical center to include part of the residential housing in the larger area now known as Oja Iba Market. As the bounds of this market passed beyond the area controlled by the Iba family, so the new market area adopted a new name, often that of the head family in the area.

Table 8.2

MAJOR DAILY FOOD MARKETS IN IBADAN BY TIME  
OF MEETING AND BY TYPE OF MARKET

| <u>Time of Meeting</u>   | <u>Central Native</u>                                        | <u>Central New</u> | <u>Residential</u>                                                 | <u>Fringe</u>                                              | <u>Number of Markets</u> |
|--------------------------|--------------------------------------------------------------|--------------------|--------------------------------------------------------------------|------------------------------------------------------------|--------------------------|
| Day only                 | Agbeni<br>Bere                                               | Dugbe              | Ibuko*<br>Mokola<br>Molete<br>Oje *†<br>Oke-Ado<br>Oranyan<br>Sabo | Apata<br>Elekuro<br>Idi-Isin<br>Ile-Titun<br>Labo<br>Sango | 16                       |
| Day - Night              | Ayeye<br>Gege<br>Iyeosa (Popoyeosa)<br>Oja Iba<br>Oritamerin |                    | Inalende                                                           |                                                            | 6                        |
| Night only               |                                                              |                    | Eleta<br>Idi-Aro<br>Oja-Igbo<br>Olorisaoko                         |                                                            | 4                        |
| <u>Number of Markets</u> | <u>7</u>                                                     | <u>1</u>           | <u>12</u>                                                          | <u>6</u>                                                   | <u>26</u>                |

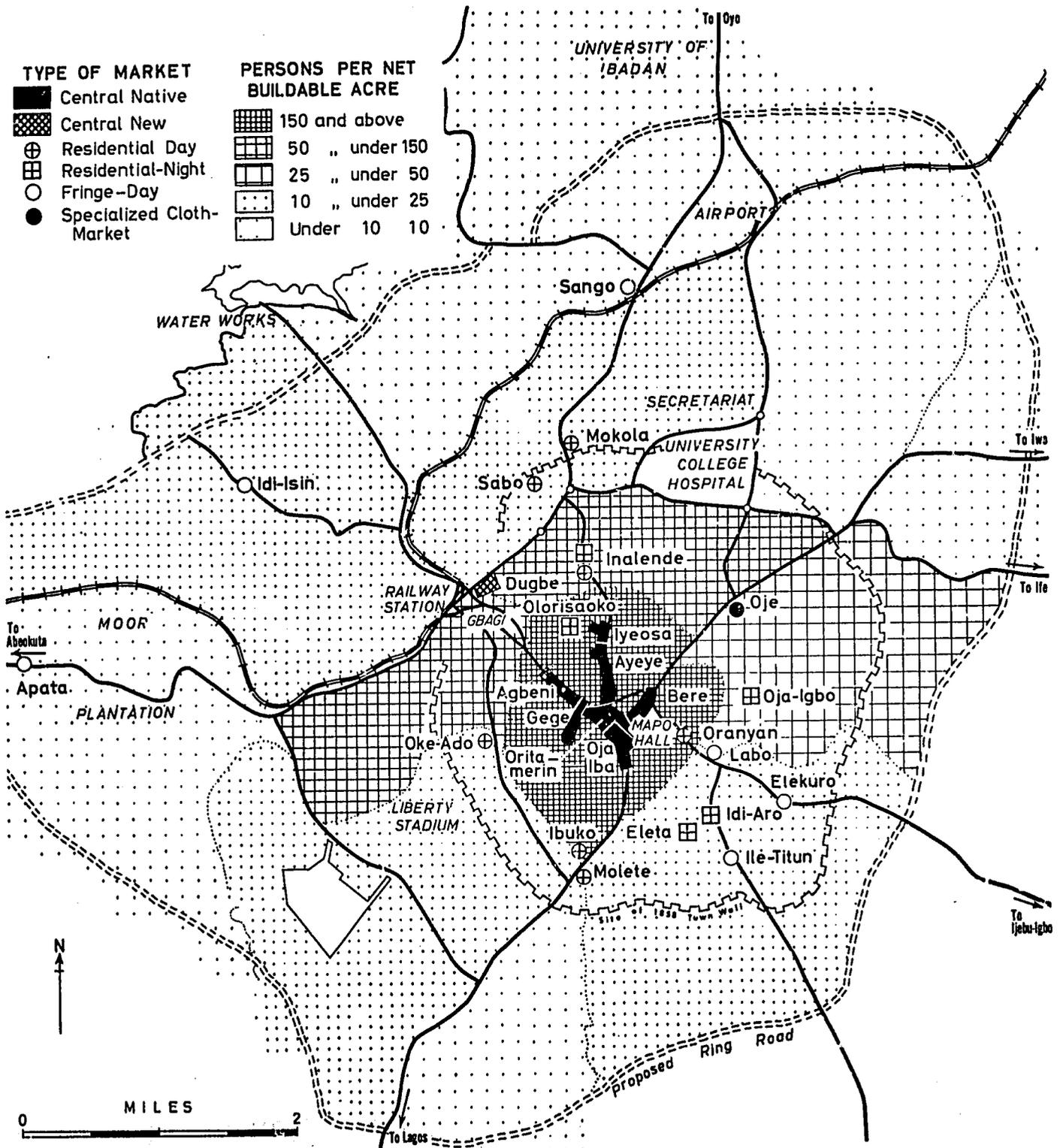
\* Eight day periodic market.

† Residential in terms of staple foods, although it is principally a specialized cloth market; it functions as a central market for native cloth for much of Western Nigeria.

In a relatively complete census of sellers in the central native markets in Ibadan during 1967, 20,963 sellers were counted and classified. Although this gives an average of nearly 3,000 sellers per market, the central native markets in Ibadan are so closely related that they can

Map 8.2

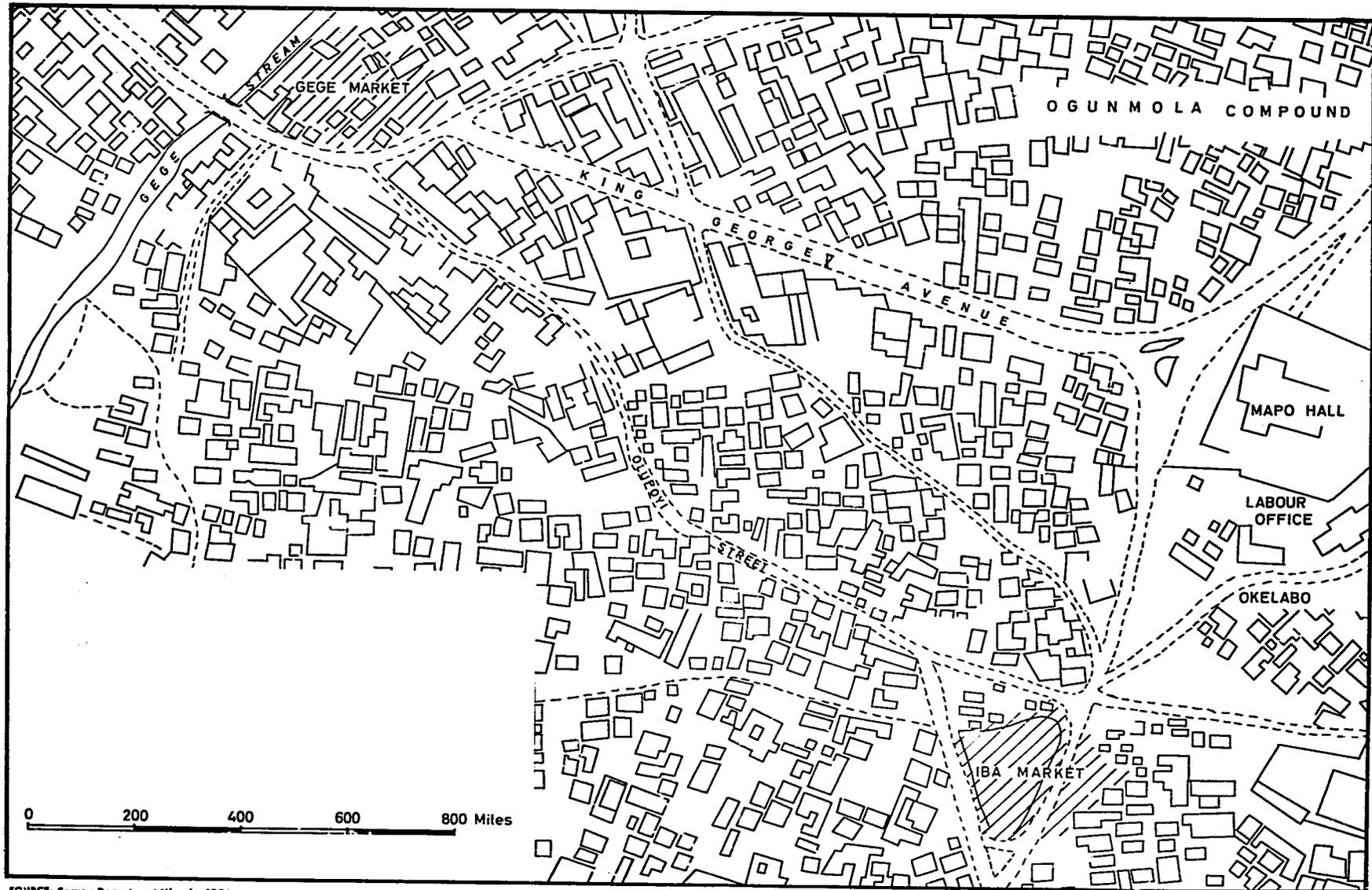
**IBADAN: MAJOR FOOD MARKETS**  
 (Showing Type of Market and Population Density 1963)



Source of Population Densities:  
 Ministry of Land and Housing

Map 8.3

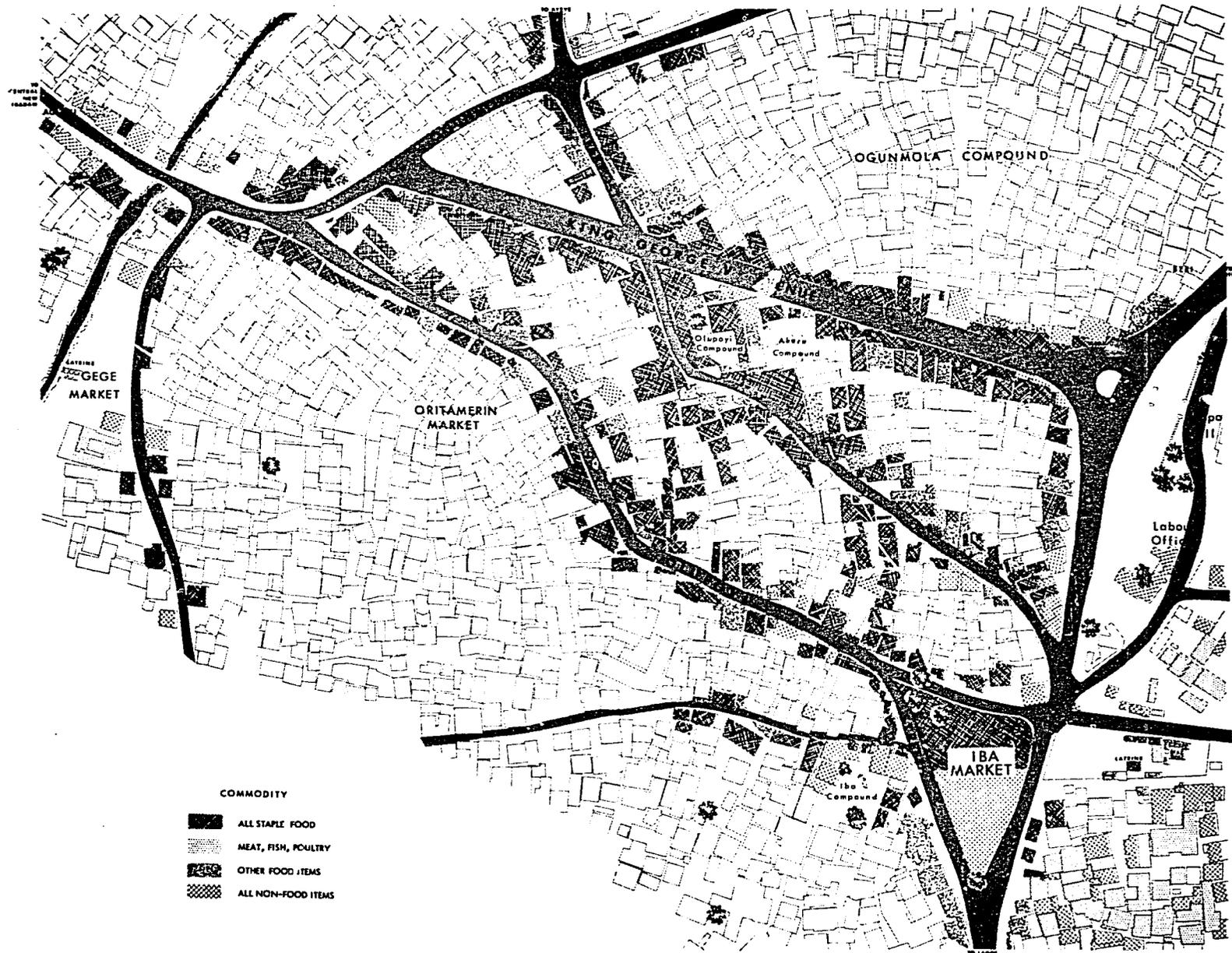
IBADAN: OJA IBA, ORITAMERIN AND GEGE MARKETS, 1949



SOURCE: Survey Department Nigeria, 1954  
Drawn from Air Photos dated 1949

Map 8.4

IBADAN: OJA IBA, ORITAMERIN MARKETS, 1961  
(Showing Location of Stalls by Commodity Group, June 1967)



be considered ostensibly as one market. As Table 8.3 shows, 26 percent of the traders were classified as wholesalers, while the remainder were retailers. The important sections of this market area trade for several hours at night, as well as during the day.

b. Central new markets. In terms of function, a central new market is the same as a central native market. However, instead of being located in the center of the native town, it is more closely connected to the new commercial and business center, which may be up to several miles away from the old center. These new centers were established by the expatriate mercantile firms as they spread their direct operations inland during the Colonial Regime.<sup>10</sup>

In Ibadan, for example, the new commercial center, Gbagi, developed close to the railway yards located about 1-1/2 miles northwest of the old hub.<sup>11</sup> Its location, together with that of Dugbe Market, is illustrated in Map 8.2. Although trading started in what is now Dugbe Market early this century, its growth in size and importance is relatively recent. This can be seen by comparing Maps 8.5 and 8.6, which represent the placement of stalls in Dugbe Market in 1948 and 1967 respectively. By May 1967, Dugbe Market contained about 6,300 traders. Of these, about 86 percent were retailers and 14 percent wholesalers. (Table 8.3)

c. Residential Markets. These are generally small retail markets located in the residential areas somewhat removed from the central markets. The location of the 12 residential markets identified for Ibadan in Table 8.2 can be seen in Map 8.2. These markets may meet either during the day or at night. The traders generally buy their supplies elsewhere, particularly from wholesalers in the central markets, for resale in these markets.

Table 8.3

NUMBER OF MARKETS, NUMBER OF SELLERS, AVERAGE NUMBER OF SELLERS PER MARKET, AND TYPE OF SELLER BY TYPE OF MARKET--MARKET SELLERS ENUMERATION - IBADAN

| Type of Market    | No. of Markets | No. of Sellers | Average No. of Sellers Per Market | Type of Seller (Percent) |            | Total (Percent) |
|-------------------|----------------|----------------|-----------------------------------|--------------------------|------------|-----------------|
|                   |                |                |                                   | Retailer                 | Wholesaler |                 |
| Central Native    | 7              | 20,963         | 2,994                             | 74                       | 26         | 100             |
| Central New       | 1              | 6,314          | 6,314                             | 86                       | 14         | 100             |
| Residential       | 6              | 3,968          | 661                               | 100                      | *          | 100             |
| Specialized Cloth | 1              | 4,338          | 4,338                             | 100†                     |            | 100             |
| Fringe            | 1              | 176            | 176                               | 100                      |            | 100             |
| <b>Total</b>      | <b>16</b>      | <b>35,759</b>  | <b>2,235</b>                      | <b>82</b>                | <b>18</b>  | <b>100</b>      |

\* Less than 0.5 percent

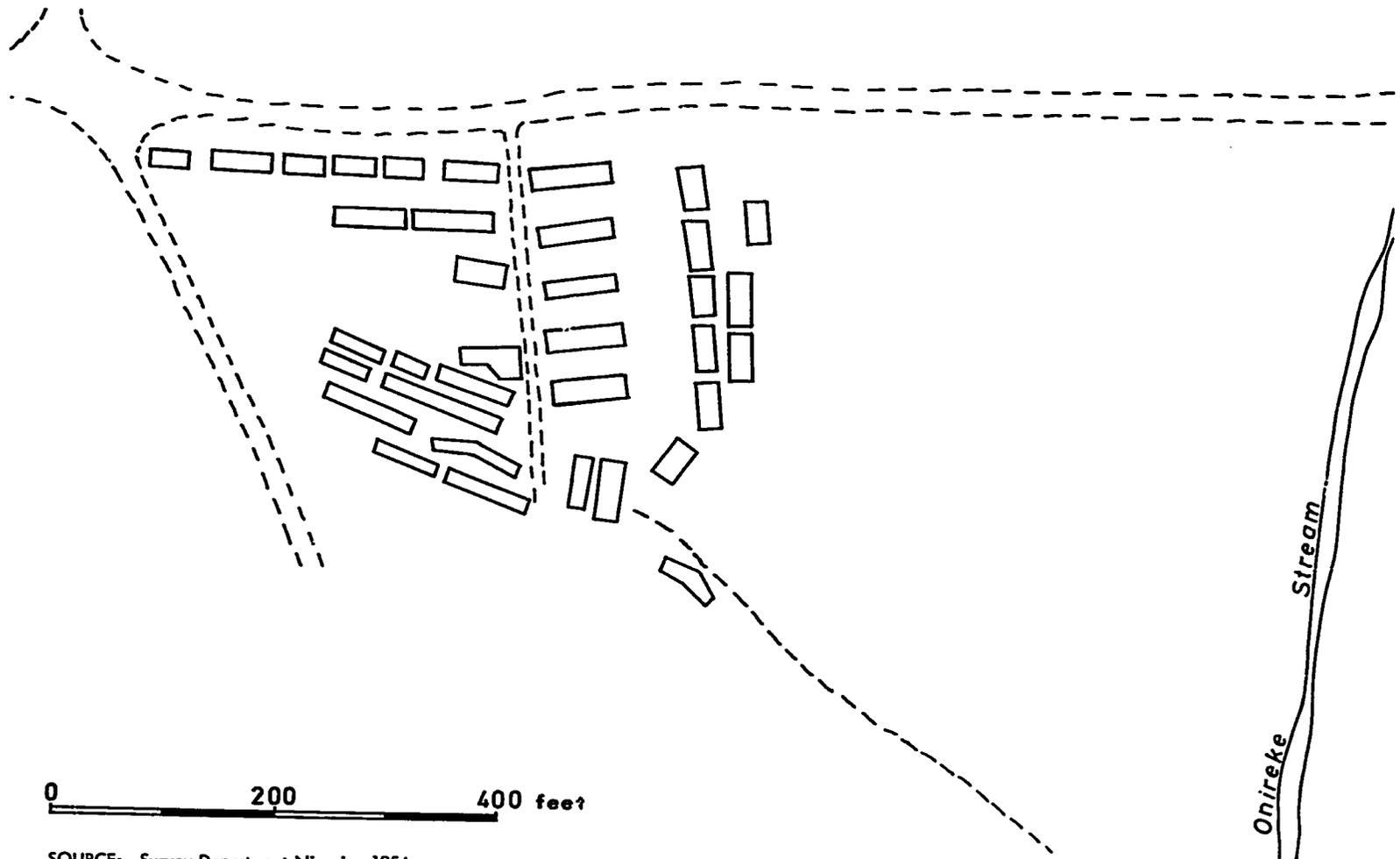
† Of the total, 2,551 sold either cloth or clothing of some kind. Most of the cloth was being sold for the first time in Ibadan. However, as most traders sold in small quantities to both consumers and other traders, they were simply classified as retailers.

The six largest residential markets in Ibadan were counted during 1967. They had on the average, 661 sellers per market. Of the total number of sellers in these markets, all but 20 could be classified as retailers.<sup>12</sup> (Table 8.3) A seventh residential market in terms of staple foods was also identified in Ibadan. However, Oje Market serves as a specialized cloth market and so deserves separate treatment. It meets every eighth day, and on the day it was enumerated (May 20, 1967) had at least 4,338 sellers, of whom 2,551 sold either cloth or clothing of some kind.<sup>13</sup>

d. Fringe markets. Located on the urban-rural fringe of the larger towns, these markets generally meet daily for a few hours in the morning. They connect the town with the surrounding rural areas. In this, they serve a two-fold function: First, they provide a location for producers

Map 8.5

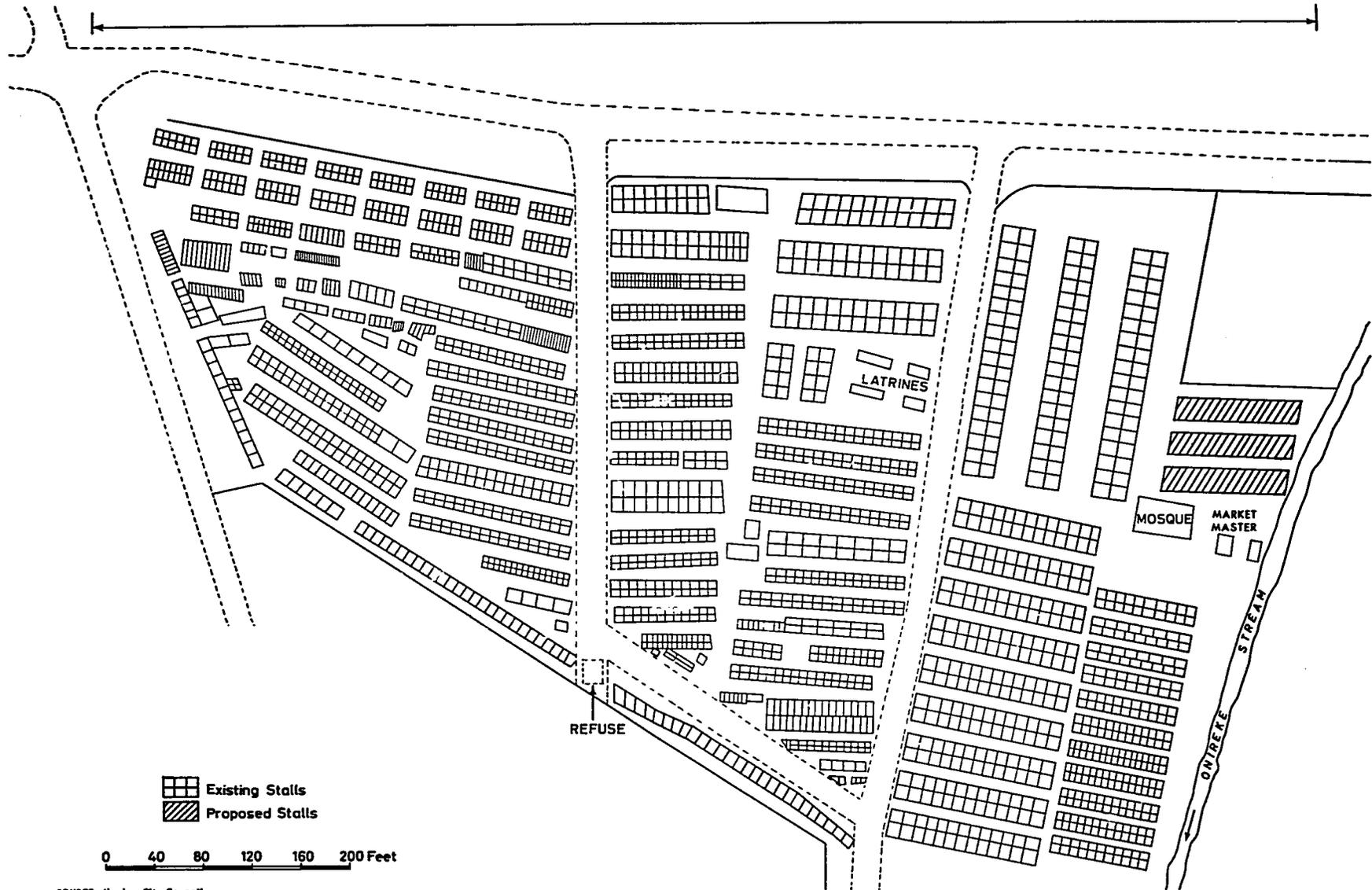
IBADAN: ARRANGEMENT OF STALLS IN DUGBE MARKET, 1949



SOURCE: Survey Department Nigeria, 1954  
Drawn from Air Photos dated 1949

Map 8.6

IBADAN: ARRANGEMENT OF STALLS IN DUGBE MARKET, 1967



SOURCE: Ibadan City Council

and assemblers of locally produced commodities to sell to middlemen from the town; and second, the trade is reversed by traders from the town selling at retail to these same producers, assemblers, and others.

In Ibadan, six permanent fringe markets have been identified and are listed in Table 8.2 and exhibited in Map 8.2. However, during the height of the fresh maize season this number is increased. On a year-round basis, the main commodity handled in all of these markets is leaves used in the packaging of foodstuffs, particularly cooked foods. Of the 176 sellers counted at Labo Market in May 1967, 118 were selling leaves they had collected in the bush along the roads that lead into Ibadan and had generally headloaded to the market for sale to middlemen, mostly from the central native markets.

Rural Markets - Rural markets are almost entirely periodic markets and serve as the main locations for assembling and distributing foodstuffs in the areas outside the larger urban agglomerations. Their main function is to provide an outlet for the marketable surplus of producers, as well as a retail source of those commodities which are deficient. While most rural markets are located in or near a village, a considerable number are not. Markets have often developed at major road junctions isolated from local villages, and many of these have grown to be large and important. Frequently, however, a village will accompany a market in its move to a better site. This is usually related to an improvement in transportation facilities, such as the provision of a new road.

Most of the 550 markets listed in the "Market Calendar" for 1967, already mentioned, are rural markets.<sup>14</sup> The main distinguishing feature



- a. Daily markets - These are rare in rural areas, although a few exist in some villages which are not yet big enough to be classified by function as towns.
- b. Two-day markets - These markets meet every other day and are only located in Ijebu and Colony Provinces. They are relatively minor as there were only 7 operating in 1967.
- c. Four-day markets - Although these markets are known as five-day markets<sup>15</sup> throughout the Region, they meet every fourth day.<sup>16</sup> They are by far the most important type of rural market and account for 416 out of the 550 or 76 percent of the markets listed in the "Market Calendar" for 1967. (Table 8.4.)
- d. Eight-day markets - Known locally as nine-day markets, these markets meet every eighth day. Although 61 occur throughout the Region, they are only dominant in Colony Province where 17 out of 32 markets or 53 percent are listed in Table 8.4 as being eight-day markets.

It seems certain that most of the periodic markets within the Region operate in conjunction with, or are complementary to, other periodic markets. Such a system of markets is generally called a "market ring," although the term "market cycle" is gaining in use and acceptance.<sup>17</sup> A market cycle exists where several adjacent markets in a rather confined area meet on different days and where the local inhabitants can easily and without hindrance go from one market in the cycle to another.

From Map 8.1, it is possible to distinguish a large number of these market cycles. It will be noticed that just about each market has its own individual and distinct set of markets to which it is related; these

depend mostly upon locational factors. As inferred, this means that for a particular market, it is possible to define the market cycle of which it is a part. This was actually done by the research assistants when they visited rural markets: almost without exception, it was possible to find other adjacent markets which meet on the days when the particular market being visited did not meet; however, even though the markets could be identified, there seemed to be little evidence of a large movement of personnel between markets.

Taking all markets together, it is not possible to define just one set of mutually exclusive market cycles. In fact, each market cycle impinges upon other market cycles, having one or more markets in common. One reason for this is to be found in the structure of rural markets themselves: over most of the more densely populated parts of the Region, for example, in the area between Ibadan and Oyo studied by Hodder,<sup>18</sup> markets are generally evenly spaced at about 7 miles, so that no hamlet or village is more than 5 miles from a market. This means that, although each village will be more closely aligned to one particular market, other markets are usually sufficiently close so that a choice of markets exists.

As periodic markets spread throughout the Region, the actual periodicity and day of holding of new markets was set in relation to the already existing adjacent markets. The day of holding selected usually fell in the middle of the off-days of the most important competitive market; this gave at least one day to assemble supplies for each market.

Any reasons proffered for the existence of the system of periodic markets as it persists in Western Nigeria must necessarily be speculative. Nevertheless, it seems reasonable to suppose that the difficulties of

transportation and storage of the staple food crops are the most important. Each market usually has associated with it a certain hinterland from which supplies are mostly headloaded in: not only does it take at least one day to assemble supplies, but also there is a limit to the quantity of supplies which is available in this restricted hinterland and which will flow through the market. Added to this is the lack of adequate storage in most rural markets; this essentially means that the limited supplies which do arrive have to be disposed of in one day.

For the itinerant retailers selling regularly in rural markets, periodic markets also have the effect of concentrating the business of the area into just one day every four or eight days. This means that these sellers can then visit more of the markets in the cycle and so increase the number of potential buyers with whom they have contact. This applies particularly to sellers of such items as imported consumer durables (plates, utensils, plastic ware), native medicines, meat, and fish.

A tremendous variation in the size of rural markets is found in Western Nigeria. For example, the size of the markets enumerated ranged from 121 for a small daily market (Maforo Market) in Ago-Are (located north west of Ibadan in Market Zone 1) to 4,474 in a very large 8-day market in Owode (located southwest of Ibadan in Market Zone 4)--of this number 1,760 were trading in kolanuts alone. For the 48 rural markets enumerated, the number of sellers per market averaged 1,170 (Table 2.5). The average number per market for each of the six market zones, however, showed considerable variation, ranging from 666 for Market Zone 2 to 2,242 for Market Zone 4 (see Table 2.5).

### 3. Commodities Traded

In nearly all traditional markets, a rather extensive but relatively standardized list of products is exchanged. Even in the smaller markets, particularly outside of the larger towns, it is possible to buy most of these commodities, although the number of sellers and available varieties are not as abundant as in the larger markets.

An abbreviated list of the range and variety of commodities traded in the traditional marketing system in Western Nigeria is presented in Appendix Table 8.1. The classification of commodities shown there is the same as that used in the analysis of the enumeration of market sellers that was made in both urban and rural markets.

The percentage distribution of the sellers enumerated in the markets studied in depth is presented in Table 8.5 for urban markets (with Ibadan and other than Ibadan listed separately) and rural markets by major commodity sold. The detail for each commodity based on type and size of trader is displayed in Appendix Tables 8.2 to 8.4.<sup>19</sup>

Sellers of all kinds and forms of foodstuff accounted for just slightly less than two-thirds of all sellers in the urban areas, with 66.5 and 64.4 percent for Ibadan and other than Ibadan respectively. With 75.9 percent, the rural markets had a considerably higher percent engaged in selling foodstuffs than the urban markets.

Exactly 25 percent of all of the sellers enumerated, both in Ibadan and in the rural markets, were selling staple foodstuffs; although a figure of 21 percent was obtained for the markets in urban areas other than Ibadan, inclusion of the smaller, less central markets would have raised this

Table 8.5

PERCENT DISTRIBUTION OF SELLERS BY COMMODITY AND  
BY TYPE OF MARKET--MARKET SELLERS ENUMERATION

| Commodity                   | Urban Markets |        | Rural Markets |
|-----------------------------|---------------|--------|---------------|
|                             | Ibadan        | Other  |               |
| <b>STAPLES</b>              |               | 25.0*  | 21.1* 25.0*   |
| 1. Beans (cowpeas)          | 4.4           | 2.9    | 1.8           |
| 2. Cassava                  |               |        |               |
| Dried                       | 2.6           | .5     | 1.8           |
| Flour                       | .8            | 2.0    | 1.3           |
| Gari                        | 2.6           | 5.5    | 4.2           |
| 3. Cocoyam                  | .7            | .7     | 1.0           |
| 4. Guinea corn              | .7            | .4     | .5            |
| 5. Maize                    |               |        |               |
| Fresh and dried             | 3.3           | 2.2    | 3.0           |
| Prepared                    | .1            | †      | †             |
| 6. Plantain                 | 1.3           | .8     | 2.3           |
| 7. Rice                     | 1.7           | 2.6    | 2.1           |
| 8. Yam                      |               |        |               |
| Dried                       | 2.5           | .5     | 2.2           |
| Flour                       | .8            | .5     | .7            |
| Fresh                       | 3.1           | 2.5    | 3.9           |
| 9. Other staples            | .3            | .1     | .1            |
| <b>OTHER FOOD</b>           |               | 21.5†  | 20.4† 29.1    |
| 10. Fruit                   | 2.3           | 1.3    | 1.7           |
| 11. Nuts and seeds          |               |        |               |
| Kola                        | 3.7           | 3.6    | 12.3          |
| Other                       | 1.2           | 1.4    | 1.4           |
| 12. Onion                   | 2.9           | 2.6    | 1.5           |
| 13. Ingredients             | 6.1           | 5.8    | 6.8           |
| 14. Vegetables              |               |        |               |
| Green                       | 2.7           | 4.1    | 3.4           |
| Oil                         | 2.3           | 1.6    | 1.7           |
| 15. Other, e.g. palm wine   | .2            | .1     | .3            |
| <b>16. DRY PROVISIONS</b>   | 2.8           | 3.7    | 3.1           |
| <b>HAWKERS</b>              | .9            | --     | --            |
| <b>PROTEIN</b>              | 13.1*         | 16.0   | 16.4*         |
| 17. Fish                    |               |        |               |
| Dried                       | 2.2           | 3.6    | 2.6           |
| Fresh                       | .7            | 1.0    | .9            |
| Stock                       | 1.2           | 2.6    | 2.1           |
| 18. Livestock               | 3.2           | 1.4    | 3.5           |
| 19. Meat                    |               |        |               |
| Dried                       | 1.3           | 1.0    | 1.6           |
| Fresh                       | 1.8           | 3.6    | 2.0           |
| 20. Poultry                 |               |        |               |
| Birds                       | 1.8           | 1.6    | 2.8           |
| Eggs                        | .5            | .5     | .8            |
| 21. Snails                  | .2            | .7     | .3            |
| 22. Other protein           | .3            | --     | †             |
| <b>23. COOKED FOOD</b>      | 3.1           | 3.4    | 2.3           |
| <b>NON-FOOD</b>             | 33.5*         | 35.6*  | 24.1*         |
| 24. Baskets/calabashes/mats | 1.3           | 1.8    | 1.8           |
| 25. China/glass/pottery     | 2.5           | 2.1    | 1.3           |
| 26. Cloth/clothing          | 9.0           | 9.5    | 5.2           |
| 27. Dry goods               | 3.5           | 5.8    | 4.0           |
| 28. Firewood                | 1.0           | 1.3    | .4            |
| 29. Hairdressers            | .8            | .8     | .6            |
| 30. Iron goods/utensils     | 1.9           | .9     | .7            |
| 31. Leaves/packers          | 2.0           | 1.9    | 1.2           |
| 32. Medicine                |               |        |               |
| Native                      | 1.5           | 2.8    | 1.7           |
| Patent                      | .4            | .5     | 1.5           |
| 34. Tailors                 | 1.6           | 1.8    | 1.4           |
| 35. Tinkers/jewelry         | 1.7           | 1.6    | 2.6           |
| 36. Other nonfood           | 6.4           | 4.9    | 1.5           |
| <b>TOTAL</b>                | 100.0*        | 100.0* | 100.0         |
| Number of sellers           | 35,759        | 27,518 | 56,182        |

\* Rounding error.

† Less than 0.5 percent.

figure closer to that for Ibadan. For the staple food crops being studied, except for yams<sup>20</sup> and cowpeas,<sup>21</sup> large overall variations in the relative importance of each of the crops were not found to exist. This can be seen in the following summary taken from Table 8.5:

| <u>Staple Food</u>       | <u>Urban Markets</u> |              | <u>Rural Markets</u> |
|--------------------------|----------------------|--------------|----------------------|
|                          | <u>Ibadan</u>        | <u>Other</u> |                      |
| Yam products             | 6.4                  | 3.4          | 6.8                  |
| Cassava products         | 6.0                  | 8.0          | 7.3                  |
| Maize products           | 3.4                  | 2.2          | 3.0                  |
| Rice                     | 1.7                  | 2.6          | 2.1                  |
| Cowpeas (beans)          | <u>4.4</u>           | <u>2.9</u>   | <u>1.8</u>           |
| Percent of Total Sellers | 21.9                 | 19.1         | 21.0                 |

The percent of traders engaged in selling the other staple food crops not included in this study varied from 2 percent of the urban areas other than Ibadan to 4 percent for the rural markets. Cocoyam, guinea corn and plantain were present almost throughout, but only in relatively small quantities.

The category, "other food," which is composed mostly of fruits, vegetables and nuts, numbered nearly as many sellers as the staple foods category for the urban areas. For the rural areas, it actually did contain more, but only because of the inclusion of 6,916 kolanut sellers. Sellers of ingredients (mostly pepper and tomatoes) can be seen to be quite important, accounting for between 5.8 to 6.8 percent of all sellers.

Dry provisions comprise the processed and packaged foodstuffs which are sold in traditional markets. Although many of these products are still

imported, such as condensed and powdered milks, a growing share is being produced in Nigeria, such as biscuits and refined sugar. Generally, sales are made in small units, e.g., single soup or sugar cubes. As Table 8.5 indicates, sellers of these commodities accounted for from 2.8 to 3.7 percent of all sellers.

Sellers of some form of meat, fish or poultry are present in all traditional markets within the Region. Because of the lack of refrigeration, most of the sellers of these high protein items handle the product either "on the hoof" or dried. This can be seen from the following regrouping made of the data in Table 8.5:

| <u>Form of Protein</u>      | <u>Urban markets</u> |              | <u>Rural Markets</u> |
|-----------------------------|----------------------|--------------|----------------------|
|                             | <u>Ibadan</u>        | <u>Other</u> |                      |
| Fresh or frozen             | 2.4                  | 4.6          | 2.8                  |
| Live animal                 | 5.2                  | 3.7          | 6.6                  |
| Dried                       | 4.7                  | 7.2          | 6.2                  |
| Eggs                        | .5                   | .5           | .8                   |
| Unallocated (other protein) | <u>.3</u>            | <u>--</u>    | <u>*</u>             |
| Percent of Total Sellers    | 13.1                 | 16.0         | 16.4                 |

Preparers of cooked foodstuffs for consumption in the market accounted for from 2.3 to 3.1 percent of all sellers.

The final major category specified, sellers of nonfood items, are important in nearly all markets, although they are more numerous in the urban markets. These sellers account for about one-third of all sellers in the urban markets and about three-quarters of all sellers in

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\* Less than 0.5 percent

the rural markets. Without doubt, sellers of cloth and clothing are the most important single group: most of the cloth is now made in Nigeria-- either by traditional methods or by machine, but mostly from imported yarn. Dry goods, such as matches and soap, also provide an important item for exchange in both urban and rural markets: again many of these items are imported, although Nigerian-made dry goods are now gaining rapidly in importance. The remainder of the nonfood items range from the products of native crafts, such as baskets, calabash containers, jewelry and pottery, to commodities collected locally, such as firewood and leaves for wrapping foodstuffs, and to people performing services, such as tailors, hair dressers and millers.

As can be judged from Table 8.5, the structure of the traditional markets in the urban areas of Western Nigeria, in terms of commodities sold, is basically uniform. Even for the rural areas, the only major departures are in the large number of kolanut traders and in the lower percent of traders engaged in selling nonfood items.

#### 4. Spatial Concentration of Commodities

Within traditional markets, sellers of the same commodity not only have a tendency to locate together, but in many markets they are forced to do so.<sup>22</sup> Particularly in the rural markets, the traders and the market administrators, if any, frequently agree on rather broad groupings of commodities and their assignment to certain sections of the markets. Any transgressions beyond these limits will usually provoke enforcement.

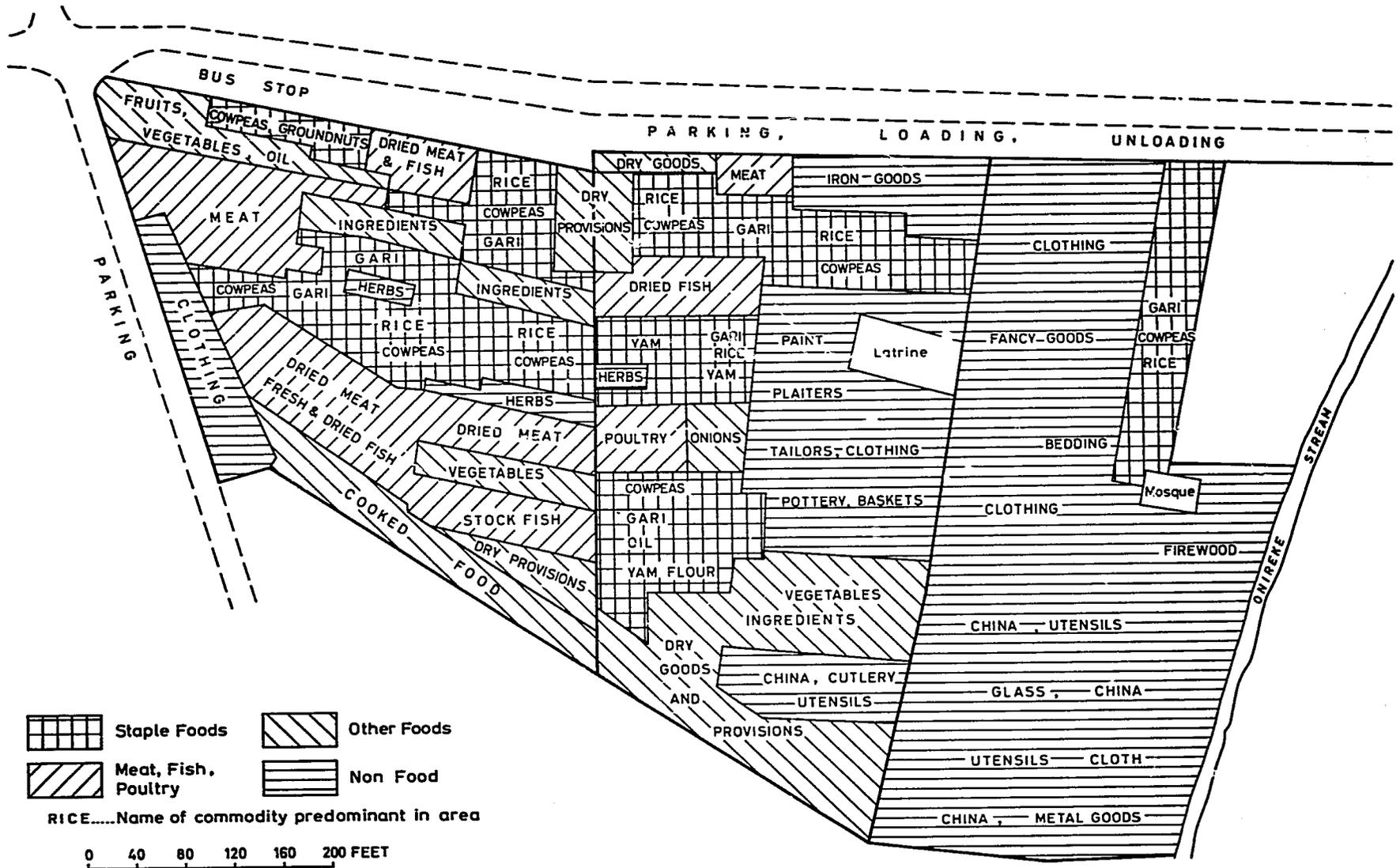
The market is usually split into food and nonfood areas. Within each of these areas, there is a further breakdown by commodity, with the allocation to each commodity depending upon its importance--shown chiefly by number of traders. This leads, for instance, to gari sellers being generally grouped with other gari sellers, although they may be located in more than one place in a market.

The number and arrangement of stalls in Dugbe Market, Ibadan, can be seen from Map 8.6. The actual location of the major commodity groups, and within these the major items, can be seen for Dugbe Market in Map 8.7. Very striking concentrations exist, but the market is sufficiently large (6,300 traders in May, 1967), that sellers of nearly all commodities are located in more than one location. This can also be partly explained by the rapid growth of the market over the last twenty years from its western end (see Map 8.5); a complete regrouping of commodities has not yet taken place.

A somewhat similar but less detailed mapping of commodities for the central native markets in Ibadan can be seen in Map 8.4. Again, sellers of the same commodity are located in close proximity to each other. For example, upon entering Oritamerin Market from the central new section of

Map 8.7

IBADAN: LOCATION OF COMMODITIES IN DUGBE MARKET, FEBRUARY 1967



Ibadan, one is immediately struck by the several hundred yam sellers that line both sides of the road; although one side is more important for retailers and the other side for wholesalers.

The formality shown in the actual structuring of the location of commodities varies considerably. The most obvious case struck was Akesan Market in Oyo Town. There the Oyo Southern District Council had erected large painted signs above the passageways between the stalls, clearly indicating in Yoruba what was to be sold in each row of stalls (as well as to the buyer what could be bought there). Generally, however, the only visible signs of this spatial specialization within markets was the actual concentration of sellers of similar commodities that was common throughout the Region.

#### 5. Age of Markets

Based on the markets studied in depth, urban markets seemed to be somewhat older than rural markets. This can be seen in Table 8.6, where more than half of the urban markets were reported to be more than 50 years old, while the opposite was true for the rural markets; only 11 out of the 36 markets for which data could be obtained<sup>23</sup> were reported to be over 50 years old.

Table 8.6

AGE OF MARKET BY TYPE OF MARKET-  
QUESTIONNAIRE ON MARKETS - PERCENT DISTRIBUTION OF  
MARKETS FOR WHICH DATA OBTAINED

| <u>Age of Market</u> | <u>Urban Markets</u> |              | <u>Rural Markets</u> |
|----------------------|----------------------|--------------|----------------------|
|                      | <u>Ibadan</u>        | <u>Other</u> |                      |
| Less than 10 years   | 9                    | --           | 3                    |
| 10 & under 25 years  | 9                    | 12           | 19                   |
| 25 & under 50 years  | 18                   | 12           | 47                   |
| 50 years & over      | <u>64</u>            | <u>76</u>    | <u>31</u>            |
| Total                | 100                  | 100          | 100                  |
| Number of Markets    | 11                   | 17           | 36                   |

The relatively recent origins of most rural markets can be traced to the spread of the road system throughout the Region. This led to not only many rural markets being re-sited, but also the development of new markets in locationally advantageous positions.

#### 6. Control and Management of Markets

The Western Region Ministry of Local Government has ultimate authority over all markets within the Region. Through "The Markets Adoptive Bye-Laws Order, 1962",<sup>24</sup> and its subsequent amendment in 1964,<sup>25</sup> it has assigned this responsibility to the local government council in whose jurisdictional area the market lies. Once the council resolves to adopt any or all of these Bye-Laws, with or without amendment, then "all markets...shall be under the control and management of the council."<sup>26</sup>

This, then, entitles the council to set the days and hours of meeting, to erect stalls, to fix fees for all stalls (irrespective of ownership) and

provide for their collection, to set standards for stalls, to control the subletting of stalls, to control the movement of motor vehicles within the market, to set sanitary standards, and so on. To assist in their enforcement, the Bye-Laws provide for fines of from ten shillings to five pounds, depending on the offense, for contraventions of the Bye-Laws. Also, the market master is empowered to eject summarily "from any stall, any person, together with his wares and other belongings" who has not paid his stallage, although it adds, "using no more force than is necessary for the purpose."

Most local government councils have adopted these Bye-Laws. However, the control and management of markets by these councils is strictly limited, as most of them lack the necessary resources to effectively regulate more than just a few of the markets under their jurisdiction. Generally, where a council has built some or all of the stalls in a market, it has assumed responsibility for the control and management of the market. In Ibadan, for example, except for parts of Iba and Gege Markets, the central native markets do not contain any Council stalls and, as a result, are not directly controlled and managed by the Ibadan City Council. Instead, this is left to the elders of the families who own the land on which the market is situated.

Where a local council accepts responsibility for a market, it appoints a person, usually known as a "market master," to execute its orders, particularly in relation to the collection of fees. Almost invariably, the market master is supported by one or more local government policemen for the purpose of "preserving order and regularity in the market." Therefore, the presence of local government policemen in the market on market days is one token of the exercise of control and management by local

councils. As Table 8.7 shows, about 43-44 percent of the urban markets studied did have local government policemen present, while this figure was somewhat higher (55 percent) for the rural markets studied.

Table 8.7

PRESENCE OF LOCAL GOVERNMENT POLICEMEN IN MARKET ON MARKET  
DAYS BY TYPE OF MARKET - QUESTIONNAIRE ON MARKETS -  
PERCENTAGE DISTRIBUTION OF MARKETS FOR WHICH DATA OBTAINED

| <u>Presence of Local<br/>Government Policemen in<br/>Market on Market Days</u> | <u>Urban Markets</u> |              | <u>Rural<br/>Markets</u> |
|--------------------------------------------------------------------------------|----------------------|--------------|--------------------------|
|                                                                                | <u>Ibadan</u>        | <u>Other</u> |                          |
| Present                                                                        | 43                   | 44           | 55                       |
| Not present                                                                    | <u>57</u>            | <u>56</u>    | <u>45</u>                |
| Total                                                                          | 100                  | 100          | 100                      |
| Number of Markets                                                              | 14                   | 18           | 42                       |

Most markets in the Region were initiated by traditional leaders. This meant that the local traditional authority exercised control over the market and assumed responsibility for its operation, including the settling of disputes as they arose. Where a local government council has taken over the control and management of a market, the traditional authority has seldom, if ever, been entirely superseded. So that, for example, in Ajegunle Market in the Ijebu area a group of male elders, organized into the Pampa society, are always present and ready to settle trade disputes and other disturbances that may arise.<sup>28</sup>

7. Ownership of Markets

Ownership of Land - By custom, markets were established on land owned by the local traditional ruler. However, markets have tended to outgrow, in both size and function, these customary markets, particularly with the

growth in population of the urban centers, and the placing of markets in rural areas outside of villages.

For the markets studied in depth, the reported owner of the land on which the market is situated can be seen from Table 8.8. Although the pattern is somewhat mixed, private families are important throughout, accounting for from 45 to 71 percent of the markets. Local traditional rulers are important in the rural markets, where they were reported to own the land on which 19 of the 38 rural markets were located: they also owned one of the "Ibadan" and 5 of the "other than Ibadan" markets as well. District or city councils owned 5 sites,<sup>29</sup> while the remaining 4 markets were located on town or village lands, no one owner of which could be identified by the informants.

Table 8.8

OWNERSHIP OF LAND ON WHICH MARKET IS LOCATED, BY  
TYPE OF MARKET--QUESTIONNAIRE ON MARKETS (PERCENT  
DISTRIBUTION OF MARKETS FOR WHICH DATA OBTAINED)

| <u>Owner of Land on which<br/>Market is Located</u> | <u>Urban Markets</u> |                  | <u>Rural<br/>Markets</u> |
|-----------------------------------------------------|----------------------|------------------|--------------------------|
|                                                     | <u>Ibadan</u>        | <u>Other</u>     |                          |
| District or city council                            | 14                   | 11               | 3                        |
| Bale or Oba                                         | 7                    | 26               | 50                       |
| Town or village (unspecified)                       | 7                    | 11               | 3                        |
| Private (families, local<br>chiefs, other)          | <u>71</u>            | <u>53</u>        | <u>45</u>                |
| Total                                               | 99 <sup>+</sup>      | 101 <sup>+</sup> | 101 <sup>+</sup>         |
| Number of Markets                                   | 14                   | 19               | 38                       |
| + Rounding error                                    |                      |                  |                          |

Ownership of facilities - In relatively few cases does the owner of the land also own most of the facilities which are found in market. The exception to this is where the local government council owns the land.

As Table 8.9 shows, the facilities predominantly belong to individuals.

Table 8.9

OWNERSHIP OF FACILITIES LOCATED WITHIN MARKET BY  
TYPE OF MARKET - QUESTIONNAIRE ON MARKETS - PERCENTAGE  
DISTRIBUTION OF MARKETS FOR WHICH DATA OBTAINED

| Owner of the<br>Market Facilities                  | Urban Markets |                  | Rural<br>Markets |
|----------------------------------------------------|---------------|------------------|------------------|
|                                                    | Ibadan        | Other            |                  |
| Local government council or tradi-<br>tional ruler | 14            | 32               | 33               |
| Mixed                                              | 7             | 11               | 5                |
| Private (individuals)                              | <u>79</u>     | <u>58</u>        | <u>62</u>        |
| Total                                              | 100           | 101 <sup>+</sup> | 100              |
| Number of Markets                                  | 14            | 19               | 39               |

+ Rounding error.

In fact, local government councils or traditional rulers only owned the facilities completely, or almost so, in two markets in Ibadan (Dugbe and Mokola), six markets in the urban areas outside of Ibadan, and thirteen of the 39 rural markets for which data was obtained. In the case of the 13 rural markets, most of them had very few facilities, and these were mostly provided by the local traditional authority or by the community in general.

8. Facilities

Stalls. Markets vary considerably as to the number, type, and condition of stalls. Without differentiating between the various types of stalls in use, Table 8.10 classifies the markets by the proportion of sellers actually selling

Table 8.10

APPROXIMATE PROPORTION OF TRADERS SELLING FROM STALLS  
 BY TYPE OF MARKET - QUESTIONNAIRE ON MARKETS -  
 PERCENT DISTRIBUTION OF MARKETS FOR WHICH DATA OBTAINED

| Proportion of Traders<br>Selling from Stalls | Urban Markets |       | Rural<br>Markets |
|----------------------------------------------|---------------|-------|------------------|
|                                              | Ibadan        | Other |                  |
| Majority (more than two-thirds)              | 50            | 61    | 33               |
| Many (one to two-thirds)                     | 10            | 22    | 33               |
| Few (less than one-third)                    | 20            | 11    | 33               |
| None                                         | 20            | 6     | 2                |
| Total                                        | 100           | 100   | 101†             |
| Number of Markets                            | 10            | 18    | 43               |

† Rounding error

from stalls. It will be noticed that nearly all markets (all but 4 of the 71 markets for which data was collected) had at least a few stalls.

Generally, stalls are more common and better constructed in urban markets, particularly in the larger more central markets, than in the rural markets. The urban markets, where stalls were not so common, were mostly the smaller residential and fringe types of markets. Only a few of the rural markets had stalls which could be considered permanent in the sense of a concrete (or other solid) base and firm foundations; where they did exist, most stalls were rather crude, temporary, open-sided structures, with poles sunk into the ground, topped with either a thatched or, more commonly, a galvanized iron sheet roof, supported on some

roughly nailed cross beams. Only a few of the rural markets were found to have more than one or two walled stalls which could be locked, although most had available, at least somewhere in close proximity, a few places where goods could be stored overnight or between market days.

For Ibadan, it is possible to describe in considerable detail the stalls used by most of the wholesalers trading in staple foodstuffs. This information was obtained in the survey of 562 wholesale traders conducted during the period February to May 1967 in Ibadan. Although the survey dealt with wholesalers, implicitly it also reflects in part the stalls used by retailers. This results from the fact that 63 percent of the wholesalers interviewed had other traders associated with (selling from) their stalls.

As Table 8.11 shows, an average of 2.09 other traders were associated with each wholesale trader. Of these, 0.35 were wholesalers, another 0.35 were retailers selling the same commodity as the wholesaler, and the remaining 1.39 were mostly retailers in the central native markets, selling commodities other than those being sold by the wholesaler.

Table 8.11  
 AVERAGE NUMBER OF OTHER TRADERS ASSOCIATED WITH STALL OF WHOLE-  
 SALER BY TYPE OF TRADER AND BY TYPE OF MARKET--WHOLESALE TRADERS  
 QUESTIONNAIRE-IBADAN--FEBRUARY-MAY 1967

| Type of Trader            | Type of Market |                     |                      | Total |
|---------------------------|----------------|---------------------|----------------------|-------|
|                           | Central Native | Central New (Dugbe) | Residential (Mokola) |       |
| Wholesaler                | .28            | .62                 | -                    | .35   |
| Retailer - same commodity | .33            | .45                 | -                    | .35   |
| " - other commodities     | 1.72           | .10                 | .38                  | 1.39  |
| All traders               | 2.33           | 1.17                | .38                  | 2.09  |
| Number of Responses       | 445            | 108                 | 8                    | 562   |

a. Roof. As shown in Table 8.12, most traders in Ibadan now have galvanized sheet iron roofs. The transition from thatched to "tin" roofs throughout the region has been in progress for most of this century. Only two percent of the stall in the central native markets in Ibadan still have thatched roofs.

Table 8.12

PERCENT DISTRIBUTION OF WHOLESALE TRADERS BY TYPE OF ROOF ON STALL AND BY TYPE OF MARKET--WHOLESALE TRADERS QUESTIONNAIRE-IBADAN--FEBRUARY-MAY 1967

| <u>Type of Roof on Stall</u> | <u>Type of Market</u> |                            |                             | <u>Total</u> |
|------------------------------|-----------------------|----------------------------|-----------------------------|--------------|
|                              | <u>Central Native</u> | <u>Central New (Dugbe)</u> | <u>Residential (Mokola)</u> |              |
| Galvanized sheet iron        | 98                    | 100                        | 100                         | 98           |
| Thatched                     | 2                     | -                          | -                           | 2            |
| Other                        | *                     | -                          | -                           | *            |
| Total                        | 100                   | 100                        | 100                         | 100          |
| Number of Responses          | 425                   | 104                        | 8                           | 537          |

\* Less than 0.5 percent

b. Walls. Without exception, the stalls of all wholesalers interviewed were walled. This is not true, however, for all retailers in Ibadan.

As Table 8.12 indicates, concrete bricks and cemented mud walls were the most common materials used. However, 59 (11 percent) of the stalls counted were found to be made of mud only, without the benefit of any cement binding or reinforcement. Most of these mud stalls were in Oritamerin Market (78 percent). The use of cement to bind mud is a transitional step between using mud only and cement bricks as a construction material. Wooden walls were only important in Dugbe Market, where they accounted for 46 percent of the stalls.

Table 8.13

PERCENT DISTRIBUTION OF WHOLESALE TRADERS BY TYPE OF  
WALLS ON STALL AND BY TYPE OF MARKET--WHOLESALE TRADERS  
QUESTIONNAIRE-IBADAN--FEBRUARY-MAY 1967

| <u>Type of Walls on Stall</u> | <u>Type of Market</u> |                            |                             | <u>Total</u>           |
|-------------------------------|-----------------------|----------------------------|-----------------------------|------------------------|
|                               | <u>Central Native</u> | <u>Central New (Dugbe)</u> | <u>Residential (Mokola)</u> |                        |
| Concrete brick                | 25                    | 27                         | 88                          | 26                     |
| Cemented mud                  | 43                    | 9                          | -                           | 38                     |
| Mud                           | 14                    | -                          | 12                          | 11                     |
| Brick or stone                | 1                     | 1                          | -                           | 1                      |
| Wood                          | 8                     | 46                         | -                           | 15                     |
| Galvanized sheet iron         | 6                     | 10                         | -                           | 7                      |
| Other                         | 2                     | 8                          | -                           | 3                      |
| <b>Total</b>                  | <u>99<sup>+</sup></u> | <u>101<sup>+</sup></u>     | <u>100</u>                  | <u>101<sup>+</sup></u> |
| Number of Responses           | 424                   | 103                        | 8                           | 535                    |

. Rounding error.

c. Floor. While most stalls in rural markets have earthen floors, this is seldom true for urban markets. Of the wholesalers interviewed in Ibadan, for example, only three percent had earthen floors, and except for two stalls with wooden floors, the remainder had concrete floors. This is indicated in Table 8.14.

Table 8.14

PERCENT DISTRIBUTION OF WHOLESALE TRADERS BY TYPE OF FLOOR  
IN STALL AND BY TYPE OF MARKET--WHOLESALE TRADERS QUESTION-  
NAIRE-IBADAN--FEBRUARY-MAY 1967

| <u>Type of Floor in Stall</u> | <u>Type of Market</u> |                            |                             | <u>Total</u> |
|-------------------------------|-----------------------|----------------------------|-----------------------------|--------------|
|                               | <u>Central Native</u> | <u>Central New (Dugbe)</u> | <u>Residential (Mokola)</u> |              |
| Earthen                       | 3                     | 4                          | -                           | 3            |
| Concrete                      | 97                    | 96                         | 100                         | 97           |
| Wood                          | *                     | -                          | -                           | *            |
| <b>Total</b>                  | <b>100</b>            | <b>100</b>                 | <b>100</b>                  | <b>100</b>   |
| Number of Responses           | 421                   | 102                        | 8                           | 531          |

\* Less than 0.5 percent.

d. Door. All stalls used by wholesalers in the survey, except for two stalls in Ayeye Market, were found to have doors of some kind. As Table 9.15 discloses, these doors were lockable in 97 percent of the cases.

Table 8.15

PERCENT DISTRIBUTION OF WHOLESALE TRADERS BY TYPE OF DOOR  
ON STALL AND BY TYPE OF MARKET--WHOLESALE TRADERS QUESTION-  
NAIRE-IBADAN--FEBRUARY-MAY 1967

| <u>Type of Floor in Stall</u> | <u>Type of Market</u> |                            |                             | <u>Total</u>          |
|-------------------------------|-----------------------|----------------------------|-----------------------------|-----------------------|
|                               | <u>Central Native</u> | <u>Central New (Dugbe)</u> | <u>Residential (Mokola)</u> |                       |
| Lockable                      | 97                    | 100                        | 100                         | 97                    |
| Not lockable                  | 3                     | -                          | -                           | 2                     |
| None                          | *                     | -                          | -                           | *                     |
| <b>Total</b>                  | <b>100</b>            | <b>100</b>                 | <b>100</b>                  | <b>99<sup>+</sup></b> |
| Number of Responses           | 436                   | 108                        | 8                           | 552                   |

\* Less than 0.5 percent.

+ Rounding error.

e. Condition of stall. Using local standards,<sup>30</sup> Table 8.16 indicates that only 9 percent of all stalls were judged to be in excellent condition: however, in Dugbe Market, 30 percent of all stalls were so rated. The remainder of the stalls were either rated good (55 percent) or fair (36 percent), although one in Iba Market was considered poor. The stalls in the central native markets were considered to be in somewhat poorer condition than those in the other markets in Ibadan. This is partly explained by the fact that the stalls in both Dugbe and Mokola Markets were built by the Ibadan City Council, many quite recently. The stalls in the central native markets, on the other hand, belong to individuals and many of them are up to 50 years or more old. Also, many were converted from living quarters as the central native market spread.

Table 8.16

PERCENT DISTRIBUTION OF WHOLESALE TRADERS BY CONDITION OF STALL AND BY TYPE OF MARKET--WHOLESALE TRADERS QUESTIONNAIRE-IBADAN--FEBRUARY-MAY 1967

| Condition of Stall  | Type of Market |                     |                      | Total |
|---------------------|----------------|---------------------|----------------------|-------|
|                     | Central Native | Central New (Dugbe) | Residential (Mokola) |       |
| Excellent           | 4              | 30                  | --                   | 9     |
| Good                | 53             | 60                  | 88                   | 55    |
| Fair                | 43             | 10                  | 12                   | 36    |
| Poor                | *              | --                  | --                   | *     |
| Very poor           | --             | --                  | --                   | --    |
| Total               | 100            | 100                 | 100                  | 100   |
| Number of Responses | 421            | 102                 | 8                    | 531   |

\* Less than 0.5 percent

Counters. The prevalence of counters in a market was found to be mostly related to the existence of stalls. However, many sellers located in stalls, particularly in the temporary stalls in rural markets, did not use counters to elevate their goods off the ground for the purposes of display and protection. Additionally, many traders selling in the open, without the protection of a stall, were found to display their wares on a counter. In a rather general way, the prevalence of counters in markets is presented by type of market in Table 8.17.

Table 8.17

APPROXIMATE PROPORTION OF TRADERS USING COUNTERS BY TYPE OF MARKET--QUESTIONNAIRE ON MARKETS--PERCENT DISTRIBUTION OF MARKETS FOR WHICH DATA OBTAINED

| <u>Proportion of Traders<br/>Using Counters</u> | <u>Urban Markets</u> |              | <u>Rural<br/>Markets</u> |
|-------------------------------------------------|----------------------|--------------|--------------------------|
|                                                 | <u>Ibadan</u>        | <u>Other</u> |                          |
| Most (more than two-thirds)                     | 60                   | 71           | 19                       |
| Many (one- to two-thirds)                       | --                   | 6            | 16                       |
| Few (less than one-third)                       | 30                   | 18           | 42                       |
| None                                            | 10                   | 6            | 23                       |
| Total                                           | 100                  | 101+         | 100                      |
| Number of Markets                               | 10                   | 17           | 43                       |

+ Rounding error.

Certainly, in the more important urban markets where the same sellers sold for long hours every day counters were the rule. In the rural markets, many of those selling at retail every market day did have counters, although probably the majority did not.

Almost all counters are of simple construction and made of unfinished and unpainted wood. They generally comprise four legs supporting a platform about one to three feet above ground level. Wherever possible, they are stored under shelter between market days. Where sufficient shelter is not available in the market and they were not taken home, the counters are generally just turned on their side.

Sealed pavement. Very few markets in the region have all, or even nearly all, of the thoroughfares between stalls or selling areas sealed. An exception to this in Ibadan is Mokola Market. Instead, as Table 8.18 suggests, many of the urban markets, including Dugbe Market in Ibadan, have only all or part of their major thoroughfares sealed. There is an even greater dearth of sealed pavement in the rural markets, as only about one-third of those visited had any at all.

Where sealed pavements do exist, the larger thoroughfares, particularly where they serve as access roads as well, are mostly sealed with asphalt. For the more minor passageways, concrete is frequently used, and in a few cases, wooden boardwalks have been laid.

Table 8.18

PRESENCE OF SEALED PAVEMENT IN MARKET BY TYPE OF  
MARKET--QUESTIONNAIRE ON MARKETS--PERCENT DISTRIBUTION  
OF MARKETS FOR WHICH DATA OBTAINED

| <u>Presence of Sealed<br/>Pavement in Market</u> | <u>Urban Markets</u>  |              | <u>Rural<br/>Markets</u> |
|--------------------------------------------------|-----------------------|--------------|--------------------------|
|                                                  | <u>Ibadan</u>         | <u>Other</u> |                          |
| Most thoroughfares                               | 18                    | 12           | 5                        |
| Main thoroughfares only                          | 27                    | 29           | 15                       |
| Some minor sealing only                          | 27                    | 18           | 12                       |
| None                                             | 27                    | 41           | 68                       |
| Total                                            | <u>99<sup>+</sup></u> | <u>100</u>   | <u>100</u>               |
| Number of Markets                                | 11                    | 17           | 40                       |

+ Rounding error

Except for several months in the drier parts of the Region, the constant high humidity and the lush surrounding vegetation generally mean that dust is not a major problem in most markets. The mud which comes with the rainy season is much more of a problem. Not only do the regularly used passageways cut deeper into the ground and so act as natural drains for run-off rainfall, they will frequently be turned into mud and slowly erode away.

Drainage. The markets with sealed pavement often also have at least the semblance of a controlled drainage system. In reality, although this is reasonably true for urban markets, it is not particularly correct for rural markets. Table 8.19 shows the extent to which a system of controlled drainage was found to exist in the markets studied

in depth. Although a few of the urban markets, such as Dugbe and Mokola Markets in Ibadan, have quite developed and extensive drainage systems, most lacked any system that could adequately drain off the prolonged and heavy downpours of the rainy season.

Table 8.19

EXISTENCE OF CONTROLLED DRAINAGE SYSTEM IN MARKET BY TYPE OF MARKET--QUESTIONNAIRE ON MARKETS--PERCENT DISTRIBUTION OF MARKETS FOR WHICH DATA OBTAINED

| <u>Type of Controlled Drainage System Present in Market</u> | <u>Urban Markets</u> |                  | <u>Rural Markets</u> |
|-------------------------------------------------------------|----------------------|------------------|----------------------|
|                                                             | <u>Ibadan</u>        | <u>Other</u>     |                      |
| Extensive--serves most stalls                               | 30                   | 28               | -                    |
| Main thoroughfares only                                     | 20                   | 6                | 7                    |
| Rudimentary                                                 | 30                   | 17               | 10                   |
| None                                                        | <u>20</u>            | <u>50</u>        | <u>83</u>            |
| Total                                                       | 100                  | 101 <sup>+</sup> | 100                  |
| Number of Markets                                           | 10                   | 18               | 42                   |

+ Rounding error.

Loading Area. Very few markets were found to have loading areas convenient to most stalls. As Table 8.20 indicates, a considerable number of markets, particularly urban markets, failed to provide any loading area within the market. The lack of good access by stalls to a loading area means that a considerable amount of effort is expended in handloading supplies to and from motor transportation.

Table 8.20

ACCESS OF STALLS TO LOADING AREA BY TYPE OF MARKET--  
 QUESTIONNAIRE ON MARKETS PERCENT DISTRIBUTION OF  
 MARKETS FOR WHL. DATA OBTAINED

| <u>Access of Stalls<br/>To Loading Area</u> | <u>Urban Markets</u> |              | <u>Rural<br/>Markets</u> |
|---------------------------------------------|----------------------|--------------|--------------------------|
|                                             | <u>Ibadan</u>        | <u>Other</u> |                          |
| Good                                        | 30                   | 28           | 45                       |
| Fair                                        | 10                   | --           | 12                       |
| Poor                                        | --                   | 28           | 17                       |
| Away from market                            | 60                   | 44           | 26                       |
| Total                                       | <u>100</u>           | <u>100</u>   | <u>100</u>               |
| Number of Markets                           | 10                   | 18           | 42                       |

Some of the rural markets particularly do provide relatively easy access. For example, Olo Market in Oyo Division and Ifon Market in Oshun Division both sit aside an area where a feeder road enters a main road, so that nearly all selling areas have individual access to a loading area. Frequently, a rural market will spread out around a central "motor park," with many of the bulkier commodities actually being displayed and sold either in or adjacent to the motor park.

Electricity. Where available, electricity is used both for lighting and for powering the small mills located in the market. As can be inferred from Table 8.21, the distribution of electricity is still basically confined to the larger urban areas of the Region. And even in these centers distribution is far from general, so that nearly half of the urban markets studied in depth do not have electricity at all. In other cases, only a few central street lights, provided by the local council, are available.

Table 8.21

PRESENCE OF ELECTRICITY IN MARKET BY TYPE OF MARKET--  
QUESTIONNAIRE ON MARKETS--PERCENT DISTRIBUTION OF  
MARKETS FOR WHICH DATA OBTAINED

| <u>Presence of<br/>Electricity in Market</u> | <u>Urban Markets</u> |              | <u>Rural<br/>Markets</u> |
|----------------------------------------------|----------------------|--------------|--------------------------|
|                                              | <u>Ibadan</u>        | <u>Other</u> |                          |
| Common                                       | 10                   | 22           | --                       |
| Limited                                      | 10                   | 17           | --                       |
| Very limited                                 | 40                   | 11           | --                       |
| Absent                                       | 40                   | 50           | 100                      |
| Total                                        | 100                  | 100          | 100                      |
| Number of Markets                            | 10                   | 18           | 42                       |

In Ibadan, only in Dugbe Market is electricity present in any number of stalls, and even here, the number is relatively small. In the areas of the central native markets where night, as well as day, trading is important, native candles and lamps are almost ubiquitous, although electricity is available; a few street lights are scattered along the streets forming these markets.

Without exception, as Table 8.21 exhibits, all rural markets studied in depth were without electricity.

Telephones. Traditional markets developed without, and are still without, the telephone. Although Table 8.22 indicates that several urban markets had at least one telephone within its bounds, in none was it an important means of communication. In Ibadan, telephones were

located in both Dugbe and Iyeosa Markets, but in all cases they belonged to individuals and were not generally available to other users.

Table 8.22

PRESENCE OF TELEPHONES IN MARKET BY TYPE OF MARKET--  
QUESTIONNAIRE ON MARKETS--PERCENT DISTRIBUTION OF  
MARKETS FOR WHICH DATA OBTAINED

| <u>Number of Telephones in Market</u> | <u>Urban Markets</u> |              | <u>Rural Markets</u> |
|---------------------------------------|----------------------|--------------|----------------------|
|                                       | <u>Ibadan</u>        | <u>Other</u> |                      |
| Plentiful                             | -                    | -            | -                    |
| Limited                               | -                    | -            | -                    |
| Very limited                          | 20                   | 11           | -                    |
| None                                  | 80                   | 89           | 100                  |
|                                       | <hr/>                | <hr/>        | <hr/>                |
| Total                                 | 100                  | 100          | 100                  |
| <br>Number of Markets                 | <br>10               | <br>18       | <br>42               |

Telephones were entirely absent from all rural markets visited, as they were from most of the villages and many of the smaller towns of the Region. In fact, Ibadan Division alone, which essentially means Ibadan town, accounted for 6,412, or two-thirds of the Region's 9,652 telephones in use in 1963-1964.<sup>31</sup>

Water. At best, traders had easy access to piped water at central locations. In no market was a tap found which belonged exclusively to one individual. The worst situations arose in the rural markets, where many markets relied on nearby streams or pools, which tended to dry up during the dry season.

Although a few rural markets had pipe-born water and a few more had central wells provided by either the local council or by community effort, the majority (79 percent), as Table 8.23 indicates, of the rural markets studied in depth and for which data was obtained, had to rely on natural surface water wherever it could be found. Even in most of the

Table 8.23

AVAILABILITY OF WATER SOURCES IN MARKET BY TYPE OF MARKET--QUESTIONNAIRE ON MARKETS--PERCENT DISTRIBUTION OF MARKETS FOR WHICH DATA OBTAINED

| <u>Availability of Water Sources in Market</u> | <u>Urban Markets</u> |              | <u>Rural Markets</u> |
|------------------------------------------------|----------------------|--------------|----------------------|
|                                                | <u>Ibadan</u>        | <u>Other</u> |                      |
| Generally available                            | 40                   | 33           | 7                    |
| Somewhat restricted                            | 10                   | 17           | 7                    |
| Restricted                                     | 30                   | 11           | 7                    |
| None available                                 | 20                   | 39           | 79                   |
| Total                                          | 100                  | 100          | 100                  |
| Number of Markets                              | 10                   | 18           | 43                   |

urban markets, water was generally somewhat difficult to obtain, although piped water was usually available from a few outlets in reasonably close proximity to the market.

Together with lights and latrines, water was one of the most frequently mentioned improvements sought in market facilities by market leaders. In rural markets, this was usually restricted to the provision of central wells, while in urban markets more outlets of pipe-born water were almost invariably thought desirable by these market leaders.

Garbage Disposal. In all markets, the individual trader is charged with the responsibility for keeping his stall in a clean and sanitary state.<sup>32</sup> However, the market authority must be responsible for actually disposing of the garbage if it is to be removed to any distance from the market site. Table 8.24 presents the prevalence of public places in markets for the deposit of garbage: from these places, the market authority controls its disposition. In effect then, the existence of public places for depositing garbage indicates that at least limited responsibility has been accepted by the market authority for the sanitary condition of the market.

Table 8.24

PREVALENCE OF PUBLIC GARBAGE DEPOSITORIES IN MARKETS BY TYPE  
OF MARKET--QUESTIONNAIRE ON MARKETS--PERCENT DISTRIBUTION  
OF MARKETS FOR WHICH DATA OBTAINED

| <u>Prevalence of Public<br/>Garbage Depositories</u> | <u>Urban Markets</u> |                        | <u>Rural<br/>Markets</u> |
|------------------------------------------------------|----------------------|------------------------|--------------------------|
|                                                      | <u>Ibadan</u>        | <u>Other</u>           |                          |
| Several                                              | 40                   | 17                     | 5                        |
| Limited                                              | --                   | 6                      | 10                       |
| Very limited                                         | 30                   | 28                     | 13                       |
| None                                                 | 30                   | 50                     | 72                       |
| Total                                                | <u>100</u>           | <u>101<sup>+</sup></u> | <u>100</u>               |
| Number of Markets                                    | 10                   | 18                     | 39                       |

<sup>+</sup> Rounding error.

As Table 8.24 indicates, one-half or more of the urban markets studied in depth had at least some public depositories. Nearly three-quarters of the rural markets, on the other hand, did not have any such receptacles.

Latrines. Besides being of convenience to the user, public latrines assist in keeping the market site and surrounding area in a more sanitary condition. Table 8.25 shows the availability of latrines in the market by type of market. In markets where latrines are generally available, such as Dugbe and Gege Markets in Ibadan, this means that there are enough facilities, usually in one central location, to provide a reasonably adequate service. Many of the publicly provided latrines have flushing facilities.

Table 8.25

AVAILABILITY OF LATRINES IN MARKET BY TYPE OF MARKET--  
QUESTIONNAIRE ON MARKETS--PERCENT DISTRIBUTION OF MAR-  
KETS FOR WHICH DATA OBTAINED

| <u>Availability of Latrines</u> | <u>Urban Markets</u> |              | <u>Rural Markets</u> |
|---------------------------------|----------------------|--------------|----------------------|
|                                 | <u>Ibadan</u>        | <u>Other</u> |                      |
| Generally available             | 50                   | 22           | 5                    |
| Some                            | -                    | -            | 2                    |
| Few                             | 10                   | 22           | 8                    |
| None                            | 40                   | 56           | 85                   |
|                                 | <hr/>                | <hr/>        | <hr/>                |
| Total                           | 100                  | 100          | 100                  |
| Number of Markets               | 10                   | 18           | 40                   |

Again, most (85 percent of the 40 markets included) of the rural markets are without such facilities, as are more than half (56 percent of the 18 markets included) of the urban markets outside of Ibadan.

#### 9. Timing

The periodicity of meeting of traditional markets in Western Nigeria has already been mentioned in relation to the types of markets. No one classification of markets is sufficient to describe the system as it exists: some urban markets may meet periodically, instead of daily, while some rural markets may meet daily instead of periodically. For example, in Ibadan, both Ibuko and Oje Markets are eight-day markets, while in Abeokuta town, only four-day markets are of any importance, with one meeting on each day (although, because there are five, two meet on one day in four).<sup>33</sup>

Time of Holding. Most markets within the Region, particularly rural markets, are essentially day markets, doing most, if not all, of their business during daylight hours. However, some of the urban markets meet at night as well as during the day and some, like those in Oyo town, conduct the major share of their transactions in the early evening. (Table 8.2 indicates the main times of holding of the markets in Ibadan.)

For the markets studied in depth, Table 8.26 indicates the distribution of the times of holding of these markets. The three (7 percent of total) night markets visited were all in Oyo Division.

Table 8.26

TIME OF HOLDING OF MARKETS BY TYPE OF MARKET--  
QUESTIONNAIRE ON MARKETS--PERCENT DISTRIBUTION  
OF MARKETS FOR WHICH DATA OBTAINED

| <u>Time of Holding</u> | <u>Urban Markets</u> |              | <u>Rural<br/>Markets</u> |
|------------------------|----------------------|--------------|--------------------------|
|                        | <u>Ibadan</u>        | <u>Other</u> |                          |
| Mainly day             | 50                   | 63           | 91                       |
| Mixed day-night        | 43                   | 26           | 2                        |
| Mainly night           | 7                    | 11           | 7                        |
| Total                  | 100                  | 100          | 100                      |
| Number of markets      | 14                   | 19           | 45                       |

Hours of Holding. As Table 8.27 indicates, most markets visited met between 8 and 12 hours on each day of holding. Ibadan markets, however, generally have longer trading hours and usually extend beyond 12 hours per day.

Table 8.27

HOURS OF MEETING OF MARKETS BY TYPE OF MARKET--  
QUESTIONNAIRE ON MARKETS--PERCENT DISTRIBUTION  
OF MARKETS FOR WHICH DATA OBTAINED

| <u>Hours of Meeting</u> | <u>Urban Markets</u> |              | <u>Rural<br/>Markets</u> |
|-------------------------|----------------------|--------------|--------------------------|
|                         | <u>Ibadan</u>        | <u>Other</u> |                          |
| Less than 4 hours       | 7                    | 5            | 2                        |
| 4 & under 8 hours       | --                   | 16           | 22                       |
| 8 & under 12 hours      | 21                   | 52           | 64                       |
| 12 hours & over         | 71                   | 26           | 11                       |
| Total                   | 99+                  | 99+          | 99+                      |
| Number of markets       | 14                   | 19           | 45                       |

+ Rounding error.

Importance of Various Days. For urban markets, Monday and Saturday appear to be the two busiest days of the week. In the sample of markets, these two days accounted for 29 out of the 33 days mentioned.

Table 8.28 shows for periodic markets the importance of off-market days relative to market days in terms of the number of sellers attending on both days. On off-market days most markets contain less than 15 percent of the total attending on market days.

Table 8.28

PERCENT OF SELLERS ATTENDING PERIODIC MARKETS ON OFF-MARKET DAYS BY TYPE OF MARKET--QUESTIONNAIRE ON MARKETS (PERCENT DISTRIBUTION OF MARKETS FOR WHICH DATA OBTAINED)

| <u>Percent of Sellers</u> | <u>Urban Markets</u> |              | <u>Rural</u>   |
|---------------------------|----------------------|--------------|----------------|
|                           | <u>Ibadan</u>        | <u>Other</u> | <u>Markets</u> |
| Less than 5 percent       | 50                   | 33           | 40             |
| 5 & under 15 percent      | 50                   | 50           | 30             |
| 15 & under 25 percent     | --                   | 17           | 25             |
| 25 percent & over         | --                   | --           | 5              |
| Total                     | 100                  | 100          | 100            |
| Number of markets         | 2                    | 6            | 20             |

### C. BUSINESS STRUCTURE

With rare exception, the marketing of staple foods is carried on by sole proprietor and partnership businesses. The small size of individual businesses and the low return in proportion to the cost and trouble involved discourage most traders from converting to a limited liability form of business organization. Even if traders are aware of the possibility, the degree of business skill, management and capital that would be required is not yet generally present among food sellers. The only businesses found engaged in the marketing of staple foods which did have a limited liability corporate structure, were a few of the large mercantile companies that imported rice. These companies operated entirely outside the traditional marketing system, although they did supply wholesalers in the system who sold in the local markets.

#### 1. Sole Proprietorship

Most traders in the traditional marketing system operate on their own, absorbing whatever gains losses may accrue from their business activities. Of the 256 traders in Ibadan included in the Market Traders Questionnaire #2, all but 25, or 10 percent, were in business entirely by themselves. By type of trader, this breaks down as follows:

| <u>Business Structure</u> | <u>Type of Seller</u> |                         |                       | <u>All Sellers</u> |
|---------------------------|-----------------------|-------------------------|-----------------------|--------------------|
|                           | <u>Retail Only</u>    | <u>Retail-Wholesale</u> | <u>Wholesale Only</u> |                    |
| Sole proprietorship       | 99                    | 85                      | 77                    | 90                 |
| Partnership               | 1                     | 15                      | 23                    | 10                 |
| Total                     | <u>100</u>            | <u>100</u>              | <u>100</u>            | <u>100</u>         |
| Number of Traders         | 130                   | 55                      | 71                    | 256                |

Retailers, both in urban and rural markets, are almost entirely sole proprietors of their businesses. Wholesalers and assemblers, however, do operate more frequently in partnership, but even these traders operate mostly alone. Although 23 percent of the wholesalers in the Market Traders Questionnaire #2 were found to operate in partnership with others, only 5 percent of the wholesale traders in the Wholesale Traders Questionnaire reported that they had partners.

## 2. Partnership

Although not generally common, partnerships do exist. The typical partnership among wholesalers in Ibadan seems to be between two friends (73 percent of wholesalers in partnership, according to the Wholesale Traders Questionnaire, had just one partner, with the same percent being in partnership with a friend--the remainder with relatives) who have built a stable relationship over a period of years (60 percent had been in partnership for between 5 and 20 years). The actual role of each partner does not appear to be clearly defined, although one will generally sell the foodstuff and manage the business, while the other may just provide capital (30 percent in the Wholesale Traders Questionnaire but 76 percent in the Market Traders Questionnaire #2), acquire the supplies in the producing area (40 percent) or assist in selling (30 percent). Almost invariably, profits and losses are shared equally (96 percent).

More than anything, partnerships are used to extend trading operations beyond the limits available to one individual. However, two traits in the Yoruba culture tend to mitigate against the ready formation of partnerships: firstly, the stress on individualism; and, secondly, the mutual distrust which most Yoruba have for each other.

### 3. Unincorporated Trading Companies

Several strong associations of food traders exist in the main supply area of the Region as well as in the major urban markets. The Ifelodun Foodstuffs Dealers and Suppliers Association is quite active and important not only in Ibadan but also in the major supply areas of Oyo Division. Members of other associations, such as the Gege Yam Sellers Company and the Egbe Olowo Apo Trading Company, both with headquarters in Ogbomosho, are also active in the major supply areas of Oyo Division and sell in Lagos, Ibadan and other centers.

Essentially, these unincorporated trading companies are similar in nature and behavior to a traditional cult. General policy decisions are made in the center by a power elite and then acted upon by a large number of small, separate groups composed mostly of one or a few traders. Although members trade in groups or as individuals and are often somewhat competitive with one another, they tend to follow quite closely the policy on prices and trading behavior decided by the whole company. In the areas where their influence and control is strong and effective, such as around Iseyin and Ogbomosho, this results in these trading groups being able to bargain collectively with farmers and smaller local assemblers. In such cases, their ability to control supplies, prices and competitive conditions are often quite effective and complete.

Members generally pay an initiation and annual fee to the association. This is used to pay officers' emoluments and to defray the costs of operating the association. Loans to members may also be made from this fund. A fee of £5-6 was frequently quoted as the amount paid by traders to the association.

#### 4. Cooperatives

For many reasons, food marketing cooperatives have never flourished in Western Nigeria. For example, a yam marketing cooperative society established by (for?) producers around Oshogbo in 1946 was reported to have failed for the following main reasons:

1. Excessive loss from rotting due to slow handling by paid workers with no financial interest in the produce.
2. Excessive loss from damage (bruising) to the tubers during rail shipment to Ibadan.
3. Excessive loss from pilferage at all levels.
4. Producers' suspicion that they would not get their full price if they released their commodity in advance of payment.

The situation with regard to possible cooperatives is still not bright. Mutual distrust and the inability to find suitable management persist. Producers still prefer to accept a lower cash price from private merchants, realizing they are being underpaid, rather than take the risks involved in joining together in cooperatives. The perishability of staple foods is also a problem.

The only active cooperatives involved in staple food marketing in Western Nigeria known to the author are a yam cooperative at Otan (Oshun Division), which is under the leadership of the local Catholic Mission, and a maize cooperative at Ifonyintedo (Egbado Division), which has its own silo and is sponsored by the Ministry of Agriculture and Natural Resources as part of its livestock and poultry feed project.

Even in the yam cooperative at Otan, where the Mission provided a five-ton lorry and released an expatriate priest for six months to get the cooperative established and train some local individuals to take over from him, the main problem is one of effective local leadership and management. Without adequate local involvement, it cannot be a viable enterprise.

#### D. PERSONNEL

##### 1. Types.

The various types of intermediaries involved in the marketing of staple foods have already been described in Chapter VII in conjunction with the flow of staple foods to Ibadan through exchange points (VII-16 - VII-17). These types were classified solely by function and location of traders.

In the producing areas, rural-resident intermediaries, known as "assemblers", buy and bulk produce from both farmers and other assemblers for movement predominantly to the deficit urban consuming areas. These assemblers dispose of their supplies, either in the producing area or in the urban center, by selling mostly to "wholesalers" who are, by definition, residents of urban areas. The wholesalers then break bulk by selling to retailers in even smaller quantities. Retailers are also pervasive in rural areas, where they again perform the function of breaking down bulk quantities for sale to consumers. "Prepared food sellers" may buy supplies at any point in the flow of commodities, but in the urban areas usually do so from wholesalers.

## 2. Sex of Market Traders

Superficially, the marketing of staple foods appears to be almost entirely in the hands of women. A visit to just about any traditional market in Western Nigeria will leave a striking impression of the predominance of women in all but a few commodities. However, a little deeper investigation, especially in Ibadan, will reveal the participation of a considerable number of men, many of whom are very influential in the marketing of their particular specialty. For example, in the survey of wholesale traders of staple foods conducted in Ibadan, 79 percent of those included were male, and 85 percent of the total value of sales recorded was attributable to these male sellers. Males are more important not only in the acquisition of supplies for Ibadan, but also in the actual control of supplies as they enter the distributive system in Ibadan.

Of all the sellers enumerated in the traditional markets of Ibadan by the project, as Table 8.29 shows, 71 percent were female. Of these women, 92 percent were retailers, while the remaining 8 percent were wholesalers. Males accounted for 29 percent of all sellers enumerated, with 59 percent of the males selling at retail and the remaining 41 percent being classified as wholesalers.

Table 8.29

IBADAN MARKETS--PERCENT DISTRIBUTION OF STAPLE FOOD SELLERS BY COM-  
MODITY, BY SEX, AND BY TYPE OF TRADER--MARKET SELLERS ENUMERATION

| Commodity       | Percent of Sellers of Commodity |           |           |           | Total      | Number<br>Of Sellers |
|-----------------|---------------------------------|-----------|-----------|-----------|------------|----------------------|
|                 | Male                            |           | Female    |           |            |                      |
|                 | Retail                          | Wholesale | Retail    | Wholesale |            |                      |
| Yam - dried     | 19                              | 35        | 37        | 9         | 100        | 883                  |
| - flour         | --                              | 22        | 64        | 15        | 101†       | 302                  |
| - fresh         | 22                              | 36        | 31        | 10        | 99†        | 1,116                |
| Cassava - dried | *                               | 39        | 50        | 10        | 99†        | 941                  |
| - flour         | 1                               | 37        | 57        | 6         | 101†       | 270                  |
| - gari          | 1                               | 22        | 68        | 9         | 100        | 933                  |
| Maize - shelled | 1                               | 41        | 49        | 9         | 100        | 1,167                |
| - prepared      | --                              | --        | 60        | 40        | 100        | 40                   |
| Rice            | *                               | 27        | 60        | 13        | 100        | 624                  |
| Cowpeas (Beans) | *                               | 42        | 51        | 7         | 100        | 1,609                |
| Other Staples   | --                              | <u>11</u> | <u>78</u> | <u>11</u> | <u>100</u> | <u>1,054</u>         |
| Total Staples   | <u>5</u>                        | <u>32</u> | <u>53</u> | <u>10</u> | <u>100</u> | <u>8,939</u>         |
| All Commodities | 17                              | 12        | 65        | 6         | 100        | 35,759               |

\* Less than 0.5 percent.

† Rounding error.

The structure of traders in the marketing of staple food crops in Ibadan is quite different from that of most other commodities (see Appendix Table 8.2). In fact, all but one percent of the wholesalers located in traditional markets in Ibadan deal in foodstuffs, with 59 percent of the wholesalers dealing explicitly in staple foods. Of these wholesalers of staple foods, 77 percent were male. Further, of all sellers of staple foods, only 5 percent were males selling at retail and, as Table 8.29 infers, almost all (94 percent) of these were selling fresh and dried yam.

In the urban markets outside of Ibadan, only 14 percent of all sellers were found to be male. In the towns of Oyo, Oshogbo and Ile-Ife, the proportion of male sellers was particularly low, at between 3 and 7 percent of all sellers. Male sellers in Abeokuta and Akure were above the average at 16 and 18 percent respectively--still below the 29 percent for Ibadan. As displayed in Appendix Table 8.3, most of the males were selling either non-food or protein items, with only 10 percent of all males selling staple foods. Among all sellers of staple food commodities, males accounted for even less at 6 percent of the total. At 94 percent of all staple food sellers, females can certainly be considered predominant in the urban markets outside of Ibadan.

In the rural markets, males accounted for 24 percent of all sellers enumerated, but only 13 percent of all sellers of staple foods. Table 8.30 presents, for the rural markets, the distribution by commodity of male and female sellers. As in Ibadan, males are most important in yam,

Table 8.30

**RURAL MARKETS--PERCENT DISTRIBUTION OF SELLERS  
OF STAPLE FOODS BY COMMODITY AND BY SEX--MARKET  
SELLERS ENUMERATION**

| <u>Commodity</u> | <u>Percent of Sellers<br/>of Commodity</u> |               |              | <u>Number of<br/>Sellers</u> |
|------------------|--------------------------------------------|---------------|--------------|------------------------------|
|                  | <u>Male</u>                                | <u>Female</u> | <u>Total</u> |                              |
| Yam - dried      | 16                                         | 84            | 100          | 1,238                        |
| - flour          | 13                                         | 87            | 100          | 374                          |
| - fresh          | 35                                         | 65            | 100          | 2,190                        |
| Cassava - dried  | 5                                          | 95            | 100          | 1,011                        |
| - flour          | 1                                          | 99            | 100          | 753                          |
| - gari           | 4                                          | 96            | 100          | 2,338                        |
| Maize - shelled  | 12                                         | 88            | 100          | 1,682                        |
| - prepared       | --                                         | 100           | 100          | 27                           |
| Rice             | 12                                         | 88            | 100          | 1,178                        |
| Cowpeas          | 12                                         | 88            | 100          | 1,039                        |
| Other staples    | <u>7</u>                                   | <u>93</u>     | <u>100</u>   | <u>2,201</u>                 |
| Total Staples    | <u>13</u>                                  | <u>87</u>     | <u>100</u>   | <u>14,027</u>                |
| All Commodities  | <u>24</u>                                  | <u>76</u>     | <u>100</u>   | <u>56,182</u>                |

particularly fresh yam tubers, in which they account for 35 percent of all such sellers. Cassava in all its forms can be considered a woman's crop in rural areas, as 96 percent of all sellers of cassava products were female. Maize, rice and cowpeas each had male sellers constituting 12 percent of their total sales force.

### 3. Age

In general, there are very few traders in staple foods in Western Nigeria under 25 and over 65 years of age. This can be seen for Ibadan in Table 8.31 where, in a sample of 264 traders, 98 percent of all traders were between 25 and 65 years of age. The average age of these traders was

Table 8.31

PERCENT DISTRIBUTION OF TRADERS BY AGE AND  
BY TYPE OF SELLER--MARKET TRADERS QUESTION-  
NAIRE #1-IBADAN--JUNE-JULY 1966

| Age                    | Type of Seller |                  |                | All Sellers |
|------------------------|----------------|------------------|----------------|-------------|
|                        | Retail Only    | Retail-Wholesale | Wholesale Only |             |
| Under 25 years         | 1              | --               | --             | *           |
| 25 and under 35 years  | 32             | 18               | 6              | 22          |
| 35 and under 45 years  | 41             | 33               | 44             | 38          |
| 45 and under 55 years  | 20             | 34               | 25             | 27          |
| 55 and under 65 years  | 5              | 13               | 22             | 11          |
| 65 years and over      | 2              | 2                | 3              | 2           |
| Total                  | <u>101†</u>    | <u>100</u>       | <u>100</u>     | <u>100</u>  |
| Average Age (in years) | <u>38</u>      | <u>43</u>        | <u>46</u>      | <u>42</u>   |
| Standard Deviation     | <u>9.3</u>     | <u>10.0</u>      | <u>9.5</u>     | <u>10.0</u> |
| Number of Traders      | 106            | 122              | 36             | 264         |

\* Less than 0.5 percent.

† Rounding error.

42 years, although retailers were somewhat less at 38 years and wholesalers higher at 46 years. The mean age of 528 wholesalers in the wholesale traders questionnaire was a confirming 45 years ( $\pm 9.0$ ).<sup>34</sup>

Based on sex of trader, males were found to be slightly older than females. In the Market Traders Questionnaire #1, males averaged 44 years ( $\pm 9.2$ ), while females averaged 41 years ( $\pm 10.2$ ). Again, in the Wholesale Traders Questionnaire, males averaged 45 years ( $\pm 8.4$ ), while females averaged 42 years ( $\pm 10.6$ ). In both surveys, the women's ages covered a greater span of years than did the men's.

In the Wholesale Traders Questionnaire, there was little difference in the average age of wholesalers when they were classified by either market or total value of sales. This indicates that, in terms of age, the wholesalers in the markets of Ibadan have a roughly similar pattern of age distribution and that age is not an important factor if business success is judged by size of business.

#### 4. Education

Bearing in mind that residents in urban areas generally receive a better education than people living in rural areas, Table 8.32 is presented for a sample of 264 traders in Ibadan. Based on the number of years school was attended, males had an average of three years of education, while females had an average of one year. This, however, hides the fact that 58 percent of the males and 87 of the females had not attended school at all.

Table 8.32

PERCENT DISTRIBUTION OF TRADERS BY YEARS IN SCHOOL AND BY SEX OF  
SELLER--MARKET TRADERS QUESTIONNAIRE #1-IBADAN-JUNE-JULY 1966

| <u>Years in School</u> | <u>Sex of Seller</u>  |                        | <u>All<br/>Sellers</u> |
|------------------------|-----------------------|------------------------|------------------------|
|                        | <u>Male</u>           | <u>Female</u>          |                        |
| None                   | 58                    | 87                     | 80                     |
| 1 - 2 years            | 1                     | 1                      | 1                      |
| 3 - 4 years            | 4                     | 4                      | 3                      |
| 5 - 6 years            | 19                    | 5                      | 8                      |
| 7 - 8 years            | 7                     | 3                      | 3                      |
| 9 - 10 years           | 7                     | 1                      | 2                      |
| 11 - 12 years          | <u>1</u>              | <u>1</u>               | <u>1</u>               |
| Total                  | <u>97<sup>+</sup></u> | <u>102<sup>+</sup></u> | <u>98<sup>+</sup></u>  |
| Average (in years)     | <u>3</u>              | <u>1</u>               | <u>1</u>               |
| Standard Deviation     | <u>3.7</u>            | <u>2.0</u>             |                        |
| Number of Traders      | 67                    | 197                    | 264                    |

+ Rounding error.

As most of the males are wholesalers, it is significant to note that this type of trader was generally a little better educated than the retailer (3 years of school compared with 1 year). In fact, in Dugbe Market particularly, several of the larger male traders were relatively well educated and were literate in English as well as Yoruba. All of these traders were wholesalers of cowpeas and rice--commodities for which an adequate means of communication is essential because of the use of agents in the producing areas up to 800 miles away.

## 5. Tribe

Most of the traders dealing in the traditional markets in Western Nigeria are without doubt of Yoruba origin. Perhaps the major exception to this are the Hausa traders engaged in the kolanut trade in the central and southeastern parts of the Region. In Ibadan, about 7 percent, at most, of the traders in staple foods are from other tribes. For wholesalers, this can be seen in Table 8.33 by area of tribe and by sex.<sup>35</sup>

Table 8.33

PERCENT DISTRIBUTION OF TRADERS BY TRIBE AND BY SEX--  
WHOLESALE TRADERS QUESTIONNAIRE-IBADAN--FEBRUARY-MAY 1967

| <u>Tribe</u>             | <u>Sex of Trader</u> |               | <u>Both</u> |
|--------------------------|----------------------|---------------|-------------|
|                          | <u>Male</u>          | <u>Female</u> |             |
| Yoruba                   | -- 94                | -- 91†        | -- 93†      |
| Ibadan                   | 57                   | 40            | 54          |
| Egba                     | 2                    | 21            | 6           |
| Ijebu                    | 4                    | 8             | 5           |
| Oyo                      | 20                   | 8             | 17          |
| Oshun                    | 4                    | 1             | 3           |
| Ekiti                    | *                    | 2             | 1           |
| Ilorin                   | 2                    | 2             | 2           |
| Unspecified              | 5                    | 10            | 6           |
| Mid-Western              | 1                    | 8             | 3           |
| Eastern                  | 0                    | 0             | 0           |
| Northern                 | 5                    | 1             | 4           |
| <u>Total</u>             | <u>100</u>           | <u>100</u>    | <u>100</u>  |
| <u>Number of Traders</u> | <u>434</u>           | <u>115</u>    | <u>549</u>  |

\* Less than 0.5 percent.

† Rounding error.

The distribution of the tribal origin of wholesalers in Ibadan by markets provides some valuable insights into the organization of markets. In effect, residents of the supply areas to Ibadan have migrated to Ibadan to market commodities from their home area

Native Ibadan residents in Dugbe Market constitute only 30 percent of all wholesalers surveyed in this market. Egbas, however, also account for 30 percent and are mostly women dealing in gari, which they assemble in the markets between Ibadan and Abeokuta. The people from Mid-Western Nigeria were split between Dugbe (9 traders) and Mokola (6 traders) Markets, where they traded mostly in a specialty gari (yellow in appearance) produced within their Region.

With 60 percent, the central native markets had a higher proportion of indigenous Ibadan residents. Of the remainder, 21 percent were Yoruba people from Oyo Division. They are particularly important (46 percent of wholesalers surveyed) in Iyeosa and Ayeye Markets--the markets closest to the highway leading from the important surplus producing areas of Oyo Division. Nupe tribesmen from Northern Nigeria, wholesaling rice again produced in their home grounds, were important in Gege and Iba Markets.

#### 6. Employees

Although the practice of employing one or more assistants is fairly common, especially in urban markets, it is still far from general. In the Ibadan markets, for instance, the survey of 264 traders showed that 36 percent of all traders employed at least one full-time assistant. However, this ranged from 23 percent for retailers to 44 percent for retail-wholesalers

and wholesalers. As Table 8.34 discloses, many of these traders employed more than one assistant, several employing six or more.

Table 8.34

PERCENT DISTRIBUTION OF TRADERS BY NUMBER OF FULL-TIME ASSISTANTS AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #1-IBADAN-- JUNE-JULY, 1966

| Number of Full-Time Assistants | Type of Seller |        |                  |        |                |        |                  |        |
|--------------------------------|----------------|--------|------------------|--------|----------------|--------|------------------|--------|
|                                | Retail Only    |        | Retail-Wholesale |        | Wholesale Only |        | All Sellers      |        |
|                                | Paid           | Unpaid | Paid             | Unpaid | Paid           | Unpaid | Paid             | Unpaid |
| None                           | 98             | 80     | 98               | 57     | 72             | 75     | 95               | 69     |
| 1                              | --             | 10     | 1                | 7      | 17             | 11     | 3                | 9      |
| 2                              | 1              | 3      | 1                | 13     | 8              | 8      | 2                | 8      |
| 3                              | 1              | 4      | --               | 11     | 3              | 3      | 1                | 7      |
| 4                              | --             | 1      | --               | 4      | --             | 3      | --               | 3      |
| 5                              | --             | 1      | --               | 4      | --             | --     | --               | 2      |
| 6 or more                      | --             | 1      | --               | 4      | --             | --     | --               | 2      |
| Total                          | 100            | 100    | 100              | 100    | 100            | 100    | 101 <sup>+</sup> | 100    |
| Number of Traders              | 106            |        | 122              |        | 36             |        | 264              |        |

<sup>+</sup> Rounding error.

Of the traders with assistants in this sample, only 14 percent paid a regular cash wage; the remainder provided the employees with the basic necessities of life --a small cash allowance being generally considered a necessity. The major reason for this particular practice can be gleaned from Table 8.35, which indicates that only 2 percent of all sellers surveyed hired only assistants who were unrelated. This means

Table 8.35

PERCENT DISTRIBUTION OF TRADERS BY RELATIONSHIP OF ASSISTANTS TO  
 TRADER AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #1-  
 IBADAN--JUNE-JULY 1966

| Relationship of<br>Assistants to<br>Traders | Type of Seller |                      |                   | All<br>Sellers  |
|---------------------------------------------|----------------|----------------------|-------------------|-----------------|
|                                             | Retail<br>Only | Retail-<br>Wholesale | Wholesale<br>Only |                 |
| No Assistants                               | 77             | 56                   | 56                | 64              |
| All Related                                 | 20             | 42                   | 36                | 32              |
| Some Related                                | 2              | --                   | 3                 | 1               |
| All Unrelated                               | 1              | 2                    | 6                 | 2               |
| Total                                       | 100            | 100                  | 101 <sup>+</sup>  | 99 <sup>+</sup> |
|                                             | 106            | 122                  | 36                | 264             |

· Rounding error.

that 94 percent of all traders with assistants employed relatives. With the system of extended families as it exists in Western Nigeria, these traders were, therefore, mostly fulfilling their familial obligations by giving employment, and hence support, to relatives worse off than themselves. As most of these assistants are relatively young, this in effect aids the assistant's parents by reducing their responsibility.

In the more comprehensive survey of wholesalers, 28 percent were found to have regular full-time employees, although only 8 percent had more than one assistant. One trader in Dugbe Market employed 15 assistants, some of whom were located in his supply area. Although some variation existed in the average number of assistants employed by

wholesalers in each market, this seems to be related more to the size of the trader than to any other characteristic. The distribution of wholesalers by number of assistants and by value of monthly sales is presented in Table 8.36. Generally, the larger the trader in terms of sales, the higher

Table 8.36

PERCENT DISTRIBUTION OF TRADERS BY NUMBER OF ASSISTANTS AND BY VALUE OF MONTHLY SALES--WHOLESALE TRADERS QUESTIONNAIRE-IBADAN-FEBRUARY-MAY 1967

| Number of Assistants | Value of Monthly Sales |             |            |            |            | All        |
|----------------------|------------------------|-------------|------------|------------|------------|------------|
|                      | Under £100             | £100-£199   | £200-£299  | £300-£499  | Over £500  |            |
|                      | 83                     | 76          | 56         | 55         | 35         | 72         |
|                      | 14                     | 21          | 31         | 31         | 26         | 20         |
|                      | 3                      | 2           | 12         | 5          | 13         | 4          |
|                      | *                      | 1           | 1          | 3          | --         | 1          |
|                      | --                     | 1           | --         | 2          | 19         | 1          |
|                      |                        |             |            | 2          | ?          | *          |
| 6 or more            | --                     | --          | --         | 2          | 3          | *          |
| Total                | <u>100</u>             | <u>101†</u> | <u>100</u> | <u>100</u> | <u>99†</u> | <u>98†</u> |
| Average              | <u>.2</u>              | <u>.3</u>   | <u>.6</u>  | <u>1.0</u> | <u>1.6</u> | <u>.4</u>  |
| Standard deviation   | <u>.5</u>              | <u>.6</u>   | <u>.8</u>  | <u>2.4</u> | <u>1.8</u> | <u>1.1</u> |
| Number of traders    | 251                    | 153         | 69         | 58         | 31         | 562        |

\* Less than 0.5 percent.

† Rounding error.

is the percent of traders with assistants, so that the average number of assistants employed rises as sales increase.

Of the 244 assistants employed by the wholesalers in the survey, all were employed in selling activities, except for 6 percent who were buyers, 5 percent who were recorders, and another 5 percent who were used for headloading supplies and other jobs. Only 2 percent served on a part-time basis. Even though a large number (72 percent) were related to the trader in some way, 53 percent of the assistants were paid a regular cash wage, while the remainder were paid in kind and cash as their needs arose. In the case of the 148 assistants whose cost per month could be obtained from the wholesaler, the average was 53 shillings per month ( $\pm$  23 shillings); this average was basically the same, irrespective of the value of monthly sales.

#### 7. Apprenticeship

Many of the traders in the Region acquired the art of successful trading by being apprenticed to some experienced trader. In fact, most traders serve some period of apprenticeship before entering the business of buying and selling in their own right. This usually lasts from 6 to 12 months but may last much longer where the apprentice has insufficient capital to establish his own business. The "master" generally rewards his apprentices by providing food, clothing, accommodation (often the place of business itself) and a small allowance, as well as paying the apprentice's taxes and other expenses.

In the survey of wholesale traders in Ibadan, approximately two-thirds of the assistants were serving in the capacity of apprentices.

## 8. Agents

Agents buying and selling on commission are quite common in Western Nigeria. The two main types of agents are:

a. Buying agents. Buying agents, generally located in the supply area, assemble the required quantity of goods with money advanced to them by a principal. The goods are then consigned to the principal. A cowpea wholesaler in Ibadan, for example, may buy cowpeas through an assembler-agent in Kano Province. Generally the agent receives about one shilling per bag, while the sub-agent he employs to assemble the cowpeas receives a further two shillings per bag, the bags being usually somewhat smaller than the ones in which the cowpeas are finally shipped to Ibadan. At a price of £5 per bag, this represents a commission of just over 2 percent. However, as the principal usually specifies a buying price for the commodity, an extra margin may be made by buying at a lower price than specified.

b. Selling agents. Selling agents, generally located in the deficit consuming area, store and sell goods that are consigned to them by a principal who is usually an assembler of staple food in the supply area. The commission is generally about six pence on a £2 to £6 bag and one shilling on a £6 to £10 bag or between 1/2 and 1 percent of the value. A storage fee of two shillings per bag charged to the buyer is quite common, however. Also, for some commodities the commission tends to be higher; yams, for example, often bring a commission of up to one penny in the shilling, or 8.5 percent, at the retail-wholesale level. If the goods are sold above the price required by the owner, the seller usually profits by it.

## E. STORAGE FACILITIES

### 1. Location

From the observations made and interviews conducted, it seems certain that most of the staple food crop storage in Western Nigeria occurs at the producer level. Little evidence was found in the urban markets of storage beyond that needed for the normal conduct of business. Speculative storage to capitalize upon temporal arbitrage was not very common. Even among assemblers located in the supply areas, storage was mostly for the purpose of maintaining a regular flow of transactions. Nevertheless, some of the most important assemblers in these areas did have commodities stored in the expectation of a later price rise.

Further evidence that most of the storage is actually undertaken at the farm and village level is that even during the off-season locally-produced surplus commodities are still available in the rural markets, although they are not as plentiful as during the harvest and immediate post-harvest period. Basically, the rural market remains the source of supply of foodstuffs for the urban areas throughout the year.

The spatial and temporal distribution of crop production throughout the supply areas has already been mentioned under the economic characteristics of the staple food crops. Certain of the botanical and agronomical characteristics associated with each of the crops contribute to making it available throughout the year. However, many of these characteristics are detrimental to storage. Moreover, an early and a late yam harvest within the Region, the early- and late-season maize crops, and the year-round harvest season for cassava to some extent reduce the need for storage.

Retailers generally sell "hand-to-mouth" with the result that they are relatively unimportant factors in the storage of staple foods, even in urban areas. Wholesalers, on the other hand, are important short-term storers of a commodity. For example, in the Wholesale Traders Questionnaire in Ibadan, the average value of inventory held by wholesalers was £101 ( $\pm 174$ ), while the average length of time that it had been in stock was 7.6 days ( $\pm 8.7$ ). This is described more fully in the next chapter.

## 2. Place

In periodic markets, it is almost essential that all supplies be cleared each market day because facilities for storing commodities between market days are strictly limited. Any commodities remaining unsold are usually returned to the sellers home to await the next market. Nevertheless, for those sellers who prefer to store their commodity in the market a place can usually be found either in or in close proximity to the market. This is true particularly of the larger markets, where a considerable volume of supplies is bulked. For example, in both Oko and Odo-Oba Markets in the derived savanna area of Oshun Division, supplies are frequently held over from one market day to the next. In fact, many of the bulk supplies of yam, maize and gari brought to these markets by producers and assemblers are actually sold by traders with lock-up stalls who act as agents. If unsold, the commodity is then stored till the next market day; this service is usually included in the commission charged.

Most of the storage facilities used by traders in rural areas are quite crude. The stalls usually have walls of mud, roofs of galvanized

iron sheets and natural floors, although some do have concrete floors. Protection from the weather is usually sufficient in these stalls, although adequate ventilation is generally lacking. The main risks are those attendant upon the commodity being stored on earthen floors (rotting due to dampness) and from rodents, insects and other pests.

The pattern of storage in the urban markets is quite mixed. Even in Ibadan, where lock-up stalls are more common than in most urban areas, 27 percent of the retailers in the Market Traders Questionnaire #1 still stored their inventory at home. As Table 8.37 indicates, all of the traders who were exclusively wholesalers stored their commodity in a market stall. In the Wholesale Traders Questionnaire, all but 3 percent

Table 8.37

PERCENT DISTRIBUTION OF TRADERS BY PLACE USED TO STORE INVENTORY  
AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #1-IBADAN  
JUNE-JULY 1966

| Place Used to Store Inventory | type of seller |                  |                | All Sellers |
|-------------------------------|----------------|------------------|----------------|-------------|
|                               | Retail Only    | Retail-Wholesale | Wholesale Only |             |
| Market stall                  | 73             | 93               | 100            | 86          |
| Trader's home                 | 27             | 2                | --             | 12          |
| Other                         | --             | 5                | --             | 2           |
| Total                         | 100            | 100              | 100            | 100         |
| Number of Traders             | 106            | 122              | 36             | 264         |

of the traders stored their entire inventory in the stall in which they were selling. In fact, only one trader in the 562 interviewed was found to have all of his inventory in store elsewhere. Rice and cowpeas were the main commodities occasionally stored outside the market, although 92 percent of the rice traders and 94 percent of the cowpea traders interviewed had none stored elsewhere.

### 3. Size

Although the measurements made of wholesale stalls in Ibadan were only approximate, they do give an indication of their size and capacity. The average floor area (width x depth) of the stalls used by wholesalers was found for each type of market to be as follows:

| <u>Floor Area of Stall</u> | <u>Type of Market</u> |                    |                             | <u>All</u> |
|----------------------------|-----------------------|--------------------|-----------------------------|------------|
|                            | <u>Central Native</u> | <u>Central New</u> | <u>Residential (Mokola)</u> |            |
| Average in square feet     | 112                   | 126                | 62                          | 114        |
| Standard deviation         | 63                    | 62                 | 27                          | 63         |
| Number of Wholesalers      | 442                   | 107                | 8                           | 557        |

The stalls in the central markets were approximately 10 feet by 12 feet, while the stalls in Mokola Market were found to be about half this size.

Perhaps more significant than floor area is volume. For these wholesalers, Table 8.38 shows that the average volume of each stall was about 1,000 cubic feet. However, those in Dugbe Market (central new) averaged 45 percent larger than those in the central native markets and 218 percent larger than the eight stalls in Mokola Market. From the distribution of traders exhibited, it can be seen that 18 percent of the

Table 8.38

PERCENT DISTRIBUTION OF TRADERS BY VOLUME OF STALL AND BY TYPE OF MARKET--WHOLESALE TRADERS QUESTIONNAIRE-IBADAN--FEBRUARY-MAY 1967

| Volume of Stall              | Type of Market |              |                        | All          |
|------------------------------|----------------|--------------|------------------------|--------------|
|                              | Central Native | Central New  | Residential (Mokola)   |              |
| Under 400 cu. feet           | 10             | 8            | 75                     | 10           |
| 400 & under 800 cu. feet     | 35             | 32           | 12                     | 34           |
| 800 & under 1,200 cu. feet   | 35             | 15           | 12                     | 31           |
| 1,200 & under 1,600 cu. feet | 10             | 9            | --                     | 10           |
| 1,600 & under 2,000 cu. feet | 6              | 18           | --                     | 8            |
| 2,000 cu. feet & over        | <u>4</u>       | <u>18</u>    | <u>--</u>              | <u>7</u>     |
| Total                        | <u>100</u>     | <u>100</u>   | <u>99</u> <sup>+</sup> | <u>100</u>   |
| Average in cubic feet        | <u>954</u>     | <u>1,383</u> | <u>434</u>             | <u>1,029</u> |
| Standard deviation           | <u>666</u>     | <u>1,027</u> | <u>191</u>             | <u>766</u>   |
| Number of wholesalers        | 442            | 107          | 8                      | 557          |

+ Rounding error.

traders in Dugbe Market had stalls in excess of 2,000 cubic feet, compared with only four percent in the central native markets.

The protection offered goods stored in these stalls is far from ideal, although it is reasonable. Only in the better concrete brick stalls was any protection afforded against rodents and other pests; in these, some form of control is possible.

#### 4. Government Assistance

The lock-up stalls built in some markets by local government councils are generally better constructed and offer more protection than most private stalls. The better ones, like some of those in Dugbe Market, constructed by the Ibadan City Council, have concrete floors raised considerably above ground level and are of concrete brick construction. However at present, lock-up stalls built by these councils are relatively few in number, most of them being in urban markets.

For maize, the Ministry of Agriculture and Natural Resources, with technical assistance from U.S. AID personnel, has been experimenting with silo storage in rural areas. This has led to the construction of several small silo complexes and an extension program to encourage their use by farmers. For example, a silo between Shaki and Ago-Are dries and stores maize for members of [functionally] productive cooperatives, which in turn belong to the local Farmer Council. Although built by the Ministry and U.S. AID, it is intended to hand the facility over to these farm groups after several years. In terms of the total quantity of maize stored within the Region, however, these silos account for a very small fraction. Nevertheless, they are important, as it is mostly through these silos that the ministry buys its maize for another of its projects--poultry and egg production.

## F. MILLING FACILITIES

At present, all machine processing of staple foods within Western Nigeria is undertaken in small mills and on a small scale. All of these mills are privately owned and operated. With very few exceptions, the millers do not own the commodities they are milling. They mill commodities for their customers for an agreed-upon charge.<sup>36</sup> Large quantities are seldom milled in one run. Most customers mill about one kerosene tin (about 1/6 of a bag) at a time.

The traditional method of processing many of the staple foods consumed was by prolonged strenuous pounding with a pestle, the commodity being placed in a large wooden mortar. Although this method is still exceedingly common, its use is declining as machine processing spreads throughout the Region. Machine processing seems to have begun in about 1946, with the introduction of small rice mills in the major producing areas. The spread of flour mills to the consuming areas appears to have come later. In fact, most mills in both urban and rural areas, especially outside of Ibadan, have been started comparatively recently. For example, of the 47 mills for which detailed information was obtained,<sup>37</sup> ten had been started in the last two years, all but four were less than seven years old, and of these two were in Ibadan.

### Types

In urban areas, most mills are concerned with grinding into flour such products as dried yam, dried cassava, dried maize, and dried cowpeas. In addition to dry-milling these commodities, it is possible to wet-mill them by first soaking and boiling. Although some traders use these

mills to convert their commodities into another form before sale, consumers and prepared food sellers are the users. Flour mills are also common in rural areas as well as urban areas.

The other type of mill is usually located in rural areas only and is used to process the commodity early in the marketing chain. Rice is the main commodity requiring such milling, although cassava grating mills are beginning to grow in number.

## 2. Location

Mills are mostly located in or adjacent to markets, although some are located in residential areas. Most markets have at least one mill associated with them. In fact, mills are now so common in all markets of any size and importance that they can really be considered one of the facilities that must be present in a market if it is to provide the services expected of it.

## 3. Equipment

The flour-type mills in consuming areas usually have just one small imported grinder, mostly Premier mills, which require a power source of not less than 5 to 8 horsepower for the larger 2A machines and somewhat less for the smaller 1A machines. In urban areas, particularly in Ibadan, electric motors are used, while in the areas where electricity is not available, gasoline motors are ubiquitous.

The capacity of the mills, as most often quoted by the operator, was between 6 and 10 bags per day (11 out of 38 responses). A few more were quoted as having a capacity of more than 20 bags per day (5 out of 38 responses).

None of 24 mills in Ibadan had frequent or protracted breakdowns. However, 4 of the 10 mills in urban areas outside Ibadan and 3 of the 13 in rural areas did have what the operators considered frequent and protracted breakdowns. All mills seem to have inoperative periods, at least occasionally.

The cost of establishing such a mill varies both with size of mill and type of motor used. Where an electric motor is used, the cost quoted is usually between £200 and £300. Gasoline motors often raise the total capital cost to upwards of £500.

Many of the mills operate in poorly constructed buildings in bad condition. For example, over 60 percent of the mills in the survey were constructed of mud alone (mostly outside Ibadan) or mud and concrete (Ibadan). Those outside of Ibadan were either of mud alone or of galvanized iron sheets, with 9 of the 23 mills having thatched roofs. However, all but two of the 47 mills did have concrete floors, and both of these were in rural areas and had earthen floors.

#### 4. Operation

Although many mills are operated solely by one man, many employ assistants as well. For example, in the 47 mills for which questionnaires were obtained, 40 percent of the operators had no assistants, while 47 percent had either one or two assistants, the remaining 13 percent having more than two.

As a result of the relatively high capital cost of establishing such mills, most are either rented or operated for the owner by an operator who may either be paid a wage or split the fees. For example

in the survey of these mills, the number of owners operating their own mills was as follows:

|                      | <u>Urban Areas</u> |              | <u>Rural</u> |
|----------------------|--------------------|--------------|--------------|
|                      | <u>Ibadan</u>      | <u>Other</u> | <u>Areas</u> |
| Operated by owner    | 5                  | 5            | 1            |
| Total Mills surveyed | 24                 | 10           | 13           |

The turnover of operators in these mills seems to be somewhat high. Of the 45 operators who responded, 26 had been operating the same mill for less than two years and only three for more than seven years; this includes owners who were operating mills. All the mill operators had served a period of apprenticeship, with 38 of the 45 serving for more than three years. Three had served more than six years.

#### G. CREDIT FACILITIES

Parallel to all the other aspects of the organization of the food marketing system, credit is in the hands of the private sector of the economy. No government or quasi-government institution grants loans to staple food traders for the conduct of their business. Banks and other financial institutions also tend to avoid lending to these traders. This leaves relatives, friends, suppliers and money lenders as the main providers of credit to the food marketing industry.

When borrowed from outside the family, money is scarce and expensive, and this fact no doubt accounts for some of the imperfections in the marketing of staple foods. Without access to adequate capital and credit resources, traders are not able to take full advantage of all the profitable opportunities that may present themselves.

Friends and relatives do not normally charge interest on loans made but often expect a share of any profits. The provision of credit by suppliers usually means that the buyer forgoes a discount which is allowed when cash is paid. Suppliers can be an expensive source of credit; for example, a discount of from 5 to 10 shillings could easily be obtained in Ibadan in May-June 1966 on a bag of cowpeas costing £8.10. Od. per bag: For 10 days credit this represents an interest rate of from 107 to 214 percent per year. (This is discussed further in the next chapter.)

Money lenders are also an expensive source of credit. Licensed money lenders who are registered under Federal-Regional Law are permitted to charge an interest rate of up to 9 pence on the £1, or 3.75 percent per month--or something more than 45 percent per year. However, contracts are usually signed which show only the amount repayable, so that an interest rate of 2 shillings on the £1, or 10 percent per month, is general throughout the Region. In some places, the rate may rise as high as 3 to 5 shillings on the £1 per month. Unlicensed money lenders without recourse to the courts are generally able to collect only 1 shilling on the £1, or 5 percent per month.

#### H. PREPARED FOOD INDUSTRY

The importance of foodstuff prepared for consumption outside the home has already been mentioned in Chapter VI. To serve this demand, a large and specialized industry has developed in the traditional sector of the economy. Preparation facilities and sellers are common throughout most areas, even where the population is small. In the markets of Ibadan alone, the enumeration of market sellers revealed 1,104 sellers of prepared foods; this represents 3 percent of the total. However, there are many more sellers in this industry outside the traditional markets than within. In the survey of more important food sellers conducted in Ibadan, for

example, 218 included were from the markets, while 250 were from only ten residential areas. In addition there were 42 located in motor parks and 37 in business areas (see Table 2.10).

### 1. Types

Two basic types of prepared food sellers exist in Western Nigeria: those selling hot foods--mostly for immediate consumption--and those selling cold foods which can be eaten immediately or at some future time. Sellers of hot foods typically have their preparation facilities at the selling site, and in the case of yam, cassava, and rice, generally sell a soup and a stew for eating along with the staple. Sellers of cold foods usually prepare and package their products for sale away from the selling site; they may then be sold from a fixed location or, more frequently, hawked around.

The Ready-to-Eat Food Sellers Questionnaire was exclusively concerned with sellers with preparation facilities at the selling site, and hence covers primarily sellers of hot foods. Table 8.39 presents for the sellers interviewed in Ibadan the staple foods on sale by order of importance of the particular preparation. Cassava products, gari, and cassava flour are the most important hot foods on sale. Yam, rice and cowpea preparations are also important. Maize is the only major staple which is not generally sold hot.

The distribution of staple food sellers in the rural markets surveyed was similar to that in Ibadan, except that rice is considerably less common (about 6 percent of all traders sell rice in rural markets compared with about 18 percent in Ibadan).

In the Ibadan survey, 37 percent of all those included sold staple foods alone; soup and stews were not offered for consumption along with the staple. However, the distribution by major commodity sold differed

Table 8.39

PERCENT DISTRIBUTION OF PREPARED FOOD SELLERS  
BY STAPLE FOOD ON SALE AND BY ORDER OF IMPORTANCE--  
READY-TO-EAT FOOD-SELLERS QUESTIONNAIRE - IBADAN  
FEBRUARY-MARCH 1967

| Staple Food on Sale          | Order of Importance |        |       |        |        |       | Total |
|------------------------------|---------------------|--------|-------|--------|--------|-------|-------|
|                              | First               | Second | Third | Fourth | Fifth  | Sixth |       |
| Yam                          |                     |        |       |        |        |       |       |
| Iyan (pounded fresh)         | 8.1                 | 1.5    | 1.1   | .6     | --     | --    | 11.2+ |
| Amala (boiled flour)         | 6.3                 | 7.6    | 4.6   | --     | --     | --    | 18.4+ |
| Isu sise (boiled fresh)      | 4.4                 | .9     | -     | .2     | .2     | --    | 5.7   |
| Dundu (roasted fresh)        | 6.4                 | .4     | .4    | .2     | --     | --    | 7.4   |
| Cassava                      |                     |        |       |        |        |       |       |
| Eba (boiled gari)            | 14.0                | 11.4   | 4.0   | .2     | --     | --    | 29.6  |
| Lafun (boiled flour)         | 15.5                | 11.0   | 1.3   | .2     | --     | --    | 28.0  |
| Fufu                         | --                  | --     | .4    | .7     | .2     | --    | 1.3   |
| Maize                        |                     |        |       |        |        |       |       |
| Eko Mimú                     | 1.3                 | .4     | --    | --     | --     | --    | 1.7   |
| Eko tutu                     | .2                  | --     | --    | --     | --     | --    | .2    |
| Other                        | .2                  | --     | --    | --     | --     | --    | .2    |
| Rice                         |                     |        |       |        |        |       |       |
| Boiled                       | 13.3                | 1.3    | 1.6   | .4     | --     | --    | 16.6  |
| Tuwo                         | 1.5                 | .2     | --    | --     | --     | --    | 1.6+  |
| Cowpea                       |                     |        |       |        |        |       |       |
| Adalu (boiled with<br>maize) | 8.7                 | 6.4    | .6    | .4     | --     | --    | 16.0+ |
| Moinmoin                     | 4.2                 | .2     | --    | --     | --     | --    | 4.4   |
| Woro                         | --                  | 1.5    | --    | .6     | .2     | --    | 2.2+  |
| Akara                        | 11.6                | 1.3    | --    | --     | --     | --    | 12.9  |
| Jogi                         | .9                  | --     | --    | --     | --     | --    | .9    |
| Ekuru                        | .4                  | --     | --    | --     | --     | --    | .4    |
| Wheat Flour                  |                     |        |       |        |        |       |       |
| Puff puff                    | 1.5                 | --     | --    | --     | --     | --    | 1.5   |
| Plantain                     |                     |        |       |        |        |       |       |
| Fried                        | 1.7                 | 4.8    | 1.1   | .4     | .2     | .2    | 8.3   |
| None                         | --                  | 51.2   | 84.9  | 96.3   | 99.3   | 99.8  | --    |
| Total                        | 100.2+              | 100.1+ | 100.0 | 100.2+ | 100.1+ | 100.0 | --    |

Number of responses: 543.

+ Rounding Error.

considerably. The percent selling staple food only was as follows:

| <u>Commodity</u> | <u>Percent of Sellers<br/>Selling Staple Food Only</u> | <u>Number<br/>of Sellers</u> |
|------------------|--------------------------------------------------------|------------------------------|
| Yam              | 39                                                     | 137                          |
| Cassava          | -                                                      | 160                          |
| Maize            | 100                                                    | 9                            |
| Rice             | 1                                                      | 80                           |
| Cowpeas          | 85                                                     | 144                          |
| Wheat Flour      | 100                                                    | 8                            |
| Plantain         | <u>89</u>                                              | <u>9</u>                     |
| Total            | 37                                                     | 547                          |

Sellers who sell soup and stew in addition to a prepared staple usually derive slightly more than one-half of the total value of sales from the staple food. The survey in Ibadan, for instance, showed that 60 percent derived 50-70 percent of total sales value from the staple food.

In the Ibadan survey, about 50 percent of the sellers sold soup. Most sold at least two different kinds (44 percent of all sellers), with many selling up to four kinds (12 percent of all sellers). Okra soup was the most important soup to more sellers (28 percent of all sellers), although it was sold by less traders (34 percent of all sellers) than two of the other varieties of soup--Ewedu (43 percent of all sellers) and vegetable (38 percent of all sellers). Cowpea soup was fourth in importance (25 percent of all sellers). Finally, a straight pepper soup, with no other ingredients, was the only soup sold by a small number of sellers (4 percent).

Again from the survey in Ibadan, 59 percent of the sellers sold a stew as well as a staple food.

Cow beef was the most important variety of stew sold by all except two, who sold fresh fish stew. A considerable number sold a stock fish stew as well (36 percent of all sellers). Fish, goat and game (bush) meat stews were also sold by a few traders.

2. Equipment and Facilities

The sellers in motor parks and business areas in Ibadan are generally located in buildings with walls as well as a roof (71 and 84 percent of the sample respectively). There are fewer sellers operating out of complete stalls in markets and residential areas than in other areas (47 and 45 percent of the sample respectively). Many others in the markets use a stall with a roof only (19 percent). The proportion of sellers not located in a stall at all but selling from a fixed position in the open was as follows for each location:

| <u>Location of Seller</u> | <u>Percent Selling From Fixed Position in Open</u> |
|---------------------------|----------------------------------------------------|
| Market                    | 34                                                 |
| Motor Park                | 21                                                 |
| Business area             | 14                                                 |
| Residential area          | 47                                                 |
| Ibadan - total            | 38                                                 |
| Rural markets             | 17                                                 |

Most sellers in motor parks and business areas provide wooden bench seats for their customers (83 and 89 percent of the total sample respectively). However in markets and residential areas, only about one half provide seats (60 and 47 percent of the total sample respectively). About 85 percent of those providing seats had places for between three and four people.

Like the protective structures, cooking equipment is generally rather rudimentary. Pottery bowls are most commonly used for both food preparation and cooking. Although many have places for the use of only one or two cooking pots simultaneously (33 percent in the sample), many can use six or more simultaneously (37 percent in the sample). In the survey of these sellers in Ibadan, although many were found to be operating at full capacity, many more were found to have cooking pots available but not in use.

In terms of staple food being sold, sellers of yam and cassava products generally have considerably more cooking pots available and in use than sellers of other commodities, although rice sellers also use more than maize, cowpea, wheat flour, and plantain sellers. This mainly reflects the use of soup and stew pots by sellers of each commodity.

Although mortars and pestles are also commonly used by these sellers (46 percent in the sample), they are mainly restricted to sellers of cassava products (96 percent of all cassava sellers had mortars in the survey) and yam products (53 percent). Those who do use a mortar generally have either one or two available.

Another important item of equipment is eating plates. Most sellers of hot foods provide plates, generally imported enamel plates, for customers who wish to eat the food on the spot or nearby (82 percent in the sample in Ibadan). Sellers of cold cooked foods use leaf wrappers almost exclusively, although most hot food sellers will have them available for the desiring customer (70 percent in the sample in Ibadan).

### 3. Operation

In Ibadan, the operator of these businesses is, with few exceptions, female (100 percent in the sample), typically between 20 and 40 years of age (82 percent in the sample) often having sold from the same site for less than 3 years (41 percent in the sample) and almost always for less than 10 years (92 percent in the sample).

Most of the smaller businesses are operated by one person (92 percent of those in the sample in Ibadan with sales of under £1 per day and 67 percent of those with sales between £1 and £2 per day employed no assistants), while the larger businesses frequently employ one or more assistants (only 13 percent of those with sales between £2 and £5 per day and 2 percent of those with sales of £5 and over did not employ assistants). The larger businesses usually employ between one and three assistants, with a few employing as many as ten or more. Assistants are generally used in the more laborious tasks of food preparation and cooking, although some also sell and clean up after customers.

Although the size of individual businesses varies considerably, more than half of them sell goods worth less than £2 per day. As Table 8.40 shows, sellers in the residential area survey in Ibadan and in rural markets generally sold less than £2 per day (65 and 77 percent of the sample total respectively), while sellers, particularly in the motor parks and business areas of Ibadan, frequently had sales of over £2 per day (57 and 54 percent respectively). Several of the sellers had sales of £7 per day.

Table 8.40

PERCENT DISTRIBUTION OF PREPARED FOOD SELLERS BY DAILY SALES VALUE AND BY LOCATION OF SELLER--READY-TO-EAT FOOD SELLERS QUESTIONNAIRE, IBADAN AND RURAL MARKETS--FEBRUARY-MARCH 1967

| Value of Daily Sale | Location of Seller - Ibadan |            |               |                  | Total Ibadan | Rural Markets |
|---------------------|-----------------------------|------------|---------------|------------------|--------------|---------------|
|                     | Market                      | Motor Park | Business Area | Residential Area |              |               |
| Under £1            | 12                          | 17         | 16            | 22               | 17           | 28            |
| £1 & under £2       | 37                          | 26         | 30            | 43               | 38           | 49            |
| £2 & under £3       | 20                          | 26         | 8             | 19               | 19           | 13            |
| £3 & under £4       | 13                          | 7          | 14            | 9                | 11           | 3             |
| £4 & under £5       | 7                           | 7          | 5             | 4                | 5            | 3             |
| £5 & under £7       | 7                           | 10         | 14            | 2                | 5            | 2             |
| £7 & over           | <u>4</u>                    | <u>7</u>   | <u>14</u>     | <u>1</u>         | <u>3</u>     | <u>2</u>      |
| Total               | 100                         | 100        | 101+          | 100              | 98+          | 100           |
| Number of Sellers   | 218                         | 42         | 37            | 250              | 547          | 98            |

+Rounding error

## I. GRADES AND STANDARDS

### 1. Grades

The system of staple food marketing, as presently organized, does not include a formalized and generally acceptable set of grades for each commodity. Nevertheless, both buyers and sellers are able to recognize the presence of grades. As a result, an informal system of grades exists in which quality differences are recognized and prices adjusted according to the relative bargaining power of the two parties to the transaction. For all staples, some extra reward is generally given for better quality products, but it is often a small incentive compared with the extra time and effort required to bring such a product to market.

Traditional methods of production and handling also result in somewhat lower-grade commodities reaching the final consumer. The mixing of supplies to obtain a "fair average quality" product is common in the producing areas. Where a trader assembles any quantity of a commodity in a single rural market, he will usually pour all of his purchases into one heap before packing into bags that he has brought to the market with him. This allows him to blend his supplies to get a relatively uniform product, mixing in as much poor quality product as is discreet. This process applies particularly to the assembling of gari within the Region.

## 2. Standards

For our purposes, standards can be divided into two relevant aspects-- quantity and value.

Weights and measures-- granular commodities. Although the English system of weights and measures has been adopted in Nigeria, it is not used in the marketing of staple foods. Instead, generally accepted native measures are used in the purchase and sale of staple foods. The main measures used for gari, maize, rice and cowpeas by the various types of traders may be briefly described as follows:

a. Producers--Although some producers sell in bags, most sell by the basket or some smaller container. Generally the most frequently used container is a round galvanized iron bowl known locally as an olodo; approximately 40 olodos are required to fill a bag. For gari, a larger container, a denge, is frequently used.

b. Assemblers--Assemblers mostly buy in small quantities such as by the olodo or denge and then repack their purchases into bags for transportation and resale. It is at this stage that their margins are usually made or lost. When buying from producers, many assemblers employ a professional measurer to measure out the agreed number of units of the agreed container at the agreed price. It is thought that these professionals are able to get about 25 percent more into each measure; for this service to the assembler, they usually receive about 5 shillings per bag for maize, for instance. The measures used in selling vary according to the quantity purchased and location of exchange. For example, for small quantities in rural markets they will again use small measures, although they will not be filled quite as full.

c. Wholesalers--The measures used by wholesalers depend upon the commodity being traded. For example, rice and cowpeas, which are often transported over long distances, they will generally buy and sell in bags. With local commodities such as maize and gari, they will frequently assemble their supplies by using the same small measures as assemblers. However, the larger wholesalers will again sell mostly by the bag. Kerosene tins are also frequently used.

d. Retailers--Retailers mostly buy either by the bag or by the kerosene tin (6-7 measures per bag). They sell by an assortment of measures, each measure having a set price relative to the other measures. The only item subject to bargaining is the quantity required to fill the measure. An example of these measures and their diameters is given below:

|               |               |
|---------------|---------------|
| Dana          | 10 1/2 inches |
| Oloruka       | 9 1/2 inches  |
| Ebdon Pebi    | 7 1/2 inches  |
| Pebi          | 7 inches      |
| Abobadan      | 6 1/2 inches  |
| Ilarun        | 6 inches      |
| Merinigo      | 4 inches      |
| Marun Igo     | 3 1/2 inches  |
| Kolobo mefago | 3 inches      |

Weights and measures--root crops. Because of the nature of the yam tuber, the measures applying to yam are somewhat different. The major measures used all relate to a quantity of tubers and are as follows:

|       |   |                           |
|-------|---|---------------------------|
| Ile   | = | 3 tubers of yam           |
| Oji   | = | 40 tubers of yam          |
| Orun  | = | 100 tubers of yam         |
| Ofa   | = | 120 tubers of yam         |
| Gauge | = | 6-7 ofas = 720-840 tubers |

Each tuber weighs between 3 and 6 pounds.

Money. The Nigerian monetary system is similar to the English--pounds, shillings and pence--and is, in fact, pegged to the pound sterling. This money is accepted throughout the Region and is the means of payment for nearly all transactions involving the exchange of staple foods.

## J. TRADE ASSOCIATIONS

There is a general belief among traders that some form of organization is necessary for the proper and efficient functioning of the marketing system. This usually manifests itself in what is called a "trade association." Through this vehicle, traders attempt to impose their collective will on those aspects of the marketing system which they cannot control individually.

### 1. Existence

Trade associations (the Yoruba "Egbe") are a common feature of the staple food marketing system in Western Nigeria. Most markets have what may formally be called a trade association, or at a very minimum an informal association of traders which functions as a trade association. Most trade associations do not extend beyond a particular market although a few larger associations such as the Ifelodon Foodstuff Dealers and Suppliers Association in Ibadan is active over a large part of the area supplying Ibadan as well as in the markets in Ibadan. Some general associations, such as the Western Nigeria Market Women's Association, exist but deal with more general issues and are in effect a federation of the separate associations in the various markets.

As well as being generally confined to a particular market, many trade associations relate to one kind of commodity, and within a commodity group often to one type of trader, e.g., wholesalers or retailers.

However, in the smaller markets, especially in the rural areas, trade associations tend to be all-inclusive or at least to cover a whole group of commodities such as staple foodstuffs.

In the Market Traders Questionnaire #1 in Ibadan, 72 percent of all traders interviewed belonged to a trade association. As Table 8.41 shows, all but 38 percent of the retailers, 21 percent of the retailer-wholesalers and 25 percent of the wholesalers belonged to a trade association. The name of the association to which each type of trader belonged is also indicated in Table 8.41. While many of the trade associations mentioned were restricted to a particular commodity, two in particular were very general in terms of commodities included. Both tended to handle more of the locally produced staple foodstuffs. For these same trade associations, Table 8.42 shows membership by sex of seller. It can be observed that the two general trade associations were particularly important to male sellers.

For the most part, traders who belonged to a trade association had been members for all of their trading careers. Table 8.43 shows the distribution of traders by years of membership in a trade association for each type of seller. Comparing length of membership in the trade association with the number of years a trader had been selling in the same market, it is apparent that most of the non-members had been trading for less than ten years in the same market. Most of the traders who had been trading for a period longer than ten years belonged to a trade association.

Details of the nine trade associations in Ibadan for which information was obtained through interview with the principal officers is summarized in Table 8.44.

Table 8.41

PERCENT DISTRIBUTION OF TRADERS BY MEMBERSHIP IN  
VARIOUS TRADE ASSOCIATIONS AND BY TYPE OF SELLER--  
MARKET TRADERS QUESTIONNAIRE #1-IBADAN-JUNE-JULY 1966

| Name of Trade<br>Association                               | Type of Seller |                      |                   | All<br>Sellers  |
|------------------------------------------------------------|----------------|----------------------|-------------------|-----------------|
|                                                            | Retail<br>Only | Retail-<br>Wholesale | Wholesale<br>Only |                 |
| Non-member                                                 | 38             | 21                   | 25                | 28              |
| Member of:                                                 |                |                      |                   |                 |
| All Nigeria Market<br>Women's Association                  | 3              | -                    | -                 | 1               |
| Mokola Market Women's<br>Association                       | 3              | -                    | -                 | 1               |
| Ifelodon Foodstuff<br>Dealers and Suppliers<br>Association | 1              | 8                    | 17                | 6               |
| Foodstuff Dealers'<br>Association                          | 11             | 27                   | 25                | 20              |
| Foodstuff and Bean<br>Sellers' Association                 | 3              | 2                    | 6                 | 3               |
| Yam Sellers' Association                                   | 10             | 10                   | 3                 | 9               |
| Gari Sellers' Association                                  | 8              | 12                   | -                 | 9               |
| Maize Sellers'<br>Association                              | 3              | 6                    | 3                 | 4               |
| Rice Sellers' Association                                  | 6              | 3                    | -                 | 4               |
| Bean Sellers' Association                                  | 14             | 11                   | 22                | 14              |
| Total Percent                                              | 100            | 100                  | 101 <sup>+</sup>  | 99 <sup>+</sup> |
| Number of Responses                                        | 106            | 122                  | 36                | 264             |

<sup>+</sup>Rounding error

Table 8.42

PERCENT DISTRIBUTION OF TRADERS BY MEMBERSHIP IN  
 VARIOUS TRADE ASSOCIATIONS AND BY SEX OF SELLER--  
 MARKET TRADERS QUESTIONNAIRE #1-IBADAN-JUNE-JULY 1966

| <u>Name of Trade Association</u>                          | <u>Sex of Seller</u> |                  | <u>Both</u>     |
|-----------------------------------------------------------|----------------------|------------------|-----------------|
|                                                           | <u>Male</u>          | <u>Female</u>    |                 |
| Non-member                                                | 33                   | 27               | 28              |
| Member of:                                                |                      |                  |                 |
| All Nigeria Market Women's Association                    | -                    | 2                | 1               |
| Mokola Market Women's Association                         | -                    | 2                | 1               |
| Ifelodun Foodstuff Dealers' and<br>Suppliers' Association | 10                   | 5                | 6               |
| Foodstuff Dealers' Association                            | 27                   | 18               | 20              |
| Foodstuff and Bean Sellers' Association                   | 3                    | 3                | 3               |
| Yam Sellers' Association                                  | 9                    | 9                | 9               |
| Gari Sellers' Association                                 | 3                    | 11               | 9               |
| Maize Sellers' Association                                | 7                    | 3                | 4               |
| Rice Sellers' Association                                 | -                    | 5                | 4               |
| Bean Sellers' Association                                 | 7                    | 16               | 14              |
| Total Percent                                             | 99 <sup>+</sup>      | 101 <sup>+</sup> | 99 <sup>+</sup> |
| Number of Responses                                       | 67                   | 197              | 264             |

<sup>+</sup>Rounding error

Table 8.43

PERCENT DISTRIBUTION OF TRADERS BY YEARS OF  
MEMBERSHIP IN A TRADE ASSOCIATION AND BY TYPE  
OF SELLER--MARKET TRADERS QUESTIONNAIRE #1 -  
IBADAN--JUNE-JULY 1966

| <u>Years of Membership<br/>in a Trade Association</u> | <u>Type of Seller</u>  |                              |                           | <u>All<br/>Sellers</u> |
|-------------------------------------------------------|------------------------|------------------------------|---------------------------|------------------------|
|                                                       | <u>Retail<br/>Only</u> | <u>Retail-<br/>Wholesale</u> | <u>Wholesale<br/>Only</u> |                        |
| Non-member                                            | 38                     | 21                           | 25                        | 28                     |
| Under 5 years                                         | 7                      | 2                            | 6                         | 4                      |
| 5 and under 10 years                                  | 27                     | 29                           | 25                        | 28                     |
| 10 and under 15 years                                 | 16                     | 28                           | 17                        | 22                     |
| 15 and under 20 years                                 | 9                      | 17                           | 17                        | 14                     |
| 20 years and over                                     | 3                      | 3                            | 11                        | 4                      |
| Total Percent                                         | 100                    | 100                          | 101 <sup>+</sup>          | 100                    |
| Number of Responses                                   | 106                    | 122                          | 36                        | 264                    |

+ Rounding error.

TABLE 8.44  
 DETAILS OF NINE SELECTED TRADE ASSOCIATIONS IN IBADAN

| NAME                                                    | COMMODITIES INCLUDED |                         |      |       |      |         |                   |               |      |            | Date of founding Present Association | Sex | Number   | Enrollment | Dues                |
|---------------------------------------------------------|----------------------|-------------------------|------|-------|------|---------|-------------------|---------------|------|------------|--------------------------------------|-----|----------|------------|---------------------|
|                                                         | Fresh Yam            | Dried Yam and Yam Flour | Gari | Maize | Rice | Cowpeas | Pepper and Onions | Groundnut Oil | Eggs | Dried Meat |                                      |     |          |            |                     |
|                                                         | Male                 | Female                  |      |       |      |         |                   |               |      |            |                                      |     |          |            |                     |
| 1. Yam Sellers Association, Dugbe Market                | X                    |                         |      |       |      |         |                   |               |      |            |                                      | X   |          |            |                     |
| 2. Gari Sellers Association, Oritamerin Market          |                      | X                       |      |       |      |         |                   |               |      |            |                                      | X   | X        |            |                     |
| 3. Gari Sellers Association, Gege Market                |                      |                         | X    |       |      |         |                   |               |      |            |                                      | X   |          |            |                     |
| 4. Maize Sellers Association, Oritamerin Market         |                      |                         |      | X     |      |         |                   |               |      |            |                                      | X   |          |            | X                   |
| 5. Women's Rice Sellers Association, Dugbe Market       |                      |                         |      |       | X    | X       |                   |               |      |            |                                      |     |          |            | X                   |
| 6. Bean (Cowpea) Sellers Assn. a) 2 wings b)            |                      |                         |      |       |      | X       | X                 |               |      |            |                                      |     |          |            | X                   |
| 7. Ibadan Foodstuff Sellers Association                 |                      |                         |      |       | X    | X       | X                 | X             | X    | X          | X                                    |     | over 100 | X          | (£2,10.0)           |
| 8. Young Foodstuffs Association, Dugbe Market           |                      |                         |      |       | X    | X       | X                 | X             | X    | X          | X                                    | X   | 30       | X          | (10/6d) (3d weekly) |
| 9. Ifeiodun Foodstuff Dealers and Suppliers Association | X                    | X                       |      |       | X    |         |                   |               |      |            |                                      | X   |          | X          | X                   |

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## 2. Origins

Three main factors are responsible for the existence and functioning of trade associations. First, trade associations have their origins in the performance of social functions, principally designed to protect and assist members, particularly those encountering an unusual hardship. Trade associations also attempt to facilitate the performance of the traditional ceremonies and festivals associated with the market.

Second, trade associations originated from the need for regulation by traders of the trading activities of all traders within a confined area such as a market. Among other things, the association will usually require all new traders dealing in its commodity specialties to become members of the association before they are allowed to trade. Furthermore if the trade association is not already in existence, when an economic need arises one is likely to be formed to fight for such things as improvement of public services, roads and market facilities. An association of traders may be formed, for example, to fight a tax which a local government council proposes to levy, or to petition a local government for the construction of new facilities or the provision of extra services.

And third, some trade associations have had their origins in the activity of the political parties which have operated in the Region since the early 1950's. Generally, however, the trade associations which were formed to serve political ends have become defunct when the initiating party lost its political plurality. An example of this is the Federated Union of Nigerian Market Women, which was launched during the Action Group administration in Western Nigeria but died when the party lost political control in 1962. Similarly, the Ifelodun Foodstuff Dealers and Suppliers

Association was formed by the late Oba [King] Kobiowu to propel the rival N.N.D.P. into a position of power in the food marketing system. However, with the coup d'état in January 1966, the political functions of the association have ceased, although its economic functions have so far been sufficiently strong to enable it to remain a viable association.

In a few cases, other factors have led to the formation of trade associations. For example, the Young Food Sellers' Association of Dugbe Market owes its origin to the conflict between the young and old members who originally made up the older Ibadan Foodstuff Sellers' Association.

For the most part, these trade associations are relatively old institutions, although as new functions and needs arise, the old trade associations may be adapted or may die and new ones be founded. Periodic reorganization appears to have been a feature of the associations in Ibadan.

### 3. Membership

Most trade associations are open to anybody who wishes to join. An applicant must be known to several active members, who must be prepared to nominate him as well as being willing to guarantee the good behavior of the new trader. For his part, the new member must be willing to abide by the rules of the association and to follow any decisions made by the association which may apply to him. At the meeting a new member will frequently be made to prove his good intentions before the other members of the association, although in some cases this may be done by having the nominating members vouch for him. In addition, the nominee will frequently be made to pay an initiation or enrollment fee. This will usually range from a few shillings to a few pounds (The Ibadan Foodstuff Sellers

Association, for instance, has an enrollment fee of £2.10.0.). This is often used to defray the costs of the various social functions performed by the association. In many associations, an annual fee is also paid.

While some associations are specifically for either males or females, several of the larger associations in particular have both male and female members. In fact, very few associations are limited to men only although many, particularly at the retail level, have only female members. For the nine trade associations studied in depth in Ibadan, Table 8.44 indicates the rules of the association as they relate to members of each sex. It will be noticed that for the Bean (Cowpea) Sellers' Association two wings of the association exist; one for male members and another for female members.

#### 4. Organization

Trade associations, by the nature of their size and function, have an organizational hierarchy. This results in all associations having at least a chairman or president, with many having a whole string of officers. The association with the most extensive organizational structure, the Young Food Sellers' Association in Dugbe Market, includes not only the usual President, Secretary and Treasurer but also other minor officers, such as a Propaganda Secretary (a person appointed to inform members of decisions taken by the association or an impending meeting) and a "Sergeant at Arms" (appointed to enforce order and discipline at association meetings and to collect fines from members), as well as having a patron and a matron who are honorary members of the Association.

In the more active associations, very few offices are left unfilled, while in the less active unions this is seldom true. By longstanding custom, officers in the older and more traditional trade associations are picked from among the elders of the association. The female wing of the Bean (Cowpea) Sellers' Union in Oja Iba Market follows a tradition of electing the daughter of a former lady president as the new president. However, the more progressive and less traditionally oriented trade associations generally elect their officers from among the more dynamic and educated members of the association. In most associations officers are elected annually, although they may usually be reelected any number of times.

In some of the female trade associations, a male secretary is often engaged in the expectation that he will use his masculine knowledge and influence to run the association wisely and steer it in the most progressive direction.

#### 5. Function

The most obvious activities of nearly all trade associations relate to the performance of social functions. In addition to settling disputes, most trade associations give presents and make loans to members on the occasion of a birth, death, or marriage which must be celebrated and which will involve the member in considerable ceremonial expenses, generally beyond his means. Presents and loans are also made in the case of sickness and to pay medical expenses incurred as a result of treatment, usually by native doctors and herbalists. This practice is especially important in the associations in which women predominate.

The performance of the economic functions is usually more subtle. Although trade associations claim that they do not attempt to control the behavior of their members, various aspects of the buying and selling activity of members are brought up at association meetings. Thus there is an implicit understanding on the part of traders of the behavior that is expected of them. However, because of the size of most markets and the number of traders in each commodity, it is generally difficult for a trade association to enforce its will on traders in these matters.

In the case where the number of members is quite small and all the traders selling a particular commodity belong to the association, the association can frequently exert considerable pressure to control the behavior of the individual traders. For example, all cowpea wholesalers of any size and importance in Dugbe Market, Ibadan, belong to the Bean (Cowpea) Sellers' Association in Dugbe Market. At the time of the new crop, the Association will meet and if any traders are left with sizable stocks of last season's cowpeas, the members will agree not to sell any new season stock until the entire inventory of last season's cowpeas is sold out. When an individual trader does not have any old cowpeas in stock, he will generally sell on commission cowpeas belonging to those who do. However, such a degree of direct control of the behavior of traders is exceptional.

The only other case found of direct involvement by an association in the marketing of staple foods was that of the Ifelodun Foodstuff Dealers and Suppliers Association. This association not only

performs the usual social functions but also acquires, controls and transports supplies as well as fixing the general price, particularly in the rural areas. In addition, the Association makes loans to members for the acquisition of supplies. For the most part, however, members, even of this Association, undertake their trading activities as individuals with only a minimum of interference and direction from the association itself.

Particularly at the retail level, trade associations were found to be quite ineffective in setting prices. An attempt was made in 1957 by the Gari Sellers' Association of Gege Market to control both the wholesale and retail price of gari in the market. However, no effective method of enforcing the price set by the Association was acceptable to members, so the attempt to fix price was eventually abandoned. Nevertheless, prices tend to be generally uniform, as a result not of the efforts of the trade association but of the forces of competition within the market.

The injection of politics into the functioning of trade associations has resulted in a certain amount of disunity and even disintegration. At the height of the political activity, it frequently happened that unless members (and usually non-members as well) complied with the wishes of the association's leaders, their goods would be confiscated and they themselves would be driven from the market. Even under a military administration, political activities have not ceased entirely, although they are outlawed. For example, when the former Premier of Western Nigeria, Chief Awolowo, entered Ibadan for the first time after his release from prison in 1966, the Dugbe Market Women's

Association decreed that all market women should attend the parade, under threat of having their goods confiscated. However, the goods of the large number that did not attend were not confiscated.

For the most part, then, trade associations are performing a social function with a secondary economic function, although the political function cannot as yet be considered excluded from the activities of the trade associations.

## FOOTNOTES - CHAPTER VIII

1. This considerable involvement of intermediaries, particularly women, is reinforced by a custom in the Yoruba culture which not only gives the woman freedom to pursue her own occupation, but expects that she will. From this occupation, she is expected to be at least partially self-supporting.

2. The traditional economy exists alongside a well-established and growing modern economy which evolved from trade with Europe. For this trade, the Europeans found it necessary to establish their own business facilities. These included not only the warehouses and facilities of merchant firms but also money, banking, insurance and other commercial institutions. A considerable investment in social overhead capital was also necessary, particularly in port facilities, railways, roads, communication and education; their provision and operation is also part of the modern economy.

Until the beginning of the twentieth century, most of the trade of these "expatriate" business establishments was centered in a few coastal enclaves, particularly Lagos. From these enclaves, business was transacted with natives who bought and/or sold in the hinterland. However, with the spread inland of British colonial control, effective in Yorubaland about 1893, and its accompanying development of social overhead capital, the modern economy also slowly spread inland.

One British firm in particular--formerly the Niger Company and now the United Africa Company--has been outstandingly important in the

development of the modern sector of the Nigerian economy. Not only did it handle most of the export and import trade of Nigeria during the early colonial days, but between 1886 and 1900 a royal charter conferred upon it the powers of government in the colony of Nigeria as well. By 1952, this firm, together with its subsidiaries and associates, was conducting business in West Africa and elsewhere totalling between £200 and £300 million annually.

The structure and behavior of firms engaged in this sector of the economy, particularly those engaged in foreign trade, has been very well described and analysed for the pre-Independence period by P. T. Bauer. This is described in large part in: P. T. Bauer, West African Trade: A Study of Competition, Oligopoly and Monopoly in a Changing Economy, Routledge and Kegan Paul, London, 1954 (1963 Reissue).

3. "Market Calendar: 1967", Ministry of Economic Planning and Social Development, Ibadan, 1967.

4. For example, there are 11 markets listed for Ibadan. Even though these are the major markets, there are altogether 26 identifiable markets dealing in foodstuffs in and around Ibadan. The remaining 15 are mostly either small residential or fringe markets.

5. Personal communication from Ministry of Economic Planning and Social Development in response to request for assistance in locating over 100 markets which could not be located on the divisional maps of the Region (prepared by the Ministry of Lands and Housing generally on a scale of 250,000:1.)

6. The problem of locating markets arose partly from their being listed in the Market Calendar almost entirely by the name of the market only (which is often different to the name of the town where they are located) and partly from the location of a few markets outside of towns and villages such as at rural road junctions.

7. Assuming 40 markets in Oyo Division and 82 markets in Ife-Ilesha Division.

8. Traditionally, Yoruba towns had several layout features in common. In the center of the town was the Oba's palace, the Āfin. Directly in front of the palace was the main market, usually called the Ojá Oba or king's market, where the Oba would watch from a distance the regular assembling of his people. From this central hub, roads radiated out through the "quarters" (which consisted of a number of compounds housing members of one or more extended families) to neighboring towns.

For more detail on the layout and morphology of Yoruba towns see G. J. Afolabi Ojo, Yoruba Culture: A Geographical Analysis, University of Ife and University of London Press, 1966; and A. L. Mabogunje, Yoruba Towns, Ibadan University Press, 1962.

9. Interview with Chief Alhaji Adedeji Adeoye, the Acting Head of Iba Family.

10. This development on the periphery of the old (walled) towns resulted from the desire of Europeans to work and live away from the old native center. Also, sufficient land was usually only available at some distance from the old center.

11. The railway service from Lagos reached Ibadan in 1901.

12. The 20gari wholesalers located in Mokola Market are exceptional, but can be explained by the fact that they are specializing in yellow gari, which is preferred by the immigrant groups living in the neighborhood.

13. Sellers by type of cloth or clothing and by sex, Oje Market, Ibadan, May 20, 1967.

| Type of<br>Cloth or Clothing | Sex          |            | Total        |
|------------------------------|--------------|------------|--------------|
|                              | Male         | Female     |              |
| Native woven cloth           | 1,351        | 331        | 1,682        |
| Native dyed cloth            | --           | 332        | 332          |
| Imported cloth               | 2            | 113        | 115          |
| Weaving thread               | 71           | 141        | 212          |
| Second hand clothing         | 73           | 35         | 108          |
| Caps                         | 102          | --         | 102          |
|                              | <u>1,609</u> | <u>942</u> | <u>2,551</u> |

14. "Market Calendar," Op. Cit.

15. The Yoruba talk about these markets meeting "every five-five days" that is, including the last market day, the next meeting of the market occurs on the fifth day.

16. The four-day period coincides with the Yoruba week which is deeply rooted in the traditional religion: "a day each was set apart for the four major deities of Yorubaland and their local variants: Sango (god of thunder), Obatala (god of physical deformities), Orunmila (Ifa - god of divination and augury) and Oduduwa ( a goddess and wife of Obatala) or Ogun (god of iron)." Formerly, the most popular god in a locality was used to mark the beginning of the week; now, however, the market day performs this function. "Thus in Ado Ekiti, the market day, first day of the week, is Ojo oza; the first day after the market is Ojo keji oja (market's second day); the second day

- after market is Ojo keta oja (market's third day); the third day after the market is Oja dola (tomorrow is market day); and the next day is another market day (Oja oja)." G.J. Afolabi Ojo, op. cit., pp. 203-204.
17. For example, see B. W. Hodder, "Some Comments on Markets and Market Periodicity," in (Proceedings of Seminar on) Markets and Marketing in West Africa, Center for African Studies, University of Edinburgh, April 1966, p. 101.
  18. B. W. Hodder, "The Yoruba Rural Market," in Paul Bohannan and George Dalton (Editors), Markets in Africa, Northwestern University Press, 1962, p. 105.
  19. It should be pointed out again that this enumeration can only give an approximate notion of the structure of markets in Western Nigeria. In the markets counted, there are not only errors resulting from diurnal, market day and seasonal variations, particularly in rural markets, but also possible collection errors. In addition, the enumeration of sellers in the 7 urban markets outside Ibadan included only the major markets, omitting many of the smaller markets: the 48 rural markets enumerated represent about 10 percent of all rural markets listed in the "Market Calendar"--however, these are generally the larger and more important rural markets, particularly in the supply of foodstuffs to Ibadan. Nevertheless, the averages resulting from the analysis are considered to be quite indicative, if not representative, of the actual structure.
  20. This resulted partly from the seasonality of yam and the timing of the enumeration (mostly well after the end of the late yam harvest) and from the preference in Ibadan for dried yam.
  21. Mainly explained by the fact that Ibadan is the major center of the cowpea trade in Western Nigeria and that the demand for cowpeas in Ibadan is more developed.

22. This is possible as a result of such a decision by the traditional market authority, such as the market or village elders, or the traders' associations, or by the relevant local government council. Under "The Markets Adoptive Bye-Laws Order, 1962", the council may adopt and act upon the following provisions:

"23. (1) The council may allot a specified area in the market for the sale or exposure for sale of a particular class or description of food or merchandise.

(2) When an area has been allotted in accordance with paragraph (1) in respect of any class or description of food or merchandise no person shall sell or expose for sale the class or description of food or merchandise in the market except in the place allotted.

28. Any person who contravenes (this provision) shall be guilty of an offence and liable on conviction to a fine of ten shillings."

"The Markets Adoptive Bye-Laws Order, 1962" WNLN 364 of 1962. Published in the Supplement to Western Nigeria Gazette, Vol. II, No. 87 of November 22, 1962, p. B 678.

23. Because most of the markets originated in a preliterate society, it has not been possible to authenticate their origins as reported by local leaders. It should also be noted that there was only an 80 percent response to this question.

24. WNLN 364 of 1962, op. cit., p. B678
25. "The Markets Adoptive Bye-Laws (Amendment) Order, 1964" WNLN 346 of 1964. Published in the Supplement to Western Nigeria Gazette, Vol. 13, No. 44 of August 13, 1964, pp. B 434-5.
26. WNLN 364 of 1962, op. cit., p. B 676.
27. WNLN 346 of 1964, op. cit., p. B 434.
28. However, the basic functions and structure of this society seem to have changed with the cessation of intra-tribal warfare. Originally, it was composed of young men organized to protect the village against attack as well as to control markets and trade. Now it is composed of a group of elders who only perform a few market functions.
- B. W. Hodder, 1966, op. cit., pp. 99-100.
29. Because this information was mostly obtained from local market leaders during interviews, it is possible that the local government councils own more of the land on which the markets are located than is actually shown in Table 8.8.
30. After examining the stall, the research assistant was asked to describe its condition in terms of whether it was excellent, good, fair, poor, or very poor. This was to be judged in relation to the condition that would be expected in an ideal stall of that kind.

31. Western Nigeria: Statistical Bulletin June and December 1965,  
Chief Statistician, Ministry of Economic Planning and Community  
Development, Ibadan, 1966, p. 127.

32. "21. Every occupier of a stall, table or site in the  
market shall on every day and when he shall use such stall,  
table or site keep the same in a sanitary state and, before  
leaving at the close of the day's selling, clean away the  
dirt and refuse from such stall, table or site and leave the  
same in a sanitary condition to the satisfaction of the  
market master."

WNLN 364 of 1962, op. cit., p. B 678.

33. For the markets studied in depth, the frequency of holding by  
type of market is shown below

| <u>Frequency of Holding</u> | <u>Urban Markets</u> |              | <u>Rural<br/>Markets</u> |
|-----------------------------|----------------------|--------------|--------------------------|
|                             | <u>Ibadan</u>        | <u>Other</u> |                          |
| Daily                       | 14                   | 13           | 3                        |
| Four-day                    | --                   | 6            | 36                       |
| Eight-day                   | <u>2</u>             | <u>--</u>    | <u>6</u>                 |
| Number of markets           | 16                   | 19           | 45                       |

34. Standard deviation of population mean shown in brackets.

35. The results of the Wholesale Traders Questionnaire confirmed results obtained earlier in the Market Traders Questionnaire #1. In the earlier survey, sellers whose home towns were outside the Region, accounted for 8 percent of all respondents: this included 1 percent from Eastern Nigeria, all of whom had returned to their "Region of origin" by the time of the Wholesale Traders Questionnaire. Of the total, 58 percent were native Ibadan residents, while people from Oyo Division accounted for 21 percent and Ijebu Division 6 percent.

36. For example, the charges which had been set by the association of millers for Oba, a rural market town in Egba Division, and which were typed and put on display by at least one miller, were as follows:

|                                         |      |
|-----------------------------------------|------|
| 1. Kerosene tin of rice                 | 1/-  |
| 2. Kerosene tin of coffee               | 2/-  |
| 3. Kerosene tin of maize                | 1/6  |
| 4. Kerosene tin of roasted ground maize | 3/6  |
| 5. Kerosene tin of fresh cowpeas        | 1/-  |
| 6. Kerosene tin of dry cowpeas          | 3/6  |
| 7. Olodo of sapala (maize product)      | 1/6  |
| 8. Olodo of fresh pepper                | 2/6  |
| 9. Olodo of dried pepper                | 16/6 |
| 10. Olodo of melon                      | 9d   |
| 11. Olodo of dried cassava              | 9d   |
| 12. Olodo of maize                      | 9d   |

However, these prices appear to be somewhat higher than those

in other areas. It is suspected that even in this village, where there were at least two millers in direct competition, the actual amount realized was probably less than the amount quoted.

37. Interviews with a questionnaire entitled "Questionnaire on Food Grinding and Milling Facilities" were conducted with flour millers, as follows:

| <u>Urban Areas</u> |                       | <u>Rural Markets</u> |
|--------------------|-----------------------|----------------------|
| <u>Ibadan</u>      | <u>Outside Ibadan</u> |                      |
| 24                 | 10                    | 13                   |

Appendix Table 8.1

LIST SHOWING RANGE OF COMMODITIES TRADED IN  
THE TRADITIONAL MARKETING SYSTEM OF WESTERN NIGERIA

| <u>STAPLES</u>          | 14. Vegetables Green: | <u>COOKED FOOD</u>           |
|-------------------------|-----------------------|------------------------------|
| 1. Cowpeas: Pewu beans  | Tete                  | 23. Cooked Food:             |
| White beans             | Sokoyokoto            | Isu                          |
| Brown beans             | Odu                   | Iyan                         |
| Schindere beans         | Worowo                | Eba                          |
| Water beans             | Yanrin                | Oka                          |
| 2. Cassava: Dried       | Alagogoro             | Dundu                        |
| Gari - White            | Okro                  | Ewa                          |
| - Yellow                | Wewdu                 | Rice                         |
| 3. Cocoyam: White       | Apon                  | Cake & Bura                  |
| 4. Guinea Corn          | Vegetable Oil:        | Roasted Plantain             |
| 5. Maize: Dried - White | Palm                  | Fried fish                   |
| - Yellow                | Groundnut             | Eko                          |
| Fresh - White           | Melon                 | Moinmoin                     |
| - Yellow                | 15. Other: Palm wine  | Bread                        |
| 6. Plantain:            |                       |                              |
| 7. Rice: Ofada          | <u>DRY PROVISIONS</u> | <u>NON-FOOD</u>              |
| Tapa                    | 16. Dry Provisions:   | 24. Baskets                  |
| Alabere                 | Canned Tomatoes       | Calabashes                   |
| Abakalili               | Salt                  | Mats                         |
| Minna                   | Biscuits              | 25. China (plates, cups)     |
| Wiri-Wiri               | Margarine             | Glass                        |
| Imported                |                       | Pottery                      |
| 8. Yam: Dried           | <u>PROTEIN</u>        | 26. Cloth                    |
| Flour                   | 17. Fish:             | Imported                     |
| Tuber - White           | Dried                 | Native: Dyed                 |
| - Yellow                | Fresh                 | Woven cloth                  |
| 9. Other: Potato        | Frozen                | Second hand                  |
| Millet                  | Stock                 | Clothing - ready m           |
| Wheat flour             | 18. Livestock:        | Caps                         |
|                         | Goats                 | Thread                       |
|                         | Sheep                 | Raw cotton                   |
|                         | Dogs                  | 27. Dry goods:               |
|                         | Pigs                  | English Soap                 |
|                         | Tortoise              | Native Soap                  |
|                         | Guinea pig            | Caustic soda                 |
|                         | Cow Skin              | Sponge                       |
|                         | 19. Meat:             | Matches                      |
|                         | Dried                 | Potash                       |
|                         | Fresh                 | 28. Firewood                 |
|                         | Roasted               | 29. Hair dressers            |
|                         | Bush meat             | 30. Iron goods               |
|                         | Animal heads          | Utensils                     |
|                         | 20. Poultry Birds:    | 31. Leaves & Packers         |
|                         | Fowls                 | 32. Medicine: Native - Herbs |
|                         | Hens                  | 33. Patent                   |
|                         | Cocks                 | 34. Tailors                  |
|                         | Ducks                 | 35. Tinkers                  |
|                         | Doves                 | Jewelry                      |
|                         | Eggs                  | 36. Other Non-food:          |
|                         | 21. Snails            | Artisans                     |
|                         | 22. Other Protein     | Grinding Mills               |
|                         |                       | Paints                       |
|                         |                       | Pools (Football)             |
|                         |                       | Books                        |
|                         |                       | Painters                     |
|                         |                       | Shoes                        |
|                         |                       | Leather goods.               |

Appendix Table 8.2

URBAN MARKETS--IBADAN--DISTRIBUTION OF SELLERS BY COMMODITY,  
BY TYPE OF SELLER AND BY SEX OF SELLER--MARKET SELLERS ENUMERATION

| Commodity                   | Retailers |        | Wholesalers |        | All   |        |
|-----------------------------|-----------|--------|-------------|--------|-------|--------|
|                             | Male      | Female | Male        | Female |       |        |
| <b>STAPLES</b>              |           | 440    | 4,750       | 2,889  | 860   | 8,939  |
| 1. Beans (cowpeas)          | 2         | 827    | 671         | 109    | 1,609 |        |
| 2. Cassava - dried          | 4         | 475    | 367         | 95     | 941   |        |
| - flour                     | 2         | 153    | 100         | 15     | 270   |        |
| - gari                      | 5         | 638    | 206         | 84     | 933   |        |
| 3. Cocoyam                  | --        | 199    | 41          | 16     | 256   |        |
| 4. Guinea corn              | --        | 169    | 46          | 31     | 246   |        |
| 5. Maize - fresh & dried    | 12        | 570    | 479         | 106    | 1,167 |        |
| - prepared                  | --        | 24     | --          | 16     | 40    |        |
| 6. Plantain                 | --        | 375    | 19          | 64     | 458   |        |
| 7. Rice                     | 1         | 376    | 166         | 81     | 624   |        |
| 8. Yam - dried              | 165       | 329    | 311         | 78     | 883   |        |
| - flour                     | --        | 192    | 65          | 45     | 302   |        |
| - fresh                     | 249       | 349    | 407         | 111    | 1,116 |        |
| 9. Other staples            | --        | 74     | 11          | 9      | 94    |        |
| <b>OTHER FOOD</b>           |           | 133    | 5,719       | 1,057  | 801   | 7,710  |
| 10. Fruit                   | 29        | 517    | 189         | 103    | 838   |        |
| 11. Nuts & seeds - kola     | --        | 569    | 534         | 220    | 1,323 |        |
| - other                     | 1         | 410    | 14          | 11     | 436   |        |
| 12. Onion                   | --        | 828    | 129         | 82     | 1,039 |        |
| 13. Ingredients             | 12        | 1,875  | 147         | 159    | 2,193 |        |
| 14. Vegetables - green      | 40        | 821    | 20          | 91     | 972   |        |
| - oil                       | 22        | 645    | 24          | 135    | 826   |        |
| 15. Other, e.g. palm wine   | 29        | 54     | --          | --     | 83    |        |
| <b>16. DRY PROVISIONS</b>   |           | 38     | 938         | 14     | 2     | 992    |
| <b>HAWKERS</b>              |           | 22     | 298         | --     | --    | 320    |
| <b>PROTEIN</b>              |           | 1,107  | 2,923       | 358    | 320   | 4,708  |
| 17. Fish - dried            | 4         | 483    | 98          | 218    | 803   |        |
| - fresh                     | 5         | 235    | --          | --     | 240   |        |
| - stock                     | --        | 430    | --          | --     | 430   |        |
| 18. Livestock               | 676       | 477    | --          | --     | 1,153 |        |
| 19. Meat - dried            | 5         | 249    | 105         | 98     | 457   |        |
| - fresh                     | 402       | 233    | --          | --     | 635   |        |
| 20. Poultry - birds         | --        | 487    | 155         | 4      | 646   |        |
| - eggs                      | 14        | 181    | --          | --     | 195   |        |
| 21. Snails                  | 1         | 55     | --          | --     | 56    |        |
| 22. Other protein           | --        | 93     | --          | --     | 93    |        |
| <b>23. COOKED FOOD</b>      |           | 27     | 1,077       | --     | --    | 1,104  |
| <b>NON-FOOD</b>             |           | 4,361  | 7,529       | 6      | 89    | 11,985 |
| 24. Baskets/calabashes/mats | 41        | 404    | --          | 13     | 458   |        |
| 25. China/glass/pottery     | 15        | 870    | --          | --     | 885   |        |
| 26. Cloth/clothing          | 1,825     | 1,408  | --          | 5      | 3,233 |        |
| 27. Dry goods               | 212       | 988    | --          | 44     | 1,244 |        |
| 28. Firewood                | 78        | 253    | --          | 16     | 347   |        |
| 29. Hair dressers           | 101       | 173    | --          | --     | 274   |        |
| 30. Iron goods/utensils     | 279       | 409    | --          | --     | 688   |        |
| 31. Leaves/packers          | 19        | 705    | 2           | 8      | 734   |        |
| 32. Medicine - native       | 43        | 479    | --          | --     | 522   |        |
| 33.    - patent             | 108       | 26     | --          | --     | 134   |        |
| 34. Tailors                 | 385       | 180    | --          | --     | 565   |        |
| 35. Tinkers/jewelry         | 244       | 351    | --          | 3      | 598   |        |
| 36. Other non-food          | 1,011     | 1,283  | 4           | --     | 2,298 |        |
| <b>TOTAL</b>                |           | 6,128  | 23,235      | 4,324  | 2,072 | 35,759 |

Appendix Table 8.3

URBAN MARKETS--OTHER THAN IBADAN--DISTRIBUTION OF SELLERS BY COMMODITY,  
BY TYPE OF SELLER AND BY SEX OF SELLER--MARKET SELLERS ENUMERATION

| Commodity                  | Retailers    |               | Wholesalers |            | All           |
|----------------------------|--------------|---------------|-------------|------------|---------------|
|                            | Male         | Female        | Male        | Female     |               |
| <b>STAPLES</b>             | <b>162</b>   | <b>5,213</b>  | <b>211</b>  | <b>215</b> | <b>5,801</b>  |
| 1. Beans (cowpeas)         | 17           | 683           | 48          | 40         | 788           |
| 2. Cassava - dried         | 15           | 107           | 7           | --         | 129           |
| - flour                    | --           | 552           | 1           | --         | 553           |
| - gari                     | 37           | 1,400         | 35          | 53         | 1,525         |
| 3. Cocoyam                 | 6            | 183           | --          | --         | 189           |
| 4. Guinea corn             | 6            | 94            | 11          | 1          | 112           |
| 5. Maize - fresh and dried | 4            | 525           | 42          | 30         | 601           |
| - prepared                 | --           | 8             | --          | --         | 8             |
| 6. Plantain                | --           | 203           | --          | 3          | 206           |
| 7. Rice                    | 13           | 675           | 17          | 24         | 729           |
| 8. Yam - dried             | 4            | 119           | 8           | 10         | 141           |
| - flour                    | 6            | 118           | --          | 4          | 126           |
| - fresh                    | 54           | 535           | 42          | 46         | 677           |
| 9. Other staples           | --           | 13            | --          | 4          | 17            |
| <b>OTHER FOOD</b>          | <b>190</b>   | <b>5,359</b>  | <b>5</b>    | <b>44</b>  | <b>5,598</b>  |
| 10. Fruit                  | 5            | 340           | --          | 4          | 349           |
| 11. Nuts & seeds - kola    | 2            | 945           | --          | 40         | 987           |
| - other                    | --           | 368           | 3           | --         | 371           |
| 12. Onion                  | 5            | 706           | 2           | --         | 713           |
| 13. Ingredients            | 12           | 1,573         | --          | --         | 1,585         |
| 14. Vegetables - green     | 154          | 970           | --          | --         | 1,124         |
| - oil                      | 7            | 424           | --          | --         | 431           |
| 15. Other, e.g. palm wine  | 5            | 33            | --          | --         | 38            |
| <b>16. DRY PROVISIONS</b>  | <b>185</b>   | <b>822</b>    | <b>1</b>    | <b>--</b>  | <b>1,008</b>  |
| <b>PROTEIN</b>             | <b>769</b>   | <b>3,479</b>  | <b>28</b>   | <b>114</b> | <b>4,390</b>  |
| 17. Fish - dried           | 61           | 924           | 3           | 17         | 1,005         |
| - fresh                    | 2            | 218           | 25          | 17         | 262           |
| - stock                    | 8            | 719           | --          | --         | 727           |
| 18. Livestock              | 180          | 193           | --          | 13         | 386           |
| 19. Meat - fried           | 14           | 249           | --          | --         | 263           |
| - fresh                    | 499          | 469           | --          | 30         | 998           |
| 20. Poultry - birds        | 5            | 433           | --          | --         | 438           |
| - eggs                     | --           | 92            | --          | 37         | 129           |
| 21. Snails                 | --           | 182           | --          | --         | 182           |
| 22. Other protein          | --           | --            | --          | --         | --            |
| <b>23. COOKED FOOD</b>     | <b>11</b>    | <b>925</b>    | <b>--</b>   | <b>--</b>  | <b>936</b>    |
| <b>NON-FOOD</b>            | <b>2,158</b> | <b>7,551</b>  | <b>29</b>   | <b>47</b>  | <b>9,785</b>  |
| 24. Basket/calabashes/mats | 71           | 423           | --          | --         | 494           |
| 25. China/glass/pottery    | 62           | 505           | --          | 15         | 582           |
| 26. Cloth/clothing         | 282          | 2,315         | 2           | 4          | 2,603         |
| 27. Dry goods              | 397          | 1,163         | 8           | 15         | 1,583         |
| 28. Firewood               | 25           | 342           | --          | --         | 367           |
| 29. Hair dressers          | 84           | 129           | --          | 7          | 220           |
| 30. Iron goods/utensils    | 97           | 150           | --          | --         | 247           |
| 31. Leaves/packers         | 38           | 483           | --          | --         | 521           |
| 32. Medicine - native      | 41           | 718           | --          | --         | 759           |
| 33.    - patent            | 69           | 67            | 12          | --         | 148           |
| 34. Tailors                | 332          | 146           | --          | 4          | 482           |
| 35. Tinkers/jewelry        | 151          | 286           | --          | --         | 436           |
| 36. Other non-food         | 509          | 625           | 7           | 2          | 1,343         |
| <b>TOTAL</b>               | <b>3,475</b> | <b>23,349</b> | <b>274</b>  | <b>420</b> | <b>27,518</b> |

Appendix Table 8.4

**RURAL MARKETS--DISTRIBUTION OF SELLERS BY COMMODITY AND BY  
SEX OF SELLER--MARKET SELLERS ENUMERATION**

| Commodity                   | Sex of Seller |               | Both          |
|-----------------------------|---------------|---------------|---------------|
|                             | Male          | Female        |               |
| <b>STAPLES</b>              | <b>1,810</b>  | <b>12,217</b> | <b>14,027</b> |
| 1. Beans (cowpeas)          | 129           | 910           | 1,039         |
| 2. Cassava - dried          | 54            | 957           | 1,011         |
| - flour                     | 8             | 745           | 753           |
| - gari                      | 98            | 2,236         | 2,334         |
| 3. Cocoyam                  | 44            | 511           | 555           |
| 4. Guinea corn              | 18            | 272           | 290           |
| 5. Maize - fresh & dried    | 199           | 1,483         | 1,682         |
| - prepared                  | --            | 27            | 27            |
| 6. Plantain                 | 96            | 1,189         | 1,285         |
| 7. Rice                     | 143           | 1,035         | 1,178         |
| 8. Yam - dried              | 201           | 1,037         | 1,238         |
| - flour                     | 48            | 326           | 374           |
| - fresh                     | 772           | 1,418         | 2,190         |
| 9. Other staples            | --            | 71            | 71            |
| <b>OTHER FOOD</b>           | <b>3,134</b>  | <b>13,235</b> | <b>16,369</b> |
| 10. Fruit                   | 9             | 944           | 953           |
| 11. Nuts & seeds - kola     | 2,602         | 4,314         | 6,916         |
| - other                     | 24            | 750           | 774           |
| 12. Onion                   | 45            | 807           | 852           |
| 13. Ingredients             | 263           | 3,541         | 3,804         |
| 14. Vegetables - green      | 183           | 1,754         | 1,937         |
| - oil                       | 2             | 937           | 939           |
| 15. Other eg palm - wine    | 6             | 188           | 194           |
| <b>16. DRY PROVISIONS</b>   | <b>420</b>    | <b>1,326</b>  | <b>1,746</b>  |
| <b>PROTEIN</b>              | <b>2,483</b>  | <b>6,733</b>  | <b>9,216</b>  |
| 17. Fish - dried            | 137           | 1,311         | 1,448         |
| - fresh                     | 9             | 487           | 496           |
| - stock                     | 111           | 1,051         | 1,162         |
| 18. Livestock               | 1,288         | 686           | 1,974         |
| 19. Meat - dried            | 207           | 672           | 879           |
| - fresh                     | 656           | 445           | 1,101         |
| 20. Poultry - birds         | 74            | 1,472         | 1,546         |
| - eggs                      | 1             | 419           | 420           |
| 21. Snails                  | --            | 179           | 179           |
| 22. Other protein           | --            | 11            | 11            |
| <b>23. COOKED FOOD</b>      | <b>11</b>     | <b>1,278</b>  | <b>1,289</b>  |
| <b>NON-FOOD</b>             | <b>5,504</b>  | <b>8,031</b>  | <b>13,535</b> |
| 24. Baskets/calabashes/mats | 252           | 786           | 1,038         |
| 25. China/glass/pottery     | 17            | 738           | 755           |
| 26. Cloth/clothing          | 1,091         | 1,815         | 2,906         |
| 27. Dry goods               | 726           | 1,528         | 2,254         |
| 28. Firewood                | --            | 199           | 199           |
| 29. Hair dressers           | 186           | 174           | 360           |
| 30. Iron goods/utensils     | 176           | 235           | 411           |
| 31. Leaves/packers          | 50            | 622           | 672           |
| 32. Medicine - native       | 87            | 887           | 974           |
| 33.    - patent             | 782           | 42            | 824           |
| 34. Tailors                 | 535           | 277           | 812           |
| 35. Tinkers/jewelry         | 1,181         | 310           | 1,491         |
| 36. Other non-food          | 421           | 418           | 839           |
| <b>TOTAL</b>                | <b>13,362</b> | <b>42,820</b> | <b>56,182</b> |



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**MARKETING OF STAPLE FOODS  
IN WESTERN NIGERIA**

**Volume 3**

Prepared for:

**THE UNITED STATES AGENCY FOR  
INTERNATIONAL DEVELOPMENT**



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MENLO PARK, CALIFORNIA**

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By: Alan R. Thodey

Contract No. AID/csd-801  
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## CONVERSION FACTORS

### WEIGHT

1 long ton (2,240 lbs.) = 1.12 short tons.

### CURRENCY

1 Nigerian pound (₦1) = US\$2.80

1 pound = 20 shillings (s.).

1 shilling = 12 pence (d.)

## QUESTIONNAIRE ABBREVIATIONS

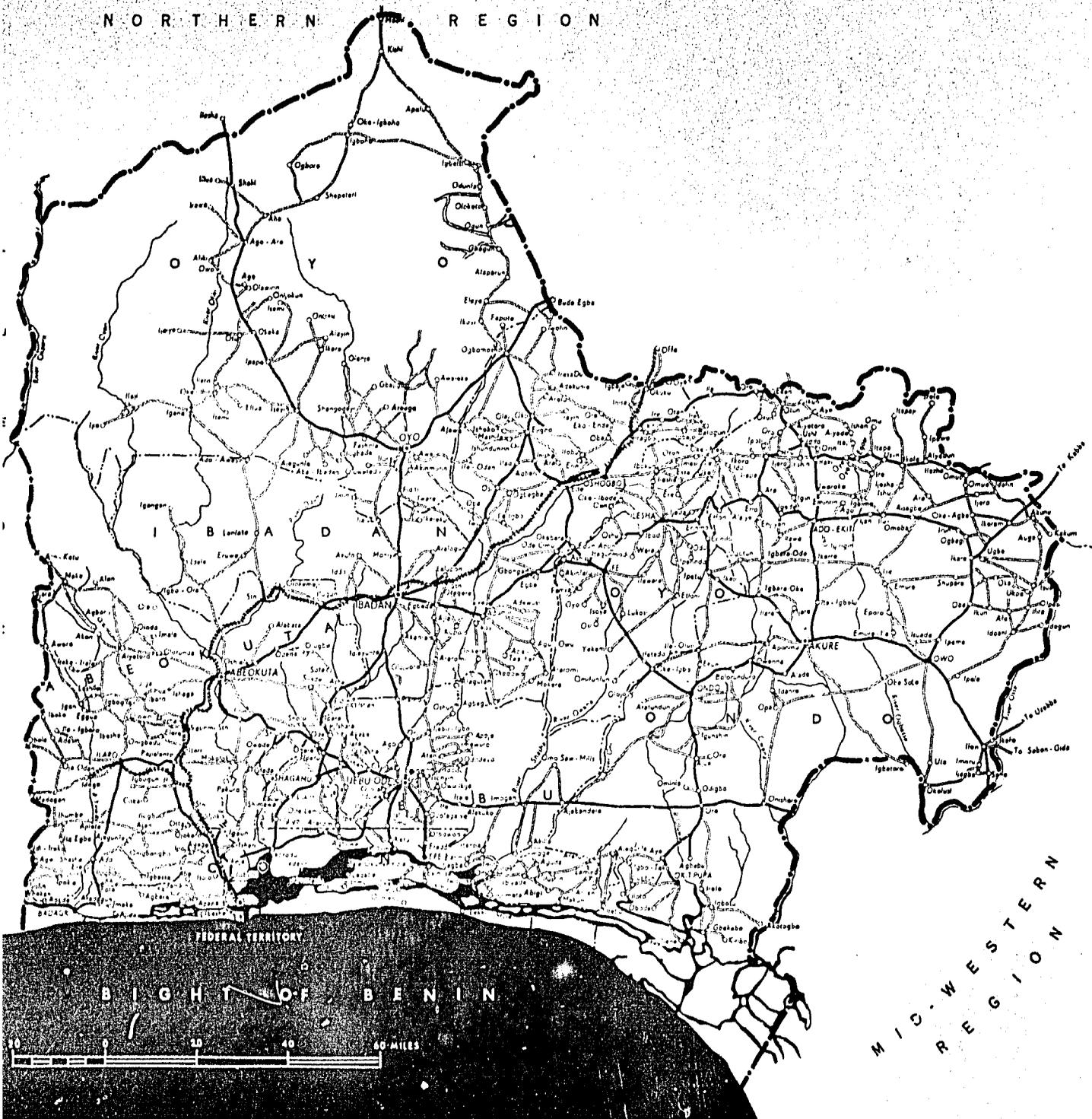
|        |                                         |
|--------|-----------------------------------------|
| HS     | Household Survey                        |
| MBQ    | Market Buyers Questionnaire             |
| MTQ #1 | Questionnaire on Markets #1             |
| MTQ #2 | Questionnaire on Markets #2             |
| MTQ-RF | Questionnaire on Markets - Revised Form |
| MSE    | Market Sellers Enumeration              |
| PS     | Producer Survey                         |
| QOM    | Questionnaire on Markets                |
| RPS-I  | SRI Retail Price Series for Ibadan      |
| RTEFSQ | Ready-to-eat-food Sellers Questionnaire |
| SRS    | 110 Selected Retail Sellers             |
| WPS-I  | SRI Wholesale Price Series for Ibadan   |
| WTQ    | Wholesale Traders Questionnaire         |



Chapter IX

BEHAVIOR OF  
MARKETING  
INTERMEDIARIES

NORTHERN REGION



MID-WESTERN REGION

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## IX. BEHAVIOR OF MARKETING INTERMEDIARIES

Details on the flow of commodities from the surplus supply areas to the deficit consuming locations, including place, form, and timing of exchange by the different types of traders, has already been presented in Chapter VII. The major characteristics of the traders involved in this flow, particularly as they relate to business structure, are dealt with in Chapter VIII. This chapter will present information on the behavior of these traders, especially in relation to the conduct of their business.

### A. ENTRY INTO TRADING

Persons enter into the business of trading in the traditional markets in Western Nigeria in a variety of ways. Perhaps the commonest for a female trader is to be initiated into the customs of the market by the trader's mother, although other relatives, such as husbands, brothers and sisters, are also important. Others are introduced to trading by friends or through an apprenticeship to a "master," while a few claim to be "entirely self-taught."

Most traders claim they went through a formal period of apprenticeship to learn the art involved in trading. For example, 75 percent of the 103 traders interviewed by means of the Market Traders Questionnaire--Revised Form--in urban markets outside Ibadan answered that they had served a period of apprenticeship. Of these, 64 percent had served with a relative; for female traders, this usually meant with mothers and sisters, and occasionally husbands, while for males mothers were most common. The remaining 36 percent of the traders who served an apprenticeship did so either with a friend or, more formally, with a selected trader who was agreeable. The period of time served was mostly from one to two years, although it ranged from 6 months to 20 years. (1)

In addition to being assisted by a relative or friend in gaining the acceptance of the other traders in the market, many of the traders interviewed were also assisted by the provision of either a loan or grant of capital. For female traders, husbands were the most common providers, although mothers were also somewhat important. Most claimed to have started with their own money. The actual amount of capital used to start most businesses was found to be quite low, £5 to £15 being most common, although the range was from just a few shillings to several hundred pounds. (2)

Many of the traders who had been financed by someone stated that they had repaid the initial advance. This occurred mostly within five years, although one woman was found to have repaid her husband after 15 years. The sizable remainder, including many who had been trading for over 20 years, still used the initial advance as part of their trading capital. Except in rare cases, the person making the advance did not expect a direct return from it while it was unpaid. In fact, under Yoruba culture husbands are expected, whenever possible, to assist their wives in establishing their own businesses so that they can acquire virtual economic independence. Similarly, other relatives, particularly older brothers and parents, are expected to give assistance.

About the earliest age at which traders enter into food marketing on their own account is 20 years. However, most traders begin at a somewhat higher age, with many being over 40 years of age when they begin their own trading activities. In the Market Traders Questionnaire #1 in Ibadan, the 264 traders were, on the average, 32 years of age when they began trading. Males, with an average age of 33 years, were only slightly higher than females, with an average age of 31 years. If the period of apprenticeship is included, this would mean that they usually become part of the food marketing system a few years earlier than these averages indicate.

## B. STABILITY IN TRADING

Once established in their businesses, traders tend to take their trade seriously and to work hard at it. Although free to move to other markets, they generally remain in the market (s) where they first established themselves. This applies to traders in both urban and rural markets.

In the Market Traders Questionnaire #1 in Ibadan, for example, the traders interviewed had been selling in the same market for an average of 9.8 years, while they had been trading altogether for an average of only 10.0 years. Table 9.1 presents a percentage distribution of traders by the years they had been selling in the same market. Also included is the average number of years trading in the same market, as well as in all markets, by type of seller. From this, it can be seen that retailers have generally been trading for a shorter period than retail-wholesalers and wholesalers. However, all groups show the same tendency to remain in the same market throughout their trading career. Interviews with traders selling in the rural and urban markets outside Ibadan confirm the tendencies found amongst traders in Ibadan.

Overall, traders generally trade for the full length of every market day. However, days are frequently taken off to attend to private business and to participate in traditional ceremonies and festivals. This is more common among females and retailers than among males and wholesalers. Other days are also lost to sickness.

In the Wholesale Traders Questionnaire in Ibadan, only 4 percent admitted that they had been out of the market for more than one continuous

PERCENT DISTRIBUTION OF TRADERS BY YEARS SELLING  
IN SAME MARKET AND BY TYPE OF SELLER--MARKET TRADERS  
QUESTIONNAIRE #1-IBADAN--JUNE-JULY 1966

| Years Selling in<br>the same Market     | Type<br>Retail<br>Only | of<br>Retail-<br>Wholesale | Seller<br>Wholesale<br>Only | All<br>Sellers  |
|-----------------------------------------|------------------------|----------------------------|-----------------------------|-----------------|
| Under 5 years                           | 23                     | 7                          | 25                          | 16              |
| 5 and under 10 years                    | 42                     | 37                         | 28                          | 38              |
| 10 and under 15 years                   | 19                     | 31                         | 14                          | 23              |
| 15 and under 20 years                   | 11                     | 16                         | 11                          | 13              |
| 20 years and over                       | 6                      | 8                          | 22                          | 9               |
| <b>Total</b>                            | 101 <sup>+</sup>       | 99 <sup>+</sup>            | 100                         | 99 <sup>+</sup> |
| Average (in years)                      | 8                      | 11                         | 12                          | 10              |
| Standard Deviation                      | 6                      | 6                          | 10                          | 7               |
| Coefficient of Variation                | .8                     | .5                         | .8                          | .7              |
| Average Years Selling<br>in all Markets | 9                      | 11                         | 13                          | 10              |
| Number of Responses                     | 106                    | 122                        | 36                          | 264             |

<sup>+</sup> Rounding error.

week in the previous year. Of these 21 wholesalers, 12 were absent for a period longer than one month. Two, in fact, were away from the market for more than 6 months. Several reasons were proffered for their absence from the market. These were as follows:

| <u>Reasons for Absence<br/>From Market</u>      | <u>Percent of<br/>Those Absent</u> |
|-------------------------------------------------|------------------------------------|
| Illness                                         | 24                                 |
| Family considerations, (mostly maternity leave) | 33                                 |
| Traditional ceremonies and festivals            | 29                                 |
| Lack of trading capital                         | 10                                 |
| Political situation of country                  | 5                                  |
|                                                 | <u>101<sup>+</sup></u>             |

<sup>+</sup> Rounding error.

Although the same question was not asked of retailers in any of the questionnaires, it is likely that their absence from the market would have been somewhat higher. Part of this is explained by the predominance of female retailers and the numerous demands made on their time by their family responsibilities. However, members of a trader's extended family help considerably in taking care of these responsibilities. Furthermore, traders themselves generally try to minimize their absence from the market. For instance, although six weeks is the usual time that women are expected to remain in their compound (home) after the birth of a child, a much shorter period now appears to be customary.

An example of the tendency of traders to be absent from the market in order to celebrate a festival or ceremony is provided by two periodic rural markets close to Ibadan, Erunmu and Egbeda Markets. Attendance during the Christian Easter and Moslem Id-El-Kabir Festivals in March 1967, and at a more usual market day soon after was as follows:

| Market | Number of Traders Selling |                               | Festival Attendance as Percent of Regular |
|--------|---------------------------|-------------------------------|-------------------------------------------|
|        | Regular Market Day        | Market During Festival Period |                                           |
| Egbeda | 914 (April 5)             | 183 (March 24)                | 20                                        |
| Erunmu | 1,263 (April 15)          | 55 (March 22)                 | 4                                         |

In each case, the Moslem Id-El-Kabir was more important than the Christian Easter.

In urban markets which meet daily, most traders do not sell on Sundays, although a few will almost always be present. In the periodic rural markets, the particular day of holding does not seem to make any difference. For example, attendance is about the same on Christian and Moslem days of worship as on other days. The occurrence of traditional festivals and other activities appears to be more important.

### C. BUYING PRACTICES

Information pertaining to the buying practices of traders was collected at two levels: from major buyers in the supply markets who were assembling supplies for movement to another market, and from traders selling in urban markets, particularly Ibadan. For this reason, buying practices of each of these groups of traders will be discussed separately.

#### 1. Buyers in Supply Markets

A considerable proportion of traders found buying in rural markets are women. For example, of the 128 respondents in the Market Buyers Questionnaire, 86 percent were female; only among buyers of maize were male traders of more importance, accounting for 30 percent of the buyers. Although male traders do use the rural markets in the

Region to obtain supplies, they also tend to circumvent it more than female traders. In addition to buying directly from producers and small assemblers, either on the farm or in the local village, male assemblers tend to trade in larger amounts and to sell either directly to other traders by personal contact at their residence or place of business in the supply area--mostly located in urban centers--or through agents in the major consuming markets such as Ibadan and Lagos.

Once traders become established in their business, they tend to follow a similar pattern of activity over the years. For example, Table 9.2 shows that traders usually continue to buy in the same market

Table 9.2

PERCENT DISTRIBUTION OF BUYERS BY YEARS BUYING IN THIS AND IN ALL MARKETS AND BY COMMODITY--MARKET BUYERS QUESTIONNAIRE--IBADAN--OCTOBER 1966-APRIL 1967

| Years Buying          | Commodity |           |           |           |           |           |           |                  |           |                 |                  |           |
|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|-----------|-----------------|------------------|-----------|
|                       | Yam       |           | Gari      |           | Maize     |           | Rice      |                  | Other     |                 | Total            |           |
|                       | This Mrkt | All Mrkts        | This Mrkt | All Mrkts       | This Mrkt        | All Mrkts |
| Less than 5 years     | 43        | 27        | 14        | 14        | 25        | 15        | 39        | 17               | 18        | 9               | 31               | 20        |
| 5 and under 10 years  | 39        | 47        | 43        | 32        | 15        | 20        | 39        | 56               | 55        | 27              | 38               | 39        |
| 10 and under 20 years | 14        | 18        | 36        | 36        | 55        | 50        | 22        | 22               | 18        | 27              | 27               | 28        |
| 20 years and over     | 5         | 8         | 7         | 18        | 5         | 15        | -         | 6                | 9         | 36              | 5                | 13        |
| Total Percent         | 100       | 100       | 100       | 100       | 100       | 100       | 100       | 101 <sup>+</sup> | 100       | 99 <sup>+</sup> | 101 <sup>+</sup> | 100       |
| Number of Responses   | 51        |           | 28        |           | 20        |           | 18        |                  | 11        |                 | 128              |           |

<sup>+</sup>Rounding error.

for long periods of time. This seems to be particularly true in the well-established gari supply markets southwest of Ibadan, where both trade and

personnel are old and stable. Although it is possible for traders to change the markets they buy in, Table 9.2 indicates that not many traders actually do so permanently. In fact, of the buyers interviewed relatively few had actually changed their main supply markets to any considerable extent.

Besides buying in the same supply markets for many years and for most of their trading lives, traders also attend regularly. As Table 9.3 indicates, 73 percent of the traders stated that they attended the market on every market day (every fourth or eighth day) although almost certainly some days will be missed throughout the course of a year. A further 16 percent claimed they attended the market on most market days, while 11 percent declared they only attended occasionally. One buyer of dried yam was found to be attending the particular market for the first time.

Most of the buyers interviewed in the supply markets indicated that that particular market was the most important source of supply. However, 77 percent mentioned that they also attended at least one other market, at least occasionally, to buy supplies. The percentage distribution of these replies for each commodity is presented in Table 9.4 in terms of total number of rural markets used by the trader to obtain supplies.

As Table 9.5 shows, only twenty percent of the buyers interviewed declared that they lived in a village or town in close proximity to the market (same District Council Area). Generally, the buyers had travelled to the market from an urban center some distance away; a few traders from

Table 9.3

PERCENT DISTRIBUTION OF BUYERS BY FREQUENCY OF ATTENDANCE  
AT MARKET AND BY COMMODITY - MARKET BUYERS QUESTIONNAIRE -  
OCTOBER 1966 - APRIL 1967

| Frequency of<br>Attendance at Market | Commodity |      |       |                  |       | Total            |
|--------------------------------------|-----------|------|-------|------------------|-------|------------------|
|                                      | Yam       | Gari | Maize | Rice             | Other |                  |
| Every Market Day                     | 74        | 79   | 75    | 56               | 73    | 73               |
| Most Market Days                     | 14        | 14   | 15    | 28               | 9     | 16               |
| Occasionally                         | 12        | 7    | 10    | 17               | 9     | 11               |
| First Time                           | -         | -    | -     | -                | 9     | 1                |
| Total Percent                        | 100       | 100  | 100   | 101 <sup>+</sup> | 100   | 101 <sup>+</sup> |
| Number of Responses                  | 51        | 28   | 20    | 18               | 11    | 128              |

<sup>+</sup>Rounding Error.

other rural areas were encountered, but were relatively unimportant. (the 80 percent of the buyers who had travelled at least from another District Council Area, 56 percent had come from within the same division)

Table 9.4

PERCENT DISTRIBUTION OF BUYERS BY TOTAL NUMBER OF RURAL  
MARKETS USED TO OBTAIN SUPPLIES AND BY COMMODITY--MARKET  
BUYERS QUESTIONNAIRE - OCTOBER 1966 - APRIL 1967.

| Total Number of<br>Rural Markets Used<br>to Obtain Supplies | Commodity |      |       |      |                  | Total |
|-------------------------------------------------------------|-----------|------|-------|------|------------------|-------|
|                                                             | Yam       | Gari | Maize | Rice | Other            |       |
| One                                                         | 18        | 25   | 10    | 50   | 18               | 23    |
| Two                                                         | 35        | 46   | 60    | 33   | 9                | 39    |
| Three                                                       | 45        | 29   | 30    | 17   | 37               | 34    |
| Four or more                                                | 2         | -    | -     | -    | 37               | 4     |
| Total percent                                               | 100       | 100  | 100   | 100  | 101 <sup>+</sup> | 100   |
| Number of Responses                                         | 51        | 28   | 20    | 18   | 11               | 128   |

<sup>+</sup>Rounding Error.

Table 9.5

PERCENT DISTRIBUTION OF BUYERS BY LOCATION OF HOME TOWN  
OF TRADER IN RELATION TO MARKET AND BY COMMODITY--MARKET  
BUYERS QUESTIONNAIRE--OCTOBER 1966-APRIL 1967

| Location of Home Town of<br>Trader in Relation to Market | Commodity |           |           |           |           | Total     |
|----------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                                                          | Yam       | Gari      | Maize     | Rice      | Other     |           |
| Same District Council                                    | 16        | 25        | 15        | 44        | --        | 20        |
| Same Division but<br>Different District Council          | 47        | 39        | 40        | 39        | 64        | 45        |
| Different Division                                       | <u>37</u> | <u>36</u> | <u>45</u> | <u>17</u> | <u>36</u> | <u>35</u> |
| Total Percent                                            | 100       | 100       | 100       | 100       | 100       | 100       |
| Number of Responses                                      | 51        | 28        | 20        | 18        | 11        | 128       |

while the remaining 44 percent had come from a different division.

It is also interesting to note that most of the buyers claimed to be residents of the area where they disposed of the commodity. As Table 9.6 illustrates, 80 percent of the buyers actually sold in urban centers with over 20,000 population. Ibadan was the most important single town mentioned, particularly for yam, gari, and maize, and constituted the place of sale of 24 percent of the buyers. The central native markets were the most important markets within Ibadan. Overall, Lagos, with 5 percent of the buyers, was relatively unimportant except for gari. Buyers from other large urban centers (over 100,000 population), such as Abeokuta, Ijebu-Ode, Oyo, Oshogbo, Ile-Ife and Ilesha, accounted for 28 percent of all buyers and were particularly important for the supply markets that were located relatively close to them. With 23 percent of the total, buyers selling in smaller urban centers (20,000 to 100,000 population) were also quite

important among the traders interviewed. However, these traders generally bought in supply areas located closer to the town than did traders from the larger towns. Buyers who sold in villages and towns with under 20,000 people accounted for 20 percent of the total. Although most of these buyers sold at retail in their market outlets, some were also performing an assembling function.

Table 9.6

PERCENT DISTRIBUTION OF BUYERS BY PLACE OF SALE  
OF COMMODITY AND BY COMMODITY -- MARKET BUYERS QUES-  
TIONNAIRE-- OCTOBER 1966-APRIL 1967

| Place of Sale of<br>Commodity | Commodity        |      |       |      |                 | Total |
|-------------------------------|------------------|------|-------|------|-----------------|-------|
|                               | Yam              | Gari | Maize | Rice | Other           |       |
| Ibadan - Central Native       | 18               | 14   | 35    | -    | 18              | 17    |
| - Other                       | 10               | 11   | 5     | -    | -               | 7     |
| Lagos                         | 2                | 14   | -     | -    | 9               | 5     |
| Other Urban - Over 100,000    | 33               | 29   | 35    | 17   | 9               | 28    |
| - 50, - 100,000               | 12               | 7    | 5     | 22   | 45              | 14    |
| - 20, - 50,000                | 10               | -    | 5     | 28   | 9               | 9     |
| Rural                         | 16               | 25   | 15    | 33   | 9               | 20    |
| Total percent                 | 101 <sup>+</sup> | 100  | 100   | 100  | 99 <sup>+</sup> | 100   |
| Number of Responses           | 51               | 28   | 20    | 18   | 11              | 128   |

<sup>+</sup>Rounding error.

Although a few of the gari buyers declared that they normally sold to assemblers, and about 10 percent of all buyers stated that they sold to or through wholesalers, most of the buyers claimed to be retail-wholesalers, selling both to retailers and to consumers. Some, however, claimed to be selling to either one or the other more or less exclusively.

Of the buyers formally interviewed, 98 percent intimated that they were buying on their own account. A woman acquiring yam supplies for a master

(employer) in Oyo and another woman buying gari as an agent for a trader in Abeokuta accounted for the other two percent.

The larger buyers in the supply markets do not usually buy from the same sellers each market day. As Table 9.7 shows, among the market buyers interviewed, 12 percent said that they seldom, if ever, bought twice from the same sellers, while 62 percent indicated that they did not usually buy from the same individuals. Of the remaining 25 percent, 20 percent stated that they usually did buy from the same sellers, while the other 5 percent said that they always used the same sellers as the source of their supplies.

Table 9.7

PERCENT DISTRIBUTION OF BUYERS BY FREQUENCY OF BUYING FROM SAME SELLERS IN MARKET AND BY COMMODITY--MARKET BUYERS  
QUESTIONNAIRE--OCTOBER 1966--APRIL 1967

| Frequency of Buying<br>from the same sellers | Commodity        |                  |       |      |       | Total           |
|----------------------------------------------|------------------|------------------|-------|------|-------|-----------------|
|                                              | Yam              | Gari             | Maize | Rice | Other |                 |
| Always                                       | 2                | 11               | 10    | 6    | 27    | 5               |
| Usually                                      | 14               | 25               | 10    | 33   | 73    | 20              |
| Not Usually                                  | 67               | 54               | 75    | 44   | -     | 62              |
| Never or very seldom                         | 18               | 11               | 5     | 17   | -     | 12              |
| Total Percent                                | 101 <sup>+</sup> | 101 <sup>+</sup> | 100   | 100  | 100   | 99 <sup>+</sup> |
| Number of Responses                          | 51               | 28               | 20    | 18   | 11    | 128             |

<sup>+</sup>Rounding Error.

Even though buyers often buy from the same sellers, firm supply agreements do not seem to exist. The terms and conditions of each transaction are subject to negotiation at the time of sale. Of the respondents to the Market Buyers Questionnaire, only one gari buyer expected a seller to supply

her with a minimum of negotiation, but that was because she had lent money to the supplier. Even in this case, the terms of exchange were not rigidly set, so that it cannot really be considered a firm supply agreement. In the only other case where money was lent by a buyer to a seller, the buyer expected to be repaid not in commodities but in cash. This was also for gari and in the same market.

For the most part, buyers in the supply markets are not related to their main suppliers. Nevertheless, it does occur, and in fact 4 percent of the buyers interviewed considered that their major suppliers were related to them. The effects of this relationship are, however, probably insignificant, as under Yoruba culture it is not expected and exists almost entirely for business reasons. If it were not satisfactory to both parties, local customs certainly would not require that the exchange between relatives continue for family considerations.

The major buyers of staple foods in the supply markets generally pay their suppliers in cash at the time of purchase. As Table 9.8 indicates, 94 percent of the buyers interviewed with the Market Buyers Questionnaire stated that they paid for their supplies immediately. The remaining 6 percent, however, usually took up to one week to pay their suppliers, one gari buyer taking between one and two weeks.

## 2. Sellers in Urban Markets

Before the buying practices of sellers in urban markets can be discussed, a definitional point must be clarified. In the larger urban markets such as Ibadan, many of the traders performing the wholesaling function

Table 9.8

PERCENT DISTRIBUTION OF BUYERS BY USUAL TIME TAKEN  
TO PAY SUPPLIER AND BY COMMODITY--MARKET BUYERS  
QUESTIONNAIRE--OCTOBER 1966--APRIL 1967

| <u>Usual Time Taken<br/>to Pay Supplier</u> | <u>Commodity</u> |                        |              |             |              | <u>Total</u> |
|---------------------------------------------|------------------|------------------------|--------------|-------------|--------------|--------------|
|                                             | <u>Yam</u>       | <u>Gari</u>            | <u>Maize</u> | <u>Rice</u> | <u>Other</u> |              |
| None (i.e. cash)                            | 94               | 89                     | 95           | 100         | 91           | 94           |
| 1-3 days                                    | 2                | 4                      | 5            | -           | -            | 2            |
| 4-7 days                                    | 4                | 4                      | -            | -           | 9            | 3            |
| 8-14 days                                   | -                | 4                      | -            | -           | -            | 1            |
| <b>Total Percent</b>                        | <b>100</b>       | <b>101<sup>+</sup></b> | <b>100</b>   | <b>100</b>  | <b>100</b>   | <b>100</b>   |
| <b>Number of Responses</b>                  | <b>51</b>        | <b>28</b>              | <b>20</b>    | <b>18</b>   | <b>11</b>    | <b>128</b>   |

+ Rounding Error

do not own the goods they sell but function as agents for assemblers. For example, Table 9.9 shows that for a sample of traders in Ibadan, only 58 percent of the wholesalers claimed that they owned all the staple foods they were selling. In the later survey of wholesalers, using the Wholesale Traders Questionnaire, the wholesaler himself owned only 40 percent (value) of the previous month's sales. This is shown in Appendix Table 7.18 by commodity; the proportion owned by wholesalers varied from 5 percent for dried yam to over 65 percent for rice.

Again from Table 9.9, 93 percent of the retailer-wholesalers and 100 percent of the retailers interviewed with the Market Traders Questionnaire #2 stated that they owned all the staple foods they were selling. Most of the wholesaling in the other urban centers in Western Nigeria is performed by retailer-wholesalers, with a pattern of ownership similar to that of retailer-wholesalers in Ibadan. Although wholesalers of the type

Table 9.9

PERCENT DISTRIBUTION OF TRADERS BY PROPORTION OF  
STAPLE FOODS OWNED AND BY TYPE OF SELLER--MARKET  
TRADERS QUESTIONNAIRE #2-IBADAN-AUGUST-SEPTEMBER 1966

| Proportion of<br>Staple Foods Owned<br>by Trader | Type of Seller |                  |                  | Total            |
|--------------------------------------------------|----------------|------------------|------------------|------------------|
|                                                  | Retail Only    | Retail-Wholesale | Wholesale Only   |                  |
| All                                              | 100            | 93               | 58               | 87               |
| 50-99 percent                                    | -              | 4                | -                | 1                |
| 1-49 percent                                     | -              | -                | 7                | 2                |
| None                                             | -              | 4                | 37               | 11               |
| Total Percent                                    | 100            | 101 <sup>+</sup> | 102 <sup>+</sup> | 101 <sup>+</sup> |
| Number of Responses                              | 130            | 55               | 71               | 256              |

<sup>+</sup>Rounding Error.

functioning in Ibadan do exist in other towns in the Region, particularly Abeokuta, Ilesha and Akure, they are fewer and less important.

As a general rule, where the goods being sold are not owned by the seller, he should be treated as an agent of the assembler (cum-wholesaler) only. However, among the wholesalers in Ibadan who are technically agents, the opposite view is held. They generally tend to think of themselves as principals, while their suppliers are considered to act more as agents. This is borne out by the independence often displayed by these wholesalers when selling supplies for assemblers. For the most part, both assemblers and wholesalers are treated as separate traders with a quasi-act of exchange occurring when the goods are delivered to the wholesaler.

The attitude of wholesalers, however, means that some of their responses germane to buying practices, particularly in the earlier questionnaires,

are technically misleading. For example, in the Market Traders Questionnaire #1 in Ibadan, all the respondents, including agents, answered as if they owned the goods on sale. Nevertheless, Table 9.10 does indicate an important distinction between retailers and wholesalers in Ibadan.

Table 9.10

PERCENT DISTRIBUTION OF TRADERS OBTAINING SUPPLIES DIRECTLY FROM SUPPLY AREA, BY COMMODITY AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #1-IBADAN-JUNE-AUGUST 1966

| Commodity       | Type of Seller |                   |                |             |
|-----------------|----------------|-------------------|----------------|-------------|
|                 | Retail Only    | Retail Wholesaler | Wholesale Only | All Sellers |
| Yam             | 9              | 94                | 100            | 73          |
| Gari            | 57             | 100               | 94             | 83          |
| Maize           | 18             | 97                | 100            | 78          |
| Rice            | 12             | 86                | 75             | 41          |
| Cowpeas         | 2              | 91                | 100            | 55          |
| All Commodities | 22             | 95                | 97             | 68          |

Generally, wholesalers (including retailer-wholesalers) obtain their supplies directly from the supply area, either on their own account or as agents, while retailers obtain their supplies from wholesalers in an Ibadan market. Some exception occurs for gari, as 57 percent of the retailers stated that they actually obtained their supplies from the producer or trader in the producing area. The slightly lower figure for wholesalers of rice is not typical, as it occurred as a result of the smallness of the sample: one of the four wholesalers of rice interviewed sold imported rice, which was obtained from the importer in Ibadan.

The information regarding quantities and value of each commodity, obtained from the surveys and contained in Appendix VII-B, generally supports the above contentions.

Most retailers go personally to buy from their supplier, while wholesalers frequently rely on someone else to acquire their supplies for them. For example, Table 9.11 presents the responses to the question of who actually goes to the supplier to acquire the supplies, contained in the Market Traders Questionnaire #1 in Ibadan. As can be seen, 97 percent of the retailers indicated that they personally dealt with their supplier, while only 74 percent of the retail-wholesalers and 65 percent of the wholesalers did so. Wholesalers used non-relatives exclusively to deal

Table 9.11

PERCENT DISTRIBUTION OF COMMODITIES SOLD BY TRADERS, BY PERSON USED TO ACQUIRE SUPPLIES AND BY TYPE OF SELLER-- MARKET TRADERS QUESTIONNAIRE #1-IBADAN-JUNE-AUGUST 1966

| Person Used<br>to Acquire Supplies | Type of Seller   |                      |                   | All<br>Sellers   |
|------------------------------------|------------------|----------------------|-------------------|------------------|
|                                    | Retail<br>Only   | Retail-<br>Wholesale | Wholesale<br>Only |                  |
| Trader Personally                  | 97               | 74                   | 65                | 79               |
| Relative                           |                  |                      |                   |                  |
| - Mother                           | 1                | -                    | -                 | *                |
| - Brother                          | -                | 1                    | -                 | 1                |
| - Sister                           | 2                | 5                    | -                 | 3                |
| - Son                              | -                | 1                    | -                 | 1                |
| - Other                            | -                | 1                    | -                 | 1                |
| Non-relative                       | <u>1</u>         | <u>18</u>            | <u>35</u>         | <u>17</u>        |
| Total Percent                      | 100 <sup>+</sup> | 100                  | 100               | 102 <sup>+</sup> |
| Total commodities sold:148         |                  | 171                  | 74                | 393              |

\* Less than 0.5 percent.

+ Rounding error.

with their suppliers; retailer-wholesalers used a combination of relatives and non-relatives, with the latter being more important; while retailers mostly used relatives in the few cases where they did not go personally. Of the relatives used, sisters were especially important.

For wholesalers in Ibadan, the Wholesale Traders Questionnaire presents a more accurate picture of buying practices. Table 9.12 indicates that 73 percent of the wholesalers interviewed were only acting as agents: By commodity, this varied from 44 percent for wholesalers of fresh yam tubers up to 92 percent for dried yam. In most cases, these wholesalers are not personally concerned with the acquisition of supplies in the supply area and their transportation to the urban center. Instead, they are concerned only once they receive the goods in store.

On the other hand, the other 27 percent of the wholesalers who own some, if not all, of the commodities they sell are directly concerned with acquiring supplies in the supply areas. For the most part, the wholesaler himself (herself) actually goes to the supply area, especially for the commodities bought within the Region. Although agents in the supply areas are used by traders selling each of the commodities to obtain supplies, they are especially important in the long distance trade in rice and cowpeas. Among the traders who own the commodities they sell, those using agents account for 42 percent and 36 percent of rice and cowpea sellers respectively. Employees are seldom used by wholesalers to purchase supplies.

Although it will be dealt with under inventory policy (Chapter IX.-F), mention should be made here of frequency of purchase. For the more

Table 9.12

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY NEGOTIATOR  
WITH SUPPLIER AND BY COMMODITY SOLD--WHOLESALE TRADERS QUES-  
TIONNAIRE--IBADAN - FEBRUARY-MAY 1967

| Negotiator<br>With Supplier                 | Commodity Sold |              |      |                  |       |      |                 | Total |
|---------------------------------------------|----------------|--------------|------|------------------|-------|------|-----------------|-------|
|                                             | Yam            | Dried<br>Yam | Gari | Dried<br>Cassava | Maize | Rice | Cowpeas         |       |
| <u>Commodity owned<br/>by Wholesaler</u>    |                |              |      |                  |       |      |                 |       |
| Wholesaler himself                          | 50             | 7            | 34   | 19               | 13    | 31   | 23              | 21    |
| Employee                                    | --             | --           | --   | --               | --    | --   | 1               | *     |
| Agent                                       | 6              | 1            | 4    | 2                | 2     | 22   | 14              | 6     |
| <u>No Commodity owned by<br/>Wholesaler</u> | 44             | 92           | 62   | 79               | 85    | 47   | 61              | 73    |
| Total Percent                               | 100            | 100          | 100  | 100              | 100   | 100  | 99 <sup>+</sup> | 100   |
| Number of Responses                         | 18             | 145          | 159  | 125              | 168   | 59   | 158             | 832   |

\* Less than 0.5 percent.

<sup>+</sup> Rounding error.

perishable local commodities, especially yam, supplies are generally purchased at frequent intervals, with only small, if any, carryover stocks being held. For yam, this often means acquiring supplies about twice a week. Gari and maize also tend to be turned over (sold out) fast, mostly because small quantities are procured frequently: for wholesalers this means once, if not twice, a week. The less perishable local commodities, dried yam and dried cassava, tend to be acquired in larger quantities less often. The same observation applies even more to wholesalers in the long distance commodities. Traders in both rice and cowpeas, whenever their capital resources permit, will usually buy enough supplies in the

supply area to last them several weeks, often up to a month or more. This not only minimizes the time, effort and cost expended to travel to the supply area, but also allows for cheaper unit transportation costs, particularly if the trader's purchases are large enough to charter a lorry (truck). Even with local commodities, particularly yam, traders frequently purchase a sufficient quantity to enable them to charter a 5-ton lorry.

While wholesalers usually sell in bulk quantities, mostly in bags, they will frequently assemble their supplies by buying in small measures and then bagging them for transportation to their market outlet. The capacity of the measure most frequently used will usually be in the 8 to 12 pound range. Retailers who buy in the supply areas usually buy in similar fashion but in smaller quantities, while those who buy from wholesalers will buy either by the bag or a smaller measure, such as one made from a discarded 4 gallon kerosene tin, which can contain from about 25 pounds of gari to about 40 pounds of cowpeas. Generally, this latter class of retailer will buy small quantities at frequent intervals, often once or twice daily, depending mostly upon the availability of capital and accessibility of storage facilities.

With the exception of commodities not owned by them, wholesalers generally pay for purchases in cash at the time of their acquisition. For example, in the Wholesale Traders Questionnaire in Ibadan, most wholesalers claimed that they owed their suppliers nothing at all, and in fact the average owed by all wholesalers was only £2.5, while the standard deviation was £20. As Table 9.13 shows, only 3 percent indicated that they owed more than £10.

Table 9.13

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY AMOUNT  
PRESENTLY OWED TO SUPPLIERS AND BY VALUE OF MONTHLY SALES-  
WHOLESALE TRADERS QUESTIONNAIRE-IBADAN-FEBRUARY-MAY 1967

| Amount<br>Presently Owed<br>to Suppliers | Value of Monthly Sales |               |               |                  |                | Total             |
|------------------------------------------|------------------------|---------------|---------------|------------------|----------------|-------------------|
|                                          | Under<br>£100          | £100-<br>£199 | £200-<br>£299 | £300-<br>£499    | £500 &<br>Over |                   |
| Under £10                                | 97                     | 97            | 99            | 97               | 97             | 97                |
| £10 & under £50                          | 2                      | 1             | 1             | --               | 3              | 2                 |
| £50 & under £100                         | --                     | 1             | --            | 2                | --             | *                 |
| £100 & over                              | 1                      | 1             | --            | 2                | --             | 1                 |
| Total percent                            | 100                    | 100           | 100           | 101 <sup>+</sup> | 100            | 100               |
| Average amount (£)                       | 3                      | 3             | 0.6           | 3                | 0.3            | 2                 |
| Standard deviation                       | 21                     | 24            | 5             | 17               | 18             | 20                |
| Coefficient of variation                 | 8.4                    | 7.1           | 8.2           | 5.3              | 5.6            | 8.0               |
| Number of responses:                     | 251                    | 153           | 68            | 58               | 31             | 561 <sup>++</sup> |

\* Less than 0.5 percent.

+ Rounding error.

++ Total amount owed to suppliers: £1,402.

Retailers tend to make much greater use of credit when acquiring supplies than wholesalers. Again from the Wholesale Traders Questionnaire in Ibadan, wholesalers claimed that they were owed, in the aggregate, about 16 times more than they owed their suppliers. Credit purchases at the retail level are very important, especially for rice and cowpeas. This can be seen in Table 9.14, which indicates that about 80 percent of the retailers of these commodities frequently purchased their supplies on credit. Retailers of maize and gari, although still using wholesaler credit to acquire supplies, did so less often than retailers of rice and cowpeas. Of the retailers selling each commodity, 53 percent for maize and 30 percent

Table 9.14

PERCENT OF TRADERS USING CREDIT FREQUENTLY TO OBTAIN SUPPLIES,  
 BY COMMODITY AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE  
 #1-IBADAN--JUNE-AUGUST 1966

| Commodity       | Type of Seller |                  |                | All Sellers |
|-----------------|----------------|------------------|----------------|-------------|
|                 | Retail Only    | Retail-Wholesale | Wholesale Only |             |
| Yam             | --             | 6                | --             | 2           |
| Gari            | 30             | 10               | 33             | 21          |
| Maize           | 53             | 13               | 7              | 21          |
| Rice            | 81             | 7                | 25             | 52          |
| Cowpeas         | <u>82</u>      | <u>23</u>        | <u>32</u>      | <u>50</u>   |
| All Commodities | 57             | 13               | 22             | 31          |

for gari intimated that they frequently used credit. All of the yam retailers interviewed claimed that they usually paid for their supplies as they were received. Most of the retailer-wholesalers and wholesalers in Table 9.14 who replied that they were using supplier credit were, in fact, only agents; meaning, therefore, is not clear.

#### D. SELLING PRACTICES

##### 1. Number of Markets Frequented

The habitual character of traders' business activities has already been mentioned. Once established, they tend to continue trading regularly in the same market (or series of markets). In the daily urban markets, traders generally sell in only one market. For example, in the Market Traders Questionnaire #1 in Ibadan, 93 percent of the traders replied that they only traded in the market where they were being interviewed. The other 7 percent all traded in two markets each, with the other

market being in Ibadan for 14 of these 19 traders. At the time of interview, some of these traders were selling in Ibuko Market which meets every eighth day, while the others sold in a night market as well as a day market. The traders who sold in another market outside Ibadan did so in a market more than 40 miles away.

In the daily urban markets outside Ibadan, the same general characteristics were noted. The higher proportion of traders in the daily markets in Akure claiming to sell in more than one market appears to be an exception. Nearly half of the 19 traders interviewed sold in two or more markets, mostly in the periodic rural markets that surround Akure. As many of the traders interviewed were retailer-wholesalers, it is possible that the sample overstates the proportion of traders selling in more than one market.

In the periodic urban markets, particularly in Abeokuta where no important daily markets exist, most traders seem to sell in more than one market. Many, in fact, follow a cycle, so that where a 4-day market cycle is predominant, as in Abeokuta, traders will trade in four different markets, cycling back to the first market after 4 days. However, in the case of Abeokuta, even though at least one important market meets within the town on each day in the cycle, many of the traders were found to include some rural periodic markets in their sequence of markets.

Among the sellers in the rural periodic markets, several types must be distinguished. Firstly, there are producers and local assemblers who tend overwhelmingly to sell in the same local market and do not generally bother to travel to other markets. Secondly, there are retailers who live

locally; they will usually buy their supplies in the market on market day and sell in the market as well as from their residence between market days. Some of these traders also sell in other rural periodic markets. The final category is retailers who travel to the market, usually from a large urban center, some distance away, bringing for sale commodities obtained elsewhere. Although these traders deal primarily in imported goods, cloth and clothing, metal goods, herbs for native medicine, and similar items, they are also important in the staple food trade, particularly in rice and cowpeas. They tend to sell in a cycle of several markets, often leaving one day in four free in order to purchase supplies.

Of the 65 interviews formally conducted with sellers of staple foods in the rural markets visited, only 23 percent mentioned that they sold in other markets besides the one in which the interview took place. Most of them sold in only one other market, although a few did sell in three or more different markets.

## 2. Commodities Sold

At any given time it is generally possible to identify one commodity as being of overwhelming importance to each staple food trader. This is true despite the fact that traders will frequently change their major commodity, and many also sell other commodities concurrently. The major commodity on sale changes with the season and as supplies of other commodities become available and profitable. For example, both maize and fresh yam tubers are particularly seasonal, with the result that many traders will only sell these commodities for a limited period after the harvest. Retailers in particular tend to be less stable with regard to

the commodity they are selling than wholesalers, although even wholesalers, particularly agents, show considerable mobility in handling different major commodities. Wholesalers in rice and cowpeas appear to be particularly stable in their trade, although they compensate for this to some extent by handling several other commodities, each with its own season.

In terms of number of staple foods being sold concurrently, there is a general tendency on the part of both retailers and wholesalers to specialize in one major commodity. For retailers, this means that they generally handle only one commodity, while wholesalers occasionally handle two major and some minor commodities. In the Wholesale Traders Questionnaire in Ibadan, for example, the 562 wholesalers interviewed handled a total of 832 staple food commodities as major items of trade. This ratio of 1.5 commodities per wholesaler includes only the major staple foods handled and not staple foods handled as minor commodities or other commodities not being studied.

The combinations of staple foods sold by all of the traders in the Market Traders Questionnaire #1 in Ibadan and their overall relative importance in the survey, are shown in Table 9.15. This information is summarized by number of commodities being sold and percent of all traders selling each staple food in Table 9.16. It can be observed that, overall, 69 percent of all the sellers interviewed sold only one commodity. A further 24 percent sold two commodities, while 8 percent sold three commodities; one exceptional retailer sold four commodities.

Yam is usually sold alone, while the other commodities may often be found in combination with each other. The two most frequently found

Table 9.15

PERCENT DISTRIBUTION OF TRADERS BY NUMBER AND COMBINATION OF  
STAPLE FOODS SOLD--MARKET TRADERS QUESTIONNAIRE, #1-IBADAN--  
JUNE-JULY 1966

| Combination of Staple<br>Foods Sold | Number of Commodities Sold |     |       |      | Total            |
|-------------------------------------|----------------------------|-----|-------|------|------------------|
|                                     | One                        | Two | Three | Four |                  |
| Yam                                 | 10                         |     |       |      | 10               |
| Gari                                | 23                         |     |       |      | 23               |
| Maize                               | 13                         |     |       |      | 13               |
| Rice                                | 5                          |     |       |      | 5                |
| Cowpeas                             | 18                         |     |       |      | 18               |
| Yam - Gari                          |                            | 1   |       |      | 1                |
| Gari - Maize                        |                            | 5   |       |      | 5                |
| Gari - Rice                         |                            | *   |       |      | *                |
| Gari - Cowpeas                      |                            | 8   |       |      | 8                |
| Maize - Cowpeas                     |                            | 4   |       |      | 4                |
| Rice - Cowpeas                      |                            | 6   |       |      | 6                |
| Yam - Gari - Cowpeas                |                            |     | *     |      | *                |
| Yam - Maize - Cowpeas               |                            |     | *     |      | *                |
| Gari - Maize - Rice                 |                            |     | *     |      | *                |
| Gari - Maize - Cowpeas              |                            |     | 2     |      | 2                |
| Gari - Rice - Cowpeas               |                            |     | 5     |      | 5                |
| Maize - Rice - Cowpeas              |                            |     | *     |      | *                |
| Gari - Maize - Rice - Cowpeas       |                            |     |       | *    | *                |
| Total percent                       | 69                         | 24  | 8     | *    | 101 <sup>+</sup> |
| Number of responses                 |                            |     |       |      | 264              |

\* Less than 0.5 percent.

+ Rounding error.

together are gari and cowpeas. Rice and cowpeas, gari and maize, and maize and cowpeas are also quite common combinations. Among the three-commodity combinations, gari, rice and cowpeas was the most frequently encountered. From Table 9.16, it can be seen that rice and

Table 9.16

PERCENT OF TRADERS SELLING EACH STAPLE FOOD, BY NUMBER OF COMMODITIES SOLD--MARKET TRADERS QUESTIONNAIRE #1-IBADAN-- JUNE-JULY 1966

| Number of Commodities Sold | Commodity |      |       |      |         | All Sellers      |
|----------------------------|-----------|------|-------|------|---------|------------------|
|                            | Yam.      | Gari | Maize | Rice | Cowpeas |                  |
| One                        | 10        | 23   | 13    | 5    | 18      | 69               |
| Two                        | 1         | 14   | 9     | 6    | 18      | 24               |
| Three                      | 1         | 8    | 3     | 5    | 8       | 8                |
| Four                       | --        | *    | *     | *    | *       | *                |
| Total                      | 12        | 45   | 25    | 16   | 44      | 101 <sup>+</sup> |
| Number of Responses        |           |      |       |      |         | 264              |

\* Less than 0.5 percent.

+ Rounding error, in column only. Rows do not add because traders selling more than one commodity are included once for each commodity sold.

cowpeas are most often sold in combination with other commodities.

Yams are generally sold exclusively.

In the Market Traders Questionnaire #2 in Ibadan, 74 percent of the retailers and 60 percent of the retailer-wholesalers claimed they were not selling any commodities other than their major staple foods. On the other hand, Table 9.17 indicates only 30 percent of the wholesalers were not selling at least one other commodity. Wholesalers also tended to sell a larger number of other commodities than the

other two types of traders. While one or two other commodities were most common for retailers and retailer-wholesalers, three or four were most common for wholesalers.

Table 9.17

PERCENT DISTRIBUTION OF TRADERS BY NUMBER OF OTHER  
COMMODITIES SOLD AND BY TYPE OF SELLER--MARKET TRADERS  
QUESTIONNAIRE #1-IBADAN--AUGUST-SEPTEMBER 1966

| Number of Other<br>Commodities Being<br>Sold in Addition to<br>Major Staple Food Items | Retail<br>Only | Retail<br>Wholesale | Wholesale<br>Only | All<br>Sellers   |
|----------------------------------------------------------------------------------------|----------------|---------------------|-------------------|------------------|
| None                                                                                   | 74             | 60                  | 30                | 59               |
| One                                                                                    | 9              | 15                  | 13                | 11               |
| Two                                                                                    | 11             | 9                   | 15                | 12               |
| Three                                                                                  | 5              | 5                   | 17                | 9                |
| Four                                                                                   | 1              | 7                   | 17                | 7                |
| Five                                                                                   | -              | 2                   | 8                 | 3                |
| Six                                                                                    | -              | 2                   | -                 | *                |
| Total Percent                                                                          | 100            | 100                 | 100               | 101 <sup>+</sup> |
| Number of Responses                                                                    | 130            | 55                  | 71                | 256              |

\* Less than 0.5 percent.

+ Rounding error.

Without exception, where another commodity was being sold by a trader it was a food item. Table 9.18 shows that of the traders interviewed in Ibadan with the Market Traders Questionnaire #2, melon seeds, (3) with 13 percent of all sellers, were the most important single other commodity being handled at that time. Dried yam and yam flour, dried cassava and cassava flour, and maize (as a minor commodity), each with a percent of

Table 9.18

PERCENT OF TRADERS BY OTHER COMMODITIES SOLD AND BY  
 TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #2 -  
 IBADAN--AUGUST-SEPTEMBER 1966

| <u>Other Commodities<br/>Being Sold by Trader</u> | <u>Type of Seller</u>  |                              |                           | <u>All<br/>Sellers</u> |
|---------------------------------------------------|------------------------|------------------------------|---------------------------|------------------------|
|                                                   | <u>Retail<br/>Only</u> | <u>Retail-<br/>Wholesale</u> | <u>Wholesale<br/>Only</u> |                        |
| <u>No other Commodities<br/>Being Sold</u>        | 74                     | 60                           | 30                        | 59                     |
| <u>Staple Foods</u>                               |                        |                              |                           |                        |
| Yam (as minor commodity)                          | 1                      | 2                            | 17                        | 5                      |
| Dried Yam & Yam Flour                             | -                      | 5                            | 30                        | 9                      |
| Dried Cassava & Cassava Flour                     | 1                      | 9                            | 22                        | 9                      |
| Gari (as minor commodity)                         | -                      | 2                            | 7                         | 3                      |
| Maize (as minor commodity)                        | 3                      | 13                           | 18                        | 9                      |
| Rice (as minor commodity)                         | 1                      | 2                            | 3                         | 2                      |
| Cowpeas (as minor commodity)                      | 3                      | 7                            | 11                        | 6                      |
| Cocoyam                                           | -                      | 2                            | -                         | *                      |
| Guinea Corn                                       | 1                      | 2                            | 4                         | 2                      |
| Millet                                            | 1                      | -                            | 6                         | 2                      |
| Plantain                                          | 2                      | 4                            | 3                         | 2                      |
| <u>Other Foods</u>                                |                        |                              |                           |                        |
| Groundnuts - Kernels                              | 1                      | 5                            | 6                         | 3                      |
| - Oil                                             | 8                      | 4                            | 6                         | 7                      |
| Palm Oil                                          | -                      | 2                            | -                         | *                      |
| Locust Beans                                      | -                      | 2                            | 8                         | 3                      |
| Melon Seeds                                       | 5                      | 16                           | 25                        | 13                     |
| Onions                                            | 6                      | 2                            | 14                        | 7                      |
| Pepper                                            | 5                      | 4                            | 8                         | 5                      |
| Tomatoes                                          | 2                      | 2                            | 4                         | 3                      |
| Okra (vegetable)                                  | 1                      | 5                            | 3                         | 2                      |
| Other Vegetable                                   | 2                      | 4                            | 6                         | 4                      |
| Fruit                                             | 1                      | 2                            | -                         | 1                      |
| Eggs                                              | -                      | 2                            | 1                         | 1                      |
| Salt                                              | 5                      | 2                            | 1                         | 3                      |
| Other                                             | 2                      | -                            | -                         | 1                      |
| <u>Number of Responses</u>                        | <u>130</u>             | <u>55</u>                    | <u>71</u>                 | <u>256</u>             |

\* Less than 0.5 percent

all sellers, were next in importance. Perhaps the most characteristic feature of the other commodities being sold was their diversity; other than being edible and of vegetable origin (except eggs and salt), they had little in common. In general, there are few overt restrictions on the other commodities that may be sold by traders once they are established in a commodity line. Wholesalers sell their other commodities mostly at wholesale, while retailers sell theirs almost entirely at retail.

### 3. Units of Sale

Assemblers from the rural areas will frequently use a small measure, usually 8 to 12 lbs. although sometimes larger, when selling in a rural market (although larger assemblers may sell by the bag), while in urban areas they will sell almost entirely in bags through agents. While waiting for a wholesaler to dispose of his commodity, an assembler may encourage the wholesaler to sell in smaller measures in order to dispose of his supplies more rapidly. In the same way, he may allow the wholesaler to make credit sales in the hope of realizing his capital in a shorter time.

As Table 9.19 illustrates, retailers in urban markets (Ibadan in this table) sell in units smaller than a bag, while wholesalers usually sell by the bag or equivalent unit.<sup>(4)</sup> Retailer-wholesalers have no definite major selling unit, but it is certainly usually smaller than for wholesalers. In fact, a mixture of small units and bags is quite common because of the dual function of the handlers.

In the Wholesale Traders Questionnaire in Ibadan, an interesting difference was seen between male and female wholesalers. Of the 443 male

Table 9.19

PERCENT DISTRIBUTION OF TRADERS BY FREQUENCY OF SALE  
 BY BAG OR EQUIVALENT UNIT AND BY TYPE OF SELLER--  
 MARKET TRADERS QUESTIONNAIRE #1-IBADAN--JUNE-JULY 1966

| Frequency of Sales<br>by the Bag<br>(or Equivalent Unit) | Type of Seller |                      |                   | All<br>Sellers |
|----------------------------------------------------------|----------------|----------------------|-------------------|----------------|
|                                                          | Retail<br>Only | Retail-<br>Wholesale | Wholesale<br>Only |                |
| Usually                                                  | -              | 55                   | 100               | 39             |
| Occasionally                                             | 1              | 34                   | -                 | 16             |
| Never                                                    | 99             | 11                   | -                 | 45             |
| Total                                                    | 100            | 100                  | 100               | 100            |
| Number of Responses                                      | 106            | 122                  | 36                | 264            |

wholesalers, only 1 percent stated that their major unit of sale was smaller than a bag or equivalent unit, while 13 percent of the 117 female wholesalers usually sold in units smaller than a bag.

The observations recorded by the project with respect to units of sale are dealt with in detail in Chapter X.

#### 4. Credit Sales

Assemblers selling in rural markets are generally paid immediately by the buyer, as also are retailers in rural markets, but assemblers selling through a wholesaler in an urban market will often have to wait for some days to receive their money. Although the preference is to sell for cash at the time the goods are delivered to the buyer, the present system does not always permit this. There are usually a great many assemblers and wholesalers in the urban markets who are anxious to dispose of their supplies in order to obtain more, and they will sell to retailers on credit.

They reason that even though they have to wait for a few days until the retailer sells the goods and can pay the wholesaler, this is still faster and more certain than waiting for a cash buyer. The assembler usually accompanies the goods and remains in the urban center until he has received his money from the wholesaler. Consequently, extensive credit to retailers through his agent probably means that he can resume his assembling much sooner. No convincing evidence for or against this contention was, however, available.

Table 9.20

PERCENT DISTRIBUTION OF TRADERS BY FREQUENCY OF RECEIPT OF CASH IMMEDIATELY AFTER SALE AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #1-IBADAN--JUNE-JULY 1966

| <u>Frequency of Receipt of Cash Immediately After Sale</u> | <u>Retail Only</u> | <u>Retail-Wholesale</u> | <u>Wholesale Only</u> | <u>All Sellers</u> |
|------------------------------------------------------------|--------------------|-------------------------|-----------------------|--------------------|
| Always                                                     | 23                 | 16                      | 14                    | 19                 |
| Usually                                                    | 34                 | 25                      | 6                     | 26                 |
| Not Usually                                                | 43                 | 58                      | 81                    | 55                 |
| <u>Total</u>                                               | <u>100</u>         | <u>99+</u>              | <u>101+</u>           | <u>100</u>         |

+ Rounding error

Although Table 9.20 shows that 43 percent of the retailers in the Market Traders Questionnaire #1 in Ibadan alleged that they did not usually receive the money for goods sold at the time of sale, this is felt to be an overstatement of the importance of credit in the sale of staple foods at the retail level.

This assertion is supported by the evidence collected in the Household Survey in Ibadan. Table 9.21 shows the responses by income group to

a question concerning the degree to which credit is used by households in acquiring food supplies. Only one percent of the households declared that they used credit extensively, and another one percent allowed that it was used regularly to some extent. However, 9 percent did mention that it was used at least occasionally. In terms of amount owed to suppliers, 86 percent of the households owing money at time of interview owed less than 10 shillings, with most owing less than 5 shillings. Considerably less than half of the households who indicated that they used credit facilities at least occasionally actually owed money to suppliers.

Table 9.21

PERCENT DISTRIBUTION OF HOUSEHOLDS BY USE OF CREDIT IN BUYING FOOD SUPPLIES AND BY INCOME GROUP--HOUSEHOLD SURVEY-IBADAN-DECEMBER 1966

| Use of Credit<br>in Buying<br>Food Supplies | Income Group |                  |      | All<br>Households |
|---------------------------------------------|--------------|------------------|------|-------------------|
|                                             | Low          | Medium           | High |                   |
| Extensive                                   | *            | 1                | 5    | 1                 |
| Often                                       | 2            | -                | -    | 1                 |
| Occasional                                  | 10           | 10               | -    | 9                 |
| Never                                       | 88           | 90               | 95   | 89                |
| Total Percent                               | 100          | 101 <sup>+</sup> | 100  | 100               |
| Number of Responses                         | 308          | 154              | 37   | 499               |

\* Less than 0.5 Percent

+ Rounding Error.

The extension of credit by retailers is generally negligible, although it does exist. It is certainly not an important form of competition among retailers. Very few retailers, in fact, owe more than a few shillings to customers at any particular time.

Credit sales have considerably more importance for wholesalers, however, although the degree varies with the wholesaler. Table 9.20 indicates

that 81 percent of the wholesalers in Ibadan interviewed with Market Traders Questionnaire #1, claimed that they did not usually receive the full cash value of goods at the time of the transaction. A more detailed and accurate picture of the use of credit by wholesalers was obtained in the Wholesale Traders Questionnaire in Ibadan. Table 9.22 shows that the larger wholesalers in particular had considerable sums of money outstanding from debtors. In fact, about 56 percent of the total amount outstanding

Table 9.22

PERCENT DISTRIBUTION OF WHOLESALERS BY AMOUNT PRESENTLY OWED BY DEBTORS AND BY VALUE OF MONTHLY SALES--WHOLESALE TRADERS QUESTIONNAIRE-IBADAN--FEBRUARY-MAY 1967

| Amount<br>Presently Owed<br>By Debtors | Value of Monthly Sales |               |               |               |                | Total |
|----------------------------------------|------------------------|---------------|---------------|---------------|----------------|-------|
|                                        | Under<br>£100          | £100-<br>£199 | £200-<br>£299 | £300-<br>£499 | £500 &<br>Over |       |
| Under £10                              | 76                     | 46            | 34            | 28            | 29             | 55    |
| £10 & under £50                        | 20                     | 42            | 49            | 43            | 13             | 32    |
| £50 & under £100                       | 2                      | 9             | 12            | 21            | 29             | 9     |
| £100 & under £200                      | 1                      | 2             | 3             | 5             | 10             | 2     |
| £200 & over                            | *                      | --            | 3             | 3             | 19             | 2     |
| Total percent                          | 99†                    | 99†           | 101†          | 100           | 100            | 100   |
| Average amount (£)                     | 10                     | 19            | 29            | 48            | 411            | 41    |
| Standard deviation                     | 24                     | 27            | 46            | 110           | 1,784          | 425   |
| Coefficient of variation               | 2.5                    | 1.5           | 1.6           | 2.3           | 4.3            | 10.4  |
| Number of Responses                    | 251                    | 153           | 68            | 58            | 31             | 561†† |

\* Less than 0.5 percent.

† Rounding error.

†† Total amount owed by debtors: £22,865

was owed to the 6 percent of traders who had sales of over £500 in the month preceding the interview. The average indebtedness of their customers was £411. In contradistinction, the 45 percent of wholesalers who had sales of less than \$100 per month had on the average only £10 owed to them. In the aggregate, this amounts to about 11 percent of the total amount owed by debtors to the wholesalers interviewed.

#### 5. Sales to Relatives

Under Yoruba culture, the strongest ties and obligations are to one's family; however, in trade, economic considerations transcend even family ties. There is no obligation to buy from or sell to one's family or relative. An exchange is generally only made when it is to the greatest benefit of both parties. Many farmers, for instance, will not sell their surplus foodstuff to their wife (wives) in the belief that their wife (wives) will cheat them. They would prefer to sell to unrelated assemblers.

Where the wife of a wholesaler is a retailer in the same market and is supplied by her husband, she is treated as a customer. The terms of sale are negotiated and agreed to at the time she receives the supplies and not after she has sold them. Each party acts as an independent entrepreneur. As a specific example, one maize wholesaler in Oritamerin Market, Ibadan, was found to be selling maize on credit to his three wives and younger sister who, in turn, were retailing the maize on the street in front of his store room. Although he does not collect rent or storage from them, each operates separately, sustaining any gains or losses.

Although both credit facilities and relatively favorable terms of sale may be offered to relatives, it is not expected that the trader will incur

a loss because he is selling to a relative. Traders are, however, expected to be "fair" with relatives and to give them a competitive price. Even though trade with relatives does exist, it is a comparatively unimportant part of the total sales of most traders.

#### E. SIZE OF BUSINESS

The trading activities of the marketing intermediaries in the staple food trade may be measured in several ways. Firstly, they may be gauged in terms of the physical volume handled over a certain time period such as a day, week or a month. Secondly, the physical quantities may be expressed in terms of the value of sales over the same period. And, thirdly, a less complete but still useful measure is the number of transactions that are made over any given period. In the discussion in this section, all three measures will be used to indicate the magnitude of the business operations of the various types of traders. Each type of trader will be treated separately.

##### 1. Assemblers

It has already been mentioned that 72 percent of the buyers interviewed in rural markets claimed that they attended that particular market every market day, that is, every 4 or 8 days (Table 9.3). Although the market where the buyer was interviewed was generally the main supply market used, 77 percent of the respondents also indicated that they obtained supplies at least occasionally in other markets. Table 9.23 gives the percentage distribution of these buyers for each commodity by value of the commodity being purchased. Overall, 30 percent of the buyers were assembling supplies worth less than £5. Depending on the commodity, this means

PERCENT DISTRIBUTION OF BUYERS BY VALUE OF COMMODITY  
BEING PURCHASED--MARKET BUYERS QUESTIONNAIRE-IBADAN--  
OCTOBER 1966 - APRIL 1967

| Value of<br>Commodity<br>Being Purchased | Commodity       |      |       |                 |                 | Total           |
|------------------------------------------|-----------------|------|-------|-----------------|-----------------|-----------------|
|                                          | Yam             | Gari | Maize | Rice            | Other           |                 |
| Under £5                                 | 25              | 25   | 35    | 44              | 27              | 30              |
| £5 & under £10                           | 25              | 14   | -     | -               | 27              | 16              |
| £10 & under £20                          | 25              | 7    | 15    | 11              | 27              | 17              |
| £20 & under £30                          | 16              | 11   | 30    | 5               | -               | 14              |
| £30 & under £40                          | 6               | 32   | 15    | -               | 9               | 12              |
| £40 & over                               | 2               | 11   | 5     | 39              | 9               | 10              |
| Total percent                            | 99 <sup>†</sup> | 100  | 100   | 99 <sup>†</sup> | 99 <sup>†</sup> | 99 <sup>†</sup> |
| Number of responses                      | 51              | 28   | 20    | 18              | 11              | 128             |

† Rounding error.

a quantity of up to one bag for gari and rice and up to 2 bags for maize or dried cassava. Only 36 percent of the buyers were acquiring supplies worth more than £20; that is, more than about 4 or 5 bags of gari or dried yam and 6 to 10 bags of maize or dried cassava.

#### 2. Urban Traders - General

Because many traders sell more than one commodity, it is difficult to express their total sales in physical terms. As a result, the best measure of the size of business operations of urban traders is total value of sales. For the three types of traders included in the Market

Traders Questionnaire #2 in Ibadan, Table 9.24 presents their percentage distribution in terms of the total value of monthly sales, as well as the

Table 9.24

PERCENT DISTRIBUTION OF TRADERS BY TOTAL VALUE OF MONTHLY SALES AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #2-IBADAN--AUGUST-SEPTEMBER 1966

| <u>Total Value of Monthly Sales</u> | <u>Type of Seller</u> |                         |                       | <u>Total</u> |
|-------------------------------------|-----------------------|-------------------------|-----------------------|--------------|
|                                     | <u>Retail Only</u>    | <u>Retail-Wholesale</u> | <u>Wholesale Only</u> |              |
| Under £30                           | 25                    | 15                      | 1                     | 16           |
| £30 & under £50                     | 30                    | 22                      | 10                    | 23           |
| £50 & under £70                     | 18                    | 11                      | 10                    | 14           |
| £70 & under £100                    | 11                    | 15                      | 10                    | 11           |
| £100 & under £200                   | 14                    | 24                      | 26                    | 19           |
| £200 & under £500                   | 3                     | 15                      | 33                    | 14           |
| £500 & over                         | -                     | -                       | 10                    | 3            |
| <u>Total Percent</u>                | 101 <sup>+</sup>      | 102 <sup>+</sup>        | 100                   | 100          |
| Average Sales (£)                   | 61                    | 106                     | 237                   | 119          |
| Standard Deviation                  | 4.9                   | 95                      | 250                   | 160          |
| Coefficient of Variation            | .8                    | .9                      | 1.1                   | 1.3          |
| <u>Number of Responses</u>          | 131                   | 55                      | 70                    | 256          |

+ Rounding error.

average value of monthly sales for the group. Although the sales figures of all three groups covered a wide range, it is certainly true that wholesalers generally had a higher value of total sales than retailer-wholesalers, who in turn had larger sales than retailers. Stated in terms of the average value of monthly sales for the group, wholesalers averaged £237, while retailer-wholesalers averaged £106 and retailers £61.

Table 9.25

PERCENT DISTRIBUTION OF TRADER'S BY QUANTITY OF MONTHLY SALES,  
BY COMMODITY AND BY TYPE OF SELLER -  
MARKET TRADER'S QUESTIONNAIRE #2 - IBADAN  
August-September 1966

| Quantity of<br>Monthly<br>Sales** | Yam             |                 |                  |      | Gari             |     |                 |      | Maize           |     |     |                 | Rice            |                 |     |                 | Cowpeas         |                 |                 |                 |
|-----------------------------------|-----------------|-----------------|------------------|------|------------------|-----|-----------------|------|-----------------|-----|-----|-----------------|-----------------|-----------------|-----|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                   | Type of Seller* |                 |                  |      | Type of Seller*  |     |                 |      | Type of Seller* |     |     |                 | Type of Seller* |                 |     |                 | Type of Seller* |                 |                 |                 |
|                                   | R-O             | R-W             | W-O              | A.S. | R-O              | R-W | W-O             | A.S. | R-O             | R-W | W-O | A.S.            | R-O             | R-W             | W-O | A.S.            | R-O             | R-W             | W-O             | A.S.            |
| 0 & under 3 units                 | 14              | -               | -                | 3    | 8                | 5   | -               | 5    | 10              | 8   | -   | 6               | 30              | 33              | -   | 27              | 26              | 18              | -               | 18              |
| 3 & under 5 units                 | -               | 8               | 7                | 6    | 25               | -   | 4               | 14   | 10              | -   | 5   | 6               | 22              | -               | -   | 15              | 28              | 36              | -               | 21              |
| 5 & under 10 units                | 14              | 46              | -                | 20   | 43               | 33  | 13              | 34   | 50              | 31  | 10  | 34              | 22              | 33              | 20  | 24              | 33              | -               | 12              | 24              |
| 10 & under 20 units               | 29              | 15              | 47               | 31   | 23               | 33  | 30              | 27   | 30              | 15  | 5   | 19              | 19              | 33              | 40  | 24              | 13              | 36              | 33              | 21              |
| 20 & under 50 units               | 43              | 15              | 40               | 31   | 2                | 24  | 52              | 19   | -               | 46  | 65  | 31              | 7               | -               | 20  | 7               | -               | 9               | 38              | 11              |
| 50 units & over                   | -               | 15              | 7                | 9    | -                | 5   | -               | 1    | -               | -   | 15  | 3               | -               | -               | 20  | 2               | -               | -               | 16              | 4               |
| Total Percent                     | 100             | 99 <sup>+</sup> | 101 <sup>+</sup> | 100  | 101 <sup>+</sup> | 100 | 99 <sup>+</sup> | 100  | 100             | 100 | 100 | 99 <sup>+</sup> | 100             | 99 <sup>+</sup> | 100 | 99 <sup>+</sup> | 100             | 99 <sup>+</sup> | 99 <sup>+</sup> | 99 <sup>+</sup> |
| Number of Responses               | 7               | 13              | 15               | 35   | 53               | 21  | 23              | 97   | 30              | 13  | 20  | 63              | 27              | 9               | 5   | 41              | 54              | 11              | 24              | 89              |

\* R-O Retail only  
R-W Retail-wholesale  
W-O Wholesale only  
A.S. All Sellers

\*\* Units:  
Yam - 100 tubers  
Other - bags

+ Rounding error.

It is rather difficult to interpret the value and quantity of sales when expressed in terms of commodity. However, even though it provides an incomplete picture of the activities of traders selling more than one commodity, such an analysis does give a general indication of the extent to which each type of trader deals in the individual commodity.

The distribution of the three types of traders in the Market Traders Questionnaire #2 in Ibadan by quantity of monthly sales is shown for each commodity in Table 9.25. The average value of monthly sales of each type of trader for each commodity in Table 9.25 is shown in Table 9.26. It

Table 9.26

AVERAGE VALUE AND STANDARD DEVIATION OF MONTHLY SALES OF TRADERS<sup>+</sup> BY COMMODITY AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #2--IBADAN - AUGUST - SEPTEMBER 1966

| Commodity | Type of Seller |                  |                | All Sellers  |
|-----------|----------------|------------------|----------------|--------------|
|           | Retail Only    | Retail-Wholesale | Wholesale Only |              |
| Yam       | 75*<br>(54)**  | 100<br>(106)     | 163<br>(145)   | 122<br>(120) |
| Gari      | 40<br>(21)     | 98<br>(81)       | 113<br>(64)    | 70<br>(60)   |
| Maize     | 18<br>(8)      | 44<br>(34)       | 173<br>(366)   | 72<br>(215)  |
| Rice      | 64<br>(62)     | 90<br>(69)       | 244<br>(176)   | 91<br>(100)  |
| Cowpeas   | 58<br>(37)     | 98<br>(183)      | 288<br>(233)   | 124<br>(160) |

+ Number of traders selling each commodity by type of seller shown in Table 9.25.

\* Average value in pounds (£) per month.

\*\* Standard deviation (in brackets)

should be stressed that this table represents the average value of sales of each type of trader for that commodity only. Because more than one commodity is frequently sold, the average value of total sales of each type of trader will necessarily be higher than the average for each individual commodity (not calculated).

### 3. Urban Retailers

Information from the Market Traders Questionnaire #2 in Ibadan on value of sales and volume of commodities handled has already been presented in a general way in the preceding section. Table 9.24 showed that while 55 percent of the retailers interviewed had sales of less than £50 per month, the fact that 17 percent of the retailers had monthly sales from £100 up to £292 meant that the average value of sales was raised to £61 per month.

The value of sales obtained by direct observation of 110 selected retail sellers in Oritamerin Market, Ibadan, for one day essentially confirms that obtained in the Market Traders Questionnaire. Both were conducted about the same time. As each of these retail sellers was selling only one commodity, the value of sales listed by commodity in Table 9.27 also represents the total value of sales of these retailers.

To compare the daily sales in Table 9.27 with the monthly sales in the other tables, it is necessary to know the approximate number of days that retailers spend selling each month. As Sunday is the only day when most food traders do not go to the market to sell, a figure of between 24 and 27 would be satisfactory; allowing for days absent, 24 is probably the most reasonable. Although there is considerable variation among retailers in commodity sold, daily sales of £2.9 for a 24-day month gives a value of monthly sales of £69.6 for the retailers observed.

Table 9.27

PERCENT DISTRIBUTION OF RETAILERS BY VALUE OF DAILY SALES  
AND BY COMMODITY--110 SELECTED RETAIL SELLERS IN ORITAMERIN  
MARKET, IBADAN, SEPTEMBER 1966

| Value of<br>Daily Sales | Commodity       |                  |                  |                 |         |                 |
|-------------------------|-----------------|------------------|------------------|-----------------|---------|-----------------|
|                         | Yam*            | Gari             | Maize            | Rice            | Cowpeas | All             |
| Under £1                | 42              | 21               | 12               | 9               | 17      | 21              |
| £1 & under £2           | 19              | 42               | 42               | 9               | 8       | 26              |
| £2 & under £4           | 8               | 38               | 35               | 27              | 33      | 27              |
| £4 & under £6           | 15              | -                | 12               | 36              | 25      | 16              |
| £6 & over               | 15              | -                | -                | 18              | 17      | 9               |
| Total Percent           | 99 <sup>+</sup> | 101 <sup>+</sup> | 101 <sup>+</sup> | 99 <sup>+</sup> | 100     | 99 <sup>+</sup> |
| Average Value Shillings | 48.4            | 34.1             | 42.4             | 91.4            | 72.1    | 58.1            |
| Number of Observations  | 26              | 24               | 26               | 22              | 12      | 110             |

\* Two retail-wholesale sellers of yam with daily sales of £22.3 and £19. were observed but not included in the analysis.

+ Rounding error.

In terms of value of sales for each commodity, direct observations in general substantiate the pattern of monthly sales quoted by retailers in the Market Traders Questionnaire #2. Retailers selling rice and cowpea tend to have a higher value of sales than those selling gari and maize. In both cases, sales of rice sellers were higher than those of cowpea sellers. It is likely that the value of sales of the 26 yam sellers that were directly observed is more representative than that of yam retailers included in the Market Traders Questionnaire #2. This means that yam retailers generally had sales of approximately the same value as sellers of other locally produced staples. Observations made during the yam harvest season resulted in an even higher figure.

One possible explanation for the sales pattern of the various commodities is suggested by Table 9.25. Both rice and cowpeas are relatively high-priced commodities per unit of weight than yams, gari or maize. This means that although the value of their sales was higher, the actual quantity sold was somewhat lower. As Table 9.25 shows, 52 and 54 percent of the rice and cowpea retailers respectively sold less than 5 bags during the month preceding the interview and many sold less than 3 bags, while only 33 and 20 percent of the gari and maize sellers respectively sold less than 5 bags.

In general, retailers of the relatively cheaper locally produced staple foods sold more in weight and less in value than the sellers of the more expensive commodities, which are mostly obtained from outside the Region. Table 9.28 shows that rice sellers had considerably more transactions during the course of a day than sellers of the other commodities. This

Table 9.28

PERCENT DISTRIBUTION OF RETAILERS BY NUMBER OF TRANSACTIONS PER DAY AND BY COMMODITY--110 SELECTED RETAILERS IN ORITAMERIN MARKET, IBADAN, SEPTEMBER 1966

| Number of Transactions Per Day | Commodity |      |       |      |         | All |
|--------------------------------|-----------|------|-------|------|---------|-----|
|                                | Yam       | Gari | Maize | Rice | Cowpeas |     |
| Under 5                        | 54        | 42   | 12    | 9    | 33      | 30  |
| 5 & under 10                   | 12        | 21   | 50    | 23   | 33      | 27  |
| 10 & under 20                  | 19        | 29   | 35    | 41   | 33      | 31  |
| 20 & over                      | 15        | 8    | 4     | 27   | -       | 12  |
| Total Percent                  | 100       | 100  | 101†  | 100  | 99†     | 100 |
| Average Number                 | 8.1       | 8.2  | 8.7   | 13.2 | 7.8     | 9.3 |
| Number of Observations         | 26        | 24   | 26    | 22   | 12      | 110 |

\* Two retail-wholesale sellers of yam with 24 and 51 transactions per day were observed but not included in the analysis.

†Rounding error.

means that the total value of their sales was higher, because both the number of transactions and the value of each transaction was higher, while for cowpea sellers only the value of each transaction was higher.

Except for rice sellers, the retailers observed averaged eight transactions per day. On the day observed, 54 percent of the yam and 42 percent of the gari sellers had less than 5 transactions-- that is, less than one transaction every two hours. In fact, several of the retailers were observed to have no sales at all during the course of the day.

Among the 110 selected retailers, only 12 percent were observed to have in excess of 20 transactions per day, and nearly half of these were rice sellers. As most transactions only take a few minutes, it is apparent that most retailers spend the greater part of their ten or so hours a day in the market waiting for customers. In fact, only a small proportion of the selling hours of most retailers are actually spent in marketing transactions.

#### 4. Urban Retailer-Wholesalers

Again the information available relates specifically to retailer-wholesalers in Ibadan. It has already been mentioned that while they are somewhat more important than retailers in average amount of business activity, they are considerably smaller than the specialist wholesalers (see also Table 9.24). However, with the value of monthly sales spread between £12 and £346, any generalization must be made with caution, as many retailers are actually larger and many wholesalers smaller than some of the traders classified as retailer-wholesalers.

The average sales figure of retailer-wholesalers was markedly similar in all commodities. In fact, as Table 9.26 shows, it was between £90 and £100 for all commodities except maize, sales of which only averaged £44 per month. Again, a wide range occurs in the value of each commodity sold by individual sellers.

Although average value of sales is about the same, dealers in yam and gari handle a higher volume of their commodity. Even though maize sellers sold less than one-half the value of those selling other commodities, they handled about the same volume as gari sellers and generally more than rice and cowpea sellers. This can be seen in Table 9.25.

#### 5. Urban Wholesalers

For the most part, wholesalers in both the central native and central new markets in Ibadan are equally distributed with regard to size. This is shown in Table 9.29, based on the Wholesale Traders Questionnaire. However, several very large traders, dealing mostly in rice and cowpeas, deal in the central new market. This resulted in the average value of sales in this market being £246, while in the central native markets it was £174. The few wholesalers who sold in the residential market averaged sales of only £40 per month.

The average value of sales in the Wholesale Traders Questionnaire was £185 per month, while in the earlier Market Traders Questionnaire #2 sales averaged £237 per month (Table 9.24). In both cases, a large standard deviation in average value was found to exist. The resultant high coefficients of variation of 1.6 and 1.1 for the Wholesale and Market Traders Questionnaires, respectively, suggest caution in the use of

Table 9.29

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY  
 VALUE OF MONTHLY SALES AND TYPE OF MARKET  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 FEBRUARY-MAY 1967

| Value of Monthly Sales   | Type of Market    |                |                  | Total |
|--------------------------|-------------------|----------------|------------------|-------|
|                          | Central<br>Native | Central<br>New | Resi-<br>dential |       |
| Under £50                | 15                | 18             | 75               | 17    |
| £50 & under £100         | 29                | 26             | 12               | 28    |
| £100 & under £200        | 27                | 28             | 12               | 27    |
| £200 & under £300        | 13                | 11             | --               | 12    |
| £300 & under £500        | 10                | 11             | --               | 10    |
| £500 & under £1,000      | 5                 | 3              | --               | 4     |
| £1,000 & under £2,000    | 1                 | 3              | --               | 1     |
| £2,000 & over            | --                | 1              | --               | *     |
| Total Percent            | 100               | 101†           | 99†              | 99†   |
| Average (£)              | 174               | 246            | 40               | 185   |
| Standard deviation       | 179               | 561            | 51               | 294   |
| Coefficient of variation | 1.03              | 2.28           | 1.28             | 1.60  |
| Number of Responses      | 446               | 108            | 8                | 562   |

\* Less than 0.5 percent.

† Rounding error.

these averages. In fact, the tremendously wide range in wholesalers' business from zero sales up to over £5,000 per month is one of the characteristic features of this class of traders.

An interesting comparison between business activities of wholesalers is illustrated by Table 9.30. Male wholesalers with average monthly sales of £200 were considerably more important than their female counterparts, who only had sales of £132 per month.

The percent distribution of wholesalers in Ibadan by actual value of monthly sales for each commodity is presented in Table 9.31 from the Wholesale Traders Questionnaire. This table is based upon the value of the amount of a commodity actually sold in the previous month by each trader.

A comparison of the average value of sales of each commodity in Table 9.31 with data on wholesalers provided by Market Traders Questionnaire #2 and displayed in Table 9.26 points to some interesting similarities and differences. First, in both surveys the largest traders are those dealing in rice and cowpeas. In the earlier survey, cowpea sellers tended to be more important than rice sellers, while the situation was reversed in the later survey. However, in terms of absolute values, both surveys showed a reasonable degree of comparability. Also, the size of cowpea sellers tended to vary more than that of rice sellers.

Second, sellers of cassava products, gari and dried cassava, generally sold less in terms of value than sellers of other commodities.

Third, sellers of yam and maize, while the average value of their sales was a little higher, were nevertheless considerably smaller than rice and cowpea sellers.

Table 9.30

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY  
 VALUE OF MONTHLY SALES AND BY SEX OF TRADER  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 FEBRUARY-MAY 1967

| Value of Monthly Sales   | Sex of Trader |        | Total |
|--------------------------|---------------|--------|-------|
|                          | Male          | Female |       |
| Under £50                | 14            | 25     | 17    |
| £50 & under £100         | 27            | 31     | 28    |
| £100 & under £200        | 28            | 25     | 27    |
| £200 & under £300        | 13            | 8      | 12    |
| £300 & under £500        | 11            | 8      | 10    |
| £500 & under £1,000      | 5             | 2      | 4     |
| £1,000 & under £2,000    | 1             | 1      | 1     |
| £2,000 & over            | *             | ---    | *     |
| Total Percent            | 99†           | 100    | 99†   |
| Average (£)              | 200           | 132    | 185   |
| Standard deviation       | 320           | 147    | 294   |
| Coefficient of variation | 1.60          | 1.12   | 1.60  |
| Number of Responses      | 444           | 118    | 562   |

\* Less than 0.5 percent.

† Rounding error.

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY  
 VALUE OF MONTHLY SALES OF EACH COMMODITY SOLD AND BY COMMODITY  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 FEBRUARY-MAY 1967

| Value of<br>Actual Sales<br>Previous Month | Commodity        |                 |      |                  |                  |      |         | All<br>Commodities |
|--------------------------------------------|------------------|-----------------|------|------------------|------------------|------|---------|--------------------|
|                                            | Yam              | Dried<br>Yam    | Gari | Dried<br>Cassava | Maize            | Rice | Cowpeas |                    |
| Under £25                                  | 17               | 7               | 10   | 34               | 10               | 5    | 7       | 12                 |
| £25 & under £50                            | 17               | 8               | 15   | 40               | 22               | 3    | 7       | 17                 |
| £50 & under £100                           | 33               | 48              | 50   | 24               | 46               | 7    | 18      | 35                 |
| £100 & under £200                          | 11               | 29              | 19   | 2                | 19               | 24   | 34      | 21                 |
| £200 & under £300                          | 6                | 5               | 3    | --               | 2                | 27   | 15      | 7                  |
| £300 & under £500                          | 17               | 1               | 2    | --               | 1                | 15   | 11      | 4                  |
| £500 & over                                | --               | 1               | 1    | --               | 1                | 19   | 8       | 3                  |
| Total Percent                              | 101 <sup>†</sup> | 99 <sup>†</sup> | 100  | 100              | 101 <sup>†</sup> | 100  | 100     | 99 <sup>†</sup>    |
| Average value (£)                          | 117              | 108             | 88   | 40               | 77               | 309  | 235     | 126                |
| Standard deviation                         | 128              | 94              | 78   | 27               | 68               | 253  | 406     | 214                |
| Coefficient of Variation                   | 1.1              | .9              | .9   | .7               | .9               | .8   | 1.7     | 1.7                |
| Number of Responses                        | 18               | 144             | 158  | 125              | 58               | 167  | 156     | 826                |

† Rounding error.

A partial explanation of why the average value of sales of wholesalers was lower in the later survey than the first, may be found in the considerably lower prices ruling in the later period compared with the earlier period for all commodities except rice. Another factor is that the later survey was conducted during the dry season when foodstuffs are less plentiful whereas the earlier survey was made during the harvest period. Another factor may have been one of definition in the solution and classification of traders interviewed with the earlier Market Traders Questionnaire #2, where retailer-wholesalers were included as well as wholesalers. In the later Wholesale Traders Questionnaire, only wholesalers were to be included; however, this survey did include some retailer-wholesalers in addition to the wholesalers.

While Table 9.31 presented, by commodity, the distribution of wholesalers surveyed in Ibadan in terms of the monthly value of sales of each commodity, Table 9.32 arrays by commodity the total value of monthly sales of all commodities sold by each wholesaler. Thus it shows the total size of the businesses selling each commodity which in many cases exceeded the sales of that commodity alone. For example, many wholesalers sold both rice and cowpeas. In Table 9.31, the same wholesaler was included twice, once for each commodity, but grouped according to the value of the sales of that commodity. In Table 9.32, he was similarly included, except that he was grouped in terms of his combined sales of rice, cowpeas and any other staple foods that he may have been selling.

From Table 9.32, it can be seen that the businesses of the wholesalers dealing in rice and cowpeas tend to be considerably larger than

Table 9.32

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY VALUE OF  
MONTHLY SALES OF ALL COMMODITIES SOLD AND BY COMMODITIES SOLD.  
WHOLESALE TRADERS QUESTIONNAIRE--IBADAN - FEBRUARY-MAY 1967

| Value of<br>Monthly Sales of<br>All Commodities Sold | Commodities Sold |              |      |                  |       |      |         | All<br>Whole-<br>salers |
|------------------------------------------------------|------------------|--------------|------|------------------|-------|------|---------|-------------------------|
|                                                      | Yam              | Dried<br>Yam | Gari | Dried<br>Cassava | Maize | Rice | Cowpeas |                         |
| Under £100                                           | 59               | 29           | 51   | 54               | 40    | 11   | 19      | 45                      |
| £100 & under £200                                    | 6                | 35           | 29   | 26               | 31    | 22   | 33      | 27                      |
| £200 & under £300                                    | 6                | 19           | 11   | 10               | 15    | 25   | 18      | 12                      |
| £300 & under £500                                    | 18               | 13           | 6    | 9                | 14    | 21   | 21      | 10                      |
| £500 & under £1,000                                  | 12               | 3            | 2    | 2                | 1     | 11   | 6       | 4                       |
| £1,000 & under £2,000                                | --               | --           | --   | --               | --    | 8    | 3       | 1                       |
| £2,000 & over                                        | --               | --           | --   | --               | --    | 2    | 1       | *                       |
| Total Percent                                        | 101†             | 99†          | 99†  | 101†             | 101†  | 100  | 101†    | 99†                     |
| Number of Responses                                  | 17               | 149          | 162  | 129              | 170   | 63   | 159     | 562††                   |

\* Less than 0.5 percent.

† Rounding error.

†† As many wholesalers sell more than one commodity, this does not equal the number of wholesalers selling each commodity.

those of wholesalers handling the other staple foods. Sellers of the cassava products were generally the smallest in terms of total value of sales of all wholesalers: 80 percent of both gari and dried cassava wholesalers had sales of less than £200 per month, and about two thirds of them were less than £100 per month. All commodities were handled by at least a few relatively large wholesalers.

The distribution of wholesalers in Ibadan by total quantity of monthly sales for each commodity is arrayed in Table 9.33. From the average quantities presented at the base of this table, it can be seen that rice and cowpea wholesalers not only had a higher value of sales, but also a larger quantity. Cowpea traders handled an average of 50 bags each in the month before they were interviewed, while rice dealers averaged 33 bags per month each. While both commodities had high standard deviations, that for cowpeas was especially high; this resulted from the existence of a few very large outlets dealing in each commodity.

The quantities handled by individual wholesalers of other commodities sold in bags averaged between 23 and 27 bags each per month. This is equivalent to about one bag per day. However, the wide distribution of wholesalers around this average is of equal significance. While many traders were selling more than 50 bags per month, several also had sales of less than 10 bags per month.

The volume handled by yam wholesalers is difficult to compare in physical terms with that of wholesalers dealing in commodities in bags. The average quantity of yams handled by the 18 yam wholesalers interviewed with the Wholesale Traders Questionnaire was 1,750 tubers per month. Using an estimated average weight of 4.5 lbs. <sup>(5)</sup> per tuber for yam sold in Ibadan,

Table 9.33

PERCENT DISTRIBUTION OF WHOLESALERS BY QUANTITY OF MONTHLY SALES  
AND BY COMMODITY--WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
FEBRUARY-MAY 1967

| Quantity of<br>Monthly Sales * | Commodity        |                 |      |                  |       |                  |                 | All<br>Commodities |
|--------------------------------|------------------|-----------------|------|------------------|-------|------------------|-----------------|--------------------|
|                                | Yam              | Dried<br>Yam    | Gari | Dried<br>Cassava | Maize | Rice             | Cowpeas         |                    |
| Under 10 units                 | 39               | 10              | 13   | 7                | 10    | 14               | 9               | 11                 |
| 10 & under 20 units            | 28               | 32              | 23   | 40               | 25    | 17               | 16              | 26                 |
| 20 & under 30 units            | 22               | 37              | 36   | 25               | 29    | 36               | 18              | 29                 |
| 30 & under 50 units            | 6                | 15              | 20   | 24               | 23    | 12               | 28              | 21                 |
| 50 & under 100 units           | 6                | 4               | 6    | 4                | 12    | 17               | 17              | 10                 |
| 100 units & over               | -                | 1               | 2    | -                | 1     | 5                | 10              | 3                  |
| Total Percent                  | 101 <sup>+</sup> | 99 <sup>+</sup> | 100  | 100              | 100   | 101 <sup>+</sup> | 98 <sup>+</sup> | 100                |
| Average Quantity*              | 17.5             | 23.1            | 25.8 | 32.8             | 27.4  | 33.0             | 50.1            | 30.1               |
| Standard Deviation             | 17.1             | 19.3            | 21.2 | 14.0             | 22.9  | 30.1             | 84.1            | 42.4               |
| Coefficient of Variation       | 1.0              | .8              | .8   | .6               | .8    | .9               | 1.7             | 1.4                |
| Number of Responses            | 18               | 155             | 149  | 125              | 168   | 59               | 158             | 832                |

\* Units: Yam - hundreds of tubers  
Other - bags

+ Rounding error.

this means that each wholesaler was handling an average of 35.2 long tons of yam per month. This compares with an average of about 15.5 long tons for dried yam wholesalers per month, 23.0 long tons for gari, 18.4 long tons for dried cassava, 29.4 long tons for maize, 35.4 long tons for rice and 47.0 long tons for cowpea dealers. (6)

For the wholesalers who completed the Wholesale Traders Questionnaire in Ibadan, the average approximate number of transactions per week for each commodity was 9.4. Comparing this with the average of about 7 major units of commodity sold per week means that many of the transactions of wholesalers are in units smaller than a bag or equivalent.

Table 9.34 indicates the approximate number of weekly transactions of these wholesalers for each commodity. Overall, 43 percent of the wholesalers had 4 or less transactions per week for each staple food on sale, while a further 33 percent had 5 to 9 transactions per week. Only 3 percent of the wholesalers had more than 30 transactions per week for each commodity, and many of these were yam sellers.

Variations in the number of transactions per week for the sellers of each commodity were quite marked. For the locally produced bagged commodities, dried yam, gari, dried cassava and maize, the average number of transactions ranged from only 6.4 for dried cassava to 7.8 for gari sellers. This compares with an average of 11.4 and 11.2 transactions per week for sellers of rice and cowpeas respectively. Although only 14 of the 18 yam sellers included in the survey made an estimate of their average number of transactions per week, the average of 69 was strikingly higher than for the other commodities. This is due to many of the yam wholesalers also selling in very small units, such as three tubers, at retail.

Table 9.34

PERCENT DISTRIBUTION OF WHOLESALERS BY APPROXIMATE NUMBER OF TRANSACTIONS  
 PER WEEK AND BY COMMODITY--WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 February - May 1967

| Approximate Number<br>of Transactions Per Week | Commodity |           |      |                  |       |      |         | Total            |
|------------------------------------------------|-----------|-----------|------|------------------|-------|------|---------|------------------|
|                                                | Yam       | Dried Yam | Gari | Dried Cassava    | Maize | Rice | Cowpeas |                  |
| 1 - 4                                          | 7         | 50        | 50   | 52               | 42    | 38   | 28      | 43               |
| 5 - 9                                          | -         | 32        | 30   | 33               | 35    | 30   | 39      | 33               |
| 10 - 19                                        | -         | 14        | 15   | 14               | 21    | 21   | 29      | 19               |
| 20 - 29                                        | 14        | 4         | 3    | 2                | 1     | 7    | 1       | 3                |
| 30 & over                                      | 79        | -         | 2    | -                | 1     | 4    | 3       | 3                |
| Total Percent                                  | 100       | 100       | 100  | 101 <sup>+</sup> | 100   | 100  | 100     | 101 <sup>+</sup> |
| Average                                        | 69.1      | 6.9       | 7.8  | 6.4              | 7.4   | 11.4 | 11.2    | 9.4              |
| Standard Deviation                             | 43.2      | 6.5       | 10.6 | 5.2              | 6.6   | 13.5 | 15.5    | 14.2             |
| Coefficient of Variation                       | .6        | .9        | 1.4  | .8               | .9    | 1.2  | 1.4     | 1.5              |
| Number of Responses                            | 14        | 134       | 148  | 118              | 154   | 56   | 148     | 772              |
| + Rounding error                               |           |           |      |                  |       |      |         |                  |

To get an estimate of the average number of all transactions per week by wholesalers, it is necessary to adjust for the fact that there are about 50 percent more commodities on sale than there are wholesalers. This means that each wholesaler has on the average about 15 transactions per week, or about 2.3 transactions per day.

#### F. INVENTORY POLICY

Stocks of staple foods are generally held by traders for non-speculative purposes only. For the most part, traders will only hold sufficient inventory in order to maintain a regular flow of business transactions consistent with their capital resources and buying practices. Where supplies can be acquired easily and at little cost, the quantity of goods held as inventory will be minimal. For example, retailers in urban centers who buy from wholesalers will generally never hold more than one bag of the commodity in stock at any time. Usually, such retailers will buy the next unit of the commodity, be it a bag or a kerosene tinful, as present supplies are about to be exhausted.

For those traders involved in moving the commodity from supply area to place of sale, a somewhat different inventory policy pertains. This is occasioned by the time acquired and expense involved in assembling the supplies and transporting them. In general, the quantity purchased each time increases with the distance between the supply area and the place of sale. Purchases will also be made less frequently. This naturally results in a larger inventory being held.

The two main groups of traders involved in the storage of staple foods are assemblers and wholesalers. Each will be discussed in turn, and a brief account of the storage activities of retailers will be given.

### 1. Assemblers

Without doubt, traders who perform solely the assembling function are the most elusive group in the food marketing system. They are ubiquitous throughout the major supply areas of staple foods yet they operate so that their activities are difficult to study systematically. For example, the assemblers who acquire supplies from farmers and other assemblers before the supplies enter a market for the first time do so in a manner difficult to observe. Similarly, the selling practices of assemblers are often difficult to study. When they sell in rural markets, their main objective is to clear their assembled produce at the highest gain consistent with a minimal selling effort. This often results in their supplies being sold within a short time of arriving at the market. At other times, assemblers sell directly to other assemblers and wholesalers at their storage location, usually a room in their place of residence. Another common selling practice is for assemblers to sell through wholesalers located in urban centers.

This elusiveness means that information on their storage activities proved to be unusually difficult to acquire. Nevertheless, from the assemblers interviewed, mostly in unstructured and informal discussions, it seems that while some do have storage in excess of their transactions needs, most assemblers store solely as a means of regularising their business activities. That is, once they have assembled sufficient supplies to sell by their usual method, they will do so.

In many cases, a time lag may be involved before an opportunity to sell arises. For example, the assembler may have to wait until the next meeting of the market where supplies are sold. Another apparently common method of sale involving a time lag is where assemblers usually sell from their storage location to a trader who has chartered a lorry to visit his usual supply areas. In this case, the assemblers must wait with their assembled produce until a trader offers a satisfactory price. Generally, the time lag resulting from these selling practices is relatively short, although at any point in time, assemblers would have a large quantity of supplies in the pipeline.

Although many of the large buyers of staple foods in rural markets are not necessarily what have been strictly defined as assemblers, their activities do reflect the general impression of the overall behavior of assemblers. Table 9.35 shows that 73 percent of such buyers in the

TABLE 9.35

PERCENT DISTRIBUTION OF BUYERS BY USUAL TIME TAKEN TO SELL SUPPLIES AND BY COMMODITY--RURAL MARKET BUYERS QUESTIONNAIRE OCTOBER 1966-APRIL 1967

| Usual Time Taken to Sell Supplies | Commodity |                 |       |      |       | Total           |
|-----------------------------------|-----------|-----------------|-------|------|-------|-----------------|
|                                   | Yam       | Gari            | Maize | Rice | Other |                 |
| Same Day                          | 8         | 7               | 5     | 6    | -     | 6               |
| 1 - 3 Days                        | 43        | 22              | 30    | 33   | 30    | 34              |
| 4 - 7 Days                        | 35        | 33              | 35    | 33   | 20    | 33              |
| 8 - 14 Days                       | 10        | 26              | 25    | 11   | 30    | 17              |
| 15 - 28 Days                      | 2         | 4               | -     | 17   | -     | 4               |
| Over 28 Days                      | 2         | 7               | 5     | -    | 20    | 5               |
| Total Percent                     | 100       | 99 <sup>+</sup> | 100   | 100  | 100   | 99 <sup>+</sup> |
| Number of Responses               | 51        | 26              | 20    | 18   | 10    | 126             |

+ Rounding error.

sample interviewed with the Market Buyers Questionnaire usually sold their purchases within one week. Only 5 percent of the buyers declared that they usually took longer than 28 days to clear their supplies. All these buyers were acquiring locally produced foodstuffs from markets in relatively close proximity to their selling center, seldom was the distance involved more than 100 miles. This resulted in these assemblers being able to buy and sell at relatively short intervals.

Evidence of speculative storage of food crops by assemblers was scarce. A few assemblers, mostly located in the main supply areas of Oyo Division, did admit to holding some supplies in the hope that they could gain from a price rise later in the season. This arbitrage over time results from the commodity becoming scarce after the harvest period is passed.

Maize was the commodity found to be most commonly held for speculative purposes, while assemblers holding dried yam and cowpeas were also to be found. Although most only held a few bags of either one or several commodities, a small number holding upwards of 40 bags were encountered. Because of the deterioration of commodities held in store for an extended period of time, even the assemblers holding large stocks tended to rotate their old stock with newly acquired stocks. The various qualities of the commodities held in store were frequently blended to upgrade those commodities in poor condition.

All the assemblers interviewed who were involved in speculative storage were also actively engaged in regular trading activities. In general, although gains from a speculative storage are firmly expected, they appear to be thought of somewhat as serendipitous income. To these assemblers, their regular trading activities seem to be considered as their prime function and source of income.

While large, the absolute quantity of supplies held by assemblers in the Region for the purpose of realizing a gain from arbitrage over time, is probably much smaller than that held for the purpose of conducting their regular business activities. It is also relatively small when compared with the amount being held by farmers. However, in comparison with that of other traders in the marketing system, it is large and important. In fact, it would account for the major share of all supplies held for speculative purposes in the marketing system.

## 2. Wholesalers

Detailed information about stocks was collected from wholesalers in Ibadan using the Wholesale Traders Questionnaire. The average value of stocks held by all wholesalers was £101. However, 72 percent of all respondents held staple foods worth less than £100 in stock, and in fact, 48 percent held less than £50 worth of goods.

Table 9.36 displays for the three types of markets where wholesalers are located in Ibadan, their distribution in terms of total value of staple food commodities in stock. While the average value of stock per wholesaler is higher for the central new market at £120, compared with £97 for the central native market, 21 percent of the wholesalers held stock worth less than £10 while only 4 percent were in this class in the central native markets. The average value of stock held by the 8 wholesalers in the residential market was very low at £11.

From Table 9.37, a strong positive relationship between the value of monthly sales of all commodities and the value of all commodities held in stock by individual wholesalers can be seen to exist. For the most part,

Table 9.36

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY VALUE OF  
STAPLE FOOD COMMODITIES IN STOCK AND BY TYPE OF MARKET  
WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
FEBRUARY-MAY 1967

| Value of Staple Food<br>Commodities in Stock | Type of Market    |                  |                  | All<br>Wholesalers |
|----------------------------------------------|-------------------|------------------|------------------|--------------------|
|                                              | Central<br>Native | Central<br>New   | Resi-<br>dential |                    |
| Under £10                                    | 4                 | 21               | 62               | 8                  |
| £10 & under £50                              | 43                | 30               | 38               | 40                 |
| £50 & under £100                             | 26                | 20               | -                | 24                 |
| £100 & under £200                            | 16                | 15               | -                | 16                 |
| £200 & under £300                            | 5                 | 6                | -                | 5                  |
| £300 & under £500                            | 4                 | 3                | -                | 4                  |
| £500 & over                                  | 2                 | 6                | -                | 2                  |
| Total Percent                                | 100               | 101 <sup>+</sup> | 100              | 99 <sup>+</sup>    |
| Average (£)                                  | 97                | 120              | 11               | 101                |
| Standard deviation                           | 158               | 231              | 10               | 174                |
| Coefficient of variation                     | 1.6               | 1.9              | 0.9              | 1.7                |
| Number of Responses                          | 446               | 118              | 8                | 562                |

+ Rounding error.

Table 9. 37

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN  
 BY TOTAL VALUE OF STOCK OF STAPLE FOODS  
 AND BY VALUE OF MONTHLY SALES  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 FEBRUARY-MAY 1967

| Total Value of<br>Stock of Staple Foods | Value of Monthly Sales |              |              |              |                | All<br>Wholesalers |
|-----------------------------------------|------------------------|--------------|--------------|--------------|----------------|--------------------|
|                                         | Under<br>£100          | £100<br>£199 | £200<br>£299 | £300<br>£499 | £500 &<br>Over |                    |
| Under £10                               | 16                     | 3            | --           | 2            | --             | 8                  |
| £10 & Under £50                         | 62                     | 33           | 21           | 12           | --             | 40                 |
| £50 & Under £100                        | 16                     | 45           | 21           | 19           | 13             | 24                 |
| £100 & under £200                       | 5                      | 15           | 46           | 29           | 13             | 16                 |
| £200 & under £300                       | 1                      | 3            | 6            | 19           | 23             | 5                  |
| £300 & under £500                       | --                     | 1            | 4            | 16           | 23             | 4                  |
| £500 & over                             | --                     | --           | 3            | 3            | 29             | 2                  |
| Total Percent                           | 100                    | 100          | 101. +       | 100          | 101. +         | 99 +               |
| Average                                 | 39                     | 75           | 149          | 208          | 414            | 100                |
| Standard deviation                      | 38                     | 57           | 163          | 317          | 340            | 173                |
| Coefficient of variation                | 1.0                    | .8           | 1.1          | 1.5          | .8             | 1.7                |
| Number of Responses                     | 251                    | 153          | 68           | 58           | 31             | 561                |

+ Rounding error.

the larger wholesalers in terms of sales are also generally larger in terms of stocks. For example, the average value of inventory held by traders with sales of less than £100 per month was only £39, while the average held by wholesalers with sales in excess of £500 was £414.

A useful way of relating sales to stocks is by finding the turnover of stock over a specified time period. This requires making sales a ratio of stock, as presented in Table 9.38 for the same data as are in Table 9.37. One problem with the data on stocks is that they only relate to the stock as it existed at the time of the interview. It does not necessarily represent the average value of stocks held by wholesalers over any given period of time. The interpretation of the figures derived for the turnover of stock must therefore be approached cautiously.

It is likely that many of the very low (under 100 percent) and very high (500 percent and over) turnover values were obtained at a time when either new supplies had just been received or current stocks were diminished and new supplies were about to be acquired. These extreme values, particularly those resulting from diminished stocks, would make any average including those essentially meaningless. From Table 9.38, it can be seen that the median observation for all wholesalers was about 200 percent. That is, during the course of a month, wholesalers will generally have sales or about twice the average value of the stock held in store. If it is assumed that current stocks are cleared before new stocks are acquired, this means that an average wholesaler will take one month to sell all of his stock of the commodity. That is, his average stock over the entire period would have one-half the value of his sales (as well as one-half the value of the original purchase of the commodity). However, the larger the carry-over

Table 9.38

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN  
 BY TURNOVER OF STOCK PER MONTH (SALES AS PERCENT OF STOCK)  
 AND BY VALUE OF MONTHLY SALES  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 FEBRUARY-MAY 1967

| Turnover of Stock<br>Per Month (Sales as<br>Percent of Stock) | Value of Monthly Sales |               |               |               |                | All<br>Wholesalers |
|---------------------------------------------------------------|------------------------|---------------|---------------|---------------|----------------|--------------------|
|                                                               | Under<br>£100          | £100-<br>£199 | £200-<br>£299 | £300-<br>£499 | £500 &<br>Over |                    |
| Under 100                                                     | 18                     | 7             | 10            | 5             | 10             | 12                 |
| 100 & under 150                                               | 14                     | 15            | 13            | 21            | 13             | 15                 |
| 150 & under 200                                               | 24                     | 25            | 26            | 14            | 19             | 23                 |
| 200 & under 300                                               | 23                     | 19            | 16            | 21            | 19             | 21                 |
| 300 & under 500                                               | 8                      | 20            | 16            | 14            | 19             | 14                 |
| 500 & under 1,000                                             | 12                     | 9             | 18            | 17            | 19             | 13                 |
| 1,000 & over                                                  | 2                      | 4             | --            | 9             | --             | 3                  |
| Total Percent                                                 | 101+                   | 99 +          | 99+           | 101+          | 99+            | 101+               |
| Number of Responses                                           | 251                    | 153           | 68            | 58            | 31             | 561                |

+ Rounding error.

of stock at the time new supplies are acquired, the more frequently will supplies have to be acquired to maintain the same rate of turnover of stock.

Table 9.39 presents for five size groups of wholesalers their percent distribution in relation to the percent of the stock-in-store owned by the wholesaler himself. Overall, 30 percent of the wholesalers owned all of the goods they were selling at the time of the interview. However, among the larger wholesalers with monthly sales of £500 or over, 48 percent owned all of the inventory in their possession. Only 3 percent of the wholesalers were selling staple foods of mixed ownership where they personally owned some of the goods on sale while acting as an agent for the remainder.

Table 9.39

PERCENT DISTRIBUTION OF WHOLESALE TRADERS IN IBADAN  
BY PERCENT OF STOCK OWNED BY WHOLESALER AND BY VALUE OF MONTHLY SALES  
WHOLESALE TRADERS QUESTIONNAIRE--IBADAN - FEBRUARY-MAY 1967

| Percent of Stock<br>Owned by Wholesaler | Value of Monthly Sales |               |               |               |                 | All<br>Wholesalers |
|-----------------------------------------|------------------------|---------------|---------------|---------------|-----------------|--------------------|
|                                         | Under<br>£100          | £100-<br>£199 | £200-<br>£299 | £300-<br>£499 | £500 &<br>Over  |                    |
| 100                                     | 29                     | 33            | 24            | 28            | 48              | 30                 |
| 50 & under 100                          | *                      | --            | 4             | --            | 6               | 1                  |
| 1 & under 50                            | *                      | 2             | 6             | 5             | --              | 2                  |
| 0                                       | 70                     | 65            | 66            | 67            | 45              | 66                 |
| Total Percent                           | 99 <sup>+</sup>        | 100           | 100           | 100           | 99 <sup>+</sup> | 99 <sup>+</sup>    |
| Number of Responses                     | 251                    | 153           | 68            | 58            | 31              | 561                |

\* Less than 0.5 percent

+ Rounding error.

For each commodity on sale, wholesalers held an average of 15 bags in store at the time of the interview. In terms of total number of bags in stock, each wholesaler held about 22.5 bags or the equivalent. The percent distribution of wholesalers for each commodity by total quantity of commodity in stock is arrayed in Table 9.40. The average quantity and value of each commodity is also shown at the base of this table.

The average quantity and value of rice and cowpeas held in stock can be seen from Table 9.40 to be considerably in excess of those of the other commodities. In terms of quantity, 27 and 28 bags of rice and cowpeas respectively, were held, while the other commodities sold in bags ranged from 8 bags for gari to 13 bags for maize. That is, they averaged less than one-half the quantity for rice and cowpeas. Comparing the value of each commodity held leads to an even more striking contrast. The value of stock of rice and cowpeas was £233 and £128 respectively, whereas for the other commodities, it ranged from £20 for dried cassava to £55 for dried yam. Yam stocks averaged £30 per wholesaler.

The actual number of days the stock of each commodity had been in store is arrayed in Table 9.41 based in the percent distribution of wholesalers. It can be seen that the average length of time that wholesalers had held their inventory was 8 days. However by commodity, the average ranged from 3 days for yam to 5 days for gari, 7 days for dried cassava and maize, 9 days for dried yam, 10 days for cowpeas, and 12 days for rice. For all commodities, a relatively large standard deviation was found to exist.

Table 9.40

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY  
 TOTAL QUANTITY IN STOCK AND BY COMMODITY SOLD  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 FEBRUARY-MAY 1967

| Total Quantity<br>of Commodity<br>in Stock (Bags*) | Commodity |              |      |                  |       |      |         | All<br>Commodities |
|----------------------------------------------------|-----------|--------------|------|------------------|-------|------|---------|--------------------|
|                                                    | Yam       | Dried<br>Yam | Gari | Dried<br>Cassava | Maize | Rice | Cowpeas |                    |
| Under 5                                            | 50        | 24           | 37   | 21               | 21    | 10   | 18      | 24                 |
| 5 & under 10                                       | 44        | 33           | 19   | 24               | 26    | 15   | 13      | 23                 |
| 10 & under 20                                      | 6         | 28           | 37   | 40               | 33    | 36   | 23      | 32                 |
| 20 & under 30                                      | --        | 10           | 6    | 9                | 12    | 12   | 18      | 11                 |
| 30 & under 50                                      | --        | 1            | 1    | 5                | 4     | 17   | 11      | 5                  |
| 50 & over                                          | --        | 3            | --   | 2                | 4     | 10   | 16      | 5                  |
| Total Percent                                      | 100       | 99†          | 100  | 101†             | 100   | 100  | 99†     | 100                |
| Average quantity                                   | 5         | 12           | 8    | 12               | 13    | 27   | 28      | 15                 |
| Standard deviation                                 | 3         | 14           | 7    | 11               | 14    | 47   | 34      | 23                 |
| Coefficient of Variation                           | .7        | 1.2          | .8   | .9               | 1.7   | 1.0  | 1.2     | 1.5                |
| Number of Responses                                | 18        | 145          | 159  | 125              | 168   | 59   | 158     | 832                |
| Average value (£)                                  | 30        | 55           | 27   | 20               | 37    | 233  | 128     | 67                 |

\* Except yam which is in 100's of tubers.

† Rounding error.

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN  
 BY NUMBER OF DAYS STOCK IN STORE BY COMMODITY  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 FEBRUARY-MAY 1967

| Number of Days<br>Stock in Store | Commodity |                 |      |                  |       |                 |                 | All<br>Commodities |
|----------------------------------|-----------|-----------------|------|------------------|-------|-----------------|-----------------|--------------------|
|                                  | Yam       | Dried<br>Yam    | Gari | Dried<br>Cassava | Maize | Rice            | Cowpeas         |                    |
| 0 - 2                            | 44        | 8               | 28   | 15               | 15    | 8               | 10              | 16                 |
| 3 - 4                            | 33        | 27              | 31   | 24               | 37    | 17              | 26              | 29                 |
| 5 - 7                            | 17        | 26              | 26   | 32               | 27    | 15              | 20              | 25                 |
| 8 - 14                           | 6         | 22              | 12   | 18               | 14    | 32              | 25              | 19                 |
| 15 - 28                          | --        | 14              | 2    | 9                | 5     | 22              | 14              | 9                  |
| 29 & over                        | --        | 2               | 1    | 2                | 2     | 5               | 4               | 2                  |
| <b>Total Percent</b>             | 100       | 99 <sup>+</sup> | 100  | 100              | 100   | 99 <sup>+</sup> | 99 <sup>+</sup> | 100                |
| <b>Average No. of Days</b>       | 3         | 9               | 5    | 7                | 7     | 12              | 10              | 8                  |
| <b>Standard deviation</b>        | 2         | 8               | 4    | 6                | 9     | 13              | 10              | 9                  |
| <b>Coefficient of variation</b>  | .8        | .9              | .8   | .9               | 1.4   | 1.1             | 1.1             | 1.1                |
| <b>Number of Responses</b>       | 18        | 143             | 156  | 123              | 166   | 59              | 157             | 822                |

+ Rounding error.

The perishability and bulkiness of yams results in their being turned over at a relatively fast rate. That is, they are bought at frequent intervals and not held in stock longer than the minimum time necessary to clear them. The other locally produced commodities can also be acquired with relative ease so that stocks can be kept smaller and replenished more often than is possible for rice and cowpeas. This is borne out by the experience of wholesalers shown in Table 9.41. A common way of acquiring supplies of rice and cowpeas is for the trader to buy enough in the supply area to fill a lorry. For example, about 45 - 50 bags of rice, just enough to fill a 5-ton lorry, may be purchased by the wholesaler and then sold over a period of several months.

Table 9.42 is similar to Table 9.41, but presents the data in terms of the value of the commodity held in store rather than by number of wholesalers. This table consequently gives a better indication of the importance of wholesalers in Ibadan as a source of storage. In all, only 15 percent of the value of all commodities in store had been held by wholesalers longer than two weeks. Little gari and no yams had been in store for this length of time.

From all the evidence available, it seems certain that wholesalers undertake very little storage beyond that required to maintain their business activities. In fact, it seems that the speculative motive for holding inventories is quite unimportant to wholesalers. This is not to say, however, that it is absent. For example, dealers in rice and cowpeas

PERCENT DISTRIBUTION OF TOTAL VALUE OF INVENTORY HELD BY WHOLESALERS IN IBADAN  
 BY NUMBER OF DAYS STOCK IN STORE AND BY COMMODITY--WHOLESALE TRADERS QUESTIONNAIRE  
 IBADAN-- FEBRUARY-MAY 1967

| Number of Days<br>Stock in Store | Commodity |                  |       |                  |                 |        | All<br>Commodities |         |
|----------------------------------|-----------|------------------|-------|------------------|-----------------|--------|--------------------|---------|
|                                  | Yam       | Dried<br>Yam     | Gari  | Dried<br>Cassava | Maize           | Rice   |                    | Cowpeas |
| 0 - 2                            | 42        | 6                | 25    | 14               | 13              | 27     | 7                  | 14      |
| 3 - 4                            | 23        | 28               | 33    | 23               | 34              | 13     | 30                 | 26      |
| 5 - 7                            | 24        | 27               | 32    | 27               | 22              | 16     | 18                 | 21      |
| 8 - 14                           | 11        | 21               | 9     | 22               | 21              | 24     | 30                 | 24      |
| 15 - 28                          | -         | 13               | 1     | 12               | 6               | 11     | 12                 | 10      |
| 29 & over                        | -         | 6                | *     | 2                | 3               | 9      | 4                  | 5       |
| Total Percent                    | 100       | 101 <sup>+</sup> | 100   | 100              | 99 <sup>+</sup> | 100    | 101 <sup>+</sup>   | 100     |
| Total Value (₦)                  | 536       | 7,982            | 4,331 | 2,491            | 6,255           | 13,759 | 20,440             | 55,794  |

\* Less than 0.5 percent

+ Rounding error.

usually expect some accretion in the value of their inventory of new season's supplies. Although gains usually do accrue to wholesalers from their normal transaction storage of supplies, losses are also suffered occasionally.

By experience, traders have learned to time when stocks should be held to a minimum. For instance, most traders will try to time being out of the commodity for when the new season's supplies become available. While this is true for the sellers of all commodities, it is particularly applicable to the sellers of cowpeas.

### 3. Retailers

Retailers, like wholesalers, seldom hold supplies specifically for the purpose of taking advantage of price arbitrage over time. Besides generally not having the capital to speculate with, retailers do not treat this as part of their business activities. With their limited capital their objective is to maximize their gains by trading with staple foods rather than sinking their capital into the storage of such commodities.

Like the other types of traders, retailers will acquire as much of the commodity as their resources permit when they feel that the price is going up and they can make a gain by holding the commodity. In the same way, they will reduce stocks when the price is going down. There can be no doubt that a strong understanding of the principles of speculation as it applies to inventory policy exists everywhere among traders.

in the staple food marketing system in Western Nigeria. It is chiefly a lack of capital, lack of knowledge, and the risks of deterioration that discourage greater involvement of both retailers and wholesalers in the speculative storage of staple foods.

#### G. RISKS AND LOSSES

The staple food traders in Western Nigeria are extremely cognizant of and responsive to factors which affect their gain from trade. Because of their generally low capital resources and, even more important, their very low capital reserves and hence ability to stay in business after sustaining losses, traders are, for the most part, particularly careful to minimize the risks which they incur. A serious loss--even though small in absolute terms--will generally result in the trader reducing the size of his trading activities and, in some cases, leaving the industry entire.

Even though risks are minimized, losses are sometimes suffered by traders. For the traders interviewed in the urban and rural markets outside Ibadan with the Market Traders Questionnaire (Revised Form), Table 9.43 indicates that 22 percent of the retailers and 37 percent of the wholesalers in the urban markets and 21 percent of the traders in rural markets, had actually suffered some loss(es) over the preceding three months from some cause(s). These causes of loss reflect the major risks involved in food trading and will be dealt with in turn.

Table 9.43

PERCENT OF TRADERS SUFFERING LOSSES DURING THREE MONTHS BEFORE INTERVIEW, BY CAUSES OF LOSSES SUFFERED, BY TYPE OF MARKET, AND BY TYPE OF SELLER (FOR URBAN MARKETS)--MARKET TRADERS QUESTIONNAIRE--REVISED FORM--MARKETS OUTSIDE IBADAN

| Causes of<br>Losses Suffered* | Type of Market |           |     |       |
|-------------------------------|----------------|-----------|-----|-------|
|                               | Urban          |           |     | Rural |
|                               | Type of Seller |           |     | All   |
|                               | Retail         | Wholesale | All | All   |
| Commodity Price Fluctuations  | 13             | 27        | 19  | 12    |
| Weather                       | 6              | 10        | 8   | 9     |
| Pests                         | -              | -         | -   | -     |
| Bad Debts                     | 2              | 14        | 8   | 3     |
| Civil Disorder                | 6              | 4         | 5   | 3     |
| Theft                         | 4              | 6         | 5   | 3     |
| Other                         | 2              | 4         | 3   | -     |
| No losses suffered            | 78             | 63        | 71  | 79    |
| Number of Traders             | 54             | 49        | 103 | 34    |

\* Traders may suffer losses from more than one cause.

1. Trading Activities

Losses from trading activities are what traders refer to as a "shortage." A shortage occurs when the selling price of the commodity fails to cover the buying cost of the commodity, including the associated costs of delivering the product to the trader's place of sale.

Table 9.44

PERCENT DISTRIBUTION OF TRADERS BY LOSSES SUFFERED FROM TRADING DURING THREE MONTHS BEFORE INTERVIEW AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #2-IBADAN-- AUGUST-SEPTEMBER 1966

| <u>Losses Suffered from Trading During Three Months Before Interview</u> | <u>Retail Only</u> | <u>Retail-Wholesale</u> | <u>Wholesale Only</u> | <u>All</u>      |
|--------------------------------------------------------------------------|--------------------|-------------------------|-----------------------|-----------------|
| No losses suffered                                                       | 98                 | 85                      | 65                    | 86              |
| Under £10                                                                | 2                  | 9                       | 17                    | 7               |
| £10 & under £20                                                          | -                  | -                       | 11                    | 3               |
| Over 20                                                                  | -                  | 5                       | 7                     | 3               |
| Total Percent                                                            | 100                | 99 <sup>+</sup>         | 100                   | 99 <sup>+</sup> |
| <u>Number of Responses</u>                                               | 130                | 55                      | 71                    | 256             |

+ Rounding error.

Table 9.44 relates specifically to this kind of loss for the three types of sellers in Ibadan. It indicates that 2 percent of the retailers, 15 percent of the retail-wholesalers and 35 percent of the wholesalers interviewed had actually incurred a trading shortage during the three month period before they were interviewed. For about one-half of the

traders suffering a loss, the total value of the loss was under £10, while for the remainder it was greater, ranging up to £45 for a trader in cowpeas. In terms of commodity responsible in the loss, the only commodity not mentioned by the respondents as resulting in a loss was rice. However, that was only for a 3-month period among a sample of sellers. Overall, the risk of loss is ever present in some degree in all commodities, including rice.

The main cause of loss from trading activities is price fluctuations. For example, after the trader has purchased supplies in the supply area, based on his knowledge of actual and expected prices in his selling market, the price may unexpectedly drop before his supplies are actually sold with the result that he must accept a trading loss. When the reverse occurs and the price unexpectedly rises, the trader will often realize an unforeseen increase in his gain. However, where an assembler is selling through an agent in a consuming center and has stipulated to the wholesaler a minimum price to be realized, unless the assembler is present to increase the price, the wholesaler will generally pocket the gain. Even when the assembler is present, he will expect to share in the increased gain. In the same way, the wholesaler may be willing to forego some, but not all, of his commission when a shortage occurs.

The risks involved in price fluctuations are always real and present, but for the most part they are not too serious where the trader is following a wise inventory management policy. However, as Table 9.43 indicates, even

over the course of a 3-month period, many traders suffer losses due to fluctuations in the price of the commodity they are selling. In fact, it was quoted by traders as being the major source of the losses they had recently suffered. As expected, more wholesalers incurred this type of loss than retailers--27 percent of the wholesalers interviewed in the urban markets outside Ibadan compared with 13 percent of the retailers in the same markets. The proportion of traders in the rural markets who had suffered this type of loss was about the same as the retailers in the urban markets.

## 2. Weather

The generally hot and humid climatic conditions of the Region affect the staple foods in the marketing system in various ways. The principal direct effect, however, is encouragement of the rapid growth of bacteria, mildew, mold and fungi which may cause a rapid deterioration of the stored product. If the storage facility is not well ventilated and protected, there is a very serious risk for any commodity stored for any length of time, the length depending on the commodity. Yam tubers, gari, and fresh maize can only be stored for relatively short periods (up to one month) under most traditional practices before deterioration of the commodity occurs.

The risk created by this direct effect helps to discourage traders from an undue amount of speculative storage. The regular trading activities of these speculators must be large enough for the product stored to be

continually turned over or blended to upgrade its quality. Even in these cases, the risk of loss is still quite substantial.

Another way in which weather conditions affect staple foods is through water damage and seepage. This can occur in a variety of locations and conditions. As many sellers, especially retailers, do not have adequate protection from the weather while engaged in selling, even a short period of rainfall may possibly damage their inventory. Although most sellers have sheets of plastic or other material to cover their supplies, the strength of the rain and the accompanying wind are often sufficient to dampen at least part of the commodity. While some commodities can be sun-dried at little more cost than loss of time and inconvenience others, like gari, do not fare as well and a commodity loss will frequently be incurred.

The damage to commodities during transportation by water may also be substantial, particularly where the commodity is being transported some distance and no effort is made to dry out the quantity affected. Although adequate protection is usually provided for the goods being carried, the driver and assistants frequently neglect to arrange it. For example, while most of the smaller 3- and 5-ton lorries have partly covered sides with a rolled canvas flap to be let down for protection from the weather when needed, they will often not take the time and trouble required to unfold the flap. For this reason among others, commodity owners generally feel that they must accompany the goods being transported in order to minimize the possibility of loss.

The seepage of water into storage facilities is generally not a major problem, as most traders have learned by experience to store their commodities off the ground and away from potentially damp areas. The replacement of thatched roofs with galvanized iron sheet roofs has also helped to protect commodities in store from possible water damage. While some damage still occurs in the rainy season, damage caused by inadequate protection during storage is probably not the major cause of loss due to weather.

For the most part, losses due to weather can be blamed as much on the owner as on the weather. The risk is always present, especially during the rainy season, but it can be regulated to a certain extent by limiting exposure of the commodity to hazardous weather conditions.

For the traders in Table 9.43, weather was mentioned as one of the more important causes of the losses suffered.

### 3. Pests

Insects, rodents and other pests are a major problem in the storage of staple foods. A very considerable quantity of foodstuffs is either consumed by pests or wasted because of them. Unless a major infestation occurs, their effect on stored commodities is usually regarded as a normal cost of storage. As it happens to most, if not all, of the commodities stored under traditional practices, and as this is the usual method of storage, a diminished and deteriorated product is accepted as normal as the season passes. The price offered for the commodity in such a condition only declines relative to the price for the commodity in general when its

damage is greater than average. In fact, with proper storage a gain can probably be made relative to the rest of the commodity, as a higher relative selling price can be obtained for a better quality product.

Cowpeas are probably the commodity most affected by pests, although damage to stored maize is also very considerable. Cowpeas are stored for particularly long periods of time--up to twelve months--and are susceptible to a large number of pests which feed and multiply in the stored beans. However, even though some control is possible by periodic fumigation of stocks, it is generally thought by the traders involved not to be worth the time, effort and cost entailed. In fact, pest damage is an accepted part of the commodity later in the season and as a result is paid for by the consumer, not the trader. One problem with the fumigation of supplies is that they are not in the hands of any one trader long enough to make it a paying proposition. That is, once supplies have entered the Ibadan market, the main objective of storage is to sell the supplies and this usually happens within about one month.

While insects cause a loss of commodity, they are not usually the cause of a monetary loss to traders. Rodents, however, while not generally thought of as a major risk or source of loss, are also a problem to traders. Supplies consumed by them are entirely removed from the area, so that not even the eaten-out shells can be blended in and sold. As a result, a minor but continuous loss is encountered by many traders from this source.

In Table 9.43, no traders mentioned pests as a cause of monetary loss. The losses suffered as a result of pests are mostly too small and subtle to be so considered. Again, it is the major storers of commodities who are generally faced with the risks and losses associated with pests.

#### 4. Debtors

Obviously, where sales are made for cash at the time of the transaction no risk of loss is associated with the terms of the transfer. However, where supplies are sold on credit, a significant risk of loss is nearly always present. Because of this risk and the fact that credit sales tie up scarce capital resources, and in many cases reduce the ability of the creditor to pursue normal trading activities--a premium is usually charged when a credit sale is made. This occurs when the discount which is usually allowed for a cash payment must be foregone.

Most of the credit transfers in the staple food marketing system involve wholesalers. These have already been described in the section on selling practices. Where the wholesaler owns the goods, it is his credit that he is extending, whereas when he is acting as an agent for an assembler it is the latter who is providing the credit and hence taking the risk. In general, the major providers of credit are the wholesalers who own their own goods.

For the 561 wholesalers in Ibadan who responded to the Wholesale Traders Questionnaire, the average loss suffered over the past year from bad debts was £32. The distribution of losses suffered in terms of the amount of the loss and the value of monthly sales is arrayed in Table 9.45. In general, the larger the wholesaler is in terms of the value of sales, the higher is his loss from bad debts. In the survey among wholesalers in Ibadan, the average yearly loss ranged from £20 for traders with sales under £100 per month up to £112 for traders with monthly sales over £500. However, many dealers in all sales groups had a loss experience from bad debts of less than £10 over the year before the interview. For the group as a whole, 25 percent were in this loss range; very few had suffered no loss at all.

Although some of these bad debts may eventually be collected by the wholesalers, the withdrawal of capital represented by them is nevertheless quite serious. To wholesalers, credit sales are considered to hold a substantial risk and are a frequent source of complaint about the present food marketing system. Many wholesalers could cite cases of retailers who had bought from them on credit and had not repaid them as the goods were sold, but instead had used the money to trade in some other commodity. After trading with the money for a short time, usually no longer than a few days, or several weeks at most, the retailer repays the wholesaler. However, this violates the terms of the original credit contract, which usually requires payment in installments as sales are made by the retailer.

Table 9.45

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY LOSSES  
SUFFERED OVER PAST YEAR FROM BAD DEBTS AND BY VALUE OF  
MONTHLY SALES--WHOLESALE TRADERS QUESTIONNAIRE-IBADAN--  
FEBRUARY-MAY 1967

| Losses Suffered<br>Over Past Year<br>From Bad Debts | Value of Monthly Sales |               |               |               |                  | Total            |
|-----------------------------------------------------|------------------------|---------------|---------------|---------------|------------------|------------------|
|                                                     | Under<br>£100          | £100-<br>£199 | £200-<br>£299 | £300-<br>£499 | £500 &<br>Over   |                  |
| Under £10                                           | 33                     | 17            | 18            | 21            | 23               | 25               |
| £10 & under £50                                     | 59                     | 69            | 68            | 53            | 39               | 61               |
| £50 & under £100                                    | 5                      | 10            | 10            | 14            | 23               | 9                |
| £100 & under £200                                   | 2                      | 4             | 4             | 7             | 3                | 4                |
| £200 & over                                         | 1                      | --            | --            | 5             | 13               | 2                |
| Total Percent                                       | 100                    | 100           | 100           | 100           | 101 <sup>+</sup> | 101 <sup>+</sup> |
| Average Loss (£)                                    | 20                     | 27            | 30            | 52            | 112              | 32 <sup>*</sup>  |
| Standard deviation                                  | 31                     | 27            | 32            | 92            | 338              | 91               |
| Coefficient of variation                            | 1.5                    | 1.0           | 1.1           | 1.8           | 2.9              | 2.9              |
| Number of Responses                                 | 251                    | 153           | 68            | 58            | 31               | 561              |

<sup>+</sup> Rounding error.

<sup>\*</sup> Total losses suffered over past year: £17,806.

Among the traders interviewed outside Ibadan, Table 9.43 shows that 2 percent of the retailers and 14 percent of the wholesalers in urban markets and 3 percent of the traders in rural markets, had suffered some loss from bad debts during the three months before the interview.

#### 5. Civil Disorder

Loss of goods and income as a result of political reprisals and other political activities, bribes to and commandeering by law enforcement and military personnel, the enforcement of group decisions without legal sanction, such as a decision by a trade or market association to expel a trader from a market, and other similar acts of civil disorder, while not common does occur. Certainly in the last few years the risk of loss from civil disorder has been quite significant. The actual number of traders affected has varied by area and, quite recently, by region of origin. While many of the acts are committed in order to seize and use the trader's goods, many seek merely to destroy them. It is a risk involved in all trades and can be neither dismissed nor ignored. Even though traders try to minimize the risk associated with civil disorder, primarily by fleeing the market with their wares at the first hint of a disturbance, they are not always successful in avoiding loss. Among the sellers interviewed outside of Ibadan, Table 9.43 shows that 5 percent of those in urban markets and 3 percent of those in rural markets had suffered a loss from what they considered civil disorder within the three months before the interview.

## 6. Theft

While civil disorder usually involves an overt and blatant act of aggression against the trader, theft of the trader's property usually occurs more surreptitiously. However, both have the effect of depriving the trader of his goods. In a limited capital situation, this often means depriving the trader of his source of livelihood as well.

In general, the risks of loss in terms of frequency associated with theft are somewhat the same as in civil disorder--very significant. However, as most acts of thievery involve only part of a trader's inventory, the risks of loss in terms of value may be regarded as slight. Several factors mitigate against a large number of thefts of traders' merchandise. Firstly, most traders stay close to their goods while selling and guard them carefully. Secondly, many traders store their goods in their own home, and those who do use a market stall to store their goods, usually also employ a guard (night watchman) to protect their goods against theft. Guards are used in Dugbe Market, Ibadan, while in the central native markets it is more usual for the trader, his apprentices, a relative or his supplier (assembler) to sleep in the stall with the goods. And thirdly, the Yoruba tradition is very much opposed to thieving, so that any thief apprehended will often be very brutally treated. This applies even where extremely petty thefts are involved. This deterrent does not however, apply in the case of civil disorder.

Again, Table 9.43 discloses that 5 percent of the sellers in urban markets and 3 percent of those interviewed in rural markets outside Ibadan, had suffered some loss over the previous three months from theft. The amount involved, however, was generally rather small.

## 7. Summary

Table 9.46 presents a summary listing of the estimated risks of loss

Table 9.46

ESTIMATED RISKS OF LOSS ASSOCIATED WITH STAPLE FOOD MARKETING  
BY COMMODITY AND BY CAUSE OF RISK

| <u>Commodity</u> | <u>Cause of Risk of Loss</u>  |                |              |                      |                           |              |
|------------------|-------------------------------|----------------|--------------|----------------------|---------------------------|--------------|
|                  | <u>Price<br/>Fluctuations</u> | <u>Weather</u> | <u>Pests</u> | <u>Bad<br/>Debts</u> | <u>Civil<br/>Disorder</u> | <u>Theft</u> |
| Yam Tubers       | B <sup>+</sup>                | C              | C            | B                    | B                         | C            |
| Dried Yam        | B                             | B              | C            | B                    | B                         | C            |
| Gari             | B                             | B              | C            | B                    | B                         | C            |
| Dried Cassava    | B                             | B              | C            | B                    | B                         | C            |
| Maize            | B                             | B              | C            | B                    | B                         | C            |
| Rice             | B                             | C              | C            | B                    | B                         | C            |
| Cowpeas          | B                             | C              | B            | B                    | B                         | C            |

+ A: Substantial; B: Significant; C: Slight; D: None  
Source: Stanford Research Institute

associated with trading in each commodity by the major causes of loss faced by traders. It can be seen that very few differences exist between commodities with regard to the risk involved.

## H. SOURCES OF FUNDS

The staple food marketing system in Western Nigeria is entirely financed by the private sector of the economy. Within that sector, the traders together with their relatives, and in some cases their friends, provide almost all of the trading capital involved in the industry. This means that the large number of small businesses involved in the system are financed by an even larger number of mostly very small capitalists.

As very little trader capital is invested in fixed physical facilities and even less in equipment, the major uses of funds to be financed are those involving the actual trading operations themselves. Of outstanding importance is the trading capital required to finance the acquisition and holding of supplies. For those traders offering credit facilities, the financing of debtors is also of importance. As cash reserves are generally always small or non-existent and except for initiation and membership fees in a relevant trade association if one is joined, very little, if any, capital is required for other uses.

For those traders not extending credit facilities to buyers, the size of the business, together with the frequency with which supplies are acquired, give a close approximation of the capital employed in the business. Where credit is extended, it is necessary to also add in this use to derive an estimate of capital in use.

Although very few traders own their own stalls, many have invested something in their improvement and in many cases their maintenance; counters are included here. The main items of equipment required are the

containers used both for holding the commodities and for measuring out the unit of sale. For some wholesalers, bags are also important. The cost of these items of equipment may be as low as a few shillings and very few traders have more than one pound so invested.

The sources of funds will now be presented in two parts. Firstly, the sources of the long-term capital invested in the business. And secondly, the sources of the short-term capital requirements; this includes the use of credit facilities which may be needed from time to time to supplement the long-term capital resources in meeting extra short term needs as they arise.

#### 1. Long-term Capital

Most of the capital used by traders is either supplied by themselves or by relatives. As a result most of the capital employed is of a long-term nature, short-term sources being relatively unimportant.

Based on the rather scant information available, Table 9.47 presents the estimated percent distribution of capital used in the food marketing industry by the sources of these funds and by the type of trader for two locations--urban centers and outside urban centers. For the wholesalers and assemblers who own their own supplies, it can be seen that the traders themselves provide at least half of their estimated total funds, and together with relatives provide about 85 percent of the funds of wholesalers and 80 percent of the funds of assemblers. For both groups, friends of the trader are also significant suppliers of funds, supplying an estimated 10 percent of the funds of wholesalers and 5 percent of the funds of the

Table 9.47

ESTIMATED PERCENT DISTRIBUTION OF CAPITAL USED BY  
SOURCE OF FUNDS AND BY TYPE OF TRADER  
FOR URBAN CENTERS AND OUTSIDE URBAN CENTERS

| Source of Funds      | Urban Centers         |        |                | Outside Urban Centers |        |                |
|----------------------|-----------------------|--------|----------------|-----------------------|--------|----------------|
|                      | Wholesalers           |        | Retail-<br>ers | Assemblers            |        | Retail-<br>ers |
|                      | Owners of<br>Supplies | Agents |                | Owners of<br>Supplies | Agents |                |
| Self                 | 65                    | 2      | 40             | 60                    | 2      | 40             |
| Relatives            | 20                    | *      | 40             | 20                    | *      | 40             |
| Friends              | 10                    | *      | *              | 5                     | *      | *              |
| Suppliers            | 5                     | 98     | 20             | 15                    | --     | 20             |
| Supply associations  | *                     | --     | --             | *                     | --     | --             |
| Buyers               | --                    | --     | --             | --                    | 98     | --             |
| Lending institutions | *                     | --     | --             | *                     | --     | --             |
| Total percent        | 100                   | 100    | 100            | 100                   | 100    | 100            |

\* Trace.

Source: Stanford Research Institute.

assemblers. Suppliers also provide a significant amount of capital, particularly for assemblers, where they supply 15 percent of the funds used. This usually takes the form of a promise to pay their supplier (either a farmer or another assembler) after they have sold their supplies in the urban center. It can be seen that lending institutions such as banks or government credit institutions provide a negligible amount of the capital used by traders in the food industry.

Agents, though similar in behavior to wholesalers and assemblers, differ in that they do not own the supplies they are selling and hence risk very little of their own capital in their trading activities. For the wholesalers in urban centers who are only agents, the major source of capital is their suppliers, who are the assemblers from outside the urban centers. In the same way, the assemblers located outside the urban centers who are only agents have as their major source of capital their buyers, who for the most part are wholesalers in the urban centers. For both groups of agents they supply probably no more than 2 percent of the total capital resources which they have tied up in their business on a long-term basis.

As most of the retailers in the food industry are women, a smaller percent of the total capital is supplied by the trader, while about an equivalent percent is supplied by relatives, particularly husbands, brothers, sisters, and parents. For retailers, both in the urban centers and in the rural areas, it is estimated that about 40 percent of the capital is provided by the trader, with relatives providing another 40 percent. The remaining 20 percent is provided by suppliers and represents

the amount which retailers in the aggregate continually have borrowed from their suppliers. In the urban centers, those retailers buy mostly from wholesalers; this represents the provision of capital to retailers by wholesalers and by assemblers when they are only acting as agents, while outside the urban centers retailers mostly buy their supplies from small assemblers or from producers. In all cases they are expected to pay their debt to their supplier as soon as they sell the supplies which they have received on credit.

For the traders interviewed in Ibadan with the Market Traders Questionnaire #1, Table 9.48 presents the percent distribution of these traders, by their major source of capital, for each of the three types of traders identified. It can be seen that for all groups the trader considered that he was his major source of capital. The next most important source of capital for both retailers and retailer wholesalers was the spouse of the trader. Other relatives and friends were also considered by several traders to be their major source of capital. Although their true importance is underestimated by the traders who were only agents, many retailers and wholesalers considered suppliers to be their major source of capital.

Table 9.49 presents the same information on the major source of capital but arrayed by the sex of the seller. It will be noticed that while 61 percent of the male and 57 percent of the female sellers said that they were their major source of capital, some major differences exist for the remaining traders. For the remaining male traders, friends and suppliers were considered to be the major source of capital by 21 and 18 percent respectively of all the male traders. For the remaining female

Table 9.48

PERCENT DISTRIBUTION OF TRADERS BY  
 MAJOR SOURCE OF CAPITAL AND BY TYPE OF SELLER  
 MARKET TRADERS QUESTIONNAIRE #1 -IBADAN  
 JUNE-JULY 1966

| <u>Major Source of Capital</u> | <u>Type of Sellers</u> |                         |                       | <u>All Sellers</u> |
|--------------------------------|------------------------|-------------------------|-----------------------|--------------------|
|                                | <u>Retail Only</u>     | <u>Retail-Wholesale</u> | <u>Wholesale Only</u> |                    |
| Self                           | 65                     | 49                      | 67                    | 56                 |
| Spouse                         | 29                     | 22                      | 6                     | 23                 |
| Close relative                 | 5                      | 6                       | 3                     | 5                  |
| Distant relative               | --                     | --                      | --                    | --                 |
| Friend                         | --                     | 12                      | 3                     | 6                  |
| Money lender                   | --                     | --                      | --                    | --                 |
| Esusu contribution             | --                     | --                      | --                    | --                 |
| Government credit institution  | --                     | --                      | --                    | --                 |
| Commercial bank                | --                     | --                      | --                    | --                 |
| Suppliers                      | 1                      | 11                      | 22                    | 8                  |
| Customers                      | --                     | --                      | --                    | --                 |
| Total                          | 100                    | 100                     | 101 <sup>+</sup>      | 100                |
| Number of responses            | 106                    | 122                     | 36                    | 264                |

<sup>+</sup> Rounding error.

Table 9.49

PERCENT DISTRIBUTION OF TRADERS BY MAJOR SOURCE OF CAPITAL  
AND BY SEX OF SELLER--MARKET TRADERS QUESTIONNAIRE #1-IBADAN--  
JUNE-JULY 1966

| <u>Major Source<br/>of Capital</u> | <u>Sex of Seller</u> |               | <u>Both</u> |
|------------------------------------|----------------------|---------------|-------------|
|                                    | <u>Male</u>          | <u>Female</u> |             |
| Self                               | 61                   | 57            | 58          |
| Spouse                             | --                   | 30            | 23          |
| Close relative                     | --                   | 7             | 5           |
| Distant relative                   | --                   | --            | --          |
| Friend                             | 21                   | 1             | 6           |
| Money lender                       | --                   | --            | --          |
| Esusu contribution                 | --                   | --            | --          |
| Government credit institution      | --                   | --            | --          |
| Commercial bank                    | --                   | --            | --          |
| Suppliers                          | 18                   | 5             | 8           |
| Customers                          | --                   | --            | --          |
| <u>Total percent</u>               | <u>100</u>           | <u>100</u>    | <u>100</u>  |
| Number of responses                | 67                   | 147           | 264         |

traders, 30 percent considered that their spouse was their most important source of capital, with another 7 percent listing a close relative. Only 1 percent had a friend as their major source of capital, while 5 percent thought suppliers filled this position.

As both of these tables only list the major source of capital of the trader, care should be taken in their interpretation. Fortunately, however, many traders do have several sources of capital; a large number also rely on just one major source of capital supplementing their requirements from other sources at times as demanded and as resources permit.

## 2. Short-Term Capital

While suppliers would no doubt be the largest source of short-term capital, most traders do not view them as a source of credit. This results particularly from the fact that traders continue to use suppliers as a source of capital, and hence, consider them more a source of long-term capital. Short-term capital then is thought of as money borrowed rather than the purchase of supplies on credit. Nevertheless, it is expected that this money will not be available to the business indefinitely but it will be repaid after an interval.

Table 9.50 shows percent distribution of traders by the total amount borrowed during the year prior to the interview for each type of seller. Of the 256 traders, only 21 percent had borrowed some money over the last year. While 17 percent of the retailers had borrowed

Table 9.50

PERCENT DISTRIBUTION OF TRADERS BY TOTAL AMOUNT BORROWED LAST YEAR AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #2 - IBADAN--AUGUST-SEPTEMBER 1966

| Total Amount Borrowed Over Last Year | Type of Seller |                  |                  | Total            |
|--------------------------------------|----------------|------------------|------------------|------------------|
|                                      | Retail Only    | Retail Wholesale | Wholesale Only   |                  |
| None                                 | 83             | 3                | 68               | 79               |
| Under £20                            | 13             | 5                | 6                | 9                |
| £20 and under £50                    | 3              | 7                | 17               | 8                |
| £50 and under £100                   | 1              | --               | 7                | 2                |
| £100 and over                        | --             | 4                | 3                | 2                |
| Total percent                        | 100            | 100              | 101 <sup>+</sup> | 100 <sup>+</sup> |
| Number of responses                  | 130            | 53               | 71               | 254              |

<sup>+</sup> Rounding error

money over the past year, most (13 percent of the total) had borrowed less than £20. For the 16 percent of retailer-wholesalers who had borrowed some amount, 5 percent of the total borrowed under £20, while a further 7 percent borrowed between £20 and £50. The remaining 4 percent borrowed in excess of £100. Among the 32 percent of wholesalers who borrowed some money, 6 percent borrowed under £20, 17 percent borrowed between £20 and £50, and the remaining 10 percent borrowed in excess of £50.

The source of the short-term capital borrowed by each type of seller is displayed in Table 9.51. For retailers the trader's spouse was predominant, having supplied the capital of 77 percent of the retailers interviewed. The second most important source of money borrowed by retailers was brothers and sisters, who provided the capital in 14 percent of the cases where money was borrowed during the past year. Friends and the Esusu also provided capital in one case each. In the case of the capital borrowed from the Esusu association, the trader was in effect using the collections he made for the association on a temporary basis in his own business, that is, informally taking advantage of his position as the Esusu collector rather than seeking a formal loan from the members of the association. For the retailer-wholesalers, while spouses and brothers and sisters are also very important, other sources become somewhat more important in the provision of short-term capital. Friends, money lenders and the Ifelodun Foodstuff Dealers and Suppliers Association were also important providers of credit. For wholesalers, because of the predominance of men the spouse now becomes an unimportant provider of credit. Brothers remain important but friends now account for the major source of short-term credit needs, accounting for 52 percent of credit to wholesalers who had borrowed during the past year. It is also significant to note that the

Table 9.51

PERCENT DISTRIBUTION OF TRADERS BY SOURCE OF AMOUNT BORROWED  
AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #2-IBADAN  
AUGUST-SEPTEMBER 1966

| Source of<br>Amount Borrowed                               | Type of Seller   |                      |                   | Total            |
|------------------------------------------------------------|------------------|----------------------|-------------------|------------------|
|                                                            | Retail<br>Only   | Retail-<br>Wholesale | Wholesale<br>Only |                  |
| Relative                                                   |                  |                      |                   |                  |
| Spouse                                                     | 77               | 33                   | 4                 | 39               |
| Brother/sister                                             | 14               | 22                   | 22                | 19               |
| Other                                                      | --               | --                   | 4                 | 2                |
| Friend                                                     | 5                | 22                   | 52                | 28               |
| Money lender                                               | --               | 11                   | --                | 2                |
| Ifelodun Foodstuff<br>Dealers and Suppliers<br>Association | --               | 11                   | 9                 | 6                |
| Bank                                                       | --               | --                   | 4                 | 2                |
| Cooperative Thrift and<br>Loan Society                     | --               | --                   | 4                 | 2                |
| Esusu Association                                          | 5                | --                   | --                | 2                |
| Total percent                                              | 101 <sup>+</sup> | 99 <sup>+</sup>      | 99 <sup>+</sup>   | 102 <sup>+</sup> |
| Number of responses                                        | 22               | 9                    | 23                | 54               |

<sup>+</sup> Rounding error.

Ifelodun Foodstuff and Suppliers Association, the commercial banks, and the Corporative Thrift and Loan Society also provided some credit to traders.

When money is borrowed from relatives, and in many cases friends, generally no interest is paid on the amount borrowed. In many cases, however, the provider of the credit does expect to receive some share of the profit derived from the trading activities as a result of the credit received. Table 9.52 shows the annual rate of interest paid on the amount borrowed for each type of trader for those traders actually borrowing money during the year prior to the interview. The retailers who borrowed paid no interest, while the retailer-wholesalers paid interest in only 22 percent of the cases, and 17 percent of the wholesalers who borrowed money paid interest. The highest annual rate of interest paid by traders was between 60 and 70 percent.

Very few of the traders interviewed intimated that they were actually averse to borrowing on a short-term basis. In most cases, however, even though short-term capital was considered desirable, they had very little idea of exactly where they would go to get such a loan. About 45 percent of the traders gave an answer such as "any willing person" as the possible source of financial assistance.

Table 9.53 presents the suggested potential source of the next loan of the traders interviewed in the Market Traders Questionnaire #2 in Ibadan. For those traders who believed they had a potential source of loan, relatives (particularly spouses) were important for retailers, and

Table 9.52

PERCENT DISTRIBUTION OF TRADERS BY ANNUAL RATE  
OF INTEREST PAID ON AMOUNT BORROWED AND BY TYPE  
OF SELLER--MARKET TRADERS QUESTIONNAIRE #2 -  
IBADAN--AUGUST-SEPTEMBER 1966

| Annual Rate of<br>Interest Paid on<br>Amount Borrowed | Type of Seller |                      |                   | Total    |
|-------------------------------------------------------|----------------|----------------------|-------------------|----------|
|                                                       | Retail<br>Only | Retail-<br>Wholesale | Wholesale<br>Only |          |
| None                                                  | 100            | 78                   | 83                | 89       |
| 10 and under 20 percent                               | --             | --                   | 4                 | 2        |
| 30 and under 40 percent                               | --             | --                   | 4                 | 2        |
| 60 and under 70 percent                               | --             | <u>22</u>            | <u>9</u>          | <u>7</u> |
| Total percent                                         | 100            | 100                  | 100               | 100      |
| Number of responses                                   | 22             | 9                    | 23                | 54       |

Table 9.53

PERCENT DISTRIBUTION OF TRADERS BY POTENTIAL SOURCE  
OF NEXT LOAN AND BY TYPE OF SELLER--MARKET TRADERS  
QUESTIONNAIRE #2-IBADAN--AUGUST-SEPTEMBER 1966

| Potential Source<br>of Next Loan  | Type of Seller |                      |                   | Total |
|-----------------------------------|----------------|----------------------|-------------------|-------|
|                                   | Retail<br>Only | Retail-<br>Wholesale | Wholesale<br>Only |       |
| <b>Relative</b>                   |                |                      |                   |       |
| Parent                            | 5              | 4                    | 1                 | 4     |
| Spouse                            | 37             | 20                   | 3                 | 24    |
| Brother/sister                    | 2              | 4                    | 6                 | 4     |
| Other                             | 4              | 4                    | --                | 3     |
| <b>Friend</b>                     | 6              | 5                    | 13                | 8     |
| <b>Money lender</b>               | --             | --                   | --                | --    |
| <b>Customer/supplier</b>          | --             | --                   | --                | --    |
| <b>Private credit institution</b> | 2              | 7                    | 4                 | 4     |
| <b>Public credit institution</b>  | 3              | 5                    | 24                | 9     |
| <b>Unspecified</b>                | 41             | 51                   | 49                | 45    |
| <b>Total percent</b>              | 100            | 100                  | 101+              | 101+  |
| <b>Number of responses</b>        | 130            | 55                   | 71                | 256   |

†Rounding error

somewhat less so for retailer-wholesalers; while for wholesalers, friends and public credit institutions were the most likely source. However, in cases where private or public credit institutions were given, none of the respondents had ever received a loan from, or had direct contact with, the credit institution mentioned. It is therefore doubtful whether these institutions really represent the most likely source of the next loan to these traders.

### 3. Banking System

Special mention should be made of the role of the commercial banking system in relation to trading intermediaries in food marketing. Except for some of the larger wholesalers, most traders do not use the banking system. In fact, many people mistrust and fear banks. This mistrust usually stems from a fear that a bank clerk who knows a trader's relatives or friends may disclose information on their accounts to them. As banks do not care to lend to people who do not pass their money through the banking system, it is exceedingly difficult for traders to obtain a loan or overdraft facilities from the commercial banks.

Instead of banking their money, women traders will usually keep it in the tie that holds up the main cloth they wear. Later, the money is transferred to a cash box hidden in the trader's private room, which is frequently locked. For male traders, the large pocket in the traditional clothes or a locked drawer in the stall is used in the first instance to hold the cash on hand. Later, it also is transferred to a cash container concealed on the trader's premises. This means that traders essentially bypass the banking system. Many traders, and several of the larger wholesalers, use bank checks<sup>8</sup> (or money orders issued by the Post Office) instead of cash when travelling a long distance to procure

## I. MARKET INFORMATION

In the absence of any public dissemination of relevant and current market information, it is necessary for staple food traders to rely on their own sources and initiative to acquire the information required for the operation of their business activities. Given the low level of literacy among food traders and the existence of very rudimentary communication facilities, especially in the rural areas, this means that traders must rely mostly on personal contacts to acquire information.

In general, information relating to staple food marketing in the same market is usually reliable, current and relatively complete. Between markets, however, information becomes less reliable, more out-of-date and more fragmentary as the distance lengthens and/or the trade ties diminish. For example, trader knowledge of prices, supplies, stocks, and other market details is generally better within the central native market complex in Ibadan than between the central native markets and the central new market, Dugbe Market. However, knowledge between the latter two types of markets is still better than that between the central native markets and markets in the other urban centers in Western Nigeria. Traders in one urban area have very little knowledge of any market information relevant to other urban areas. This results from there being very little direct exchange either of traders or of supplies between the urban centers.

Where strong trade ties exist between areas, such as between an urban area and its supply hinterland, many traders keep themselves relatively well informed of prices, supplies and conditions in the other area.

Although few in number, these traders are essential to keeping the urban market in reasonable equilibrium with its supply area. In addition to personal buying or selling exchanges in the other area, these traders usually keep in touch with other traders and transporters who have attended markets or transacted business there.

Although newspapers occasionally publish an article of current interest to staple food traders, there is no regular service catering to traders. The distribution of newspapers has a fairly wide base, and although it is restricted to literates, mostly males, it is helped by the existence of many Yoruba language newspapers. Although radio and television services exist within the Region, they are not aimed at market traders and hence are not used as a media for communicating market information. Rediffusion<sup>9</sup> boxes exist in the homes of numerous traders and in many stalls, but like radio, is not used to disseminate market information.

The knowledge of traders in several situations will now be considered in more detail. A final section will also be included on the private records kept by traders as these are also a potential source of information to traders.

#### 1. Information About Supplies

For retailers in urban areas who acquire their supplies from adjacent wholesalers, the availability and price of supplies is generally constantly known. Although the relevant information for competing wholesalers is not as well known, it is usually obtained periodically--sometimes by personal inquiry but usually by hearsay from other traders in the market.

For the traders in urban areas who acquire their supplies directly in the area of production, information is more difficult to obtain. For the most part, traders establish a particular buying pattern which is unflinching followed. As this means visiting the same supply areas with a certain regularity in order to acquire supplies, these traders generally have good information on the supply markets used but poor and fragmentary information on all other markets.

Table 9.54 presents for the wholesalers in Ibadan a summary of their knowledge of other potential sources of supply for each commodity. It is based on the information that was obtained in response to the Wholesale Traders Questionnaire. Emphasis was placed first on the names of other places where supplies could be, but are not presently being, obtained. Then the wholesaler was asked if he knew the buying price presently ruling in that supply market.

In general, where the wholesaler was actually acquiring the supplies for himself in a supply area, he had a reasonably good idea of other potential sources of supply and the ruling price. Where the wholesaler was only acting as an agent, he could generally give the names of other major producing areas, but found it difficult to quote a buying price. However, some wholesaler-agents were able to provide reasonably good information for several areas because they maintained contact with traders from several areas. Very few wholesalers, only one percent of the total, were able to provide virtually no information about other potential supply areas.

The reason why wholesaler-agents do not use these other potential sources of supply is relatively self-explanatory: they rely on assemblers from the supply areas to bring supplies to them to sell and generally only have contacts well established with traders from a rather confined area-- often the same home town.

Table 9.54

PERCENT DISTRIBUTION OF WHOLESALERS BY KNOWLEDGE OF  
OTHER POTENTIAL SOURCES OF SUPPLY AND BY COMMODITY  
WHOLESALE TRADERS QUESTIONNAIRE-IBADAN-FEBRUARY-MAY 1967

| Knowledge of Other<br>Potential Sources<br>of Supply | Commodity |                 |                  |                  |       |      |                  |       |
|------------------------------------------------------|-----------|-----------------|------------------|------------------|-------|------|------------------|-------|
|                                                      | Yam       | Dried<br>Yam    | Gari             | Dried<br>Cassava | Maize | Rice | Cowpeas          | Total |
| Knows places and has<br>good idea of price           | 50        | 21              | 43               | 19               | 22    | 69   | 45               | 34    |
| Knows places but has<br>poor or no idea of price     | 50        | 77              | 57               | 79               | 78    | 29   | 53               | 65    |
| Has no knowledge                                     | -         | 1               | 1                | 2                | -     | 2    | 3                | 1     |
| Total Percent                                        | 100       | 99 <sup>+</sup> | 101 <sup>+</sup> | 100              | 100   | 100  | 101 <sup>+</sup> | 100   |
| Number of Responses                                  | 18        | 148             | 159              | 125              | 168   | 59   | 158              | 832   |

<sup>+</sup> Rounding error.

For the wholesalers who actually buy in the supply area, the reason for not using other supply areas is not as evident: Table 9.55 presents the percent distribution of wholesalers who buy their own supplies in terms of the main reasons stated for each commodity for not using these other sources of supply. The largest single group of answers (39 percent) related to the lack of knowledge on the part of the wholesalers of these other supply areas. In general, this reflects a reluctance on the part of traders to risk their limited capital in personally establishing contacts and acquiring knowledge of other supply markets and areas. In addition to losing some present business by spending time visiting other areas, traders rely to a great extent on their familiarity with the people and facilities where they presently transact business. Establishing new contacts and patterns is not only risky but also somewhat difficult because of the time and patience required in being accepted by tribesmen previously unknown to the trader.

Of the wholesalers in Ibadan buying in the supply area, 22 percent considered that their present sources of supply were adequate and that they had no desire to change. A further 23 percent stated that they had insufficient capital to travel to new supply areas to obtain supplies; this implies that with the limited capital at their disposal, their present sources of supply are also considered to be their best. While it is possible that both of these reasons were predicated on knowledge in the possession of the wholesaler about the other supply areas, it is more likely that they were primarily offered in ignorance of the other areas, except that sufficient information was available to form an opinion.

Table 9.55

PERCENT DISTRIBUTION OF WHOLESALERS BUYING IN SUPPLY AREAS BY  
REASONS FOR NOT USING OTHER SOURCES OF SUPPLY AND BY COMMODITY  
(UP TO TWO REASONS ALLOWED)--WHOLESALE TRADERS QUESTIONNAIRE-  
IBADAN--FEBRUARY-MAY 1967

| Reason for not Using<br>Other Sources of Supply<br>of Commodity | + Commodity |              |                  |                  |       |      |                 | Total            |
|-----------------------------------------------------------------|-------------|--------------|------------------|------------------|-------|------|-----------------|------------------|
|                                                                 |             | Dried<br>Yam | Gari             | Dried<br>Cassava | Maize | Rice | Cowpeas         |                  |
| Present sources adequate                                        | 15          | 25           | 21               | 32               | 32    | 19   | 15              | 22               |
| No knowledge of other areas                                     | 31          | 33           | 46               | 45               | 41    | 44   | 29              | 39               |
| Insufficient capital                                            | 31          | 38           | 30               | 18               | 24    | 14   | 16              | 23               |
| Unfavorable price in other areas                                | -           | -            | -                | 3                | 3     | -    | 6               | 2                |
| Traders too competitive or too<br>restrictive in other areas    | -           | -            | 3                | -                | -     | 3    | 2               | 2                |
| Not yet season for other area                                   | 8           | 4            | 1                | -                | -     | 14   | 29              | 11               |
| Transportation inadequate                                       | 15          | -            | -                | 3                | -     | 6    | 1               | 2                |
| Total Percent                                                   | 100         | 100          | 101 <sup>+</sup> | 101 <sup>+</sup> | 100   | 100  | 98 <sup>+</sup> | 101 <sup>+</sup> |
| Number of Responses                                             | 13          | 24           | 70               | 38               | 34    | 36   | 85              | 300              |

<sup>+</sup> Rounding error.

Many wholesalers (11 percent) particularly of rice and cowpeas, responded that the other areas were not yet in the main season. Although this does not mean that these wholesalers will go there to acquire supplies when their season does arrive, it does show cognizance of the existence of seasonality in the other supply areas.

Other reasons, such as those related specifically to the price in the other areas being less favorable, [for example, "buying there would bring shortage on me personally"], traders in the other areas being either too restrictive or too competitive [for example, "big assembler makes things impossible for us"], and inadequate transportation links with the other areas [for example, "no quick transport"], were generally unimportant. However, where these reasons were tendered, they mostly indicate that the trader has investigated somewhat more thoroughly, if he has not actually bought there, the possibility of acquiring supplies in these other areas.

## 2. Sales Opportunities

For retailers and wholesalers, the opportunity to sell supplies in other markets is strictly limited because of the time and difficulty involved in establishing a trading business in a new market. This means that their interest in information on sales opportunities in other markets is mostly limited to a long term shift from one market to another. As has already been mentioned, very little movement of traders between markets occurs once the trader is established.

By contrast, assemblers have a great deal of potential flexibility as to sales outlet while their supplies are still located in the supply area.

The success of an assembler in his trading activities, therefore, depends upon his ability to obtain information about the existence of supplies and prices ruling in his potential market outlets.

Although many assemblers work essentially by themselves, many others function together in the form of a loose trading company or trade association. One of the functions of this type of organization is to provide a channel for members to acquire information about supplies and prices, both in the supply area itself and in the urban markets. Again the information is passed by personal contact, either by informal exchanges or in regularly scheduled meetings (usually once a month if not more frequently). For the assemblers who belong to one of these trading companies, a reasonably good knowledge is maintained of the relevant types of information. This is particularly true, for example, for members of the Ifelodun Foodstuff Dealers and Suppliers Association.

For all assemblers, however, a strong tendency exists for known market outlets to be used in spite of the possibility of higher prices elsewhere. For most assemblers information about other sales outlets is not usually complete enough to mitigate against the increased risks that would be incurred if they were to sell there.

### 3. Competitors' Prices

The one type of information which is usually relatively complete, relevant and current is that pertaining to the prices being charged by the trader's immediate competitors. Generally, the further a trader is located away from potential competitors, the less perfect will be his knowledge of the other trader's prices.

For the wholesalers interviewed in Ibadan, Table 9.56 attempts to show the level of knowledge that existed about the prices being charged by other wholesalers of the same commodity in Ibadan. In response to a request to actually quote the price being charged by other wholesalers in various locations, 72 percent of the wholesalers appeared to have a reasonably good notion of the price currently ruling not only in the same market but in the other central market as well.

Two percent of the respondents gave the impression of having absolutely no idea of the market price of the commodity, except what they were charging themselves. The remaining 26 percent seemed to have a vague impression only of the price ruling in their immediate vicinity. The proportion of traders in these last two groups varied considerably by commodity and ranged from 17 percent of the gari wholesalers to 44 percent of the yam dealers. One reason for this apparent low level of knowledge among wholesalers of each others prices is that many of them were acting merely as agents. This means that it is mostly the responsibility of the assembler rather than the wholesaler to decide the minimum selling price of the goods.

#### 4. Written Records

Among many of the larger traders, an awareness exists as to the desirability of keeping a written record of business transactions. At present, however, even for many of the traders making sales on credit, no records of any kind are kept, except mentally.

Table 9.57 presents for the traders interviewed with the Market Traders Questionnaire #2 in Ibadan, their percent distribution in terms of type

Table 9.56

PERCENT DISTRIBUTION OF WHOLESALERS BY KNOWLEDGE OF OTHER  
 WHOLESALERS PRICES IN IBADAN AND BY COMMODITY--WHOLESALE  
 TRADERS QUESTIONNAIRE-IBADAN--FEBRUARY-MAY 1967

| Knowledge of Other<br>Wholesalers Prices in Ibadan                          | Commodity |              |      |                  |       |      |         | Total |
|-----------------------------------------------------------------------------|-----------|--------------|------|------------------|-------|------|---------|-------|
|                                                                             | Yam       | Dried<br>Yam | Gari | Dried<br>Cassava | Maize | Rice | Cowpeas |       |
| Has good idea of price in<br>both central native and<br>central new markets | 56        | 68           | 83   | 62               | 67    | 81   | 77      | 72    |
| Has good idea of price in<br>immediate vicinity                             | -         | -            | -    | -                | 1     | -    | 1       | *     |
| Has vague idea of price<br>in immediate vicinity                            | 44        | 31           | 15   | 34               | 32    | 19   | 20      | 26    |
| Has no idea of price                                                        | -         | 1            | 2    | 3                | 1     | -    | 2       | 2     |
| Total percent                                                               | 100       | 100          | 100  | 99†              | 101†  | 100  | 100     | 100   |
| Number of responses                                                         | 18        | 145          | 158  | 125              | 168   | 57   | 158     | 829   |

\* Less than 0.5 percent

† Rounding error.

Table 9.57

PERCENT DISTRIBUTION OF TRADERS BY TYPE OF RECORDS KEPT  
AND BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #2-  
IBADAN--AUGUST-SEPTEMBER 1966

| <u>Type of Written<br/>Records Kept</u> | <u>Type of Seller</u>  |                              |                           | <u>Total</u>          |
|-----------------------------------------|------------------------|------------------------------|---------------------------|-----------------------|
|                                         | <u>Retail<br/>Only</u> | <u>Retail-<br/>Wholesale</u> | <u>Wholesale<br/>Only</u> |                       |
| None                                    | 98                     | 91                           | 65                        | 87                    |
| Debtors only                            | 2                      | 2                            | 12                        | 4                     |
| Sales (incl. debtors)                   | -                      | 5                            | 17                        | 6                     |
| Sales and Cash                          | 1                      | 2                            | 4                         | 2                     |
| Purchases Only                          | -                      | -                            | 1                         | *                     |
| Sales, cash and purchases               | -                      | -                            | 1                         | *                     |
| Total Percent                           | <u>101<sup>†</sup></u> | <u>100</u>                   | <u>100</u>                | <u>99<sup>†</sup></u> |
| <u>Number of Responses</u>              | 130                    | 55                           | 7                         | 256                   |

\* Less than 0.5 percent

† Rounding error.

of written records kept. It indicates that 98 percent of the retailers, 91 percent of the retailer-wholesalers and 65 percent of the wholesalers kept no written records at all. For those keeping records, nearly all included a listing of debtors, while about two-thirds also accounted for sales as well as debtors. Although written records represent a potentially valuable source of information for traders, they are seldom used for that purpose.



FOOTNOTES - CHAPTER IX

1. One woman in Abeokuta served as an apprentice to her mother for 20 years finally beginning to trade in her own right in 1961 at the age of 35 years, Her mother provided her £5 to begin her own business at that time.
2. Several wholesalers, both male and female, claimed to have begun trading with amounts between £150 and £600.
3. The oil extracted from melon seeds is mainly used as an ingredient in soup preparations.
4. For yam, an equivalent unit in terms of weight and value is at least 50 tubers with (a heap of) 100 tubers probably being a more comparable minimum unit.
5. The average weight of the 4,460 yam tubers weighed over a 13 month period in the central native markets in Ibadan was 4.47 lbs.
6. The estimated weight used to convert a bag of each commodity into long tons is shown in Appendix Table 7.6.
7. An esusu association is a private thrift society where members contribute an agreed amount at a regular interval and then receive all the contributions when their turn arrives. Although the order of receipt is usually agreed in advance by the members of association, it is subject to their wishes so that where a member has an

urgent need, he may receive his savings out of turn. For all market traders, the Ebusu association is a particularly important institution as it is their primary means of saving money. That is, a small amount withdrawn from their trading activities at regular intervals does not generally interfere with their ability to trade, and yet allows money to be used for other purposes. In some cases it may also be reinvested in their trading activities.

8. Bank checks are issued by a bank in exchange for cash, allowing the trader to collect an equivalent amount of money less bank charges at a bank in the supply area. This eliminates the risk of loss of money while in transit. This risk is real. For example, one Ibadan cowpea trader lost over £300 during 1966 when his assistant was reportedly robbed while on his way to Kano with the money.
9. For a small monthly rental, rediffusion boxes, essentially a loud speaker with a volume control unit, can be installed in homes, stalls, and other places where desired. They function the same as a radio, except that the input to the box is by a cable connected to a central tuner. They are particularly adapted to areas without electric power.

Chapter **X**

**PRICING, PRICES  
AND MARGINS**

03



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## X. PRICING, PRICES, AND MARGINS

In evaluating the performance of the staple food marketing system, two sets of indicators are especially pertinent. First, the behavior of prices and the existence of price spreads (arbitrage) reflected in them. And, second, the gross and net margins charged by the entire marketing system and by individual intermediaries for the performance of services rendered by it. The information available on these two topics for the Region will be presented following a description of the framework in which and process by which prices are determined.

### A. PRICE FORMATION

The prices of staple foods are set entirely within the private sector of the economy. Government programs have no marked effect on the prevailing forces of supply and demand. At most, some relatively small public programs either consume supplies such as the maize required by the poultry product of the Ministry of Agriculture and Natural Resources or add supplies such as those resulting from the intensification of land use by the Farm Settlement Scheme of the Regional Government.

In the absence of public regulation of prices, the structure and behavior of individuals (businesses) involved in the exchange process are the most potent active factors involved. However, these individuals are constrained by the conditions of supply and demand prevailing within the producing and consuming areas.

The structure of the food marketing system, as already described, is basically a perfectly competitive system, with some collusive tendencies among the larger assemblers and wholesalers moving supplies to the urban centers. In general, there are a large number of small intermediaries who may enter and

leave the system with relative freedom; they buy from and sell to a large number of small producers and consumers. Except in some rather restricted areas, no one individual or group of individuals, whether producers, traders, or consumers, is large enough to markedly affect the general level of prices, and is even less able to determine it.

The overall level of prices in the Region is determined by the interaction of the competitive forces within the system. However, as current, relevant and reliable information is not generally available to the participants in the system except as it relates to quite restricted areas, it is possible for individual areas to be out of consonance with each other to a considerable extent.

Within a confined area, information is relatively complete, with the result that prices tend to reflect the relevant competitive factors more quickly. Nevertheless, the terms of each and every act of exchange is the subject of negotiation between the two parties involved. In this process, a large number of factors are involved with an even larger number of possible approaches and outcomes being possible.

For the most part, the major characteristics of these exchanges at various points in the system have already been described. However, several factors relevant to the process by which prices are determined at the market level remain to be discussed.

#### 1. Trader Competition

In a market there are very few visible signs of open competition between sellers. For example, there is very little advertising by sign or by voice. Prices asked for the same size of local measure are generally the same within a market, and the terms of sale are usually the same for each type of trader. Because of the traditional nature of the food marketing system, more subtle forms of competition are practised.

Personal relationships are perhaps the most important element at all levels of the system. As most businesses are sole proprietorships and the remainder partnerships, traders must rely on their own ability to remain in business. In general, once a relationship is established between individuals, each shows a dedicated loyalty to the other. This requires that the seller give as good a deal as possible, at least meeting the competition, while buyers are expected to remain somewhat faithful to the seller. These relationships usually only follow an extensive period of trading together.

Once a buyer is known as a particular trader's customer, all overt forms of competition by the other traders cease. It is an accepted custom that there is no open "poaching" of each other's customers. The importance of personal relationships can be judged by the number of women traders who employ a sister or a child to tend their business and so maintain their customers while they are away for the several weeks before and after childbirth.

Even though personal relationships are very important, they are in no way binding. For example, buyers will usually forsake a supplier when they feel that the trader is no longer competitive, particularly if they feel that the trader is cheating them in some way.

For wholesalers and assemblers, both the price and quantity of the unit of sale are important factors affecting their ability to compete. At the time of sale only price is negotiable, but because of the relatively large value, a considerable range often exists over which bargaining is possible: one aspect of this, discount for cash, is treated in a later section.

The quantity contained in one bag of a granular staple food (which excludes only fresh yam tubers among the important staples), may be varied to some extent. Bags may be extended (instead of stitching the top of the bag even with the end of the bag, an extra piece of sack is used to cover the bag) or tightly packed (a certain amount of force is used to cram more into the bag). The amount

in a bag is, therefore, carefully evaluated by the buyer before price is negotiated. In the same way, the quality of the commodity is appraised before negotiations begin.

Retailers in both urban and rural markets seldom use price as a competitive variable. For the most part, the price of the unit of sale is the same throughout a market and is not the direct subject of negotiation. However, even though one local measure will generally be the predominant unit of sale for each commodity in each market, several of the many other local measures may be used by the seller if the buyer insists. By changing the measure used, the buyer hopes to obtain a lower price in terms of total quantity purchased; that is, both price and weight are involved in setting the final price.

For the most part, however, the quantity contained in the unit of sale is the prime variant. This is determined by the amount of "heaping" that is allowed to occur. Without comment, the buyer will frequently refill the measure after the seller has scooped off part of the heaping. After many attempts at heaping, the buyer will eventually decide either to buy the quantity being allowed for the price or not to buy from that trader. In a few cases, the buyer will receive a greater quantity if the seller is allowed to do the measuring, particularly if the latter is a man.

## 2. Inquiries by Potential Buyers

Although personal relationships are important, particularly between traders dealing with one another, price and other information is often sought from other potential suppliers. This is perhaps truest among consumers, particularly where they must pass other traders before reaching their usual supplier, if they have one. For those who do not usually buy from the same sellers, several inquiries may be made before the final purchase.

Table 10.1 presents the distribution of 110 retailers observed, each for one day, in Oritamerin Market, Ibadan, in terms of the number of inquiries received during that one day that did not result in a sale. For all retailers, the average number

Table 10.1

PERCENT DISTRIBUTION OF RETAILERS BY NUMBER OF INQUIRIES\*  
RECEIVED PER DAY AND BY COMMODITY--110 SELECTED RETAIL  
SELLERS IN ORITAMERIN MARKET, IBADAN--SEPTEMBER 1966.

| Number of Inquiries<br>Received per Day         | Commodity |      |                 |                  |         | Total |
|-------------------------------------------------|-----------|------|-----------------|------------------|---------|-------|
|                                                 | Yam       | Gari | Maize           | Rice             | Cowpeas |       |
| Under 5                                         | 46        | 33   | 38              | 41               | 58      | 42    |
| 5 and under 10                                  | 54        | 46   | 42              | 55               | 42      | 48    |
| 10 and over                                     | **        | 21   | 19              | 5                | -       | 10    |
| Total                                           | 100       | 100  | 99 <sup>+</sup> | 101 <sup>+</sup> | 100     | 100   |
| Average No. of Inquiries                        | 4.0       | 6.2  | 5.4             | 4.8              | 4.3     | 5.1   |
| Average No. of Transactions                     | 8.1       | 8.2  | 8.7             | 13.2             | 7.8     | 9.3   |
| Ratio of Inquiries to<br>Transactions (percent) | 49        | 76   | 62              | 36               | 55      | 55    |
| Number of Observations                          | 26        | 24   | 26              | 22               | 12      | 110   |

\* Not resulting in a purchase.

\*\* Excludes two retail-wholesale sellers who had 14 and 22 inquiries each.

<sup>+</sup> Rounding error

of inquiries was 5.1, compared with a total of 9.3 completed transactions. This gives a proportion of inquiries to transactions of 55 percent. By commodity, however, some marked differences exist. Because of the variability in the quality and flavor of gari, the retailers of gari had the highest proportion of inquiries to transactions with 76 percent. Any one type of rice, on the other hand, is usually sold in rather restricted areas by a small group of sellers. Once a buyer knows the type of rice he requires, there is little need to obtain details of the commodity; as a result, the ratio of inquiries to transactions for the rice sellers observed was only 36 percent.

### 3. Use of Local Measures

The existence and use of local measures in food marketing has been alluded to frequently throughout the report. The most important characteristics of these local measures are their profusion and lack of standardization, particularly at the retail level. Where volume measures made of metal are used, it is possible to vary not only the diameter and depth of the measure but also the slope of the sides. In general, there are many opportunities to alter the volume capacity of the measure. However, for the measures regularly used, very few false bottoms, markedly dented walls or truncated sides were actually found in use. Perhaps the measure most tampered with was the kerosene tin where a fraction of an inch was occasionally cut off the top. Seldom, however, is it possible to fool the Yoruba buyer, even the consumer, who is generally well acquainted with these sales practices.

Most traders tend to use one measure when selling, although for most commodities several different measures are generally used concurrently in the same market. Table 10.2 presents for Oritamerin Market, Ibadan, the various local measures that are in common use, together with the general frame of reference quoted by several traders for the relationships between the various measures. All units are though

Table 10.2

NAME AND SIZE OF LOCAL MEASURES BY QUOTED PRICE OF COMMODITY -  
ORITAMERIN MARKET, IBADAN  
August 31, 1966

| Name of Measure in Ibadan | Approx. Diameter     | Quoted Size of Measure | No. of Measures per Bag | Price Quoted Per Measure (pence) |       |       |         |        |
|---------------------------|----------------------|------------------------|-------------------------|----------------------------------|-------|-------|---------|--------|
|                           |                      |                        |                         | Gari                             | Maize | Rice  | Cowpeas |        |
|                           |                      |                        |                         |                                  |       |       | Kano    | Sokoto |
| <b>Wholesale</b>          |                      |                        |                         |                                  |       |       |         |        |
| Bag                       |                      |                        | 1                       | 1,200                            | 570   | 2,280 | 2,460   | 2,640  |
| Kerosene tin              | (4 imperial gallons) | 6-7 to bag             | 6-7                     | 180                              | —     | 360   | 480     | 540    |
| <b>Retail</b>             |                      |                        |                         |                                  |       |       |         |        |
| Gadabu                    | 13"                  | 2 to k. tin            | 12-14                   | 96                               | —     | —     | 150     | —      |
| Denge                     | 12"                  |                        |                         |                                  |       |       |         |        |
| Olodo                     | 10"                  | 4 to k. tin            | 24-28                   | 60                               | —     | 144   | 120     | 126    |
| Dana                      |                      | 1½ to Olodo            | 36-42                   | —                                | —     | —     | —       | —      |
| Oloruka                   | 9"                   | 5 to k. tin            | 30-35                   | —                                | —     | —     | —       | —      |
| Erebe/Besue               |                      | 2 to Olodo             | 48-56                   | 36                               | —     | —     | 66      | 72     |
| Mudu                      |                      | 2 to Erebe             | 96-112                  | 24                               | —     | 30    | 48      | 51     |
| Egbon Pebi                | 7"                   |                        |                         |                                  |       |       |         |        |
| Pebi                      | 6½"                  | 4 to Olodo             | 96-112                  | 15                               | —     | 24    | 30      | 33     |
| Ababadan                  | 6½"                  |                        |                         |                                  |       |       |         |        |
| Kongo                     | 14cm                 | 5 to Olodo             | 120-140                 | 12                               | 10    | 30    | 36      | 42     |
| Kolobo                    | 5½"                  | 6 to Olodo             | 144-168                 | 9                                | —     | 18    | 18      | 21     |
| Keke                      | 3½"                  | 8 to Olodo             | 192-224                 | 6                                | —     | 12    | 9       | 12     |
| Orente                    | 3-1/16"              | 2 to Kolobo            | 288-336                 | 5                                | —     | 6     | 7       | 8      |
| Labintin/Cigarette Cup    | 2-5/8"               | 4½ to Kolobo           | 648-756                 | —                                | —     | 5     | 7       | 8      |
| Roboto                    |                      | 2 to Labintin          | 1,296-1,512             | 1                                | —     | —     | 4       | 5      |

of as being some portion of a commonly used larger measure. For example, 4 olodo measures were considered equal to one kerosene tin measure, while 4 pebi measures were quoted as being equal to one olodo.

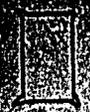
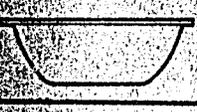
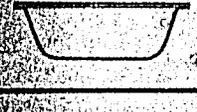
Comparing the prices quoted by traders for the various commodities sold in these measures (and arrayed in Table 10.2) with the estimated number of measures per bag quoted by the same traders, some inconsistencies are quite apparent. For the most part, it is the quoted measure relationship which is inconsistent with the facts, while the price relationships seem to conform reasonably well with the actual relationships. In all cases, however, the effect of heaping is such that no exact set of relationships is possible.

Not all measures are used for each commodity. The gaps in the listing of prices quoted per measure of commodity in Table 10.2 represent those measures seldom used and for which no price is readily available. It can be seen that most of the more common measures are used in the sale of gari and cowpeas in Oritamerin Market, Ibadan, while for maize, only two measures are commonly used--the bag (by wholesalers) and the kongo (by retailers).

The price relationships of the various local measures in common use in Dugbe Market, Ibadan, are displayed in Table 10.3, with the approximate weight of the measure and the associated price per pound. Where a single weight value is quoted, it represents the weight of a measure heaped normally. Where a range is presented, it shows the usual value for light and profuse heaping respectively (cramming in the case of bags). Taking the example of maize, the top value for the kongo measure is about 30 percent higher than the low value. As the price of the unit is fixed before the measure is filled, this means that the price per pound will have the same relative range. In Table 10.3, the price ranges from 2.78 to 3.62 pence per pound, with the actual cost per pound paid by the buyer being determined by the quantity of heaping allowed by the seller.

Table 10.3

**LOCAL MEASURES USED IN URBAN MARKETS**  
 (Showing Name, Price, Weight and Pence/Pound  
 by Commodity for Dugbe Market, Ibadan - 1967)

| WHOLESALE                                                                           | NAME IN<br>IBADAN<br>Inside Diameter | COMMODITY                         |                               |                              |                                |                               |
|-------------------------------------------------------------------------------------|--------------------------------------|-----------------------------------|-------------------------------|------------------------------|--------------------------------|-------------------------------|
|                                                                                     |                                      |                                   |                               |                              |                                |                               |
|    | BAG                                  | Price (d)<br>Weight (lbs)<br>d/lb | 1,020<br>185-230<br>5.51-4.43 | 720<br>220-260<br>3.27-2.77  | 2,520<br>235-260<br>10.72-9.69 | 1,260<br>190-240<br>6.63-5.25 |
|    | KEROSENE<br>TIN                      | Price (d)<br>Weight (lbs)<br>d/lb | 129<br>28.50<br>4.53          | 27.69                        |                                | 228<br>32.12<br>7.10          |
| RETAIL                                                                              |                                      |                                   |                               |                              |                                |                               |
|    | GADABU<br>10 3/16"                   | Price (d)<br>Weight (lbs)<br>d/lb | 72<br>14.38<br>5.01           | 12.25                        |                                |                               |
|    | OLODO<br>9 7/8"                      | Price (d)<br>Weight (lbs)<br>d/lb | 36<br>7.22<br>4.99            | 8.19                         | 120<br>10.31<br>11.64          | 60<br>7.44-9.44<br>8.06-6.36  |
|  | OLORUKA<br>8 7/8"                    | Price (d)<br>Weight (lbs)<br>d/lb | 27<br>4.88-5.38<br>5.53-5.02  |                              | 84<br>7.53<br>11.16            | 48<br>5.12-6.50<br>8.54-7.38  |
|  | EGBON PEBI<br>6 7/8"                 | Price (d)<br>Weight (lbs)<br>d/lb | 15<br>2.31<br>6.49            |                              | 36<br>3.81<br>9.45             | 24<br>3.25<br>7.38            |
|  | PEBI<br>6 1/2"                       | Price (d)<br>Weight (lbs)<br>d/lb | 12<br>1.81<br>6.63            |                              | 30<br>3.03<br>9.90             | 18<br>2.50<br>7.20            |
|  | ABOBADAN<br>6 3/16"                  | Price (d)<br>Weight (lbs)<br>d/lb |                               |                              | 24<br>2.19-2.50<br>10.96-9.60  | 12<br>2.38<br>5.04            |
|  | KONGO<br>14 c.m.                     | Price (d)<br>Weight (lbs)<br>d/lb |                               | 12<br>3.31-4.31<br>3.62-2.78 |                                | 3.75                          |
|  | KOOBO<br>5 1/2"                      | Price (d)<br>Weight (lbs)<br>d/lb | 6<br>1.04<br>5.77             | 2.69                         | 21<br>2.06<br>10.19            | 1.94<br>5.41                  |
|  | KEKE<br>3 3/4"                       | Weight (lbs)                      |                               |                              |                                | .62-.75                       |
|  | ORENTE<br>3"                         | Weight (lbs)                      |                               |                              |                                | .50                           |
|  | LABINTIN<br>2 5/8"                   | Weight (lbs)                      |                               |                              |                                | .35                           |

Comparing pence per pound values of the various measures in common use (displayed for each commodity in Table 10.3), it can be seen that relatively little variation exists. In fact, most of the differences could be eliminated simply by varying the amount of heaping that occurs for retailers and the weight of the bag for wholesalers. For example, if the pebi measures were to be used for gari, given the existing price relationships it is likely that considerably more heaping would be tolerated for these measures than for the others.

It should also be noticed from Table 10.3 that the pence per pound of the retail measures conform reasonably closely to the wholesale prices represented by the bag and kerosene tin. This supports the contention frequently made by traders that it is their skill in filling the measure that gives them their gain and is their source of livelihood. Lack of the necessary skill will lead to loss and eventual withdrawal from the industry.

Table 10.4 presents for Erekesan Market, Ado Ekiti information similar to that contained in Table 10.3 for Dugbe Market, Ibadan. It can be observed that the pence per pound values of only the smaller retail measures are about the same as the wholesale values: the larger retail measures all have considerably higher pence per pound values. Two explanations are possible. First, the weight values are for regularly heaped measures filled by the seller for the explicit purpose of observing the weight of the contents--that is, no buyer was involved in determining the weight of the measure. And second, although the larger measures may be used if requested by the buyer, the smaller measures are the most common units. Consequently, the price may have been raised by the trader proportionately more than the volume of the measure, in the hope of realizing a greater gain. This seems likely because of the buyer's possible ignorance of the exact relative values of the various measures involved.

Table 10.4

NAME AND SIZE OF LOCAL MEASURES BY PRICE AND WEIGHT OF COMMODITY -  
EREKESAN MARKET (URBAN), ADO-EKITI  
November 23, 1966

| Local Measure          |                                 |        | Commodity                |                         |               |                           |                         |               |                               |                         |               |                                 |                         |               |
|------------------------|---------------------------------|--------|--------------------------|-------------------------|---------------|---------------------------|-------------------------|---------------|-------------------------------|-------------------------|---------------|---------------------------------|-------------------------|---------------|
|                        |                                 |        | Gari<br>(from Ado-Ekiti) |                         |               | Maize<br>(from Ado-Ekiti) |                         |               | Rice<br>(from Niger Province) |                         |               | Cowpeas<br>(from Kano Province) |                         |               |
| Name in<br>Ado-Ekiti   | Size (inches)<br>Diameter Depth |        | Price<br>/Unit<br>d.     | Weight<br>of Unit<br>lb | Pence<br>/lb  | Price<br>/Unit<br>d.      | Weight<br>of Unit<br>lb | Pence<br>/lb  | Price<br>/Unit<br>d.          | Weight<br>of Unit<br>lb | Pence<br>/lb  | Price<br>/Unit<br>d.            | Weight<br>of Unit<br>lb | Pence<br>/lb  |
| <b>Wholesale</b>       |                                 |        |                          |                         |               |                           |                         |               |                               |                         |               |                                 |                         |               |
| Bag                    |                                 |        | 720                      | 185-235                 | 3.89-<br>3.06 | 180                       | 220-260                 | 0.82-<br>0.69 | 1,740                         | 235-260                 | 7.40-<br>6.69 | 1,020                           | 190-240                 | 5.37-<br>4.25 |
| <b>Retail</b>          |                                 |        |                          |                         |               |                           |                         |               |                               |                         |               |                                 |                         |               |
| Dana senior            | 10                              | 3-3/5  |                          |                         |               |                           |                         |               | 84                            | 9.00                    | 9.33          |                                 |                         |               |
| Dana (1)               | 9-4/5                           | 3-1/2  | 42                       | 6.00                    | 7.00          |                           |                         |               |                               |                         |               | 42                              | 6.00                    | 7.00          |
| Dana (2)               | 8-2/5                           | 3-1/10 | 27                       | 4.50                    | 6.00          |                           |                         |               | 48                            | 6.00                    | 8.00          | 36                              | 5.00                    | 7.20          |
| Dana (3)               | 8                               | 2-3/5  | 21                       | 3.25                    | 6.46          |                           |                         |               |                               |                         |               |                                 |                         |               |
| Dana (4)               | 6-1/5                           | 2-1/2  | 12                       | 2.12                    | 5.66          | 6                         | 3.00                    | 0.50          | 24                            | 2.75                    | 8.73          | 18                              | 2.50                    | 7.20          |
| Dana (5)               | 5-1/5                           | 2-1/10 | 11                       | 1.88                    | 5.85          |                           |                         |               | 12                            | 1.88                    | 6.38          | 15                              | 2.12                    | 7.08          |
| Dana (6)               | 5-1/2                           | 2      | 8                        | 1.50                    | 5.33          |                           |                         |               |                               |                         |               | 8                               | 1.62                    | 4.94          |
| Dana (7)               | 4-1/2                           | 1-4/5  | 6                        | 1.00                    | 6.00          |                           |                         |               | 9                             | 1.25                    | 7.20          | 6                               | 1.25                    | 4.80          |
| Yeke (1)               | 4-1/5                           | 1-3/5  | 4                        | 0.75                    | 5.33          |                           |                         |               | 6                             | 1.06                    | 5.66          | 4                               | 0.75                    | 5.33          |
| Yeke (2)               | 3-1/2                           | 1-2/5  | 2                        | 0.50                    | 4.00          |                           |                         |               |                               |                         |               |                                 |                         |               |
| Yeke (3)               | 3-1/10                          | 1-3/10 | 1                        | 0.38                    | 2.63          |                           |                         |               |                               |                         |               | 2                               | 0.38                    | 5.26          |
| Labondo<br>(condensed) | 2-1/2                           | 7/10   | 1/2                      | 0.19                    | 2.63          |                           |                         |               |                               |                         |               | 1-1/2                           | 0.28                    | 5.36          |
| Milk Tin               | 5 cm                            | 2-1/5  |                          |                         |               |                           |                         |               | 3                             | 0.38                    | 7.89          |                                 |                         |               |

Table 10. 5

DISTRIBUTION OF PRICE OBSERVATIONS BY COMMODITY, BY SIZE OF UNIT OF SALE  
AND MARKET - SRI RETAIL PRICE SERIES FOR IBADAN  
1966-67

| Commodity & Size<br>of Unit of Sale<br>(pounds) | Oritamerin<br>Market |         | Dugbe Market |         | Total  |         |
|-------------------------------------------------|----------------------|---------|--------------|---------|--------|---------|
|                                                 | Number               | Percent | Number       | Percent | Number | Percent |
| Yam                                             | 617                  | 100%    | 652          | 99%*    | 1,269  | 100%    |
| Under 2                                         | 39                   | 6       | 21           | 3       | 60     | 5       |
| 2 & under 4                                     | 234                  | 38      | 316          | 48      | 550    | 43      |
| 4 & under 6                                     | 232                  | 38      | 248          | 38      | 480    | 38      |
| 6 & over                                        | 112                  | 18      | 67           | 10      | 179    | 14      |
| Gari                                            | 668                  | 100%    | 683          | 100%    | 1,351  | 100%    |
| Under 2                                         | 195                  | 29      | 308          | 45      | 503    | 37      |
| 2 & under 4                                     | 258                  | 39      | 169          | 25      | 427    | 32      |
| 4 & under 10                                    | 28                   | 4       | 94           | 14      | 122    | 9       |
| 10 & over                                       | 187                  | 28      | 112          | 16      | 299    | 22      |
| Maize                                           | 359                  | 100%    | 192          | 100%    | 551    | 100%    |
| Under 3                                         | 22                   | 6       | 70           | 36      | 92     | 17      |
| 3 & under 6                                     | 328                  | 91      | 119          | 62      | 447    | 81      |
| 6 & under 15                                    | 7                    | 2       | 3            | 2       | 10     | 2       |
| 15 & over                                       | 2                    | 1       | --           | --      | 2      | †       |
| Rice                                            | 625                  | 100%    | 493          | 100%    | 1,118  | 100%    |
| Under 1                                         | 74                   | 12      | 261          | 53      | 335    | 30      |
| 1 & under 3                                     | 477                  | 76      | 72           | 15      | 549    | 49      |
| 3 & under 15                                    | 41                   | 7       | 148          | 30      | 189    | 17      |
| 15 & over                                       | 33                   | 5       | 12           | 2       | 45     | 4       |
| Cowpeas                                         | 459                  | 100%    | 492          | 101%*   | 951    | 101%*   |
| Under 2                                         | 170                  | 37      | 264          | 54      | 434    | 46      |
| 2 & under 4                                     | 197                  | 43      | 165          | 34      | 362    | 38      |
| 4 & under 10                                    | 61                   | 13      | 49           | 10      | 110    | 12      |
| 10 & over                                       | 31                   | 7       | 14           | 3       | 45     | 5       |
| Total                                           | 2,728                | 100%    | 2,512        | 100%    | 5,240  | 100%    |
| Small                                           | 500                  | 18      | 924          | 37      | 1,424  | 27      |
| Medium                                          | 1,494                | 55      | 841          | 33      | 2,335  | 45      |
| Large                                           | 369                  | 14      | 542          | 22      | 911    | 17      |
| Very large                                      | 365                  | 13      | 205          | 8       | 570    | 11      |

\* Rounding error.

† Less than 0.5 percent.

From the price observations in Ibadan, there seems to be no distinct relationship between the size of the unit sold and the real price paid. It appears common for buyers using the larger measures to actually pay a higher real price than for those buyers using the more common small measures. On other occasions, a lower real price was paid when a larger measure was used.

The distribution of all of the retail price observations made in both Oritamerin and Dugbe Markets, Ibadan, in terms of the size of the unit used in the transaction is presented in Table 10.5. The average weight of the unit of sale is displayed in Table 10.6.

Table 10.6

AVERAGE WEIGHT OF UNIT OF SALE (LBS.) OF PRICE  
OBSERVATIONS BY MARKET AND BY COMMODITY -  
SRI RETAIL PRICE SERIES FOR IBADAN - 1966-67

| Market     | Commodity |      |       |      |         | Total |
|------------|-----------|------|-------|------|---------|-------|
|            | Yam       | Gari | Maize | Rice | Cowpeas |       |
| Oritamerin | 4.47      | 9.68 | 4.11  | 3.72 | 4.32    | 5.50  |
| Dugbe      | 4.04      | 6.33 | 2.95  | 2.83 | 2.87    | 4.11  |
| Both       | 4.25      | 7.99 | 3.71  | 3.33 | 3.57    | 4.84  |

It can be observed that on the average the unit of sale is larger in Oritamerin Market than in Dugbe Market--5.50 lbs. compared with 4.11 lbs. This is true for all commodities. Of the five commodities, the average weight of yam tubers is most similar: however, as most of yams sold in Dugbe Market are procured in Oritamerin Market and as the yam tuber itself is a physical unit, this similarity is to be expected.

The size of the predominant measure used for each commodity in each market is far from uniform. For example, 76 percent of the rice transactions observed in

Oritamerin Market used a measure weighing between one and three pounds, while in Dugbe Market, only 15 percent of the transactions used this size of measure; however, 53 percent used a measure weighing under one pound, while 30 percent used a measure weighing between 3 and 15 pounds. Overall, 27 percent of the transactions observed in both markets involved what can be considered small units, while a further 45 percent used a medium-size unit of sale.

Generally, the smaller the size of the unit of sale, the larger the number of units purchased. For the price observations in Ibadan, this can be seen in Table 10.7, which shows for each commodity the average number of purchases in each of the unit sizes shown in Table 10.5. With the exception of one size group for cowpeas in Dugbe Market, the average number of units purchased decreased for all commodities as the size of the unit increased.

#### 4. Quoted Unit Prices

It has already been mentioned that the smaller the unit of sale, the less likely is the quoted price to vary and the more likely the quantity contained in the unit to fluctuate. For example, in the 13 months during which prices were collected for gari in Oritamerin Market, Ibadan, the price of the major unit of sale (the kongo measure) remained one shilling (12 pence). However, as Figure 10.1 indicates, the weight of the measure varied extensively--from a low of 1.5 lbs. to a high of 4.2 lbs. In order to achieve this weight range with the same unit of sale, several sizes of kongo were used by most traders. In addition, the amount of heaping practised by sellers increased as the wholesale price of gari decreased: in fact, most of the weekly variation in the average weight of the kongo measures observed was due solely to heaping.

The other extreme is where the unit is large and the weight can only be varied fractionally, such as the two major measures used by wholesalers--the bag and the kerosene tin. In this case, the quantity contained in the unit tends to remain

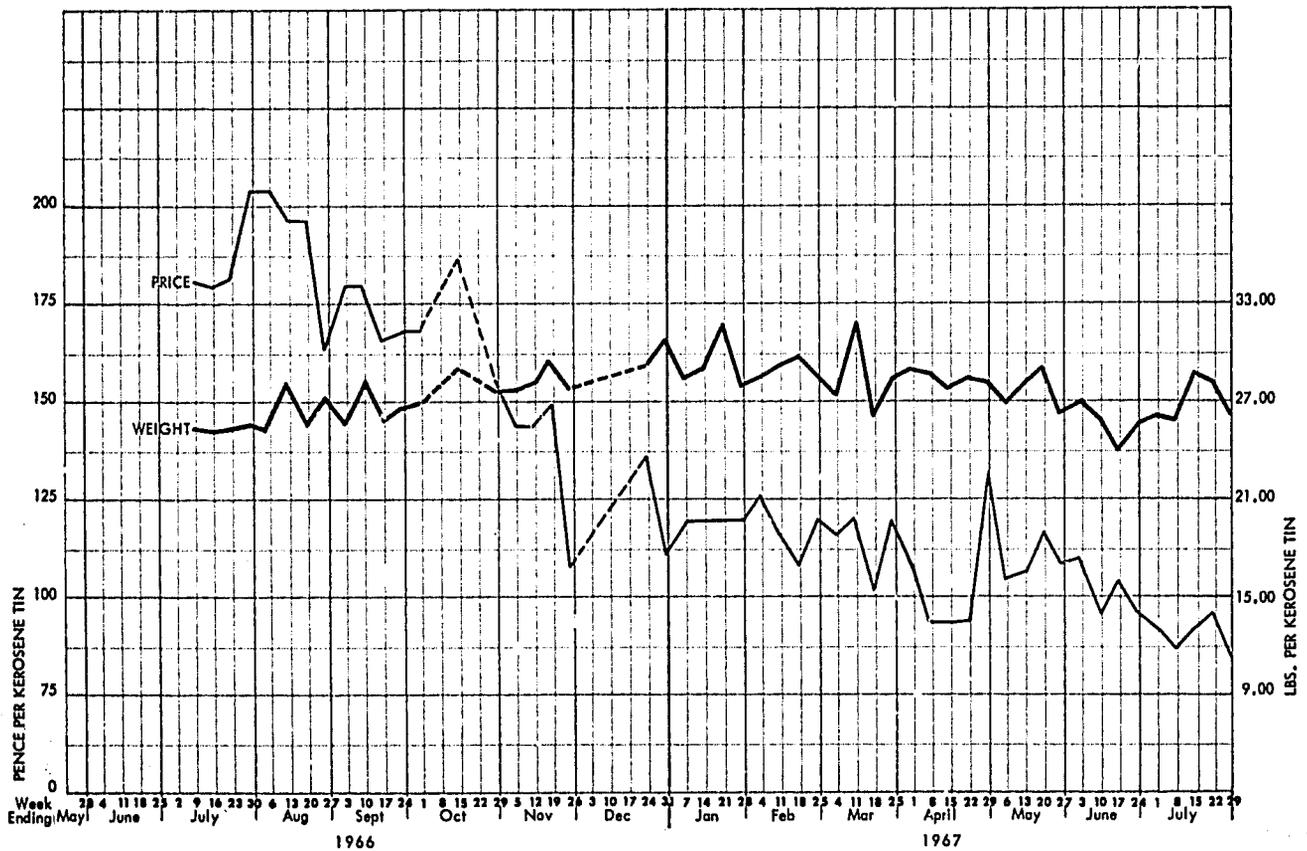
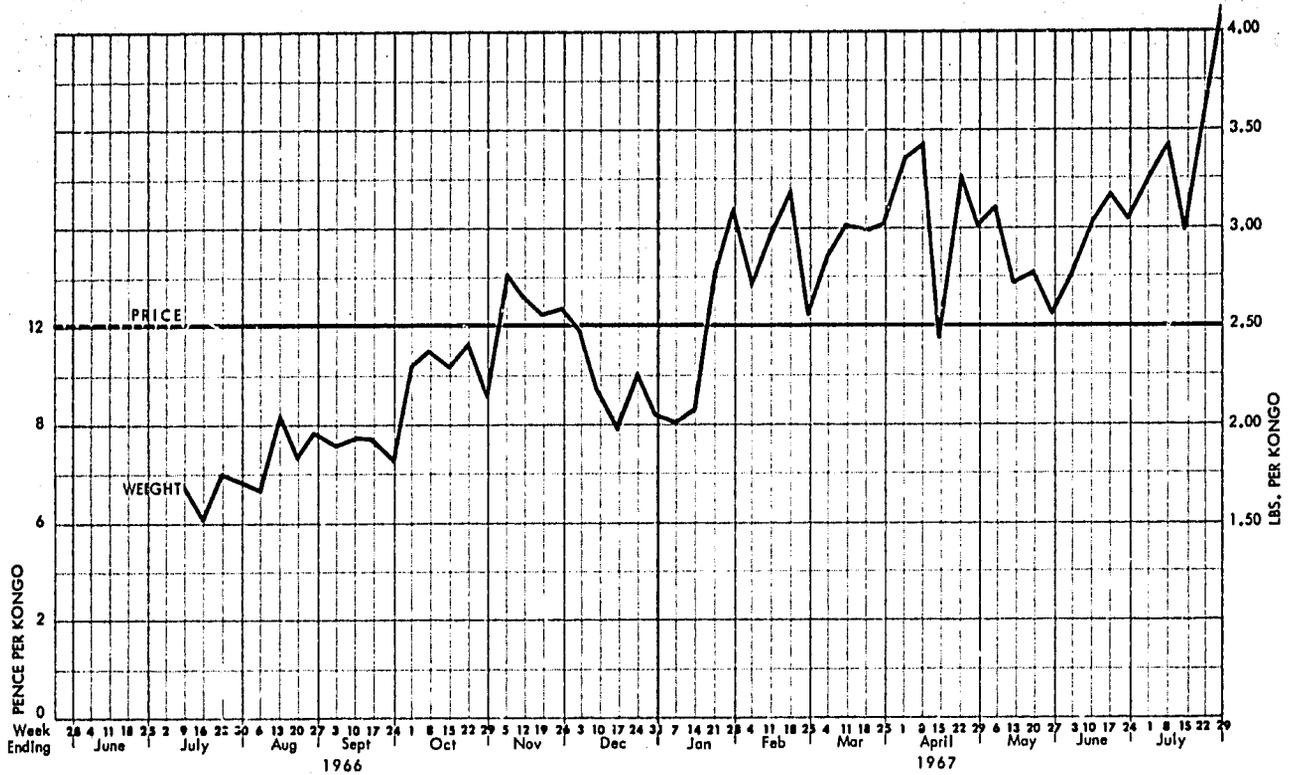
Table 10.7

AVERAGE NUMBER OF UNITS OF SALE PURCHASED BY COMMODITY, BY SIZE OF SALE  
AND BY MARKET - SRI RETAIL PRICE SERIES FOR IBADAN  
1966-67

| <u>Commodity &amp; Size<br/>of Unit of Sale<br/>(pounds)</u> | <u>Oritamerin Market</u> | <u>Dugbe Market</u> |
|--------------------------------------------------------------|--------------------------|---------------------|
| <b>Gari</b>                                                  | 2.37                     | 2.48                |
| Under 2                                                      | 3.66                     | 2.78                |
| 2 & under 4                                                  | 2.55                     | 2.22                |
| 4 & under 10                                                 | 1.80                     | 1.79                |
| 10 & over                                                    | 0.88                     | 0.89                |
| <b>Maize</b>                                                 | 3.55                     | 2.60                |
| Under 3                                                      | 5.50                     | 2.87                |
| 3 & under 6                                                  | 3.50                     | 2.48                |
| 6 & under 15                                                 | 2.00                     | 1.17                |
| 15 & over                                                    | 1.05                     | —                   |
| <b>Rice</b>                                                  | 5.54                     | 4.87                |
| Under 1                                                      | 8.73                     | 6.43                |
| 1 & under 3                                                  | 5.84                     | 4.37                |
| 3 & under 15                                                 | 3.42                     | 2.69                |
| 15 & over                                                    | 0.91                     | 0.77                |
| <b>Cowpeas</b>                                               | 3.55                     | 3.94                |
| Under 2                                                      | 4.67                     | 5.12                |
| 2 & under 4                                                  | 3.38                     | 2.59                |
| 4 & under 10                                                 | 2.29                     | 3.07                |
| 10 & over                                                    | 1.05                     | 0.84                |

Figure 10.1

GARI: PRICE AND WEIGHT OF KONGO AND KEROSENE TIN MEASURES  
ORITAMERIN MARKET, IBADAN JULY 1966-JULY 1967



SOURCE: Stanford Research Institute.

about the same, while the price of the unit is allowed to vary. This is illustrated in Figure 10.1 for a kerosene tin measure of gari in Oritamerin Market, Ibadan. While the average weekly weight ranged from 24 lbs. to 32 lbs. for a range of 33 percent of the low weight, the average weekly price of the unit ranged from 7.5 (90 pence) to 17 shillings (204 pence) for a range of 127 percent of the low price. During this same period, the average wholesale price of a bag of gari varied from 50 shillings to 135 shillings for a range of 170 percent of the low price. Although bags were not weighed regularly during this period, this does support the theory that comparatively little variation occurs in the weight of a bag of a commodity. This results in the price of the bag being the major variable manipulated in the exchange process.

Even though pricing characteristics vary with the size of the unit, Figure 10.2 shows that the resulting average price measured in pence per pound for gari in Oritamerin Market was generally about the same and that the two series roughly paralleled one another. (These two series are the main components of the retail price series for gari in Oritamerin Market shown in Table 10.4).

What appears to be true for small measures of gari in Oritamerin Market, however, does not apply equally to all commodities. In these other cases, the unit of sale is held constant, with the result that only a limited amount of price variation can be achieved by heaping. As already mentioned, for example, the absolute range for a kongo of maize is only about 1 lb., so that its relative range, based on the low value, is only about 30 percent. In these cases, a discrete movement in the price of the unit of sale occurs when a large relative price change is required. That is, small relative movements in the wholesale price are reflected in the quantity heaped into the measure, while larger movements will usually mean a change in the price of the unit. An example of discrete jumps in the price of a small retail unit can be seen in Table 10.8.

Figure 10.2

GARI: PENCE PER POUND OF KONGO AND KEROSENE TIN MEASURES  
ORITAMERIN MARKET, IBADAN JULY 1966-JULY 1967

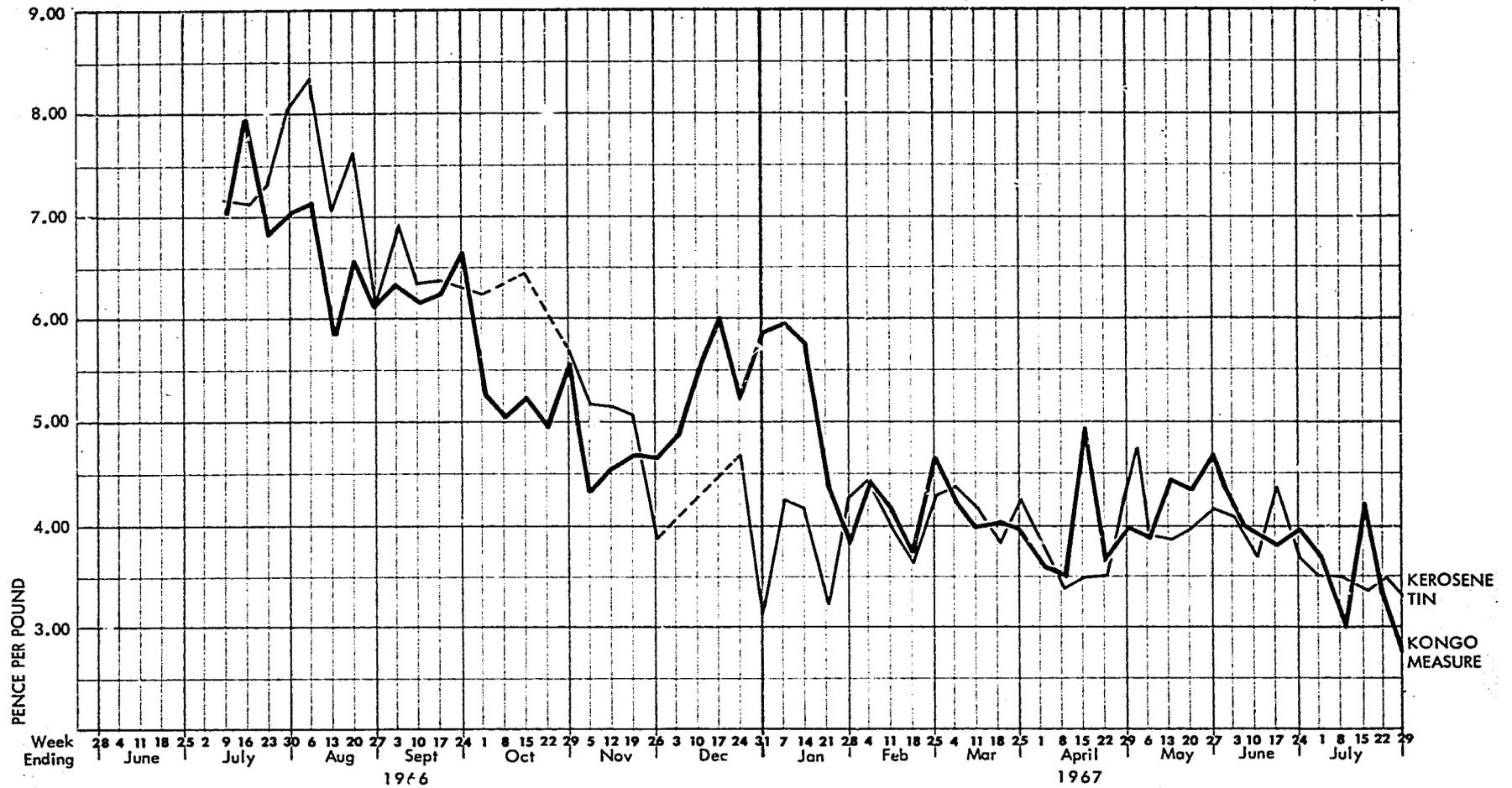


Table 10.8

PRICE OF WHOLESALE AND RETAIL MEASURES OF MAIZE  
IN ORITAMERIN MARKET, IBADAN, SEPTEMBER 6, 1966

| <u>Area of Production</u> | <u>Wholesale Price</u>           |                                   | <u>Retail Price</u>                |                                    |
|---------------------------|----------------------------------|-----------------------------------|------------------------------------|------------------------------------|
|                           | <u>Per bag</u><br><u>(pence)</u> | <u>Per lb.*</u><br><u>(pence)</u> | <u>Per kongo</u><br><u>(pence)</u> | <u>Per lb.**</u><br><u>(pence)</u> |
| Idogo                     | 600                              | 2.50                              | 10                                 | 2.62                               |
| Ifon                      | 600                              | 2.50                              | 10                                 | 2.62                               |
| Iseyin(kuru) - (1)        | 540                              | 2.25                              | 9                                  | 2.36                               |
| - (2)                     | 510                              | 2.12                              | 8                                  | 2.10                               |
| - (3)                     | 420                              | 1.75                              | 7                                  | 1.84                               |

\* Assuming 240 lbs. per bag.

\*\* Assuming 3.81 lbs. per kongo.

On the same day, several qualities of maize were being sold in Oritamerin Market, Ibadan, at four different wholesale prices (per bag). The same size of kongo was used as the retail unit of sale for all qualities, but each quality was being sold at a different unit price. Given the [representative] weights of the measures used, in each case the average price per pound at both the wholesale and retail level was about the same, with the wholesale price being generally fractionally lower.

#### 5. Real Unit Prices

From the evidence accumulated, there did not seem to be a strong relationship between the real price of a unit (measured in terms of pence per pound) and the size of the unit. In general, the real price of a unit was about the same for all sizes of measures, with a slight tendency for the real price to decrease slightly as the size of the unit increased. However, the extremely wide dispersion of results obtained when the size of unit of sale used is plotted against the real price paid, even for the same day in the same market, means that any generalization must

In support of the generalization made, Table 10.9 presents the average price (in pence per lb.) of the observations made of gari in Dugbe Market in terms of size of the unit of sale used. In most months, units of sale under 4 lbs. had a higher real average price than units over 4 lbs. With some notable exceptions, as the size of the unit of sale increased, so the average real price of gari generally fell.

#### 6. Size of Sales

Some discussion has already been presented in Chapter IX of the size of sales in relation to the selling practices of marketing intermediaries. In general, wholesalers seldom sell more than one bag at a time, although the bag is the most common measure. Moreover, many sales are of one measure of a smaller unit,

Table 10.9

GARI—NUMBER OF OBSERVATIONS, AND AVERAGE PRICE BY MONTH AND BY  
 SIZE OF UNIT OF SALE - SRI RETAIL PRICE SERIES FOR DUGBE MARKET, IBADAN  
 May 1966-July 1967

| Month                 | Number of Observations    |                |                 |              |            | Average Price (pence per lb) |                |                 |              |         | Average<br>Weight of<br>Unit Used<br>(lb) |  |
|-----------------------|---------------------------|----------------|-----------------|--------------|------------|------------------------------|----------------|-----------------|--------------|---------|-------------------------------------------|--|
|                       | Size of Unit of Sale (lb) |                |                 |              |            | Size of Unit of Sale (lb)    |                |                 |              |         |                                           |  |
|                       | Under<br>2                | 2 &<br>Under 4 | 4 &<br>Under 10 | 10 &<br>Over | Total      | Under<br>2                   | 2 &<br>Under 4 | 4 &<br>Under 10 | 10 &<br>Over | Average |                                           |  |
| <b>1966</b>           |                           |                |                 |              |            |                              |                |                 |              |         |                                           |  |
| May                   | 32                        | 7              | 5               | —            | 44         | 8.19                         | 8.47           | 6.94            | —            | 7.87    | 1.91                                      |  |
| June                  | 33                        | 14             | 11              | 1            | 59         | 8.45                         | 8.27           | 7.77            | 8.62         | 8.28    | 2.58                                      |  |
| July                  | 70                        | 11             | 10              | 18           | 109        | 8.56                         | 8.65           | 8.65            | 8.08         | 8.48    | 5.58                                      |  |
| August                | 27                        | 9              | 2               | 6            | 44         | 8.28                         | 8.15           | 7.59            | 8.04         | 8.02    | 5.04                                      |  |
| September             | 23                        | 18             | 7               | 11           | 59         | 8.08                         | 8.33           | 8.19            | 7.08         | 7.92    | 7.24                                      |  |
| October               | 29                        | 11             | 6               | 7            | 53         | 8.16                         | 7.31           | 7.19            | 7.59         | 7.56    | 5.24                                      |  |
| November              | 9                         | 17             | 8               | 2            | 36         | 7.31                         | 5.37           | 5.42            | 6.22         | 6.08    | 4.67                                      |  |
| December              | 17                        | 17             | 2               | 7            | 43         | 7.73                         | 5.94           | 5.25            | 5.14         | 6.02    | 5.74                                      |  |
| <b>1967</b>           |                           |                |                 |              |            |                              |                |                 |              |         |                                           |  |
| January               | 9                         | 16             | 7               | 8            | 40         | 4.86                         | 4.33           | 5.00            | 4.70         | 4.72    | 7.32                                      |  |
| February              | 14                        | 5              | 12              | 11           | 42         | 6.73                         | 6.16           | 4.92            | 4.66         | 5.62    | 9.45                                      |  |
| March                 | 14                        | 5              | 5               | 9            | 33         | 6.72                         | 5.90           | 4.19            | 4.52         | 5.33    | 9.99                                      |  |
| April                 | 9                         | 7              | 7               | 6            | 29         | 5.76                         | 5.22           | 5.37            | 4.41         | 5.19    | 8.10                                      |  |
| May                   | 7                         | 11             | 5               | 9            | 32         | 7.19                         | 5.42           | 5.04            | 5.28         | 5.73    | 9.77                                      |  |
| June                  | 9                         | 6              | 2               | 11           | 28         | 5.75                         | 4.70           | 4.00            | 4.90         | 4.84    | 12.00                                     |  |
| July                  | 6                         | 15             | 5               | 6            | 32         | 4.38                         | 4.77           | 5.40            | 4.51         | 4.76    | 7.00                                      |  |
| <b>All<br/>months</b> | <b>308</b>                | <b>169</b>     | <b>94</b>       | <b>112</b>   | <b>683</b> |                              |                |                 |              |         | <b>6.33</b>                               |  |

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usually a kerosene tin. Assemblers sell both by the bag and by any number of bags as well as in smaller amounts. For the larger assemblers, the size of sale depends mostly upon the size of the buyer.

For retailers, the size of sale is generally quite mixed, varying both by commodity and market. Table 10.10 presents for each commodity the distribution of price observations made in Dugbe and Oritamerin Market in terms of weight of the sale. The average size of sale for each commodity and for each market is shown in Table 10.11. It can be observed that the average weight of sales in Oritamerin Market is about 53 percent greater than in Dugbe Market - 15.75 lbs. compared with 10.28 lbs. This relationship holds for all commodities, although the percent by which Oritamerin Market sales are larger ranges from 41 percent for gari to 76 percent for maize.

As may be expected, the high moisture content of yams renders them bulky, so that yam sales are the heaviest by weight, averaging 32.31 lbs. per transaction in Oritamerin Market and 18.90 lbs. in Dugbe Market. Because of their high relative price, a smaller quantity of cowpeas is generally purchased in each transaction than of other commodities--averaging 8.90 lbs. per transaction in Oritamerin Market and 6.28 lbs. in Dugbe Market.

Taking the distribution of sales in Table 10.10, it can be seen that 35 percent of the sales in Oritamerin Market were small (under 20 lbs. for yam and under 5 lbs. for the granular staples), while in Dugbe Market, 58 percent of the observations fell into this grouping. Large sales (over 40 lbs. for yam, over 10 lbs for rice, and over 15 lbs. for the others), however, are quite important in Oritamerin Market, where they accounted for 29 percent of observations, while in Dugbe Market they only accounted for 12 percent. Many of these larger transactions represent sales of kerosene tin measures of the commodity--some to consumers and others to retailers.

Table 10.10

DISTRIBUTION OF PRICE OBSERVATIONS BY COMMODITY, BY TOTAL SIZE OF SALE  
AND BY MARKET - SRI RETAIL PRICE SERIES FOR IBADAN  
1966-67

| Commodity & Total<br>Size of Sale<br>(pounds) | Oritamerin<br>Market |             | Dugbe Market |              | Total        |              |
|-----------------------------------------------|----------------------|-------------|--------------|--------------|--------------|--------------|
|                                               | Number               | Percent     | Number       | Percent      | Number       | Percent      |
| <b>Yam</b>                                    | <u>617</u>           | <u>100%</u> | <u>652</u>   | <u>99%*</u>  | <u>1,269</u> | <u>100%</u>  |
| Under 20                                      | 215                  | 35          | 421          | 64           | 636          | 50           |
| 20 & under 40                                 | 255                  | 41          | 186          | 28           | 441          | 35           |
| 40 & under 60                                 | 90                   | 15          | 28           | 4            | 118          | 9            |
| 60 & over                                     | 57                   | 9           | 17           | 3            | 74           | 6            |
| <b>Gari</b>                                   | <u>668</u>           | <u>100%</u> | <u>683</u>   | <u>100%</u>  | <u>1,351</u> | <u>101%*</u> |
| Under 5                                       | 222                  | 33          | 339          | 50           | 561          | 42           |
| 5 & under 15                                  | 259                  | 39          | 239          | 35           | 498          | 37           |
| 15 & under 30                                 | 169                  | 25          | 95           | 14           | 264          | 20           |
| 30 & over                                     | 18                   | 3           | 10           | 1            | 28           | 2            |
| <b>Maize</b>                                  | <u>359</u>           | <u>100%</u> | <u>192</u>   | <u>101%*</u> | <u>551</u>   | <u>100%</u>  |
| Under 5                                       | 86                   | 24          | 115          | 60           | 201          | 36           |
| 5 & under 15                                  | 123                  | 34          | 55           | 29           | 178          | 32           |
| 15 & under 30                                 | 126                  | 35          | 19           | 10           | 145          | 27           |
| 30 & over                                     | 24                   | 7           | 3            | 2            | 27           | 5            |
| <b>Rice</b>                                   | <u>625</u>           | <u>99%*</u> | <u>493</u>   | <u>99%*</u>  | <u>1,118</u> | <u>100%</u>  |
| Under 5                                       | 241                  | 38          | 287          | 58           | 528          | 47           |
| 5 & under 10                                  | 170                  | 27          | 110          | 22           | 280          | 25           |
| 10 & under 20                                 | 127                  | 20          | 65           | 13           | 192          | 17           |
| 20 & over                                     | 87                   | 14          | 31           | 6            | 118          | 11           |
| <b>Cowpeas</b>                                | <u>459</u>           | <u>100%</u> | <u>492</u>   | <u>100%</u>  | <u>951</u>   | <u>100%</u>  |
| Under 5                                       | 199                  | 43          | 306          | 62           | 505          | 53           |
| 5 & under 15                                  | 173                  | 38          | 149          | 30           | 322          | 34           |
| 15 & under 30                                 | 67                   | 15          | 23           | 5            | 90           | 9            |
| 30 & over                                     | 20                   | 4           | 14           | 3            | 34           | 4            |
| <b>Total</b>                                  | <u>2,728</u>         | <u>100%</u> | <u>2,512</u> | <u>99%*</u>  | <u>5,240</u> | <u>99%*</u>  |
| Small                                         | 963                  | 35          | 1,468        | 58           | 2,431        | 46           |
| Medium                                        | 980                  | 36          | 739          | 29           | 1,719        | 33           |
| Large                                         | 579                  | 21          | 230          | 9            | 809          | 15           |
| Very large                                    | 206                  | 8           | 75           | 3            | 281          | 5            |

\* Rounding error.

Table 10.11

AVERAGE TOTAL WEIGHT (LBS.) OF PRICE OBSERVATIONS  
BY MARKET AND BY COMMODITY -  
SRI RETAIL PRICE SERIES FOR IBADAN - 1966-67

| <u>Market</u> |              |             |             |             |             | <u>Total</u> |
|---------------|--------------|-------------|-------------|-------------|-------------|--------------|
| Oritamerin    | 32.31        | 11.59       | 13.86       | 9.97        | 8.90        | 15.75        |
| Dugbe         | <u>18.90</u> | <u>8.23</u> | <u>7.89</u> | <u>6.63</u> | <u>6.28</u> | <u>10.28</u> |
| Both          | 25.42        | 9.89        | 11.78       | 8.50        | 7.54        | 13.13        |

For a selected group of retailers in Oritamerin Market, Ibadan, Table 10.12 presents the average value per transaction for each commodity based on sales observations for one day. Cowpea sellers had the highest average value per transaction, at 9.2 shillings. Rice and yam sellers were somewhat intermediate in terms of value, with 6.9 and 6.0 shillings per transaction respectively. Maize and gari sellers were lowest, with average value per transaction of 4.7 and 4.2 shillings respectively. It should be emphasized, however, that this order and these values are only valid for the day of the observation. As the price relationship between commodities changes, consumers will not necessarily change their quantity of purchases proportionately. In fact, where a consumer does not substitute a cheaper commodity, the quantity purchased will tend to remain constant because of the basic need for a minimum quantity of food, and in the present diet this means mostly staple foods.

Table 10.12

AVERAGE VALUE PER TRANSACTION OF RETAIL TRADERS BY  
COMMODITY, 110 SELECTED RETAIL SELLERS, ORITAMERIN  
MARKET, IBADAN, SEPTEMBER 1966

| <u>Commodity</u> | <u>Average Value per Transaction</u> |              |
|------------------|--------------------------------------|--------------|
|                  | <u>Shillings</u>                     | <u>Pence</u> |
| Yam              | 6.0*                                 | 72*          |
| Gari             | 4.2                                  | 50           |
| Maize            | 4.7                                  | 56           |
| Rice             | 6.9                                  | 83           |
| Cowpeas          | 9.2                                  | 110          |
| Total            | 5.9                                  | 71           |

\* Excludes two retailer-wholesalers with transactions averaging 8.8 shillings (106 pence) and 15.5 shillings (186 pence) respectively.

The relationship between average weight and price of all the transactions in gari observed in Oritamerin and Dugbe Markets, Ibadan, is shown in Table 10.13 for each market, by month. The average value per transaction is the product of the average weight and price per transaction. The inclusion of an irregular number of kerosene tins per month in Oritamerin Market, some of which may have been wholesale transactions, is probably the major cause of the month-to-month instability of average weight per transaction and hence of average value per transaction. The series for Dugbe Market does not suffer from this same interpretation problem and is therefore a better indicator of consumer demand with varying price levels.

In Dugbe Market, Table 10.13 shows that except for the first and last months, the average value for transactions of gari for each month was about constant between 47.2 and 63.5 pence. That is, the high value was 35 percent higher than the low value. However, the average weight per transaction increased from 5.86 lbs. in June 1966 to 12.22 lbs. in June 1967--an increase of 109 percent--while the price of gari generally fell during the same period,

Table 10.13

GARI—AVERAGE WEIGHT, PRICE AND VALUE PER TRANSACTION OF OBSERVATIONS  
BY MONTH AND BY MARKET - SRI RETAIL PRICE SERIES FOR IBADAN

| Month             | Oritamerin Market       |                  |               | Dugbe Market            |                  |               |
|-------------------|-------------------------|------------------|---------------|-------------------------|------------------|---------------|
|                   | Average per Transaction |                  |               | Average per Transaction |                  |               |
|                   | Weight<br>(lb)          | Price<br>(d./lb) | Value<br>(d.) | Weight<br>(lb)          | Price<br>(d./lb) | Value<br>(d.) |
| <b>1966</b>       |                         |                  |               |                         |                  |               |
| May               | ---                     | ---              | ---           | 5.62                    | 7.90             | 28.6          |
| June              | ---                     | ---              | ---           | 5.86                    | 8.36             | 49.0          |
| July              | 11.33                   | 7.34             | 83.2          | 7.25                    | 8.51             | 61.7          |
| August            | 15.51                   | 6.74             | 104.6         | 6.65                    | 8.19             | 54.5          |
| September         | 12.55                   | 6.17             | 77.4          | 8.09                    | 7.85             | 63.5          |
| October           | 10.90                   | 5.18             | 56.5          | 7.87                    | 7.86             | 61.9          |
| November          | 14.10                   | 4.41             | 62.2          | 9.52                    | 6.00             | 57.1          |
| December          | 9.24                    | 5.44             | 50.3          | 8.93                    | 6.39             | 57.0          |
| <b>1967</b>       |                         |                  |               |                         |                  |               |
| January           | 12.48                   | 5.14             | 64.2          | 10.29                   | 4.61             | 47.4          |
| February          | 12.02                   | 4.14             | 49.7          | 10.75                   | 5.28             | 56.8          |
| March             | 10.50                   | 3.94             | 41.3          | 10.56                   | 5.81             | 61.3          |
| April             | 12.01                   | 3.87             | 46.5          | 9.72                    | 4.86             | 47.2          |
| May               | 9.87                    | 4.27             | 42.1          | 10.97                   | 5.53             | 60.7          |
| June              | 11.14                   | 3.97             | 39.7          | 12.22                   | 5.05             | 61.8          |
| July              | 9.05                    | 3.35             | 30.3          | 7.10                    | 4.75             | 33.7          |
| All observations* | 11.59                   | 5.63             | 65.3          | 8.23                    | 6.89             | 56.7          |
| July-July†        | 11.59                   | 4.92             | 49.2          | 9.22                    | 6.21             | 57.2          |

\* Each observation given equal weight.

† Each month given equal weight (difference results from there being an unequal number of observations per month).

having a high of 8.51 pence per pound in July 1966 and a low of 4.61 pence per pound in January 1967--that is, a high value 85 percent above the low.

The data in Table 10.13 for Dugbe Market indicate that consumer demand for gari is relatively constant in value terms, even in quite varied price conditions. In contrast to this, the data for gari for Oritamerin Market suggest that the average weight of the transaction is relatively constant, even with quite extreme price variations. Consequently, as the average price decreases, so the average value per transaction declines. This effect can be seen in Table 10.13, where the average price of gari fell from 7.34 pence per pound for the observations in July 1966 to 3.35 pence per pound for July 1967--that is, a fall of 119 percent in relation to the low price. As a result, the average value per transaction fell from 83.2 pence in July 1966 (excluding an exceptional 104.6 pence in August, 1966). to a low of 30.3 pence in July 1967--or a fall of 175 percent in relation to the low price.

Although the average weight of gari sales observed in Oritamerin Market was greater than for Dugbe, the higher average price in Dugbe Market actually led to the average value per purchase being higher for Dugbe Market. Table 10.13 shows that over a comparable time period--July 1966 - July 1967--with each month weighted equally, the average value of a gari transaction observed in Dugbe Market was 57.2 pence, while it was 49.2 pence for Oritamerin Market.

## 7. Quantity Discounts

Generally, the larger the quantity of a commodity purchased at the retail level, the lower the real price paid; in effect, this is a quantity discount. As already discussed under the section on use of local measures,

the quoted real price (pence per pound based on the quoted price) of a normally heaped large measure is often higher than that of the smaller measures. This situation was found to exist in Erekesan Market, Ado Ekiti, for all commodities, and can be seen in Table 10.4. However, provided the buyer is aware of the real price of the commodity, the extra heaping and occasional inclusion of an extra quantity after the measuring process has been completed (either as a part filling of some local measure or as a full measure of a smaller unit) which occurs when a large quantity is purchased, usually results in the real price of a large quantity actually being lower than that of a smaller quantity.

The price observations in Ibadan support this generalization as far as gari and rice are concerned and to a lesser extent for cowpeas. For yam and maize, the quantity purchased did not seem to affect markedly the real price paid. Table 10.14 shows the average price of each commodity in Oritamerin Market for a 13-month period, based on total weight of sale. These observations are shown in more detail, by month, in Appendix Tables 10.2.1-10.2.5. Appendix Table 10.2.6 presents the average price of gari in Dugbe Market for four sizes of sales groups for each of the 15 months.

For the retail price observations in Oritamerin Market, quantity discounts averaging respectively 10.6 and 12.5 percent for gari, 4.9 and 6.8 percent for rice, and 5.5 and 2.5 percent for cowpeas appeared to be given when medium and large quantities were purchased instead of a small quantity. In Dugbe Market, the discounts received for medium and large purchases of gari averaged 8.9 and 14.7 percent respectively, compared to the price paid for small quantities.

Table 10.14

AVERAGE PRICE BY SIZE OF SALE AND  
BY COMMODITY--SRI RETAIL PRICE  
SERIES FOR ORITAMERIN MARKET, IBADAN  
JULY 1966 - JULY 1967

| Size of Sale | Commodity |      |       |      |         |
|--------------|-----------|------|-------|------|---------|
|              | Yam       | Gari | Maize | Rice | Cowpeas |
| Small        | 2.31      | 5.37 | 2.91  | 9.46 | 7.95    |
| Medium       | 2.37      | 4.80 | 2.92  | 9.00 | 7.51    |
| Large        | 2.28      | 4.70 | 2.86  | 8.82 | 7.76    |
| Very large*  | 2.37      | †    | †     | 8.82 | †       |
| All Sizes*   | 2.31      | 4.92 | 2.90  | 9.03 | 7.69    |

\* Based on equal weighing of size groups.

† Insufficient observations available.

#### 8. Discount for Cash

Retailers normally expect to receive payment for goods at time of sale. As a result, a discount for cash is generally not included in their price structure. Their price already represents a cash price.

Due to the prevalence of credit sales by wholesalers, their average price per bag generally represents the credit price; a discount is then usually allowed if cash is paid at the time of sale. Although the actual discount received depends upon the bargaining power of both parties at the time of exchange, a fairly well established pattern actually exists among wholesalers in the giving of discounts.

Information on the discount offered by wholesalers for cash was collected

informally from both wholesalers and retailers. Table 10.15 presents this information for each commodity in terms of the estimated percent distribution of traders giving various cash discounts. The absolute amount offered varied mostly by commodity. For example, 5 to 10 shillings per bag seemed the usual cash discount given by gari sellers, while 2.5 to 5 shillings per bag appeared customary for maize sellers. Both rice and cowpea sellers mostly gave discounts of between 2.5 and 7.5 shillings per bag. Yam sellers do not usually sell on credit. Given the wholesale prices of September 1966, these cash discounts amounted to approximately 7 percent for gari and maize sellers, and about 2.5 percent for rice and cowpea sellers. With a lower wholesale price, these discount rates would be somewhat increased if the discount given were to remain about the same in absolute terms. This appears to be the usual trade practice.

ESTIMATED PERCENT DISTRIBUTION OF WHOLESALERS BY  
DISCOUNT USUALLY GIVEN FOR PAYMENT OF CASH  
AT THE TIME OF SALE AND BY COMMODITY--1966

| Discount Usually<br>Given for Cash<br>At the Time of Sale<br>(Shillings per Bag) | Gari       | Maize      | Rice       | Cowpeas    |
|----------------------------------------------------------------------------------|------------|------------|------------|------------|
| Under 2.5                                                                        | -          | 20         | -          | 5          |
| 2.5 & under 5.0                                                                  | 20         | 80         | 40         | 30         |
| 5.0 & under 7.5                                                                  | 40         | -          | 50         | 50         |
| 7.5 & under 10.0                                                                 | 30         | -          | 10         | 5          |
| 10.0 & over                                                                      | 10         | -          | -          | 10         |
| <b>Total</b>                                                                     | <b>100</b> | <b>100</b> | <b>100</b> | <b>100</b> |

Source: Stanford Research Institute

## 9. Discrimination by Sex

At the retail level, most buyers of staple foods in markets are housewives. As Table 10.16 indicates, 90 percent of the price observations in Oritamerin Market and 80 percent in Dugbe Market, Ibadan, concerned female buyers. The average for the Region as a whole is probably similar to that for Oritamerin Market.

When men buy foodstuffs at the retail level, they are generally only doing so as agents. Some, such as stewards buying for their employers, shop regularly while most of the remainder shop for foodstuffs infrequently. Agents are probably charged a higher price, on the grounds that they are not spending their own money. Similarly, irregular buyers are likely to pay a higher price because of their ignorance of the current price and, in most cases, lack of expertise in filling the local measures used in purchasing.

The evidence collected in Ibadan as a result of the retail price observations tends to support the view that male buyers do actually pay a higher real price than female buyers. Table 10.17 shows the number of months when the average price of each commodity was highest for each sex in the two markets in Ibadan. For several months there were no observations of male buyers and no comparisons could be made. Although too few observations on the price paid by male buyers are available to be at all inclusive, the fact that male buyers paid a higher average price than female buyers in three-quarters of the period observed in Oritamerin Market and about two-thirds in Dugbe Market, does give some support to the view held by many males that they are discriminated against.

The average price paid by male and female buyers is presented in more detail on a monthly basis in Appendix Tables 10.3.1-10.3.5 for yam and gari

Table 10.16

DISTRIBUTION OF PRICE OBSERVATIONS BY COMMODITY, BY SEX OF BUYER  
AND BY MARKET - SRI RETAIL PRICE SERIES FOR IBADAN  
1966-67

| Commodity and<br>Sex of Buyer | Oritamerin<br>Market |         | Dugbe Market |         | Total  |         |
|-------------------------------|----------------------|---------|--------------|---------|--------|---------|
|                               | Number               | Percent | Number       | Percent | Number | Percent |
| Yam                           | 617                  | 100%    | 652          | 100%    | 1,269  | 100%    |
| Male                          | 126                  | 20      | 160          | 25      | 286    | 23      |
| Female                        | 491                  | 80      | 492          | 75      | 983    | 77      |
| Gari                          | 668                  | 100%    | 683          | 100%    | 1,351  | 100%    |
| Male                          | 95                   | 14      | 165          | 24      | 260    | 19      |
| Female                        | 573                  | 86      | 518          | 76      | 1,091  | 81      |
| Maize                         | 359                  | 100%    | 192          | 100%    | 551    | 100%    |
| Male                          | 8                    | 2       | 34           | 18      | 42     | 8       |
| Female                        | 351                  | 98      | 158          | 82      | 509    | 92      |
| Rice                          | 625                  | 100%    | 493          | 100%    | 1,118  | 100%    |
| Male                          | 24                   | 4       | 81           | 16      | 105    | 9       |
| Female                        | 601                  | 96      | 412          | 84      | 1,013  | 91      |
| Cowpeas                       | 459                  | 100%    | 492          | 100%    | 951    | 100%    |
| Male                          | 24                   | 5       | 61           | 12      | 85     | 9       |
| Female                        | 435                  | 95      | 431          | 88      | 866    | 91      |
| Total                         | 2,728                | 100%    | 2,512        | 100%    | 5,240  | 100%    |
| Male                          | 277                  | 10      | 501          | 20      | 778    | 15      |
| Female                        | 2,451                | 90      | 2,011        | 80      | 4,462  | 85      |

for Oritamerin Market, and for yam, gari, and rice for Dugbe Market.

Table 10.17

NUMBER OF MONTHS WHEN AVERAGE PRICE PAID  
HIGHEST BY SEX, BY MARKET AND BY COMMODITY  
SRI RETAIL PRICE SERIES FOR IBADAN  
MAY 1966 - JULY 1967

| <u>Market and Sex</u>    | <u>Commodity</u> |             |              |             |                | <u>Total</u> |
|--------------------------|------------------|-------------|--------------|-------------|----------------|--------------|
|                          | <u>Yam</u>       | <u>Gari</u> | <u>Maize</u> | <u>Rice</u> | <u>Cowpeas</u> |              |
| <b>Oritamerin Market</b> |                  |             |              |             |                |              |
| Male                     | 11               | 7           | 2            | 7           | 6              | 33           |
| Female                   | 2                | 4           | 1            | 2           | 2              | 11           |
| Total Months             | <u>13</u>        | <u>11*</u>  | <u>3</u>     | <u>9</u>    | <u>8</u>       | <u>44</u>    |
| <b>Dugbe Market</b>      |                  |             |              |             |                |              |
| Male                     | 11               | 6           | 5            | 10          | 8              | 40           |
| Female                   | 4                | 9           | 1            | 2           | 5              | 21           |
| Total Months             | <u>15</u>        | <u>15</u>   | <u>6</u>     | <u>12†</u>  | <u>13</u>      | <u>61</u>    |

\* In addition, both were equal in one month.

† In addition, both were equal in two months.

## B. PRICE BEHAVIOR

The collection of accurate price data for staple foods under Western Nigerian conditions is complicated by several factors. The effect of these factors is that the real price (pence per pound) of all transactions is seldom the same, even for the same seller on the same day. First, each transaction represents the successful consummation of a negotiated agreement based on the knowledge and skill of each party. Secondly, although each commodity is relatively homogenous and is sold from bulk (undifferentiated) supplies, grade differences do exist even if they are only informally recognized. Thirdly, relatively standardized units of measure are used for the same commodity in the same market on the same day, but this is seldom true if one or more of the three variables is changed, particularly where the change is somewhat extreme. And lastly, there is a variation in the amount of services provided by the seller at the time of the transaction, such as the provision of credit, wrapping materials, and transportation of the commodity.

As retail sales are made in a wide variety of units of measure, mostly small, to take the price of the measure is not necessarily a good indicator of the real price of the commodity because the quantity contained in the unit varies. The larger the size of the unit of measure, the more accurately the price of the unit reflects its real price. The Federal Office of Statistics (FOS), mindful of this fact, collects its retail price data for the largest commonly used measure in each market. However, for some commodities, only smaller measures are used exclusively, with the result that the price of the large measure must be extrapolated from the price of some

smaller measure. For example, in Ibadan the price of an olodo measure of maize is considered to be twice the price of a kongo measure.

One important result of using unit prices as an indicator of the real price of a commodity is that the fluctuations in the weight of the unit will not be reflected in the real price. This means that the price movement will tend to be less extreme than if the real price had been calculated on the basis of both unit price and unit weight.

For these reasons, the SRI Retail Price Series for Ibadan was based both on the price paid and on the weight of the commodity actually received by the buyer. However, as Figure 10.3 displays for three days of observations of gari prices in Dugbe Market, Ibadan, there are wide disparities in the real price paid on any one day even in the same market.

The mean average value calculated for each day of price observations collected for inclusion in the weekly SRI Retail Price Series for Ibadan omitted the extreme high and low values. An example of the magnitude of the range observed in the real price of yam, gari and rice for several days in the same week in the central native markets, Ibadan, can be seen in Table 10.18. As a percent of the low price, the price range for the same day varied from 58 to 148 percent.

#### 1. Prices in Ibadan--1966-67

The SRI Retail and Wholesale Price Series for Ibadan clearly demonstrate most of the important characteristics of the price behavior of the five staple foods included in this study. Perhaps the most obvious characteristic is the volatility of real prices as a result of constantly changing

Table 10.18

DAILY RANGE IN REAL PRICE OF YAM, GARI, AND RICE OBSERVATIONS;  
ORITAMERIN MARKET, IBADAN--JULY 4-9, 1966  
(Pence Per Pound)

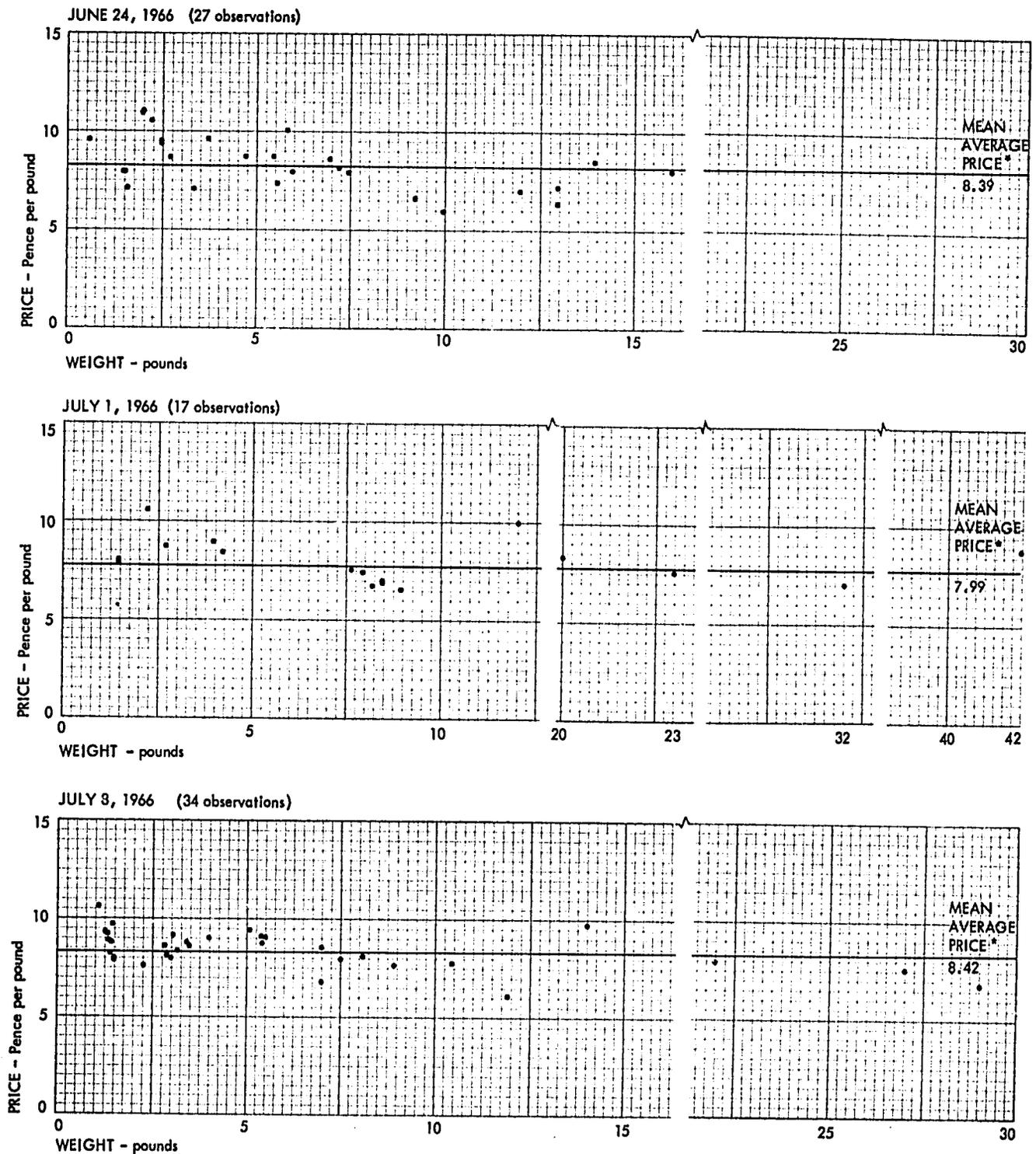
|                      | Yam    |        |        | Gari   |        |        |        | Rice   |        |        |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                      | July 5 | July 6 | July 9 | July 4 | July 5 | July 6 | July 9 | July 5 | July 6 | July 9 |
| Real Price for Day   |        |        |        |        |        |        |        |        |        |        |
| Higest               | 5.53   | 5.57   | 2.85   | 8.00   | 12.00  | 9.60   | 10.90  | 12.00  | 9.00   | 9.60   |
| Average*             | 2.60   | 3.06   | 2.30   | 6.38   | 7.56   | 7.13   | 7.72   | 8.63   | 7.69   | 7.68   |
| Lowest               | 2.28   | 2.25   | 1.68   | 4.80   | 6.00   | 6.09   | 5.90   | 6.42   | 4.00   | 6.00   |
| Price Range--Actual  | 3.25   | 3.32   | 1.17   | 3.20   | 6.00   | 3.51   | 5.00   | 5.58   | 5.00   | 3.60   |
| Percent of low price | 143    | 148    | 70     | 67     | 100    | 58     | 85     | 87     | 125    | 60     |
| No. of Observations  | 13     | 15     | 16     | 31     | 20     | 25     | 23     | 24     | 27     | 32     |

Mean average price calculation excludes the high and low extreme values

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Figure 10.3

GARI: RETAIL PRICE OBSERVATIONS, DUGBE MARKET, IBADAN



\* Mean Average Price calculated excluding high and low extreme values.

supply and demand conditions. This manifests itself in the relatively large fluctuations in the real prices of the commodities from week to week.

Imperfect supply conditions appeared to be the main factor responsible for the constantly changing level of real prices in Ibadan during 1966-67. In general, traders hold relatively small inventories of staple foods, especially yam, gari and maize, and procure supplies frequently. This results in a considerable variation in the availability of supplies not only from day to day but even on the same day: for the most part, traders respond almost instantly to these changes.

Another quite obvious characteristic is that the real price in the central native market, Oritamerin Market, is generally lower than that prevailing in the central new market, Dugbe Market. The specific characteristics contained in the SRI Price Series are discussed in more detail for each commodity in the following sections, while the general characteristics of price behavior in each of the Ibadan markets receive further attention in the section on spatial price behavior.

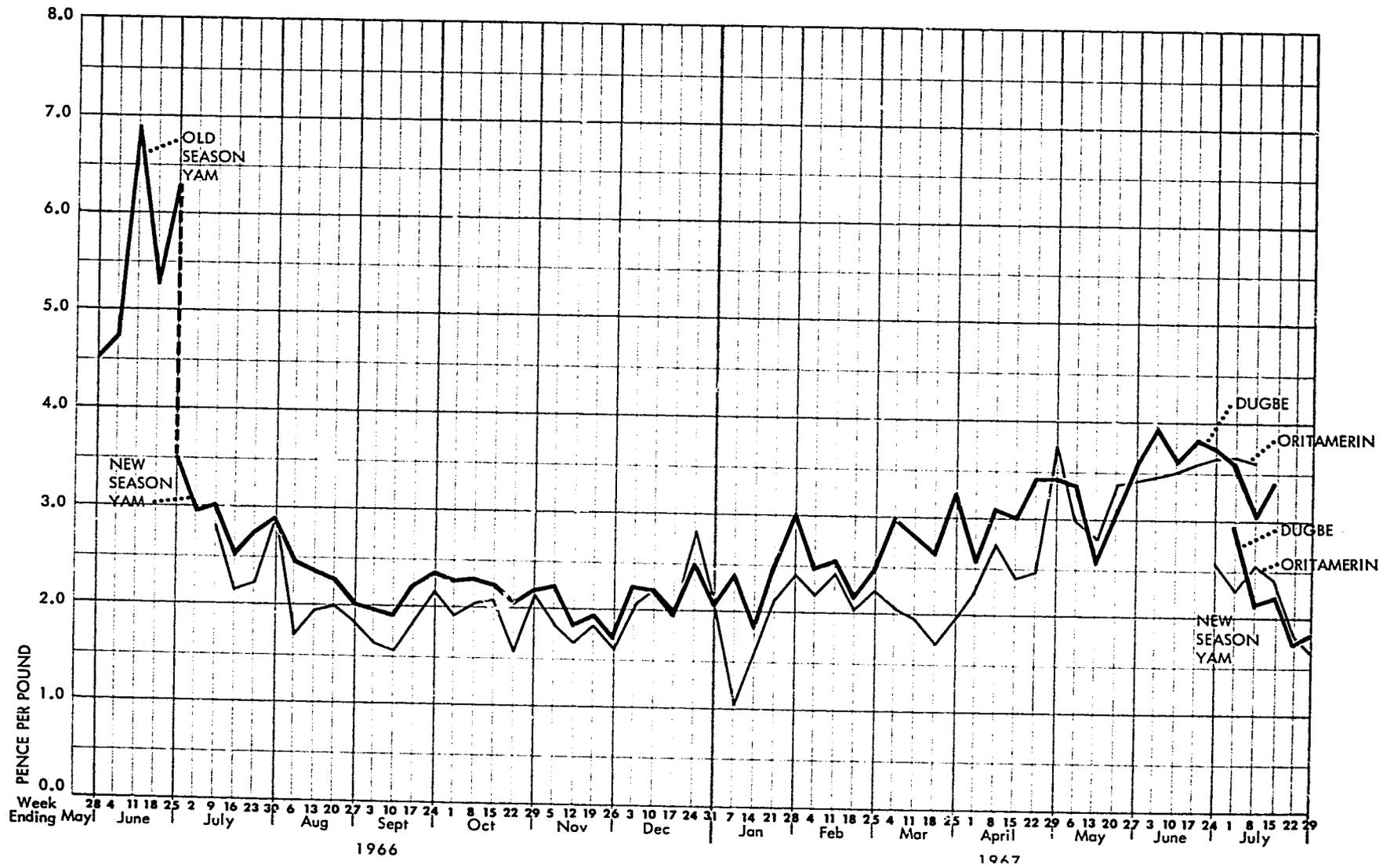
Other characteristics, such as seasonal and longer-term price movements, are also present to varying degrees in all the commodities. For this reason, the specific characteristics contained in the SRI Price Series are discussed separately for each commodity in the following sections on individual commodities.

a. Yam

As Figure 10.4 shows (values are listed in Appendix Table 10.1.1), the retail price series collected for yam coincided with a full crop year.

Figure 10.4

YAM: RETAIL PRICE IN ORITAMERIN AND DUGBE MARKETS, IBADAN  
MAY 1966-JULY 1967



SOURCE: Stanford Research Institute.

The break in the series which occurs when new season yam replaces old season yam came at about the same time in both 1966 and 1967--during the last week of June and the first week of July. During the few weeks when both old and new season yam are sold concurrently, they are sold essentially as different products and at quite different prices. For example, in 1966, old season yam was about twice the real price of new season yam; in 1967, the absolute price difference was considerably less, with the real price of old season yam being only about 50 percent more than new season yam.

In general, yam supplies were considerably more abundant during the 1966-67 crop year than during the previous crop year. This resulted in the seasonal effect on price during 1966-67 being less pronounced than during 1965-66, and was probably also conducive to an attitude on the part of traders that allowed the 1967-68 yam season prices to begin lower and to fall faster than those obtaining after the appearance of new season yam in 1966.

In spite of the wide weekly fluctuations in the average price of yam, a clear seasonal pattern can be seen in the price series. Firstly, following the appearance of new season yam the price fell quite markedly during July and August, due to the increasing availability of new season yams as they mature throughout the Region. Secondly, the 25-35 percent rise in price which occurred during the second part of September coincided with the end of the main early yam harvest and the dry period between the early and late rainy seasons. Thirdly, the late yam harvest in the Region, lasting from mid-October to January, introduced a period of relatively low prices; the higher prices in December were probably associated with

the celebration of the Christian, Moslem and traditional festivals and ceremonies occurring at that time. The four-week Moslem fast, during which food is not to be consumed between sunrise and sunset, certainly results in decreased activity on the part of both farmers and traders; for Christians, the period around Christmas is usually spent in social pursuits. In general, this is a period when the labor normally involved in harvesting and moving a bulky product like yam is otherwise engaged; this has the concomitant effect of reducing available supplies. Once cash and credit reserves are exhausted there is an increase in both farming and trading activities. This appeared to be the reason for increased supplies in early January.

From the second part of January on, a gradual upswing in price occurred until the appearance of new-season yam again. Western Region yam became increasingly scarce from about early March onwards, mostly because the high losses suffered from storage discourage stocking. From February onward, yam from the "Middle Belt" of Northern Nigeria, channeled particularly through Abuja and Lokoja, is the main variety available in Ibadan; in the last two months before new season yam is available, it accounts for almost the entire supply. The seasonal rise in price reflects not only the high cost but also the inadequate storage within the Region. This means yam has to be transported 150-400 miles from outside the Region. Yam can be harvested later and stored more easily in these supply areas outside the Region because of the shorter rainy season and less humid conditions. It should also be mentioned that during this period the consumption of fresh yam is quite low compared with the harvest period. Not only are other staple

foods substituted because of their lower relative price, but also the imported yam is mostly of a different variety, with somewhat different characteristics.

Table 10.19 presents for the 55 weeks when price observations were made in both Dugbe and Oritamerin Markets a comparison of the average retail price of yam in Oritamerin Market and Dugbe Market on a week-to-week basis. In only 10 of the 55 weeks was the average price in Dugbe Market actually lower than in Oritamerin Market. In the other 45 weeks, it was higher by 0.5 pence per pound or more on 8 occasions and by between 0.25 and 0.5 pence per pound on 17 occasions. During the 1966-67 crop year, the average price ranged from about 1.6 to 3.7 pence per pound in Oritamerin Market.

The central native markets in Ibadan, centered around Oritamerin Market, are the main wholesale (supply) markets for yam in Ibadan. Retailers in Dugbe Market and the other markets in Ibadan obtain most of their supplies from wholesalers in these markets. It is not surprising, therefore, that the retail price of yam in Dugbe Market is generally higher than that in the central native markets. For the 652 observations of yam prices in Dugbe Market, the average weight of each sale/purchase was 18.90 pounds. Assuming that the price difference is 0.25 pence per pound, this means that the consumer in Dugbe Market is paying about 4.72 pence per purchase more: the one-way bus fare for the two miles between the two markets is 4 pence, while the more commonly used taxi costs 6 pence.

Examining the price movements in Oritamerin Market, Table 10.19 shows that in 36 of the 55 weeks the average price increased or decreased in relation to the previous week by less than 0.5 pence per pound. In only 3 weeks, was the average price change 1.0 pence per pound or more.

Table 10.19

YAM - FREQUENCY OF CHANGE IN AVERAGE RETAIL PRICE FROM PREVIOUS WEEK IN ORITAMERIN MARKET  
 BY DIFFERENCE IN AVERAGE RETAIL PRICE OF DUGBE MARKET FROM ORITAMERIN MARKET - SRI RETAIL  
 PRICE SERIES FOR IBADAN - WEEKLY DATA - JULY 9, 1966-JULY 29, 1967

| Change in Average<br>Price from Previous Week<br>in Oritamerin Market | Difference in Average Price of Dugbe Market from Oritamerin Market |                          |                    |      |                    |                     |       |
|-----------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------|--------------------|------|--------------------|---------------------|-------|
|                                                                       | Higher                                                             |                          |                    | Same | Lower              |                     | Total |
|                                                                       | 0.5 d/lb<br>& Over                                                 | 0.25 & Under<br>0.5 d/lb | Under<br>0.25 d/lb |      | Under<br>0.25 d/lb | 0.25 d/lb<br>& Over |       |
| <u>Increase</u>                                                       |                                                                    |                          |                    |      |                    |                     |       |
| 1.0 d/lb & over                                                       | -                                                                  | -                        | -                  | -    | -                  | -                   | -     |
| 0.5 & under 1.0 d/lb                                                  | -                                                                  | 2                        | 2                  | 1    | -                  | 4                   | 9     |
| Under 0.5 d/lb                                                        | 3                                                                  | 6                        | 10                 | 1    | 1                  | -                   | 21    |
| <u>Same</u>                                                           | -                                                                  | -                        | -                  | -    | -                  | -                   | -     |
| <u>Decrease</u>                                                       |                                                                    |                          |                    |      |                    |                     |       |
| Under 0.5 d/lb                                                        | 1                                                                  | 6                        | 4                  | -    | 4                  | -                   | 15    |
| 0.5 & under 1.0 d/lb                                                  | 2                                                                  | 3                        | 1                  | -    | 1                  | -                   | 7     |
| 1.0 d/lb & over                                                       | 2                                                                  | -                        | 1                  | -    | -                  | -                   | 3     |
| <u>Total</u>                                                          | 8                                                                  | 17                       | 18                 | 2    | 6                  | 4                   | 55    |

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Although the number of weeks of observations is too small and their dispersion too great, a loose relationship does seem to exist between the change in the average price of yam from the previous week in Oritamerin Market and the difference between the average prices of yam in Dugbe and Oritamerin Markets. In general, a decrease in the average price from the previous week in Oritamerin Market is associated with a greater difference in the average price of yam in Dugbe Market compared to Oritamerin Market. This average price difference tends to be less when the average price in Oritamerin Market increases.

This relationship bears out the suggestion that the central native markets in Ibadan determine the general level of yam prices in Ibadan. In general, yam prices in Dugbe Market tend to lag slightly behind those in the central native markets. Additionally, prices in Dugbe Market seem to be less responsive to changed supply and demand conditions than those in Oritamerin Market.

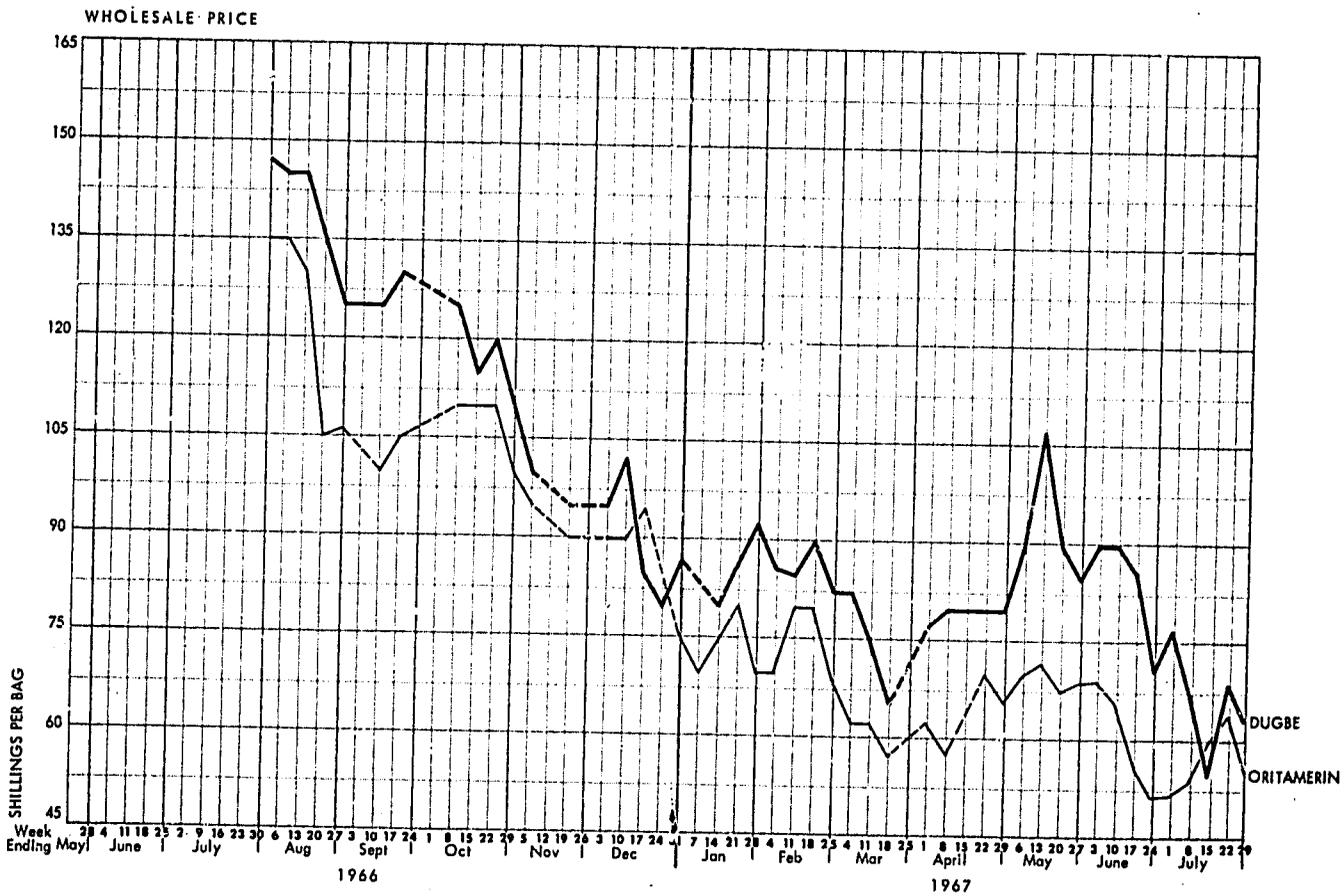
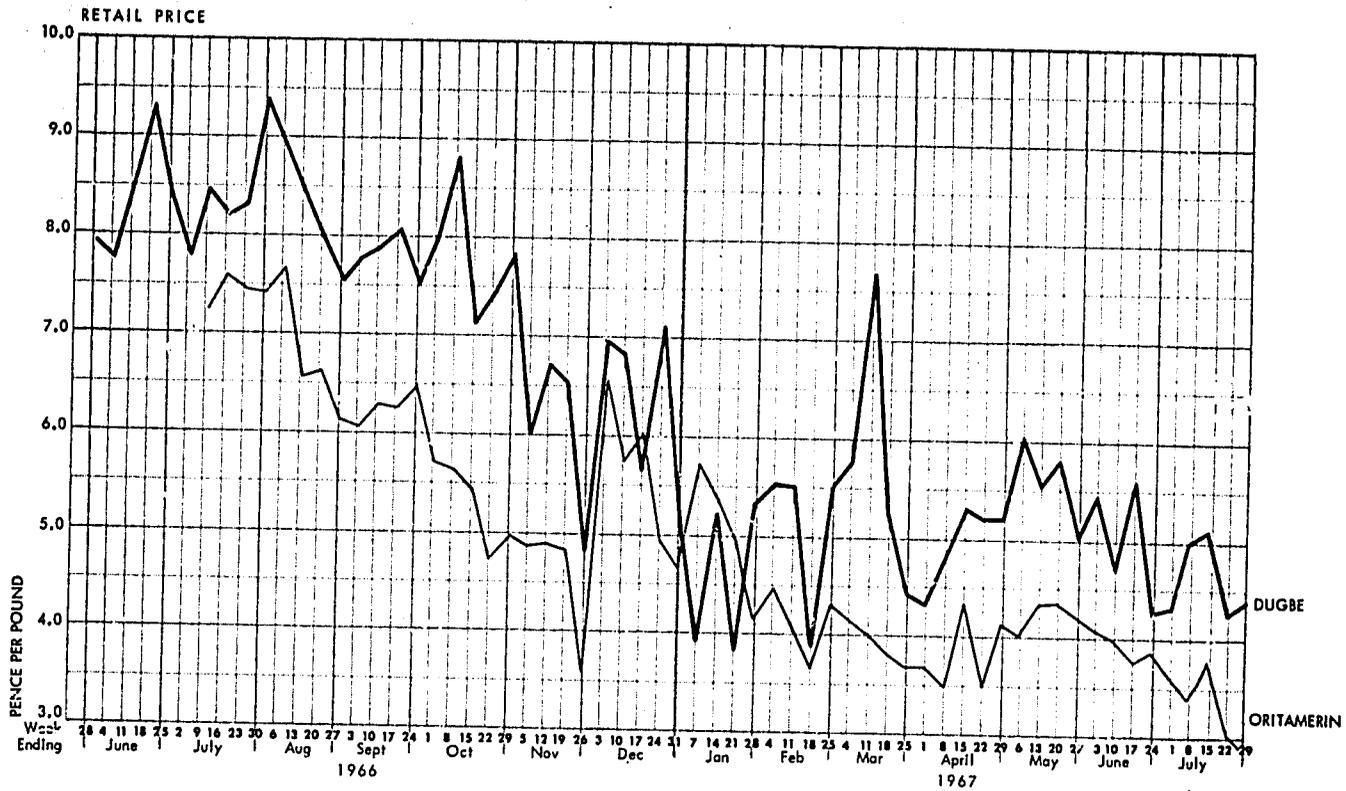
b. Gari

The weekly retail and wholesale price series collected for Oritamerin and Dugbe Markets, Ibadan, are presented graphically in Figure 10.5. (The retail price series itself is contained in Appendix Table 10.1.2, while the wholesale price series is arrayed in Appendix Table 10.5.1.)

Although there were retail price, particularly in Dugbe Market, a strong downward trend was perceptible after July, 1966. This is seen in Table 10.20, where the average monthly retail and wholesale prices of gari in Oritamerin and Dugbe market are displayed. During the period July 1966 to July 1967, the average retail price fell from 7.34 to 3.35 pence per

Figure 10.5

GARI: RETAIL AND WHOLESALE PRICES IN ORITAMERIN AND DUGBE MARKETS, IBADAN MAY 1966-JULY 1967



SOURCE: Stanford Research Institute.

Table 10.20

GARI - AVERAGE RETAIL AND WHOLESALE PRICE BY MONTH AND  
BY MARKET - SRI PRICE SERIES FOR IBADAN-1966-67

| Market      | Retail Price Series             |                            | Wholesale Price Series            |                              |                                  |                             |
|-------------|---------------------------------|----------------------------|-----------------------------------|------------------------------|----------------------------------|-----------------------------|
|             | Market                          |                            | Market                            |                              |                                  |                             |
|             | Oritamerin<br>(pence per pound) | Dugbe<br>(pence per pound) | Oritamerin<br>(shillings per bag) | Dugbe<br>(shillings per bag) | Oritamerin<br>(pence per pound)* | Dugbe<br>(pence per pound)* |
| <b>1966</b> |                                 |                            |                                   |                              |                                  |                             |
| July        | 7.34                            | 8.51                       | 135                               | 147                          | 7.71                             | 8.40                        |
| August      | 6.74                            | 8.19                       | 129                               | 138                          | 7.37                             | 7.88                        |
| September   | 6.17                            | 7.85                       | 102                               | 127                          | 5.83                             | 7.26                        |
| October     | 5.18                            | 7.86                       | 106                               | 120                          | 6.06                             | 6.86                        |
| November    | 4.41                            | 6.00                       | 92                                | 98                           | 5.26                             | 5.60                        |
| December    | 5.44                            | 6.39                       | 90                                | 92                           | 5.14                             | 5.26                        |
| <b>1967</b> |                                 |                            |                                   |                              |                                  |                             |
| January     | 5.14                            | 4.61                       | 74                                | 86                           | 4.23                             | 4.91                        |
| February    | 4.14                            | 5.28                       | 75                                | 86                           | 4.29                             | 4.91                        |
| March       | 3.94                            | 5.81                       | 61                                | 75                           | 3.49                             | 4.29                        |
| April       | 3.87                            | 4.86                       | 65                                | 80                           | 3.71                             | 4.57                        |
| May         | 4.27                            | 5.53                       | 70                                | 92                           | 4.00                             | 5.26                        |
| June        | 3.97                            | 5.05                       | 60                                | 82                           | 3.43                             | 4.69                        |
| July        | 3.35                            | 4.75                       | 55                                | 64                           | 3.14                             | 3.66                        |
| Average     | 4.92                            | 6.21                       | 86                                | 99                           | 4.90                             | 5.66                        |

\* Calculated from the shillings per bag value on assumption that each bag contains 210 lbs.

pound in Oritamerin Market--a drop of 54 percent from July 1966. Wholesale prices fell even more during the same period, from 135 to 55 shillings per bag--a drop of 59 percent. The comparable retail and wholesale price falls in Dugbe Market were 50 and 56 percent respectively.

As in the case of yams, the major factors responsible for the marked downward movement in gari prices originated on the supply side. Supplies of gari began to increase markedly from August 1966 onwards and it took until February or March for prices to reach a consistently low level. This suggests that even though the yam and maize harvest seasons coincided with the earlier part of this period, supplies were still somewhat scarce and only became more abundant toward the end of the harvest seasons. This is consistent with the biological fact that cassava takes considerably longer to reach maturity than the other commodities. It seems likely that much of the fall in price which occurred during the earlier part of the period resulted from a substitution by consumers of the other more abundant staples for gari, while during the later period increased supplies of gari were the governing factor.

The brief rise in the price level which occurred during April-June 1967 can possibly be attributed to the seasonal increase in demand resulting from the general pre-harvest scarcity of other staple foods and the fact that gari is the only major staple food available in any quantity throughout the year; this is due to the fact that cassava can be harvested all year, which eliminates the need for long-term storage. The downturn in price which follows this seasonal price rise is caused primarily by the harvest of fresh (immature) maize and by the availability of new season yam and dried maize.

Figure 10.5 indicates that the level of both retail and wholesale prices in Dugbe Market is generally considerably above that in Oritamerin Market. As Table 10.21 discloses, the average price difference at the retail level for the 13 months of the SRI Retail Price Series for both markets was 1.29 pence per pound, or 26 percent of the price in Oritamerin Market. By month, however, this difference ranged from 10 percent to 52 percent of the price in Oritamerin Market; for individual weeks the price difference was even greater.

For the 55 individual weeks included in the SRI Retail Price Series, Table 10.22 shows that the average price in Dugbe Market was lower than in Oritamerin on only five occasions. Of the remaining weeks, it was 2.0 pence per pound or over on seven occasions; and between 1.0 and 2.0 pence for 31 weeks.

Both Oritamerin and Dugbe Markets are major wholesale markets, although the central native markets located in Oritamerin Market are the most important in terms of volume handled and general price level determination. Table 10.21 indicates that the level of wholesale prices in Dugbe Market averaged 16 percent higher than Oritamerin Market during the period July 1966 to July 1967. In absolute terms, this meant 13.3 shillings per bag, or about 0.76 pence per pound. The difference by month ranged from 2 to 37 percent.

The wholesale price difference between the two markets averages about 10 percent less than the retail price difference. Only in two of the 13 months did the wholesale price difference actually exceed the retail price difference. This tends to support the hypothesis that the retail market for

Table 10.21

GARI - AMOUNT AVERAGE RETAIL AND WHOLESALE PRICES IN DUGBE MARKET WERE ABOVE  
THOSE IN ORITAMERIN MARKET BY MONTH - SRI PRICE SERIES FOR IBADAN-1966-67

| Month       | Retail Price Difference |                                | Wholesale Price Difference |                  |                                |
|-------------|-------------------------|--------------------------------|----------------------------|------------------|--------------------------------|
|             | Pence per Pound         | As Percent of Oritamerin Price | Shillings per Bag          | Pence per Pound* | As Percent of Oritamerin Price |
| <b>1966</b> |                         |                                |                            |                  |                                |
| July        | 1.17                    | 15.9                           | 12                         | .69              | 8.9                            |
| August      | 1.45                    | 21.5                           | 9                          | .51              | 7.0                            |
| September   | 1.68                    | 27.2                           | 25                         | 1.43             | 24.5                           |
| October     | 2.68                    | 51.7                           | 14                         | .80              | 13.2                           |
| November    | 1.59                    | 36.0                           | 6                          | .34              | 6.5                            |
| December    | .95                     | 17.5                           | 2                          | .12              | 2.2                            |
| <b>1967</b> |                         |                                |                            |                  |                                |
| January     | .53                     | 10.3                           | 12                         | .68              | 16.2                           |
| February    | 1.14                    | 27.5                           | 11                         | .62              | 14.7                           |
| March       | 1.87                    | 47.5                           | 14                         | .80              | 23.0                           |
| April       | .99                     | 25.6                           | 15                         | .86              | 23.1                           |
| May         | 1.26                    | 29.5                           | 22                         | 1.26             | 31.4                           |
| June        | 1.08                    | 27.2                           | 22                         | 1.26             | 36.7                           |
| July        | 1.40                    | 41.8                           | 9                          | .52              | 16.4                           |
| Average     | 1.29                    | 26.2                           | 13.3                       | .76              | 15.5                           |

\* Assuming each bag contains 210 lbs.

Table 10.22

GARI - FREQUENCY OF CHANGE IN AVERAGE RETAIL PRICE FROM PREVIOUS WEEK IN ORITAMERIN MARKET BY DIFFERENCE IN AVERAGE RETAIL PRICE OF DUGBE MARKET FROM ORITAMERIN MARKET - SRI RETAIL PRICE SERIES FOR IBADAN - WEEKLY DATA - JULY 9, 1966-JULY 29, 1966

| Change in Average Price from Previous Week in Oritamerin Market | Difference in Average Price of Dugbe Market from Oritamerin Market |                      |                |          |                |                 | Total     |
|-----------------------------------------------------------------|--------------------------------------------------------------------|----------------------|----------------|----------|----------------|-----------------|-----------|
|                                                                 | Higher                                                             |                      |                | Same     | Lower          |                 |           |
|                                                                 | 2.0 d/lb & Over                                                    | 1.0 & Under 2.0 d/lb | Under 1.0 d/lb |          | Under 1.0 d/lb | 1.0 d/lb & Over |           |
| <u>Increase</u>                                                 |                                                                    |                      |                |          |                |                 |           |
| 1.0 d/lb & over                                                 | -                                                                  | -                    | 1              | -        | 1              | 1               | 3         |
| 0.5 & under 1.0 d/lb                                            | -                                                                  | 2                    | 1              | -        | -              | -               | 3         |
| Under 0.5 d/lb                                                  | 1                                                                  | 10                   | 2              | -        | -              | -               | 13        |
| <u>Same</u>                                                     | -                                                                  | -                    | 1              | -        | -              | -               | 1         |
| <u>Decrease</u>                                                 |                                                                    |                      |                |          |                |                 |           |
| Under 0.5 d/lb                                                  | 3                                                                  | 13                   | 7              | -        | 1              | 1               | 25        |
| 0.5 & under 1.0 d/lb                                            | 2                                                                  | 3                    | -              | -        | -              | 1               | 6         |
| 1.0 d/lb & over                                                 | 1                                                                  | 3                    | -              | -        | -              | -               | 4         |
| <b>Total</b>                                                    | <b>7</b>                                                           | <b>31</b>            | <b>12</b>      | <b>-</b> | <b>2</b>       | <b>3</b>        | <b>55</b> |

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gari in Dugbe Market is not as closely linked to the price-determining central native markets as is the wholesale gari market, and that consumers are less sensitive than retailers in Dugbe Market to the price difference existing between the two market areas.

Table 10.23 presents additional information on the magnitude of the price differences existing at the wholesale level between the various markets in Ibadan. It indicates that only 11 percent of the wholesalers of gari interviewed in Dugbe Market with the Wholesale Traders Questionnaire thought that their selling price was either the same or lower than that in the other markets in Ibadan. The remaining 89 percent admitted that the price of gari was actually lower in the other markets; 31 percent thought that their price was less than 5 shillings per bag higher, 44 percent quoted the difference as between 5 and 10 shillings per bag, while 14 percent suggested the difference was 10 shillings per bag or more.

The wholesale price of gari in the residential market (Mokola Market) was generally considered by the wholesalers themselves to be 10 shillings per bag or more higher than in the other markets in Ibadan. The wholesale price in all of the markets comprising the central native market complex is generally quite comparable, although it is perhaps fractionally lower in Oritamerin Market.

It would seem that both at the retail and wholesale levels the average price difference per transaction between Oritamerin and Dugbe Markets exceeded the transportation cost for the two miles between them

TABLE 10.23

GARI - PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN  
 BY PRICE DIFFERENCE (IN SHILLINGS/BAG) BETWEEN MARKETS AND BY MARKET  
 WHOLESALERS QUESTIONNAIRE-IBADAN  
 FEBRUARY - MAY 1967

| Price difference (in shillings/<br>bag) between Markets | Market           |                 |      |                 |                  |             |             | Total           |
|---------------------------------------------------------|------------------|-----------------|------|-----------------|------------------|-------------|-------------|-----------------|
|                                                         | Central Native   |                 |      |                 |                  | Central New | Residential |                 |
|                                                         | Oja<br>Iba       | Orita-<br>merin | Gege | Agbeni          | Other            | Dugbe       | Mokola      |                 |
| <u>Higher in other Marke</u>                            |                  |                 |      |                 |                  |             |             |                 |
| 10 and over                                             | -                | 11              | -    | 11              | 12               | -           | -           | 6               |
| 5 and under 10                                          | 17               | 9               | -    | -               | 12               | -           | -           | 5               |
| 1 and under 5                                           | -                | 7               | 18   | 33              | -                | 3           | -           | 7               |
| <u>Same as in other Mark</u>                            |                  |                 |      |                 |                  |             |             |                 |
|                                                         | 67               | 62              | 73   | 44              | 71               | 8           | -           | 45              |
| <u>Lower in other Market</u>                            |                  |                 |      |                 |                  |             |             |                 |
| 1 and under 5                                           | -                | 9               | -    | 11              | -                | 31          | -           | 12              |
| 5 and under 10                                          | 17               | 2               | 9    | -               | -                | 44          | 14          | 15              |
| 10 and over                                             | -                | -               | -    | -               | 6                | 14          | 86          | 9               |
| Total percent                                           | 101 <sup>+</sup> | 100             | 100  | 99 <sup>+</sup> | 101 <sup>+</sup> | 100         | 100         | 99 <sup>+</sup> |
| Number of Responses                                     | 6                | 45              | 11   | 9               | 17               | 36          | 7           | 131             |

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<sup>+</sup>Rounding error

during much of the study period. In the case of retail purchases in Dugbe Market, where the average weight of gari purchases observed for the SRI Retail Price Series was found to be 8.23 pounds, an average of 10.6 pence more per purchase was paid in Dugbe Market than in Oritamerin Market. The one-way transportation cost per person varied between 4 and 6 pence. At the whole-sale level, the 13.3 shillings per bag average difference between the two markets far exceeded the cost of transportation. A bag of gari could be either head-loaded or hand-trucked between the two markets for about 2 shillings.

In addition to the influence on price of the locational, structural, and clientele differences between the two markets, some of the price difference may also be accounted for by a quality difference in the gari being sold in each market complex. In general, different supply areas are used, the gari in Dugbe Market usually being of a slightly better quality than that in the central native markets. Perhaps the major difference is that the wholesalers in Dugbe Market are more specialized and procure and stock good second-grade (Ikeko) gari more consistently than do wholesalers in the central native markets.

In terms of fluctuations in the average retail price from week to week, Table 10.22 shows that in 39 of the 55 weeks, the change from the previous week in the average price of gari in Oritamerin Market was less than  $\pm 0.5$  pence per pound. In 9 weeks the change was between  $\pm 0.5$  and 1.0 pence per pound, and in the remaining 7 weeks, the change was  $\pm 1.0$  pence per pound or more.

Relating the change from the previous week in the average retail price in Oritamerin Market to the difference in price between Oritamerin and Dugbe Markets, a rather weak relationship is apparent. In general, the greater the decrease in the average price from the previous week in Oritamerin Market, the more the price in Dugbe Market exceeds that in Oritamerin Market. This is consistent with the contention that the central native markets are the major price determining bodies for gari in Ibadan.

For the most part, gari prices in Dugbe Market were more volatile than in Oritamerin Market; that is, the change in the average price from the previous week was usually higher in Dugbe Market than in Oritamerin Market. This difference in the price behavior between the two markets probably reflects more than anything the fact that Dugbe Market operates almost entirely independently of the central native markets. As the number of gari wholesalers and the quantity handled are smaller, and as the prices in Dugbe Market respond almost exclusively to the market's own supply and demand conditions, it seems reasonable to expect larger price fluctuations than in the central native markets over both the short and the long run.

c. Maize

The retail and wholesale price series collected for maize in Oritamerin and Dugbe Markets are shown graphically in Figure 10.6. (The retail series itself is shown in Appendix Table 10.1.3, while the wholesale series is displayed in Appendix Table 10.5.3.)

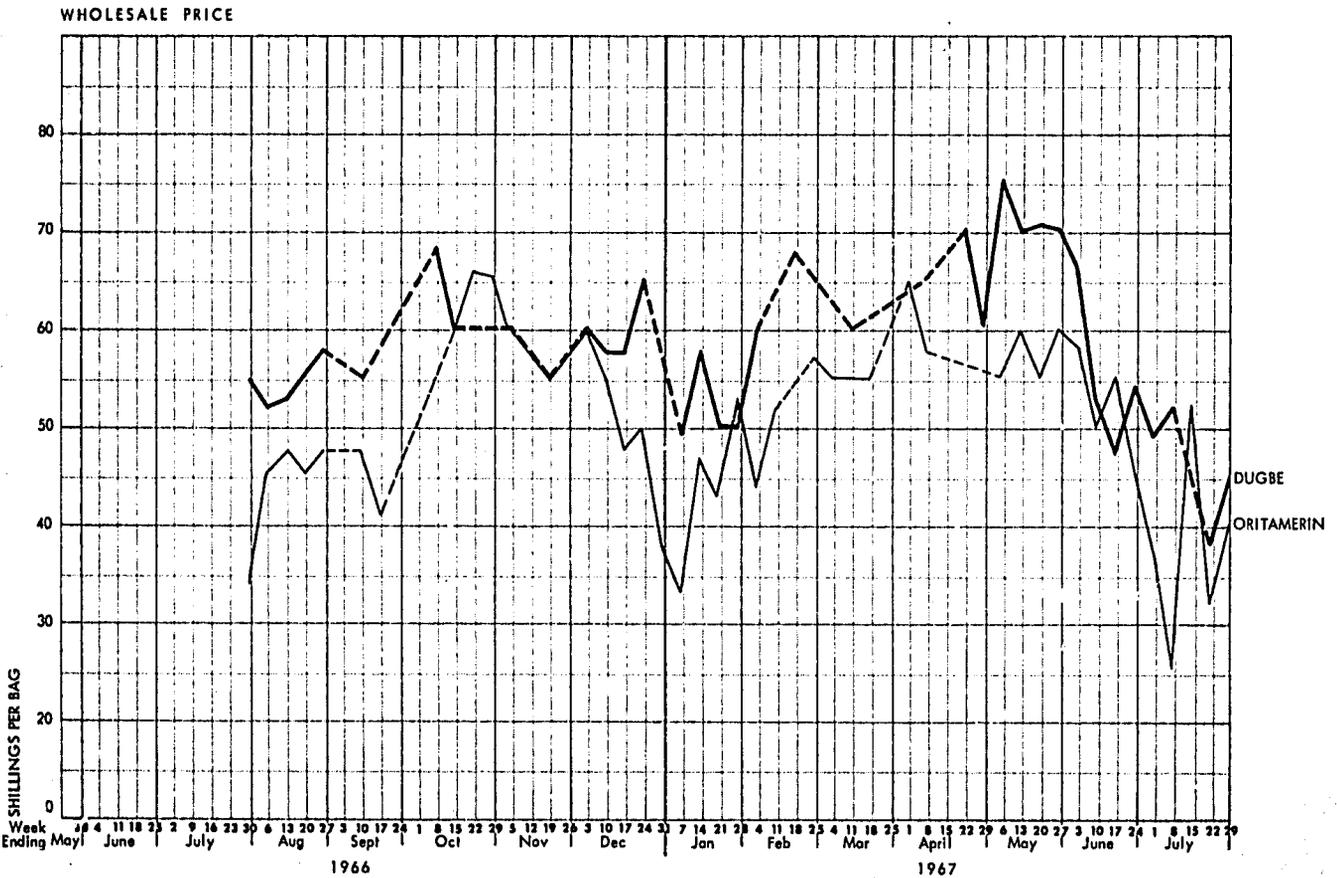
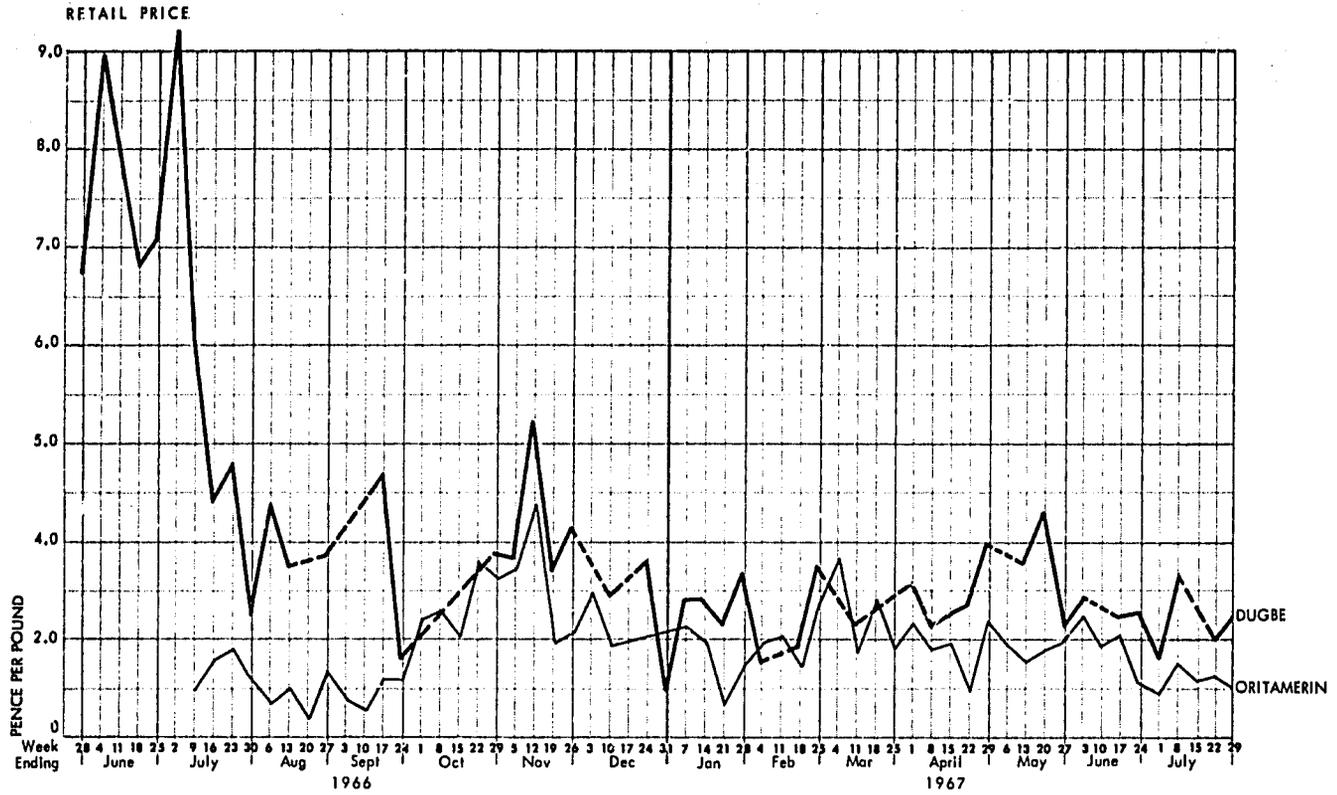
The series are for dried shelled maize. The main buyers of maize in this form are prepared food processors (and sellers) who generally procure their supplies directly from wholesalers. Final consumers do buy dried shelled maize but are relatively unimportant. As a result, retail sales of maize are mostly in a prepared form, such as eko and ogi, with dried shelled maize being somewhat rare. In fact, in Dugbe Market, although considerable quantities of maize are sold at wholesale, relatively little dried shelled maize is sold by retailers. Consequently, it was frequently difficult to observe sufficient transactions to arrive at an average retail price for inclusion in the retail price series for Dugbe Market.

Following the harvest seasons for maize, supplies in the Ibadan markets tend to be somewhat sporadic. Although almost always available in considerable quantities, stocks fluctuate widely. For the traders acquiring and transporting maize from the supply areas, the resulting unpredictable behavior of maize prices represents a significant element of uncertainty and hence risk. In discussions during the project period many assemblers supplying maize to Ibadan complained of losses resulting from unexpected price changes.

In general terms, maize prices fell markedly following the appearance of large quantities of early-season shelled maize during July 1966. Prices then rose slowly until the appearance of late-season shelled maize during November, after which they fell again, reaching a general low point about January 1967.

Figure 10.6

MAIZE: RETAIL AND WHOLESALE PRICES IN ORITAMERIN AND DUGBE MARKETS, IBADAN MAY 1966-JULY 1967



SOURCE: Stanford Research Institute.

Wholesale prices in particular then rose until the appearance of early-season shelled maize during June 1967, when prices again turned downward.

It is interesting to note that during February-May 1967, the retail price of maize remained about the same in Oritamerin Market and increased only slightly in Dugbe Market. This is usually a period of relative food scarcity lasting through the dry season and until the early harvests of the new crop year--about late May-early June for maize. However, the wholesale price increased by about 40 percent during this period. As may be expected, this period is usually considered by retailers an unprofitable time to be handling maize.

Storing maize by traditional methods generally entails considerable loss, particularly from insects and other pests. This is reflected in the price of maize in at least two ways. First, the price of early-season maize is generally lower than that of late-season maize once supplies of the latter are plentiful. Thus, during the week of February 3, 1967, the price of early-season dried shelled (white) maize in Oritamerin Market was 32.5 shillings per bag, while the equivalent type of late-season maize was being sold for 45 shillings per bag or 38 percent more. The early-season maize had been stored for about five months and was in considerably poorer condition than the late-season maize which had only been stored for about one month.

Second, for late-season maize, the seasonal price rise that normally occurs after storage mainly reflects the substantial loss of product that occurs in storage. This is the largest component of storage costs. A farmer storing maize is generally reluctant to sell his surplus if the value of the quantity remaining after storage does not at least equal its value at harvest; that is, the loss of commodity resulting from storage must be at least matched by an equivalent price rise. As a result, at least at the assembling and wholesale levels, a rise in the real price of maize usually occurs. However, at the retail

level, because the poorer quality is clearly visible, it is often difficult to raise prices commensurately--at this time, other staple foods are often substituted for maize.

Table 10.24 presents the results of a further analysis of the retail price series data. First, it shows that in only two of the 39 weeks when data were available for Dugbe Market, the average retail price in Dugbe Market was actually lower than in Oritamerin Market. In the remaining 37 weeks it was higher--in 15 by less than 0.5 pence per pound, in 12 by 0.5 and less than 1.0 pence per pound, and in 10 by 1.0 pence per pound and over. Wholesale prices followed a similar pattern, with wholesalers of maize in Dugbe Market generally charging somewhat more than those in Oritamerin Market.

Second, for 39 of the 53 weeks of observations, the change in the average price of maize in Oritamerin Market from the previous week was less than  $\pm 0.5$  pence per pound--that is, less than 20 percent. In 11 weeks the average price change from the previous week in Oritamerin Market was between  $\pm 0.5$  and 1.0 pence per pound. In only three weeks was it greater than  $\pm 1.0$  pence per pound. In general, the retail price movements in Dugbe Market tended to follow those in Oritamerin Market. This was also true for wholesale prices.

Even though the absolute price changes from week to week are not as great as for rice or cowpeas, the relatively low unit price of maize means that the changes are often quite sizable. For example, in about 14 of the 53 weeks, the change in the average retail price in Oritamerin Market from the previous week was about 20 percent or higher. With relatively low margins, it is easy to understand how losses may be incurred; in the same way, fortuitous gains are also frequently made.

The central native markets are again the main foci of the wholesale maize trade in Ibadan. Prices are certainly lower. Although the maize trade in Dugbe Market is conducted somewhat in isolation from that in the central native

Table 10.24

MAIZE - FREQUENCY OF CHANGE IN AVERAGE RETAIL PRICE FROM PREVIOUS WEEK IN ORITAMERIN MARKET  
 BY DIFFERENCE IN AVERAGE RETAIL PRICE OF DUGBE MARKET FROM ORITAMERIN MARKET - SRI RETAIL  
 PRICE SERIES FOR IBADAN - WEEKLY DATA - JULY 9, 1966-JULY 29, 1967

| Change in Average<br>Price from Previous Week<br>in Oritamerin Market | Difference in Average Price of Dugbe Market<br>from Oritamerin Market |                         |                   |      |                   |                    | Observations<br>for Dugbe<br>Market | Total |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------|-------------------|------|-------------------|--------------------|-------------------------------------|-------|
|                                                                       | Higher                                                                |                         |                   | Same | Lower             |                    |                                     |       |
|                                                                       | 1.0 d/lb<br>& Over                                                    | 0.5 & Under<br>1.0 d/lb | Under<br>0.5 d/lb |      | Under<br>0.5 d/lb | 0.5 d/lb<br>& Over |                                     |       |
| <u>rise</u>                                                           |                                                                       |                         |                   |      |                   |                    |                                     |       |
| .0 d/lb & over                                                        | -                                                                     | -                       | -                 | -    | -                 | 1                  | -                                   | 1     |
| .5 & under 1.0 d/lb                                                   | 1                                                                     | 1                       | 1                 | -    | -                 | -                  | 3                                   | 6     |
| Under 0.5 d/lb                                                        | 7                                                                     | 2                       | 6                 | -    | 1                 | -                  | 4                                   | 20    |
| <u>Same</u>                                                           | -                                                                     | 1                       | 1                 | -    | -                 | -                  | -                                   | 2     |
| <u>Decrease</u>                                                       |                                                                       |                         |                   |      |                   |                    |                                     |       |
| Under 0.5 d/lb                                                        | 2                                                                     | 4                       | 5                 | -    | -                 | -                  | 6                                   | 17    |
| 0.5 & under 1.0 d/lb                                                  | -                                                                     | 3                       | 1                 | -    | -                 | -                  | 1                                   | 5     |
| 1.0 d/lb & over                                                       | -                                                                     | 1                       | 1                 | -    | -                 | -                  | -                                   | 2     |
| <u>Total</u>                                                          | 10                                                                    | 12                      | 15                | -    | 1                 | 1                  | 14                                  | 53    |

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markets, the two markets do generally respond in the same direction, with Dugbe Market often lagging in its response.

The cross-tabulation shown in Table 10.24 between the change in the average price from the previous week in Oritamerin Market to the difference between the two markets produces no real evidence of a relationship. On some occasions, Dugbe Market has a higher price response to a change in market conditions than Oritamerin Market. On other occasions, the situation is reversed.

d. Rice

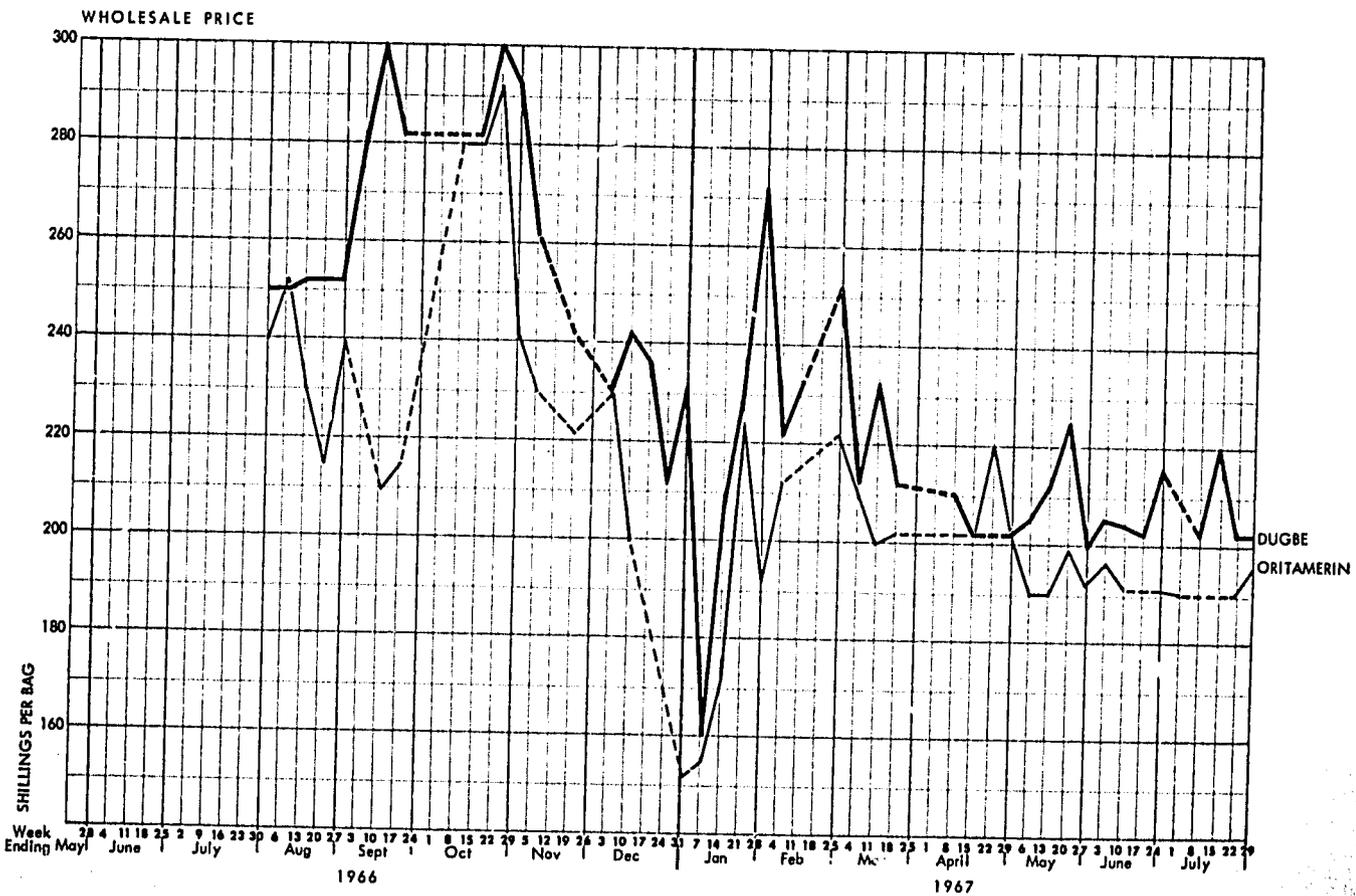
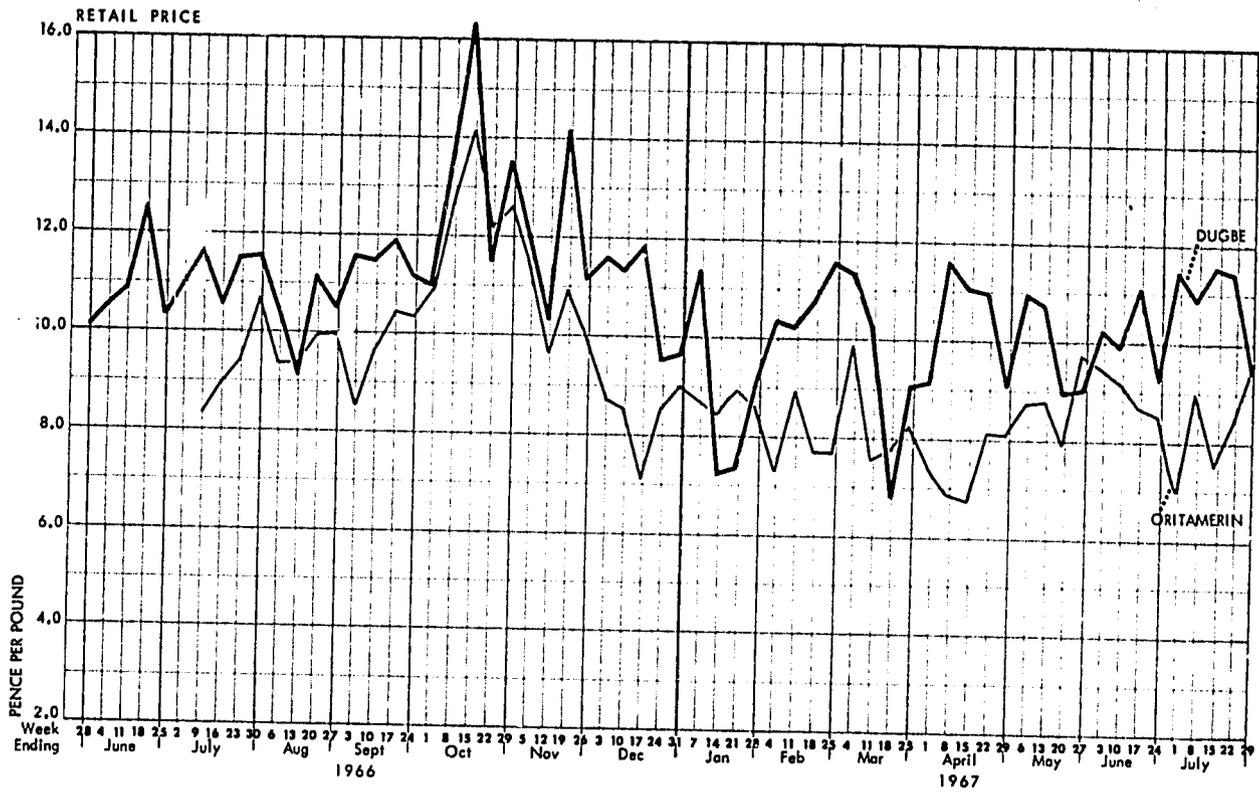
Figure 10.7 is a graphical presentation of the retail and wholesale price series collected by the project for rice in Oritamerin and Dugbe Markets. (The retail series itself is shown in Appendix Table 10.1.4, while the wholesale series is displayed in Appendix Table 10.5.4. The wholesale price series for rice from other sources are presented in Appendix Tables 10.5.5 to 10.5.7.).

One problem throughout the price collection period was the existence of rice from several different supply areas, each with its own special variety, quality and characteristics. Northern Region (Niger Province-Tapa rice was predominant in the central native markets, while Eastern Region (Abakaliki Province) rice was predominant in Dugbe Market until supplies became unavailable during April 1967, after which Northern Region (Benue Province-Oturkpo) rice took its place. Rice produced within the Region was also available, as well as imported rice.

The retail price series for Oritamerin Market is based as much as possible on Niger Province rice, while that for Dugbe Market is for Abakaliki Province rice until April 28, 1967, and for Benue Province rice after that date. The wholesale price series for both markets are for Abakaliki Province rice until April 28, 1967 and thereafter Benue Province rice.

Figure 10.7

RICE: RETAIL AND WHOLESALE PRICES IN ORITAMERIN AND DUGBE MARKETS, IBADAN MAY 1966-JULY 1967



SOURCE: Stanford Research Institute.

The effect on price of the place of origin was often quite considerable. In general, the parboiling and milling procedures employed by handlers of rice in Abakaliki Province were superior to those used in Niger Province, and resulted in the marketing of a better quality rice at a higher price. Table 10.25 presents the wholesale price of rice from several different sources of supply in Oritamerin and Dugbe Markets for two different dates. The pence per pound price based on the actual weight of the bags being sold indicates that the small quantity of rice imported from Texas (U.S.A.) was selling for the highest relative price. Of the Nigerian sources, the order (in terms of descending price) was Eastern Region, Northern Region and finally Western Region. It can be seen that even within the same market, a considerable variation in the pence per pound price existed as a result of different prices and weights of the unit of sale (bag). For example, in the February observations in Dugbe Market, the range in price of three observations of Eastern Region rice was from 10.56 to 12.00 pence per pound.

The overwhelming majority of the rice sold in Ibadan is imported into Western Nigeria. This results not only in the supply pipeline being longer but also the stocks in Ibadan being generally large enough to last for a much longer period than for the locally-produced staple foods. Consequently, two rather different characteristics of supply exist for rice and cowpeas when compared to the other commodities.

First, whereas the time lag between a decision to procure supplies from a supply area and their delivery in Ibadan is generally only 1-3 days for locally produced staple foods, in the case of rice and cowpeas it may well be one to two weeks. That is, there will generally be a considerable delay in increasing supplies to meet an unanticipated change in market conditions. It could be expected therefore, that a major shortage in supply would result in relatively large price fluctuations, often persisting for several weeks.

Second, because of the high fixed cost in procuring supplies, particularly

Table 10.25

WHOLESALE PRICE OF RICE FROM SEVERAL SOURCES OF SUPPLY  
BY DATE AND BY MARKET--SRI WHOLESALE PRICE SERIES FOR IBADAN

| Date            | Source of Supply         |                           | Oritamerin Market    |                    |                     | Dugbe Market         |                    |                     |
|-----------------|--------------------------|---------------------------|----------------------|--------------------|---------------------|----------------------|--------------------|---------------------|
|                 | Region<br>or<br>Imported | Province<br>or<br>Country | Price<br>(Shillings) | Weight<br>(Pounds) | Pence<br>Per<br>lb. | Price<br>(Shillings) | Weight<br>(Pounds) | Pence<br>Per<br>lb. |
| <u>1966</u>     |                          |                           |                      |                    |                     |                      |                    |                     |
| September 12-21 | Western                  | Ilesha                    | 160                  | 235                | 8.17                |                      |                    |                     |
|                 |                          | Ekiti                     | 190                  | 235                | 9.70                |                      |                    |                     |
|                 | Eastern                  | Abakaliki                 | 210                  | 250                | 10.08               | 282                  | 254                | 13.33               |
|                 |                          |                           | 232                  | 252                | 11.05               |                      |                    |                     |
|                 | Northern                 | Niger                     | 222                  | 254                | 10.49               | 250                  | 245                | 12.24               |
|                 |                          |                           |                      |                    |                     | 250                  | 235                | 12.77               |
|                 | Imported                 | Thailand                  |                      |                    |                     | 110                  | 110                | 12.00               |
|                 |                          |                           |                      |                    |                     | 250                  | 238                | 12.60               |
|                 | Texas                    |                           |                      |                    | 115                 | 100                  | 13.80              |                     |
| <u>1967</u>     |                          |                           |                      |                    |                     |                      |                    |                     |
| February 16     | Eastern                  | Abakaliki                 |                      |                    |                     | 252                  | 252                | 12.00               |
|                 |                          |                           |                      |                    |                     | 220                  | 250                | 10.56               |
|                 |                          |                           |                      |                    |                     | 220                  | 236                | 11.19               |
|                 | Northern                 | Benue<br>Ilorin<br>Niger  |                      |                    |                     | 192                  | 251                | 9.18                |
|                 |                          |                           |                      |                    | 150                 | 210                  | 250                | 10.08               |
|                 | Imported                 | Texas                     |                      |                    |                     | 190                  | 233                | 9.78                |
|                 |                          |                           |                      |                    |                     | 130                  | 99                 | 15.75               |

those resulting from the time and cost related to the distance between the supplying and consuming markets, traders in rice and cowpeas generally purchase larger quantities less often than traders in the locally produced staple foods. This results in fairly large stocks of both rice and cowpeas being held, which help to reduce price fluctuations. However, it also creates a tendency for the major flow of these commodities to Ibadan to be controlled by fewer traders.

Supplies of rice during the period of the series were frequently quite uncertain, mostly as a result of the political instability. Following the July 29, 1966, counter-coup d'état, supplies from the Niger Province area of Northern Nigeria became somewhat scarce because of locally imposed restrictions and the producers' feeling that they should withhold supplies for their own use during the period of impending civil strife. Of much greater impact was the Regionally-decreed prohibition against the export of foodstuffs from Eastern Nigeria after that date. Although traders in Ibadan claimed to have supplies of "Abakaliki" rice which had been smuggled out of Eastern Nigeria for more than six months, supplies had dried up entirely by late April 1967. During and after this transitional period, rice which formerly went to Eastern Nigeria from the Benue Province producing area of Northern Nigeria was diverted to other markets, including Ibadan; Ibadan traders claimed that they acquired their supplies through Oturkpo and Jos. (These supply areas are illustrated in Map 7.5).

This uncertainty about supplies probably had its greatest effect on price during the period August-October 1966. Immediately following the civil unrest in Northern Nigeria of late September-early October 1966, the price of Niger Province rice in Oritamerin Market was 280 shillings per bag; two or three weeks before it had been 190 shillings. Following that period, it became evident that sufficient supplies probably did exist in the country although the

problem of reaching the holders of these supplies was still quite real.

By the end of the period, a reasonable adjustment seemed to have been made to the changed supply situation.

The low wholesale prices during late December-early January may well have been due to a temporary abundance of rice resulting from an over-estimation of the increase in consumption of rice during the festival period. This fall in wholesale prices did not seem to be reflected in the retail price prevailing in Oritamerin Market, whereas it was mirrored to a considerable extent in Dugbe Market, although with some delay.

In general, the retail price series for rice is characterized by large and frequent price fluctuations. As Table 10.26 indicates, the change in average price from the previous week in Oritamerin Market was  $\pm 1.0$  pence per pound or more in 26 of the 55 weeks. In 11 of the remaining weeks, the change was between  $\pm 0.5$  and  $\pm 1.0$  pence per pound, while in the other 18 weeks, it was less than  $\pm 0.5$  pence per pound. The average retail price in Dugbe Market fluctuated just as much as, if not more than, the price in Oritamerin Market. However, because rice is a relatively expensive foodstuff, costing between 7 and 12 pence per pound throughout the period, the relative price movements are frequently not as large as for the lower priced locally-produced staple foods.

As for the other commodities, rice in Oritamerin Market is generally lower-priced than in Dugbe Market. As Table 10.26 demonstrates for the price series for the two markets, Oritamerin Market was lower in 48 of the 55 weeks and higher during the other seven weeks. While in 22 weeks Dugbe Market was less than 1.5 pence per pound higher, in 16 weeks it was between 1.5 and 3.0 pence per pound higher and 3.0 pence per pound or over in ten weeks. However, the quality of rice sold in Dugbe Market was generally superior to that being sold in Oritamerin Market.

Table 10.26

RICE - FREQUENCY OF CHANGE IN AVERAGE RETAIL PRICE FROM PREVIOUS WEEK IN ORITAMERIN MARKET  
 BY DIFFERENCE IN AVERAGE RETAIL PRICE OF DUGBE MARKET FROM ORITAMERIN MARKET - SRI RETAIL  
 PRICE SERIES FOR IBADAN - WEEKLY DATA - JULY 9, 1966-JULY 29, 1967

| Price from Previous Week<br>in Oritamerin Market | Difference in Average Price of Dugbe Market<br>from Oritamerin Market |                         |                   |      |                   |                    | Total     |
|--------------------------------------------------|-----------------------------------------------------------------------|-------------------------|-------------------|------|-------------------|--------------------|-----------|
|                                                  | Higher                                                                |                         |                   | Same | Lower             |                    |           |
|                                                  | 3.0 d/lb<br>& Over                                                    | 1.5 & Under<br>3.0 d/lb | Under<br>1.5 d/lb |      | Under<br>1.5 d/lb | 1.5 d/lb<br>& Over |           |
| <u>Increase</u>                                  |                                                                       |                         |                   |      |                   |                    |           |
| 1.0 d/lb & over                                  | 1                                                                     | 4                       | 5                 | -    | 2                 | 1                  | 13        |
| 0.5 & under 1.0 d/lb                             | 1                                                                     | 2                       | 3                 | -    | -                 | 1                  | 7         |
| Under 0.5 d/lb                                   | -                                                                     | 2                       | 4                 | -    | 1                 | -                  | 7         |
| <u>Same</u>                                      | -                                                                     | -                       | -                 | -    | -                 | -                  | -         |
| <u>Decrease</u>                                  |                                                                       |                         |                   |      |                   |                    |           |
| Under 0.5 d/lb                                   | 2                                                                     | 4                       | 5                 | -    | -                 | -                  | 11        |
| 0.5 & under 1.0 d/lb                             | 1                                                                     | 1                       | 2                 | -    | -                 | -                  | 4         |
| 1.0 d/lb & over                                  | <u>5</u>                                                              | <u>3</u>                | <u>3</u>          | -    | <u>2</u>          | -                  | <u>13</u> |
| Total                                            | 10                                                                    | 16                      | 22                | -    | 5                 | 2                  | 55        |

Although the two markets operate somewhat in isolation, Oritamerin Market is nevertheless the major market determining the general level of rice prices in Ibadan, particularly at the wholesale level. Dugbe Market usually follows Oritamerin Market in the direction of change, generally with a few days' delay. While a strong relationship is not indicated in Table 10.26 between the change in the average price from the previous week in Oritamerin Market and the difference in the average price of Dugbe Market over Oritamerin Market in the same week, it does seem that the larger the price decrease from the previous week in Oritamerin Market, the greater the price difference between the two markets. Conversely, the larger the price increase from the previous week in Oritamerin Market, the smaller the price difference between the two markets. In general then, even at the retail level, Oritamerin Market would seem to be the price-leading market.

It is interesting to note that even though several different sources of supply were used for rice, the pattern of price behavior in Ibadan was similar, though not identical, for all sources of supply. That is, prices for each type of rice tend to change in similar proportions, modified by differing supply situations and consumer preferences.

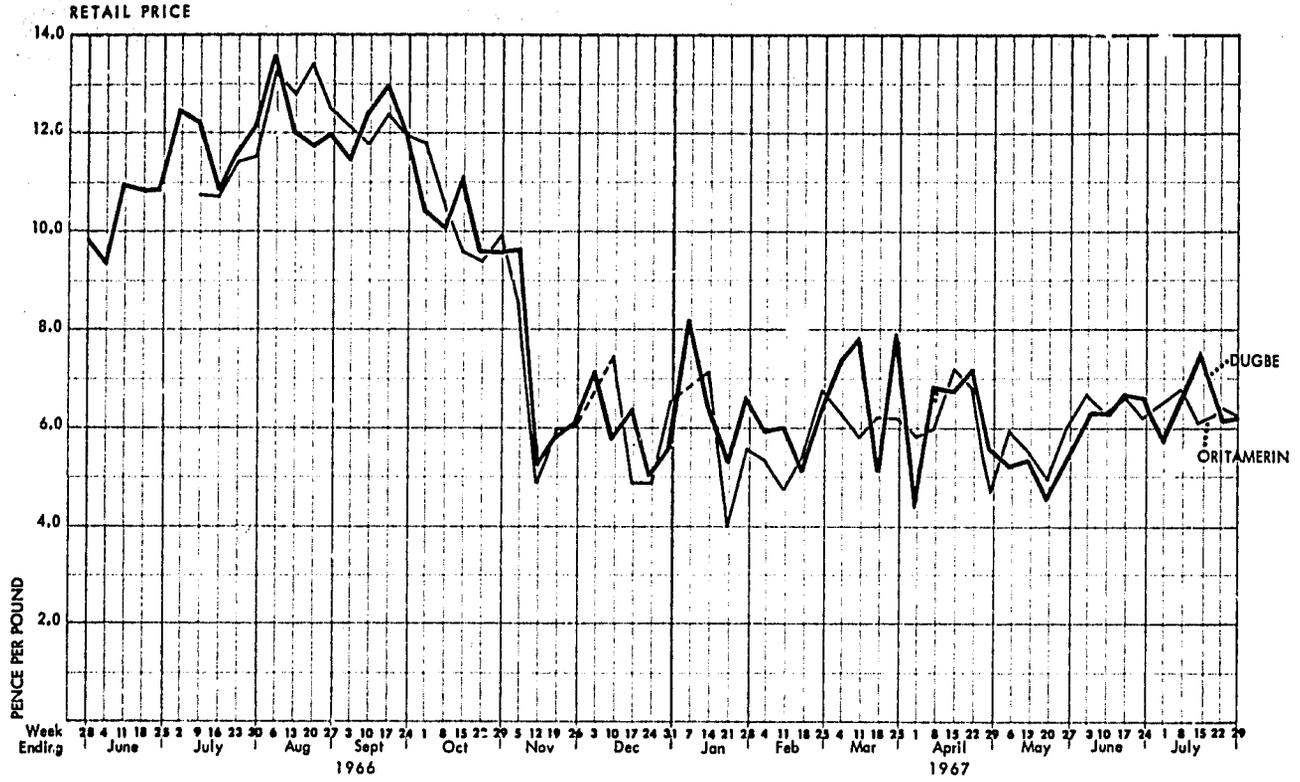
e. Cowpeas

The retail and wholesale price series collected for cowpeas in Oritamerin and Dugbe Markets, Ibadan, are shown graphically in Figure 10.8. (The actual values of the retail price series are shown in Appendix Table 10.1.5 and of the wholesale series in Appendix Table 10.5.8).

Cowpeas, like rice, are mostly imported into the Western Region, so that in market structure and price behavior both commodities are essentially similar. The characteristics resulting from this long-distance factor have already been described in the previous section in relation to rice.

Figure 10.8

COWPEAS: RETAIL AND WHOLESALE PRICES IN ORITAMERIN AND DUGBE MARKETS, IBADAN MAY 1966-JULY 1967



SOURCE: Stanford Research Institute.

The period following the cowpea harvest in the Northern Region supply area, when supplies of new season cowpeas become plentiful in Ibadan, can easily be seen for 1966 in Figure 10.8 as the last week of October-first week of November. Several points are evident from this data. First, the highest price level of the 1965-66 season was reached about two months before the availability of new season Northern Region cowpeas. Two explanations are possible: (1) the existence of a price disequilibrium due to the scarcity of cowpeas being over-estimated, i.e., it was assumed that consumer demand could not be met from the remaining stocks; and (2) the earlier availability of cowpeas produced in the Western Region and the contiguous part of Northern Nigeria. The civil disturbances in Northern Nigeria during that period do not seem to have been a particularly important factor. In fact, the movement to Ibadan of new-season Northern Region cowpeas coincided with the major period of civil disturbance in that Region.

Second, both at the retail and wholesale levels, the price of new-season Northern Region cowpeas in Oritamerin Market started falling one week earlier than in Dugbe Market. More than anything, this probably resulted from the greater effectiveness of the cowpea traders associations in Dugbe Market in holding up the price of old-season cowpeas until stocks had been entirely cleared in the market. This occurred up to about two weeks earlier for wholesalers than for retailers.

Third, while wholesale prices generally fell by about 50 percent over a period of three to four weeks following the appearance of new season Northern Region cowpeas, retail prices were maintained at their previous level for several weeks before dropping precipitously in a matter of days. The fall in the average price of cowpeas during the week ending November 12, 1966 in Dugbe Market was from 9.59 to 5.18 pence per pound or a drop of 47 percent. The retail price fall, once it occurred, about equaled the fall in the wholesale price.

And fourth, within days of the retail price level having dropped the same as wholesale prices, a three-to four-week upward movement in price occurred. During this period, wholesale prices rose about 20 percent while retail prices rose somewhat more--about 33 percent. It is possible that wholesalers over-estimated the necessary price drop for the new season cowpeas as a result of the accumulation of considerable stocks in Ibadan before retail prices reflected their presence. Regardless of the reason, the price of cowpeas did rise significantly following an exaggerated early drop in price.

Throughout the whole period, the wholesale and retail prices moved roughly in consonance. The only major exception occurred at the time of the appearance of new-season Northern Region cowpeas and in late December-early January, when price movements were divergent. In general, retail prices follow wholesale prices, although usually with a lag.

Considerable fluctuations from week to week in the average price of cowpeas were also found. As Table 10.27 indicates for Oritamerin Market, the change in the average retail price from the previous week was less than  $\pm 0.5$  pence per pound in 23 of the 54 weeks, between  $\pm 0.5$  and  $\pm 1.0$  pence per pound in 13 weeks, and  $\pm 1.0$  pence per pound or more in 18 weeks. Although in absolute terms these price fluctuations are generally larger than for the locally produced commodities, the difference is narrowed considerably when the higher price level of cowpeas is considered. Nevertheless, the weekly price fluctuations are quite large, particularly in Dugbe Market.

Cowpeas are the only major staple food for which the central native and central new markets operate jointly as a coordinated central market. In general, only one wholesale price exists for Ibadan based on the total supply in the two central market complexes. A significant change in price in one market is usually reflected in the other with little delay. However, small price differences exist between the

Table 10.27

COWPEAS - FREQUENCY OF CHANGE IN AVERAGE RETAIL PRICE FROM PREVIOUS WEEK IN ORITAMERIN MARKET  
 BY DIFFERENCE IN AVERAGE RETAIL PRICE OF DUGBE MARKET FROM ORITAMERIN MARKET - SRI RETAIL  
 PRICE SERIES FOR IBADAN - WEEKLY DATA - JULY 9, 1966-JULY 29, 1967

| Change in Average<br>Price from Previous Week<br>in Oritamerin Market | Difference in Average Price of Dugbe Market<br>from Oritamerin Market |                         |                   |      |                   |                    | Total |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------|-------------------|------|-------------------|--------------------|-------|
|                                                                       | Higher                                                                |                         |                   | Same | Lower             |                    |       |
|                                                                       | 1.5 d/lb<br>& Over                                                    | .75 & Under<br>1.5 d/lb | Under<br>.75 d/lb |      | Under<br>.75 d/lb | .75 d/lb<br>& Over |       |
| <u>Increase</u>                                                       |                                                                       |                         |                   |      |                   |                    |       |
| 1.0 d/lb & over                                                       | -                                                                     | 2                       | 1                 | -    | 5                 | 3                  | 11    |
| 0.5 & under 1.0 d/lb                                                  | -                                                                     | -                       | 2                 | -    | 3                 | 1                  | 6     |
| Under 0.5 d/lb                                                        | -                                                                     | 1                       | 3                 | -    | 2                 | 2                  | 8     |
| <u>Same</u>                                                           | -                                                                     | -                       | 1                 | -    | -                 | -                  | 1     |
| <u>Decrease</u>                                                       |                                                                       |                         |                   |      |                   |                    |       |
| Under 0.5 d/lb                                                        | 2                                                                     | -                       | 6                 | -    | 3                 | 3                  | 14    |
| 0.5 & under 1.0 d/lb                                                  | -                                                                     | 4                       | 1                 | -    | 2                 | -                  | 7     |
| 1.0 d/lb & over                                                       | -                                                                     | 3                       | 1                 | -    | 2                 | 1                  | 7     |
| <u>Total</u>                                                          | 2                                                                     | 10                      | 15                | -    | 17                | 10                 | 54    |

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various markets in Ibadan.

As can be deduced from Table 10.28, Oja Iba market is the major cowpea wholesaling section and lowest-priced area of the central native market. All but two percent of the cowpea wholesalers interviewed there believed that their price was either the same or lower than that in the other markets in Ibadan. Of the cowpea wholesalers interviewed in Dugbe Market, however, 94 percent admitted that their price was above that in the central native markets-- 58 percent said by less than 5 shillings per bag while 36 percent admitted that their price was at least 5 shillings or more per bag higher. These price differences represent those normally prevailing, although over a short period the difference may be somewhat modified; a price change in one market will be reflected in another only when these price differences are extremely out of line.

The price difference at the retail level between Oritamerin and Dugbe Markets can be seen in Table 10.27. No clear trend exists; Dugbe Market was higher than Oritamerin Market in 27 of the 54 weeks and lower in the other 27 weeks. Even in terms of which market is the price-leading market, no clear relationship exists between them. In general, the two markets move closely together at the retail level, with price responses being somewhat the same in both markets, although Dugbe Market often tends to be slightly more extreme in its response

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| Price Difference (in shillings/<br>bag) between Markets | Market                 |                       |                        |                       | Total                  |
|---------------------------------------------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|
|                                                         | Central Native         |                       | Other                  | Central New           |                        |
|                                                         | Oja<br>Iba             | Oritamerin            |                        | Dugbe                 |                        |
| <u>Higher in other Markets</u>                          |                        |                       |                        |                       |                        |
| 10 and over                                             | 2                      | -                     | -                      | -                     | 1                      |
| 5 and under 10                                          | 10                     | 8                     | 17                     | -                     | 6                      |
| 1 and under 5                                           | 24                     | -                     | -                      | -                     | 10                     |
| <u>Same as in other Markets</u>                         | 63                     | 58                    | 67                     | 5                     | 37                     |
| <u>Lower in other Markets</u>                           |                        |                       |                        |                       |                        |
| 1 and under 5                                           | -                      | 33                    | -                      | 58                    | 29                     |
| 5 and under 10                                          | 2                      | -                     | 17                     | 29                    | 15                     |
| 10 and over                                             | -                      | -                     | -                      | 7                     | 3                      |
| <u>Total Percent</u>                                    | <u>101<sup>+</sup></u> | <u>99<sup>+</sup></u> | <u>101<sup>+</sup></u> | <u>99<sup>+</sup></u> | <u>101<sup>+</sup></u> |
| <u>Number of Responses</u>                              | <u>51</u>              | <u>12</u>             | <u>6</u>               | <u>55</u>             | <u>124</u>             |

<sup>+</sup>Rounding error

## 2. Temporal Price Behavior

The longest and seemingly most reliable price series available for staple foods in Western Nigeria are those collected by the Federal Office of Statistics (FOS) for the markets in Ibadan. In addition to the five major staple foods already emphasized, yam flour and cassava flour prices are collected. Collection of prices began in January 1951 with the unit of measure being changed in January 1953 for all commodities except yam. As records relating to the size of the original units are not available, only 1951-52 data for yam have been included in the following analysis.

Although Lagos is a politically separate territory, economically it is very closely related to Western Nigeria, particularly in its dependence on sources of supply for foodstuffs. A priori, it might be expected that the behavior of staple food prices in Ibadan and Lagos would be markedly similar. Further, Lagos, like Ibadan, has a relatively long and apparently reliable set of price series available. For the five major staple foods studied, price data from 1954 are available and have been used in the following analysis, while for yam flour and cassava flour, data from 1958 have been used.

Both Ibadan and Lagos contain major FOS offices with the result that price data collection and analysis has received more careful and consistent supervision than those price series collected in the other urban centers in Western Nigeria. The series collected in some of these urban centers between 1952 and 1956 by the Ministry of Agriculture and published in the Ministry's "Crop and Weather Report" do not appear to be comparable either in method of collection or basis to the FOS series beginning in 1957. These FOS series are, in turn, generally more complete and reliable than the producer market price series collected by the Ministry of Agriculture and Natural Resources and processed by the Ministry of Economic Planning and Social Development.

In the following sections, major emphasis is placed on the analysis of the FOS Ibadan price series. Analysis of the FOS Lagos series is also emphasized, but mainly for purposes of comparison. Particularly in the analysis of seasonal price behavior, FOS price series for seven other urban centers in Western Nigeria are also included. The location of these urban centers and the distances between them are illustrated in Map 10.1. The method of analysis has already been described in Chapter II.

a. Yam

The average monthly retail price and the centered 12-month moving average price for yam in Ibadan for the period January 1951 to June 1967 is shown graphically in Figure 10.9. (A semi-logarithmic scale has been used in this figure.) The complete analysis of the FOS yam data for Ibadan is contained in Appendix Table 10.7.1.

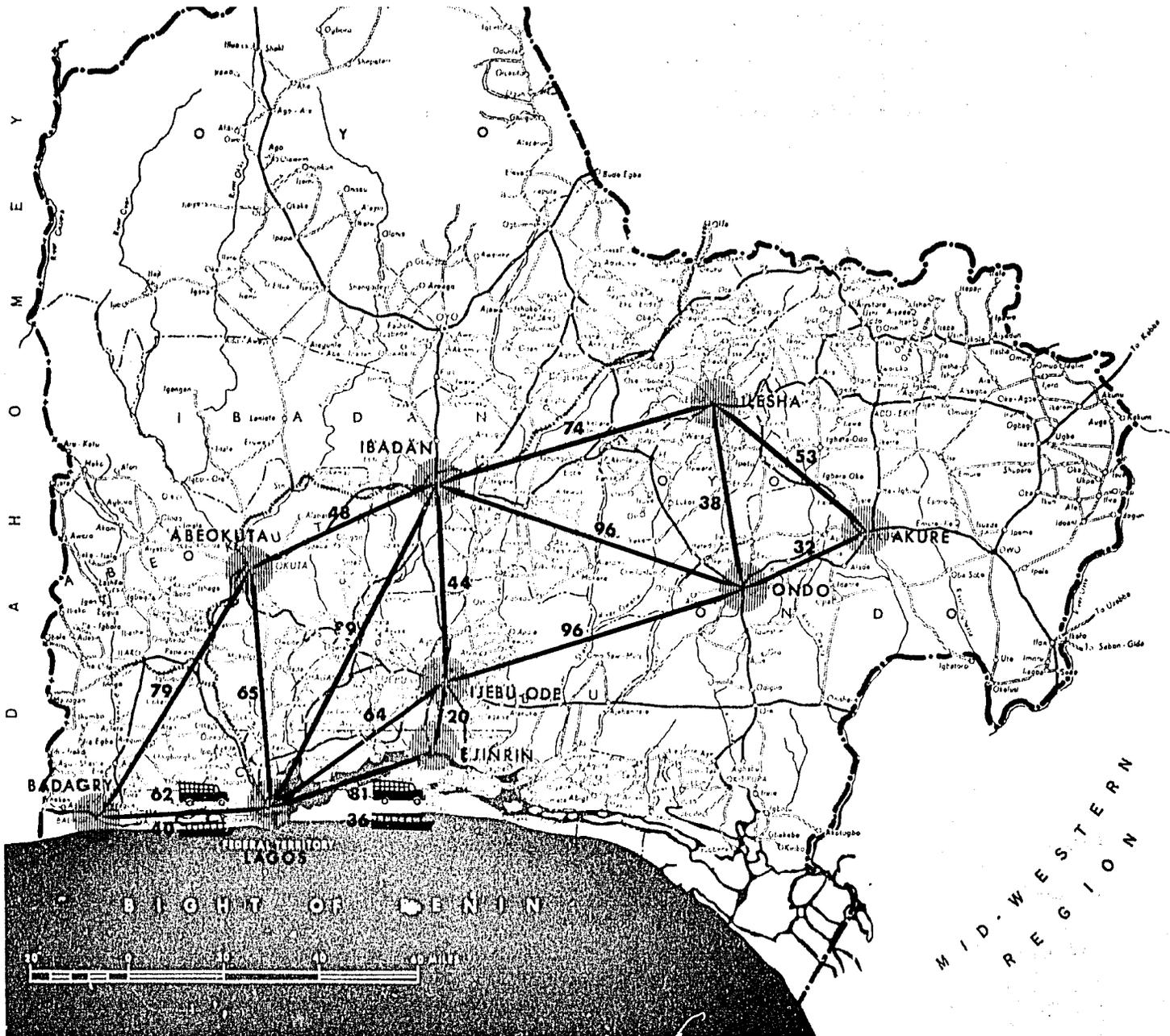
1. Seasonal Behavior. The centered 12-month moving average price essentially reflects the deseasonalized behavior of the price series. The movement of the average monthly price around this moving average consequently reflects the seasonal movements in yam prices. It is obvious from Figure 10.9, therefore, that there is a very large seasonal movement in yam prices in Ibadan. This is shown in more detail in Appendix Table 10.9.1 where the average monthly price is arrayed as a percent of the centered 12-month moving average price.

The variation in the seasonal price movement from year to year is very sizable. The highest recorded seasonal price fluctuation in Ibadan occurred in 1953 and was apparently due in part to the delayed appearance of new season yams. During February-March 1953, the average monthly price was 67 percent of the centered 12-month moving average price; by June it had reached 148 percent, and by July it had risen to 226 percent. In August it dropped to 72 percent, and finally reached a low of 57 percent in November 1953. That is, in the same crop year, there was a 237 percent seasonal increase in price, followed by a 75 percent post-harvest

Map 10.1

URBAN CENTERS USED IN RETAIL PRICE SERIES ANALYSIS  
 (Showing Mileage Between Urban Centers)

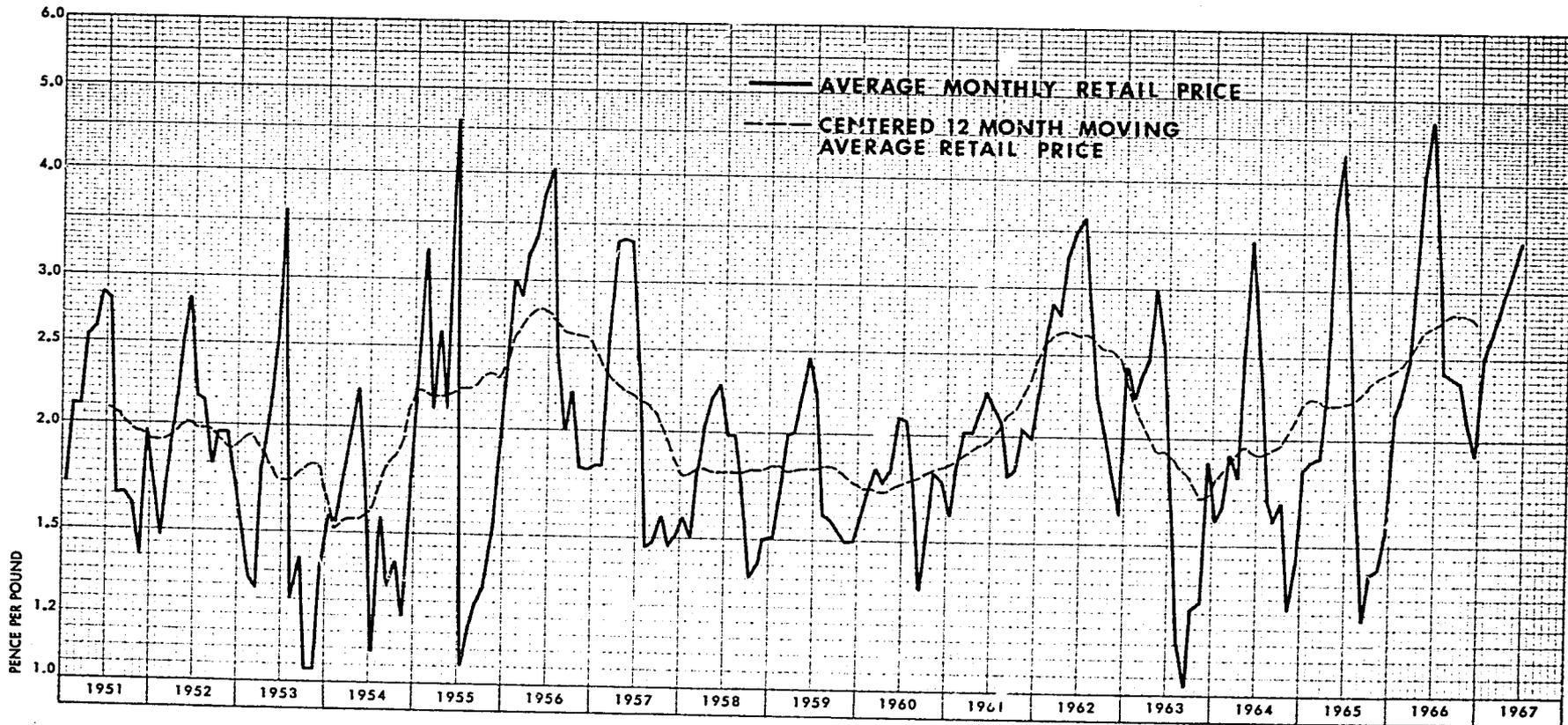
N O R T H E R N R E G I O N



Drawn by Survey Division, Ministry of Lands and Housing, Western Nigeria, 1965  
 Printed by Federal Survey, Nigeria, 1965  
 500 186 3-66

Figure 10.9

YAM: AVERAGE MONTHLY RETAIL PRICE AND CENTERED 12-MONTH MOVING AVERAGE PRICE IN IBADAN 1951-1967

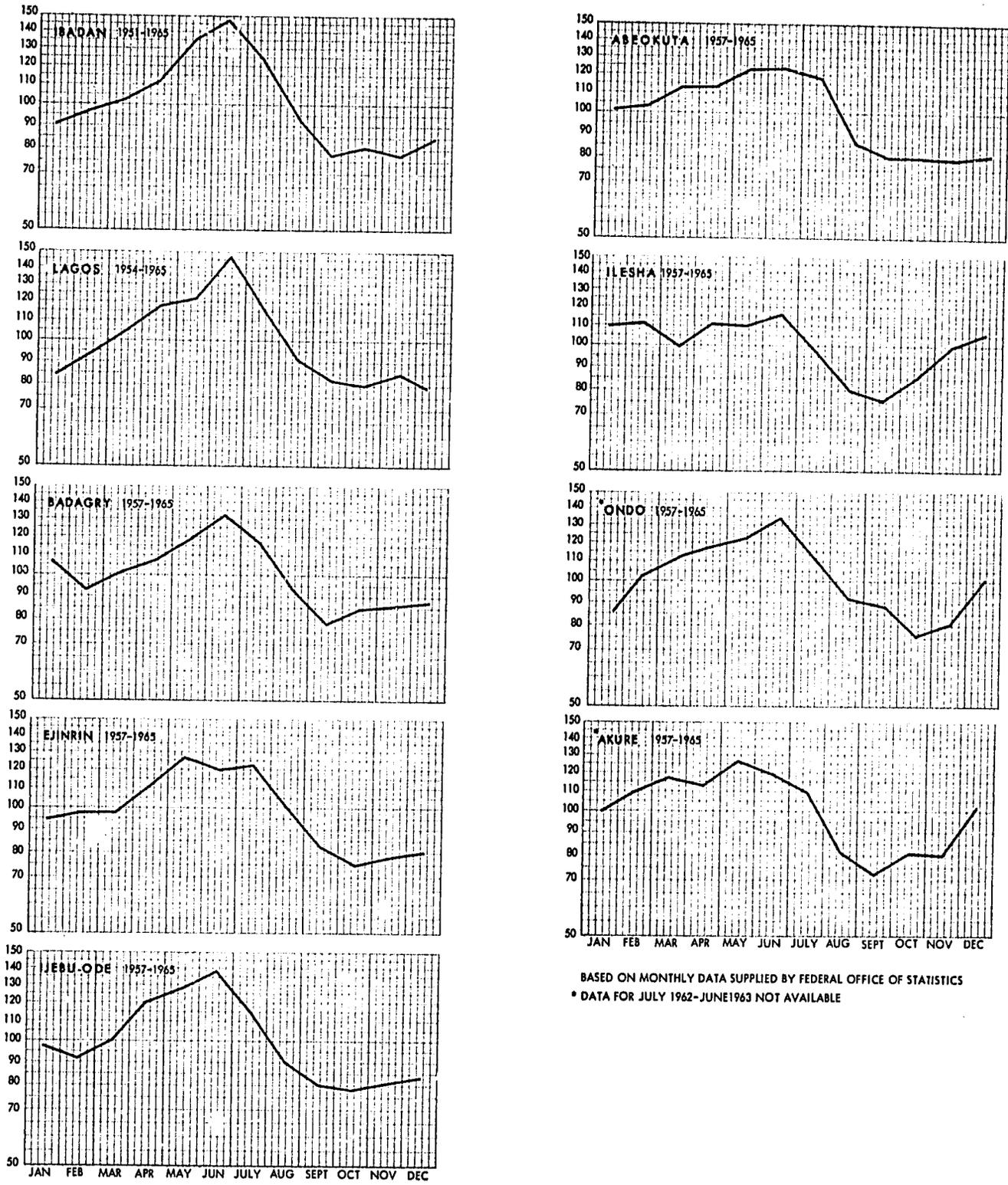


NOTE: Based on Retail Price Series collected by Federal Office of Statistics, Ibadan.



Figure 10.10

YAM: SEASONAL INDEXES FOR 9 SELECTED URBAN CENTERS



BASED ON MONTHLY DATA SUPPLIED BY FEDERAL OFFICE OF STATISTICS  
 \* DATA FOR JULY 1962-JUNE 1963 NOT AVAILABLE

0.35 whereas that for Lagos is 0.14. In general, this means that the seasonal price movements are less predictable in Ibadan than in Lagos.

The lowest calculated seasonal fluctuation occurs in Ilesha, where the range is 40 points. However, the occasional erratic behavior of the reported average monthly price for Ilesha, like that of some other urban centers, leaves considerable doubt as to the reliability of the seasonal index calculated from these prices. Nevertheless, Ilesha is located relatively close to several areas of early yam harvest, with the result that the pre-harvest high price can be expected to occur sooner and be somewhat less marked than in more distant places like Ibadan and Lagos.

The month of seasonally lowest prices falls between September and December, while the seasonal high occurs mostly in June, the seasonal index being highest in May in Akure and Ejinrin. However, the exact date of the appearance of new season yams varies somewhat each year but ranges from May to July. If the seasonal index is calculated for the crop year instead of the calendar year, the seasonal price range is undoubtedly larger than that shown.

2. Cyclical Behavior. As can be seen in Figure 10.9, yam prices in Western Nigeria do appear to behave in a cyclical manner. In fact, the period 1951-67 contains three complete cycles when peak-to-peak behavior is considered; the cycles were consecutively of about five, six, and four years' duration. Measured in terms of range from low to high point in the centered 12-month moving average around the average for the period 1951-66, the cycles were 61, 46 and 50 percent respectively.

The peaks and troughs indicated by the centered 12-month moving average price agree within a few months with those calculated by eliminating trend and irregular fluctuations from the deseasonalized value and obtaining the cyclical deviations in terms of standard deviations. (These values are shown for yam for Ibadan in Appendix Table 10.7.1 and for Lagos in Appendix Table 10.8.1.)

Observing the existence of cycles in the (retail) price of yams is considerably easier than providing an explanation for them. However, certain factors and events appear to have a particular bearing on them. It should be noted that, for the most part, these factors affect the availability of supplies of the commodity, rather than causing marked fluctuations in consumer demand. In fact, after allowing for income changes, the demand for yam, although growing, is relatively stable from year to year, as it is essentially related to population size.

To emphasize the role played by the variability of the supply of staple food crops in determining the cyclical behavior of prices, brief mention should be made of the situation in Western Nigeria following the 1965 and 1966 harvests. As the survey of producers in Western Nigeria shown in Table 10.29 affirms, there was a relative scarcity of foodcrops in the Region for the year following the 1965 harvest. In fact, 60 percent of the producers interviewed considered that supplies of staple foods were very scarce, while 25 percent opined that supplies were moderately scarce. Under the somewhat more stable production conditions of the following year, the supply of staple foods resulting from the 1966 harvest was noticeably more plentiful. Of the same producers who offered an opinion for the 1966-67 crop year, only 32 percent considered that staple food supplies were scarce, and perhaps even more importantly as far as supplies in Ibadan are concerned, only 24 percent of the producers interviewed in the savanna area supplying Ibadan claimed that supplies were scarce.

The year following the 1965 harvest was the year of peak prices in the yam cycle. Following the 1966 harvest, the price level began to turn downwards. For example, Figure 10.4 indicates that the beginning price of new season yam in 1967 was lower than in 1966, and there was a strong likelihood that the level of prices would generally remain lower than those following the 1966 harvest.

TABLE 10.29

PERCENT DISTRIBUTION OF VILLAGES BY OPINION ABOUT  
SUPPLY OF STAPLE FOODS AND BY LOCATION OF VILLAGE  
WESTERN NIGERIAN PRODUCER SURVEY -  
1966-1967

| Opinion about Supply of Staple Foods | Location of Village    |             |                     |             |                       |             |            |             |
|--------------------------------------|------------------------|-------------|---------------------|-------------|-----------------------|-------------|------------|-------------|
|                                      | Savanna (Arable Crops) |             | Forest (Tree Crops) |             | Forest (Arable Crops) |             | Total      |             |
|                                      | This Year*             | Last Year** | This Year*          | Last Year** | This Year*            | Last Year** | This Year* | Last Year** |
| Very scarce                          | 2                      | 58          | 13                  | 65          | 5                     | 58          | 7          | 60          |
| Moderately scarce                    | 22                     | 20          | 24                  | 24          | 28                    | 29          | 25         | 25          |
| About right                          | 23                     | 14          | 24                  | 2           | 32                    | 3           | 27         | 5           |
| Moderately plentiful                 | 49                     | 8           | 32                  | 9           | 29                    | 8           | 35         | 9           |
| Very plentiful                       | 4                      | -           | 8                   | 1           | 6                     | 2           | 6          | 1           |
| <b>Total</b>                         | <b>100</b>             | <b>100</b>  | <b>100</b>          | <b>100</b>  | <b>100</b>            | <b>100</b>  | <b>100</b> | <b>100</b>  |
| Number of Responses                  | 82                     | 90          | 143                 | 156         | 136                   | 151         | 361        | 397         |

\* From 1966 harvest

\*\* From 1965 harvest

This price behavior suggests that an attitudinal factor is also involved in the cyclical behavior of prices in Western Nigeria. The impression gained was that following a year of high prices there is a psychological resistance to lowering prices beyond a certain point. After this price level has obtained for a period, such as a crop year, if supplies are again plentiful, the price level is allowed to drop further. In fact, following a period of peak cyclical prices, it seems to take about two years for prices to respond fully to a plentiful supply situation. This behavior seems to be mainly accounted for by producers' insistence on obtaining a relatively high price and the general willingness of traders and consumers to pay the price demanded; this price level is predicated on the memory of the prices prevailing in the previous year.

The major factors which appear to be primarily responsible for the cyclical upswings in price are diverse and, to a certain extent, ambiguous. The most important of these affect the supply situation and cause a real or imagined shortage of supplies. However, a relatively small decrease in the marketable surplus available for distribution through the marketing system may lead to a comparatively large cyclical price increase. As the major staple foods, including yam, are reasonably good substitutes for each other, the real impact of a marked change in the supply of yams will depend upon the availability of other staple foods. The level of consumer demand for staple foods can be considered to be relatively stable; this means that demand is fairly inelastic.

For individual commodities, however, the magnitude of the cycles peculiar to each particular staple food will be determined by a relatively elastic demand function. The exact magnitude will depend upon consumer preference for that particular food; the more popular foods are less likely to be replaced by other foods when the supply is scarce, and more likely to be consumed when the supply is plentiful.

Although yam is popular, it is unlikely that a strongly marked cyclical price pattern would exist for yam based only on the cyclical production pattern peculiar to yam. That is, if the yam production cycle did not coincide with those of the other major staple foods, the cyclical price movement would be fairly small.

In reality then, it is the scarcity of all staple foods that accounts for the pronounced cyclical price swings that exist for staple foods within the Region. For all of the staple food crops, the three major periods of cyclical price upswings essentially coincide with peaks occurring in the period following the 1955-56, 1961, and 1965 crop years. For some commodities, but not yam, several minor peaks occurred in other years as well.

During the decade before Nigerian Independence in 1960, before politics reached their full impact in Western Nigeria, probably the major factor determining cyclical price behavior was the greater profitability of cash crops compared with food crops. Cocoa is the predominant cash crop over much of the Region, particularly Abeokuta, Ibadan, Oyo II (Ife-Ilesha Divisions) and Ondo Provinces. As Table 10.30 suggests, cocoa purchases by the Western Nigeria Marketing Board in 1964-65 accounted for 94 percent of the total for Nigeria; in terms of the quoted producer price, this represents a total cocoa production for the Region of about £33 million in 1964-65. (The main producing areas of the major cash crops in the Region can be seen in Map 5.1).

The producer price paid by the Marketing Board is based primarily on the world cocoa price. This price has characteristically been subject to very severe price fluctuations. As Table 10.30 shows, producer prices rose in the postwar period until the 1955-56 crop year. This resulted in a considerable expansion of the acreage planted to cocoa and a subsequent two- to three-fold increase in production as the new plantings reached maturity.

Table 10.30

**COCOA: PRODUCER PRICE AND PURCHASES  
BY REGIONAL MARKETING BOARDS - 1947/48 - 1964/65**

| Crop year<br>(September-August) | Producer price<br>Grade 1<br>(£ per ton) | (Purchases ('000 long tons)) |                  |
|---------------------------------|------------------------------------------|------------------------------|------------------|
|                                 |                                          | Western<br>Nigeria           | Total<br>Nigeria |
| 1947/48                         | 62.5                                     | -                            | 75‡              |
| 1948/49                         | 120                                      | -                            | 109‡             |
| 1949/50                         | 100                                      | -                            | 96               |
| 1950/51                         | 120                                      | -                            | 110              |
| 1951/52                         | 170                                      | -                            | 108              |
| 1952/53                         | 170                                      | -                            | 109              |
| 1953/54                         | 170                                      | -                            | 97               |
| 1954/55*                        | 200                                      | 81                           | 85               |
| 1955/56                         | 200                                      | 103                          | 108              |
| 1956/57                         | 150                                      | 125                          | 131              |
| 1957/58                         | 150                                      | 71                           | 76               |
| 1958/59                         | 150                                      | 127                          | 134              |
| 1959/60                         | 160                                      | 142                          | 149              |
| 1960/61 <sup>†</sup>            | 160 <sup>†</sup>                         | 176                          | 186              |
| 1961/62                         | 100                                      | 180                          | 191              |
| 1962/63                         | 105                                      | 164                          | 176              |
| 1963/64                         | 110                                      | 211                          | 217              |
| 1964/65                         | 120                                      | 276                          | 294              |

\* Through the operation of the Sales of Produce (Taxation) Ordinance of 1953 payments to producers were reduced by £4 per ton of cocoa, beginning from 1 January 1955 in the Western Region.

<sup>†</sup> Reduced to £112 per ton with effect from 23 January 1961.

‡ Including West Cameroon.

Source: Annual Abstract of Statistics: Nigeria 1964, Federal Office of Statistics, 1965 (Tables 4.1 and 10.2).

It seems reasonable to suppose that this rise in cocoa prices contributed to the cyclical rise in food prices during the mid-1950s in three ways. First, labor was withdrawn from food production and employed in cocoa production; fortunately, the peak demand for labor for cocoa production falls between September and December, after the main food-crop harvest. Second, there was a greater willingness on the part of cocoa farmers to purchase food supplies rather than being self-sufficient or surplus producers. Third, there was the contagious effect of the rising producer price of cocoa, which resulted in producers demanding higher prices for all commodities.

It is possible that the low producer price for cocoa in the 1961-62 crop year also contributed to the cyclical peak which occurred in food prices in that year. This sudden 38 percent drop in the cocoa price occurred when it was too late to transfer labor from cocoa production to food crop production, with the result that food crop production was probably not markedly affected. However, producers used their bargaining power in the traditional marketing system to obtain higher prices for their surplus food production, in an effort to offset the uncontrollable loss of income from cocoa. It seems likely that food crop production actively increased the following year as cocoa output fell about nine percent in the 1962-63 crop year: cyclical food prices also began to fall.

The peak food prices occurring during the 1965-66 crop year also coincided with a precipitous fall in the cocoa price. In fact, producer prices of cocoa dropped by more than 47 percent for the 1965-66 crop season. Here again, it is likely that producers used this price fall and loss of income to reinforce demands for higher prices for their surplus food production.

As a rather general indication of the opinion of farmers as to profitability of cash crops compared to food crops, Table 10.31 presents the responses of producers interviewed during the Producer Survey. In relation to past years, 43 percent of the producers stated that cash crops were much more profitable, while 22 percent claimed that cash crops were only slightly more profitable than

Table 10.31

PERCENT OF FARMERS BY OPINION ON PAST, PRESENT\* AND FUTURE PROFITABILITY  
OF CASH VERSUS FOOD CROPS AND BY LOCATION OF FARM - WESTERN NIGERIAN  
PRODUCER SURVEY - 1966-67

## Location of Farm by Vegetation Zone

| Opinion on Profitability<br>of Cash vs. Food Crops | Savanna<br>(Arable Crops) |         |        | Forest<br>(Tree Crops) |         |        | Forest<br>(Arable Crops) |         |        | Total |         |        |
|----------------------------------------------------|---------------------------|---------|--------|------------------------|---------|--------|--------------------------|---------|--------|-------|---------|--------|
|                                                    | Past                      | Present | Future | Past                   | Present | Future | Past                     | Present | Future | Past  | Present | Future |
| Much more profitable                               | 59                        | 7       | 4      | 36                     | 28      | 51     | 38                       | 14      | 38     | 43    | 18      | 33     |
| Slightly more profitable                           | 9                         | 50      | 76     | 22                     | 39      | 40     | 33                       | 44      | 53     | 22    | 44      | 54     |
| About the same                                     | 8                         | 5       | 10     | 11                     | 7       | 5      | 3                        | 9       | 7      | 8     | 7       | 7      |
| Slightly less profitable                           | 19                        | 26      | 7      | 15                     | 20      | 2      | 13                       | 24      | 2      | 15    | 3       | 4      |
| Much less profitable                               | 5                         | 12      | 3      | 15                     | 6       | 2      | 12                       | 8       | 0      | 12    | 8       | 2      |
| Total                                              | 100                       | 100     | 100    | 100                    | 100     | 100    | 99                       | 100     | 100    | 100   | 100     | 100    |
| Number of Responses:                               | 85                        | 85      | 78     | 151                    | 152     | 111    | 97                       | 99      | 57     | 333   | 336     | 246    |

\*1966

food crops. Of the remainder, 8 percent felt they were equally profitable and 27 percent thought cash crops were either slightly or much less profitable. During the 1966-67 crop year, however, cash crops were generally considered somewhat less profitable than in the past. Only 18 percent of the producers declared that cash crops were now much more profitable, while 44 percent considered them only slightly more profitable. Nevertheless, producers were generally optimistic about the future profitability of cash crops in relation to food crops. In fact, 33 percent of the producers opined that cash crops would be much more profitable, while 54 percent responded that they expected cash crops would be slightly more profitable than food crops. It is interesting to note that only 73 percent of the producers who felt qualified to give an opinion about the present relationship of the profitability of cash crops versus food crops had an opinion about the future relationship; this suggests that either they did not take the future relative profitability of crops into account in their production plans or they had no definite production plans for the future.

Even though the relative profitability of crops is important in explaining cyclical price behavior, it seems likely that political factors were more influential in the upswings in prices which reached their peaks during the consumption periods following the 1961 and 1965 crop harvests. During both upswings, it seems that the availability of surplus foods was reduced, due to the direct or indirect involvement of producers in political activities.

The extent and importance of this involvement is hard to gauge. One interviewer explained that "when politics were 'buoyant,' many villagers who were predominantly farmers left the cultivation of their farms and took actively to politics." It was also frequently mentioned that during the long and active period of campaigning leading up to the 1962 and 1965 elections for the Western Region House of Assembly, "in varying degrees, nearly all people, including farmers, diverted their attention from their normal pursuits to politics."

The coup d'état of January 15, 1966, which placed Nigeria under military

rule and led to the banning of all political parties, temporarily reduced the influence of politics on the cyclical behavior of food prices. As it will be several years before a civilian government resumes control of the Region, it seems probable that the cyclical price behavior, at least in the immediate future, will again be determined by the same factors as before Independence. Furthermore, it is possible that the marketing system will have matured to some extent by that time, with a consequent reduction in the magnitude of the cyclical price movement.

Several other factors contributing to periodic scarcity and abundance of staple food supplies should also be mentioned. First, climatic conditions vary from year to year, and this often has a marked effect on the level of production. This is especially true in the savanna areas, where the timing of the rains is often crucial not only to planting and plant growth but to harvesting and storage. The Savanna zone is the major area of surplus food production supplying Western Nigeria. Access to the production areas is often limited during the rainy season, as many of the roads feeding into the all-weather road system become more or less impassable. Although this chiefly affects the level of supply at that time, a real loss of product may also arise from the lack of satisfactory storage.

Secondly, the incidence of pests and diseases varies from year to year, from area to area, and from crop to crop. For example, the periodic appearance of army worms, yam beetles, and other pests may significantly reduce the amount of available surplus.

Thirdly, the ability to transport supplies depends on the number and condition of lorries (trucks) in use. As these motor vehicles are privately owned and controlled by elements outside the marketing system, their availability is determined mainly by the general level of economic activity.

This is especially true for the large number of vehicles purchased under installment credit (hire-purchase) contracts. The availability of transportation affects not only the quantity of supplies reaching the consuming areas, but also the amount of transportation costs incorporated in the general price structure.

3. Price Trends. Yam prices in Ibadan showed no significant straight-line trend during 1951-1965. However, a significant upward straight-line trend was found in yam prices in Lagos, where the annual rate of increase was 1.8 percent during the period 1954-1965. The least-squares regression and correlation coefficients calculated for Ibadan and Lagos are shown in Appendix Table 10.11.1.

As can be seen in Figure 10.9 for Ibadan, the period 1951-53 was one of cyclically declining prices, while 1965 was the central point of a cyclical price rise. It is likely, therefore, that the selection of an earlier base year for Lagos would probably have resulted in a non-significant price trend for Lagos as well. Data for the earlier years are not available.

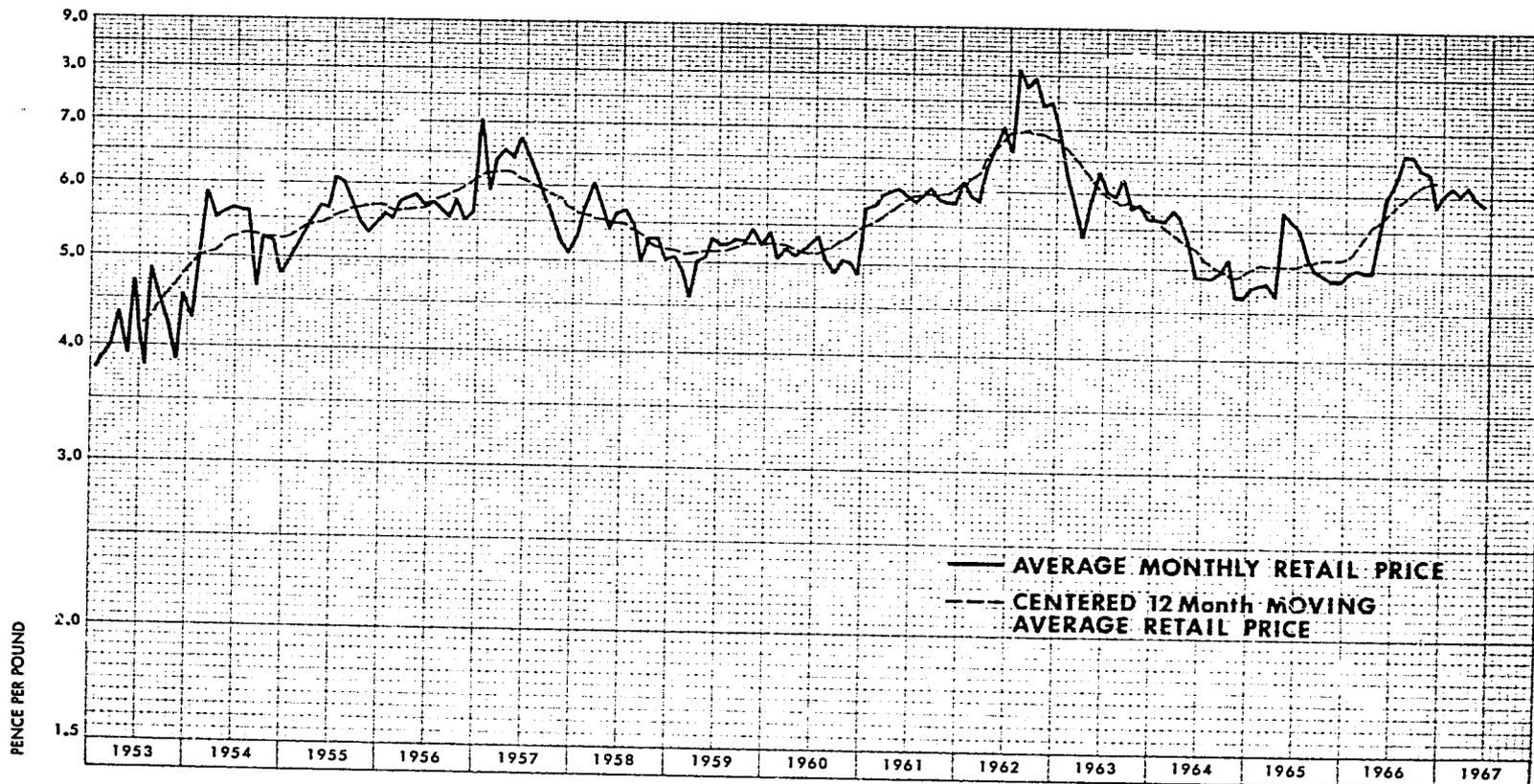
In general, the seasonal and cyclical price movements over the 16-year period for which data are available for Ibadan have more than overshadowed any trend in the price of yam that may exist. This seems to be true of yam prices generally throughout the whole of Western Nigeria.

#### b. Yam Flour

The average monthly retail price and centered 12-month moving average price for yam flour in Ibadan for the period January 1953 to June 1967 is shown graphically in Figure 10.11. (The complete analysis of the FOS yam flour data for Ibadan is contained in Appendix Table 10.7.2 and for Lagos in Appendix Table 10.8.1).

Figure 10.11

YAM FLOUR: AVERAGE MONTHLY RETAIL PRICE AND CENTERED 12-MONTH MOVING AVERAGE PRICE IN IBADAN 1953-1967



NOTE: Based on Retail Price Series collected by Federal Office of Statistics, Ibadan.

1. Seasonal Behavior. Yam flour (dried yam), in contrast to fresh yam tubers, is relatively storable and portable. Consequently, there is comparatively little seasonal variation in yam flour prices. In Ibadan, for example, the coefficient of variation of the monthly price of yam flour in relation to the centered 12-month moving average price was 0.06 for the period 1953-66. This compares with a value of 0.30 for yam tubers for Ibadan for the period 1951-66 (Appendix Tables 10.7.2 and 10.7.1). That is, the fluctuations of yam flour prices around the 12-month moving average were only about 20 percent of those of yam tubers.

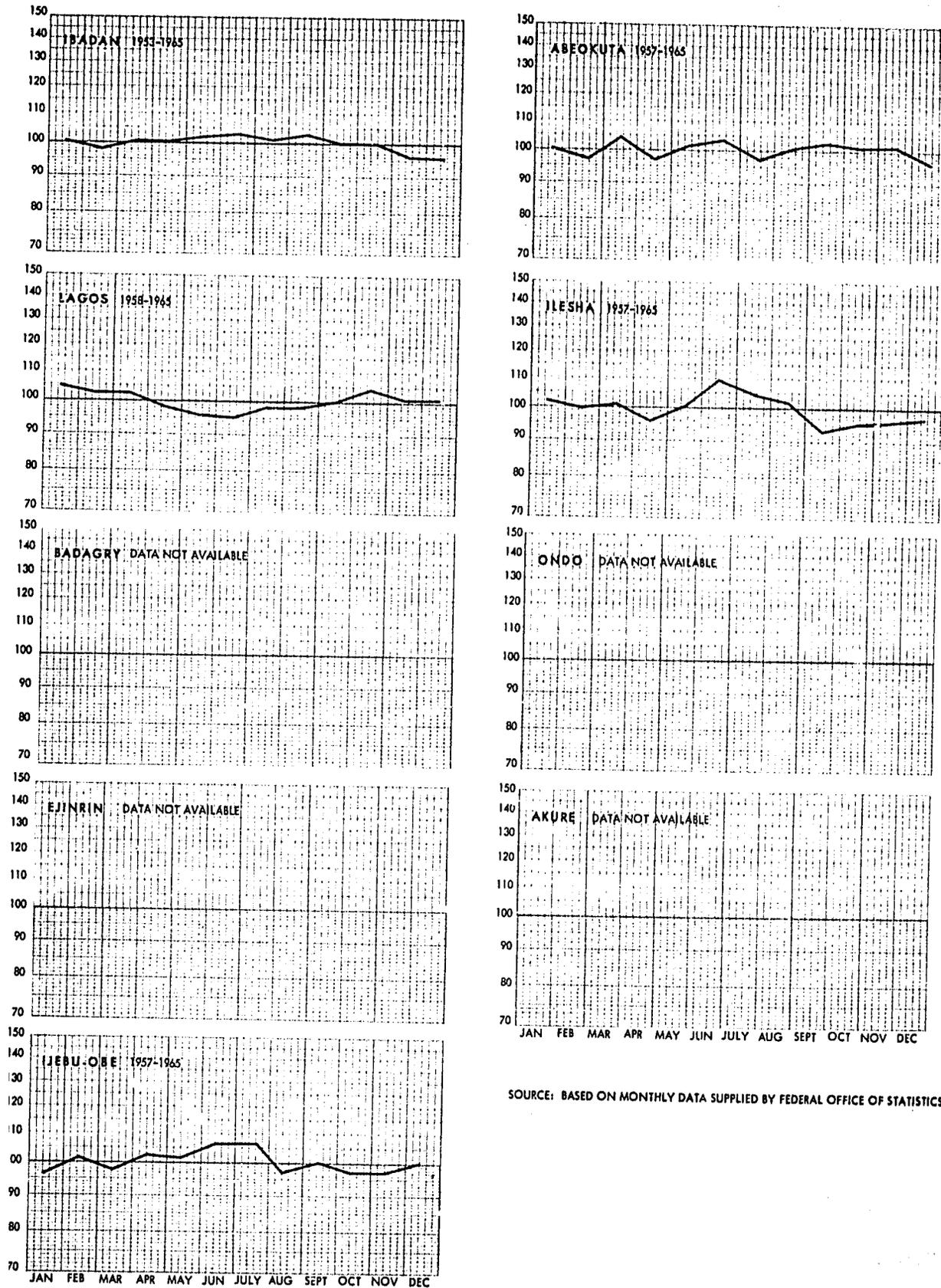
The seasonal indexes calculated for Ibadan and the four other selected urban centers for which data were available are shown graphically in Figure 10.12. (The actual values, together with the coefficients of variation for each month, are shown in Appendix Table 10.10.2.)

If a seasonal price pattern does exist for yam flour, it is probably similar to that calculated for Ibadan. Not only do the other seasonal indexes, with the exception of that for Lagos, essentially agree with that for Ibadan, but the associated coefficients of variation for Ibadan are also the lowest. This seasonal price pattern follows to a considerable extent the seasonal price pattern existing for yam tubers, although it only ranges from 96 during November-December to 104 during June. The coefficient of variation of the seasonal index of yam flour for Ibadan is only 0.02 while that of yam tubers for Ibadan is ten times larger at 0.23.

The absence of a marked seasonal price pattern for yam flour is also borne out by the fact that the coefficient of variation is as large for deseasonalized yam flour prices as for original values--both are 0.13. This contrasts noticeably with yam tubers where, using the seasonal index calculated for yam tubers to deseasonalize the original values, the coefficient of variation is reduced from 0.35 to 0.24. (Appendix Tables 10.7.2 and 10.7.1.)

Figure 10.12

YAM FLOUR: SEASONAL INDEXES FOR 5 SELECTED URBAN CENTERS



SOURCE: BASED ON MONTHLY DATA SUPPLIED BY FEDERAL OFFICE OF STATISTICS

2. Cyclical Behavior. As can be seen from the centered 12-month moving average for Ibadan displayed in Figure 10.11, cycles do appear to be present in yam flour prices. The semi-logarithmic scale used in Figures 10.9 and 10.11 enables the size of the cycles in yam tubers and yam flour prices to be directly compared. It can be seen that the yam flour cycles are much less pronounced than those for yam tubers. This is also indicated by the considerably smaller coefficient of variation of the 12-month moving average for yam flour compared with yam tubers. In spite of the significantly larger trend in yam flour prices, which is also incorporated into this indicator, the coefficient of variation for yam flour is 0.10 compared with 0.15 for yam tubers.

Except for divergent behavior in 1953, yam flour and yam tuber cycles are very closely related in terms of the direction of change of the cycle. In general, and especially during the upswings, the yam flour cycle moves with the yam tuber cycle, although usually with a lag of several months. This is explained by the tardy appearance of large quantities of dried yam on the market after the early yam harvest; the drying of yam tubers is delayed by the rainy season.

The main factors behind the cyclical behavior of yam flour prices appear to be those described for yam tubers. No reasonable explanation was obtained for the divergence of the two cycles in 1953.

3. Price Trends. Using original values for the years 1953-65, a significant straight-line trend was calculated for yam flour prices in Ibadan. The annual rate of increase amounted to about one percent. However, the selection of 1953, with its relatively low prices, as the base year probably accounts for much of the calculated trend: the selection of a different year, such as 1955, would have been more realistic and probably would have resulted in an insignificant trend. A significant downward trend was calculated for Lagos but it was probably also influenced more by the position in the cycle of the selected years than by the existence of an ascertainable trend. (Appendix Table 10.11.2.)

c. Gari

The average monthly retail price and the centered 12-month moving average price for gari in Ibadan for the period January 1953 to June 1967 is shown graphically in Figure 10.13. (The complete analysis of the FOS gari data for Ibadan is contained in Appendix Table 10.7.3 and for Lagos in Appendix Table 10.8.3.

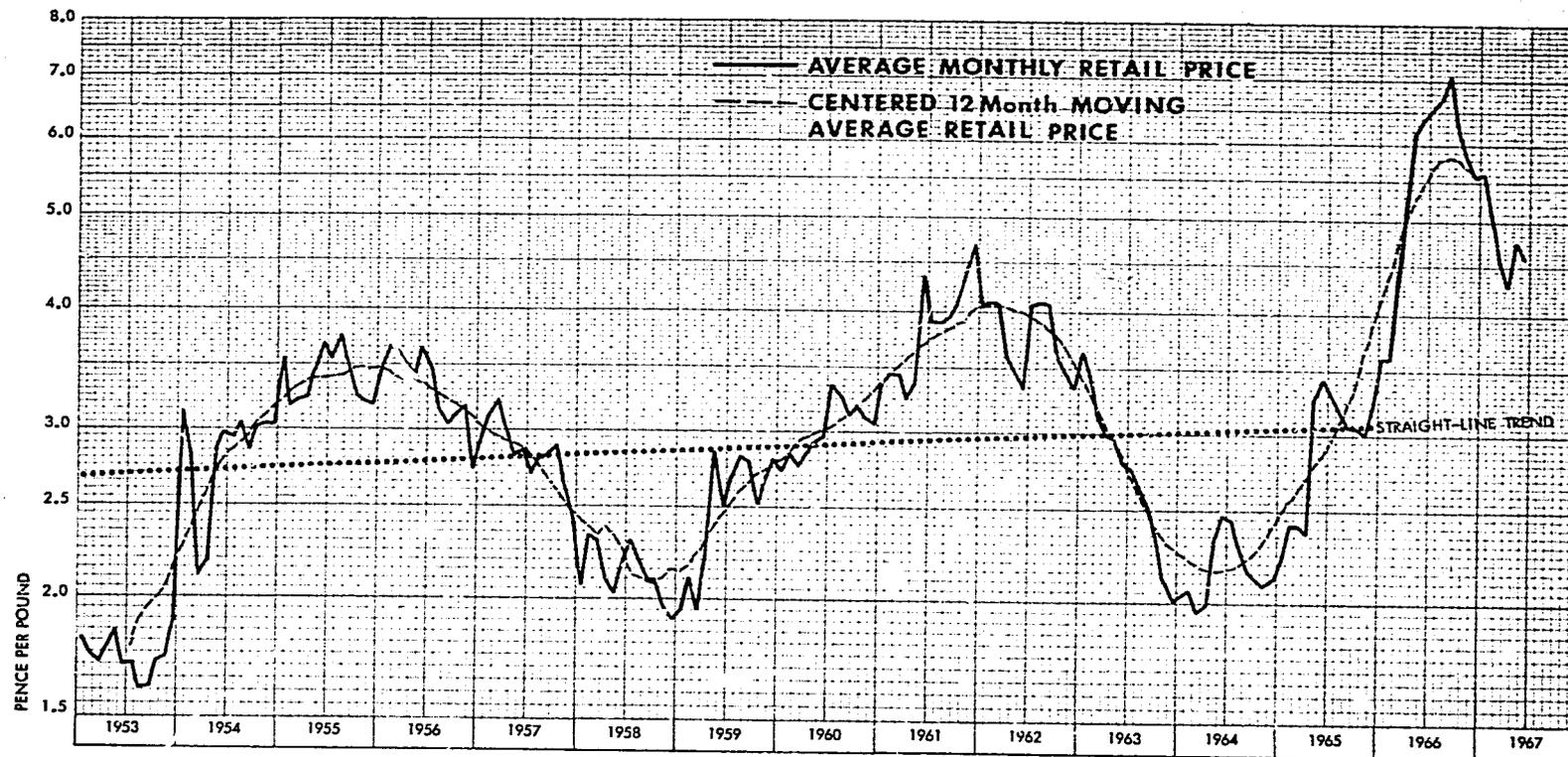
1. Seasonal Behavior. The fact that cassava can be harvested throughout the year for conversion into gari (and dried cassava) considerably simplifies the seasonal storage problem for gari. As a result, there is relatively little seasonal variation in the price of gari. This can be seen for Ibadan in Figure 10.13, where the seasonal fluctuations of the original monthly data appear as small fluctuations around a marked cyclical pattern. The coefficient of variation for these seasonal movements is 0.09; this compares with 0.30 for yam tubers and 0.06 for yam flour. The seasonal variation in gari prices in Lagos is even less, with a coefficient of variation of 0.07 for the original value as a percent of the centered 12-month moving average value.

The seasonal indexes calculated for the nine selected urban centers are presented graphically in Figure 10.14. (The actual values, together with the coefficients of variation for each month, are shown in Appendix Table 10.10.3.)

It should be mentioned that the method used by FOS in collecting price information for all commodities except yam tubers almost certainly results in an under-representation of actual seasonal price movements. This is due to the data being expressed in terms of a constant unit of measure which varies seasonally in weight. That is, during a low-price period, the weight of the unit of measure is generally greater than during a high-price period. The actual seasonal price fluctuation for gari and the other commodities is, therefore, probably somewhat greater than that indicated in the seasonal indexes calculated.

Figure 10.13

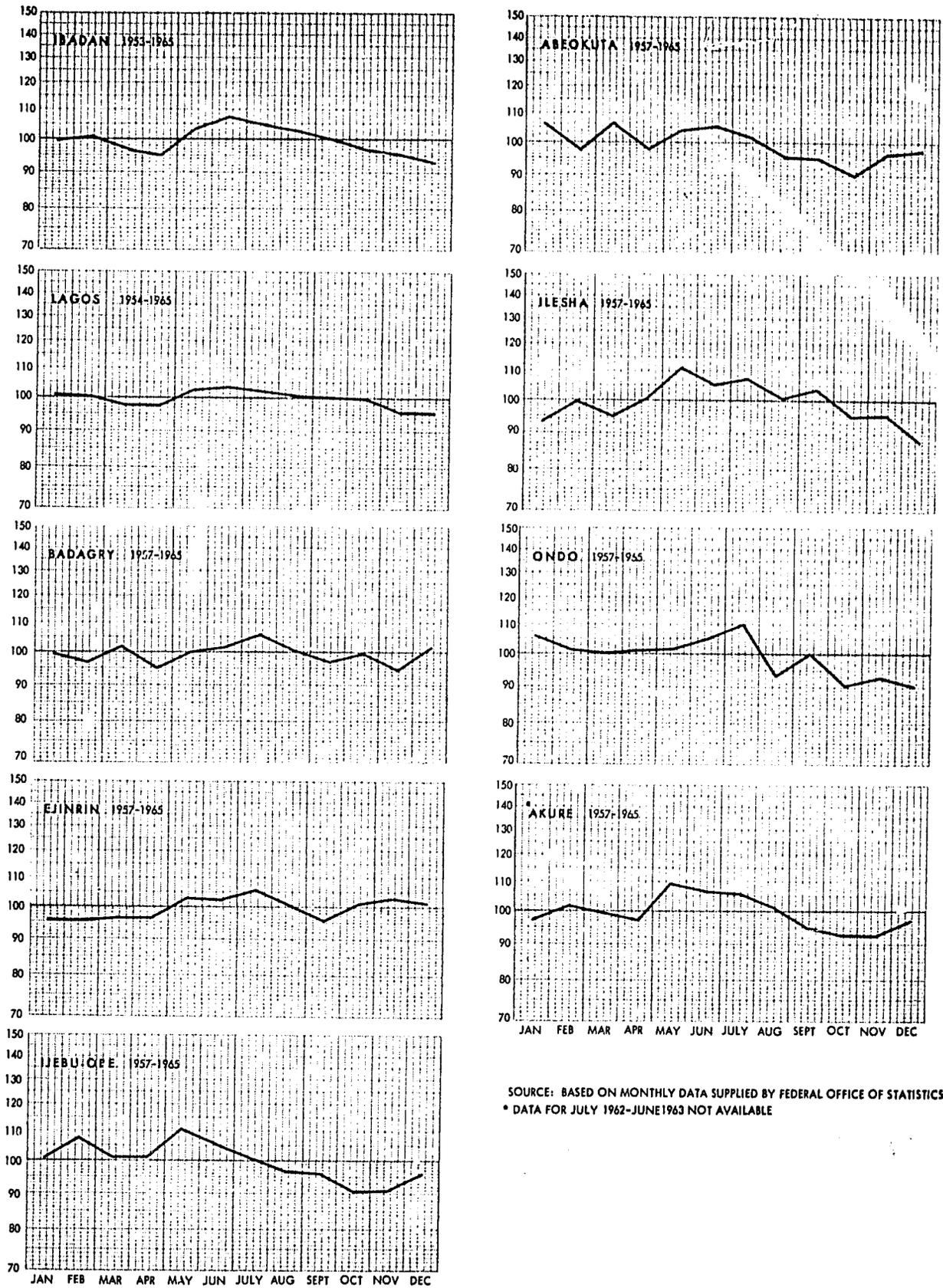
GARI: AVERAGE MONTHLY RETAIL PRICE AND CENTERED 12-MONTH MOVING AVERAGE PRICE IN IBADAN 1953-1967



NOTE: Based on Retail Price Series collected by Federal Office of Statistics, Ibadan.

Figure 10.14

GARI: SEASONAL INDEXES FOR 9 SELECTED URBAN CENTERS



SOURCE: BASED ON MONTHLY DATA SUPPLIED BY FEDERAL OFFICE OF STATISTICS  
 \* DATA FOR JULY 1962-JUNE 1963 NOT AVAILABLE

In general, the pattern described by these seasonal indexes follows the seasonal pattern calculated for yam tubers. That is, a major seasonally high price period from May to July and a major seasonally low price period from October to December. This coincidence seems reasonable in view of the fact that gari is the major substitute for yam tubers when the latter become scarce.

An interesting difference in the seasonal price pattern seems to exist for gari in the months between January and April, when a minor seasonal price rise occurs. That is, the price level suddenly rises for several months before dropping again, whereas yam tuber prices continue to rise until a single seasonal peak is reached. This is probably explained mostly by the impeditive effect of the dry season on the harvesting of cassava tubers during January and February; the rains in March and April make harvesting easier.

In Ibadan, the major fluctuation in the seasonal index for gari is 15 points, from 108 in June to 93 in December. The minor fluctuation involves a rise to 101 in February, with a fall to 95 in April. The seasonal price pattern in Lagos is similar but the range is only nine points, from 104 in June to 95 in December. The other urban centers are basically similar, although individual differences exist.

2. Cyclical Behavior. The existence of cyclical behavior in gari prices seems unmistakable. This can be seen for Ibadan in Figure 10.13, where two and one-half cycles occurred in the period 1953-1967. The cycles were about five to six years in length.

The gari price cycles are the smoothest and most clearly apparent, and are only rivalled in magnitude by the cycles occurring in cowpea prices.

As an indicator of the magnitude of these cycles, the coefficient of variation of the centered 12-month moving average was 0.23 for gari in Ibadan.

This compares with a coefficient of variation in yam tuber prices of 0.15 and yam flour prices of 0.10.

The timing of the cycles in gari prices closely resembles that for yam tuber prices. The high degree of mutual substitutability of these two commodities makes it reasonable to expect their cyclical behavior to be closely related, particularly where the major factors behind this cyclical behavior are not peculiar to only one commodity. These factors have already been described in relation to the cyclical behavior of yam prices.

3. Price Trends. Observing from Figure 10.13 that each subsequent low and high peak value is higher than the corresponding previous value, it seems reasonable to conclude that there was a slight upward trend in gari prices in Ibadan during the period 1953-1967. The extreme cyclical price behavior makes it reasonable to expect that any straight line trend (regression) equation fitted to the original data would have such large deviations around it that the significance of the trend values would be diminished. This results from the fact that the long-term price movement, as indicated by a straight-line trend value, only accounts for a small part of the overall fluctuation in prices.

The straight line trend values calculated for Ibadan and Lagos for the periods 1953-65 and 1954-65, respectively, both showed a significant upward trend at the five percent level of significance. At the one percent level, however, they were not significant. The annual rate of increase calculated for Ibadan was 1.1 percent, while that for Lagos was 0.9 percent. Because 1953 was a low point in the gari cycle, the annual rate of increase of 0.9 percent calculated for Lagos probably better represents the trend in gari prices which exists in these urban centers. (The values from the regression analysis are shown in Appendix Table 10.11.3.).

The reasons for this apparent upward trend are more difficult to identify. Nevertheless, the general rise in cash income of urban employees and the rise in the general level of prices throughout the period are probably quite closely

associated. Further, the general demographic trend in Western Nigeria seems likely to support a long-term upward price movement. First, as mentioned in Chapter III, the population growth rate since 1950 has been considerably in excess of two percent per year. This has led not only to a rapidly expanding population, but also to a relatively large proportion in the young pre-productive age groups. And, second, there has been a sizable migration of people, particularly young adults, from rural areas to the larger urban centers. This shift in population has both reduced the proportion of the labor force engaged in agriculture and increased the proportion of the population depending upon the internal exchange economy for foodstuffs.

On the supply side, there seems to be little evidence to support the contention that agricultural productivity is increasing rapidly, particularly in food crop production. In general, while food crop production specifically for the market economy is expanding, it seems unlikely that it is keeping pace with market demand. However, in the absence of adequate production statistics, any discussion of the subject will necessarily be conjectural.

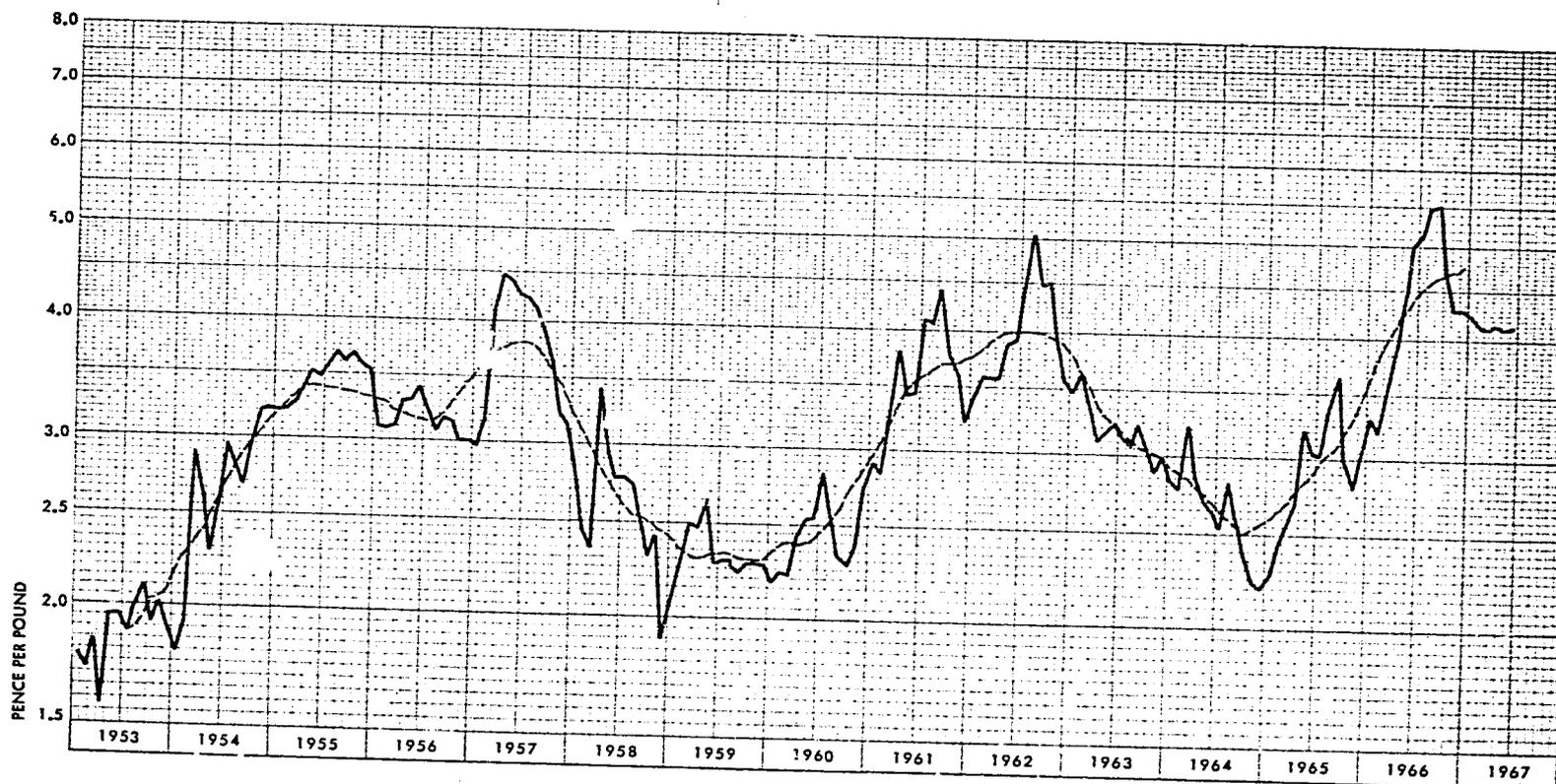
#### d. Cassava Flour

The average monthly retail price and the centered 12-month moving average price for cassava flour in Ibadan for the period January 1953 to June 1967 are shown graphically in Figure 10.15. (The complete analysis of the FOS cassava flour price data for Ibadan is contained in Appendix Table 10.7.4 and for Lagos in Appendix Table 10.8.4.)

Cassava tubers are usually consumed in the form of gari or dried cassava (cassava flour), particularly in the savanna areas where the lower humidity is more conducive to sun-drying of crops. Yam flour is also popular as a substitute for cassava flour. Consequently, it might be expected that the behavior of cassava flour prices would be closely allied to that of yam flour and gari prices.

Figure 10.15

CASSAVA FLOUR: AVERAGE MONTHLY RETAIL PRICE AND CENTERED  
12-MONTH MOVING AVERAGE PRICE IN IBADAN 1953-1967



NOTE: Based on Retail Price Series collected by Federal Office of Statistics, Ibadan.

This, in fact, does seem to be the case. In the Ibadan FOS retail price data for the period 1953-66, for example, the highest bivariate correlation coefficients were obtained between cassava flour and gari (+0.79) and cassava flour and yam flour (+0.74). (Appendix Table 10.14.1)

1. Seasonal Behavior. The seasonal variation in cassava flour prices in Ibadan is similar to that of gari and somewhat less than that of yam flour. The coefficient of variation of the (original) monthly price as a percent of the centered 12-month moving average price is 0.09, the same as for gari, whereas the coefficient of variation for yam flour is 0.06.

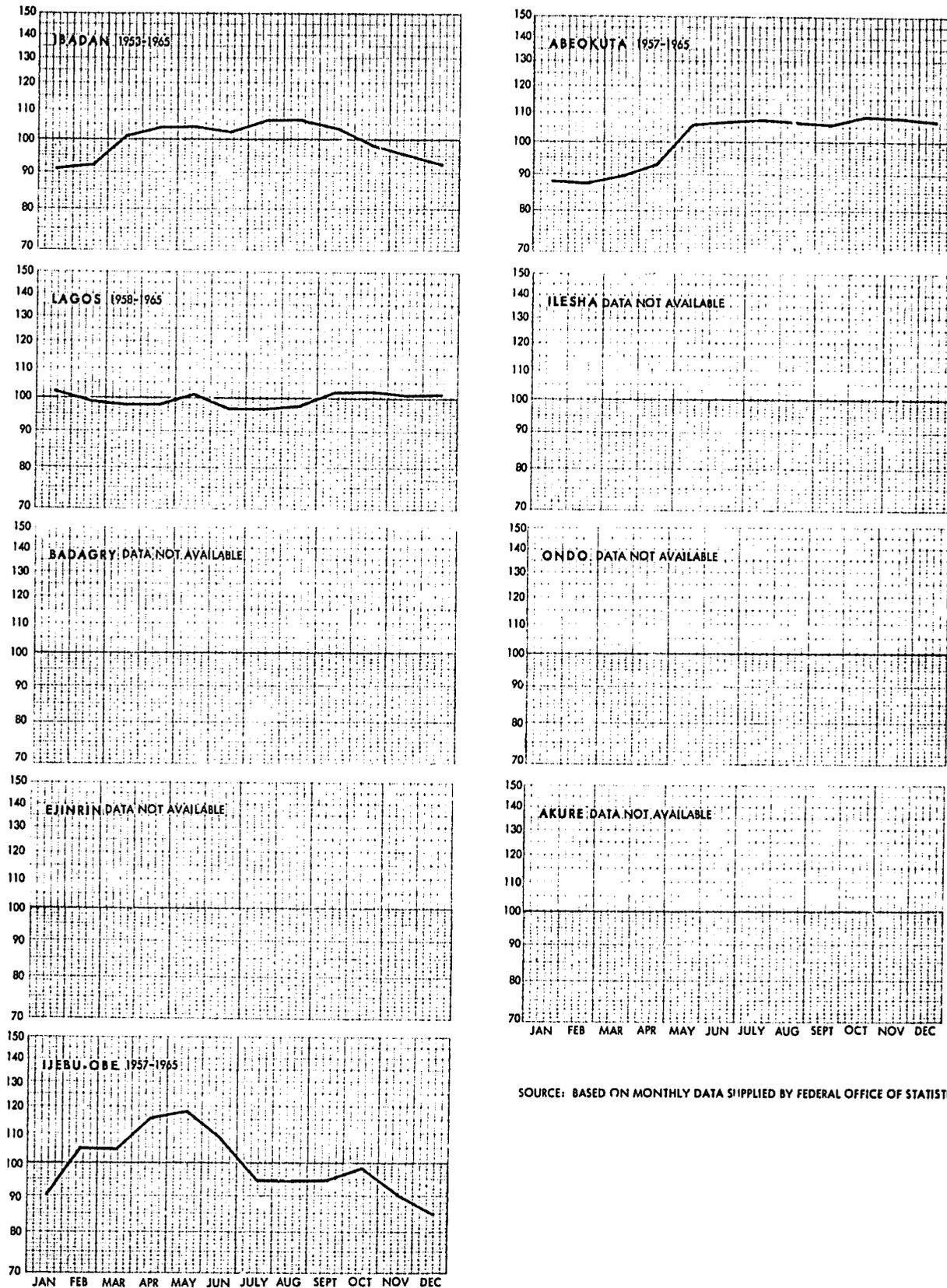
The seasonal indexes calculated from the FOS price series data for Ibadan and the three other selected urban centers for which price data were available are displayed graphically in Figure 10.16. (The actual values, together with the coefficients of variation for each month, are arrayed in Appendix Table 10.10.4. The calculation for Ibadan is shown in Appendix Table 10.9.4.)

The four seasonal indexes calculated all have somewhat different seasonal characteristics. So much so that it is difficult to describe a general price pattern for the Region. In Ibadan, the seasonal index is above 100 from March to September, with a peak of 106 in August; a low of 92 is reached in January. Although there is relatively little seasonal variation in Lagos, the pattern is almost the exact opposite of that in Ibadan. The seasonal index is above 100 from September to January, with a peak of 104 in October. With the exception of May, the seasonal index is below 100 from February to August, with lows of 97 in June and July.

The seasonal indexes calculated for Ijebu-Ode and Abeokuta both have a larger seasonal range--34 and 20 points respectively--as well as considerably larger coefficients of variation. In general, the fluctuations in the monthly values from year to year more than counterbalance any precise seasonal pattern that may exist.

Figure 10.16

CASSAVA FLOUR: SEASONAL INDEXES FOR 4 SELECTED URBAN CENTERS



SOURCE: BASED ON MONTHLY DATA SUPPLIED BY FEDERAL OFFICE OF STATISTICS

2. Cyclical Behavior. Like gari prices, cassava flour prices have a pronounced cyclical pattern. A comparison of Figures 10.13 and 10.15 reveals markedly similar cyclical patterns, although slightly less pronounced for cassava flour than for gari. The only major divergence between the cycles for the two commodities occurred during 1956-57 when cassava flour prices rose to a second cyclical peak after gari cyclical prices had begun to decline. Comparing cassava flour prices with those shown for yam flour in Figure 10.11, it can be seen that this second peak coincided with the peak of the cycle in yam flour prices; the earlier peak in cassava flour prices in 1955 roughly coincided with the peak in gari prices.

The magnitude of the cycles in cassava flour prices can be judged by the coefficient of variation of the centered 12-month moving average price: it was 0.19 for the period 1953-66 in Ibadan, while that for gari was 0.23. However, it seems likely that a higher trend factor was incorporated in the centered 12-month moving average price for cassava flour than for gari.

The explanation of cyclical behavior presented for yam tubers seems to apply equally to cassava flour.

3. Price Trends. A significant straight-line trend value was found in cassava flour prices in Ibadan for the period 1953-65. Throughout this period, prices were increasing at an annual rate of 1.4 percent (Appendix Table 10.11.4). However, some of this increase would be accounted for by the fact that a year of low cyclical prices, 1953, was selected as the base year. Nevertheless, an upward trend in cassava flour prices does seem to exist: the underlying cause of this phenomenon is no doubt the same as in the case of gari and yam flour prices.

e. Maize

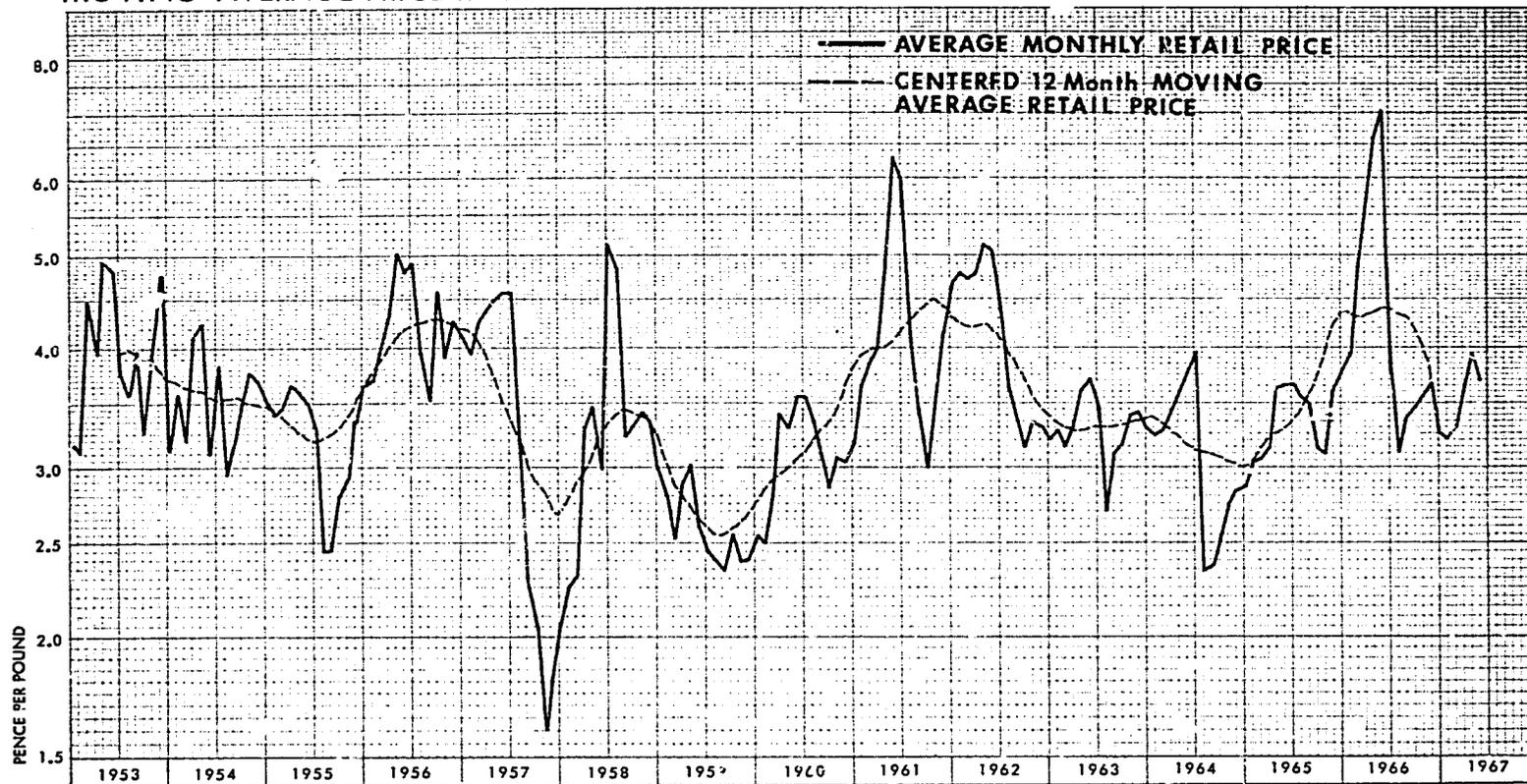
The average monthly retail price and the centered 12-month moving average price for maize in Ibadan for the period January 1953-June 1967 are shown graphically in Figure 10.17. (The complete analysis of the FOS maize price data for Ibadan is contained in Appendix Table 10.7.5 and for Lagos in Appendix Table 10.8.5.)

The behavior of maize prices more closely resembles that of yam tuber prices than of any other staple food. In Ibadan, for example, the highest bivariate correlation coefficient calculated for the FOS retail price data for maize for the period 1953-66 was +0.54 with yam tubers-- this was also the highest for yam tubers. Comparing the bivariate correlation coefficients of maize prices for 2-year periods, once again those with yam tuber prices are generally highest. (Appendix Table 10.14.1). The longer-period (14-year) comparison relates more to a cyclical and trend relationship, while the 2-year comparison relates more to a seasonal relationship, although two seasons are included in each of these comparisons.

Several reasons exist for this similarity in behavior between maize and yam tuber prices: (1) most of the yam and maize consumed within Western Nigeria is produced in the Region; (2) in most areas, yam and maize are frequently grown as complementary crops--that is, yam and early maize are intercropped or when grown as sole crops are part of the same rotation system; (3) both are highly seasonal commodities with roughly corresponding harvest periods; (4) the traditional methods of storing both commodities result in high storage losses and hence in relatively sparse supplies for several months before the new season supplies become available; and (5) although maize and yam occupy somewhat different places in the diet of the consumers, they are substitutes for each other.

Figure 10.17

MAIZE: AVERAGE MONTHLY RETAIL PRICE AND CENTERED 12-MONTH MOVING AVERAGE PRICE IN IBADAN 1953-1967



NOTE: Based on Retail Price Series collected by Federal Office of Statistics, Ibadan.

1. Seasonal Behavior. As one indication of the magnitude of the seasonal fluctuation in the price of maize in Ibadan, the coefficient of variation of the (original) monthly price as a percent of the centered 12-month moving average price for the period 1953-66 is 0.17, while the value for the (original) monthly price is 0.24. The former value is less than for yam tubers (0.30), slightly more than for cowpeas (0.15), and considerably more than for the other commodity prices analyzed.

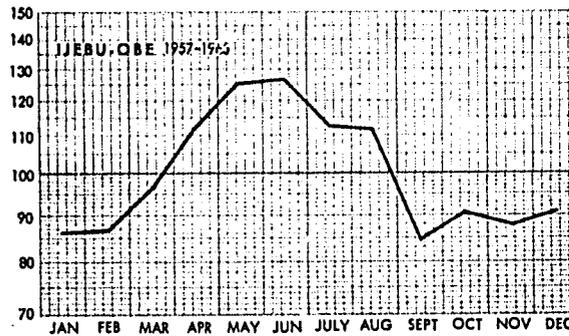
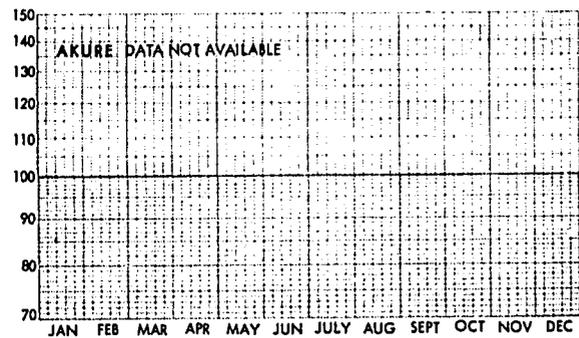
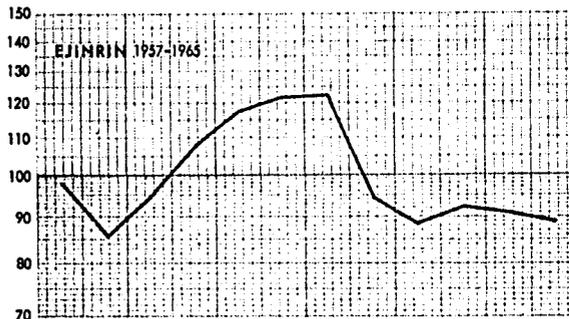
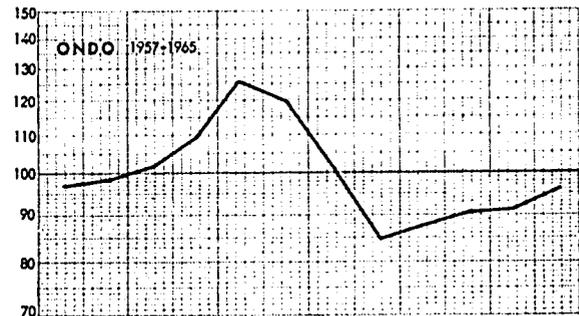
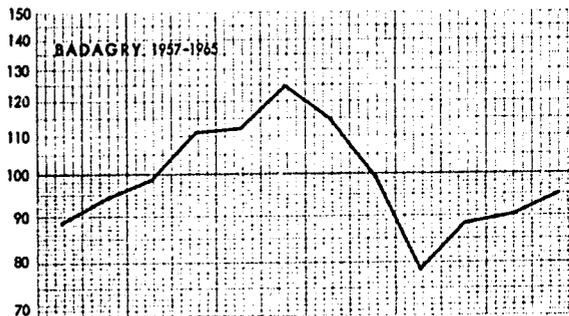
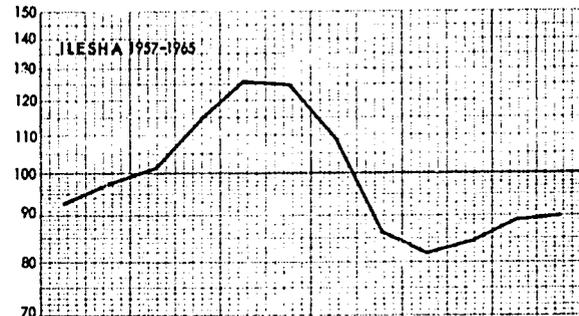
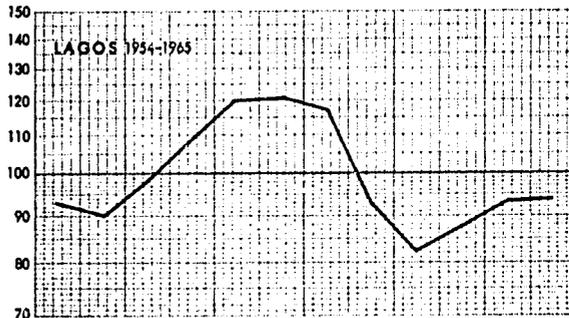
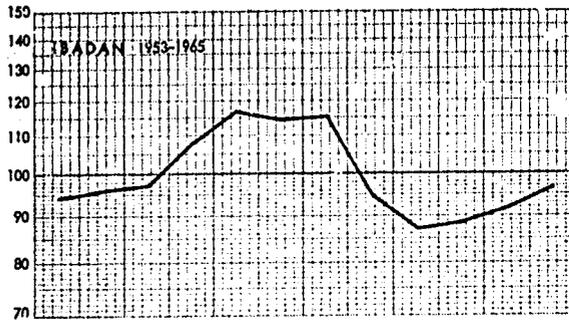
The seasonal indexes calculated for the eight selected urban centers for which FOS data was available are shown graphically in Figure 10.18. (The actual values, together with the coefficients of variation for each month, are shown in Appendix Table 10.10.5. The calculation for Ibadan is shown in Appendix Table 10.9.5.)

Except for Ilesha and Ondo, the seasonal price pattern in the selected urban centers may be generally described as follows: a 4-month period of seasonally high prices from April to July, followed by major and minor periods of seasonally low prices. The major period follows the harvest of dry maize from the early season crop, reaching a low point in September, while the minor period follows the harvest of the late season maize crop, which allows a reversal during January-February of the upward seasonal movement in maize prices after the more major early crop.

In Ilesha and Ondo, seasonal price behavior is influenced mainly by the early season maize crop. As a result, the period of seasonally high prices is longer (about five months) although the seasonal peak which occurs in May, as in Ibadan, is about one month earlier than in the other urban centers. This probably results from the availability of locally-grown fresh (immature) maize during June and July. Following the seasonal low that occurs during August-

Figure 10.18

MAIZE: SEASONAL INDEXES FOR 8 SELECTED URBAN CENTERS



SOURCE: BASED ON MONTHLY DATA SUPPLIED BY FEDERAL OFFICE OF STATISTICS

September, subsequent to the harvest of dry maize, the price rises steadily for the remainder of the season.

Of the eight selected urban centers, the seasonal price index calculated for Ibadan shows the smallest seasonal variation. This is probably due to the large quantities of maize grown in the area contiguous to Ibadan and sold mostly in the Ibadan markets as fresh maize during June and July. The seasonal index for maize in Ibadan has a high period of 116 in May to 115 in July, falling to a low of 87 by September and rising to 97 by December before falling to a second low of 94 in January. The major seasonal price fluctuation is the fall of 28 points (25 percent) between July and September; perhaps more meaningful, the seasonal price rise of early season maize is nearly 10 points (11 percent) between September and December, while the rise in late-season maize prices is 22 points (23 percent) between January and May. However, the relatively high coefficients of variation occurring between June and December in the seasonal index for Ibadan mean that a considerable variation exists from year to year in this pattern of seasonal price behavior.

While the range in the seasonal price index for Ibadan is 29 points, that for the other urban centers is between 36 and 44 points, with the exception of that for Badagry, which is 51 points.

2. Cyclical Behavior. By comparing the centered 12-month moving averages shown for yam tubers and maize in Figures 10.9 and 10.17, respectively, it can be seen that a similar pattern of cyclical price behavior exists. The major deviation between the two commodities which occurred in 1958 seems to be more the product of a seasonal disequilibrium resulting from the large seasonal price fall (65 percent) which followed the early maize harvest in 1957. Either this discouraged the planting of a large late-season maize crop, or the crop was a relative failure, as maize prices rose by 220 percent between November 1957 and July 1958.

The explanation of the overall pattern of cyclical price behavior has already been given in relation to the cyclical behavior of yam prices.

3. Price Trends. In the early 1950's, maize production was drastically reduced as a result of the widespread appearance of rust, a fungus disease new to West Africa. This seems to be the most likely reason for the relatively high maize prices recorded during this period. The long-run effect, however, is that there has not been a significant price trend in Ibadan, although a non-significant downward trend was calculated for the period 1953-65.

For Lagos, however, a significant upward price trend was obtained for the period 1954-65, where the annual rise in price was calculated to be 1.4 percent. Part of this difference in the trend in maize prices can be explained by the absolute and relative amount of price difference between Lagos and Ibadan increasing after about 1957, with the result that maize has become relatively more expensive in Lagos than Ibadan. (Appendix 10.15.5). No explanation was obtained for the occurrence of this specific price trend.

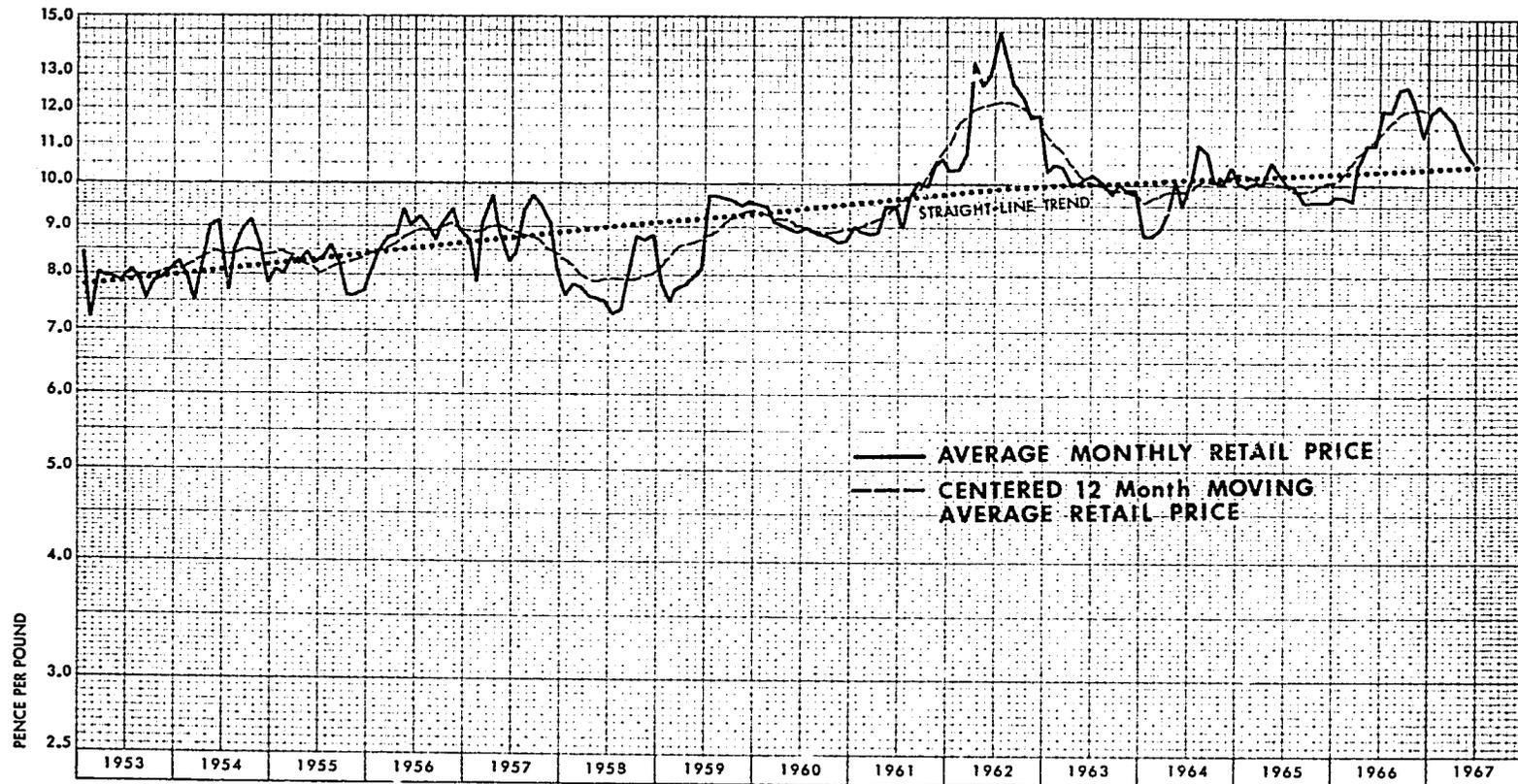
f. Rice.

The average monthly retail price, the centered 12-month moving average price, and the straight-line trend value for (brown-Nigerian) rice in Ibadan for the period January 1953 - June 1967 are shown graphically in Figure 10.19. (The complete analysis of the FOS rice price data for Ibadan is contained in Appendix Table 10.7.6 and for Lagos in Appendix Table 10.8.6.)

Comparison of the behavior of rice prices with that of the other staple foods is interesting for several reasons: (1) although it is a preferred staple food, its relatively high price means that it contributes only a small proportion of the total calories consumed within the Region; (2) the widespread production and consumption of rice in Nigeria is recent--post-World War II; (3) several major, although widely separated producing areas supply the Region

Figure 10.19

RICE: AVERAGE MONTHLY RETAIL PRICE AND CENTERED 12-MONTH MOVING AVERAGE PRICE IN IBADAN 1953-1967



NOTE: Based on Retail Price Series collected by Federal Office of Statistics, Ibadan.

with rice: for example, Eastern and Northern Nigeria are the main supply areas for Ibadan, while Eastern Nigeria supplies Lagos almost entirely; (4) imported rice is available, although a relatively high customs duty must now be absorbed in the price; and (5) rice stores better than the other major staple foods, particularly before hulling occurs.

Due to the remoteness of most of the main supply areas, rice supplies were not subject to the same conditions as those governing the supply of locally-produced staple foods until national and regional political activity became widespread with Independence in 1960. Until then, the existence of several widely separated major supply areas meant that price fluctuations were reduced because of the possibility of substitution of rice supplies between areas.

In terms of similarity of price behavior, rice does not strongly resemble any other commodity. In Ibadan it is most like gari (with a bivariate correlation coefficient of +0.61) and in Lagos most like cowpeas (+0.64). (Appendix Tables 10.14.1 and 10.14.2.)

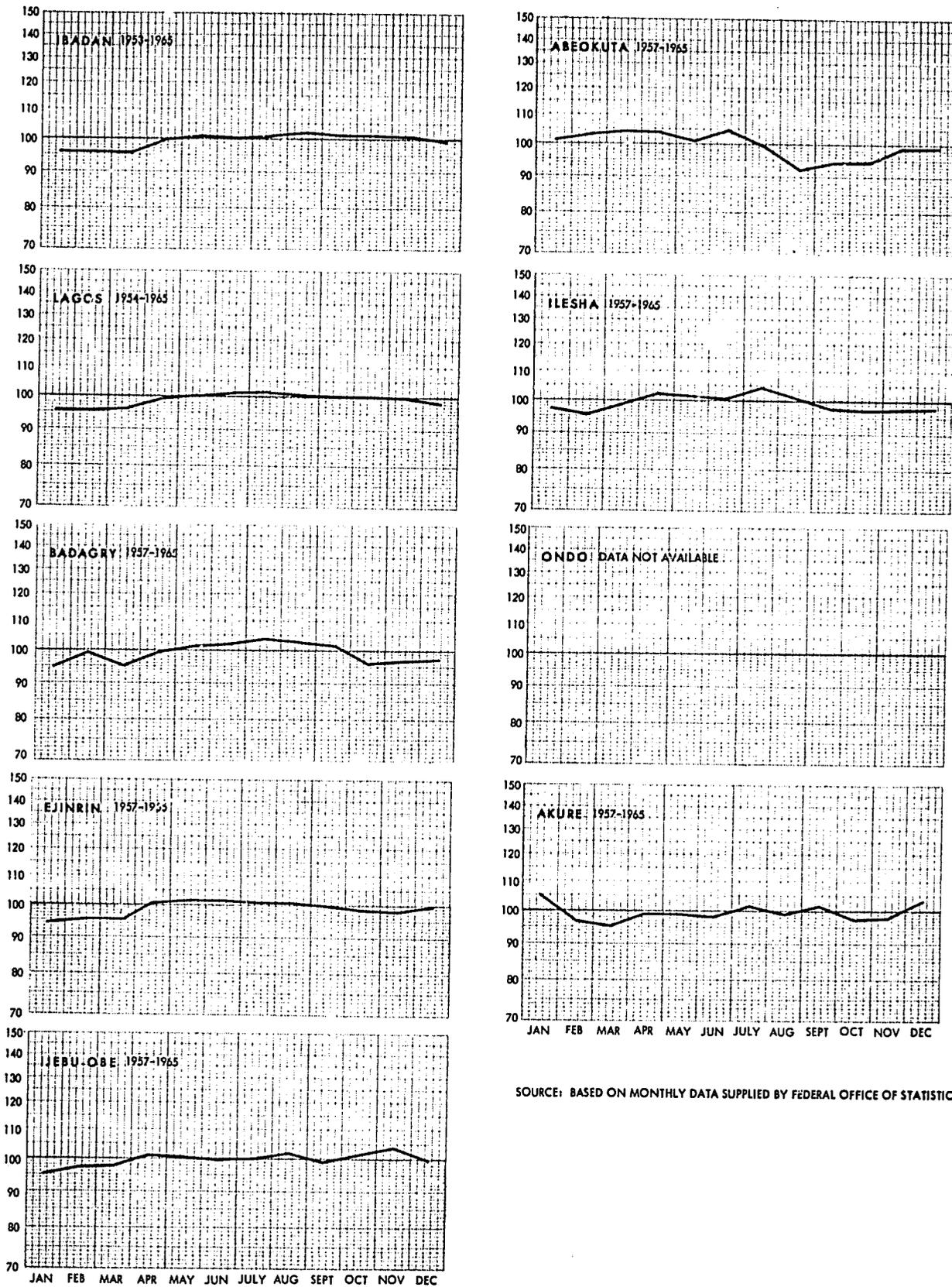
1. Seasonal Behavior. The apparent seasonal price variation of rice is the least of all the commodities studied. In Ibadan, for example, the coefficient of variation of the (original) monthly value as a percent of the centered 12-month moving average for the period 1953-66 is only 0.05. The comparable value for yam tubers is 0.30.

The seasonal indexes calculated for the eight selected urban centers for which FOS data were available are shown graphically in Figure 10.20. (The actual values, together with the coefficients of variation for each month, are shown in Appendix Table 10.10.6. The calculation for Ibadan is shown in Appendix Table 10.9.6.)

Once again, the seasonal indexes for Ibadan and Lagos essentially agree. Both have seven months of seasonally higher prices, from May to November, although the highest value is only 103, in August and July in each case. Both have lows in

Figure 10.20

RICE: SEASONAL INDEXES FOR 8 SELECTED URBAN CENTERS



SOURCE: BASED ON MONTHLY DATA SUPPLIED BY FEDERAL OFFICE OF STATISTICS

February of 96. Over the 13-year period for Ibadan and the 12-year period for Lagos for which the seasonal indexes were calculated, this means that the seasonal rise in price averaged only eight points in Ibadan and seven points in Lagos. All of the other selected urban centers had seasonal price ranges from 10 to 12 points.

The only major variation among these selected urban centers from that just described occurred in Abeokuta, where the high and low periods were basically reversed. In fact, a six-month period of seasonally high prices was generally present, from January to June, with a high of 105 in June. The low value of 93 obtained during August. Abeokuta is one of the few urban areas in the Region receiving large supplies of locally-produced rice; the upland rice grown in Egba Division is generally harvested during July and August.

The presence of even small quantities of early-sown rice from such areas as Egba Division has no doubt helped to reduce the seasonal price increases that may have occurred before the appearance of the late-sown rice harvested mostly from November to January.

2. Cyclical Behavior. As Figure 10.19 suggests, mild cycles are present in the retail price data for rice in Ibadan. As much of the variation in rice prices is due to the pronounced influence of an upward price trend, the value of 0.12 obtained for the coefficient of variation of the centered 12-month moving average for the period 1953-66 considerably overstates the magnitude of the cyclical price variation. In fact, the cycles present in rice prices are the smallest of all the commodities, including yam flour.

The rice cycles are also the shortest, recurring approximately every three years. Comparing Figure 10.19 with the gari cycles shown in Figure 10.13, it can be seen that there are almost two rice cycles corresponding to every gari cycle. This suggests that not only are the conditions of supply quite different, but also that rice and gari are not especially close substitutes. To amplify, even during periods of particularly high cyclical gari (locally-grown commodity)

prices, only in 1962 (and possibly 1966) did rice prices particularly move upward as did gari prices. It is possible that only in 1962 and 1966 were the rice supplies reaching Ibadan somewhat smaller than usual, with the result that rice prices responded to supply conditions rather than to a substitution induced by other locally-grown staple foods being in short supply.

In addition to the opportunity to acquire supplies from several independent supply areas, the relatively high transportation cost involved in moving supplies to Western Nigeria and the high producer price of rice means that price fluctuations will tend to be less than for the cheaper locally-grown staple foods. That is, the basic fixed costs in acquiring rice supplies are higher relatively and markedly higher absolutely. Further, it seems reasonable to suspect that because there are only a small number of traders involved in transporting these rice supplies from outside the Region, they will tend to even out price fluctuations to some extent by incorporating larger margins into their selling price when producer prices are falling, and vice versa.

3. Price Trends. As already mentioned, a significant upward straight-line trend was found in rice prices in Ibadan for the period 1953-65. Throughout this period, rice prices were increasing at an annual rate of about 2.4 percent. This upward trend, in fact, accounts for much of the movement present in rice prices in Ibadan. (Appendix Table 10.11.6.)

It is important to note that the annual rate of increase in Lagos was only about 0.5 percent (and this rate was only significant at the five percent level). The main reason for this more rapid rate of increase in rice prices in Ibadan is an apparent narrowing of the price difference between the two markets. Rice was considerably cheaper in Ibadan than it was in Lagos at the beginning of the period, while by the end of the period the price levels were roughly comparable. Particularly for Eastern Region rice, there can be no doubt that Lagos is the most important rice consuming center and a

major element in the determination of the level of rice prices. The smaller, less significant upward trend in Lagos rice prices is, therefore, a better indicator of the underlying trend existing within the Region. (Appendix Table 10.15.6).

g. Cowpeas

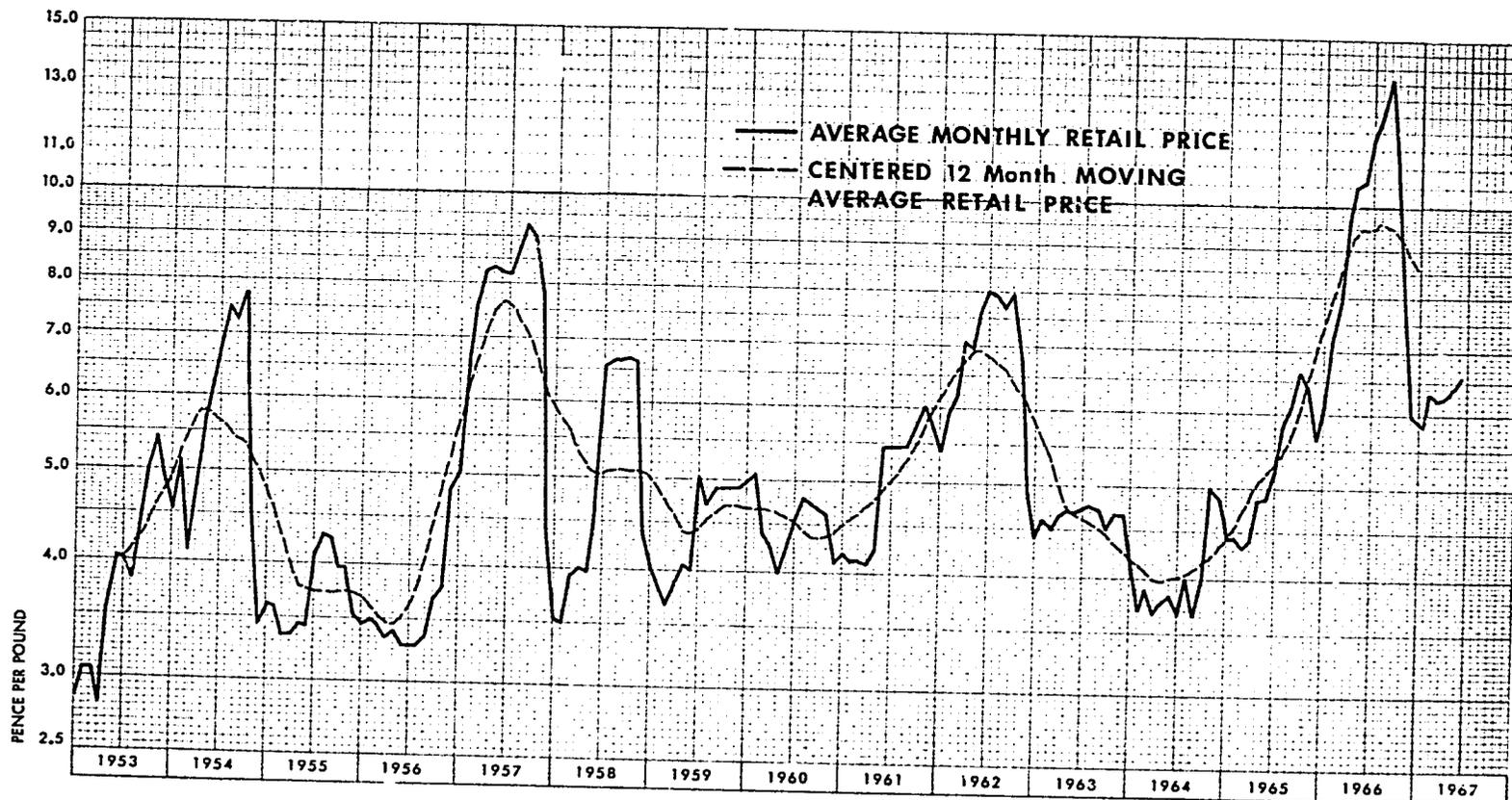
The average monthly retail price and the centered 12-month moving average price for cowpeas (black-eyed beans) in Ibadan for the period January 1953 - June 1967 are shown graphically in Figure 10.21. (The complete analysis of the FOS cowpea price data for Ibadan is arrayed in Appendix Table 10.7.7 and for Lagos in Appendix Table 10.8.7).

Supply and demand conditions for cowpeas are similar in many respects to those for rice: (1) cowpeas are a relatively expensive item of staple food and therefore constitute only a small proportion of the overall diet of the Region; (2) cowpeas have been consumed in quantity in Southern Nigeria only recently, but probably before rice; (3) the main supply area is 700 to 1,000 miles to the north, extending over a large area of Northern Nigeria; (4) a large and well organized group of traders is involved in assembling and transporting cowpea supplies to the south; and (5) although cowpeas do not store as well as rice, they can be stored for a considerable length of time, although infestation during storage can cause a very sizable loss of product over a protracted period.

On the supply side, cowpeas, like rice, are almost entirely independent of the locally-grown staple food crops. The major exception to this is in the small quantities of marketable surplus cowpeas produced in the savanna areas of the Region. Nevertheless, in terms of the behavior of cowpea prices, there is some similarity of movement in Ibadan to rice (with a bivariate correlation coefficient of +0.55), gari (+0.64) and cassava flour (+0.67) prices. The comparable values for Lagos are +0.64, +0.55, and +0.49 respectively.

Figure 10.21

COWPEAS: AVERAGE MONTHLY RETAIL PRICE AND CENTERED 12-MONTH MOVING AVERAGE PRICE IN IBADAN 1953-1967



NOTE: Based on Retail Price Series collected by Federal Office of Statistics, Ibadan.

(Appendix Tables 10.14.1 and 10.14.2).

1. Seasonal Behavior. A very prominent seasonal fluctuation occurs in cowpea prices. In Ibadan, for example, although considerably smaller than the seasonal fluctuation calculated to be present in yam tuber prices, it is only slightly smaller than that present in maize prices. The coefficient of variation of the (original) monthly price as a percent of the centered 12-month moving average price for the period 1953-66 is 0.15 compared with a value of 0.17 for maize.

The seasonal indexes calculated for the eight selected urban centers for which FOS data were available are shown graphically in Figure 10.22. (The actual values, together with the coefficients of variation for each month, are shown in Appendix Table 10.10.7. The calculation of the seasonal index for Ibadan is demonstrated in Appendix Table 10.9.7.)

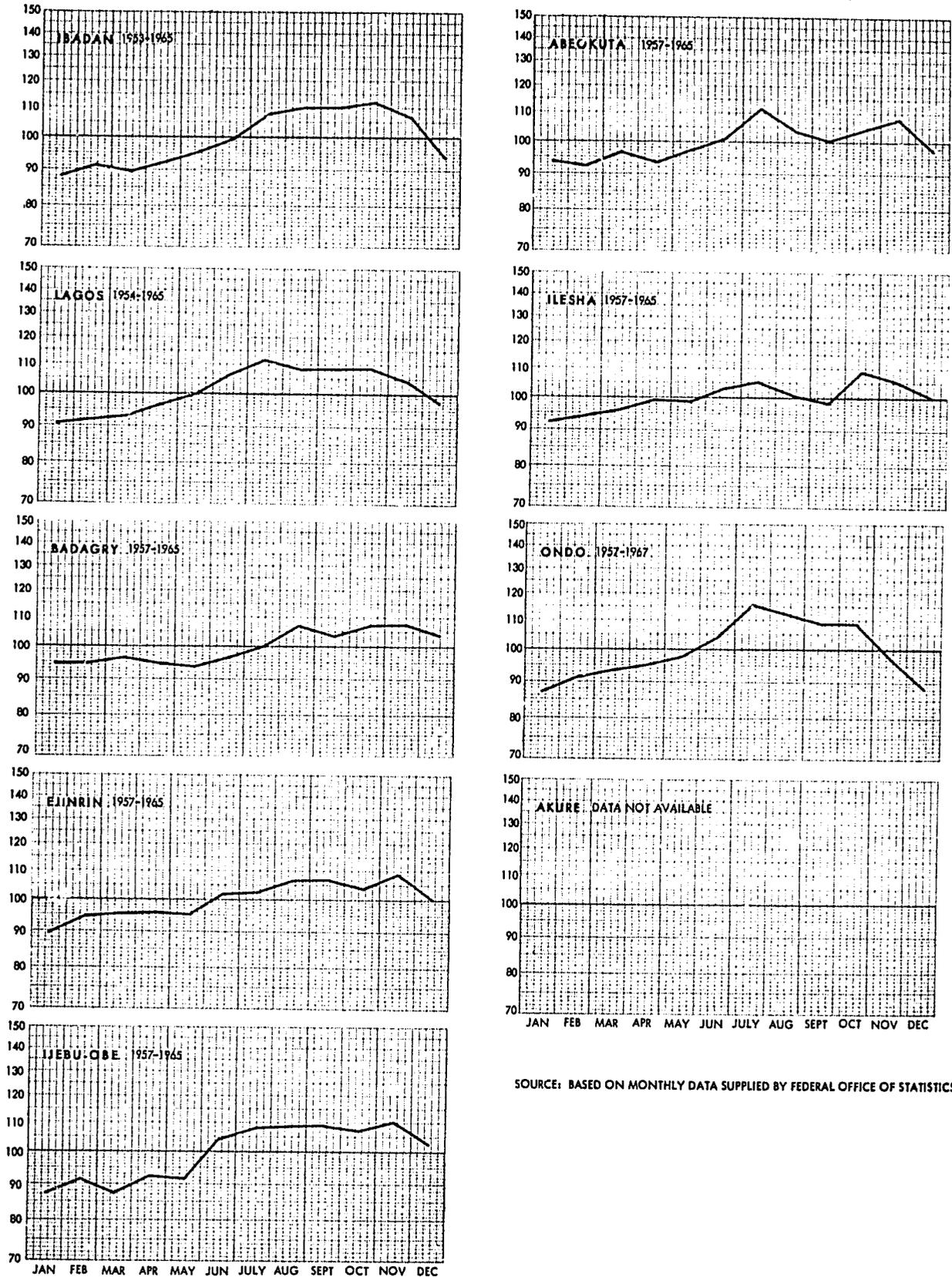
Although the pattern of seasonal price behavior is somewhat irregular (witness the comparatively high coefficients of variation associated with the seasonal indexes), a general pattern can be described. A six-month period of high seasonal prices occurs from June to November, with the peak price usually occurring toward the end of the period just prior to the arrival of new season cowpeas from the North. Generally, from October on increasing quantities of cowpeas become available, again with the seasonal low being usually reached in January.

The range of seasonal index in Ibadan is 24 points--from a low of 89 in January to a high of 113 in October. All the other urban centers have ranges in their seasonal indexes of from 14 to 22 points, with Ondo having a 28-point range. The fluctuations of values within each month are too large to place a great deal of significance on these differences between the selected urban centers.

The availability of small quantities of new season locally-produced cowpeas from about August on does not seem to have a marked effect upon the seasonal

Figure 10.22

COWPEAS: SEASONAL INDEXES FOR 8 SELECTED URBAN CENTERS



SOURCE: BASED ON MONTHLY DATA SUPPLIED BY FEDERAL OFFICE OF STATISTICS

price behavior. It is possible, however, that it does prevent a more marked seasonal peaking than actually occurs.

2. Cyclical Behavior. In addition to strong seasonal price movements, very pronounced cyclical patterns are present in cowpea prices. In fact, for Ibadan cowpeas had the largest variation in the centered 12-month moving average (as well as in the original monthly prices) of all commodities analyzed--a coefficient of variation of 0.24. The remainder ranged from 0.10 for yam flour to 0.23 for the strong cyclical movements in gari prices.

The four cycles present for Ibadan and shown in Figure 10.21 occur at 3-, 5-, and 4-year intervals respectively, when measured from peak to peak. While the 1962 and 1966 peaks may be assumed to be related to political activities, as already mentioned in particular relation to yam tubers, the 1954 and 1957 peaks are more difficult to explain. They are undoubtedly more the result of fluctuations in the level of agricultural production and productivity in Northern Nigeria than of conditions in Western Nigeria.

3. Price Trends. Although an upward trend in cowpea prices appears to be discernible for Ibadan in Figure 10.21, the trend calculated for the period 1953-65, using a linear regression equation, was found to be non-significant. The existence of such large seasonal and cyclical price movements makes the form of the regression equation particularly unsuitable when applied to the original monthly values. Nevertheless, the trend in cowpea prices does appear to be an upward one. In Lagos, for example, an upward trend of about 1.2 percent per year was found to be significant, although only at the five percent level of significance for the period 1954-65. (Appendix Table 10.11.7).

### 3. Spatial Price Behavior

Given enough long, reliable price series, four main types of spatial price analysis are possible. All involve comparing two price series with one another and obtaining some measure of the consonance between them. Firstly, it is possible to compare the price series of markets within a confined area, such as an urban center. Secondly, the price series of different urban centers may be compared with one another. Thirdly, the price series of different consuming centers may be compared with those of producing areas. And lastly, the price series of different producing areas may be compared with one another.

In Western Nigeria, at present, the only apparently reliable price series available are those collected by the Federal Office of Statistics for several urban centers. For several of these urban centers and for several time periods, the reliability of these series may even be questioned. The price series relating to producing areas (rural markets) were considered of dubious reliability and were not used. Further, all of the price series available are for one-month periods (except one for Lagos and Ibadan beginning March 1966, which were one-week periods). To accurately measure how closely markets are operating together, daily price information is desirable or at least weekly price data (with the prices being obtained on the same day for each market if possible).

In spite of the availability of only usable monthly data for several urban centers and for several of the markets in Ibadan, a detailed analysis was made of the available data. The analysis of the FOS Ibadan data

was made graphically by plotting the differences between markets. The analysis of the SRI weekly price series data for Ibadan has already been presented in a section entitled "Prices in Ibadan," 1966-67. The analysis of the FOS retail price data for up to 9 selected urban centers (shown in Map 10.1) was made in two parts.

1. Calculation of the bivariate correlation coefficients between each pair of towns for each commodity. For synchronous (matched months) retail price series, the results of this analysis are presented in Appendix X-XII. The results for nonsynchronous retail price series, where each urban center was lagged one month in relation to the other, can be seen in Appendix X-XIII. However, yam was the only commodity for which this analysis was done, as very few correlation coefficients were improved and an inspection of the data for the rest showed this observation to be generally true.
2. The series for each commodity for each selected urban center was compared both absolutely (actual pence per pound differences) and relatively (pence per pound difference as a percent of Ibadan price) with the comparable series for Ibadan. The differences for each observation and the average differences, standard deviations, and coefficients of variation between Ibadan and Lagos for all observations, each month and each year, are contained in Appendix X-XV. In general, the differences between years were larger and much more significant than the differences between months: that is, the variation of the yearly

averages was generally much greater than the variation within years, while the variation of the monthly averages was usually much less than the variation within months. For all series, the results of the analysis of differences from Ibadan between years are exhibited in Appendix X-XVI.

a. Within Ibadan

1. Price Behavior. Based upon the observations made in Ibadan during 1966-67, as has already been mentioned, the central native and central new markets in Ibadan, typified by Oritamerin and Dugbe Markets respectively, essentially move in directional consonance. However, the central native markets appeared to lead the central new market in price changes by at least several days, and perhaps by up to a week. (This phenomenon can be seen for the five major staple foods in Ibadan in Figures 10.4 to 10.8.)

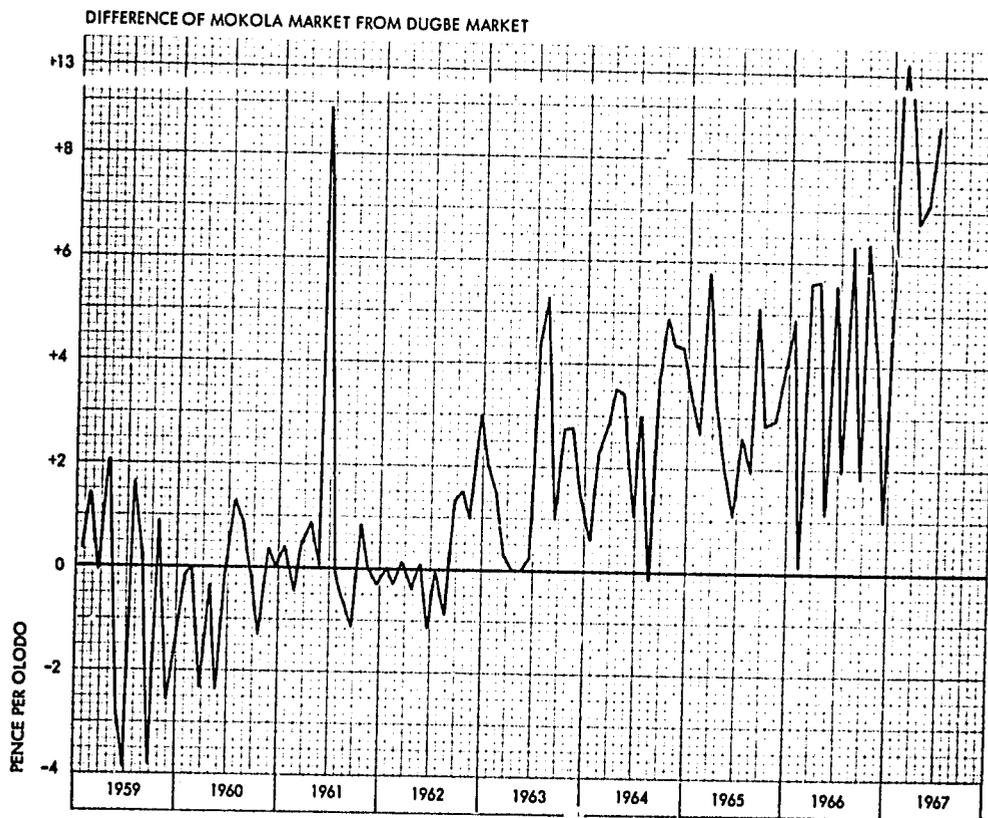
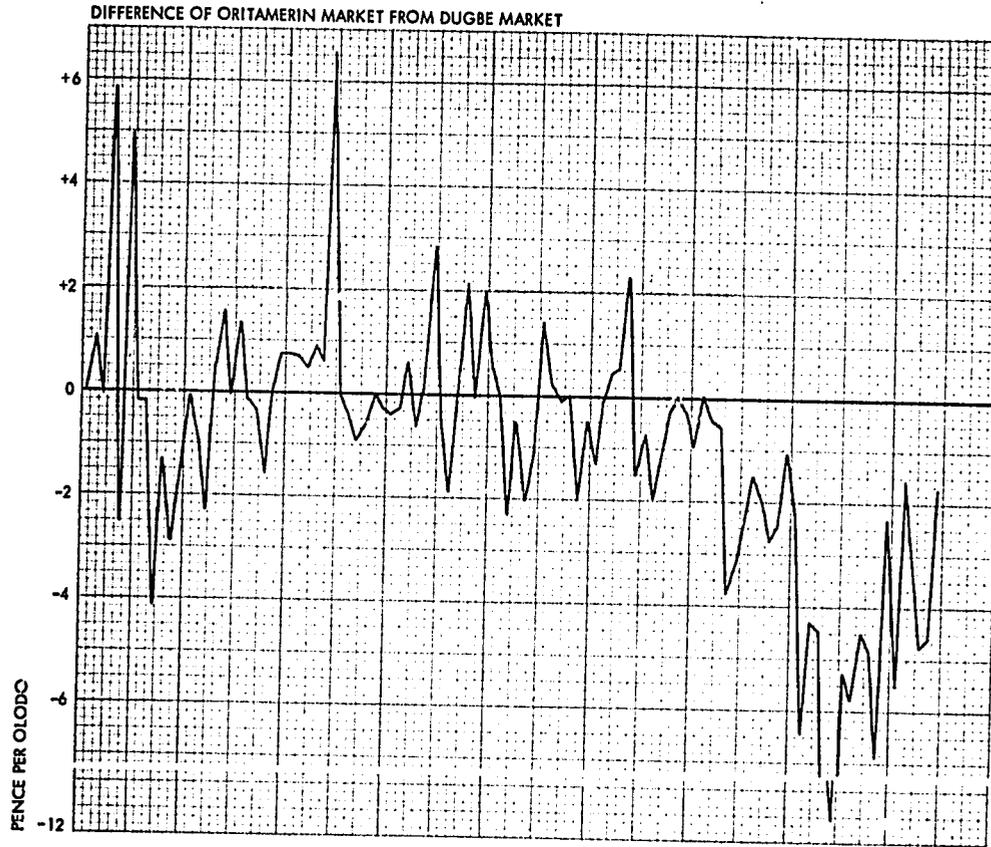
Even though the direction of change is essentially in consonance, given the existence of a minimum "lead" time required for prices in Dugbe Market to respond, the amount of change is frequently quite divergent. In fact, except for cowpeas, the absolute amount of movement in prices was seldom the same or even nearly the same, during the 13 month period in 1966-67 when prices were collected weekly in both Oritamerin and Dugbe Markets.

The difference in the average monthly retail unit price of gari between Dugbe Market and (a) Oritamerin and (b) Mokola (residential) Markets collected by the Federal Office of Statistics for the period 1959-67 and shown in Figure 10.23, further demonstrates the divergence. If the amount of change from month to month were the same in each market, then the difference between the markets would remain reasonably stable, at least in the short run. However, the violent fluctuations that actually occurred in the unit price difference between markets from month to month attests to the fact that even the average monthly change is quite uneven. If shorter time periods were taken, then this variability of the difference between markets would be further magnified because several observations are included in the monthly average.

It is apparent, therefore, that even within a compact urban center such as Ibadan, with the major markets only about 2 miles apart, there is only imperfect consonance of prices. In general, the central native, central new and residential markets in Ibadan, although related, function somewhat independently--each market is basically affected by the same supply and demand conditions at about the same time and each usually moves in a similar direction but mostly by quite different amounts.

Figure 10.23

GARI: AVERAGE RETAIL PRICE DIFFERENCES BETWEEN IBADAN MARKETS



As similar conditions exist in other urban centers, it seems reasonable to expect that this same type of imperfect price relationship also exists between markets located within the other urban centers of the Region.

2. Price Differences. It has already been stressed that in the SRI weekly retail and wholesale price series for the two market complexes in Ibadan, the real price in the central new market (Dugbe Market) was generally always higher than the comparable price in the central native market (Oritamerin Market). This was found to be true for all commodities except cowpeas where the prices in the two markets were, on the average, about the same.

The most pronounced difference in price was for gari. Although the absolute difference was on the average slightly less than for rice, the considerably lower price of gari meant that the relative difference was larger. (The absolute differences for gari are shown in Table 10.22 and for rice in Table 10.26.)

A detailed analysis of the average weekly price differences for gari, based on one-month periods, reveals a sizable fluctuation in this price difference at both the retail and wholesale levels. The average difference of retail prices in Dugbe Market from Oritamerin Market throughout the period July 1966 - July 1967 was 1.29 pence per pound, or 26 percent of the retail price in Oritamerin Market. By month, however, the average difference fluctuated

from 2.68 pence per pound (or 52 percent) in October 1966 to 0.53 pence per pound (or 10 percent) in January 1967. Except for three months in 1967 the wholesale price difference was considerably less than the retail price difference. Throughout the same period, the average wholesale price difference was 13.3 shillings per bag (approximately 0.76 pence per pound) or 16 percent of the wholesale price in Oritamerin Market. The average monthly difference fluctuated from 2 shillings per bag (or 2 percent) in December 1966 to 22 shillings per bag (or 31 percent) in May 1967 and (37 percent) in June 1967. (The results of this analysis are shown in Table 10.21.)

Overall, given the average size of retail purchases, the retail price difference does not generally cover the cost of return transportation between the two market complexes. However, as most market buyers use some form of public conveyance, particularly on the return journey, it is really the marginal transportation cost difference between markets that is relevant. In this case, it seems certain that the retail price difference between the two markets more than covers the extra transportation cost involved. Further, most consumers purchase more than one item in each market they visit, with the result that the total expenditure difference for equivalent purchases will be even greater.

It is apparent, therefore, that the consumers buying in the expensive central new market and the even more expensive residential markets do so by choice, as adequate public transportation exists in Ibadan to convey them to the central native market complex. The cost to the consumer of this preference has tended to become more marked in recent years. This can be seen in Figure 10.23 for gari, where the (FOS) unit retail price differences from Dugbe Market are shown for Oritamerin and Mokola Markets. Although the specific market data are only available from 1959 on, it does seem that the main upward trend in the price difference of the central new market and from the central native markets, and the even higher upward trend of the residential market prices, did not begin until about 1963.

Several salient facts help explain the hierarchy of prices that exists in the markets in Ibadan whereby prices in the central native markets are generally lowest and the central new market is more expensive but still cheaper than the residential markets:

1. The central native markets are located in the high-density low-income area of Ibadan; the central new market is located in the new commercial center of Ibadan adjacent to the termini of all public transportation in Ibadan; the residential markets are mostly in lower-density higher-income residential areas.

(For the location of the markets in Ibadan in relation to the population density see Map 8.2).

2. The central native market complex is extremely large and extensive, with a multitude of both retailers and wholesalers specializing in every popular commodity; the central new market is a single compact market with fewer retailers and wholesalers but essentially the same wide range of commodities; the residential markets are small compact markets with retailers only - supplies are acquired from wholesalers in one of the central markets and the range of commodities is somewhat reduced. (The size of markets can be seen in Table 8.3.)
  
3. For the most part, storage and selling facilities in the central native markets consist of converted, privately owned dwellings located in the main thoroughfares; the central new market was designed and constructed by the Ibadan City Council as a market and consequently has more facilities and generally more suitable stalls; the residential markets vary in the existence and ownership of facilities. Mokola Market is a planned public market, while the few facilities in the other residential markets are mostly private.

4 The central native markets are, for the most part, the markets of the indigenous Ibadan residents; the central new and most of the residential markets serve more the "stranger" elements (non-Ibadan Yoruba and non-Yoruba residents) and the overlapping group of generally higher-income residents living outside the traditional (indigenous) center of Ibadan. (This can be roughly seen from the consumer market patterns of the sample of households interviewed in Ibadan and shown in Map 6.1.)

It is reasonable, then, that prices in the central new market are generally higher than the central native market because it is frequented by a generally higher-income group of households who are willing to pay more for the locational advantage (disadvantage), the more compact and better layout, better and more accessible facilities, and the many other tangible and intangible factors that are associated with it. The even higher price in the residential markets is probably due more to their close proximity to largely higher-income residential areas, fewer retailers, and absence of wholesalers (except for several gari wholesalers in Mokola Market.)

## Between Urban Centers

1. Price Behavior. Using the bivariate correlation coefficients derived from the FOS monthly retail price series for selected urban centers in Western Nigeria to show the relationship between price movements in these centers, it is obvious that a wide variation exists in the degree of association between urban centers, commodities and years. (Appendix X-XII)

The closest relationships were generally found to exist between Ibadan and Lagos--only for yam flour, cassava flour and rice were these relationships something less than moderately strong.<sup>1</sup> In fact, for the period 1957-66, the correlation coefficients of +0.93 and +0.91 obtained for gari and cowpeas respectively suggest a high degree of association, while those for yam and maize of +0.83 and +0.82 respectively suggest a moderate degree of association between prices in Ibadan and Lagos.

The two urban centers selected with inland waterway connection with Lagos--Badagry and Ejinrin--were generally the next most closely related to both Ibadan and Lagos as well as to themselves. However, the connection appeared slightly stronger with Lagos than Ibadan when both the entire series and two-year periods are considered. Ibadan rice prices, like Lagos prices, are not very highly correlated overall, although for individual periods some closer relationships exist. Yam flour and cassava flour are evidently too unimportant in Badagry and Ejinrin for prices to be collected.

In a general way, Ijebu-Ode is most closely related to Ibadan, although Lagos, Badagry and Ejinrin are also quite well related for most commodities. This is particularly true for gari, maize and cowpeas and to a lesser extent for rice. Among the other urban centers, it is difficult to detect a general close pattern of association similar to those just mentioned, although some close relationships do appear to exist for particular commodities.

Undoubtedly, the behavior of gari prices throughout the Region is the most similar, particularly when the whole 10-year period is considered. The high-to-moderately high relationships that were found to exist between all 9 selected urban centers indicates that the cyclical trend pattern of price behavior already described for Ibadan exists throughout the Region. The generally weaker relationships obtained for the shorter two-year periods suggest that on a strictly month-to-month basis, the relationship of gari prices between urban centers is somewhat weaker. This is particularly true until about 1963 for most urban centers and until about 1965 for Akure. (Appendix Table 10.12.3)

A similar, although slightly weaker, situation exists in cowpea prices. The high to moderately high relationships existing among the selected urban centers in monthly prices

indicate that cowpea prices throughout the Region followed a similar cyclical-trend pattern to that already described for Ibadan. For the shorter two-year periods, where seasonal factors are more influential in determining the amount of association between urban centers, the relationships are generally much weaker, particularly between 1959 and 1964. (Appendix Table 10.12.7).

The relationship of yam prices between the selected urban centers was generally quite weak, with more seasonal price correspondence (as expressed by the correlation coefficients for the two-year periods) than cyclical-trend similarity (as based on the 10-year relationship). However, it is likely that the true nature of the cyclical-trend relationship between urban centers is obscured by the presence of extremely large and often quite different seasonal price movements. Moreover, extensive local production, perishability, bulkiness and the relatively high transport costs associated with fresh yam tubers produce great dissimilarity of behavior in yam prices throughout the Region. (Appendix Table 10.12.1)

There is mostly only a weak price relationship in maize prices throughout the Region. This is true for seasonal as well as cyclical-trend prices. Nevertheless,

even though the monthly relationships are weak, the basic underlying relationships seem to be essentially the same. This can be seen in the existence of only a few very low or negative price relationships for maize prices between urban centers. (Appendix 10.12.5)

The behavior of rice prices during 1959-60 in Ibadan were quite dissimilar to those in Lagos (with a correlation coefficient of -0.29). The pattern of rice prices in Ijebu-Ode followed Ibadan prices (+0.90), while in Badagry, Ejinrin, and Akure, and to a lesser extent Abeokuta and Ilesha, rice prices followed Lagos. A similar, although much less marked, pattern obtained throughout most of the period. In general, in both seasonal and cyclical-trend movements, rice prices throughout the Region were only weakly related during the period for which data is available (1957-66). As for maize, the underlying pattern was essentially the same, with the exception already noted. (Appendix Table 10.12.6)

In terms of a general pattern of distribution and consumption, yam flour and cassava flour are relatively unimportant compared with the other five commodities included. In fact, their main area of importance is in the western part of the Region--in Ijebu, Ibadan and Abeokuta Provinces. Even in these areas, the relationship between month-to-month patterns of price behavior are quite weak, both in seasonal and cyclical-trend movements. (Appendix Tables 10.12.2 and 10.12.4)

One possible explanation of the weak relationships found between urban centers for several of the commodities using synchronous price series data is that there is a time lag between a price change in one market and a corresponding change in another market. Using the price series data for yam, bivariate correlation coefficients were obtained for nonsynchronous series where each series was lagged one month in relation to the others. However, with a few rare exceptions, the extent of the connection between urban centers for the period 1957-66 was even weaker. (Appendix Table 10.13.1). It can be concluded for yam, at least, and seemingly for the other commodities as well, that if a time lag does exist then it is generally less than one month.

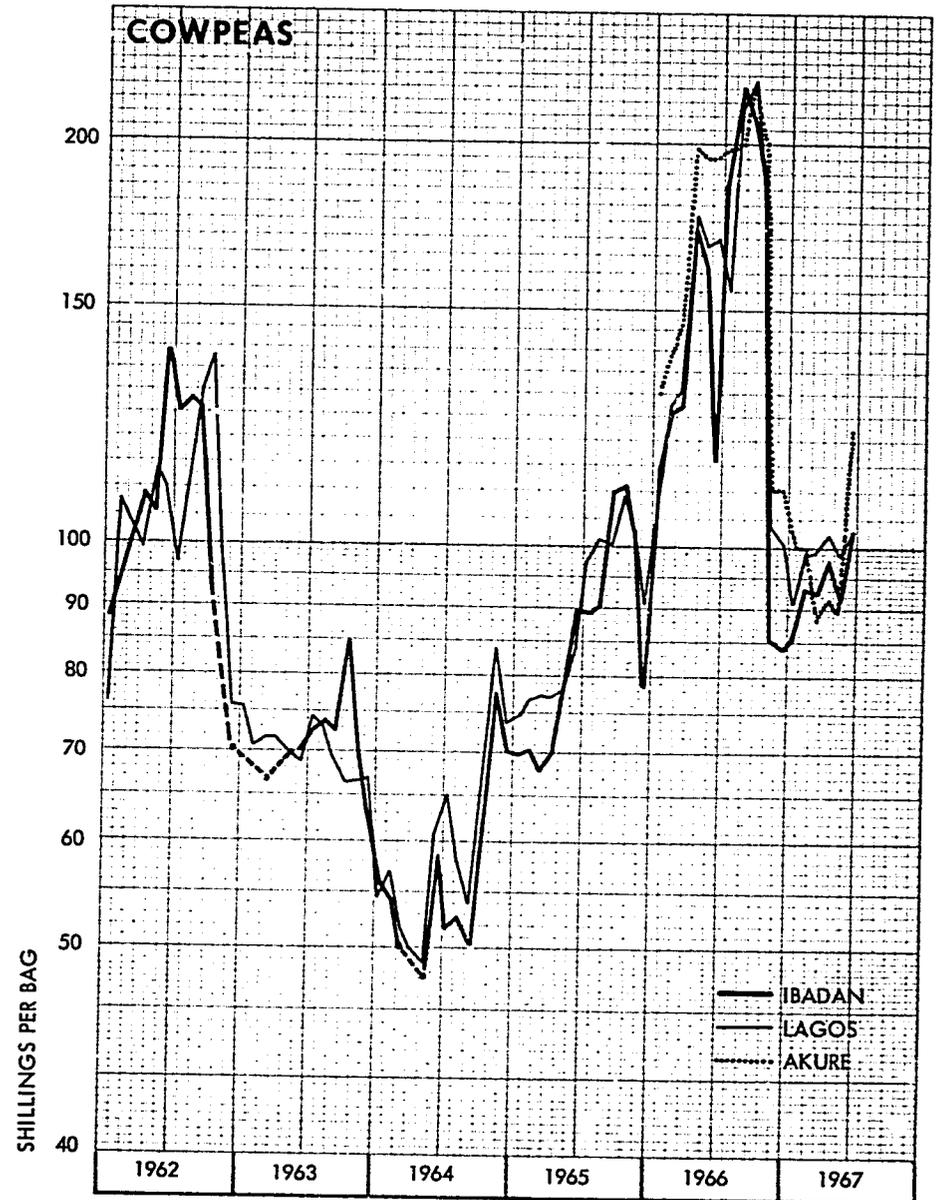
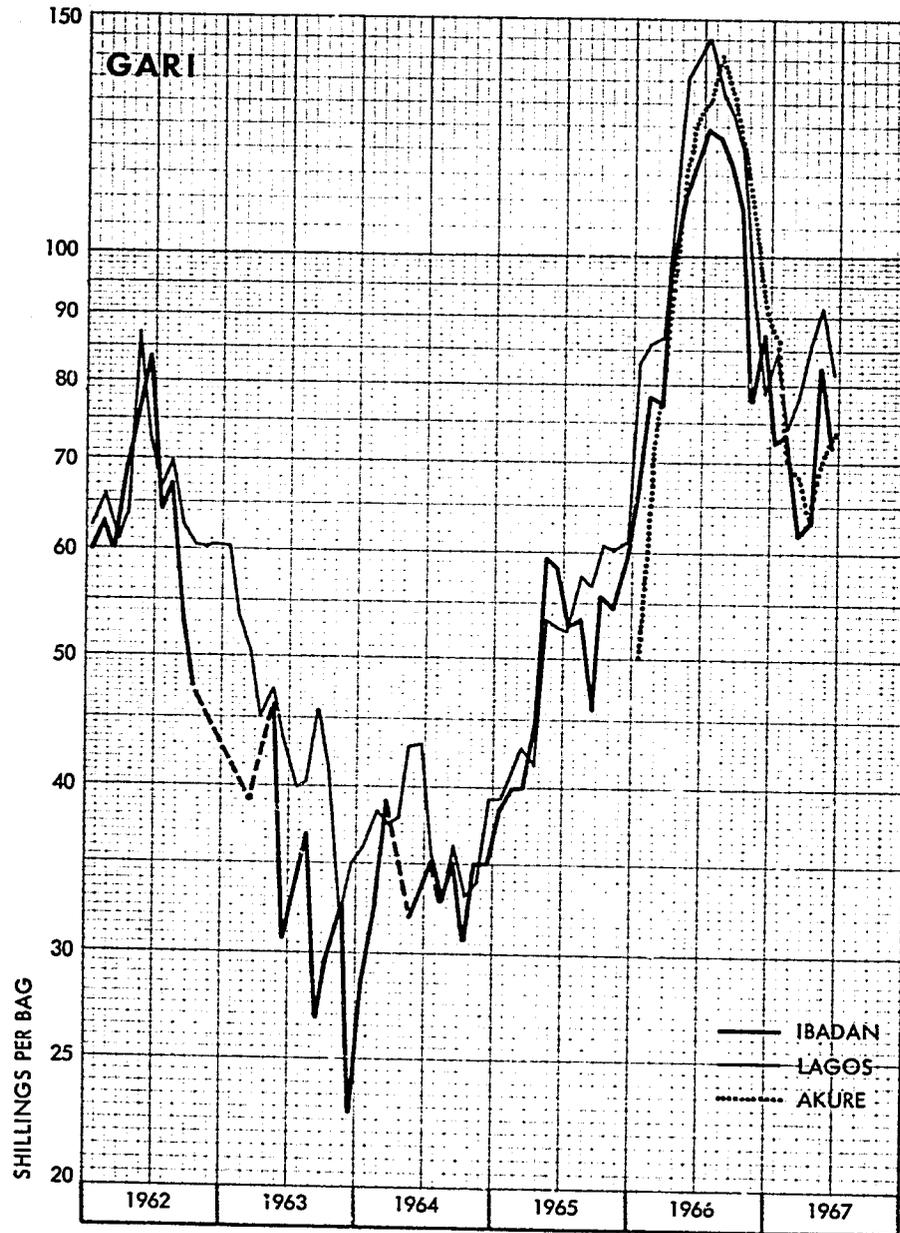
In conclusion, it seems that, at least between the selected urban centers and most likely throughout the whole Region, the price behavior of each of the five major staple foods is roughly parallel in terms of basic behavior. However, the exact extent of this association differs by commodity, place and time. Only for gari and cowpeas is there generally a high-to-moderately high association. For the most part, the other commodities are rather weakly associated, particularly over such short periods as a few months. Over shorter periods of time, such as a few days or weeks, it is likely that there is even less correspondence of price behavior. In general, the shorter the time period, the more likely are prices to be influenced by local and rather capricious factors.

2. Price Differences. In comparing price levels between urban centers, wholesale and retail prices provide somewhat different insights into the variations in price behavior between the several urban centers. Wholesale prices constitute the bulk selling price and incorporate all assembling and selling costs, commissions and returns. They are an indication of the gross price available to traders who handle bulk supplies and sell in one or more urban centers. Retail prices indicate the prices paid by consumers in the various urban centers, although this is somewhat obscured in the available FOS data by the use of different market measures, each with a considerable degree of variability as to the exact quantity contained. Comparison of retail and wholesale prices indicates the retail margin obtained in the various urban centers.

Federal Office of Statistics wholesale price data are available for Ibadan and Lagos only from 1962. Average yearly wholesale prices are shown in Appendix X-XIX. Nevertheless, several factors stand out. First, there is a considerable fluctuation in prices from year to year, roughly similar to the retail price behavior already described. Secondly, as shown in Figure 10.24 for gari and cowpeas, wholesale prices are roughly parallel in Ibadan and Lagos (and seemingly in Akuri as well). However, there is frequently quite a difference

Figure 10.24

AVERAGE MONTHLY WHOLESALE PRICE IN IBADAN, LAGOS AND AKURE 1962-1967



SOURCE: Federal Office of Statistics

between them from month to month. Thirdly, this difference is quite variable from year to year--that is, between markets the margin is perpetually changing. And, fourthly, prices in Ibadan are considerably lower than in Lagos for gari and maize (and also yams, although comparable wholesale values are not available), slightly lower for cowpeas, and considerably higher for rice.

For the 5 1/2 year period, 1962 (June)-1967, the wholesale price of (white) gari in Lagos averaged 6.6 shillings per bag (12 percent) more than in Ibadan, maize averaged 4.6 shillings per bag more (8 percent), (brown) rice averaged 31.6 shillings per bag (18 percent) less, and (white) cowpeas averaged 3.6 shillings per bag (3 percent) more. This behavior is somewhat to be expected. For the locally-produced commodities--yam, gari and maize--Ibadan is much closer to the main areas of surplus production and has had much stronger roots in these areas for a longer period than Lagos. Lagos has grown much more rapidly than Ibadan and consequently the demand for foodstuffs has also grown more rapidly. To attract the required supplies, it is likely that an increased margin was necessary. In general, both incomes and food prices are higher in Lagos but so are nearly all marketing costs. Finally, part of the higher price in Lagos probably goes to cover greater costs, particularly transportation. For example, from the major supply areas, the extra cost of transporting to

Lagos instead of Ibadan would generally account for approximately half of the difference in the wholesale price between the two markets.

The difference in wholesale rice prices between Ibadan and Lagos is explained partly by differences in sources of supply, partly by the greater dependence of Lagos on rice as a source of calories, with a correspondingly larger number of traders being involved, and partly by the ability to transport supplies to Lagos entirely by inland waterways.

Cowpeas provide the best example of two markets working in unison at the wholesale level. In fact, both are centers of the cowpea trade in southern Nigeria, and traders undertaking the transportation from the North are very flexible about off-loading in Ibadan or continuing on to Lagos. It seems that the difference in the wholesale prices is a reflection of the higher transportation and selling costs associated with marketing cowpeas in Lagos.

From the available retail price data, it is apparent that retail price differences are more volatile than wholesale price differences. (FOS retail prices in Ibadan and Lagos are compared in detail in Appendix X-XV.) In general, retail prices are determined not only by wholesale prices but also by a host of peculiar conditions affecting the level of market supply and consumer demand. Comparing wholesale and retail price differences between Ibadan and Lagos, it seems that retail margins

are considerably larger in Lagos (assuming the conversion weights of the local units of measure used in collecting retail prices are reasonably correct). That is, the retail price differences are considerably greater than the wholesale price differences (except for rice, where the wholesale price was less in Lagos than in Ibadan). The relatively higher retail margins in Lagos are most likely attributable to the same factors as the large price differences between the central native and central new markets in Ibadan. In fact, the retail price differences between these markets in Ibadan are frequently comparable to the retail price differences between Ibadan and Lagos.

Over a period of several years, it is apparent that the yearly price differences between urban centers is much greater than the monthly one. (Compare the standard deviations in Appendix X-XVI.) This means that there is no consistent seasonal pattern to the variations in the price differences between urban centers. Rather, the price differences are associated more with the cyclical and longer-term effects than with seasonal factors.

Although the several FOS retail price series cannot be closely compared (except for yam), they do indicate the pattern of price difference movements that exists in the Region-- both absolutely and relatively. (Average yearly percent

price differences from Ibadan are shown for up to 8 selected urban centers in Appendix X-VI.) For example, between Ibadan and Lagos, relative differences in yam, gari and cowpea retail prices have remained about the same, cassava flour and rice prices have declined in Lagos relative to Ibadan, while maize prices have increased. In general, maize, rice and cowpea prices have decreased throughout the Region relative to Ibadan during the interim since 1957. This is also true to a lesser extent for yam with the exception that Badagry and Ejinrin have increased relative to Ibadan. Relative gari price differences have stayed about the same over this same period.

From Table 10.32 it appears that retail prices are generally highest in Lagos. Elsewhere, price differences seem to be related to the commodity rather than to the urban center. Hence, retail prices are generally lowest in Ibadan for yam, yam flour, cassava flour and cowpeas; while for gari and rice, Ibadan appears to be more expensive than most other places in the Region. Maize is quite mixed, with Abeokuta and Ondo having lower retail prices than Ibadan, while Lagos, Badagry, Ejinrin and Ilesha are higher.

Table 10.32

AVERAGE PERCENT PRICE DIFFERENCE FROM IBADAN OF MONTHLY RETAIL PRICE  
 SERIES DATA, BY COMMODITY AND BY URBAN CENTER - 1954-1966

| Commodity     | Urban Center |          |          |            |           |         |       |        |  |
|---------------|--------------|----------|----------|------------|-----------|---------|-------|--------|--|
|               | Lagos        | Badagry* | Ejinrin* | Ijebu-Ode* | Abeokuta* | Ilesha* | Ondo* | Akure* |  |
| Yam           | 35           | 29       | 27       | 5          | 10        | 25      | 16    | 40     |  |
| Yam flour     | 63†          | --       | --       | 34         | 22        | 14      | --    | --     |  |
| Gari          | 51           | -6       | -14      | -12        | -19       | 4       | 1     | -11    |  |
| Cassava flour | 93†          | --       | --       | 29         | 11        | --      | --    | --     |  |
| Maize         | 27           | 10       | 10       | 0          | -1        | 17      | -15   | --     |  |
| Rice          | 10           | 2        | -1       | -8         | -8        | 13      | --    | -6     |  |
| Cowpeas       | 52           | 15       | 15       | 2          | 16        | 48      | 22    | --     |  |

\* 1957-1966

† 1958-1966

Source: Appendix X-XVI.

#### 4. Inter-Commodity Price Relationships

Even within the same urban center, the degree of conformity in price movements between the various staple food commodities is not high. Overall, it seems that there is a general, although weak, relationship of the longer-term cyclical-trend movements, while the shorter-term seasonal-irregular movements are associated more erratically. Some are very high, e.g., gari and cassava flour in Ibadan during 1965-66, where the correlation coefficient calculated for the FOS price series data is +0.97, while others are quite the reverse, e.g., maize and rice in Ibadan during 1963-64, where the correlation coefficient is -0.40. (Appendix Table 10.14.1)

Because of the presence of somewhat similar seasonal fluctuations, yam is most closely, although still weakly, related to maize. Yam flour the other hand, is most closely related to cassava flour, both in the short and longer term: its relationship to yam is especially weak. The behavior of gari prices is most similar to that of cassava flour, and is followed to some extent by yam flour, rice and cowpeas. Cassava flour prices follow a somewhat similar pattern to that of yam flour and gari prices, and to a lesser extent rice and cowpea prices. Maize is weakly related to yam only. Rice and cowpeas prices are slightly related to each other and to the other commodities with marked cyclical-trend behavior and smaller seasonal movements--yam flour, gari and cassava flour. (Appendix X-XIV)

Although the major staple foods can be substituted for one another, it is apparent that the effect on price is not very marked. Neither the relative price changes nor their timing coincides in either Ibadan or Lagos.

These weak price relationships, indicating only imperfect substitution, no doubt exist throughout the whole Region.

#### 5. Intra-Commodity Price Relationships

For both yam and cassava, it is possible to compare the price relationship of two forms of each commodity. It has just been pointed out that yam tuber prices have relatively little association with yam flour prices, whereas gari and cassava flour prices are somewhat related. The absolute and relative price relationships existing between the two forms of each commodity in Ibadan is shown in detail in Appendix X-XVII.

In general, yam prices are highly seasonal, while yam flour prices are not. As a result, the price relationship between these two commodities is mostly associated with this seasonal price behavior: as yam prices rise to a seasonal high in June, so the relative price of yam flour declines in relation to yam. For example, yam flour averaged about 270 percent more than yam tubers during the month of September for the period 1953-66. By the following June however, this retail price difference averaged only about 100 percent higher. (Appendix Table 10.18.1)

The opposite is true of gari and cassava flour. In general, the differences in the yearly averages are much larger than the differences in the monthly averages. This means that both forms have essentially the same seasonal price behavior but differ somewhat in their longer-term price relationship. In fact, it seems that the cyclical fluctuations of gari prices are greater than of cassava flour prices, so that during the cyclical peaks gari prices are considerably higher relative to cassava flour prices than during the cyclical lows. This is even more marked in Ibadan, where the actual price of gari is higher than cassava flour prices during cyclical peaks and lower during periods of cyclical lows. (Appendix 10.18.2)

## C. MARGINS

In establishing the margins existing in the staple food marketing system in the region, three principal approaches are possible. Firstly, the price series available for the various levels of the system may be compared. This involves comparing retail, wholesale, rural market and farm price series for connected supplying and consuming areas. The different series would have to be converted into comparable units. Secondly, information on costs and returns can be obtained directly from the marketing intermediaries involved in the marketing chain. And thirdly, the actual flow of commodities can be observed with the details of all transactions being recorded as they are made. This process begins by observing the producer dispose of his product and finishes with the details of the exchange between the last intermediary and the consumer.

All three of these approaches have been used to some extent. However, the information available is incomplete and rather fragmentary, especially in relation to prices and transactions in the supply areas. Nevertheless, sufficient information is available to obtain some assessment of the costs and returns involved in the marketing of staple foods. The most pertinent of these data will be discussed in sub-groups based on the method of collection. This is necessary because of the differences in the data and the differing ways in which the individual costs and returns are included.

### 1. Price Series Data

By comparing price series data for the various levels in the marketing system it is possible to obtain some measure of the gross margins. Unfortunately, for Western Nigeria the use of different units of measure

at the various levels and in some cases of different units within levels renders the data less comparable. Even if accurate weights were available for converting the data into comparable units, the problem of the reliability of the data would still exist. This applies particularly to the producer market price series that is available, especially in relation to the validity of the series as producer prices--in some cases these prices seem to represent retail rural market prices better. If this is the case, then a downward bias exists in the margins calculated using this series.

Using average yearly data, Table 10.33 indicates for the five major staple food crops for the period 1962-65, the gross margin between the average retail price in Ibadan and the average producer market price in the six most important (administrative) divisions supplying Ibadan. Although the gross margin is shown for each division for each commodity, it should be pointed out that not all commodities are necessarily in surplus in every division each year. For example, Ibadan receives considerable supplies of gari from Egba Division while maize and rice are also supplied to a lesser extent. Further, the divisional average prices are calculated from prices in several (up to 14) selected markets and although nearly all of these markets are large and locally important, they are not all necessarily major surplus supply markets for each commodity to Ibadan and other urban centers. This will effectively reduce the calculated gross margin because prices are generally lower in the more major surplus markets than elsewhere. Finally, it should be remembered that only producer market prices have been used and not "farm-gate" prices. As an intermediary is frequently involved in moving the

Table 10.33

**GROSS MARGIN BETWEEN RETAIL PRICE IN  
IBADAN AND PRODUCER MARKET PRICE BY  
COMMODITY, YEAR AND DIVISION**

| Commodity<br>and Year | Retail Price<br>in Ibadan<br>(d./lb) | as Percent of Retail Price in Ibadan |        |       |       |     |     | Regional<br>Average |
|-----------------------|--------------------------------------|--------------------------------------|--------|-------|-------|-----|-----|---------------------|
|                       |                                      | Division                             |        |       |       |     |     |                     |
|                       |                                      | Egba                                 | Ibadan | Oshun | Ijebu | Owo | Oyo |                     |
| <b>Yam</b>            |                                      |                                      |        |       |       |     |     |                     |
| 1962                  | 2.62                                 | -22                                  | 39     | 31    | -27   | 16  | --  | -14                 |
| 1963                  | 1.93                                 | -35                                  | 17     | -14   | 48    | 67  | --  | -45                 |
| 1964                  | 1.90                                 | -37                                  | 5      | 5     | 26    | -16 | --  | -42                 |
| 1965                  | 2.19                                 | -28                                  | 41     | 22    | 32    | 9   | 32  | -5                  |
| <b>Gari</b>           |                                      |                                      |        |       |       |     |     |                     |
| 1962                  | 3.94                                 | 21                                   | -45    | 21    | 26    | 9   | --  | 11                  |
| 1963                  | 2.76                                 | 35                                   | -49    | 42    | 24    | 24  | --  | 17                  |
| 1964                  | 2.15                                 | 35                                   | 26     | 35    | 35    | 30  | --  | 21                  |
| 1965                  | 2.90                                 | 48                                   | 17     | 38    | 38    | 31  | 17  | 31                  |
| <b>Maize</b>          |                                      |                                      |        |       |       |     |     |                     |
| 1962                  | 4.16                                 | 18                                   | -8     | 40    | 28    | 64  | --  | 25                  |
| 1963                  | 3.30                                 | 12                                   | -6     | 48    | 33    | 67  | --  | 33                  |
| 1964                  | 3.15                                 | 8                                    | 11     | 43    | 36    | 59  | --  | 27                  |
| 1965                  | 3.33                                 | 16                                   | 4      | 37    | 25    | 61  | 66  | 28                  |
| <b>Rice</b>           |                                      |                                      |        |       |       |     |     |                     |
| 1962                  | 12.36                                | 19                                   | 40     | 30    | 21    | 35  | --  | 26                  |
| 1963                  | 10.20                                | 17                                   | 25     | 25    | 21    | 41  | --  | 19                  |
| 1964                  | 9.95                                 | 21                                   | 19     | 26    | 13    | 37  | --  | 21                  |
| 1965                  | 10.02                                | 14                                   | --     | 19    | 15    | 13  | 28  | 19                  |
| <b>Cowpeas</b>        |                                      |                                      |        |       |       |     |     |                     |
| 1962                  | 6.89                                 | -6                                   | -36    | 19    | -1    | 11  | --  | 6                   |
| 1963                  | 4.66                                 | -16                                  | -27    | 8     | -37   | 14  | --  | -24                 |
| 1964                  | 4.04                                 | -6                                   | -9     | 11    | -61   | 26  | --  | -26                 |
| 1965                  | 5.29                                 | -6                                   | --     | 21    | 2     | 30  | 28  | 4                   |

Source: Retail prices: Federal Office of Statistics; Producer Market prices: Ministry of Economic Planning and Social Development.

commodity from the farm to the local market and in some cases, particularly in the more important surplus supply areas in Oyo Division, foodstuffs move straight from the farm to the urban market, bypassing all rural markets, the calculated gross margins do not represent the full cost of moving staple foods through the marketing system. Once again there is a downward bias incorporated in these gross margins.

Using these figures and noting the factors tending to reduce the calculated gross margins in relation to the actual gross margins, it seems that for the staple foods produced within the Region and sold at retail in Ibadan, the gross margin is generally between 30 and 40 percent of the retail price. This gross marketing margin represents the total cost of moving staple foods from the place of production to the consumer in Ibadan. In general, areas located close to a major area of surplus production will have a lower gross marketing margin than places further away. However, the behavior of the traders involved in the marketing system will frequently invalidate this generalization.

Based on the FOS retail price series, it has already been noted that the retail price of the major staple foods (except rice) in Lagos is generally between 30 and 50 percent higher than in Ibadan (Appendix X-XV). However, the wholesale price is more frequently between 4 and 15 percent higher in Lagos than Ibadan. (Appendix X-XIX). Even if a relative under-estimation of the weight of the retail unit of measure used in Lagos was applied in converting the retail price series, the inescapable conclusion is that retail margins are considerably higher in Lagos than in Ibadan. This can be seen in Table 10.34.

Table 10.34

**GROSS RETAIL MARGIN IN IBADAN AND  
LAGOS BY COMMODITY AND YEAR  
1962-1966\***

| Commodity<br>and Year | Ibadan              |                               | Lagos               |                               |
|-----------------------|---------------------|-------------------------------|---------------------|-------------------------------|
|                       | Gross Retail Margin |                               | Gross Retail Margin |                               |
|                       | Pence Per<br>Pound  | As Percent of<br>Retail Price | Pence Per<br>Pound  | As Percent of<br>Retail Price |
| <b>Gari</b>           |                     |                               |                     |                               |
| 1962                  | 0.27                | 7                             | 2.07                | 35                            |
| 1963                  | 0.87                | 32                            | 1.81                | 42                            |
| 1964                  | 0.20                | 9                             | 1.70                | 44                            |
| 1965                  | 0.03                | 1                             | 1.51                | 34                            |
| 1966                  | -0.11               | -2                            | 1.27                | 17                            |
| <b>Maize</b>          |                     |                               |                     |                               |
| 1962                  | 1.07                | 26                            | 1.76                | 36                            |
| 1963                  | 0.70                | 21                            | 1.56                | 38                            |
| 1964                  | 0.85                | 27                            | 1.77                | 39                            |
| 1965                  | 0.61                | 18                            | 1.77                | 39                            |
| 1966                  | 0.77                | 18                            | 2.38                | 37                            |
| <b>Rice</b>           |                     |                               |                     |                               |
| 1962                  | 2.40                | 19                            | 4.61                | 37                            |
| 1963                  | 3.19                | 31                            | 3.57                | 38                            |
| 1964                  | 2.27                | 23                            | 3.17                | 34                            |
| 1965                  | 2.33                | 23                            | 3.45                | 35                            |
| 1966                  | 2.25                | 11                            | 3.80                | 32                            |
| <b>Cowpeas</b>        |                     |                               |                     |                               |
| 1962                  | 1.28                | 19                            | 3.50                | 37                            |
| 1963                  | 0.68                | 15                            | 3.51                | 47                            |
| 1964                  | 0.85                | 21                            | 3.50                | 51                            |
| 1965                  | 0.49                | 9                             | 2.47                | 33                            |
| 1966                  | 1.39                | 14                            | 2.41                | 22                            |

\* Based on monthly retail and wholesale price series supplied by the Federal Office of Statistics. Retail series converted into pence per pound using values shown in Table 2.14 and wholesale series converted using representative values shown in Appendix X-XIX (Vol. III p. 178).

From the available evidence, it appears that the gross marketing margin of staple food crops produced within Western Nigeria and sold at retail in Lagos is generally between 50 and 60 percent of the retail price in Lagos. Without doubt, the costs associated with selling at all levels of the marketing system in Lagos are substantially higher than in the more traditionally organized urban centers of the Region such as Ibadan. Directly, it is unlikely that these costs account for all of the higher margins in Lagos, although they no doubt provide a more conducive atmosphere for traders to obtain higher per unit returns (net margins).

Even using annual data, Table 10.34 indicates that the gross margin between the retail and wholesale price is not stable. In general, and especially for gari, it seems that this retail margin, particularly the percent gross margin, is higher in periods of declining prices and lower at times of rising prices. The fluctuations within a year are likely to be considerably greater than between years, particularly for yam and maize where the seasonal price fluctuation is so considerable.

While gross retail margins appear to be reasonably uniform in Lagos for all commodities, averaging between 30 and 40 percent of the retail price, the margins in Ibadan are considerably more volatile and vary by commodity. For example, the gross retail margin for gari in Ibadan for the period 1962 to 1966 was generally quite low at between -2 and 9 percent of the retail price, although in 1963 it averaged 32 percent. For maize, rice and cowpeas the gross retail margin generally ranged between 10 and 30 percent of the retail price.

In general, 1966 was a year of relatively low margins because of the cyclically high prices occurring during that year. The low margin shown for gari in Ibadan during 1966 in Table 10.34 is somewhat substantiated by the gross retail margin calculated from the SRI price series for Ibadan and shown in Table 10.35. While it appears that losses were being made in Oritamerin Market, relatively small positive gross margins were apparently being made by retailers in Dugbe Market. From July 1966 to July 1967, the average gross retail margin appeared to be about zero in Oritamerin Market and about 9 percent in Dugbe Market. Based on the gross retail margins shown in Table 10.34, it seems that while they were lower in relation to the earlier period of cyclically low prices, it was only for gari in Ibadan that the margin was negative--for the other commodities the margin was still substantially positive (11 to 18 percent for Ibadan and 22 to 37 percent for Lagos).

Perhaps one of the main conclusions to be drawn from this analysis of the price series data is that the field work of this project coincided with a period of cyclically high prices and low margins. This has important implications for the data on margins collected from traders during this period. In general, these data will be low compared to both the high and the average margins existing in the Region over the length of a full price cycle. Although transport costs may be raised fractionally because of the increased value of foodstuffs, it is likely that the costs incurred by traders during the survey period are a reasonable reflection of traders' usual costs, at least in absolute terms.

Table 10.35

GARI - GROSS RETAIL MARGIN IN  
ORITAMERIN AND DUGBE MARKETS, IBADAN BY MONTH  
- SRI PRICE SERIES FOR IBADAN\* -

| <u>Month</u> | <u>Pound</u> | <u>Retail Price</u> | <u>Pound</u> | <u>Retail Price</u> |
|--------------|--------------|---------------------|--------------|---------------------|
| 1966         |              |                     |              |                     |
| July         | -0.37        | -5                  | 0.11         | 1                   |
| August       | -0.63        | -9                  | 0.31         | 4                   |
| September    | 0.30         | 3                   | 0.59         | 8                   |
| October      | -0.88        | -17                 | 1.00         | 13                  |
| November     | -0.85        | -19                 | 0.40         | 7                   |
| December     | 0.30         | 6                   | 1.13         | 18                  |
| 1967         |              |                     |              |                     |
| January      | 0.91         | 18                  | -0.30        | -6                  |
| February     | -0.15        | -4                  | 0.37         | 7                   |
| March        | 0.45         | 11                  | 1.52         | 26                  |
| April        | 0.16         | 4                   | 0.29         | 6                   |
| May          | 0.27         | 6                   | 0.27         | 5                   |
| June         | 0.54         | 14                  | 0.36         | 23                  |
| July         | <u>0.24</u>  | <u>7</u>            | <u>1.09</u>  | <u>23</u>           |
| Average      | 0.02         | †                   | 0.55         | 9                   |

\* In converting the wholesale price series to pence per pound, it was assumed that each bag contained 210 lbs.

† 0.04 percent.

## 2. Trader Information

The most complete direct information from traders on costs and margins was obtained in Ibadan in response to the Market Traders Questionnaire #2. This was conducted during August-September 1966, a period of cyclically high prices particularly for gari, rice and cowpeas; both yam and maize were being harvested with commensurately low seasonal prices. Further information concerning wholesalers in Ibadan was secured in response to the Wholesale Traders Questionnaire during February-May 1967, a post-harvest period of high but declining cyclical prices. Information about assemblers was obtained by means of the Market Buyers Questionnaire administered to major buyers in rural markets from October 1966 to April 1967.

### a. Gross Margin

The average gross margin of retailers, retailer-wholesalers, and wholesalers in Ibadan (calculated from the Market Traders Questionnaire #2 by dividing the difference between the quoted selling and buying prices per bag by the selling price) is shown in Table 10.36. In general, the margins quoted by traders performing the wholesaling function only were fractionally higher than for wholesalers who also undertook some retailing. Both of these two groups generally quoted gross margins from 50 to 100 percent higher than retailers.

Apparent from this survey is the major difference in gross margins between commodities. The margins obtained by yam and maize traders is substantially higher than that for the other three commodities. This is mostly explained by the fact that yam and maize were in season, with

Table 10.36

AVERAGE GROSS MARGIN OF TRADERS AS PERCENT OF  
SELLING PRICE BY COMMODITY AND BY TYPE OF SELLER  
MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
August-September 1966

| Commodity | Type of Seller |                   |                 | All Sellers    |
|-----------|----------------|-------------------|-----------------|----------------|
|           | Retail Only    | Retail-Whole-sale | Whole-sale Only |                |
| Yam       | 14.3<br>(6.0)* | 23.7<br>(12.1)    | 23.2<br>(19.6)  | 21.6<br>(15.2) |
| Gari      | 5.9<br>(2.5)   | 7.9<br>(3.5)      | 9.7<br>(4.6)    | 7.3<br>(3.6)   |
| Maize     | 9.1<br>(2.4)   | 14.8<br>(6.4)     | 16.8<br>(5.7)   | 12.7<br>(5.7)  |
| Rice      | 4.1<br>(1.9)   | 7.6<br>(6.4)      | 6.1<br>(2.2)    | 5.1<br>(3.7)   |
| Cowpeas   | 3.9<br>(2.6)   | 5.5<br>(3.5)      | 8.7<br>(3.1)    | 5.4<br>(3.5)   |

\* Standard deviation.

relatively low prices, while prices for the other commodities were both cyclically and seasonally high. It has already been observed that the occurrence of this phenomenon appears to lead to low relative margins. Further, per unit prices for gari, rice and cowpeas were substantially higher, so that the absolute difference in margins is considerably less than that indicated by the relative gross margin shown in Table 10.36. One measure of the average unit selling price is contained in Table 10.37. The pence per pound retail price can be seen in Appendix X-1.

Table 10.37

AVERAGE UNIT SELLING PRICE OF TRADERS BY COMMODITY AND  
 BY TYPE OF SELLER--MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August-September 1966

| Commodity | Shillings per Bag* |                           |                        | All<br>Sellers  |
|-----------|--------------------|---------------------------|------------------------|-----------------|
|           | Retail<br>Only     | Retail-<br>Whole-<br>sale | Whole-<br>sale<br>Only |                 |
| Yam       | 97.7<br>(53.2)†    | 115.4<br>(53.3)           | 147.7<br>(79.8)        | 125.7<br>(67.4) |
| Gari      | 116.5<br>(15.6)    | 123.3<br>(20.8)           | 108.0<br>(7.8)         | 115.9<br>(16.2) |
| Maize     | 48.9<br>(7.8)      | 47.7<br>(11.0)            | 46.7<br>(2.3)          | 48.0<br>(7.4)   |
| Rice      | 204.4<br>(47.9)    | 217.8<br>(45.8)           | 199.8<br>(18.4)        | 206.8<br>(44.5) |
| Cowpeas   | 225.1<br>(40.2)    | 229.1<br>(28.9)           | 210.0<br>(13.0)        | 221.5<br>(34.2) |

\* Shillings per 100 tubers for yam.

† Standard deviation.

From the standard deviations shown in brackets in Table 10.36, it is evident that there is a considerable variation in the gross margin realized by individual traders. Nevertheless, during the month before the interview, retailers were obtaining gross margins of around 4 percent for rice and cowpeas, 6 percent for gari, 9 percent for maize and 14 percent for yam. Wholesalers, on the other hand, were realizing gross margins of around 6 to 8 percent for rice and cowpeas, 8 to 10 percent for gari, 15 to 17 percent for maize and 23 percent for yam.

As an indication of the degree of accuracy of the information on margins obtained from the price series data, it is possible to calculate

the retail margin realized by retailers and retail-wholesalers based on the average selling prices quoted by traders in response to the Market Traders Questionnaire #2 and shown in Table 10.37. The retail gross margins calculated for each commodity by this method are as follows:

| <u>Commodity</u> | <u>Retail Gross Margin as<br/>Percent of Selling Price</u> |                                  |
|------------------|------------------------------------------------------------|----------------------------------|
|                  | <u>Retailers</u>                                           | <u>Retailer-<br/>Wholesalers</u> |
| Yam              | -33.9                                                      | -21.9                            |
| Gari             | 7.9                                                        | 14.2                             |
| Maize            | 4.7                                                        | 2.1                              |
| Rice             | 2.3                                                        | 9.0                              |
| Cowpeas          | 7.2                                                        | 9.1                              |

Only the gross margins of the retailers are comparable with those shown in Table 10.36. From this it is apparent that the method of comparing average prices may lead to a considerable degree of error. This is especially true for yam, where a consistent bulk unit comparable to a bag is lacking. For this reason, only the yam price series based on units of weight were compared earlier--wholesale yam prices are collected for units of 100 tubers only.

The gross margins calculated for wholesalers in Ibadan from the Wholesale Traders Questionnaire are displayed by commodity in Table 10.38. These margins represent for each wholesaler included, the difference between the selling price in Ibadan and the buying price in the supply area. The margin is shown as a percent of the wholesaler's selling price. These gross margins are thought to be a good representation of the assembler-wholesaler cost of acquiring commodities in the supply area and selling

Table 10.38

PERCENTAGE DISTRIBUTION OF WHOLESALERS IN IBADAN  
 BY GROSS MARGIN AS PERCENT OF SELLING PRICE AND BY COMMODITY  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 February - May 1967

| Gross Margin as Percent<br>of Selling Price | Commodity |              |      |                  |       |      |      |      |
|---------------------------------------------|-----------|--------------|------|------------------|-------|------|------|------|
|                                             | Yam       | Dried<br>Yam | Gari | Dried<br>Cassava | Maize | Rice |      |      |
| Under 10                                    | 12        | 6            | 12   | -                | 14    | 15   | 11   | 11   |
| 10 and under 20                             | -         | 94           | 55   | 28               | 49    | 68   | 6    | 44   |
| 20 and under 30                             | 25        | -            | 26   | 40               | 34    | 15   | 54   | 31   |
| 30 and under 40                             | 38        | -            | 6    | 24               | 3     | -    | 27   | 12   |
| 40 and over                                 | 25        | -            | -    | 8                | -     | 2    | 3    | 3    |
| Total Percent                               | 100       | 100          | 99*  | 100              | 100   | 100  | 101* | 101* |
| Average (Percent)                           | 32        | 14           | 17   | 27               | 17    | 16   | 25   | 20   |
| Standard Deviation                          | 17        | 3            | 7    | 9                | 6     | 15   | 9    | 10   |
| Coefficient of Variation                    | .5        | .3           | .4   | .3               | .4    | .9   | .4   | .5   |
| Number of Responses                         | 8         | 31           | 65   | 25               | 35    | 40   | 71   | 275  |

\* Rounding error.

them at wholesale in Ibadan. For the 275 wholesalers from whom sufficiently accurate data could be obtained, the average gross margin was 20 percent of the wholesale selling price. Wholesalers of cowpeas, dried cassava and yam were above this average at between 25 and 32 percent, while wholesalers of dried yam, rice, gari and maize were below this average, at between 14 and 17 percent. For all commodities, the range of the margin obtained by wholesalers within each commodity group was extremely wide--from a loss in some cases to well over 40 percent in others.

The wholesale margins shown in Table 10.38 are generally higher than those shown in Table 10.36. Whereas only yam and maize were seasonally plentiful during the early survey, all commodities were similarly situated at the time of the Wholesale Traders Questionnaire; although by this time prices were beginning to edge up seasonally but considerably less than the cyclical price decline. For the same reason that yam and maize gross margins were higher at the time of the Market Traders Questionnaire #2, so the gross margins of the other commodities were also higher at the time of the Wholesale Traders Questionnaire. Yam margins were probably somewhat higher because of higher transport costs associated with more remote supply areas.

The gross margins expected to be realized by buyers of bulk supplies in rural markets are shown for each commodity in Table 10.39. Although circumstances may contrive either to raise or lower the actual gross margin in relation to that expected in the particular instance, it is nevertheless a good indication of the gross margin usually realized. From Table 10.39 it is apparent that traders performing the assembling function generally realize between 10 and 30 percent of the selling price--this range constituted 65 percent of the sample. In general, these margins are

Table 10.39

PERCENT DISTRIBUTION OF BUYERS BY EXPECTED GROSS MARGIN AS  
PERCENT OF SELLING PRICE AND BY COMMODITY  
MARKET BUYERS QUESTIONNAIRE  
October 1966-April 1967

| Expected Gross Margin<br>As Percent of Selling<br>Price | Commodity |          |           |           |           | Total    |
|---------------------------------------------------------|-----------|----------|-----------|-----------|-----------|----------|
|                                                         | Yam       | Gari     | Maize     | Rice      | Other     |          |
| Under 10                                                | 6         | 25       | 25        | 20        | --        | 15       |
| 10 & under 20                                           | 34        | 18       | 40        | 47        | 64        | 35       |
| 20 & under 30                                           | 28        | 50       | 20        | 20        | 18        | 30       |
| 30 & under 40                                           | 16        | 4        | 5         | 13        | 18        | 11       |
| 40 & over                                               | <u>16</u> | <u>4</u> | <u>10</u> | <u>--</u> | <u>--</u> | <u>9</u> |
| Total Percent                                           | 100       | 101*     | 100       | 100       | 100       | 100      |
| Number of Responses                                     | 50        | 28       | 20        | 15        | 11        | 124      |

\* Rounding error.

comparable with those of the wholesalers in Ibadan displayed in Table 10.38, especially when it is considered that the rural markets used to sample major suppliers were located entirely within Western Nigeria, whereas the supplies of wholesalers in Ibadan were obtained both from within and outside the Region.

b. Selling Expenses

The gross margin represents the difference between the selling price of the commodity and the cost of acquiring the goods sold. To obtain the net margin received by traders as the return on labor, management, and capital provided to the business, the costs incurred in selling the commodity must be deducted.

For the traders interviewed in Ibadan with Market Traders Questionnaire #2, Table 10.40 presents the equivalent of an average monthly "revenue statement" for each type of trader. Each item is also shown as a percent of the value of monthly sales.

In relative terms, the selling expenses of retailers were about 1.6 percent of the value of monthly sales, 7.4 percent for retailer-wholesalers and 6.5 percent for wholesalers. However, because of the vast differences in the value of monthly sales for each type of trader, the differences in absolute selling costs were much larger--being £1.0.0, £7.18.0 and £15.8.0, respectively. For each type of trader, the major item of selling expense was the cost of transporting the commodity from the place of purchase to the place of sale. The next most, although much less important item was rent. Wages and other costs were almost negligible.

1. Transportation. The importance of transportation expenses can be seen in Table 10.40. Retailers in urban markets seldom use mechanical means for transporting their supplies. In fact, only 4 percent of the retailers interviewed with the Market Trader's Questionnaire #2 used a lorry to transport supplies. Generally, retailers buy their supplies from wholesalers in the same market and then have them headloaded to their storage or selling facility. In contrast to retailers, only 38 percent of the retailer-wholesalers and 4 percent of the wholesalers questioned did not use either lorry or rail transportation in procuring supplies. Some of the wholesalers were spending well in excess of £20 per month on transportation, particularly those selling yam and cowpeas.

Table 10.40

AVERAGE VALUE OF MONTHLY SALES, COSTS AND MARGINS OF TRADERS BY TYPE OF TRADER  
 MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
 August-September 1966

| Item                    | Type of Seller |         |                      |         |                   |         |             |         |
|-------------------------|----------------|---------|----------------------|---------|-------------------|---------|-------------|---------|
|                         | Retail Only    |         | Retail-<br>Wholesale |         | Wholesale<br>Only |         | All Sellers |         |
|                         | Value          | Percent | Value                | Percent | Value             | Percent | Value       | Percent |
| Sales                   | £61.2          | 100.0   | £106.2               | 100.0   | £237.2            | 100.0   | £119.0      | 100.0   |
| Less cost of goods sold | 55.9           | 91.3    | 93.4                 | 87.9    | 206.7             | 87.1    | 106.0       | 89.1    |
| Gross margin            | 5.3            | 8.7     | 12.8                 | 12.1    | 30.5              | 12.9    | 13.0        | 10.9    |
| Less selling expenses   | 1.0            | 1.6     | 7.9                  | 7.4     | 15.4              | 6.5     | 6.5         | 5.5     |
| Rent                    | .38            | .6      | 1.62                 | 1.5     | 1.96              | .8      | 1.08        | .9      |
| Transport               |                |         |                      |         |                   |         |             |         |
| Lorry                   | .19            | .3      | 5.14                 | 4.8     | 11.53             | 4.9     | 4.40        | 3.7     |
| Headcarrier             | .35            | .6      | .71                  | .7      | 1.11              | .5      | .64         | .5      |
| Wages                   | .02            | *       | .38                  | .4      | .39               | .2      | .20         | .2      |
| Other                   | .03            | *       | .05                  | *       | .40               | .2      | .14         | .1      |
| Net Margin              | £ 4.3          | 7.0     | £ 4.9                | 4.6     | £ 15.1            | 6.4     | £ 6.5       | 5.5     |
| Number of responses     | 131            |         | 55                   |         | 70                |         | 256         |         |

\* Less than 0.05 percent.

Human porters carrying supplies over short distances on their heads accounted for between 0.5 and 0.7 percent of the value of sales for all types of traders. To retailers it is the most important type of transportation while to traders using lorries it is a complementary and relatively less important component of total transportation costs.

Table 10.41 presents for the wholesalers in Ibadan interviewed with the Wholesale Traders Questionnaire, the cost of transporting each commodity from the supply area as a percent of the wholesale selling price. Marked differences in the relative size of this transportation cost can be noted. The two commodities with the lowest value to volume (weight) ratios (yam and dried cassava) have the highest relative transportation costs--17 and 15 percent respectively. The two commodities involved in long-distance trade (rice and cowpeas) are next highest--10 and 13 percent respectively. The locally-produced staple foods with higher value to weight ratios (dried yam, gari and maize) have the lowest relative transportation costs--7, 8, and 7 percent respectively.

The actual value of transportation costs as a percent of the wholesale selling price can be seen from Table 10.41 to vary considerably, particularly for yam, dried cassava and cowpeas. Among wholesalers, 73 percent spent between 5 and 15 percent of the wholesale selling price on transportation costs.

The effect of these transportation costs on the gross margins of the wholesalers studied with the Wholesale Traders Questionnaire can be seen in Table 10.42. The gross margin less transportation cost exhibited as a percent of the wholesale selling price may be directly compared with the

Table 10.41

PERCENTAGE DISTRIBUTION OF WHOLESALERS IN IBADAN  
 BY TRANSPORTATION COST AS PERCENT OF  
 SELLING PRICE AND BY COMMODITY  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 February - May 1967

| Transportation Cost as Percent<br>of Selling Price | Commodity |              |      |                  |       |      |         | Total |
|----------------------------------------------------|-----------|--------------|------|------------------|-------|------|---------|-------|
|                                                    | Yam       | Dried<br>Yam | Gari | Dried<br>Cassava | Maize | Rice | Cowpeas |       |
| Under 5                                            | -         | 11           | 6    | -                | 1     | 17   | 15      | 7     |
| 5 and under 10                                     | 12        | 76           | 61   | 5                | 39    | 72   | 8       | 40    |
| 10 and under 15                                    | 12        | 11           | 33   | 50               | 56    | 11   | 26      | 33    |
| 15 and under 20                                    | 38        | 1            | 1    | 15               | 3     | -    | 46      | 13    |
| 20 and over                                        | 38        | 1            | -    | 31               | 1     | -    | 5       | 7     |
| Total                                              | 100       | 100          | 101* | 101*             | 100   | 100  | 100     | 100   |
| Average percent                                    | 17.3      | 7.3          | 8.0  | 15.3             | 6.7   | 10.0 | 12.9    | 10.4  |
| Standard deviation                                 | 6.3       | 2.6          | 2.8  | 4.9              | 2.9   | 2.6  | 6.1     | 5.0   |
| Coefficient of variation                           | .4        | .4           | .3   | .3               | .4    | .3   | .5      | .5    |
| Number of responses                                | 16        | 142          |      |                  |       |      |         |       |

\* Rounding error.

Table 10.42

PERCENTAGE DISTRIBUTION OF WHOLESALERS IN IBADAN  
 BY GROSS MARGIN LESS TRANSPORT COST AS PERCENT OF  
 SELLING PRICE AND BY COMMODITY  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 February - May 1967

| Gross Margin Less Transport Cost<br>as Percent of Selling Price | Commodity |              |      |                  |       |      |         | Total |
|-----------------------------------------------------------------|-----------|--------------|------|------------------|-------|------|---------|-------|
|                                                                 | Yam       | Dried<br>Yam | Gari | Dried<br>Cassava | Maize | Rice | Cowpeas |       |
| Under 5                                                         | 14        | 27           | 13   | 17               | 24    | 26   | 13      | 18    |
| 5 and under 10                                                  | 29        | 46           | 37   | 17               | 24    | 50   | 15      | 30    |
| 10 and under 15                                                 | 14        | 27           | 28   | 25               | 38    | 13   | 21      | 24    |
| 15 and under 20                                                 | 14        | -            | 10   | 17               | 3     | 5    | 28      | 13    |
| 20 and over                                                     | 29        | -            | 12   | 25               | 10    | 5    | 22      | 14    |
| Total                                                           | 100       | 100          | 100  | 101*             | 99*   | 99*  | 99*     | 99*   |
| Average                                                         | 14        | 6            | 10   | 13               | 8     | 7    | 14      | 10    |
| Standard Deviation                                              | 17        | 4            | 7    | 9                | 7     | 6    | 10      | 8     |
| Coefficient of Variation                                        | 1.2       | .7           | .7   | .7               | .9    | .8   | .7      | .8    |
| Number of Responses                                             | 8         | 31           | 65   | 25               | 35    | 40   | 71      | 275   |

\* Rounding error.

gross margins shown in Table 10.38. While the gross margin has been reduced by about one-half as a result of transportation costs, the variability of the margin has stayed nearly the same absolutely (standard deviation) but has almost doubled relatively (coefficient of variation).

For the traders buying in rural markets for resale elsewhere, the major item of expense is transportation. Although Table 10.43 includes all items of expected expense for the traders interviewed with the Market Buyers Questionnaire, these are mainly a reflection of transportation costs. As not all of these buyers planned to transport their purchases a considerable distance, the range of expected selling expenses was quite large. In general, the values obtained in this survey tended to support those obtained from the wholesalers in Ibadan with the Wholesale Traders Questionnaire.

Table 10.43

PERCENTAGE DISTRIBUTION OF BUYERS BY EXPECTED EXPENSES  
AS PERCENT OF SELLING PRICE AND BY COMMODITY  
MARKET BUYERS QUESTIONNAIRE  
October 1966 - April 1967

| Expected Expenses<br>as Percent of<br>Selling Price | Commodity |      |       |      |       | Total |
|-----------------------------------------------------|-----------|------|-------|------|-------|-------|
|                                                     | Yam       | Gari | Maize | Rice | Other |       |
| Under 5                                             | 18        | 56   | 75    | 38   | 60    | 42    |
| 5 and under 10                                      | 56        | 19   | 10    | 38   | 20    | 35    |
| 10 and under 15                                     | 2         | 19   | 15    | 23   | 10    | 11    |
| 15 and under 20                                     | 10        | 4    | -     | -    | -     | 5     |
| 20 and over                                         | 14        | 4    | -     | -    | 10    | 8     |
| Total                                               | 100       | 102* | 100   | 99*  | 100   | 101*  |
| Number of responses                                 | 50        | 27   | 20    | 13   | 10    | 120   |

\* Rounding error.

2. Rent. While transportation costs vary with the volume of commodity sold, for the most part rent does not. It is the most important expense that has to be met regularly, regardless of the volume of commodity sold. The actual amount paid varies considerably and depends mostly on facilities provided and location--rural markets are generally much cheaper than urban markets. Very few traders own their own facilities, although quite a few do not pay rent.

The percent distribution of monthly rent paid by each type of trader in the Market Traders Questionnaire #2 in Ibadan is shown in Table 10.44. The retailers interviewed paid an average of £0.38 per month, while retailer-wholesalers paid an average of £1.62 and wholesalers £1.96.

Table 10.44

PERCENT DISTRIBUTION OF TRADERS BY TOTAL COST OF  
RENT FOR MONTH AND BY TYPE OF SELLER  
MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
August-September 1966

| Total Cost<br>of Rent<br>for Month | Type of Seller |                      |                   | All<br>Sellers |
|------------------------------------|----------------|----------------------|-------------------|----------------|
|                                    | Retail<br>Only | Retail-<br>Wholesale | Wholesale<br>Only |                |
| None                               | 5              | 4                    | 4                 | 5              |
| Under £0.5                         | 66             | 29                   | 1                 | 40             |
| £0.5 and under £1                  | 24             | 20                   | 7                 | 18             |
| £1 and under £2                    | 4              | 20                   | 27                | 14             |
| £2 and under £3                    | 1              | 16                   | 48                | 17             |
| £3 and under £5                    | -              | 2                    | 10                | 3              |
| £5 and over                        | -              | 9                    | 3                 | 3              |
| Total                              | 100            | 100                  | 100               | 100            |
| Average (£)                        | 0.38           | 1.62                 | 1.96              | 1.08           |
| Standard deviation                 | 0.30           | 2.37                 | 1.04              | 1.43           |
| Coefficient of Variation           | 0.8            | 1.5                  | 0.5               | 1.3            |
| Number of responses                | 130            | 55                   | 71                | 256            |

In general, wholesalers possessed considerably more storage space, as well as more secure facilities, than retailers. In fact, most retailers use very little space, many selling from the front portion of a wholesaler's store. These retailers generally store their supplies in the wholesaler's facility and pay him rent for the use of both storage and selling facilities. The percent distribution of several sizes of wholesalers in Ibadan by the total returns received per month from the use of their stall by other traders is exhibited in Table 10.45.

Table 10.45

PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN BY RETURN PER MONTH FROM USE OF STALL BY OTHER TRADERS AND BY VALUE OF MONTHLY SALES  
WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
February-May 1967

| Returns Per Month<br>From Use of Stall<br>By Other Traders | Value of Monthly Sales |               |               |               |                | Total |
|------------------------------------------------------------|------------------------|---------------|---------------|---------------|----------------|-------|
|                                                            | Under<br>£100          | £100-<br>£199 | £200-<br>£299 | £300-<br>£499 | £500 &<br>Over |       |
| No Traders storing                                         | 28                     | 40            | 44            | 66            | 58             | 39    |
| Traders storing                                            |                        |               |               |               |                |       |
| No return                                                  | 7                      | 10            | 7             | 3             | 10             | 8     |
| 1 & under 10 shillings                                     | 4                      | 2             | 3             | 5             | -              | 3     |
| 10 & under 20 shillings                                    | 27                     | 21            | 19            | 9             | 13             | 22    |
| 20 & under 30 shillings                                    | 25                     | 18            | 10            | 9             | 10             | 19    |
| 30 & under 50 shillings                                    | 9                      | 7             | 12            | 7             | 6              | 8     |
| 50 shillings & over                                        | -                      | 3             | 4             | 2             | 3              | 2     |
| Total percent                                              | 100                    | 101*          | 99*           | 101*          | 100            | 101*  |
| Number of responses                                        | 251                    | 154           | 68            | 58            | 31             | 562   |

\* Rounding error.

To generalize, the larger the wholesaler, the more specialized and completely utilized is his stall. This results in fewer other traders being associated with his stall to sell and store. Overall, 39 percent of the wholesalers had no other traders associated with their stall, while the remaining 61 percent did, although 8 percent received no cash rent. For 29 percent of the wholesalers, the total return per month exceeded £1. In some cases, it is likely that the rents collected from other traders more than paid the wholesaler's rent.

An interesting practice exists among male sellers of yam in the central native markets in Ibadan. They collect stallage (rent) directly from the purchaser at the rate of one penny on the shilling (1:12). Most of these sellers are agents selling at wholesale or as retailer-wholesalers.

For the stalls erected by local government councils, a fixed rent is paid by the leasee. For example, for open stalls in Ibadan, the Ibadan City Council collects 7.5 shillings per month--stalls with walls and doors cost more. The lessee is not obliged to sell from the stall and may in turn sub-let it. In some markets where stalls are particularly in demand, such as Dugbe Market, Ibadan, the rent charged may well exceed that being paid to the local government council.

The stallages that may be collected by local government councils are regulated by the Regional Government. The stallages set out in "The Markets Adoptive By-Laws Order, 1962"<sup>2</sup> are as follows:

|                                                                                                                                |                     | <u>Shillings</u> | <u>Pence</u> |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------|--------------|
| In respect of each stall owned or maintained by the council.                                                                   | for each market day | 0                | 2            |
|                                                                                                                                | for each month      | 2                | 6            |
|                                                                                                                                | for one year        | 25               | 0            |
| In respect of any other stall (including a stall erected by the person selling or trading).                                    | for each market day | 0                | 3            |
|                                                                                                                                | for one month       | 3                | 0            |
|                                                                                                                                | for one year        | 30               | 0            |
| In respect of any vacant space (not occupied by stalls) used for exposing goods for sale or carrying on any trade or business. | for each market day | 0                | 1            |

However, with the approval of the Ministry of Local Government and publication in the Western Nigeria Gazette, individual local government councils may alter this stallage, and this frequently happens.

3. Wages. It has already been mentioned that most traders do not use employed assistants. As Table 10.46 indicates for the traders interviewed in Ibadan with the Market Trader's Questionnaire #2, only 2 percent of the retailers, 7 percent of the retailer-wholesalers and 11 percent of the wholesalers actually employed assistants to whom they paid a cash wage. Among the traders paying wages the total amount paid per month varied considerably, with several paying over £5 per month.

While few traders actually employ paid assistants, many more employ relatives in some capacity. Although a cash wage is not involved, the trader must assume the financial obligations of the relatives employed. This usually involves housing, feeding and clothing these assistants, as well as giving them a small cash allowance as needed. In reality then, the cost of assistants is considerably understated when only wages are considered.

Table 10.46

PERCENT DISTRIBUTION OF TRADERS BY TOTAL COST OF  
WAGES FOR MONTH AND BY TYPE OF SELLER  
MARKET TRADERS QUESTIONNAIRE #2--IBADAN  
August-September 1966

| Total Cost<br>of Wages<br>for Month | Type of Seller |                      |                   | All<br>Sellers |
|-------------------------------------|----------------|----------------------|-------------------|----------------|
|                                     | Retail<br>Only | Retail-<br>Wholesale | Wholesale<br>Only |                |
| None                                | 98             | 93                   | 89                | 95             |
| Under £2                            | 2              | -                    | -                 | 1              |
| £2 and under £3                     | -              | 2                    | 6                 | 2              |
| £3 and under £5                     | -              | 2                    | 1                 | 1              |
| £5 and over                         | -              | 4                    | 4                 | 2              |
| Total percent                       | 100            | 101*                 | 100               | 101*           |
| Number of responses                 | 130            | 55                   | 71                | 256            |

\* Rounding error.

4. Other Expenses. Of the traders interviewed in Ibadan with the Market Traders Questionnaire #2, 77 percent of the traders claimed that they did not incur any items of cash expense in addition to transportation, rent and wages. This excludes non-cash items such as bad debts, theft, and spoilage. The main items of additional cash expense were payments to night-watchmen (security guards) to guard their stalls, mostly in Dugbe Market, and to trade associations. Except for wholesalers, these additional cash expenses nearly always amounted to less than £0.5 per month.

c. Net Margin

The net margin represents the return to the trader on his capital investment and provision of labor and management services to the business.

To the trader, it is the reward for managing the resources at his command, including his own capital and labor; and to the society it is the cost of having the trader provide certain staple food marketing utilities.

The cyclically low net margins calculated for each type of trader in Ibadan from the Market Traders Questionnaire #2 are shown in relative terms (as a percent of the total value of sales) in Table 10.47. Although there was considerable variation, the average net margin of traders was mostly

Table 10.47

PERCENT DISTRIBUTION OF TRADERS BY TOTAL NET MARGIN AS PERCENT OF TOTAL VALUE OF SALES AND BY TYPE OF SELLER  
MARKET TRADERS QUESTIONNAIRE #2- IBADAN  
August-September 1966

| Total Net Margin As<br>Percent of Total<br>Value of Sales | Type of Seller |                           |                        | Total |
|-----------------------------------------------------------|----------------|---------------------------|------------------------|-------|
|                                                           | Retail<br>Only | Retail-<br>Whole-<br>sale | Whole-<br>sale<br>Only |       |
| 0 & under                                                 | 8              | 9                         | 6                      | 7     |
| Over 0 & under 2                                          | 22             | 15                        | 16                     | 19    |
| 2 & under 4                                               | 24             | 36                        | 26                     | 27    |
| 4 & under 6                                               | 27             | 13                        | 23                     | 23    |
| 6 & under 10                                              | 15             | 16                        | 14                     | 15    |
| 10 & under 20                                             | 3              | 9                         | 13                     | 7     |
| 20 & over                                                 | --             | 2                         | 3                      | 1     |
| Total percent                                             | 99*            | 100                       | 101*                   | 99*   |
| Average net margin<br>(percent)                           | 7.0            | 4.6                       | 6.4                    | 5.5   |
| Number of responses                                       | 131            | 55                        | 70                     | 256   |

\* Rounding error.

between 2 and 6 percent of the value of sales. Overall, 7 percent of the traders made a net loss on their trading activities in the month before the interview, while a total of 76 percent of the traders reported making a net margin of less than 6 percent. Only 8 percent of the traders obtained net margins of more than 10 percent, and most of these were wholesalers.<sup>3</sup>

The actual net margin calculated from the information given by each type of trader in Ibadan in response to the Market Traders Questionnaire #2 is shown in Table 10.48. Among the retailers, 8 percent made a loss

Table 10.48

PERCENT DISTRIBUTION OF TRADERS BY TOTAL NET MARGIN  
FOR MONTH AND BY TYPE OF SELLER-MARKET  
TRADERS QUESTIONNAIRE #2--IBADAN  
August-September 1966

| Total Net Margin<br>for Month | Type of Seller |                     |                   | Total |
|-------------------------------|----------------|---------------------|-------------------|-------|
|                               | Retail<br>Only | Retail<br>Wholesale | Wholesale<br>Only |       |
| None or loss                  | 8              | 9                   | 6                 | 7     |
| Over £0 &<br>under £2         | 49             | 33                  | 14                | 36    |
| £2 & under £4                 | 23             | 24                  | 19                | 22    |
| £4 & under £6                 | 12             | 13                  | 9                 | 11    |
| £6 & under £10                | 7              | 7                   | 16                | 9     |
| £10 & under £20               | 1              | 9                   | 20                | 8     |
| £20 & over                    | 1              | 5                   | 17                | 6     |
| Total percent                 | 101*           | 100                 | 101*              | 99*   |
| Average net margin            | £4.3           | £4.9                | £15.1             | £6.5  |
| Number of<br>responses        | 131            | 55                  | 70                | 256   |

\* Rounding error.

while a further 49 percent reported making less than £2 in the month before the interview. Only 2 percent received a net margin of more than £10 per month.

Assuming an average net margin of between £2 and £3 per month and an average of 26 selling days per month, this means that the retailer receives about two shillings for a ten-hour day. This compares with about five shillings a day for an employed unskilled worker in Ibadan and about one to three shillings a day for an agricultural laborer. However, it must be remembered that the sample was taken at a time of generally cyclically low margins and also that some of the staple food reported as sold by retailers was no doubt consumed by the seller.<sup>4</sup>

In terms of the actual net margin received, the wholesalers in Table 10.48 fall into two categories--small and large. The former receives a net margin of around £2.8s. per month, while the latter generally receives in excess of £10 per month. In comparing this net return to wholesalers with that to retailers, the larger investment in inventories must be taken into account. Also, the procuring of supplies from the surplus-producing areas generally involves more management skill and entails a higher degree of risk than that undertaken by retailers.

When the net margin of wholesalers is classified by value of monthly sales, it is apparent that size of wholesaler is relevant to the actual net margin realized. For the 56 wholesalers in Ibadan who were able to state their net monthly margin in response to the Wholesale Traders Questionnaire, the percent distribution is shown in Table 10.49. The wholesalers with monthly sales under £100 had a net margin averaging £6

Table 10.49

PERCENTAGE DISTRIBUTION OF WHOLESALE TRADERS IN IBADAN  
BY VALUE OF NET MONTHLY MARGIN AND BY VALUE OF MONTHLY SALES  
WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
February - May 1967

| Value of Net<br>Monthly Margin | Value of Monthly Sales |               |               |               |                | Total |
|--------------------------------|------------------------|---------------|---------------|---------------|----------------|-------|
|                                | Under<br>£100          | £100-<br>£199 | £200-<br>£299 | £300-<br>£499 | £500 &<br>Over |       |
| Under £10                      | 83                     | 56            | 25            | 56            | --             | 64    |
| £10 & under £20                | 17                     | 28            | 75            | 22            | --             | 25    |
| £20 & under £30                | --                     | 17            | --            | 22            | --             | 9     |
| £30 & over                     | --                     | --            | --            | --            | 100            | 2     |
| Total Percent                  | 100                    | 101*          | 100           | 100           | 100            | 100   |
| Average (£)                    | 6                      | 12            | 11            | 12            | 43             | 10    |
| Standard Deviation             | 3                      | 6             | 7             | 9             | --             | 8     |
| Coefficient of Variation       | .5                     | .5            | .7            | .8            | --             | 8     |
| Number of Responses            | 24                     | 18            | 4             | 9             | 1              | 56    |

\* Rounding error.

per month, those between £100 and £499 averaged £12 per month and the one wholesaler over £500 had a net monthly margin of £43.

This relationship of an increasing net margin to increasing sales is to be expected. Taking the average net margin of £10 per month shown in Table 10.49, this means that an average wholesaler receives a return of nearly 8 shillings per day for his capital, labor and management.

Table 10.50 shows in relative terms (as a percent of monthly sales) the actual net margins contained in Table 10.49. From this small sample,

Table 10.50

PERCENTAGE DISTRIBUTION OF WHOLESALERS IN IBADAN  
 BY NET MARGIN AS PERCENT OF SALES AND BY VALUE OF MONTHLY SALES  
 WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
 February - May 1967

| Net Margin As<br>Percent of Sales | Value of Monthly Sales |               |               |               |                | Total    |
|-----------------------------------|------------------------|---------------|---------------|---------------|----------------|----------|
|                                   | Under<br>£100          | £100-<br>£199 | £200-<br>£299 | £300-<br>£499 | £500 &<br>Over |          |
| Under 5                           | 4                      | 28            | 75            | 78            | --             | 29       |
| 5 & Under 10                      | 46                     | 39            | 25            | 22            | 100            | 39       |
| 10 & Under 15                     | 38                     | 22            | --            | --            | --             | 23       |
| 15 & Under 20                     | 8                      | 6             | --            | --            | --             | 5        |
| 20 & over                         | <u>4</u>               | <u>6</u>      | <u>--</u>     | <u>--</u>     | <u>--</u>      | <u>4</u> |
| Total Percent                     | 100                    | 101*          | 100           | 100           | 100            | 100      |
| Number of Responses               | 24                     | 18            | 4             | 9             | 1              | 56       |

\* Rounding error.

it seems that the smaller wholesalers realized a higher relative net return than the larger wholesalers. Among the wholesalers with monthly sales under £100, 50 percent obtained a net margin in excess of 10 percent of the value of sales, whereas all of the wholesalers with monthly sales in excess of £200 realized net margins of under 10 percent.

The relative net margins shown for wholesalers in Ibadan in Table 10.50 are somewhat higher than those shown in Table 10.47. It is likely that this is more the result of the six-month difference in timing than any other single factor. A net wholesale margin of at least 10 percent seems to be the most usual one realized by traders in Ibadan performing the wholesaling function.

### 3. Commodity Examples

By following a quantity of a commodity through its various exchanges from the farm to the consumer, it is possible to obtain a specific idea of the margins and costs actually involved in the marketing of staple foods. To follow this approach literally is very time-consuming and burdensome. Instead, a modified method was used--piecing together commodity information wherever it was possible so as to associate several levels but always including the assembler-wholesaler stage. This method can only serve as a spot-check on the margin information obtained by the other methods. For this reason, all of the examples presented relate to commodities being sold at retail in Ibadan.

#### a. Yam

Unless every transaction in the movement of yam is witnessed, the lack of a consistent unit will almost exclude this type of margin analysis. Table 10.51 presents what seems to have been the most typical situation for yam produced around Iseyin, in Oyo Division, and sold in Ibadan during November 1966.

The yam was bought from producers by an assembler on the farm and sold through a wholesaler in Ibadan on commission. Producers received about 62 percent of the retail price in Ibadan--somewhat higher than is usual for yam. The transportation cost to Ibadan amounted to nearly 20 percent of the retail price; this left a margin of about 7 percent to be shared by the assembler-wholesaler. The retail margin was about 10 percent. The importance of the high transportation cost of yam is readily apparent in this example.

Table 10.51

TYPICAL MARKETING MARGINS AND COSTS FOR OYO DIVISION (ISEYIN)  
YAM BEING SOLD IN ORIGIN MARKET, IBADAN,  
DURING NOVEMBER 1966

| Item                           | £ Per<br>Gauge | Percent |
|--------------------------------|----------------|---------|
| Retail price--Ibadan           | £72.00         | 100.0   |
| Retail marketing margin        | 7.50           | 10.4    |
| Wholesale price--Ibadan        | £64.50         | 89.6    |
| Assembling expenses            |                |         |
| Transport--Lorry               | 12.00          | 16.7    |
| --Drivers food allowance       | .50            | .7      |
| --Loading at farm              | 1.15           | 1.6     |
| --Off-loading in Ibadan        | .50            | .7      |
| Net margin* and other          | 5.35           | 7.4     |
| Wholesale marketing margin     | 19.50          | 27.1    |
| Producer price--Iseyin (rural) | £45.00         | 62.5    |

\* Wholesaler sells for assembler on commission collecting a margin (stallage) of about 1 penny on the shilling of the quoted selling price. This margin is then split between the wholesaler and the assembler.

b. Gari

As gari is a processed form of cassava, the costs and returns of the gari producer must also be considered. In rural areas, surplus gari is usually assembled for sale in the urban areas, while in urban areas producers frequently sell directly to consumers, thus receiving both the production and marketing margins. Table 10.52 presents the costs and margins of a producer in Ibadan selling directly to consumers.

Gari production is a very labor-intensive process requiring relatively few purchased inputs in addition to the cassava. The producer in Table 10.52 incurred more cash costs than producers usually do, especially

Table 10.52

PRODUCTION COSTS AND MARGINS FOR GARI PRODUCER\*  
SELLING TO CONSUMERS FROM HOUSE IN IBADAN,  
APRIL 1967

| Item                                                                    | Shillings<br>per Week | Percent     |
|-------------------------------------------------------------------------|-----------------------|-------------|
| Selling price to consumers--Ibadan<br>(12 denges @ 3.5 shillings/denge) | 42.0                  | 100.0       |
| Production costs (excluding cassava)                                    |                       |             |
| Transport--taxi                                                         | 1.5                   | 3.6         |
| Firewood                                                                | 2.0                   | 4.8         |
| Palm oil                                                                | 1.0                   | 2.4         |
| Rent of iron frying pot for day                                         | <u>.5</u>             | <u>1.2</u>  |
|                                                                         | 5.0                   | 11.9†       |
| Production & marketing margin--net                                      | <u>22.0</u>           | <u>52.4</u> |
| --gross                                                                 | <u>27.0</u>           | <u>64.3</u> |
| Producer price of cassava‡                                              | 15.0                  | 35.7        |

\* Producer makes gari once a week--buys cassava on Mondays, prepares cassava for fermenting on Tuesdays, fries fermented cassava on Fridays, and sells production of gari over weekend.

† Rounding error.

‡ Price of cassava standing in field.

in rural areas; total cash production costs amounted to about 12 percent of the retail value of the production. As the cassava producer received about 36 percent of the retail value for the unharvested cassava, this left a combined net production-marketing margin of 52 percent. The producer viewed her gari production as a full-time occupation requiring about three days to process and two days to sell per week; most of these activities were conducted close to her home. Among the gari producers interviewed, her return of about 4.5 shillings per day was one of the highest ever encountered for a gari producer.

Table 10.53 is an example of the margins and costs involved in selling in Ibadan gari assembled in Owo Division during March 1967. The margin received by the producers and assemblers of the gari in Owo Division were not learned, but they were no doubt quite substantial. The gross margin involved in procuring the gari in Owo Division and selling at wholesale in Ibadan was 21 percent of the retail price in Ibadan. Transportation costs alone amounted to over 9 percent of the retail value. The gross retail marketing margin was approximately 11 percent, the exact margin depending on the contents of the bag and the heaping allowed in each retail transaction

Table 10.53

MARKETING MARGINS AND COSTS FOR OWO DIVISION (DAJA) (WHITE) GARI  
BEING SOLD IN ORITAMERIN MARKET, IBADAN ON MARCH 15, 1967

| Item                                         | Shillings<br>Per Bag | Percent     |
|----------------------------------------------|----------------------|-------------|
| Retail price--Ibadan<br>(210 lb @ 4.00 d/lb) | 70.0                 | 100.0       |
| Retail marketing margin                      | <u>7.5</u>           | <u>10.7</u> |
| Wholesale price--Ibadan                      | 62.5                 | 89.3        |
| Assembling expenses--transport               |                      |             |
| Road                                         | 6.0                  | 8.6         |
| Headload                                     | .5                   | .7          |
| Net margin and other                         | <u>8.5</u>           | <u>12.1</u> |
| Wholesale marketing margin                   | <u>15.0</u>          | <u>21.4</u> |
| Assembler price--Owo Division                | 47.5                 | 67.9        |

c. Maize

For maize produced in Oshun Division and sold in Oritamerin Market, Ibadan, during November 1967, Table 10.54 presents the pertinent costs and returns. From the evidence, producers were receiving about 62 percent of the retail price in Ibadan. The assembler who purchased the maize from the producer and sold it at a local rural market received a gross margin of 7 percent of the retail price in Ibadan but incurred transportation costs of 2 percent. The wholesaler in Ibadan who acquired the maize in the rural market and sold it in Ibadan received a gross

Table 10.54

MARKETING MARGINS AND COSTS FOR OSHUN DIVISION (ODO-OBA) MAIZE  
BEING SOLD IN ORITAMERIN MARKET--IBADAN ON NOVEMBER 3, 1966

| Item                                        | Shillings<br>Per Bag | Percent |
|---------------------------------------------|----------------------|---------|
| Retail price--Ibadan<br>(240 lb @ 3.6 d/lb) | 72.0                 | 100.0   |
| Retail marketing margin                     | 9.0                  | 12.5    |
| Wholesale price--Ibadan                     | 63.0                 | 87.5    |
| Assembling expenses--transport              |                      |         |
| Road                                        | 5.0                  | 6.9     |
| Headload                                    | .5                   | .7      |
| Net margin and other                        | 7.5                  | 10.4    |
| Wholesale marketing margin                  | 13.0                 | 18.1*   |
| Assembler price--Oshun Division             | 50.0                 | 69.4    |
| Assembling expenses                         |                      |         |
| Transport                                   | 1.5                  | 2.1     |
| Net margin and other                        | 3.5                  | 4.9     |
| Assembler marketing margin                  | 5.0                  | 6.9*    |
| Producer price--Oshun Division              | 45.0                 | 62.5    |

\* Rounding error

margin of 18 percent, but laid out nearly 8 percent on transportation. The retailer received a gross margin of around 12 percent.

This example seemed somewhat typical, although at various times wholesalers of maize in Ibadan complained of not being able to cover their expenses with the gross margin being received.

d. Rice

Most rice is imported into the Region, and because of the fluid supply situation a concerted effort to learn of rice margins did not seem practicable. An exception to this is rice imported from outside Nigeria. A major rice importer in Ibadan was allowing a margin of about 10 percent of the wholesale price (13 shillings per bag) to a rice wholesaler in Dugbe Market during March 1967.

e. Cowpeas

Like rice, supplies of cowpeas are mostly imported into the Region, and for the same reason it is difficult to obtain information on all the costs and margins involved in its marketing. Table 10.55 presents for cowpeas assembled in Kano Province (Northern Nigeria) and sold in Ibadan during February 1967, the pertinent marketing margins and costs from the point of assembly in Kano Province. The assembler price in Kano Province was about 43 percent of the retail price in Ibadan--the producer price would be somewhat less. The wholesaler actually doing the assembling received a gross margin of 46 percent of the retail price, although direct assembling costs amounted to about 19 percent. The retailer received a gross margin of about 10 percent.

Table 10.55

MARKETING MARGINS AND COSTS FOR KANO PROVINCE (WHITE) COWPEAS  
BEING SOLD IN DUGBE MARKET, IBADAN ON FEBRUARY 13, 1967

| Item                                         | Shillings<br>Per Bag |              | Percent     |
|----------------------------------------------|----------------------|--------------|-------------|
| Retail price--Ibadan<br>(215 lb @ 5.90 d/lb) |                      | 105.75       | 100.0       |
| Retail marketing margin                      |                      | <u>10.75</u> | <u>10.2</u> |
| Wholesale price--Ibadan                      |                      | 95.00        | 89.8        |
| Assembling expenses                          |                      |              |             |
| Transport--road                              | 15.00                | 14.2         |             |
| Transport--headload                          | 1.00                 | .9           |             |
| Bag                                          | 2.00                 | 1.9          |             |
| Labor for filling bags                       | .17                  | .2           |             |
| Commission                                   | <u>2.00</u>          | <u>1.9</u>   |             |
|                                              | 20.17                | 19.1         |             |
| Net margin and other                         | <u>29.00</u>         | <u>27.4</u>  |             |
|                                              |                      | <u>49.17</u> | <u>46.5</u> |
| Assembler price - Kano Province              |                      | 45.83        | 43.3        |

FOOTNOTES - CHAPTER X

1. In an analysis of Indian wheat markets using monthly data, Cummings has indicated that a correlation coefficient "greater than 0.9 suggests a high degree of association, while a coefficient above 0.8 suggests a moderately strong association. A very low coefficient (such as less than 0.1) suggests that the two series move almost independently of each other."

Ralph W. Cummings, Jr., Pricing Efficiency in the Indian Wheat Market, Impex India, New Delhi, 1967, p. 87

This interpretation of the correlation coefficient is supported by Lele in her work with weekly sorghum prices in Western India. The coefficients derived were mostly around 0.9 and were considered to be "indeed high and to show (a) close relationship between price movements in various markets."

Uma J. Lele, "Market Integration: A Study of Sorghum Prices in Western India," Journal of Farm Economics, February 1967, p. 150

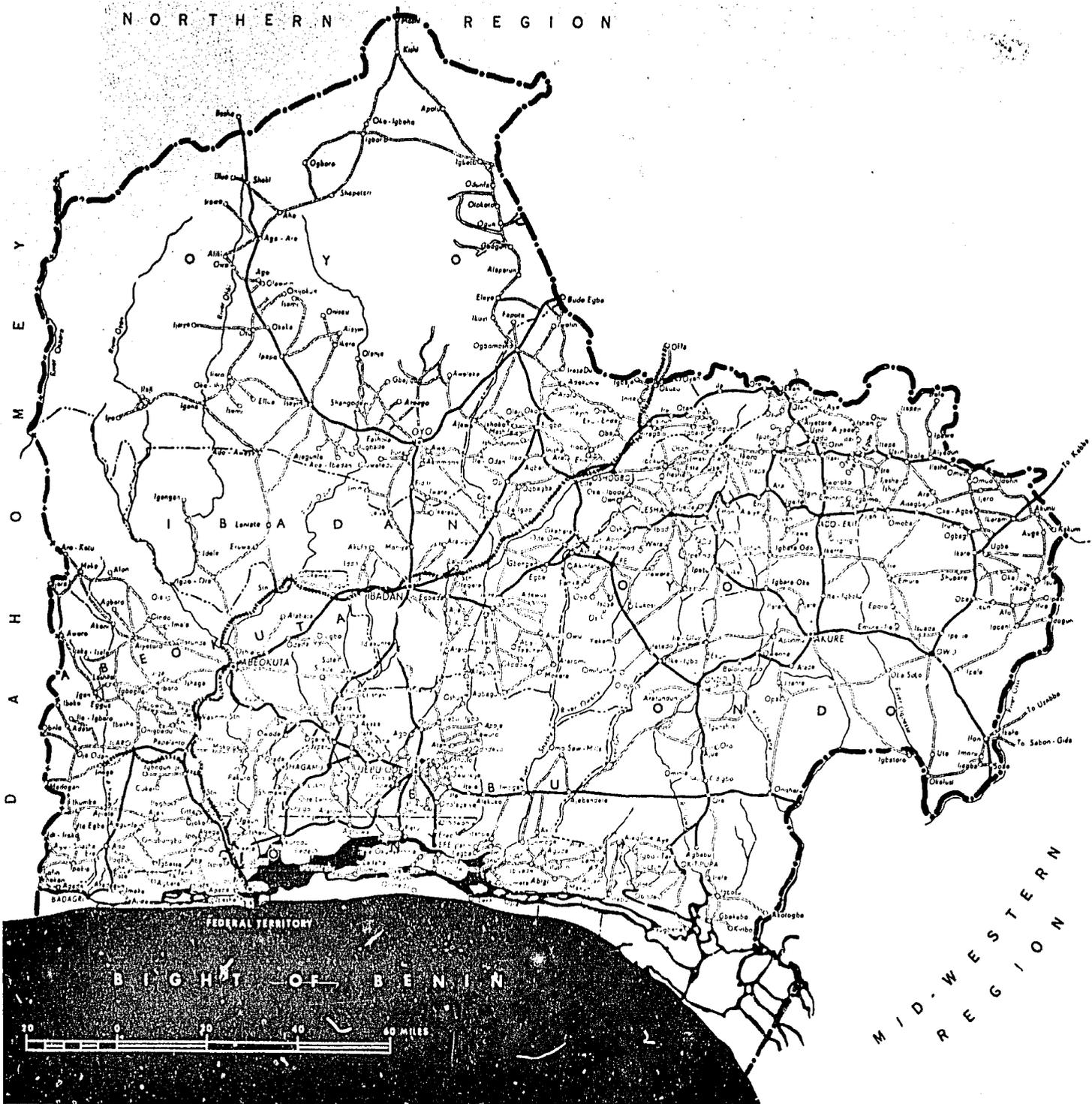
Further, in interpreting the correlation coefficient ( $r$ ), it should be remembered that its square, ( $r^2$ ), indicates what proportion of the movement in one price series is related to the other. That is, an  $r$  of 0.9 indicates that 81 percent of the movement in one series is associated (similar) to the other, while an  $r$  of 0.8 indicates that only 64 percent is similarly related.

2. "The Markets Adoptive By-laws Order, 1962," WNLN 364 of 1962. Published in Supplement to Western Nigeria Gazette, Vol. II, No. 87 of November 22, 1962, p. B 679.
3. Due to the fact that several of the traders were selling more than one commodity, it is not possible to show the net margin applicable to each commodity because of the difficulty of allocating the fixed costs. The average net margins shown in Tables 10.47 and 10.48 were calculated using the average values per trader shown in Table 10.40, not by an equal weighting of the value for each trader. The average is therefore biased in favor of the net margins applicable to the traders with larger margins.
4. One rather useful way of cross-checking the validity of the net margin (profit) reported by traders is to inquire as to their daily Esusu contribution. The majority of traders, especially women selling at retail, use this as a means of realizing much of their profit. By withdrawing small amounts daily for contribution to the Esusu fund, the contributor's ability to trade is not (seriously) impaired, yet a sizable sum is available to the trader when it is her turn to receive the day's contributions. From the observations made, it seems that large and successful retailers contribute about 5 shillings per day (about £6.10.0 per month), medium-sized retailers contribute about 2 to 2.5 shillings per day (about £3 per month) and small-sized retailers pay in around 1 shilling per day (about £1.10.0 per month). In terms of the total net margin, it seems that these contributions make up from one-half to all of the margin realized.

Chapter XI

EVALUATION OF  
MARKETING  
PERFORMANCE

NORTHERN REGION



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## XI EVALUATION OF MARKETING PERFORMANCE

The marketing system can be evaluated in several ways. However, two criteria in particular are stressed in this report. First, the opinion of participants in the system about its performance. As the assurance of an adequate and regular food supply at reasonable prices is not only essential to economic development but is also politically desirable, the opinions of these participants are discussed at some length. Secondly, the efficiency of the marketing system is evaluated and major economic inefficiencies are identified. The most important aspect of this is the way in which prices respond to information about supply and demand conditions, although other aspects are also important. In this evaluation, the yardstick used is the perfectly competitive economic model. Technical standards of efficiency are given little weight.

### A. EVALUATION BY PARTICIPANTS

The opinion of participants at all points in the food marketing system on the efficiency of the system was obtained during the course of the fieldwork. While many of these opinions were solicited in response to a questionnaire, many were obtained less formally. The opinions expressed reflect the participant's evaluation of the system. Numerous participants felt dissatisfied with the present system but were unable to pinpoint this dissatisfaction and provide positive suggestions for improvements. In many cases, the dissatisfaction was not with the food marketing system itself but with the low level of income resulting from a low level of productivity. This type of evaluation was an ever-present danger and could not be entirely excluded from the opinions recorded.

The evaluation made by each of the major links in the food marketing chain will now be discussed in sequence, together with their suggestions for improving the system.

#### 1. Producers

Among the farmers interviewed during the Producer Survey, 49 percent expressed positive dissatisfaction with the way in which they could market surplus foodstuffs. As Table 11.1 indicates, more farmers in the part of the forest (and coastal) zone specializing mainly in the production of foodcrops as opposed to tree (cash) crops were dissatisfied with the present marketing system--63 percent compared with 47 percent and 24 percent in the forest (tree crop) and savanna (arable crop) zones respectively. However, among farmers producing surplus non-food crops, the dissatisfaction with the present system for marketing these commodities was even more positive--60 percent, with one half being very dissatisfied. Cocoa was the main cash crop involve

It is significant that in the areas where the traditional marketing system was weakest, such as Ago-Are village in Oyo Division, satisfaction was strongest. Further, in the forest (arable crop) zone where surplus output per farmer was generally low and the traditional marketing system was relied upon almost exclusively to dispose of surplus foodstuffs, dissatisfaction was strongest. As suggested earlier, part of the dissatisfaction arose from inadequate income resulting from insufficient surplus production. Nevertheless, there was a pervasive feeling that the marketing system was unsatisfactory and something ought to be done about it as soon as possible. (Appendix Table 11.1.a).

Table 11.1

PERCENT DISTRIBUTION OF FARMERS BY SATISFACTION WITH PRESENT SYSTEM OF MARKETING FOOD CROPS AND CASH CROPS AND BY LOCATION OF FARM-PRODUCERS SURVEY-WESTERN NIGERIA-1966-67

| Satisfaction With<br>Present Marketing<br>System | Location of Farm by Vegetation Zone |      |                      |      |                        |      | All Farmers<br>Crops |      |
|--------------------------------------------------|-------------------------------------|------|----------------------|------|------------------------|------|----------------------|------|
|                                                  | Savanna-Arable<br>Crops             |      | Forest-Tree<br>Crops |      | Forest-Arable<br>Crops |      |                      |      |
|                                                  | Food                                | Cash | Food                 | Cash | Food                   | Cash | Food                 | Cash |
| Very satisfied                                   | 42                                  | 4    | 17                   | 5    | 14                     | 3    | 22                   | 4    |
| Satisfied                                        | 31                                  | 79   | 26                   | 26   | 14                     | 24   | 22                   | 30   |
| No strong opinion                                | 2                                   | 12   | 9                    | 5    | 8                      | 6    | 7                    | 6    |
| Dissatisfied                                     | 23                                  | 4    | 37                   | 26   | 47                     | 43   | 38                   | 29   |
| Very dissatisfied                                | 1                                   | --   | 10                   | 39   | 16                     | 24   | 11                   | 31   |
| Total                                            | 99*                                 | 99*  | 99*                  | 101* | 99*                    | 100  | 100                  | 100  |
| Number of responses                              | 90                                  | 24   | 145                  | 153  | 153                    | 91   | 388                  | 268  |

\* Rounding error.

In general, it seemed that where the farmer had a relatively large surplus output and dealt directly with either major assemblers or wholesalers at the farm or in the village, the degree of satisfaction with the system was substantially higher than with farmers using rural markets as the exchange point. It seems that rural markets are used by producers and local assemblers with relatively small quantities to dispose of. In the cases where a large quantity of a commodity (several bags or more) is to be disposed of, the rural market is frequently bypassed. It is mostly the small producer using a rural market who is dissatisfied with the food marketing system, although many larger producers also express dissatisfaction.

Numerous factors seemed to lie behind this dissatisfaction with the food marketing system. Farmers in Agunboye village, in Ijebu Division, were the most vehement and vocal in their dissatisfaction. Typical of the comments of farmers in this village are the following five:

- a. Food prices are too unstable and demand is too irregular.
- b. There is too much cheating by traders.
- c. There is no good direct road to my village. (The village is linked by a gravel road (?) to a tarred road just over a mile away.)
- d. There is always a much better market in the towns.
- e. A government or cooperative buying system is needed.

To nearly all farmers, the question of price received is extremely important. As Table 11.2 indicates for the farmers interviewed in the Producer Survey, 95 percent opined that higher prices were very important

Table 11.2

PERCENT DISTRIBUTION OF FARMERS' OPINIONS REGARDING THE IMPORTANCE OF HIGHER PRICES AND INCREASED PRODUCTION IN MAKING LIFE MORE SATISFYING--PRODUCER SURVEY--WESTERN NIGERIA-1966-67

| <u>Opinion Expressed</u> | <u>Importance in Making Life More Satisfying of</u> |                             |
|--------------------------|-----------------------------------------------------|-----------------------------|
|                          | <u>Higher Prices</u>                                | <u>Increased Production</u> |
| Very important           | 95                                                  | 94                          |
| Fairly important         | 4                                                   | 5                           |
| Uncertain                | 1                                                   | 1                           |
| Fairly unimportant       | --                                                  | --                          |
| Very unimportant         | *                                                   | *                           |
| Total percent            | <u>100</u>                                          | <u>100</u>                  |
| Number of responses      | 396                                                 | 397                         |

\* Less than 0.5 percent.

in making their life more satisfying, while a further 4 percent regarded higher prices as fairly important--only 1 of the 396 respondents considered them unimportant. It will also be noticed that increased production is about the same in importance.

When these same farmers were asked their opinion regarding the likelihood of achieving higher prices and increased production, Table 11.3 shows that the latter was considered slightly more probable. With typical Yoruba optimism, 74 percent of the respondents opined that increased production was at least fairly likely, while 62 percent declared higher prices were just as likely; most of the remainder were either uncertain

Table 11.3

PERCENT DISTRIBUTION OF FARMERS' OPINIONS REGARDING THE LIKELIHOOD  
OF ACHIEVING HIGHER PRICES AND INCREASED PRODUCTION-PRODUCER  
SURVEY-WESTERN NIGERIA-1966-67

| <u>Opinion Expressed</u> | <u>Likelihood of Achieving</u> |                             |
|--------------------------|--------------------------------|-----------------------------|
|                          | <u>Higher Prices</u>           | <u>Increased Production</u> |
| Very likely              | 26                             | 30                          |
| Fairly likely            | 36                             | 44                          |
| Uncertain                | 37                             | 23                          |
| Fairly unlikely          | 1                              | 3                           |
| Very unlikely            | *                              | --                          |
| Total percent            | <u>100</u>                     | <u>100</u>                  |
| Number of responses      | 382                            | 394                         |

\* Less than 0.5 percent.

or had no opinion. Taking the opinions by village, it is interesting to note that the villages in the savanna zone were generally the most optimistic on both scores. In the areas where the trade in surplus food production is oldest (the forest zone) the optimism was apparently somewhat jaded. However, inasmuch as the savanna zone is the major area of surplus production and is likely to become even more so, the optimism of these farmers is of the gravest concern. If they can substantiate their confidence in their ability to achieve increased production, it is likely that their output will be sought after by more traders than at present. In this eventuality, producer prices would likely rise relative to those in urban areas.

Not only do producers consider higher prices for their surplus output important, they are also concerned about the fluctuations in the prices they receive. In fact, as Table 11.4 indicates for the farmers in the Producer Survey, instability of farm prices was almost universally important as a cause of mental anxiety. Only the problems of maintaining and increasing present yields and of getting sufficient funds to send their children to school rank equally with price instability as a source of concern.

Although there is a tendency for respondents to agree with statements put to them, it is very interesting to note that the farmers in the Producer Survey were about equally divided in their responses to the statement: "You would continue to produce what you are now producing irrespective of what prices you are offered." (Appendix Table 11.1.p.) By village, producers in the savanna area were in greatest disagreement; that is, they seemed the most price-responsive of all village groups. In the heart of the cocoa area and in the villages with generally low levels of output per farmer, agreement with the statement was strongest; that is, varying output in response to price changes did not seem particularly important. For the most part, these two latter groups of villages are producing food for subsistence purposes rather than specifically for the marketing system.

In terms of factors which apparently limit expansion of production most, Table 11.5 shows that only lack of capital is more important than low prices. It is only in the heart of the cocoa area that these two factors are less important; elsewhere they are about equally important in their limiting effect. An exception to this is in the arable farming area in

Table 11.4

PERCENTAGE DISTRIBUTION OF FARMERS BY CAUSES OF MENTAL ANXIETY  
 PRODUCER SURVEY - WESTERN NIGERIA - 1966-67

| <u>Degree of Importance</u> | <u>Cause of Mental Anxiety</u>                         |                                       |                                  |                                    |
|-----------------------------|--------------------------------------------------------|---------------------------------------|----------------------------------|------------------------------------|
|                             | <u>Financial<br/>Obligation to<br/>Extended Family</u> | <u>Instability of<br/>Farm Prices</u> | <u>Political<br/>Uncertainty</u> | <u>Health of<br/>Farmer/Family</u> |
| Very great                  | 63.4                                                   | 82.0                                  | 48.4                             | 64.4                               |
| Moderate                    | 13.0                                                   | 11.6                                  | 18.1                             | 7.0                                |
| Slight                      | 11.0                                                   | 4.3                                   | 12.6                             | 10.8                               |
| Nonexistent                 | <u>12.5</u>                                            | <u>1.5</u>                            | <u>20.9</u>                      | <u>17.8</u>                        |
|                             | <u>99.9*</u>                                           | <u>100.0</u>                          | <u>100.0</u>                     | <u>100.0</u>                       |
| Number of responses         | 398                                                    | 397                                   | 396                              | 398                                |

\* Rounding error.

Table 11.5

PERCENTAGE DISTRIBUTION OF FARMERS BY LIMITS ON EXPANSION DUE TO SHORTAGE  
OF LAND, LABOR, CAPITAL, KNOWLEDGE OF NEW TECHNIQUES, ADEQUATE PRICES, AND  
TRANSPORTATION FACILITIES  
PRODUCER SURVEY - WESTERN NIGERIA - 1966-67

| <u>Effect of Shortage on<br/>Expansion Possibilities</u> | <u>Land</u>  | <u>Labor</u> | <u>Capital</u> | <u>Knowledge of<br/>New Techniques</u> | <u>Adequate<br/>Prices</u> | <u>Transportation<br/>Facilities</u> |
|----------------------------------------------------------|--------------|--------------|----------------|----------------------------------------|----------------------------|--------------------------------------|
| Very limiting                                            | 52.1         | 44.7         | 86.9           | 43.8                                   | 69.5                       | 38.7                                 |
| Limiting                                                 | 17.1         | 19.7         | 9.1            | 24.4                                   | 14.1                       | 11.4                                 |
| No strong opinion                                        | 1.8          | 4.8          | 1.2            | 12.0                                   | 2.5                        | 4.1                                  |
| Not limiting                                             | <u>29.0</u>  | <u>30.8</u>  | <u>2.8</u>     | <u>19.8</u>                            | <u>13.9</u>                | <u>45.8</u>                          |
|                                                          | <u>100.0</u> | <u>100.0</u> | <u>100.0</u>   | <u>100.0</u>                           | <u>100.0</u>               | <u>100.0</u>                         |
| Number of responses                                      | 396          | 395          | 395            | 392                                    | 396                        | 394                                  |

the extreme south-west, where of all the factors suggested, only lack of capital was generally classed as very limiting--even inadequate prices were not universally so acknowledged as elsewhere.

Of the other factors that might be important in limiting production, all were generally very limiting in the savanna area, with the partial exception of lack of land and knowledge of new techniques; farmers in this area considered lack of farm labor and transportation facilities particularly limiting. Based on the responses received, producers in the savanna area generally felt more factors limited expansion of their production than producers elsewhere; nevertheless, it will be remembered that these producers were also the most optimistic about being able to increase production.

The lack of knowledge of new farming techniques was most limiting in those villages in the forest zone where cocoa production was declining and arable farming somewhat difficult. New techniques and new crops are desired by these producers.

For the most part, producers sell to traders rather than consumers. Nearly all of these traders travel to the farmer rather than vice versa. Many of the traders come from towns. In general, the relationship between traders and farmers is not particularly cordial, with farmers generally mistrusting traders, as evidenced by their adamant demand for payment at the time of sale. They do not consider the trader on their side (Appendix Table 11.1.c), many believing that traders collude to their disadvantage (Appendix Table 11.1.d). Obviously, however, the experience with and opinions about traders vary tremendously throughout

the Region. It is difficult to generalize, but it seems that the larger farmers and the more productive villages have a better opinion of traders and are more inclined to trust them.

Many (68 percent) of the farmers thought more traders would lead to higher farm prices. It was apparent that many farmers considered the possibility of obtaining higher prices was limited by the small number of traders to whom they could sell. On the other hand, many farmers were skeptical that even if they could sell to more traders (with an implied increase in competition), they would receive higher prices. To these producers, obviously, increased trader competition was not the answer to their dissatisfaction with the marketing system. (Appendix Table 11.1.r)

Most farmers (87 percent) believed that if they had more knowledge about markets and prices, they would be able to get higher prices for their surplus output. Only in a major cocoa village--Omifunfun--and in a village with a government marketing system for the major crop (maize)--Ifonyintedo--is this belief not so generally held. With this knowledge, farmers believe that not only can they sell in places where the price is more favorable but they will not be taken advantage of so easily by the traders they presently deal with. Good, reliable information is seen by many farmers as important and necessary to any improvement in the marketing system. (Appendix Table 11.1.v)

An inescapable fact is that extremely few farmers (2 percent) would not like to see the present system of marketing foodstuffs changed in some way. Further, the common belief among farmers is that the government can provide the solution to all their problems. In fact,

extremely few (3 percent) expressed a desire to see the government take a less active role in food marketing. Most farmers (94 percent) were positive in their desire to see government assume a more active role. Overwhelmingly, farmers are receptive to increased government assistance and many to government intervention in food marketing. (Appendix Table 11.1.a & b.)

In general, the changes sought by farmers fall into two classes: those improving the operation of the marketing system, particularly in its present form; and those actually changing the basic structure of the system. The major items included in the former are as follows:

- a. Improved dissemination of market information, particularly prices.
- b. Improved transportation facilities, particularly the construction of (better) roads to villages and of access tracks closer to the place of production.
- c. Improved storage facilities, particularly for on-farm storage.
- d. Construction of more convenient markets (to the place of production) so as to reduce producers' transport costs.
- e. The establishment of a well-funded credit system accessible to all farmers which, among other things, will allow the farmer to hold his output to a more convenient time.
- f. Increased recognition of quality differences (grades) through the pricing system.
- g. The existence of a larger choice of traders with whom producers may deal.
- h. The elimination of trader collusion detrimental to producers.

The attitude of producers toward structural change is much more difficult to assess. Several major possibilities exist and they may be listed in ascending order of implied change as follows:

- a. Provision of direct access to traders in urban markets so that all rural markets are bypassed.
- b. Use of a farmer association to bargain jointly with traders for higher prices.
- c. Physical marketing through a farmer cooperative or association.
- d. Creation of a government agency to license traders and to regulate prices and margins.
- e. Appointment of a government agency to procure either part or all of the surplus production, either directly or through a system of licensed buying agents.

The first possibility is frequently sought by farmers, particularly those with a sizable quantity of surplus output. In a few cases, farmers are already marketing in this manner; for example, several of the producers in Ago-Are sell lorry-loads of yam directly through wholesaler-agents in Ibadan. However, most farmers are debarred from using this method, either because they lack knowledge or adequate supplies to make it practicable or because their experience with this method in the past has been unfortunate. Evidence was definitely found in Ibadan to suggest that traders not only discourage farmers from marketing their surplus supplies through wholesaler-agents but take advantage of them whenever possible.

The second and third possibilities involve some form of cooperation or association between traders for their mutual benefit. The type of association which does not include joint marketing is a traditional feature of much of Yoruba society. Most Yoruba are generally willing to form an association to discuss common problems although enforcement of any decision usually meets with qualified success, rarely being completely successful. A bargaining association for producers was never seriously suggested by farmers and even if enough information were available to arrive at agreed prices and other conditions, it is doubtful whether the individual farmers and traders involved would seriously follow such decisions.

Producer marketing cooperatives already exist within the Region but are mostly concerned with the marketing of cocoa. As Table 11.6 indicates, 28 percent of the farmers interviewed in the Producer Survey belonged to a cooperative society. By village, however, membership varied from 94 percent in Omifunfun (cocoa) and Ifonyintedo (maize) to none in five villages and under 10 percent in another three villages. In fact, cooperative societies were significant in only five of the thirteen villages surveyed.

Farmers' associations are mostly concerned with joint operations relating to the procurement of production inputs. These associations are frequently sponsored by the Ministry of Agriculture and Natural Resources to assist in its extension activities and, like the cooperative societies, generally receive substantial outside direction from government. Although a few members also belong to a cooperative society, these

Table 11.6

PERCENT DISTRIBUTION OF FARMERS BY MEMBERSHIP IN COOPERATIVE SOCIETIES AND FARMERS' ASSOCIATIONS BY LOCATION OF FARM - PRODUCER SURVEY - WESTERN NIGERIA - 1966-67

|                             | Location of Farm by<br>Vegetation Zone |            |            | All<br>Farmers |
|-----------------------------|----------------------------------------|------------|------------|----------------|
|                             | Savanna                                | Forest     |            |                |
|                             | Arable                                 | Tree       | Arable     |                |
| <u>Cooperative Society</u>  |                                        |            |            |                |
| Officer                     | --                                     | 6          | 5          | 4              |
| Member                      | 2                                      | 33         | 27         | 24             |
| Non-member                  | <u>98</u>                              | <u>61</u>  | <u>68</u>  | <u>72</u>      |
|                             | <u>100</u>                             | <u>100</u> | <u>100</u> | <u>100</u>     |
| <u>Farmers' Association</u> |                                        |            |            |                |
| Officer                     | 3                                      | 7          | 3          | 5              |
| Member                      | 21                                     | 16         | 26         | 21             |
| Non-member                  | <u>76</u>                              | <u>77</u>  | <u>71</u>  | <u>74</u>      |
|                             | <u>100</u>                             | <u>100</u> | <u>100</u> | <u>100</u>     |
| Number of responses         | 90                                     | 156        | 153        | 399            |

associations seem to be more active in the villages where cooperative societies are weakest. As Table 11.6 discloses, 26 percent of the farmers interviewed were already gaining experience in this type of association.

In response to statements put to farmers (Appendix Table 11.1), it seems that in the villages with active cooperative societies, particularly for cocoa marketing, there was less agreement with the suggestion that cooperative marketing was the solution to the food marketing problem. Certainly villages with some experience in cooperative ventures were generally more

understanding of the principles of cooperative marketing and appeared more willing to be faithful to the cooperative. Very few farmers (2 percent) indicated that they would be unwilling to join a cooperative if it were supervised by the Ministry of Trade and Industry (which is already required by the Regional Government).

One of the major problems with cooperatives is finding suitably qualified managers. Although most farmers (88 percent) did not see this as a problem, from the responses it was clearly a problem for the otherwise fairly successful maize cooperative at Ifonyintedo. The farmers in the cocoa-producing areas generally thought that obtaining a manager was not a great problem, although their trust in the cooperative leadership was generally not unqualified (.or untarnished).

Farmer support for cooperative marketing of foodstuffs was quite enthusiastic in several of the more important surplus food producing villages. To these producers, their own cooperative represented the solution to their dissatisfaction with the present system of food marketing as it avoids relying on their major source of dissatisfaction--private traders.

The fourth possibility involves government regulation of essentially the present food marketing system, while the fifth possibility requires direct government participation in the system. Neither possibility was discussed in detail with farmers, although a statement related to the latter possibility was put to farmers. Most farmers (87 percent) agreed to the statement that "the government should replace private traders with government buyers buying for a government corporation." It is significant to note, however, that

the two savanna villages where disagreement was strongest had both had a limited amount of direct contact with government buyers. It is likely that the strong agreement with this proposition was more indicative of agreement with the idea that private traders should be replaced than with the suggestion that government buyers should directly take their place.

Producers of export crops have had experience with a Marketing Board operating through a system of licensed buying agents. Again, it is significant to note that the dissatisfaction of farmers with regard to the marketing of export (cash) crops was somewhat stronger than in regard to food crops. Faced with the suggestion that the structure of the food marketing system be changed to resemble basically that prevailing for cash crops, it is highly likely that farmers would not generally be enthusiastic for such a change. The dissatisfaction is real but the suggestions for improvement are incomplete, utopian, and definitely not unanimous.

## 2. Traders

For the most part, staple food traders are reasonably satisfied with their vocation and have no strong desire to shift to another occupation. However, they are quite vocal in their desire to see changes in the system which will lead to increased sales, lower costs and higher profits. The general dissatisfaction is not with their involvement in staple food marketing but with some of the conditions involved.

The attitude of traders towards their involvement in staple food marketing was inquired into in both urban (outside Ibadan) and rural markets with the Market Traders Questionnaire--Revised Form. As Table 11.7 suggests, the proportion of traders who were generally satisfied with food marketing as a form of livelihood was higher in rural markets than in urban markets. Further, in the urban markets, including Ibadan, wholesalers were

Table 11.7  
PERCENT DISTRIBUTION OF TRADERS BY ATTITUDE  
TOWARD TRADING AND BY TYPE OF MARKET--MARKET  
TRADER'S QUESTIONNAIRE---REVISED FORM  
OCTOBER 1966-APRIL 1967

|                                            |    |    |     |     |
|--------------------------------------------|----|----|-----|-----|
| Do you think selling foodstuffs gives you: |    |    |     |     |
| a. The kind of life you want?              |    |    |     |     |
| Yes                                        | 73 | 80 | 79  | 100 |
| No                                         | 27 | 14 | 21  | -   |
| b. Sufficient profits to live on?          |    |    |     |     |
| Yes                                        | 73 | 80 | 76  | 100 |
| No                                         | 27 | 20 | 24  | -   |
| Number of responses                        | 52 | 49 | 101 | 33  |

generally more satisfied than retailers. In nearly all of the cases where traders were dissatisfied with their occupation, they considered that their profits were insufficient to support them. In the urban markets, 24 percent of a sample of 101 traders claimed their profits were not enough to live on, while none of the 33 traders in the rural markets who were formally asked made this complaint.

Despite the fact that most traders were generally satisfied with staple food trading as an occupation for themselves, many stated that they would not encourage their children to enter the same trade. As Table 11.8 discloses, among the traders in urban markets (outside Ibadan), 46 percent of the retailers and 36 percent of the wholesalers asked would not encourage their children to trade in foodstuffs. In rural markets, the corresponding figure was only 9 percent. This apparently reflects the low esteem in which the traditional way of dealing in staple commodities is held, particularly in urban areas, where the level of education is higher.

In most cases where traders would encourage their children to trade in foodstuffs, they would generally like to see them follow in their own footsteps. As Table 11.8 suggests, for example, retailers (mostly women) in urban markets would encourage their daughters to trade at retail in the same market. Wholesalers in urban markets and traders in rural markets were less unanimous about encouraging their children to trade in the same market. Among these traders, there was more enthusiasm about encouraging their children to trade elsewhere, although 64 to 70 percent would still prefer to see their children establish themselves in the same market.

Table 11.8

PERCENT DISTRIBUTION OF TRADERS BY ATTITUDE  
TOWARD ENCOURAGING THEIR CHILDREN TO  
SELL FOODSTUFFS AND BY TYPE OF MARKET  
MARKET TRADERS QUESTIONNAIRE--REVISED FORM  
OCTOBER 1966-APRIL 1967

|                                                                                   | Urban - Outside Ibadan |           |     | Rural  |
|-----------------------------------------------------------------------------------|------------------------|-----------|-----|--------|
|                                                                                   | Retail                 | Wholesale | All | Market |
| Would you encourage your children to go into the business of selling food-stuffs? |                        |           |     |        |
| Yes                                                                               | 54                     | 64        | 58  | 91     |
| No                                                                                | 46                     | 36        | 42  | 9      |
| Total Percent                                                                     | 100                    | 100       | 100 | 100    |
| Number of Responses                                                               | 54                     | 47        | 101 | 34     |
| If <u>yes</u> , which?                                                            |                        |           |     |        |
| a. Male children                                                                  | 3                      | 30        | 17  | 26     |
| Female children                                                                   | 93                     | 50        | 71  | 68     |
| Both                                                                              | 3                      | 20        | 12  | 6      |
| b. Retailing                                                                      | 90                     | 7         | 47  | 52     |
| Wholesaling/Assembling                                                            | 10                     | 87        | 49  | 45     |
| Any                                                                               | -                      | 7         | 3   | 3      |
| c. Same area                                                                      | 86                     | 64        | 75  | 70     |
| Elsewhere/Anywhere                                                                | 14                     | 36        | 25  | 30     |
| Number of Responses                                                               | 29                     | 30        | 59  | 31     |

The suggestions made by traders for improving the present system of marketing mostly relate to the eradication of what are essentially imperfections in the present marketing system. Table 11.9 shows these suggestions in terms of rather broad categories for the wholesalers in Ibadan interviewed with the Wholesale Traders Questionnaire.

Table 11.9

PERCENT OF WHOLESALERS IN IBADAN BY TYPE OF SUGGESTIONS MADE  
FOR IMPROVING THE FOOD MARKETING SYSTEM BY TYPE OF MARKET  
(UP TO THREE SUGGESTIONS ALLOWED PER TRADER)  
WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
FEBRUARY - MAY 1967

| Type of suggestions Made<br>For Improving the Food<br>Marketing System | Type of Market    |                |                  | Total |
|------------------------------------------------------------------------|-------------------|----------------|------------------|-------|
|                                                                        | Central<br>Native | Central<br>New | Resi-<br>dential |       |
| Provision of better market facilities                                  | 16                | 15             | 12               | 15    |
| Provision of better transportation<br>facilities                       | 6                 | 19             | 12               | 9     |
| Provision of better credit facilities                                  | 66                | 43             | 25               | 61    |
| Restrict credit sales                                                  | 34                | 20             | 62               | 32    |
| Better cooperation between traders                                     | 6                 | 19             | --               | 8     |
| Increase availability of supplies                                      | 10                | 19             | 12               | 12    |
| Expand employment & hence sales<br>opportunities                       | 62                | 19             | 12               | 54    |
| Provide stability in government                                        | 9                 | 14             | --               | 9     |
| Other, e.g., set food prices                                           | 12                | 9              | 25               | 11    |
| Number of traders                                                      | 146               | 108            | 8                | 562   |

The major complaint of wholesalers in Ibadan related to the smallness of their business operations. Of those interviewed, 61 percent expressed a desire to have access to an outside source of capital, mostly in the form of a government loan or grant. The rather general sentiment of traders is that unless they have more capital with which to trade, then they are doomed to a life of small operations with commensurate returns. Furthermore, their status among other traders in the market is almost directly related to their size (as well as their age). For lack of better alternatives, suggestions relating to improved credit facilities usually require the government to be the main benefactor

Another indicator of the dissatisfaction of wholesalers with the size of their present activities is that 54 percent of the respondents expressed a desire to see the level of employment expanded, particularly through the construction of more industries. This, they believed, would lead directly to a higher level of sales with a faster rate of stock turnover. That is, having used their capital to acquire a supply of staple foods, there is a rather general desire to see a faster rate of sales, so that they can then go about the task of acquiring more supplies. This more intensive use of capital, they believe, will also lead to increased returns, as well as greater use of their own time and facilities.

The extent to which some wholesalers had tied their capital up in credit sales was of particular concern to some 32 percent of the wholesalers in Ibadan. Credit sales are made because it is the only way in which most of these wholesalers feel that they can dispose of their supplies with any degree of speed. They believe that increased demand may eliminate the need for credit sales (at least by them), but would much prefer to take some positive action, such as having traders or the government prohibit credit sales by all traders. The risk of loss involved was also of major concern to many, several suggesting that the government help them collect their bad debts.

Concern over the inadequacy of present market facilities was expressed by 15 percent of the wholesalers. For the most part, suggestions for improvement involved the construction of new stalls, the grouping of all traders selling similar commodities in more compact areas, the provision of more central parking space and, in a few cases, the construction of an

entirely new market. Facilities such as water, latrines, electricity, telephones, drains and incinerators were not usually specifically mentioned by these wholesalers in Ibadan.

In contrast to the suggestions of wholesalers in the major markets in Ibadan, the new or improved facilities generally sought by traders and market officials in the urban (Ibadan and other) and rural markets studied was more inclusive. As Table 11.10 suggest, the provision of either piped or well water, latrines and electricity, and the construction of new stalls were the items for which there was the most conscious and immediate need in

Table 11.10

PERCENT DISTRIBUTION OF MARKETS BY NEW OR IMPROVED FACILITIES SOUGHT AND BY LOCATION--QUESTIONNAIRE ON MARKETS

| New or Improved<br>Facilities Sought | Urban  |       | Rural |
|--------------------------------------|--------|-------|-------|
|                                      | Ibadan | Other |       |
| New market                           | --     | --    | 9     |
| Stalls                               | 25     | 61    | 60    |
| Sealed pavement                      | --     | --    | --    |
| Electricity                          | 33     | 67    | 36    |
| Telephone                            | --     | --    | 7     |
| Post office                          | --     | --    | 4     |
| Water                                | 75     | 72    | 42    |
| Drains                               | --     | --    | --    |
| Latrine                              | 83     | 44    | 49    |
| Garbage disposal                     | 25     | 6     | 20    |
| Cassava mill                         | --     | --    | 2     |
| Access road                          | --     | 6     | 7     |
| Unloading area/motor park            | 33     | --    | --    |
| No. of markets                       | 12     | 18    | 45    |

markets. Other items, such as the provision of garbage disposal facilities, access roads and convenient parking areas, were sought in several markets but less than the other items just mentioned. Facilities such as sealed pavements and drains were not sought in any of the markets studied. In four of the 45 rural markets it was suggested that a completely new market be constructed on a new site.

In every case it was considered by people in these markets that the facilities should be provided by a government agency, usually the local government council responsible for the market. In most markets, traders appeared willing to pay a fee to the local council as a contribution to the cost of the facilities provided. The fee usually depended upon the services sought. For example, for the provision of stalls in (periodic) rural markets, traders appeared willing to pay between two and five shillings per month, and a few were willing to pay up to 7.5 shillings per month. In several of the urban markets, including Ibadan, traders sought new or improved facilities but stated that they were unwilling to pay anything toward their cost and maintenance or for their use.

The higher cost of road transport and the dislocation of rail transportation due to the unstable political situation was of concern to many traders, including up to 9 percent of the sample of wholesale traders in Ibadan. The traders mainly concerned about the situation were those dealing in rice and cowpeas. One of their strongest wishes was to see the rail services from the North return to their former level of operation, both in frequency of service and in availability of space. A few of the wholesalers dealing in locally-produced commodities suggested some form of

rate control over local carriers, while others suggested that the government should loan them money so they could buy their own lorries to assist them in assembling supplies.

For the most part, assemblers buying supplies in rural markets do not experience difficulty in obtaining transportation back to their selling market for themselves and their supplies. As Table 11.11 indicates, 86 percent of the assemblers interviewed stated that they never have trouble obtaining transportation, while a further 13 percent declared that they do not usually encounter transportation problems in removing their purchases from the rural market. In general, the major complaint was one not of availability, but of cost. Many were quite vocal and indignant about their felt exploitation by transporters.

Table 11.11

PERCENT DISTRIBUTION OF BUYERS (ASSEMBLERS) BY DIFFICULTY  
IN OBTAINING TRANSPORTATION FROM RURAL MARKETS  
AND BY COMMODITY--MARKET BUYERS QUESTIONNAIRE  
OCTOBER - MARCH 1966-67

| Difficulty in Obtain-<br>ing Transportation<br>from Rural Markets | Commodity |      |       |      |       | Total |
|-------------------------------------------------------------------|-----------|------|-------|------|-------|-------|
|                                                                   | Yam       | Gari | Maize | Rice | Other |       |
| Never                                                             | 94        | 75   | 95    | 88   | 64    | 86    |
| Not usually                                                       | 6         | 21   | 5     | 12   | 36    | 13    |
| Usually                                                           | --        | 4    | --    | --   | --    | 1     |
| Always                                                            | --        | --   | --    | --   | --    | --    |
| Total percent                                                     | 100       | 100  | 100   | 100  | 100   | 100   |
| Number of responses                                               | 49        | 28   | 20    | 17   | 11    | 125   |

Many wholesalers in Ibadan (about 12 percent) believe that if the government could help farmers increase production, they would have less difficulty in procuring supplies and lower assembling costs. In addition, many believe that the price to the farmer would fall and their margin would be increased. This belief is held strongly by several of the larger assemblers of locally-produced commodities selling at wholesale in Ibadan. To them, the problem is one not of marketing, but of the level and organization of agricultural production.

The problem of political instability and the discordant relationship between several of the major tribes was a source of irritation to many wholesalers in Ibadan. The desire to "stop the crisis and let Nigerians live and trade in peace" was quite commonly expressed. Many traders were directly affected by the political situation--having to change their source of supplies, find new means of transportation, and losing customers who fled to their "region of origin."

Several problems, such as the instability of staple food prices and the irregularity of demand, were the object of special suggestions from wholesalers in Ibadan. For example, several suggested that fixed prices should be set for staple foods. Their objective was to have the government establish a system of prices to be followed by traders, which would reduce the possibility of loss (and gain) from price fluctuations. Other wholesalers wanted their customers to sign supply contracts; the question of how negotiable (fixed) the price is at the time of sale was not revealed by these wholesalers.

The final major problem to be discussed in relation to the direct or implied evaluation of the food marketing system by traders is that of its organization. In general, traders feel that some form of association of traders is necessary to regulate their industry. For example, Table 11.12 shows that 73 percent of the traders interviewed in urban markets outside Ibadan, and 93 percent of those in rural markets, were of the opinion that traders could help themselves by joining together.

Table 11.12

PERCENT DISTRIBUTION OF TRADERS BY ATTITUDE TOWARDS  
TRADER COOPERATION AND BY TYPE OF MARKET--  
MARKET TRADERS QUESTIONNAIRE--REVISED FORM  
OCTOBER - APRIL 1967

|                                                                                      | Urban - Outside Ibadan |           |     | Rural<br>Market |
|--------------------------------------------------------------------------------------|------------------------|-----------|-----|-----------------|
|                                                                                      | Retail                 | Wholesale | All |                 |
| Do you think you and other traders<br>can help yourself by joining<br>together?      |                        |           |     |                 |
| Yes                                                                                  | 74                     | 71        | 73  | 93              |
| No                                                                                   | 26                     | 29        | 27  | 7               |
| Total percent                                                                        | 100                    | 100       | 100 | 100             |
| No. of responses                                                                     | 53                     | 49        | 102 | 30              |
| If yes, what form of organization<br>would you like to see this<br>cooperation take? |                        |           |     |                 |
| Cooperative                                                                          | 37                     | 57        | 47  | 30              |
| Trade association                                                                    | 60                     | 37        | 49  | 70              |
| Corporation                                                                          | --                     | 3         | 1   | --              |
| Government-financed credit union                                                     | 3                      | --        | 1   | --              |
| "Communism"                                                                          | --                     | 3         | 1   | --              |
| Total percent                                                                        | 100                    | 100       | 99* | 100             |
| No. of responses                                                                     | 38                     | 35        | 73  | 27              |

\* Rounding error.

There is little agreement on the form this association should take. The majority of traders appear to be in favor of strengthening trade associations to operate more effectively, principally by giving them more power to enforce their decisions. This applies not only to their own members but all other traders selling the same commodities at the same level in the same market area. In this way, it is hoped to have more trader control over such items as prices, margins and the use of credit as well as over the number of traders actually competing against each other. In general, traders wish to restrict the entry of new traders to those approved by their trade association and to encourage more collusive practices in order

The formation of trader cooperatives was suggested by a considerable number of traders. For the most part, they wanted small groups of "honest" traders (3-10) to get together to acquire supplies, provide joint facilities, and obtain better access to sources of credit. Although this is basically a partnership arrangement, it is also a form of cooperation among individual traders. Even at present there are very few examples of this kind of cooperation. No doubt the motive behind this suggestion is individual traders' feeling of being smaller--having fewer facilities, less knowledge, less capital--than is necessary to assure a reasonably satisfactory return for their investment of labor, capital, and management. They feel they should control more resources and have greater division of labor--with specialized skills and functions--if they are to be successful traders.

There can be no doubt that the traders themselves consider they are under-employed. Their awareness of this situation will nearly always lead to suggestions for more productive use of their resources. Although

individual traders may improve their productivity and returns by implementing their suggestions, this will not necessarily lead to an overall improvement in the level of productivity for all traders as a group. This question will be discussed further in relation to the recommendations to be made in Chapter XII for improving the system of marketing staple foods.

### 3. Consumers

It can be expected that consumers in Ibadan will generally be less satisfied with a system of food marketing using the traditional form of organization than consumers elsewhere, with the exception of Lagos. This results from their greater exposure to and awareness of modern business methods. Also, more consumers will have direct contact with the modern sector of the economy and as a result will tend to be less tolerant of the largely traditional methods of staple food marketing.

The comments which follow are related specifically to consumers in Ibadan and are based largely upon the opinions expressed in response to the Household Survey in Ibadan. As just mentioned, these opinions will probably be more critical than those of consumers in areas outside Ibadan, particularly in rural areas. Nevertheless, they are indicative of the attitudes that will most likely exist throughout the Region at some future time.

Table 11.13 indicates that only 8 percent of the responding households judged themselves "quite satisfied" with the present system of marketing staple foods. A further 56 percent were "just satisfied." This means that 36 percent were actually "dissatisfied" with the present system although the degree of dissatisfaction varied with the wife's monthly income; it ranged

from 25 percent of the households where the wife's estimated monthly income was under £5 to 53 percent where it was £20 and over.

Table 11.13

PERCENT DISTRIBUTION OF HOUSEHOLDS BY PRESENT  
SATISFACTION WITH FOOD MARKETING SYSTEM  
AND BY ESTIMATED MONTHLY INCOME OF  
WIFE--HOUSEHOLD SURVEY--IBADAN  
DECEMBER 1966

| Degree of Satisfaction | Estimated Monthly Income of Wife |       |        |         |            | All Households |
|------------------------|----------------------------------|-------|--------|---------|------------|----------------|
|                        | Under £5                         | £5-£8 | £8-£12 | £12-£20 | £20 & Over |                |
| Quite satisfied        | 11                               | 6     | 6      | 6       | 14         | 8              |
| Just satisfied         | 64                               | 57    | 50     | 53      | 33         | 56             |
| Dissatisfied           | 25                               | 37    | 44     | 42      | 53         | 36             |
| Total                  | 100                              | 100   | 100    | 101*    | 100        | 100            |
| No. of responses       | 179                              | 125   | 78     | 72      | 36         | 490            |

\* Rounding error.

Among the households interviewed in Ibadan, there seems to be little doubt about their desire to see the present system changed. Table 11.14 shows that 72 percent of the households actually desired a change, while a further 6 percent were somewhat less certain. Only 22 percent of the households were against change, most of these being in the low-income groups.

Table 11.14

PERCENT DISTRIBUTION OF HOUSEHOLDS BY DESIRE TO  
SEE PRESENT FOOD MARKETING SYSTEM CHANGED  
AND BY ESTIMATED MONTHLY INCOME OF WIFE  
HOUSEHOLD SURVEY--IBADAN  
DECEMBER 1966

| Desire to<br>See Present<br>Food Marketing<br>System Changed | Estimated Monthly Income of Wife |       |        |         |               | All<br>House-<br>holds |
|--------------------------------------------------------------|----------------------------------|-------|--------|---------|---------------|------------------------|
|                                                              | Under £5                         | £5-£8 | £8-£12 | £12-£20 | £20 &<br>Over |                        |
| Yes                                                          | 57                               | 74    | 89     | 86      | 77            | 72                     |
| Possibly                                                     | 6                                | 7     | 2      | 4       | 12            | 6                      |
| No                                                           | 37                               | 19    | 9      | 10      | 12            | 22                     |
| Total                                                        | 100                              | 100   | 100    | 100     | 101*          | 100                    |
| No. of responses                                             | 177                              | 129   | 79     | 72      | 35            | 492                    |

\* Rounding error.

Several households desired to see the facilities in the present markets expanded, while 6 percent of the respondents wished to see an entirely new market constructed closer to their home. Other market-related suggestions, such as increasing the neatness in existing markets and improving the quality, packaging and handling of foodstuffs, were also made. In addition, many suggestions related more to the householders' poor economic situation and their need for a higher level of income.

Certainly not all of the households interviewed were able to give an unprompted suggestion for improving the food marketing system. However, 77 percent were, and their suggestions are presented in Table 11.15 for each income group. Of those making a suggestion, 71 percent were directly

concerned with the prices they actually pay for foodstuffs. All wanted to see food prices reduced in some way or other. Suggestions as to how this might be achieved were seldom forthcoming, although 6 percent intimated that food supplies should be increased, while another 1 percent considered that fixed prices should be set for foodstuffs.

Table 11. 15

PERCENT DISTRIBUTION OF HOUSEHOLDS BY SUGGESTED  
METHOD OF IMPROVING FOOD MARKETING SYSTEM  
AND BY ESTIMATED MONTHLY INCOME OF WIFE  
HOUSEHOLD SURVEY--IBADAN  
DECEMBER 1966

| Suggested Method<br>of Improving System                       | Estimated Monthly Income of Wife |       |        |         |               | All<br>House-<br>holds |
|---------------------------------------------------------------|----------------------------------|-------|--------|---------|---------------|------------------------|
|                                                               | Under £5                         | £5-£8 | £8-£12 | £12-£20 | £20 &<br>Over |                        |
| Reduce food prices                                            | 72                               | 70    | 80     | 68      | 54            | 71                     |
| Have fixed prices for<br>food supplies                        | --                               | --    | --     | 2       | 10            | 1                      |
| Increase food supplies                                        | 2                                | 9     | 7      | 9       | --            | 6                      |
| Increase facilities in<br>existing markets                    | --                               | --    | --     | 2       | 3             | 1                      |
| Construct new market                                          | 9                                | 6     | 3      | 6       | 6             | 6                      |
| Increase neatness in<br>existing markets                      | --                               | --    | --     | 3       | 6             | 1                      |
| Improve quality, pack-<br>aging and handling of<br>foodstuffs | --                               | --    | 1      | 2       | 3             | 1                      |
| Unspecified government<br>assistance                          | 1                                | --    | 3      | --      | 3             | 1                      |
| Other e.g., give more<br>money to consumer                    | 16                               | 16    | 7      | 9       | 13            | 13                     |
| Total                                                         | 100                              | 101*  | 101*   | 101*    | 98*           | 101*                   |
| No. of responses                                              | 110                              | 104   | 75     | 66      | 31            | 386                    |

\* Rounding error.

It is significant that 8 percent of the households thought there were "not enough" traders and a further 80 percent thought that the number

of traders was "about right." This leaves only 12 percent who thought that there were "too many" traders. As Table 11.16 indicates, the distribution of these responses by income group is about the same, with

Table 11.16

PERCENT DISTRIBUTION OF HOUSEHOLDS BY OPINION ABOUT  
THE PRESENT NUMBER OF TRADERS SELLING FOODSTUFFS  
AND BY ESTIMATED MONTHLY INCOME OF WIFE  
HOUSEHOLD SURVEY--IBADAN  
DECEMBER 1966

| Opinion on Present<br>Number of Traders | Estimated Monthly Income of Wife |          |          |           |               | All<br>House-<br>holds |
|-----------------------------------------|----------------------------------|----------|----------|-----------|---------------|------------------------|
|                                         | Under £5                         | £5-£8    | £8-£12   | £12-£20   | £20 &<br>Over |                        |
| Not enough                              | 3                                | 10       | 11       | 10        | 9             | 8                      |
| About right                             | 80                               | 81       | 81       | 79        | 78            | 80                     |
| Too many                                | <u>17</u>                        | <u>9</u> | <u>8</u> | <u>11</u> | <u>12</u>     | <u>12</u>              |
| Total                                   | 100                              | 100      | 100      | 100       | 99*           | 100                    |
| No. of responses                        | 177                              | 125      | 80       | 71        | 34            | 487                    |

\* Rounding error.

the possible exception of the lowest income group, where 17 percent of the households indicated that there were "too many" traders.

The attitude of consumers toward the profit made by traders is not quite as favorable. As Table 11.17 shows, 14 percent were of the opinion that it was "not high enough" while only 52 percent thought that it was "about right." This means that 34 percent considered traders' profits "too high." It is interesting to note that the households in the upper bracket of the low income group--households where the wife has an estimated monthly income of between £5 and £12--were much more favorably disposed toward traders' profits than the very low- and high-income groups.

Table 11.17

PERCENT DISTRIBUTION OF HOUSEHOLDS BY OPINION ABOUT  
PROFIT MADE BY TRADERS SELLING FOODSTUFFS AND BY  
ESTIMATED MONTHLY INCOME OF WIFE  
HOUSEHOLD SURVEY--IBADAN  
DECEMBER 1966

| Opinion About<br>Profit Made By Traders<br>Selling Foodstuffs | Estimated Monthly Income of Wife |       |        |         |               | All<br>House-<br>holds |
|---------------------------------------------------------------|----------------------------------|-------|--------|---------|---------------|------------------------|
|                                                               | Under £5                         | £5-£8 | £8-£12 | £12-£20 | £20 &<br>Over |                        |
| Not high enough                                               | 10                               | 11    | 23     | 16      | 18            | 14                     |
| About right                                                   | 45                               | 66    | 56     | 46      | 44            | 52                     |
| Too high                                                      | 45                               | 23    | 21     | 38      | 38            | 34                     |
| Total                                                         | 100                              | 100   | 100    | 100     | 100           | 100                    |
| No. of responses                                              | 177                              | 122   | 80     | 70      | 34            | 483                    |

With few exceptions, consumers are not particularly dissatisfied with the performance of the food marketing system, although they are disturbed about the price of foodstuffs. This latter feature is particularly important in low income groups because of the relatively high proportion of all expenditures devoted to food. Although most consumers would like to see some changes in the food marketing system, most of their suggestions relate to improving the present structure rather than changing it. There is certainly not a strong movement at present to eliminate either the traditional markets or the traders who trade in them.

## B. EFFICIENCY OF THE MARKETING SYSTEM

### 1. Price Response

One of the most outstanding features of the system of staple food marketing in Western Nigeria is the promptness with which prices react to changed supply and demand conditions. This is particularly true where the trader has an opportunity to raise prices and somewhat less true in the reverse situation. Yoruba people generally, and traders in particular, are very conscious of price spreads and margins and are always ready to take advantage of favorable situations to maximize their returns and minimize their losses. There can be little doubt about their profit consciousness and their desire to maximize profits.

Not only are the intermediaries in the system responsive to changed conditions but the system itself is conducive to rapid price response. There are a large number of small traders competing against one another, restrictions on entry into trading being non-existent or nominal in most places. Capital requirements, both for facilities and operating capital, are small. Commodities are basically homogenous, unpackaged, and only informally graded. Slight locational advantages exist for some traders but the tendency of traders selling similar commodities to assemble in the same spot reduces these advantages. Production is by a large number of very small producers; no plantations producing foodstuffs exist in the Region. Buyers buying for final consumption are numerous but individually small. Buyers (traders) buying for resale are generally numerous, particularly in urban areas, although in some rural areas the number of buyers is often considered inadequate.

Institutional rigidities are few, although trade associations are quite effective in regulating traders in some areas, particularly in parts of the savanna zone of Western Nigeria. In general, however, even though these trade associations may be successful in preventing new traders from entering into competition with their members either in buying or selling, it is seldom possible for them to control the actions of their members. For example, they may be successful in getting all traders to agree upon certain terms of exchange, such as price, but it is seldom possible for them to force individual traders to comply. Nevertheless, the mere existence of these established terms of exchange is a persuasive guide to members in setting their own conditions. Where effective trade associations exist, their influence on the behavior of traders cannot be ignored; they constitute a departure from the model of a perfectly competitive marketing structure.

Government also has some institutional control over the food marketing system. This mostly takes the form of regulating and providing trading facilities and producing, selling, and buying relatively small quantities of foodstuffs. However, in periods of relatively scarce food supplies such as 1966, some local governments pass by-laws prohibiting the export of foodstuffs grown or marketed in the area under its jurisdiction. (For example, the important surplus food marketing town of Ikare (Owo Division) had such a restriction during 1966.) The objective is to keep food prices low to residents, but the inability of local governments to enforce these prohibitions renders them almost valueless.

The most serious shortcoming of the staple food marketing system in Western Nigeria as compared to the perfectly competitive system is lack of information. Farmers, traders, and consumers generally buy and sell under

the handicap of very imperfect knowledge. In a relatively small neighborhood, such as a market, knowledge of supply, price and other conditions is generally quite good, but outside of this small area it is often fragmentary and inaccurate. Consequently, within neighborhood areas the system responds rapidly to changed conditions of supply and demand, but between areas interaction is slight and usually slow in manifesting itself.

In practice, then, neighborhood areas are relatively independent of one another with there being a negligible quantity of foodstuffs moving between urban centers in response to price differences. Most of the competition occurs in the major producing areas, where urban centers compete with each other for supplies. Again, however, as Map 7.1 suggests for the larger urban centers in the Region, most consuming areas rely on the surrounding farmlands for the greater part of their supplies. Several major towns, particularly Lagos, Ibadan, and Ilesha receive many of their foodstuffs from non-adjacent areas; in the other supply areas, traders assembling for these major towns compete for available supplies with each other and with traders assembling for the nearest urban center.

## 2. Spatial Price Behavior

Spatial price differences exist and are frequently greater than can be justified by transportation costs. As already indicated in Chapter X, these price differences vary greatly, even from month to month, although major price movements throughout the Region tend to be roughly parallel over time. For example, the price differences between the two major central market complexes in Ibadan were greater in 1966-67 than the transportation cost

between the two complexes for all commodities except cowpeas. They generally move in consonance with each other but with a lag of a few days. If such differences exist between markets only two miles apart in an area where transportation facilities and communication are excellent, then it seems reasonable to expect that the same kind of imperfect spatial price behavior exists throughout the Region.

From the evidence obtained, it is apparent that only a very imperfect relationship exists between the individual markets scattered throughout the Region. This relationship is particularly poor in the short term, when prices are only loosely related and the price difference between markets may be very large. The longer-term relationship is somewhat better, the overall movement of prices being roughly parallel, particularly in terms of cyclical price movements.

Wholesale prices in the major urban centers are much more closely related than retail prices. This was particularly true during the period of relatively high prices in 1966-67, although the trend of closer wholesale price interaction was already well established. Nevertheless, wholesale price differences well in excess of transportation costs were encountered during 1966-67. The main factors lying behind this imperfect spatial price behavior are:

1. The lack of accurate and current information about supplies, demand, and prices.
2. The fact that most urban centers are essentially independent of each other and interaction occurs only in competitive supply areas.

3. The absence of a class of traders willing to move stocks between urban centers in response to price differences between them.

Price differences between urban centers and rural areas are even greater and more erratic than between urban centers. The number of traders competing in any supply area varies considerably. The dearth of information in rural areas means that price movements are usually only loosely related to the overall demand for the commodity. For example, an influx of assemblers buying in a rural market will usually raise the price of the commodities immediately. The range of prices at which a commodity may be sold is generally quite large, the exact price being determined by the circumstances prevailing at the time of sale.

The pattern of spatial price behavior prevailing in the Region is a fairly normal one. With a few exceptions, the price of commodities in the major surplus producing areas is lower than in the urban centers, while in the minor surplus producing areas the price is somewhere between these two. The urban centers closer to the major surplus producing areas generally have lower prices than more distant ones, particularly where the latter rely to some extent on the major surplus producing areas for supplies. As indicated in Chapter VII, these major surplus producing areas are Oyo (and northern Oshun) and Owo Divisions for yam and gari, and with the addition of Egbado Division for maize. Prices for the locally produced staple foods increase with distance from the major surplus producing areas. For the two imported commodities, rice and cowpeas, prices increase with distance from the major centers of importation, especially Ibadan and Lagos.

This general pattern is somewhat distorted by the factors underlying the imperfect spatial price behavior between urban centers. At the retail level, the margin obtained by traders varies from place, depending upon the circumstances. For example, it is considerably higher in the central new market in Ibadan than in the central native markets. Similarly, it is generally higher in Lagos than in Ibadan.

It is significant that the prices of most commodities in Ibadan are as low or lower than in most of the other urban centers in Western Nigeria. Ibadan is reasonably well located in relation to the major producing areas, as are many other urban centers. Moreover, it has two notable advantages over the other urban centers. First, it has always been a center of trade in Western Nigeria and has a very well developed system of traditional markets with a large number of competing traders, so that collusion is extremely difficult. The market is large and supplies are easily disposed of. And, secondly, the transportation network serving Ibadan is extensive and well organized.

In comparison with a perfectly competitive system, the present system of marketing staple foods in Western Nigeria is less than perfect in its pattern of spatial price behavior. This is due more to environmental imperfections, particularly lack of knowledge, than to the basic structure of the marketing system and pattern of trader behavior.

### 3. Temporal Price Behavior

The short- and long-term aspects of temporal price behavior must be treated separately. The former relate to the allocation of the commodity throughout the crop season, including storage practices; while the latter relate to the general price movements between crop seasons, and the associated cyclical and secular changes in the conditions of supply and demand.

## Seasonality

Definite seasonal price patterns exist for all staple foods in Western Nigeria. These were described in Chapter X and their close relationship to the agricultural production patterns of the major supply areas was stressed. The extent of the seasonal price fluctuation is attributable to the seasonality of production, the perishability of the commodity and current storage practices.

The less perishable commodities--notably dried yam (yam flour) and rice--have the least seasonal price fluctuation, while the more perishable commodities--especially yam tubers, and to a much lesser extent maize and cowpeas--have a considerably more pronounced seasonal price movement. As yam tubers and gari are often substituted for each other, the strong seasonal movement in yam tuber prices has a strong influence on gari prices, particularly in the more extreme periods of abundance and scarcity of yam supplies.

The average percentage seasonal retail price rise in Ibadan for the 7 major staple foods, calculated from the seasonal price indexes for the period 1953-65 (1951-65 for yam tubers), is shown in Table 11.18. All commodities except gari, cassava flour and maize have only one major harvest season each year, after which the price rises until the appearance of new season supplies. Cassava may be harvested throughout the year, but there are two short periods of major price increase of both gari and cassava flour. Maize has two crop seasons per year. The price rises occurring during these shorter periods are probably more significant in the case of gari, cassava flour and maize.

From Table 11.18 it can be seen that the average seasonal rise in retail prices in Ibadan ranges from 91.4 percent for yam tubers to 8 percent for yam flour and rice. Because the number of months between

the seasonal low and high prices differs for the various commodities, the average percentage seasonal retail price rise per month is more relevant when commodities are being compared. This percentage monthly rise must be taken into account in measuring the cost of capital involved in holding stocks.

Table 11.18

AVERAGE PERCENT SEASONAL  
RETAIL PRICE RISE IN IBADAN FOR  
SEVEN STAPLE FOODS--1953-65\*

| Commodity     | Month of Seasonal |      | No. of<br>Months | Average Percent Seasonal Price<br>Rise |           |
|---------------|-------------------|------|------------------|----------------------------------------|-----------|
|               | Low               | High |                  | Total†                                 | Per Month |
| Yam--tubers   | Nov.              | June | 7                | 91.4                                   | 13.1      |
| --flour       | Dec.              | June | 6                | 8.0                                    | 1.3       |
| Cassava--gari | Dec.              | Feb. | 2                | 8.7                                    | 4.3       |
|               | Apr.              | June | 2                | 13.4                                   | 6.7       |
|               | Dec.              | June | 6                | 15.9                                   | 2.6       |
| --flour       | Jan.              | Apr. | 3                | 14.5                                   | 4.8       |
|               | June              | Aug. | 2                | 3.6                                    | 1.3       |
|               | Jan.              | Aug. | 7                | 16.2                                   | 2.3       |
| Maize         | Sept.             | Dec. | 3                | 11.0                                   | 3.7       |
|               | Jan.              | May  | 4                | 23.5                                   | 5.9       |
|               | Sept.             | May  | 8                | 33.7                                   | 4.2       |
| Rice          | Feb.              | Aug. | 6                | 8.0                                    | 1.3       |
| Cowp          | Jan.              | Oct. | 9                | 27.4                                   | 3.0       |

\* 1951-65 for yam tubers.

† Calculated from seasonal indexes shown in Appendix X-X as follows:

$$\left( \frac{\text{High value} - \text{low value}}{\text{low value}} \times 100 \right)$$

The most spectacular seasonal price rise occurs in yam tuber prices. Although the average seasonal retail price rise in Ibadan over the

seven-month period from November to June is 13.1 percent per month, this rate of increase is quite uneven. More explicitly, the average increase for each month is as follows:

| <u>Month</u> | <u>Percent Increase Over</u> |                       |
|--------------|------------------------------|-----------------------|
|              | <u>November</u>              | <u>Previous Month</u> |
| December     | 10.3                         | 10.3                  |
| January      | 18.4                         | 7.4                   |
| February     | 26.1                         | 6.4                   |
| March        | 33.4                         | 5.8                   |
| April        | 47.1                         | 10.3                  |
| May          | 76.6                         | 20.0                  |
| June         | 91.4                         | 8.4                   |

Against this seasonal price rise must be tallied the very substantial losses that occur in the storage of yam tubers. Under normal conditions, the weight loss is of the order of 10 to 20 percent after 3 months and 20 to 40 percent or more after 5 months' storage (Chapter IV). However, in the more humid parts of the Region, rotting and sprouting losses are so severe that storage in the last few months before the appearance of new season yams is very risky. During this period, yam tubers are very scarce, most being procured from the northern savanna area.

The labor and facilities necessary to store yam tubers under some commonly used methods, the cost of the capital tied up in inventories, and risk of loss are considerable. It is therefore not surprising that the average return for storage at the retail level in Ibadan, after allowing for weight losses, is about 10 percent after three months, 15 percent

after five months and probably between 30 and 50 percent after seven months in those areas where storage losses are less severe. For the first five months this represents an average return of about 3 percent per month. This compares with an average return of about 1 percent per month for dried yam (yam flour) during the same period.

It should be remembered that these are average returns relating to the 15-year period 1951-65. The seasonal pattern in each crop year is frequently somewhat different. (see Appendix Table 10.9.1). Looking at this seasonal pattern of price behavior by individual years, it is apparent that seasonal storage of yam tubers is only very imperfectly practised in the Region. The year-to-year fluctuations in the seasonal price pattern are frequently quite extreme; this is mainly a reflection of great surpluses or shortages of yam tubers. It is also an indication that the requirement that cost of storage should be the main consideration in allocating yam supplies throughout the year is not being properly respected for yam tubers. For the most part, storage returns seem to be well in excess of the cost of storage, but this is frequently offset by large losses, both incurred physical loss and unexpected price declines, by storers of yam tubers.

Stored properly under reasonable conditions, gari will maintain its original quality for several months. Despite this, it is apparent that there is relatively little speculative storage of gari to take advantage of seasonal price fluctuations. Gari prices tend to follow yam tuber prices during periods of more extreme yam tuber price fluctuations. The rise in gari prices is generally short-lived lasting only about two months before a production response reverses the trend. Nevertheless,

these short-term fluctuations are somewhat predictable, and as Table 11.18 indicates, occur most often during January-February and May-June. (See also Appendix Table 10.9.3). These seasonal price rises mostly reflect the lack of stored supplies to meet the increase in demand that occurs as yam tuber supplies become seasonally more scarce.

Losses suffered in the storage of maize are frequently quite high, particularly when it is stored under traditional methods. Based on retail prices in Ibadan, the average gross return for maize stored from the early crop is about 6.2 percent per month for the two months between September and November and about 5.9 percent per month for late season maize stored from January to May. These returns are probably well in excess of the storage costs of maize. However, storage facilities in the Region, particularly for drying and storing early season maize, are generally poor and inadequate.

Rice has probably the least storage problems of all commodities studied. Along with dried yam, it has the lowest average gross return to storage, 1.3 percent per month. (Table 11.18.) The existence of several major supply areas and relatively large quantities in storage at many points contributes toward stabilizing rice prices. For example, wholesalers in Ibadan generally acquire enough supplies to last for from one to two months at their normal rates of sale. For the most part, the seasonal rise in rice prices of 1.3 percent per month probably fairly closely represents the average cost of storage under Nigerian conditions, after allowing for commodity losses. However, it is likely that with better and well organized storage facilities, the cost of storage would be somewhat lower.

The procurement of cowpea supplies for Western Nigeria, which is in the hands of a few large assemblers, is comparatively well organized. However, the storage function again seems to be inefficiently handled, the amount of the seasonal price rise being quite variable from year to year. The average rise in retail cowpea prices in Ibadan from January to October is about 3.0 percent per month. However, in two of the thirteen years, seasonal prices moved irregularly downwards as the season progressed. There are several ways in which cowpea storage could be improved. In particular, early fumigation to reduce large losses now caused by pests would certainly reduce storage costs. By the time the supplies reach Western Nigeria, most traders do not consider the cost and inconvenience of fumigation worth the extra profit they might receive for selling slightly better quality cowpeas in a few weeks' time.

To sum up, the pattern of seasonal price behavior indicates that storage is generally being poorly performed in Western Nigeria. This results in relatively high storage costs, due principally to commodity losses in storage and capital scarcity, and a seasonal price pattern that is quite variable.

b. Cyclical--Secular Price Behavior

The existence of pronounced cyclical price behavior in staple food prices in Western Nigeria has already been noted in Chapter X. A significant upward secular trend was found in several commodities but it was relatively minor compared with the magnitude of the cyclical price movements. The prices of all of the locally-produced staple foods appear to move very roughly together in the long-term. The extent to which these commodities may be substituted for one another is certainly an important factor in this movement.

The cyclical price pattern is mainly a response to the overall conditions of supply and demand, especially variations in the level of supply. In cases where the variations in supply are not caused by factors exogenous to the system of production--such as political disturbances--but are chiefly a response to the prices received for surplus agricultural production, then the role of the marketing system must be appraised.

After a year of cyclically high retail prices and high producer prices due to lower margins, an output response can be expected. Prices of the new season's output fall considerably but are still relatively high, maintained by the recollection of the previous season's relative scarcity and high prices. Again, production responds to this stimulus, and prices in the next season fall farther because supplies are once more plentiful. The extent of the price fall is determined by the previous year's price. After a time, retail prices reach a cyclical low. Lack of bargaining power on the part of producers, high margins, and very low producer prices discourage production to some extent in the following season and prices begin to rise. Again the price change is conditioned by the recollection of the previous year's price.

Evidence of this type of price rigidity is present in the cyclical behavior of retail prices in Western Nigeria, but in the absence of reliable estimates of agricultural production it is difficult to assess the exact cyclical relationship between prices and production, especially between producer prices and surplus production. However, observations of the attitude and behavior of traders, farmers, and consumers after the cyclical downturn in prices following the harvest in 1966 support the above contention.

#### 4. Inter-Commodity Price Differences

To some extent, consumers consider all of the major staple foods substitutes for one another. This is particularly true of the various forms of yam, cassava and maize, and somewhat less true of the higher-priced staples (rice and cowpeas). The seasonality of yam and maize means that during their harvest seasons, when prices are seasonally low, consumption is high. In fact, a high proportion of these seasonal crops are consumed within a few months of harvest, so that annual prices fail to reflect the average price actually paid for these commodities.

An important consequence of the substitutability of the major staple foods in relation to yam and maize production is that the seasonal price pattern is much less extreme than it might otherwise be. For example, the availability of (green) maize during May alleviates the seasonal shortage of foodstuffs early in the growing season. This encourages consumers to switch part of their demand for dried yam, gari and dried cassava to maize. Several months later, fresh yam is again available in quantity and becomes a major consumption item. Seldom do consumers substitute one staple food entirely for others as a result of seasonal abundance and relative cheapness; usually there is only a change in the mix of the major staple foods. Yam is perhaps the principal exception to this pattern, as it is rarely consumed by households during the four months prior to the availability of new-season yams.

There can be little doubt that the price of each staple food is related to the prices of the other staple foods. These prices in turn are related to the supply and demand situation obtaining for these other staple foods.

The seasonal rise and fall of gari prices, although less marked, closely parallels that of yam tubers. Further, the long-term movement in the prices of the major staple foods is very similar.

A more detailed examination of these inter-commodity price movements, particularly over the short term, shows that the relationships are quite imperfect, however. In the short-term (e.g., a few weeks), prices may diverge widely before a sufficiently major change in consumer buying habits occurs to reverse the trend. The longer the time period considered, the more perfect is the relationship. For example, over the course of the last half-century, the low price of cassava products as compared to the more popular and traditional yam products has led to a considerable increase in the relative importance of cassava products. The presence on the market of large supplies of the more easily produced and cheaper cassava products has undoubtedly prevented the rise in yam prices which would otherwise have occurred. Needless to say, cassava prices were sufficiently high in relation to yam prices to encourage this change in production patterns.

The bivariate correlation coefficients obtained in Ibadan and Lagos for the seven major products (including yam flour and cassava flour) from 1953 and 1954 respectively to 1966 were generally quite poor (Appendix X-XIV). Many of the coefficients for two-year periods were actually negative, while the highest coefficient for the entire period was only 0.79, between gari and cassava flour in Ibadan.

The facts support the contention that consumers substitute one staple food for others only after a time lag, the perfection of this relationship being positively related to time. The tardiness of this consumer response

may be attributable to two factors. First, consumers' lack of information about relative prices; and secondly, the time required for consumers to accept the fact that the pattern of consumption must be changed if they are to continue to exert their influence on food prices. Consequently, the price change may be quite large before consumers' reaction is sufficient to have a noticeable impact on prices.

Further, consumer preferences are such that even after allowing for differing moisture contents, relative food prices cover a very wide range. Table 11.19 gives data on the wholesale commodities which were priced, weighed and sample dried during September 1966. At that time, yam tubers cost 259 percent as much as an equivalent quantity of calories from maize, while dried yam was 391 percent, gari and dried cassava were 292 and 183 percent respectively, and rice and cowpeas were 497 and 577 percent respectively.

Table 11.20 shows the average annual retail prices collected in Ibadan by the Federal Office of Statistics for the period 1960-66, after conversion to an index of relative prices based on the price per 1,000 calories. In comparison with the moisture contents calculated from the samples obtained in September 1966 and shown in Table 11.19, those used in Table 11.20 seem too high for yam tubers and yam flour and too low for the remaining commodities. If this situation does in fact exist, then yam tubers and yam flour have a somewhat lower relative price than is shown.

Nevertheless, several facts are clearly apparent from Table 11.20. First, inter-year comparisons show that a considerable year-to-year fluctuation occurs in prices especially in the price of gari. For example,

Table 11.19

AVERAGE PENCE PER 1,000 CALORIES AND INDEX OF RELATIVE PRICES  
BASED ON SRI WHOLESALE PRICES IN IBADAN BY COMMODITY  
SEPTEMBER 1966

| <u>Commodity</u> | <u>Average Wholesale Price (d/lb)</u> | <u>Average Moisture Content* (percent)</u> | <u>Average Dry-Matter Price (d/lb)</u> | <u>Average d/1,000 Calories†</u> | <u>Index of Relative Prices‡</u> | <u>No. of Observations</u> |
|------------------|---------------------------------------|--------------------------------------------|----------------------------------------|----------------------------------|----------------------------------|----------------------------|
| Yam              |                                       |                                            |                                        |                                  |                                  |                            |
| - tuber          | 2.11                                  | 68.5                                       | 6.70                                   | 3.83                             | 100                              | 7                          |
| - dried          | 8.53                                  | 15.6                                       | 10.11                                  | 5.79                             | 151                              | 1                          |
| Cassava          |                                       |                                            |                                        |                                  |                                  |                            |
| - gari           | 6.53                                  | 14.2                                       | 7.62                                   | 4.32                             | 113                              | 9                          |
| - dried          | 4.07                                  | 15.0                                       | 4.79                                   | 2.71                             | 71                               | 4                          |
| Maize            |                                       |                                            |                                        |                                  |                                  |                            |
| - dried          | 2.37                                  | 14.4                                       | 2.77                                   | 1.48                             | 39                               | 7                          |
| Rice             | 11.69                                 | 12.9                                       | 13.42                                  | 7.35                             | 192                              | 13                         |
| Cowpeas          | 12.74                                 | 13.0                                       | 14.64                                  | 8.54                             | 223                              | 11                         |
| Guinea Corn      | 4.58                                  | 11.2                                       | 5.16                                   | 2.88                             | 75                               | 2                          |
| Plantain         | 0.99                                  | 61.9                                       | 2.60                                   | 1.52                             | 40                               | 1                          |
| Potatoes         | 9.00§                                 | 60.0                                       | 22.50                                  | --                               | --                               | 1                          |

\* Calculated from moisture loss occasioned by oven drying of samples collected after bag priced and weighed.

† Calories per pound calculated from values given in B.S. Platt, Tables of Representative Values of Foods Commonly Used in Tropical Countries, Privy Council, Medical Research Council Special Report Series No. 302, H.M.S.O., London 1962

‡ Index of relative prices: Average d/1,000 calories as a percent of the value for yam.

§ Wholesale supplies not available; based on retail price of 12.00 pence per pound.

Source: Stanford Research Institute.

Table 11.20

INDEX OF RELATIVE PRICES BASED ON FOS RETAIL  
PRICES IN IBADAN BY COMMODITY  
1960-66

| Commodity                                    | Conversion Factor*                  |                                  | Index of Relative Prices† (Yam Tubers = 100) |      |      |      |      |      |      |
|----------------------------------------------|-------------------------------------|----------------------------------|----------------------------------------------|------|------|------|------|------|------|
|                                              | Calories/lb<br>of Edible<br>Portion | Moisture<br>Content<br>(percent) | 1960                                         | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
| Yam                                          |                                     |                                  |                                              |      |      |      |      |      |      |
| - tuber                                      | 471.7                               | 73                               | 100                                          | 100  | 100  | 100  | 100  | 100  | 100  |
| - flour                                      | 1,439.9                             | 18                               | 96                                           | 98   | 86   | 102  | 89   | 76   | 70   |
| Cassava                                      |                                     |                                  |                                              |      |      |      |      |      |      |
| - gari                                       | 1,551.3                             | 12                               | 52                                           | 57   | 46   | 44   | 34   | 40   | 62   |
| - flour                                      | 1,551.3                             | 12                               | 42                                           | 55   | 47   | 50   | 42   | 41   | 50   |
| Maize                                        | 1,646.6                             | 12                               | 50                                           | 60   | 46   | 49   | 47   | 44   | 46   |
| Rice                                         | 1,605.7                             | 12                               | 152                                          | 143  | 138  | 155  | 154  | 134  | 122  |
| Cowpeas                                      | 1,542.2                             | 10                               | 80                                           | 78   | 80   | 74   | 67   | 74   | 108  |
| Price of yam tubers<br>(d/1,000<br>calories) |                                     |                                  | 3.71                                         | 4.18 | 5.55 | 4.09 | 4.03 | 4.64 | 5.79 |

\* After B. S. Platt, *Op. Cit.* Note: The calories per lb. of edible portion are based on the percent moisture contents as shown.

† Index of relative prices: Average d/1,000 calories as a percent of the value for yam tubers.

the average annual price of gari varied from a calculated average of 34 percent of the yam tuber price in 1964 to 62 percent in 1966. Secondly, the range in the average annual prices is very wide, the highest being 2.6 to 4.5 times as high as the lowest. Thirdly, rice is generally highest in price, while gari, cassava flour, or maize is lowest, depending upon the year. Yams and cowpeas are in between, yams generally being more expensive when average annual values are used. And, finally, prices are less divergent during periods of high prices than during periods of low prices, indicating that the cyclical price behavior of the lower priced commodities, especially cassava products, is more pronounced than that of the higher-priced commodities. This supports the proposition that the lower-priced commodities are less popular and that during periods of cyclically low prices, households consume more of their favorite, higher-priced staple foods, thus enhancing the cyclical price decline. In a period of cyclically high prices, the reverse is true, with the result that the cyclical price rise is more pronounced.

Given the structure of the marketing system, this pattern of price behavior might be expected where consumers' preferences for the various foods follow a definite order. It is to the credit of the system that it does actually perform in this way, if only to a limited extent. When compared with a perfectly competitive marketing system, however, the performance of the Western Nigerian system is very imperfect, with numerous major deviations.

## 5. Price Differences of Various Forms of Commodity

The performance of the marketing system in relation to the form of the commodity will be discussed in two parts: transformation of the commodity, and effect of quality differences.

### a. Commodity Transformation

All cassava, and much of the yam and maize, sold to final consumers undergoes a major transformation at some point in the marketing system. Maize undergoes this transformation just prior to sale, when it is prepared for consumption. No data are available on the behavior of prepared food sellers; hence their performance cannot be evaluated.

The average monthly retail price of a pound of yam flour in Ibadan for the period 1953-66 was 292 percent of the price of yam tubers (Appendix X-XVII). However, due to the marked seasonal pattern of yam tuber and yam flour prices, this difference ranged from an average of 201 percent for June to 372 percent for September. Based on inter-year comparisons, this seasonal pattern of price behavior fluctuates widely in terms of value, although the pattern of change is relatively stable. The instability in the actual price difference between these two forms of yam seems to be mainly the result of the behavior of yam tuber prices caused by a highly seasonal supply pattern and poor storage practices. This results in an imperfect relationship between the two forms.

Based on these same retail prices, it appears that the reward is greater for handling yams in tuber form than for transforming them into dried yam. This can be seen in the relative prices shown in Table 11.20, where the calorie content of yam tubers is shown to be more expensive than

that of yam flour. However, two important facts are overlooked in these averages. First, the average price of yam tubers is for tubers that are actually sold and includes the high losses that occur in the storage of yam tubers. And second, the transportation and handling costs of dried yam are considerably lower than for the more bulky and perishable tubers. This also results in a considerable proportion of the Region's dried yam supplies coming from relatively distant or inaccessible areas. Also, in many parts of the Region, there is a strong preference for yam tubers.

The drying of yam tubers results in the saving of considerable quantities of foodstuff that would otherwise be lost in storage. It is mostly this reduction in storage losses that provides the incentive and justifies the effort and cost, if any, incurred in the transformation process.

In the drier parts of the Region, cassava can be transformed just as easily into gari as dried cassava. The costs of transformation are about the same. However, processors of cassava nearly always make either one or the other product, seldom both. As may be expected, the supply of each commodity depends upon the price the processors can afford to pay the farmer for the cassava roots. Prices are similarly loosely related, with the result that there are considerable deviations. The most important deviations occur over fairly long periods, months or years often being required for the trend to change.

This kind of oscillatory price behavior is observed in the retail price data for Ibadan, where the overall difference in the monthly prices of cassava flour and gari from 1953 to 1966 was only 4.6 percent of the gari price (Appendix Table 10.17.1). However, in eight years, the average

monthly price of cassava flour was higher than gari, reaching a maximum difference of 34 percent of the gari price, while in six years it was lower, with a maximum difference of 19 percent.

The prices of the two forms of cassava are approximately the same, although cassava flour is much less important in terms of production. Moreover, cassava flour is used much less frequently as a substitute, except for yam flour. As a result, its price is less directly affected by changes in the prices of the other staple foods; its seasonal pattern does not seem to be affected by yam prices in the same way as gari prices; and its cyclical pattern is less extreme.

The transformation margin for cassava is generally large. Cassava producers seldom receive more than a small portion of the retail price of the processed product--probably no more than 20 to 40 percent of the retail price. However, farm production costs are fairly low for cassava, with processors mostly undertaking the harvesting and transporting, as well as the processing function. As most processors sell in bulk to assemblers and other traders, their margin depends upon their bargaining power, which in turn depends on the supply and demand situation of gari. Most processors sell in bulk to assemblers and other traders close to the place of production--generally at a rural location. The vicissitudinous behavior of processed cassava prices, particularly gari prices, in response to unstable supply and demand conditions means that margins are also quite variable; most of the variation occurs in the price of the processed product, with producer prices being almost stable. This absorption of much of the price fluctuation by processors enables them to obtain higher margins by paying producers consistently relatively lower prices for cassava.

Even in cases where processors receive comparatively large margins, their returns are generally limited by the size of their operations. Since it requires three to seven days to produce each batch of cassava product, the absolute return to labor is relatively small. For example, the gross margin (after processing) of one group of six-women gari processors, producing in four-day cycles was 52 percent of the selling price to assemblers. However, the return to each woman was about one shilling per day, which in the particular area was considered a reasonable re

Based on the operation of a pilot plant, the Ministry of Trade and Industry considers that a gross margin of 73 percent of the retail price is essential if mechanical processing of gari is to be economically feasible. This total gross margin is composed of a 53 percent manufacturing margin and a 20 percent selling margin for the wholesalers-retailers involved. Such a plant is presently not competitive with native methods of processing because of its relatively higher costs and the inability of the present system of agricultural production to provide regular and adequate supplies.

b. Quality Differences

None of the staple foods marketed in Western Nigeria can be considered strictly homogeneous because consumers do have definite preferences with regard to variety, method of processing, size, color, and other characteristics of each of the staple foods. Although a formally organized system of commodity grading does not exist, quality differences are recognized by consumers.

In general, consumers, particularly the middle- and higher-income households, are willing to pay a higher price for a better quality product.

The fact that prices in the central new market in Ibadan are higher than prices in the central native markets is attributable partly to better quality produce and partly to higher costs and margins, all of which are made possible by the propensity of higher-income households to shop in the central new market. For the most part, traders do not find it to their advantage to stock the better quality commodities, even though they can get a higher price for them, mainly because the market for such commodities is very limited. However, consumers do impose some quality control by shunning below-average produce or buying it at derogatory prices.

In the producing areas, on the other hand, quality differences have a marked influence on prices. However, the effect is more to discourage the production of poor quality commodities than to stimulate good quality production, although the latter is usually more easily disposed of. The cheaper, poorer quality produce is blended with better quality produce by the assemblers to produce a "fair average quality," which the consumers will accept. Profit is derived from this maneuver because of the lack of adequate recognition of good quality produce.

Despite the recognition of quality differences and their influence on prices, there is little price incentive for farmers to produce more than a "fair average quality" product for the exchange economy. At the same time, there is a significant price disincentive associated with below-average quality produce. However, the number of consumers able and willing to pay an adequate price for better quality produce is very small at present.

This is partly due to the substantially higher price demanded by traders who handle this type of produce. In sum, the present marketing system appears to exert a reasonable restraining influence on below-average quality production, but fails to provide sufficient encouragement for the production and handling of better than "fair average quality" produce.

#### 6. Cost of Performance

The direct cost of transportation, storage, processing, and transference of control inherent in the passage of surplus staple foods through the marketing system is represented by the difference between the price consumers pay and the price producers receive. This is the gross margin of the marketing system.

The widely fluctuating character of staple food prices at all levels and the overall paucity of adequate and reliable price data makes any generalizations about the gross margin of the marketing system extremely precarious. Tentative estimates of 30 to 40 percent of the retail price for Ibadan and 50 to 60 percent of the retail price for Lagos based on information available were given in Chapter X. These estimates are for the major locally produced staple foods and reflect the relatively high prices in effect during 1966-67, when margins were apparently smaller than in periods of lower prices. Consequently, these gross margins may be understated. Furthermore, these gross margins chiefly represent transportation and transference of control; storage and processing would raise them very significantly. The gross margins derived from staple foods as a result of interregional trade are also significantly higher, while for commodities disposed of near the place of production the gross margin is usually somewhat lower.

Traders do undertake storage, but usually only for short periods, to facilitate the regular flow of transactions. Long, overlapping harvest periods reduce the need for storage. Producers are probably the main longer term storers of staple foods. Further, with the exception of rice hulling, traders seldom transform any of the commodities. The main function of individuals undertaking processing is the rendering of form utilities. This means that the traders in the system mainly undertake transportation and the transference of possession and ownership.

A very approximate breakdown of the margins paid received by traders for moving staple foods from producers (processors) within the Region to markets in Ibadan is as follows:

|                                                                           | <u>As Percent of Retail<br/>Price in Ibadan</u> |
|---------------------------------------------------------------------------|-------------------------------------------------|
| Retail margin                                                             | 10                                              |
| Wholesale/assembler margin - transport cost                               | 10                                              |
| - balance                                                                 | 10                                              |
|                                                                           | } 20                                            |
| Margin for moving commodity from farm to local rural market or equivalent | <u>10</u>                                       |
| Total margins                                                             | 40                                              |
| Producers (processors) share                                              | <u>60</u>                                       |
| Retail price in Ibadan                                                    | 100                                             |

These margins are only for Ibadan; those for Lagos are considerably higher. Margins in other urban areas are roughly similar to those in Ibadan although they vary by area, commodity and local conditions.

Also, trader margins which include the cost of transportation vary according to the bulk to value ratio of the commodity and the trading risks associated with its handling. For example, the wholesale-assembler margin for yam tubers, including transportation cost, in the Wholesale Traders Questionnaire in Ibadan was 32 percent of the retail price, while that for dried yam was only 14 percent (Table 10.38).

An evaluation of the cost to consumers of storage and processing performed in relation to the marketing of staple foods has already been presented. In general, margins are relatively high. Storage costs are boosted by storage losses and inadequate storage facilities; however, a disproportionate share of all production, particularly of yam and maize, is consumed in the few months following the harvest period. Processing margins are high, due to the time and skill necessary; producers do not usually have a high level of bargaining power because of the need for local processing before the product can proceed further in the marketing system.

The relatively high cost of performing the storage and processing services can be ascribed mainly to the technical factors involved. The performance of both of these services is almost exclusively the concern of the traditional private sector of the economy. Considerably improved techniques are available to perform these functions with a wide range of labor, capital, and management inputs, and size of throughput being available. There are good possibilities of improving technical efficiency with these techniques, although all involve some change in the present system. However, the degree to which individuals and society in general would be better off, particularly in relation to the costs and returns involved, is not necessarily commensurate with the increase in technical efficiency.

Direct and detailed inter-country comparisons of marketing margins are virtually impossible because of major differences in the services performed by the various marketing systems. For example, Nigerian commodities undergo fewer market services than similar United States foodstuffs. As a result, it can be expected that in the U.S. a large proportion of the retail price is related to market services as opposed to the cost of producing the commodity--the farmer's share. The marketing margins for the U.S. of several commodities as a percent of their retail price are shown in Table 11. 21. In many ways, yam tubers are roughly equivalent to potatoes, while cowpeas are roughly equivalent to dry navy beans.

In general, marketing margins in the United States are probably somewhat higher than those obtained in Western Nigeria. However, this higher cost is no doubt more than offset by the larger number of marketing services performed in regard to foodstuffs in the United States prior to their acquisition by the consumer. In terms of equivalent marketing services, the staple food marketing system seems to be relatively more expensive in Western Nigeria than in the United States but probably not excessively so.

In most trading situations in the Region, margins are kept small by the intensive trader competition resulting from the profusion of traders. However, in cases where trader competition is restricted either by a trade association or by too few competitive traders, trader margins--and hence marketing costs--show a definite tendency to rise. This increase in margin seldom results in an increase in the marketing services performed.

Table 11.21

UNITED STATES MARKETING MARGINS AS PERCENT OF RETAIL  
PRICE BY COMMODITY-1965

| Commodity                | Percent of Retail Price |               |
|--------------------------|-------------------------|---------------|
|                          | Marketing Margin        | Farmers Share |
| Flour, white             | 64                      | 36            |
| Bread, white             | 84                      | 16            |
| Beans, Michigan dry navy | 60                      | 40            |
| Potatoes                 | 62                      | 38            |
| All farm products        | 61                      | 39            |

Source: Marketing and Transportation Situation, ERS, USDA, MTS-160, February 1966, p. 29.

For the most part, the cost of the various marketing services in Western Nigeria is reasonable, given the technical and economic environment and the degree of risk involved. Margins are usually not large, and as most trading firms are small, absolute returns are generally quite meager compared with returns to most of the other occupations associated with the traditional economy. The major source of inefficiency, apart from low productivity, is the use of inferior methods of storage and processing, and in some cases handling. Lack of marketing information at all levels compounds these inefficiencies.

#### 7. Trader Efficiency

At present, staple food marketing is extremely labor-intensive, all but a few businesses being very small in size. The system can

accommodate the large number of small traders with little capital because except in the assembling of commodities, particularly those involved in inter-regional trade, there are few economies of scale in relation to purchased inputs. Transportation and rental of facilities are the major items of marketing expense: most of the rest of the marketing margin is the reward to the trader for labor, management and capital provided.

Selling in the traditional marketing system is one of the easiest occupations to enter in Western Nigeria, although one with low returns and little prestige. Anyone able to enter a more rewarding, prestigious, or desirable occupation will generally do so. This results in the staple food marketing system being composed predominantly of rather unskilled, uneducated traders lacking in capital. For example, in the Wholesale Traders Questionnaire in Ibadan, the interviewers ranked wholesalers according to their managerial ability and performance. As Table 11.22 indicates, only 2 percent were considered excellent entrepreneurs and 28 percent good, while 69 percent were considered to be poor in managerial ability and performance. Further, there is a definite relationship between managerial ability and performance and the value of monthly sales; larger traders in general were considered to have greater managerial ability and to perform better.

Not to be forgotten is the fact that traders performing the wholesaler-assembler function generally have considerably more capital, skill and managerial ability than other traders. Also, it is usually more difficult

Table 11.22

**PERCENT DISTRIBUTION OF WHOLESALERS IN IBADAN  
BY MANAGERIAL ABILITY AND PERFORMANCE AND BY VALUE OF MONTHLY SALES  
WHOLESALE TRADERS QUESTIONNAIRE--IBADAN  
February - May 1967**

| Managerial Ability<br>And Performance | Value of Monthly Sales |               |               |               |                | Total |
|---------------------------------------|------------------------|---------------|---------------|---------------|----------------|-------|
|                                       | Under<br>£100          | £100-<br>£199 | £200-<br>£299 | £300-<br>£499 | £500 &<br>Over |       |
| Excellent                             | --                     | 1             | 2             | 6             | 17             | 2     |
| Good                                  | 18                     | 28            | 52            | 35            | 52             | 28    |
| Poor                                  | 81                     | 72            | 47            | 59            | 31             | 69    |
| Very poor                             | *                      | --            | --            | --            | --             | *     |
| Total Percent                         | 99†                    | 101†          | 101†          | 100           | 100            | 99†   |
| Number of Responses                   | 225                    | 134           | 58            | 49            | 29             | 495   |

\* Less than 0.5 percent.

† Rounding error

for someone to become a wholesaler. Wholesalers handle larger volumes of commodities at about the same relative net margin as other traders; their absolute return is therefore larger. For instance, in the Market Traders Questionnaire #2 in Ibadan, the average value of wholesalers' sales was 387 percent of retailers', while the gross margin was 575 percent and the net margin 351 percent. (Table 10.40)

There can be no question that most traders are under-employed. In urban areas, they sell for about ten hours per day, six days a week. Retailers average about eight transactions per day and wholesalers about two sales per day. The rate of transactions in periodic markets may be slightly higher because of the greater concentration of marketing

activities. Traders view their under-employment as a symptom not of too many traders competing for the available business but rather of inadequate demand due to the generally low income level, and/or inadequate capital which precludes larger-scale operations.

Foodstuff traders with relatively little capital--especially those with less than £10--usually lack alternative employment opportunities that are either as remunerative or as desirable. They are therefore forced to accept relatively low absolute returns for their labor, capital and management. For retailers in Ibadan at least, this net return is about two to four shillings per day, while for wholesalers it is about five to ten shillings per day, although many make a good deal more or less than this. (Tables 10.48 and 10.49) Male traders, mostly wholesalers, able to do manual labor can achieve a net return about equal to or slightly higher than in their alternative employment possibilities. Women comprise the overwhelming majority of food traders, chiefly because the man has been traditionally involved with production, but also because they have few other employment opportunities. Therefore, even though their net return is paltry, it nevertheless exceeds the potential return from the most lucrative alternative employment.

From all the available evidence it seems that even though a tremendous number of small traders operate the staple food marketing system, the relative margins are either the same or smaller than they would be if the system were operated by a small number of large traders.

As a result, each trader's slice of the total net margin is very small. The evidence also supports the contention that absence of government regulation probably means that the present marketing services

cost less than they would if business were concentrated in the hands of a few traders. Competition limits the traders' ability to charge more than a reasonable price for their services, while under-employment generally makes them willing to function on low margins. Larger margins are common where there are few traders and sellers are in a weak bargaining position, or where there is implied or overt collusion.

Without question the labor productivity of traders is almost universally low: a much larger quantity of foodstuffs could easily be handled by the present number of traders without significantly increasing their labor (and management) input. Similarly, fewer traders could easily handle the present quantity of staple foods. However, given the present labor-intensive techniques associated with the performance of marketing services, per unit costs are not likely to be changed greatly by an increase in the quantity handled. Furthermore, traders involved in food marketing will probably become unemployed or enter an even less remunerative occupation. Under these circumstances, particularly if large capital investments are necessary, the return to the society of the present system will be greater than if a major structural change were implemented. Only in a situation of scarce labor, abundant capital, and increasing returns to scale will a major structural change be of overall benefit to the society. None of these conditions applies to food marketing in Western Nigeria at present or will apply in the foreseeable future.

#### 8. Technical Efficiency

Although the performance of the present atomistic marketing system does not justify a major change in structure, it is apparent that the current level of technical efficiency is low. This is basically the

result of factors associated with the environment, rather than the structure of the system itself. These environmental factors are directly related to the level of development in Western Nigeria and to increased education, private and social capital investment, and improved technology. Changes may be expected in these factors that will be conducive to increased efficiency

The factors most directly related to the low level of efficiency, such as lack of market information and poor storage facilities, have been mentioned frequently throughout the report, especially in this chapter, and are the main subject of the recommendations contained in Chapter I. For this reason, they will not be treated separately in this section.

Appendix Table 11.1

PERCENT DISTRIBUTION OF FARMERS BY RESPONSE TO  
STATEMENTS MADE IN RELATION TO FOOD CROPS--  
PRODUCER SURVEY--DECEMBER 1966-JANUARY 1967

| Statement                                                                                                                            | Response |           |          | Total<br>Percent | No. of<br>Responses |
|--------------------------------------------------------------------------------------------------------------------------------------|----------|-----------|----------|------------------|---------------------|
|                                                                                                                                      | Agree    | Uncertain | Disagree |                  |                     |
| a. Without much delay, something should be done about the present system of marketing.                                               | 96       | 2         | 2        | 100              | 388                 |
| b. The Government should take a much more active role in marketing.                                                                  | 94       | 3         | 3        | 100              | 389                 |
| c. Traders do all they can to help the farmer.                                                                                       | 35       | 5         | 60       | 100              | 382                 |
| d. Traders get together and agree about things to the disadvantage of the farmer.                                                    | 50       | 6         | 43       | 99 <sup>+</sup>  | 384                 |
| e. The farmers of your village should join together to sell their output.                                                            | 87       | 4         | 9        | 100              | 388                 |
| f. A cooperative of farmers in your village would mean that all farmers in the village would receive better prices for their output. | 89       | 6         | 6        | 101 <sup>+</sup> | 387                 |
| g. Every farmer should be forced to join the cooperative and sell to it only.                                                        | 54       | 5         | 41       | 100              | 383                 |
| h. A cooperative of farmers would <u>not</u> work because the leaders could <u>not</u> be trusted.                                   | 37       | 11        | 52       | 100              | 386                 |
| i. If you were a member of a cooperative and some trader offered you a higher price, you would sell to the trader.                   | 40       | 2         | 58       | 100              | 387                 |
| j. You would be willing to join a cooperative if it were supervised by the Ministry of Trade and Industry.                           | 96       | 1         | 2        | 99 <sup>+</sup>  | 386                 |
| k. A suitably qualified manager for such a cooperative could easily be found.                                                        | 88       | 9         | 2        | 99 <sup>+</sup>  | 382                 |
| l. Higher prices for individual crops would encourage you to grow more of those crops.                                               | 96       | 3         | 2        | 101 <sup>+</sup> | 387                 |

Appendix Table 11.1 (concluded)

| Statement                                                                                                                       | Response |           |          | Total<br>Percent | No. of<br>Responses |
|---------------------------------------------------------------------------------------------------------------------------------|----------|-----------|----------|------------------|---------------------|
|                                                                                                                                 | Agree    | Uncertain | Disagree |                  |                     |
| m. If you were able to get your goods to a buyer more easily, then you would begin to grow more immediately.                    | 93       | 3         | 4        | 100              | 384                 |
| n. If you had a good safe place to store your output, then you would hold your output until the price rose.                     | 87       | 4         | 9        | 100              | 386                 |
| o. Because of your need for money immediately, you sell your output as soon as you can.                                         | 82       | 3         | 15       | 100              | 385                 |
| p. You would continue to produce what you are now producing irrespective of what prices you are offered.                        | 48       | 3         | 49       | 100              | 382                 |
| q. If there were more farmers, then prices would be lower.                                                                      | 36       | 10        | 53       | 99               | 381                 |
| r. If there were more traders, then prices would be higher.                                                                     | 68       | 12        | 20       | 100              | 383                 |
| s. The location of a market closer to your farm would mean higher prices to you for your output.                                | 78       | 12        | 9        | 99 <sup>+</sup>  | 384                 |
| t. Men traders are fairer and offer better prices than women traders.                                                           | 69       | 16        | 14       | 99 <sup>+</sup>  | 386                 |
| u. If a higher price for better quality produce were offered to you, you would try hard to improve the quality of your produce. | 96       | 2         | 3        | 101 <sup>+</sup> | 382                 |
| v. If you had more knowledge about markets and prices, you would be able to get higher prices for your output.                  | 87       | 9         | 4        | 100              | 377                 |
| w. The government should replace private traders with government buyers buying for a government corporation.                    | 87       | 3         | 10       | 100              | 386                 |

<sup>+</sup>Rounding error



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