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EVALUATION OF FOOD MARKET REFORM:

CORABASTOS-BOGOTA

By

Alvaro Silva

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ABSTRACT

EVALUATION OF FOOD MARKET REFORM:

CORABASTOS-BOGOTA

By

Alvaro Silva

Bogotá, Colombia's capital and largest city, also has the country's fastest rate of population growth. Between 1950 and 1970, the population of Bogotá was quadrupled. Yet diagnostic studies in 1970, indicated that the food marketing system serving this city and its growing population, and particularly the channels serving middle and low income consumers, were changing slowly and performing unsatisfactorily.

Corabastos, a semi-public agency, was created in 1970 to formulate and implement programs in order to correct this situation by inducing innovations in the food marketing system. Initially, Corabastos followed a market improvement strategy recommended by the Latin American Planning Center (LAMP) of Michigan State University. Under this approach the following programs were formulated and implemented: construction and operation of a central wholesale market, neighborhood stores chains, commodity exchange, and market information. But later Corabastos set up a risky direct intervention program of buying, selling and processing, which produced huge financial losses. Initially, the shift in approach and later, the very difficult financial situation,

weakened the reform programs and prevented the formulation and implementation of new programs. Nevertheless, the population growth and the urbanization process continue and demands for faster changes are becoming apparent.

This research had the following objectives:

1. To identify the LAMP market reform approach and to conceptualize an evaluation framework for reforms attempted under that model.
2. To evaluate both the organization (Corabastos and subsidiaries) as an institution built to promote socially desirable changes in the food marketing system and the direct intervention programs which include fruit and vegetable processing and exports, beef processing and wholesaling and potato storing and wholesaling.
3. To evaluate the impact of the market reform program on the food marketing system in Bogotá's food shed area and, in particular, the impact of specific reform programs on farmers, assemblers, wholesalers, retailers and consumers. The market reform programs being evaluated were: operation of the new central wholesale market, commodity exchange, retailers' cooperative, wholesale-retail voluntary chains and market information.
4. To make recommendations on research methodology, market reform approach programs and institution building.

A modified structure, conduct and performance framework combined with an institution building approach was developed as a conceptual framework to guide the research activity. Data for the evaluation of the organization in charge of market reform were obtained from in-depth case studies with Corabastos' leaders and government officials,

from on-going contact with LAMP leaders and from a review of Corabastos' files and financial statements. Data to assess the impact of the food market reform programs were collected by surveys of farmers, wholesalers and retailers in the area of influence of Bogotá. In addition, in-depth case studies were conducted with farmers, merchants, truckers, wholesalers, institutional buyers and consumers in key roles. They were able to provide information which aided an understanding of the functioning of the reformed system as compared to the non-reformed system.

The Corabastos leader (1970-1974) had personal linkages with the president of the nation. These linkages and his political power in the Conservative party helped Corabastos to secure resources and implement programs in the early years. But, in later years, political pressures encouraged Corabastos to enter into direct intervention programs with high risks and subsidized prices, programs which produced huge financial losses and small social benefits. Corabastos did not have institutionalized linkages with the public sector. Therefore, a solution to the financial situation has been more difficult, although it seems forthcoming in mid to late 1976.

Corabastos market reform programs' operating costs and operating income seem to be close to breaking even, and their social benefits have been substantial. The food marketing system has become better coordinated, and volume and broadline wholesalers have gained scale and power and are becoming channel leaders. Nevertheless, there are oligopsonies in most markets but competition and innovation have improved and operational efficiency has significantly increased.

However, a significant percentage of the reform benefits has remained with the innovators.

Traditional channels have changed slowly and have prevented middle and low income consumers from taking full advantage of reform benefits. Consequently, operation of Corabastos' pilot wholesale-neighborhood store chains has indicated that there are significant opportunities to improve efficiency and innovation and to create countervailing power. Moreover, human resources development and new market institutions seem to be crucial to the support of new self-reinforcing changes in the food marketing system in the area of influence of Bogotá.

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GLOSSARY

- CABSA Central de Abastecimientos de Bogotá S.A. (Central Market Authority). A Corabastos subsidiary which has been in charge of the administration of Bogotá central food wholesale market since mid-1972.
- CID Centro de Investigaciones para el Desarrollo - Universidad Nacional de Colombia. It is the National University Research Center which conducted urban food distribution diagnostic studies for Bogotá in 1970.
- Corabastos Corporación de Abastos de Bogotá (Supplies Corporation of Bogota). Corabastos is a semi-public agency in charge of the promotion of improvements on the food marketing system in the area of influence of Bogotá.
- DANE Departamento Administrativo Nacional de Estadística (National Department of Statistics). It compiles most of national development periodic information.
- DNP Departamento Nacional de Planeación (Department of National Planning) a public bureau in charge of formulating and evaluating national economic plans.
- EDIS Empresa Distrital de Servicios Públicos (Bogotá's Municipal Corporation of Public Services). This agency administers public plaza retail markets, public slaughtering houses and other public services.
- IDEMA Instituto de Mercadeo Agropecuario (Agricultural Marketing Institute). A public agency set up to regulate prices and markets for food products through buying and selling activities, importation, and exportation, and guaranteeing support prices to farmers.
- LAMP Latin American Market Planning Center is a group of professors at Michigan State University who have conducted food marketing research and have provided technical assistance in several Latin American countries.
- Plaza Market A traditional Latin American food retailing open place or building comprised of many sellers.

Plaza España It was the major food wholesale and retail market area near downtown Bogotá until July 1972.

Peso (Col. \$) Monetary unit of Colombia which was equivalent to 0.035 U.S. dollars on December 1974 and 0.03 U.S. dollars on December 1975.

CHAPTER I
INTRODUCTION

Statement of the Problem

The population of Colombia is growing at a rapid rate, and because of migration this rate is higher in major cities. Bogotá, the largest city in the country, has the fastest population rate of growth.¹ In fact, the population of Bogotá has increased by 705,000 people in only the last four years, an increase which is larger than the total population of the city in 1951. Based upon recent trends, the city could become a megalopolis of about 6 million people by 1985 (see Table 1). In addition, per capita income has also increased, especially in urban areas and particularly in Bogotá.

Population growth, migration, and urban per capita income increases have had several consequences in the food marketing system. For example, there has been an increase in demand for a larger volume and wider variety and assortment² of food and for more marketing services in urban areas. Moreover, increasingly specialized and larger scale farmers are responding to raw food demands, and food production

¹Bogotá is absorbing about one-fourth of the national population increase; see: Departamento Nacional de Planeación, Para Cerrar la Brecha: Plan de Desarrollo Social, Económico y Regional 1975-1978 (Bogotá: Banco de la República, 1975), p. 90.

²Variety refers to range of food items; and assortment refers to the range of choices within a food product.

Table 1. Bogotá's Population in 1973 and Projections to 1985

	1 9 7 3	1 9 8 0	1 9 8 5
Census	2,855,065	- -	- -
Projections			
Low rates of vegetative growth and migration (CEDE)	- -	4,540,730	5,938,811
High rates of growth (CEDE)	- -	4,865,717	6,804,109
This research using 6% rate ^a	- -	4,293,482	5,745,793
Increase over 1973's population	- -	1,437,753	2,890,730

Sources: Estimates from:

Departamento Nacional de Estadística, "Censos Nacionales de población 1951, 1964 and 1973", Boletín Mensual de Estadística (Bogotá), Nos. 43, 175, and 279.

Centro de Estudios sobre Desarrollo Económico, Proyecciones de la Población del Distrito Especial de Bogotá (Bogotá: Universidad de los Andes, 1969), as quoted in: Centro de Investigaciones para el Desarrollo, Estudio de Consumidores y Distribución Urbana de Víveres de Bogotá (5 Vols, Bogotá: Universidad Nacional, 1971), II, 92-103.

^aThe population of Bogotá in 1951 was estimated at 648,324 and 1,697,311 in 1964. See: DANE, "Censos", op. cit. This research estimated an annual rate of population growth of 6 per cent between 1964 and 1973.

and food consumption are becoming more physically and institutionally separated. Thus, rapid structural changes in the economy of Colombia are demanding a more complex and innovative marketing system to coordinate consumers' demands and production processes through transactions, logistical mechanisms and institutions.

But the conclusions of food marketing diagnostic studies, conducted in Cali, the third largest city of Colombia, and in Bogotá in 1970, were not very optimistic about the performance of the food marketing system. These studies came to the conclusion that the "... urban food distribution system..." serving the cities was "...becoming increasingly unsatisfactory..."³ Poor performance affected mainly the lowest income consumers who were spending 50 to 80 per cent of their income on food and paying the highest marketing costs, margins and prices. Consumers, then, had only a small remainder of income to spend on nonfood commodities. The marketing system was also performing poorly as a coordinating mechanism between producers and consumers, with market participants having to bear high risks. Thus, farmers and merchants were not responding quickly to consumer demands and were not willing to accept additional risks to adopt major innovations. In sum, poor performance of the food marketing system was retarding economic development.

³Harold Riley, et al., Market Coordination in the Development of the Cauca Valley Region, Colombia, Marketing in Developing Communities Series, Research Report No. 5 (East Lansing: Latin American Studies Center- Michigan State University, 1970), p. 352. Also see: CID, Distribución de Víveres, Vol. V, p. 99, and: Centro de Investigaciones para el Desarrollo, Informe Preliminar del Estudio Area de la Plaza España y Mercadeo Agropecuario de Bogotá (2 Vols, Bogotá: Universidad Nacional, 1970).

Diagnostic studies have also argued that although..."the system is very slowly evolving toward more modern food distribution practices, there are substantial barriers to this process of change..." and that most of the constraints "on innovation are beyond the control of individual food distribution firms. Hence, public or group action is needed to break the low-level equilibrium currently existing and create an environment that will encourage desirable patterns of change in the food system."⁴

The Latin American Market Planning Center (LAMP)⁵ prescribed a strategy to improve the food marketing system in Cauca Valley. This strategy was based upon the conclusions of the diagnostic study and on a marketing approach that Michigan State University had been articulating since 1965. The strategy was to be implemented by a semi-public agency in the Cali foodshed area.

However, in Bogotá, Corabastos,⁶ a semi-public agency, was created with LAMP technical assistance in 1970. The agency began to formulate and implement a program..."along the lines of the recommendations from...the marketing study conducted by LAMP and a Colombian task force in the Cauca Valley Region."⁷ Corabastos quickly aroused

⁴Riley, et al., Market Coordination-Colombia, p. 353.

⁵LAMP is defined in this research as a group of professors at Michigan State University which has conducted research and provided technical assistance in food marketing programs in Latin America.

⁶The Corporación de Abastos de Bogotá (Food Supplies Corporation of Bogotá) will be referred to as Corabastos in this thesis (see glossary of terms).

⁷Kelly Harrison, et al., Improving Food Marketing Systems in Developing Countries: Experiences from Latin America, Marketing in Developing Communities Series, Research Report No. 6 (East Lansing: Latin American Studies Center, Michigan State University, 1974). p. 119.

public expectations, gained public recognition and became an innovative agency. Several market reform programs were promoted and initiated: planning, design, construction and administration of a new food wholesale market facility; a retailers' owned cooperative; voluntary wholesale-retail chains; and a commodity exchange. But, Corabastos' name was associated by the public with the wholesale market facility. Central market facilities, then, became a fashion in Colombia. Even small towns were lobbying for a wholesale market facility.

However, soon some weaknesses became publicly known. Since 1974, Corabastos has suffered large financial losses which have threatened its survival. These major financial losses were incurred in direct intervention programs, programs which were inconsistent with the original objectives and marketing reform approach of the institution.

The financial performance of Corabastos has had several implications for market reform programs. Since the image of the institution has been tarnished, it will be more difficult to get the cooperation of its social environment for future reform programs. In addition, Corabastos' reform programs and the programs of its subsidiaries have thus suffered the impact of shortage of financial resources. In practice, new market reform programs have been stopped since late 1973, and several reform programs initiated remain as pilot projects. Yet reform programs may have produced and may well produce high social returns. Without them, society loses the opportunity of gaining large benefits.

Moreover, migration and specialization continue. Bogotá may be a megalopolis in 1985; thus a more complex system is demanded. But the urban food distribution system serving low income consumers remains very traditional and costly. Thus, although society demands a more complex and coordinated system, the system is slow to respond. And the traditional marketing system can retard economic growth and hurt low income consumers. Yet, the agency in charge of market reform may be undergoing too slow a financial and reorganizational recovery to be able to plan and implement reform programs for some time.

The general and the more specific problems discussed suggest many practical and relevant research questions for evaluating market reform in Bogotá.

Research Questions and Research Objectives

The problems outlined above suggest many researchable questions. This research, however, addresses itself to the following:

1. Did the organization in charge of food market reforms in Bogotá obtain resources and implement programs consistent with its objectives?
2. What programs from the LAMP market reform approach were implemented, how well were they implemented, and which programs were not implemented? What are the consequences of implementing a partial approach?
3. How were food market reform programs formulated? Under whose leadership were the programs formulated and how

were they tied to the political system and to the public sector? How effectively were the reform programs implemented?

4. How were market participants affected and what were their behavioral responses? What changes and results are expected in the short, medium, and long run?
5. What channels are becoming more efficient and innovative? Is this caused by market reform programs? What impact would these changes have in the social system?
6. Who benefits and who loses, and by what mechanisms and practices? Who gains position and power, and how are they used? Who will control?
7. What lessons have been learned about the internal structure of the organization in charge of market reform, its financing, its control, its linkages with the private and the public sector? What policy recommendations can be suggested?

The research had four main objectives which follow from the general problems stated, and from the research questions outlined:

1. To identify the LAMP market reform approach and to conceptualize an evaluation framework for reforms attempted under that model.
2. To evaluate the organization (Corabastos and subsidiaries) as an institution built to promote socially desirable changes in the food marketing system and to evaluate direct intervention programs: fruit and vegetable

processing and exports, beef processing and wholesaling and potato storing and wholesaling.

3. To evaluate the impact of market reform programs on the food marketing system in Bogocá's food shed area and, in particular, the impacts of specific reform programs on farmers, assemblers, wholesalers, retailers and consumers. The market reform programs being evaluated were: operation of the new central wholesale market, commodity exchange, retailers' cooperatives, wholesale-retail voluntary chains and market information.
4. To make recommendations on research methodology, market reform approach, specific reform programs and on institution building.

Research Design and Data Collection

The framework of analysis and the marketing approach of this research are treated in Chapter II. The main concern in this section is with the mechanics of data collection and scope of the research.

The research had a long planning period. The author went to Colombia for discussion with Corabastos leaders in June, 1973. Then, a seminar on a thesis proposal was held at Michigan State University in December, 1973. After several months of negotiation, a research project was approved by the Corabastos Board of Directors and a contract was signed between the general manager and the author as professor at the National University. Corabastos would pay for the direct research costs and first draft, and National University would provide the salary of the author. Administrative research details were

completed, and a team of two full-time field researchers and the author was organized. Also, on a part-time basis six professionals provided advice and help in data collection and analysis.

The researchers held a seminar on methodology and approach with the participation of Corabastos executives and technical personnel. The seminar was useful in terms of improving the approach, securing information and gaining the cooperation of Corabastos personnel.

Several methods and sources of data collection were used in the research. Research data were collected mostly in Bogotá and its vicinity.

Information concerning Corabastos and its subsidiaries was collected by reviewing secondary information. In addition, interviews were held with government officials and with the Corabastos general manager, Board of Director members and field managers. Afterwards, the results were organized in research memoranda. Also, internal statistics and, when possible, financial statements were reviewed.

Information concerning direct intervention programs was collected from Corabastos statistics. Case studies were conducted with farmers and merchants who held transactions with the programs. In the potato storage program a "simulation" method was used to examine three strategies.

The methodology utilized in the study of market reform programs requires a more detailed discussion. Each program itself was studied as well as its impact on the food marketing system. Secondary information was reviewed. Interviews with previous research leaders were held, as well as informal interviews with market participants and

personnel engaged in planning and implementation programs. Then, research memoranda were prepared.

Some programs may have impact at the national level, such as Bogotá's wholesale market operation and commodity exchange. An indication of a national impact on the wholesale market can be seen from the national geographic dispersion of food flowing into Bogotá (Figure 1). However, a nationwide survey was beyond research objectives and resources.

Research objectives did call for predictions of changes in the food marketing system in the area of influence of Bogotá. Thus a population of farmers and merchants was defined for this area, followed by the design and selection of random samples. This formal procedure was applied to farmers, Bogotá's wholesalers and retailers, and trucks entering the wholesale market.

The most relevant population of farmers was defined as that engaging in the Central Market facility. A sample size of $n=100$ was determined based on budget approval and statistically acceptable size. Population size is still unknown. Then, a sample stratified by-product group was drawn. Specific hours and places within the central market facility were determined and interviewers contacted wholesalers who then introduced them to farmers.

Wholesalers population was determined by several methods. The population of wholesalers within the Central Market was available from CABSAs⁸ records, and a census of wholesalers located in other places

⁸CABSA is the "Central de Abastecimientos de Bogotá S.A.", a corporation subsidiary of Corabastos and in charge of the administration of Bogotá food Central Market (see glossary of terms).

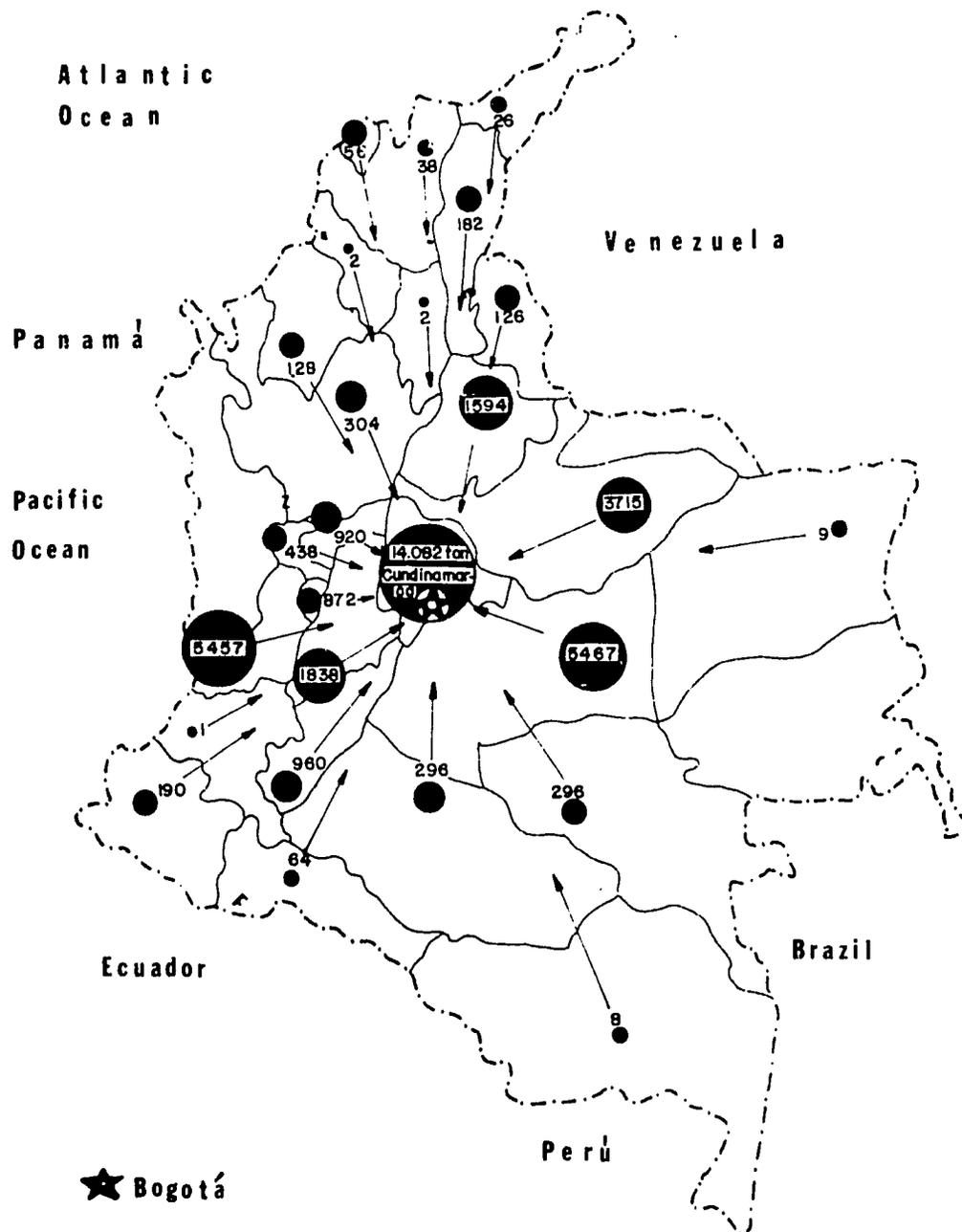


Figure 1. Origin of Bogotá Food Supplies. (Tons, May 17 to 25, 1970.)

Source: Idema's Check Points Study (1970): Instituto de Mercadeo Agropecuario, Movimiento de Productos Alimenticios en la Ciudad de Bogotá (Bogotá: Corabastos, 1970).

in Bogotá was carried out in the main wholesaling areas of the city. The two groups were the main strata, which were also stratified by food groups. The population of each strata was also determined (N_h). Total sample size ($n=110$) was estimated from the following criteria: (1) since several strata were considered, the total sample size should allow each strata to have at least a sample size of 5 units; (2) the sample size should be big enough to satisfy technical requirements of the Corabastos Board of Directors and should involve a cost which would allow approval of the research project; (3) population size in the Central Market was known, and the variability was estimated from previous studies. These factors allowed a judgment on sample size.

Sample size within each strata (n_h) was estimated proportionally to population strata (N_h), but several corrections were made by the observed variability within strata. For strata with larger variability, sample size was increased and for more homogeneous strata it was reduced. Then, through use of a table of random numbers, samples from each strata were selected. Replacements were also chosen.

Arriving at a population of retailers required a time-consuming determination. First, the population was stratified in four groups: (1) independent plaza retailers, (2) independent neighborhood stores, (3) retailer owned cooperative affiliates and voluntary chains affiliates, and (4) corporate chains and consumer owned outlets.

Plaza retailers population (N_1) was determined from EDIS⁹ files

⁹Municipal corporation of public services of Bogotá (see glossary of terms).

for the 15 municipal plazas and from administrators for the 30 plazas privately owned and administered. A first approximation of neighborhood stores populations (N'_2) was determined from municipal sales tax computer lists. Next, a census was conducted in 28 blocks of the city taken at random, one block per tax book. Data collected by the research team on the number of neighborhood stores per block was compared with the same data taken from the computer lists; then a corrected population (N_2) was estimated.¹⁰

Population of neighborhood stores affiliated to chains was determined from Corabastos files, while the population of corporate chains and consumer owned cooperative outlets was estimated from the telephone directory (see Table 2). Finally, sample size for retailers (n=196) was determined from the experience of previous research and with the expectation of proposing both to a technically and financially acceptable research project to Corabastos. Sample size within strata (nh) was determined proportionally to population size (Nh) for independent retailers. But because of larger variability and small population size of corporate and cooperative outlets, sample size was increased for these strata. Samples were selected at random from every plaza, sales tax book and Corabastos files.

Structured questionnaires were prepared and pretested in field conditions, and university seniors were selected and trained as interviewers. Data was checked, open questions were coded, and data was passed to IBM cards, cleaned and passed to computer tapes. Tabulation

¹⁰ N_2 was smaller than N'_2 , which means that tax evaders are fewer than stores that exit the market and still remain on the tax records.

was then carried out through a University of Michigan set of computer programs called OSIRIS III.

In order to estimate time savings in transportation, due to wholesale market facility operation, a survey on traffic flow was conducted. A very short questionnaire was prepared and administered to truckers entering the market (the hour of entrance was registered). The questionnaire was given to the trucker at the entrance, and he returned it at exit gate where exit time and load were registered. To avoid congestion in peak hours, the questionnaire was administered to every five trucks.¹¹

A short questionnaire was also administered to 50 final consumers who patronize neighborhood store chains and the central wholesale market.

Surveys are costly and time consuming to prepare, standardize, tabulate and analyze. Nevertheless, the experience from surveys and the early results provided a good framework from which relations among variables were indicated. But an understanding of the causes and actual workings of the marketing system were not clear. In addition, early stratification and questionnaire standardization were barriers to capturing the new significant changes in the few market participants with important roles and positions in the channel. Thus, surveys were complemented with in-depth case studies which required several interviews. All case studies were conducted personally by the author and his associated professional team. Informal guides for carrying out

¹¹The survey was conducted August 8 and 9, 1974. A total of 1360 questionnaires were processed which amounted to 16 per cent of the vehicles entering the wholesale market facility on these particular days.

Table 2. Population of Food Wholesalers and Retailers and Number of Structured Interviews

Farmers and Merchants for Selected Food	Population (Nh)	Structured Interviews (nh)	Percentage ($\frac{nh}{Nh} 100$)
Farmers	--	100	--
Wholesalers located in Central Market	1476	81	5.5
Wholesalers located in other places of Bogotá	380	29	7.6
Total Wholesalers in Bogotá	<u>1856</u>	<u>110</u>	<u>5.9</u>
Plaza retailers	7380	66	0.9
Independent neighborhood stores	9050	99	1.1
Affiliate retailers to cooperative and voluntary chains	1132	24	2.1
Corporate and consumer owned cooperative outlets	<u>120</u>	<u>7</u>	<u>5.8</u>
Total Retail Outlets	17682	196	1.1
Total Number of Structured Interviews	--	406	--

Source: Population estimates and design of survey from this research, Bogotá, 1974.

case studies were developed. Data and analyses of each case study were written up in a research memorandum. The memorandum followed a general outline in order to facilitate reading and the "tabulation" of results.

In-depth case studies are similar to psychologists, in-depth interviews of their patients, the patient (for this part of the research) would be market participants selected for case studies. Inaccurate quantitative data from surveys or data not collected because

they were considered sensitive can be obtained and checked by an in-depth case study where a good personal relationship is established between market participants and researcher.

Case studies were administered to market participants that had the following characteristics: (1) their position and role in the market channel had some economic and noneconomic relevance; (2) their acceptance of and cooperation in long and easy-going interviews, some of which occurred in their own houses, and (3) their expected ability to understand not only their own firms but also the workings of the food marketing subsystem, the market reforms closely related to them, and market history.

In-depth case studies were conducted for retailers (20), wholesalers (20), assemblers (10), long-haul truckers (10), urban distribution vehicles (10) and farmers (10).¹²

This research did not have as a main approach the study of marketing characteristics of a specific commodity or groups of commodities. Instead, food groups and those characteristics which were studied were selected only because of their relevance to understanding the impact of market reform programs. The main criterion in the selection of food groups was their relative high volume in the central wholesale market facility. Groups with very low volume or those not

¹²Besides case studies for assemblers, two panels were held with the participation of 20 assemblers. Researchers also participated in meetings of wholesalers and warehouse leaders and in shareholders meetings, and wholesalers' public meetings protesting rent increases. The research had its office at the wholesale market facility. This was particularly valuable because researchers daily got more acquainted with the operation of the market, with many market participants and market administrators. The author himself had this permanent interaction for over 16 months at all research stages. Data results and analyses benefited from this daily interaction.

being transacted in the central market were not considered. The criteria for organizing commodities into groups included their marketing practices and channel similarities. The following groups were designed and selected: (1) grains and processed food (rice, corn, beans, sugar, etc.), (2) potatoes, (3) vegetables (carrots, onions, etc.), (4) plaintain and cassava, (5) fresh fruits (oranges, pineapples, etc.). All the selected food groups amount to about 53 per cent of the Bogotá consumer food bill.¹³

Thesis Plan

Chapter II presents the theoretical framework used to provide research questions, guide research data collection and analysis and suggest marketing approaches to problems and reforms. It also contains a review of literature on the role of marketing in economic development and summarizes briefly the main components of the market reform recommended by LAMP.

Chapter III analyzes Corabastos as a formal organization in charge of promoting innovations, its market reform approach, internal organization and leadership and the financial results of its programs. An evaluation of this organization, as an agent for innovation as well as a commercial enterprise, is also attempted.

A description of major changes connected with the central wholesale market facility is presented in Chapter IV. The impact of these

¹³Estimated from: CID, Distribución de Víveres, Vol. II, Table 25, p. 46.

changes, in the structure and conduct of long-haul food transportation, food production and assembly, is also studied.

Chapter V analyzes competition and price formation in the production, assembly and wholesale market interface in terms of degree of concentration, access to market information and competition from newly arising institutions.

Chapter VI tries to measure the consequences of the reform on the interface in terms of changes in efficiency, innovation, distribution of benefits and expected competition in the long run.

Chapter VII attempts to describe market reform programs more closely related with the wholesale-retail market interface and tries to measure their impact on structure, conduct and performance of the interface.

Reform programs, interfaces, and the organization in charge of market reform are analyzed together in order to understand the total impact of the reform and the interaction among the parts on the total food system for Bogotá's food shed area in Chapter VIII.

Chapter IX deals with recommendations on market reform and institution building and with questions for future disciplinary and problem-solving research.

CHAPTER II

A CONCEPTUAL FRAMEWORK - REVIEW OF LITERATURE

Theoretical and Conceptual Framework

This thesis is concerned with the evaluation of market reform programs carried out in Bogotá, Colombia. Market reform is defined here as a process of social, self-sustaining change in the food marketing system. The process can be initiated and monitored by change agents and formal organizations which may produce innovative programs which affect market rules, incentives and sanctions in such a way that market participants, by "freely" reacting to them, would produce desired performance consistent with social goals.

To evaluate market reform, the research has developed a framework based upon, first, an institutional building approach to deal with organizations and induced social change¹ and, second, a structure, conduct and performance framework to deal with changes in the food marketing system.²

¹This framework borrows ideas from: Milton J. Esman, "The Elements of Institution Building," mimeographed draft eventually published in Institution Building and Development: From Concepts to Application, ed. by Joseph W. Eaton (Beverly Hills, Calif.: Sage Publications, 1972). Also from: Milton J. Esman and Hans C. Blaise, Institution Building Research: The Guiding Concepts (Pittsburgh: Graduate School of Public and International Affairs, University of Pittsburgh, 1966).

²The framework uses concepts from: Joe S. Bain, Industrial Organization, 2nd ed. (New York: John Wiley & Sons, Inc., 1968),

Managerial Task

Market reform as social change is a complex managerial task of planning, executing and controlling innovations: (1) It is initiated by change agents who make plans to promote social and behavioral changes aimed at a target social system and interact with leaders and assist them in a process of building up formal organizations; (2) Organizations develop innovative plans and programs under a market reform approach and with the assistance of the change agents; (3) Outputs are produced so that physical and social technologies are adopted by the target social system; (4) Then, program results are evaluated to provide feedback to articulate the market reform approach and to improve market reform programs.

Thus, market reform in this research is seen as a product of a specific managerial task carried out by several organizations to induce social change.

Organizations Engaged in Market Reform

The research identifies three organizations engaged in this managerial task: (1) the organization that has provided a marketing approach and has given technical assistance; (2) a formal organization in charge of promoting and implementing market reform; (3) the target social system subject of market reform programs.

The first is a change agent at Michigan State University: LAMP.

pp. 7-12; and from: James D. Shaffer and A. Allan Schmid, "Community Economics: A Framework for Analysis of Community Economic Problems," East Lansing, Michigan State University, pp. 5-22. (Mimeographed.)

LAMP, for the purpose of this research, is a group of professors at Michigan State University which has close links with and financial support from the U.S. Agency for International Development (AID). LAMP specializes in the managerial activities of developing and articulating a marketing approach to stimulate social change, promoting the changes, evaluating, articulating and reformulating the approach. Both the marketing approach and the transactions to provide it are relevant for the research.

The second organization is a regional food marketing corporation: Corabastos. It was created to develop plans and programs and implement them in order to induce social change in its environment. The food marketing system is the social environment most relevant to this organization. The organization has a marketing reform approach and objectives and a marketing strategy; it plans and implements programs, secures human and financial resources. The organization in this process makes transactions with its environment which in turn contributes to the determination of the range of choices of the organization.

The environment of the regional development corporation was identified as follows: The change agent, who provides the market reform approach, and technical assistance, the public sector which provides authority and resources, bank creditors who provide resources, organizations developed to implement reform programs, the social system and, of course, the food marketing system in its area of influence.

Thus, the third organization or, rather, social organism is the food marketing system. It receives physical and social innovations

from the regional food marketing development corporation and provides resources and power to the corporation. Once this process becomes institutionalized, the corporation itself becomes a part of the food marketing system.

Up to this point, research framework should help in an understanding of how innovations have been produced with the use of social resources to attain specific objectives and how the food system may have adopted innovations. Thus, the questions that remain are: How is the marketing system being shaped? What results are produced by the food marketing system due to the physical and social innovations induced by the regional food marketing development corporation?

Consequences of Innovations on the Food Marketing System

A food system is defined as "a set of interrelated stages of production activity. These include the manufacture and distribution of agricultural inputs such as seed, fertilizer, machinery and pesticides; the farm production activities; and the assembly, storage, processing and distribution of food products to consumers."³

The research selected only that part of the food system which was more exposed to innovations from the regional marketing corporation. The selected food system components were: farmers in the Bogotá food shed, assemblers, long-haul truckers, Bogotá selected food wholesalers, urban food transportation, Bogotá retailers, Bogotá households. New organizations created to implement specific market reform

³Riley, et al., Market Coordination - Colombia, p. 4.

programs became endogenous to the food marketing system, i.e. the commodity exchange, the retailer owned cooperative chain, the voluntary wholesale retail chains, and the central market authority. Thus, these market reform organizations are considered as components of the reformed food marketing system.

However, to appraise the changes induced by market reform programs the food marketing system is disaggregated. Consequently, the change is measured first, at the individual market participant level; second, at a market dyad level, i.e., a group of closely interrelated sellers and buyers; third, at the interface level. Two interfaces with a common boundary at the wholesale level are defined: the production, assembly-wholesale interface and the wholesale-retail interface. And, finally, the change is measured at the food marketing system level.

Aggregation is not simply a summation. Rather, aggregation tries to discover interactions between the parts, and more specifically it tries to study vertical integration and coordination trends.

On the other hand, changes in the food marketing system can be assessed by the nature of the market variables being altered. These variables can be related to structure, i.e., the rules of the market game affecting the range of choice of market participants, to the conduct or behavior of market participants and, finally, to consequences (performance) of the game.⁴ These variables can be applied to the

⁴Marketing system structure is defined as all..."the predetermined characteristics of the game and the players which constrains the players' choices. The structure establishes the opportunity set for each player. Conduct refers to all of the choices, decisions, or strategies that the players adopt within the opportunity set established

several levels of aggregation discussed above.

Market structure may have changed in the process of market reform. The adoption of new market rules, the entrance of new market participants affect others' opportunity sets. A food market participant, including the new organizations created, is free to make decisions and to follow strategies in a market game in trying to achieve his goals. But his choice is constrained to his range of choices, his opportunity set. And his opportunity set is determined socially in a dynamic world. The range of his choice would thus be affected by others' range of choices in a world of scarcity and in a permanent interacting process between individuals, social classes, new rules and new market participants introduced as part of market reform programs.

The following structural variables may have been affected by market reform programs and hence may act as constraints to reform programs:

1. Related to general economic conditions: Population growth, migration, urbanization patterns, employment opportunities, rate of inflation, technological (physical and social) environment; level of income, distribution of income, geographic characteristics and location-related aspects.

2. Related to competition in the formal sense: degree of

by the structure. Performance refers to all the consequences of the player's choices which are payoffs to the participants of the game. Performance is the matrix of benefits and costs resulting from playing the game." Shaffer and Schmid, op. cit., p. 6.

market concentration of buyers and sellers; conditions of entry and exit; market segmentation; written and unwritten laws, how laws are applied and by whom.

3. Variables more closely related to psychological and sociological aspects: social environment of place of work and surroundings; status of one's job in society; social and professional organizations; position and role in the marketing channel.

4. Variables closely related to power: entrepreneurial ability; ownership of means of production; access to warehousing facilities; access to credit; access to market information; skills at negotiation; relationship of dependency with other market participants; actual power to exercise choice, coerce and emulate as well as exposure to other's coercions, emulations and choices.⁵

The market reform organizations and programs affected mainly the structure of the marketing system. But market participants can react to the changes in structure in any direction; thus, the results of reforms can be the desirable or undesirable. Some undesirable consequences can be predicted. Therefore, the regional marketing corporation may use several methods to teach its approach to market participants in trying to change their values, attitudes and beliefs so that

⁵This section uses concepts developed by: Warren Samuels, "Welfare Economics, Power and Property," in Perspectives of Property, ed. by Gene Wunderlich and W. E. Gibson (University Park: Institute for Research on Land and Water Resources, Pennsylvania State University, 1972) 61-67. and by Frederick J. Beier and Louis W. Stern, "Power in the channel of distribution," in Distribution Channels Behavioral Dimensions, ed. by Louis W. Stern (Boston: Houghton Mifflin Company, 1969), pp. 92-116.

their behavior in response to new programs produces the desired results. The research selected the following market participants' conduct or behavior variables as the most relevant to study: Attitudes, values, beliefs about one's job, job environment, job status, group belonging, group reinforcement and attitudes towards other groups (i.e., familialism). Attitudes toward change, toward the discovery and taking advantage of new market opportunities; predatory and exclusionary tactics and collusion; policies about products, product line, services, price and physical distribution.⁶

The market reform programs were expected to affect structure and conduct of the marketing system at different channel levels by providing infrastructure and new organizations and by giving incentives and sanctions in such a way that the private system would produce socially desirable results. In addition, because the organizations created to induce market reform are endogenous to the food marketing system, they also produce direct results in terms of cost, efficiency, etc.

The results or consequences of structural and conduct variables changes are defined in the research as performance criteria. The following four performance criteria were defined: (1) financial and economic efficiency in the use of resources; (2) adoption of innovations; (3) distribution of economic benefits; (4) estimation of how the system will perform in the long run.

⁶Bain, op. cit., pp. 9-10.

1. Financial and economic efficiency refers to the income produced per unit of resource. Financial efficiency is concerned with enterprises and economic efficiency is concerned with society as a whole.⁷ Efficiency in food distribution can be achieved by specialization in the task of matching (sorting) heterogeneous supply with heterogeneous demand and by specialization in providing services complementary to the marketing process.

Three principles are helpful in organizing and selecting efficiency variables relevant for the research.

a) The principle of minimum total transactions:⁸ Reduction of the number of transactions increases efficiency. Thus, the variables selected related to number of transactions are: cost of transactions and transaction time, economies of scale in transportation and cost of transportation.

b) The principle of massed reserves: Inventories must be held in the process of sorting heterogeneous supply with heterogeneous demand. There are inventories at all stages from farmers to households. The variables selected are: inventory management and physical product losses.

c) The principle of proximity: Institutional and physical proximity to buyers and sellers; providing seller and buyer with services and products they need, in the right place and at the right

⁷J. Price Gittinger, Economic Analysis of Agricultural Projects (Baltimore: Johns Hopkins University Press, 1972), pp. 3-8.

⁸Thomas A. Staudt and D. A. Taylor, A Managerial Introduction to Marketing (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1965), pp. 223-24.

moment. The variables used are: product line, price fluctuations and vertical integration and coordination.

2. Technological, administrative and institutional innovations: Are risks being reduced and innovation being fostered?

3. Distribution of the economic benefits and costs derived from the market reform: Who benefits, who loses and who controls? Several variables are selected: price margins, excess profits, warehousing rental subsidies, price structure.

4. Projection of the expected competition in the medium and long run: vertical and horizontal integration and coordination trends, reinforcement and self-adjusting process of the marketing system; who will control?

In sum, changes in the food system have been considered as changes in structure, or conduct, or performance and as interactions between structure and conduct to produce a result. The structure-conduct-performance framework has been applied to one level of aggregation (i.e., a market or an interface). Now, interaction between levels of aggregation and dynamics will be conceptualized.

Changes in one part of the system may also affect other parts of the system. In fact, changes in structure, conduct and performance variables of one interface may produce changes in the other interface. The outputs of one interface may become the inputs of the other interface.

In addition, time can be introduced as a variable. Performance then becomes a reinforcer. Results can be rewards (or sanctions) for certain behavior given certain structure; hence, structure and conduct would tend to be maintained (or changed). The system is being

shaped itself and future structure, conduct and performance is being determined today. In fact, change agents may be planning for the long run. The fourth performance criteria of expected competition tries to bring time into the framework. When research is conducted for a few years or even months after the reform programs are started, observed changes brought about by the programs might not be as great as they would be if they were measured at a much later date.

But how much change has the market reform produced up to the present time? How good or how bad has the reform been? Which government policies can be suggested to achieve desired performance? Who can tell what is a desired performance?

To deal with these final questions, the structure, conduct, performance and the institutional building frameworks, are used in both a relative (or positive) way and in a normative way.⁹

The positive or relative way is one of trying to compare structure, conduct and performance of the present reformed system with (a projection to the present of) structure, conduct and performance if there had been no reforms. It is an approach of with and without¹⁰ reform. For this purpose a benchmark was necessary for comparison. The benchmark was developed from diagnostic studies of CID (1970 and 1971)¹¹ and complemented by in-depth case studies and surveys conducted

⁹Harold M. Riley, Improving Internal Marketing Systems as Part of National Development Systems. (East Lansing: Latin American Studies Center - Michigan State University, 1972), p. 7.

¹⁰This test is used as a rule of thumb to identify overall costs and benefits expected from a project. Here it is used similarly. see Gittinger op. cit., p. 15.

¹¹CID, Distribución de Víveres; and: CID, Informe Plaza España.

for this research using the market participants' memories. Then, it was compared with research results for 1974 and 1975. Conceptually, the benchmark was projected to 1974 in order to discuss the comparison of with and without reform programs instead of before and after such programs. Also, in this comparison the limitations imposed on the organization in charge of market reform programs by its social environment are considered.

The framework is also used in a normative way. The present structure, conduct and performance of the food marketing system, and the programs, resources, internal structure, leadership and linkages of the organization are compared with a desirable alternative, which may be obtained from three sources. First, the LAMP approach to market reform in Latin America and the recommendations and priorities given for the city of Cali, Colombia.¹² Second, a desirable alternative from Corabastos' own objectives and strategies which were developed in close relationship with LAMP leaders. And the third source, also related to the first two, comes from government goals and plans expressed in the last two development plans.¹³ The performance criteria used for the research are based upon the three sources.

The positive and the normative ways of using the model are complementary rather than substitutes. The former deals with the

¹²Riley, et al., Market Coordination-Colombia, pp. 7, 109-117, 133-140, 153-157, 165-173, 193-198, 213-220, 287-289, 312-314, 327-328, 332-337, 345, 363-379.

¹³Departamento Nacional de Planeación, Las Cuatro Estrategias (Bogotá: Editorial Andes, 1972), and: DNP, Para Cerrar la Brecha.

question of what the reform has accomplished and the other deals with the question of what should it have accomplished.

In sum, the total framework developed is a guide to suggest researchable questions, to organize data collection and to analyze the data collected. The framework also permits the analysis of how the organization in charge of market reform is performing as well as what changes have occurred and how far from the desired performance were these changes in the food marketing system. In addition, the framework gives managerial orientation to the research, first, to be practical, that is, to suggest changes for the reforms underway and propose new reforms, and, second, to be disciplinary, that is, provide some inputs for further marketing approach articulation.

The Role of Food Marketing in Economic Development

This section will attempt to review very briefly how food marketing is related to economic development. It is based upon recent research done by Michigan State-LAMP and other authors.

A food marketing system is defined broadly as a social system or mechanism for coordination of "interrelated stages of production activity. These include the manufacture and distribution of agricultural inputs..." "...the farm production activities; the assembly, storage, processing and distribution of food products to consumers."¹⁴

Social system orientation calls for: An emphasis on..."interdependence of related activities as is concerned with the coordination

¹⁴Riley, et al., Market Coordination-Colombia, p. 4. The separation between "production" and "marketing" is rejected as well as the narrow definition of agricultural marketing being the activities that occur after raw food passes the farm gate.

of economic activities..."¹⁵ The marketing system is visualized as a process of interaction between individuals and social groups. Thus, the exchange activities and function of the marketing system are conditioned by attitudes, values, roles, conflicts, power and social norms expressed in tacit and formal rules and policies.¹⁶

The marketing system is a part of the social system which is dynamic and in constant change, i.e., in a process of development. Thus, changes in the social system are related to changes in the sub-systems. If these changes do not follow, maladjustments will emerge and the whole system may perform poorly.¹⁷

The process of development and the process of urbanization and industrialization tend to be closely intertwined in most countries. Rural, agriculturally based economies tend to become more urban, industrially based economies. These economies then become more specialized. "Increased specialization is fundamental to rising levels of productivity and income."¹⁸

As income grows, consumers tend to spend a lower proportion of their income on food. Demand for food tends to grow at a lower rate than average aggregate demand. Price elasticity for food is less than 1. Thus, the value of output in agriculture will tend to grow

¹⁵Harrison, et al., op. cit., p. 5.

¹⁶Ibid., pp. 3, 24, 92-110.

¹⁷Lauchlin Currie, "Marketing Organization for Underdeveloped Countries." in Markets and Marketing in Developing Economies, ed. by Reed Moyer and Stanley C. Hollander (Homewood, Illinois: Richard D. Irwin Inc., 1968), pp. 119-120.

¹⁸Riley et al., Market Coordination-Colombia, p. 4.

at a slower rate than the average growth of the national income.¹⁹ If the labor productivity increases at about the same pace, then the demand for labor in nonagriculture sectors will increase. Labor will migrate to those more dynamic nonagricultural sectors which tend to be located in urban areas. Thus, migration between sectors appears as a rural-urban migration and is at least in part explained by the behavior of consumers when their income grows.²⁰ The behavior of consumers supports a close relationship between development, urbanization and industrialization.

As income increases, urban consumers, as a whole, demand larger volume, variety, and assortment of food and the incorporation of more marketing services. On the other hand, commercial farmers, as the development process continues, tend to use more and buy most of their technical inputs. Thus, the process of development results in a geographic and institutional separation between food consumption (mainly urban and increasingly heterogeneous) and food production (mainly rural and increasingly specialized). Likewise, a similar separation occurs between farming and production of agricultural inputs. Hence, the more separated farmers become from urban consumers and from industrial producers the higher is the social interdependence within them and among all of them.

The social separation-interdependence process poses several demands and pressures on the traditional market processes to play

¹⁹ It is assumed a closed economy where exports are unimportant.

²⁰ For one elaborated argument on this subject, see Departamento Nacional de Planeación, "La Política Urbana y el Plan de Desarrollo", Revista de Planeación y Desarrollo, Vol. V, No. 3 (1973).

their coordinating role. Exchange has an increasing role to match increasingly heterogeneous supply with increasingly heterogeneous demand.²¹ A larger volume of food must be transacted, handled and processed to serve larger and growing urban centers. Sources of supply are scattered and final demand for food is also scattered mainly in cities but also in rural areas nationwide and even internationally. Traditional institutions, not changing or changing slowly, may become increasingly unsuited to do the coordinating job effectively and efficiently. Thus, the process of development demands a more complex marketing system to contribute in achieving social goals and to foster rather than retard development. Also, marketing activities become a larger proportion of economic activity as national income grows. Therefore, marketing diagnosis and prescriptions require increasing analytical sophistication for development planning and program implementation.

Moreover, consumers in less developed countries spend a high proportion of their income on food. Prices at the consumer level could be lowered by improving the coordination of the food system. As a result, consumers would increase their demand for food and especially their demand for non-food items. This new demand might generate a multiplier effect on all the economy. Farmers would expand output and hence demand more inputs which in turn would encourage industrialists to expand present output. The increase in economic activity would generate jobs in production and distribution which in

²¹ Similar but more complete treatment in: Staudt and Taylor, op. cit., pp. 218-222.

turn would create new demands. Demand for industrial goods would generate similar effects on production and employment. "The aggregate effect of improved market coordination would stimulate economic growth, increase productivity and income, and alter income flows in favor of lower income groups."²²

A better coordination of the food system would reduce risks and thereby foster innovation. "This produces competitive pressures that induce other firms to try the improvements. Soon there is a genuine development spiral of innovation and counter-innovation in the food production-distribution system."²³ But similarly, inefficient, costly and poorly coordinated food marketing systems would have high risk along their channels and could retard adoption of innovations and economic growth.

LAMP argues that improvements in the system can be attained by increasing productivity of human effort. But there is great disguised unemployment within the marketing system. So a reformed system with lower ratio of labor input to output would not allow the food marketing system to provide a net increase in employment. As a result, other sources of employment must be found. Currie²⁴ argues for employment generation in the marketing system for less developed economies characterized by widespread disguised unemployment. "The emphasis, for some time, must be not so much on displacement of labor as on absorption in more remunerative work." He argues too, that increases in

²²Riley, Market Coordination-Colombia, p. 351.

²³Harrison, op. cit., p. 103.

²⁴Currie, op. cit., p. 126.

efficiency in marketing activities would benefit the whole community depending on the efficiency of the economic system to provide jobs to those displaced from marketing activities.

Key Results of Diagnostic Studies in Colombia²⁵

The Colombian system was performing unsatisfactorily, especially in urban food distribution. There was a high cost of procurement. Thousands of small scale retailers went to wholesale markets to inspect the small quantities of a few items²⁶ which they finally bought. Old central wholesale retail markets were congested and had no appropriate physical facilities for handling products efficiently. This added extra costs to the system. Poor handling and poor facilities resulted in high product losses and in unsanitary conditions.

Wholesalers' and retailers' margins were relatively low as a result of few marketing services and subsistence income for merchants, and there was no evidence of monopoly profits. The assembling system was costly due to small scale and scattered farm production the system was relatively competitive except for some cases of local oligopsonies.²⁷

²⁵This section tries to indicate the major problems studied by the LAMP team before suggesting a Market Reform. Also similar problems were faced by Corabastos before designing and implementing programs. The section summarizes the key issues raised by Riley, et al., Market Coordination-Colombia, in the Cauca Valley diagnostic study and CID, Distribución de Víveres, in Bogota's diagnostic study.

²⁶Independent neighborhood stores had the highest costs per unit sold, but had a high share of middle and lower income consumers' food bills. See CID, Distribución de Víveres, II, p. 114, and Currie, op. cit., pp. 122-129.

²⁷J. Pablo Torrealba, "Improving the Organization of Fruit and Vegetable Production-Assembly Systems in the Coffee Zone of Colombia: A case study in the la Mesa Region" (Unpublished Ph.D. dissertation, Michigan State University, 1972), p. 127-128.

There was an excess number of competitors at all levels. Entry was relatively easy and exit was frequent. The high, open unemployment contributed to this superabundance of competitors. Many of them could be counted as disguised unemployment.

Most of the food marketing enterprises were small scale family firms. Few corporated firms existed at the retail level. Also, few firms were market oriented. "That is, they did not see attractive profit opportunities in attempting to identify unexploited markets."²⁸

In addition, prevalent values held by the public and by public officials were mostly anti-middlemen. Intermediaries were considered as speculators and hoarders. Instead, agricultural and industrial production was considered as socially useful. These values, which may be a result of the rural life and autarkic economy in which most of today's adults were raised, were changing slowly but society's structure was changing fast. The rural Colombia of the fifties is an urbanized Colombia in the seventies. Government policies may have been influenced more by these values than by substantial research. In fact, the main government policies related with intermediaries were: (1) the use of coercive power to control prices and to harass "speculators and hoarders"; (2) direct intervention buying, selling and processing. IDEMA has been the government agency implementing this policy; (3) support prices for some commodities (the agency in charge has been IDEMA); (4) construction of physical infrastructure, especially storage facilities; (5) prefeasability studies had been made for the

²⁸Riley, et al., Market Coordination-Colombia, p. 361.

construction of wholesale market facilities in Bogotá, Cali and Medellín, in 1950, 1965 and 1967, respectively.

National, provincial and municipal government units had little concern for promoting "an institutional environment that would encourage innovative behavior in this economic subgroup."²⁹

However, food marketing diagnostic studies found major barriers that might not allow individual firms to adopt major innovations at a profit. Thus, major necessary changes could not be produced by the individual firms themselves and, consequently, collective or public action was needed.

Food System Reform Strategy

The food market reform strategy proposed by LAMP is discussed here as a general approach or doctrine.³⁰ It is related to the first objective of this thesis.

Role of Government in Market Reform

Colombia's economy is predominantly a private enterprise system. The direct activities of food production and food distribution are carried out by private firms, with the exception of direct intervention by IDEMA in production and distribution of a few products.

LAMP identified barriers that do not allow private entrepreneurs to adopt major innovations; in its recommendation, it emphasized "...

²⁹ Ibid., 360.

³⁰ LAMP's main market reform proposal was prepared for the city of Cali. But LAMP leaders were advisors of Corabastos, so Cali's experience was used in Bogotá's shed area food market reform.

the role of government in fomenting development through regulation, research and educational efforts and through direct intervention when critical services are not being provided by the private sector..." "Regulations are seen as necessary to deal with antisocial or anti-economic conduct."³¹

The recommendations assigned activities to be carried out by the public sector at the national, sectorial, regional and municipal levels. Many government agencies would have a new role or action to plan, implement and control. Moreover, new public or semi-public regional food marketing development corporations were proposed. They should not "become directly involved in food marketing enterprises, but rather should assist private and public entities within the food distribution system to function more effectively."³² The new agencies, though, have a regional geographic area of influence, their main concern being with urban food distribution in a large city.³³ The role of these food marketing regional development agencies, then, was to coordinate all the market reform programs and to implement high priority programs that required a major effort especially those related to urban food distribution.

³¹Riley, et al., Market Coordination-Colombia, p. 360.

³²Ibid., p. 109. Thus, it was recommended that these agencies keep out of direct buying and selling. "Evitar a todo trance la participación directa en las actividades de compra venta de productos.": Corabastos. Un Plan Nacional para Mejorar el Sistema de Mercadeo de Productos Alimenticios (Bogotá: Corabastos, 1970).

³³Three in the near future: One in Cali, one in Bogotá, one in Barranquilla. In Medellín a municipal agency could follow up the reform programs.

Main Elements and Strategies of LAMP Food Market Reform Recommendations

This section outlines only the reforms and provides some details on the ones of highest priority.

Urban food distribution had the highest priority. And the programs of most importance concerned planning, attaining financial assistance and securing the necessary resources in order to: (1) construct a central wholesale food market; (2) promote the development of larger volume, full-line retail stores and broad-line service wholesalers who will start having direct contracting between them;³⁴ (3) re-evaluate both public direct intervention in urban food distribution and special privileges afforded to consumer owned cooperatives; (4) organize some specific commodity programs to promote efficiency in the marketing channels.

Rural production and assembly markets had second priority, and reforms, here were directed to complement ongoing programs.³⁵ And the distribution program for manufactured consumer goods had third priority.³⁶ Other programs on changing government regulations and laws, residential construction, market information programs and regional planning were not given a priority.

The market reforms had as their main thrust the improving of coordination in the system so that its performance in terms of

³⁴ For this purpose a pilot project with a very small number of wholesalers and retailers was recommended.

³⁵ Recommendations were related to credit policies, extension and technical assistance, regulation and construction of some infrastructure.

³⁶ Was related to the development of franchise-wholesalers.

(1) efficiency, (2) progressiveness and (3) equity would be effectively achieved and rural and urban development fostered.

Implementing a Market Reform Program

LAMP leaders envisaged the financing of the central market project in two ways: equity capital and loans. It was expected that national and regional public and semi-public agencies, and wholesalers who would use the facility were the most likely sources of equity capital, while long-term loans would be obtained from Colombian banks and international lenders. The pilot food distribution project would get funding from IDEMA and/or an international agency. "This fund could be repaid as the loans are refinanced through a more permanent credit institution."³⁷

Human resources were critical in plan implementation. LAMP leaders strongly suggested a major component of foreign technical assistance and on-the-job training of national counterparts. In addition, political support for the program was considered necessary. LAMP leaders in Bogotá met, with local political leaders who had been concerned with the poor performance of urban food distribution. Finally, a four point program was agreed upon and submitted to the elected president of Colombia before he came into office. The program had appeal to a president of the conservative party for several reasons.

First, the liberal party had been engaged for several years in a not very successful Agrarian Reform program. Market reforms could be an alternative to agrarian reform.

³⁷ Riley, et al., Market Coordination-Colombia, p. 371.

Secondly, the president had won in a close election with the leader of the popular National Alliance Party (ANAPO). The issue of his opponent was how cheap food staples were in his government (a dictatorship from 1953 to 1957).

The president approved the four-point program. But the National marketing plan³⁸ as a whole was neither formally presented to government planning offices nor approved by the legislative or the executive branch. However, it has been partially implemented by several public and semi-public agencies nationally and regionally. The plan actually has had national and international financing sources: nationally, by government agencies and private banks, and internationally, by the Interamerican Development Bank (IDB). IDB approved a U.S. \$12 million loan for financing the construction of central markets in Bogotá (second stage), Cali and Medellín. Specific projects have been studied and approved by the National Planning Office.

³⁸Corabastos, Un Plan Nacional, op. cit.

CHAPTER III

A REGIONAL DEVELOPMENT CORPORATION - CORABASTOS

Corabastos was set up in mid-1970 as a formal organization in charge of market reform programs to induce innovation in the food marketing system in the area of influence of Bogotá. This chapter analyzes the history of Corabastos, its market reform approach, its internal structure, programs, financial results, leadership and its linkages to its social environment.

Institutional Setting

A diagnostic study of Bogotá's food wholesaling physical facilities was carried out by an American Engineering¹ firm in 1952 under a contract with the local municipal government. Bogotá, at that time, was a small city with a traditionally low rate of population growth.

The American firm studied the food problem only as an engineering problem. First, using past trends, it projected population (their population estimate for the mid-60s was half the actual population). Second, the study proposed the construction of a central market facility located in the downtown area and designed to serve the projected population. The recommendation was never implemented.

¹Skidmore, Owings and Morrill, "Informe Sobre Estudios Relativos al Proyecto de un Centro de Servicios Municipales para la Ciudad de Bogotá", New York, 1953. (Mimeographed.)

Nevertheless, a few months later, in 1953, the national government became concerned by the aesthetics of a downtown wholesale retail market area - Plaza de la 10. The behavior of government officials, revealed in the alternative that was chosen, and the way that alternative was implemented tend to indicate that they followed anti-middlemen values in arriving at a decision rather than the recommendation of the engineering firm or other technical recommendations. In fact, the government used its coercive power and forced wholesalers and retailers to relocate somewhere else. Merchants finally settled in another lower-income residential zone in the downtown area which had a park called España and some vacant lots. Government troops still harassed them but they resisted and a stalemate developed. Thus, location of wholesaling was a product of a deadlock after a conflict of coercive powers: the military, and the aggressive and organized merchants. The new location for transactions was called Plaza España.

The new wholesaling and retailing area did not have market facilities. Hence, food merchants operated in the España park, streets, vacant lots and houses. Private entrepreneurs started slowly adapting houses and building market facilities. The area soon became large and congested, with high crime rates. Meanwhile, Bogotá's population had grown to 2.7 million in 1972. In fact, the population quadrupled during the existence of Plaza España as the main food wholesaling and retailing place.

Moreover, another partial physical solution was studied and implemented to locate merchants. Plaza Paloquemao, located near

the Plaza España, was built by the National Railroad Agency in 1965 as a wholesale market facility, but it remained empty until 1972 when Corabastos rented it to relocate retailers. It seems that it was not functional for wholesalers' activities. In addition, there was not a major promotion, and the few wholesalers that rented warehouse space lost sales. Thus, they went back to where the traffic of retailers, assemblers and producers was located.

Food marketing problems were finally given consideration with a multidisciplinary approach during the 60s, especially by the Latin American Marketing Institute (ILMA), a United Nations Food Administration Organization (FAO) project for food marketing research, undergraduate and graduate training and extension. However, ILMA did not go beyond functional and institutional approaches to marketing. Finally, LAMP's research project in the Cauca valley, discussed in Chapter II, went beyond functional and institutional orientation to an urban-rural developmental approach.

The pressing problems and the direct counseling provided by LAMP staff to Bogotá's leaders helped in the setting up of a PROMOTORA (April 10, 1970), which was named CORABASTOS, in August, 1970 to implement both a short and long-run strategy.

Corabasto's Approach to Market Reform

Several documents² and discussion with leaders indicate that Corabastos was, at least initially, committed to the LAMP approach

²Corabastos, Un plan Nacional, op. cit.; Corabastos Análisis, Realizaciones y Perspectivas del Mercadeo Agropecuario de Bogotá D.E.

for market improvement. As such, its main role was to foment market improvement by assisting, coordinating and providing certain services and infrastructure to private and public enterprises, especially those engaged in food distribution. Consequently, Corabastos set up the following objectives³:

1. To improve nutrition in Bogotá, especially for lower income classes.
2. To facilitate and modernize the food assembly and distribution system so that it could respond to Bogotá's present and future demand for food.
3. To stimulate production through a well-coordinated marketing system.
4. To reduce real costs so that real prices to consumers could be reduced.

These objectives were consistent with those of national plans to increase the rate of economic growth and to improve its distribution.⁴

To achieve those goals a four point strategy was initially adopted:

1. To promote and administer modern food wholesale facilities for the city of Bogotá.
2. To foment broadline and full service wholesalers which would contract with retailers strategically located in the city.

First Trimester Report (Bogotá: Corabastos, 1970) Chapter II.; Corabastos, "Aspectos básicos para la programación de actividades de la Corporación de Abastos de Bogotá," Bogotá, 1972, pp. 1-15. (Mimeographed.)

³Corabastos, Análisis, Realizaciones y Perspectivas, Ch. II.

⁴DNP, para Cerrar la Brecha, p. vii; DNP, Las Cuatro Estrategias, p. 13.

3. To program and implement specific commodity programs to improve efficiency in assembling, processing and handling agricultural products.

4. Simultaneously, to give technical assistance to traditional wholesalers and retailers who might want to modernize their business.⁵

These goals and the four point strategy were a clear guideline for Corabastos' programs. However, two additional questions remain to be asked. Did Corabastos follow its four point strategy? If so, was it well-implemented and were its goals achieved?

Internal Structure

Corabastos was organized as a mixed economy corporation, but most of its equity capital was subscribed by public agencies. The following public agencies were the main shareholders in 1974: Incora (26 per cent), Idema (25.2 per cent), Edis (15.1 per cent), a mixed economy agency, Cofiagro (28.5 per cent) and other mixed-economy and private agencies.⁶ These agencies were represented in its Board of Directors (Figure 2).

⁵Corabastos, Análisis, Realizaciones y Perspectivas, Ch. II.

⁶Incora is the Instituto Colombiano de la Reforma Agraria, A public agency in charge of agrarian reform programs in Colombia. Idema is the Instituto de Mercadeo Agropecuario (Agricultural marketing institute), a public agency in charge mainly of price supports and direct intervention programs on food. Edis is the Empresa Distrital de Servicios Públicos (Bogotá's municipal corporation of public services). One of the functions of this corporation is the operation of Bogotá's slaughterhouse and management of public plaza food retail markets. Cofiagro, Corporación financiera Agropecuaria y de exportaciones, is a mixed economy bank in charge of providing credit for food production, distribution and exports.

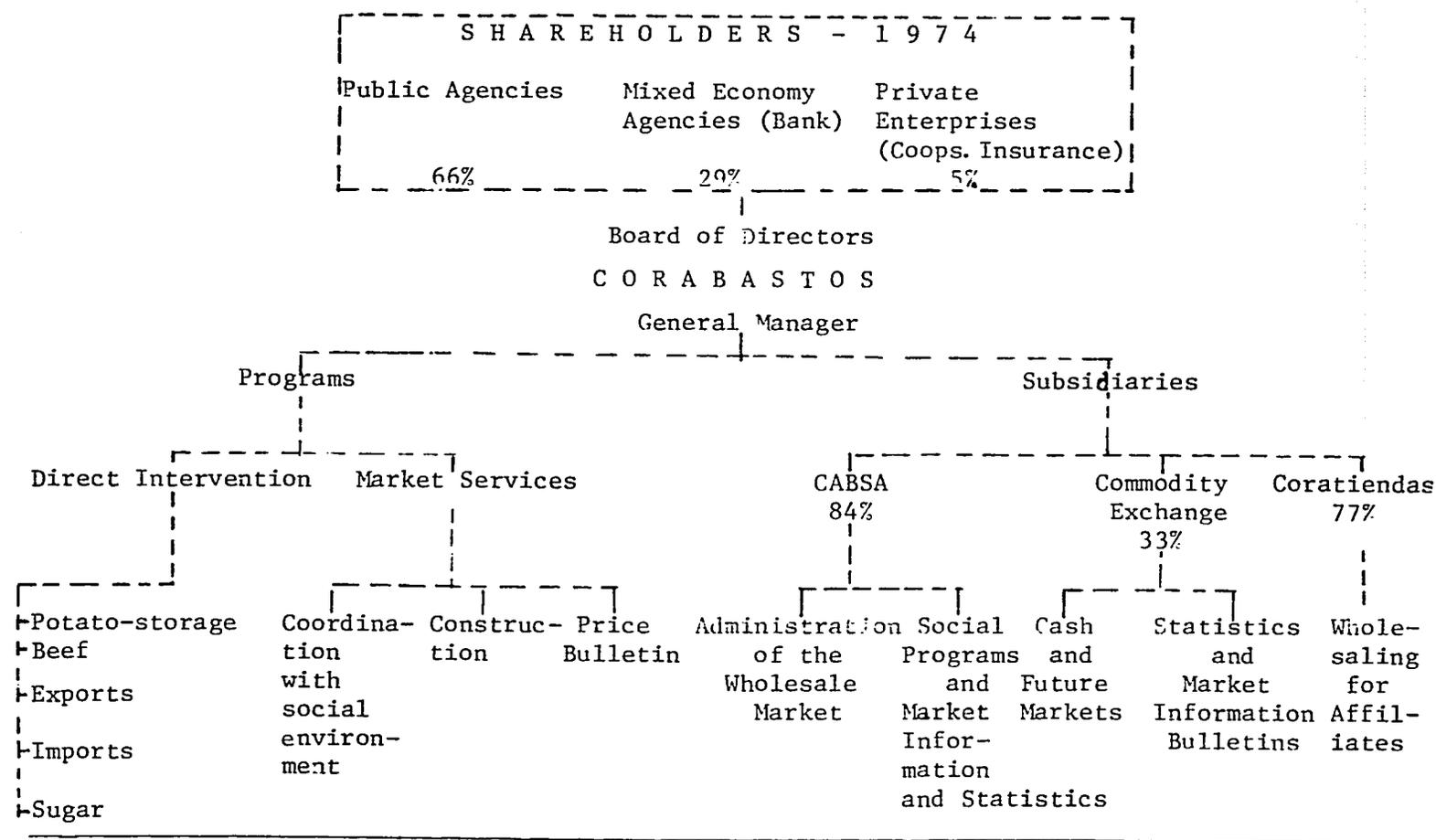


Figure 2. Corabastos Organization and Programs - 1974

Source: Interviews with executives and files of Corabastos and subsidiaries, Bogotá.

Corabastos, in turn was shareholder in three subsidiaries: In CABSAs Corabastos had 84 per cent of its equity capital (Figure 2) and 800 wholesalers located in the Central Market facility had 16 per cent; in Bolsa Agropecuaria de Colombia Corabastos had 33 per cent, and the Bogotá Stock Exchange Corporation, 33 per cent; and finally, in Coratiendas, Corabastos owned 77 per cent of equity capital and 82 neighborhood store owner affiliates owned 23 per cent.⁷

Corabastos had representatives in the Board of Directors of its subsidiaries. On the CABSAs Board of Directors Corabastos had four representatives and wholesalers had three. Corabastos also had its major investment and its major leadership effort in CABSAs.

CABSAs has three kinds of programs. The first program deals with the administration of the wholesale market facility; the second program deals with the welfare, education and training of all kinds of wholesale market participants and CABSAs personnel; the third with programs related to logistics and transactions technology, i.e., helping, along with other public and private agencies, to improve market information.

The commodity exchange authority has been in charge of administering and promoting cash and future commodity markets for Colombia. Corabastos is a stockholder, but has not had leadership in this organization. Instead, the leadership is comprised of the general manager of the exchange and leaders of the Banco de Bogotá (Bank of Bogotá).

⁷ Bolsa Agropecuaria de Colombia is the Colombia's commodity exchange authority. Coratiendas is the first neighborhood store owned cooperative chain in Bogotá.

Coratiendas carries out wholesaling functions for its neighborhood store affiliates. Corabastos has representatives on the Board of Directors of Coratiendas and provides technical assistance to the organization. Also, commercial transactions of commodities have been held between the two organizations.

In addition to organizational assistance activities which set up both its subsidiaries and the programs of its subsidiaries, Corabastos has been involved in other programs concerning marketing services and direct intervention as is indicated in Figure 2. Early in 1974 Corabastos operated programs in public relations and programs centered around the construction of market facilities and the production of a price bulletin. But most of the effort and resources were dedicated to programs of direct market intervention: buying, storing and wholesaling potatoes in the Bogotá area of influence; transporting, processing and wholesaling beef; buying and transporting fresh fruits and vegetables, then processing and exporting them frozen; importing grain and domestic distribution of sugar. Such direct intervention programs resulted in huge financial losses, however, they were closed, one by one, except for the sugar distribution program which has been profitable.

The financial losses of Corabastos prompted a merging with its subsidiary, CABSAs, a merger which, had been in preparation since early 1975 and which may be completed in mid- to late 1976. Before merging, bank creditors are expected to convert liabilities into equity capital. Banks then will dominate the Board of Directors of the merged corporation as is projected in Figure 3. This new

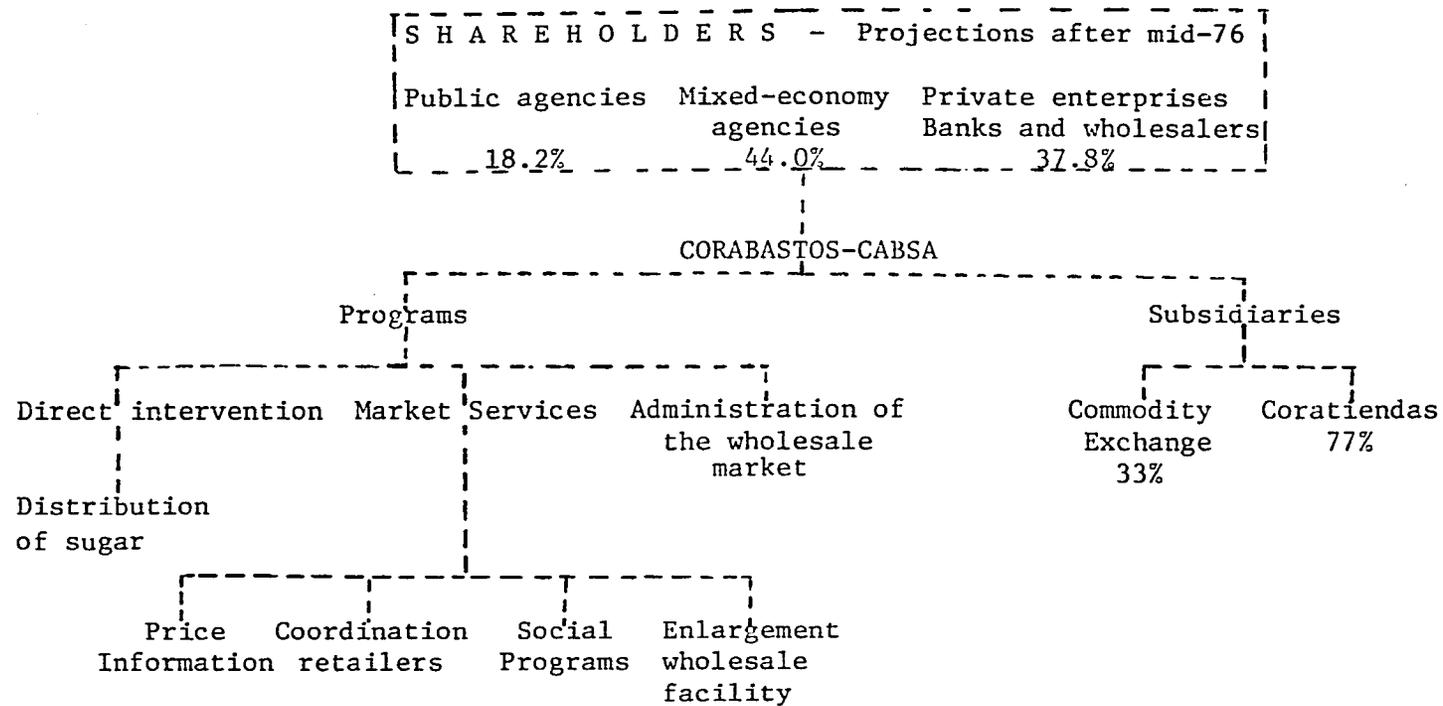


Figure 3. Projection of Corabastos-CABSA Organization After Subscription of New Equity Capital and Merging.

Source: Corabastos, "Informe de la Junta Directiva y del Gerente General de Corabastos a la Asamblea Ordinaria Reunida en Bogotá el Miércoles 17 de Marzo de 1976." Bogotá, 1976, p. 12, Table 7.

composition of the Board of Directors may give more emphasis to less risky and more profitable programs.

This brief discussion, which considers Corabastos' organization during the period of 1974 to the present, is an oversimplification. Still, Corabastos' internal organization has changed very rapidly in its few years of existence as the following section indicates.

Corabastos Action-A Historical Perspective

Four major periods can be outlined in Corabastos life from its beginnings in 1970 until mid-1976.

The first period (1970 to early 1971) was a time for organization, definition of the market reform approach and objectives and diagnostic research. Three basic programs were organized and implemented during this period: (1) production and assembly; (2) Bogotá's urban food distribution, and (3) consumer education. To design and initiate these programs, a basic core of information was necessary. Thus, a study of food distribution problems was contracted with the National University - Development Research Center (CID). The research covered wholesaling, retailing, prices, price margins and consumer behavior. Corabastos personnel studied the main assembly and production centers in the area of influence in Bogotá, described their characteristics and tried to discover improvement opportunities.

Simultaneously, Corabastos initiated an organizational and promotional program for public plaza retailers to improve efficiency. This program was canceled early in this period as a result of poor planning.

In a second period (1971 to early 1972), following CID and LAMP recommendations, more attention was paid to wholesaling and independent neighborhood stores. The program could be outlined as follows:

1. Programming and constructing a wholesale market facility.
2. Training and motivating wholesalers for relocation to the new facility.
3. Organization and training of neighborhood store owners.

Prefeasibility and feasibility studies were carried out⁸ and a wholesale market facility was designed and constructed. A complementary formal organization, CABSAs, in charge of administering the wholesale facility, was then set up. At the same time, motivation and educational programs were directly organized by Corabastos, for Plaza España wholesalers and retailers.

The third program, directed at neighborhood stores, was motivated by one important conclusion of CID's study. It was found that low and middle income consumers spent the highest proportion of their food bill at neighborhood stores. In addition, because of very low scale and low bargaining power in purchasing, these retailers had high costs and, therefore, there were high prices for consumers. Thus, low income consumers ended up paying the highest food prices.

Following the Brazilian experience with CADEP (campaign for the defense and protection of low income groups), Corabastos designed and implemented a program called P^oN (Nutritional Supplies Program).

⁸Corabastos, "Aspectos Económicos, Técnicos y Financieros del Proyecto de la Central Mayorista de Abastecimientos de Bogotá," Bogotá, April 1971, (Mimeographed.) And Corabastos, "Estudio de Factibilidad de la Central de Abastecimientos para Bogotá," Bogotá, December, 1971. (Mimeographed.)

The program was a combination of three different government policies: First, food price controls; second, direct intervention by IDEMA, which was thought to be the main supplier of the program; third, promotional program to improve coordination between three selected wholesalers and hundreds of affiliated neighborhood stores.

One problem in implementing the program was the low level of education of neighborhood store operators. For this and other reasons Corabastos gave financial support to CEIMA (Center for studies and research in agricultural marketing) to organize and carry out educational activities for retailers. A second problem was posed by unreliable supplies from IDEMA, especially for products under government price controls. For these reasons Corabastos began a direct market intervention program, competing with the private and public sector buying, handling and selling sugar, salt, plantains and importing lentils, chickpeas and dry green peas. Through this intervention, Corabastos began moving away from its initial market reform approach and goals.

The third period (late 1972-1973) began with a nationally televised and grandiose inauguration of the wholesale market facilities headed by the Colombian President, the Minister of Agriculture, the City's mayor and political representatives from other countries.⁹ At this time, Corabastos' general manager was being mentioned as a candidate for Minister of Agriculture.

From politicians' addresses it was understood by many consumers and farmers, and especially by the Corabastos leadership, that this

⁹The inauguration was held on the 20th of July - celebration of Colombia's national independence.

new market facility and other Corabastos' programs represented the end of speculators and hoarders and the beginning of low prices for consumers and high prices to producers. However, the rate of inflation by this time was increasing and so were political pressures on Corabastos. Thus, Corabastos initiated both massive institutional propaganda and new programs aimed more at showing administrative efficiency and innovative ideas than combating increasing food prices. And soon, by October 1972, a new program was announced through the mass media. It was a project for introducing an auction system for transactions of perishables, but a project combined with direct intervention. Corabastos would buy and sell perishables in a public auction held daily.¹⁰ However the project was not even started since Corabastos was unable to obtain the huge financial and human resources required for such a program. Moreover potential sellers and buyers did not cooperate. Nevertheless, it was the beginning of the idea of setting up a commodity exchange.

In spite of marketing reform programs, most wholesalers located in the new central facility were adopting innovations at a slower pace than Corabastos' leaders wanted. In addition, as elections for president were getting closer, there were political pressures by Conservative party leaders to prepare programs to be used in the election month (April, 1974). Thus, Corabastos' leaders decided to carry out programs, both to modernize the system by themselves and to serve short run political interests.

¹⁰Corabastos, "Programa de Bolsa y Subasta de Productos Agropecuarios-Corasubasta," Bogotá, 1973, pp. 1-69. (Mimeographed.)

As a result, they entered the business of processing and exporting frozen fruits and vegetables, storing potatoes, processing and wholesaling beef, and importing grains. The best human resources available in the country were hired and several sources of capital were secured. Thus, new and more aggressive direct intervention programs were set up and higher risks were accepted. But, in fact, these programs were inconsistent with Corabastos' initial market reform approach.

Nevertheless, there were new programs planned and implemented under its original doctrine. The corporation promoted and provided resources to the first neighborhood stores cooperative chain (May 31, 1973). It also participated in the promotion and investment of equity capital in the commodity exchange (September 1973).

The fourth period began in 1974. Direct intervention programs started producing outputs but with poor financial results. Net working capital was increasingly negative, so Corabastos could not pay its due liabilities, and new financial resources were not forthcoming. However, in an effort to avoid poor financial performance, new and huge direct intervention projects were planned. For example, a project to invest in beef and livestock was approved by the general manager.¹¹ The project contemplated the following actions: contract with ranchers for livestock feeding, slaughter in its own facilities, process and wholesale at the national level in Bogotá, Cali, Medellín and Barranquilla, export of baby beef, rabbit's meat, etc. The project reached only the experimental stage.

¹¹Corabastos, "Proyecto para la Comercialización del Ganado Vacuno en Bogotá", Bogotá, March 1974. (Mimeographed.)

Late in 1974 and early in 1975 the mass media was leaking information about Corabastos' financial position being close to bankruptcy. Indeed, Corabastos' direct intervention programs were closed one by one. And the market reform programs underway suffered a shortage of financial resources, though all have survived so far, including Corabastos' subsidiaries.

Corabastos has tried every possible alternative to obtain government financial support. Yet, government resources have not been available just to pay Corabastos losses. However, it does seem that Corabastos and CABSAs will merge and creditors' banks will capitalize debts for two years (Figure 3). Then, the government may buy back stocks held by banks using the budget of 1977 and 1978. If so, Corabastos' losses will be finally paid for by taxpayers.

It is important to note here that direct intervention programs have had subsidized prices. But data from this research tend to indicate that subsidies benefit only small groups, though, in contrast programs fomenting changes in the private system may have produced important benefits for large social groups (see following chapters).

Financial Results of Direct Intervention Programs

Potato Storing

Potato producers and consumers face great seasonal price fluctuations. The main potato harvest in the Bogotá supply area runs from August to October with a large secondary harvest around January and February. However, there are fresh harvested potatoes in the market

at all times. Prices fall sharply during the main harvest periods and increase sharply, in the nonharvest periods, especially around April. If it is assumed that the demand function for potatoes is rather inelastic and stable, seasonal price fluctuations can be explained by the quantity of potatoes being harvested, since there is no refrigerated storage at any level in the marketing channel.

There is some evidence that Corabastos was committed to potato storage due to a request by the Minister of Agriculture in August, 1973. Corabastos set up two main goals: (1) to reduce price declines during the main harvest periods; (2) to increase the supply of potatoes in nonharvest periods and bring down prices for consumers.¹² Besides these goals, another hidden objective of the conservative government may have existed, as revealed in several actions; such as helping the Conservative party candidate in the election held in April, 1974¹³ in which the main issue of the Liberal candidate was the high cost of living. Corabastos' general manager, at that time, was a political supporter of both the President and the Conservative party candidate.

Corabastos set up a support price for farmers, spending about 5 million pesos in only three months in subsidies intended for farmers due to the difference between the support price and a much lower market price. Also, a ceiling price for sales was established. Corabastos spent about 2.5 million pesos more on subsidies during April 1974 due

¹²Corabastos, Realizaciones, Agosto 1970-Diciembre 1973 (Bogotá: Arli Ltd., April, 1974).

¹³Two members of the Board of Directors interviewed in 1975, and the potato storage manager agreed with this statement and used it to explain some of their policies.

to the differences between the ceiling price and the higher market price. Nevertheless, the data from this research indicate that subsidies of the potato program may not have benefited large social groups. Research estimates indicate that half of the total subsidies may have benefited four farmers, who were the largest suppliers, and two wholesalers, who were the largest buyers (Table 3).

The author has evidence from case studies and monthly price indices that the program slightly reduced price fluctuations as a result of reducing supply during harvest periods and increasing supply in non-harvest periods. However, price supports and price ceilings may not have had any impact on market price fluctuation, but rather resulted in subsidies and queues of trucks. Reduction of price fluctuations may have marginally benefited thousands of farmers in the harvest period, but not consumers. On the other hand, consumers benefited in the nonharvest period while farmers did not.

Corabastos had no reliable marketing channels for distribution of its stored potatoes and only had the logistic capacity to handle a limited volume per day. Thus, all potatoes stored could not reach the market in the month of highest prices. In addition, its technology and management on storing temperature, on selection of varieties with best storing qualities and on handling, were rather poor. Also, the storing strategy of buying in the main harvest period (August) and selling in months with the highest prices (April) is risky¹⁴ and

¹⁴To predict the months of lowest prices and highest prices is very difficult in a country with poor market information. Though there are some trends, harvests are affected by changes in weather conditions in the different and scattered production zones.

Table 3. Distribution of Subsidy Payments to Farmers and Merchants from the Corabastos Potato Storing Program between September 1973 and July 1974

	Col. \$	Percentage
Subsidy to Farmers		
4 largest	2,061,084	40.1
5 th to 8 th largest	519,126	10.1
9 th to 142 th	<u>2,559,651</u>	<u>49.8</u>
Subtotal	5,139,861	100.0
Subsidy in Sales		
To two wholesalers	2,502,070	72.1
To retailers (140)	<u>967,571</u>	<u>27.9</u>
Subtotal	3,469,641	100.0
T O T A L	8,609,502	

Source: Estimated from Corabastos potato program statistics, Bogotá, 1973-1974.

implies long periods of storage. Thus, physical product losses were high. About 50 per cent of volume stored (equivalent to 7.5 million pesos at purchasing cost) was lost due to spoilage, up to mid-1974.

Some of the major mistakes were corrected for the second storing period (starting July 1974). But there was no working capital; hence, the volume stored was very low and not enough to reach a break-even point.

Financial operating losses of the potato program were 171 per cent-sales in the first storing period. Up to December 1974 losses reached 15.4 million pesos (See Table 4) and up to December 1975, 20.0 million pesos.

Processing and Exporting Fruits and Vegetables

This program may have been motivated by two main factors:

1. Corabastos leaders' perception of the low rate in adoption of innovations and the low operational efficiency of the small scale fruits and vegetables wholesalers in the central market. It was expected that this low level of progressiveness and efficiency would be changed by the demonstration effect of a direct intervention program using modern technology and oriented to serve an export market.

2. Two merchants from foreign countries offered to buy selected frozen fruits and vegetables. Corabastos gambled this time with the highest of risks of sophisticated technology and export of perishable commodities. Highly qualified technicians on production and processing of fruits and vegetables were hired. But the program was production oriented rather than market oriented, and the major efforts and resources were thus invested in the technicalities of processing,

Table 4. Income Statement of Corabastos for Three Direct Intervention Programs: Potatoes, Beef and Exports

	Potatoes Sept. '73 to Dec. '74	Exports Sept. '73 to Dec. '74	Beef May 1, '73 to Dec. '74
(Millions of pesos)			
Sales	8.96	3.5	61.96
Purchases	15.04	3.1	52.12
Gross margin	(6.08)	0.4	8.84
Total operation expenses ^a	9.32	11.4	7.27
Profits in operation	--	--	1.67
Losses in operation	(15.40) ^b	(11.0) ^c	--
(Profits/Sales) 100	--	--	2.7%
(Losses/Sales) 100	171%	314%	--

Source: Estimated from Corabastos financial statements. Bogotá 1973-1975.

^aGeneral overhead costs are not included.

^bIncreased to 20.0 million pesos up to December 1975.

^cIncreased to 15.6 million pesos up to December 1975.

packing, transporting, etc. It was assumed that Corabastos would share in a growing market for frozen food in the United States and Europe. But could it serve one segment of it? Through what channels? Could Corabastos compete in any market segment? Would the program have a supporting national technological and managerial environment?

Colombia had neither the infrastructure nor the managerial capabilities to deal with the new technology. As a result, Corabastos faced many negative externalities which led to its development of a costly integrated flow and transaction channel from local farmers to wholesalers in Europe and the U.S.. But the channels were not reliable and had many managerial and technological flaws. Hence, the program, a costly though highly innovative experiment, did not pass the introduction stage. However, the experience was useful for AID in planning for future loans in food processing.¹⁵

Up to December 1974 the financial losses were 11.0 million pesos, or about 314 per cent on sales, and 15.6 million pesos up to December 1975 (Table 4).

Beef Program

The program started in May, 1973 when a plant for processing (cutting and packing) beef was built. The raw material was second quality beef retained from exports for which Corabastos organized the wholesaling in Bogotá. The program was motivated by the price increase for beef in the domestic market as a result of exports.

¹⁵Kornfeld, L., New Departures in Rural Development in Colombia (Bogotá: AID, 1974), Appendix. And Corabastos, "Proyecto de Agroindustrialización", Bogotá, July 1974, pp. 1-25. (Mimeographed.)

The program carried out a new approach to urban beef distribution. Most of the beef had been distributed by wholesalers who sold carcasses mainly to specialized retailers.¹⁶ The new system included cutting and packing by Corabastos and selling through neighborhood store chains affiliated with PAN and Coratiendas. Some neighborhood stores bought equipment for refrigeration to add meat as a new line.

Early in 1974 European beef imports were drastically reduced, and by mid-1974 beef exports of Colombia were closed down. Meanwhile, an ambitious project was written for buying from ranchers, slaughtering, processing and wholesaling. However several attempts to buy from ranchers and keep the program operating under the new scheme were unsuccessful. Thus, the program was closed because of lack of raw materials.

This program may not have caused any major change in the structure of the beef system as a whole. But it may have contributed to the initiation of a change in such a direction. In fact, retail chain affiliates learned to handle a broader line and to use mixed margins and lost leaders' techniques.

Prices to consumers were subsidized because raw material was bought at low prices in an agreement between the national government, exporters and Corabastos and the margin to retailers was controlled (2 per cent). Middle and low income groups which patronize consumer owned cooperatives and neighborhood stores benefited from the subsidized prices. In fact, prices for second quality beef, while the program was

¹⁶Details can be found in: David Cuéllar, Problemas del Mercadeo de Carne de Res en Bogotá, (Bogotá: CEIMA, 1973).

operating, were below their traditional three year trend as a result of the increase in supply of second quality beef on the domestic market.

The program exhibited good financial performance at the beginning, but as time passed its operational profits were reduced due to the decline in exports and, consequently, in raw materials for the program. Thus, reduction of scale and rigidities in laying off personnel contributed to an increase in per unit costs.

Other Intervention Programs and Summary of Direct Intervention

Some programs, such as wholesaling of sugar, have steadily produced net income to Corabastos. Sugar processors are required to assign a quota to IDEMA which, in turn, allocates part of it to Corabastos which serves as a source of income. There is no major risk in Corabastos handling sugar because buying and selling prices are fixed by government. Black market prices generally are higher than prices established by government.

One of the huge direct intervention programs involved grain imports. The last and largest imports were made in 1973. Corabastos, competing with IDEMA and private enterprises, imported 240 million pesos worth of commodities, most of which were chickpeas, dry green peas, grain and processed food. Prices dropped and the corporation decided to keep inventories. About 73 million pesos worth of grains were held in inventories on December 31, 1973, and 25 million were still in inventories on December 31, 1974. Long periods of storage resulted in high physical product losses and high storing costs. Indeed, it is

estimated that in this intervention operational financial losses were at the 60 million pesos level for 1974 and 1975.

In sum, operational financial losses in direct intervention programs are estimated at 94 million pesos. General overhead costs, the price information programs and the opportunity cost of Corabastos' investments in its subsidiaries account for the balance in losses (10 million pesos) and for the opportunity cost of its equity capital.

Direct intervention programs were inconsistent with the original Corabastos market reform approach, and used up its efforts and scarce resources. Social benefits were also doubtful, while financial results hampered potential market reform programs.

Financial Performance of Corabastos and CABS

This financial analysis is consolidated as well as comparative between CABS and Corabastos. Corabastos obtained capital sources first from its stockholders and second from local banks and the National Savings Fund.¹⁷ Its main investment was in the construction of the central wholesale market facility. Corabastos set up CABS in 1972, but remained as the main shareholder (84 per cent). CABS, whose equity capital has been around 112 million pesos (book value), undertook the responsibility for the 70 million pesos loan from the National Savings Fund and was in charge mainly of administration of the Central Market.

¹⁷The National Savings Fund is a public agency that receives from public institutions the retirement benefit provisions of their employees. Most of the money is invested in housing finance for public servants at subsidized interest rates.

Securing capital resources and allocating them have had the following general characteristics: (1) Long run investments such as physical facilities, were financed by short-term loans. (2) Short-term loans were used to finance purchases and inventories of goods. (3) There has been, in general, no repayment of loans nor of interest on loans.

By 1975 almost all current liabilities were overdue and current liabilities were rapidly increasing. Financial costs tended to take an increasing share of total operating expenses and working capital was increasingly negative (Table 5). Therefore, these organizations have no liquidity. In 1975 the consolidated-Corabastos-CABSA group had 10 cents to pay on each peso of current liabilities (Table 5).

Corabastos and CABSA have applied their assets to three kinds of major actions since 1970: (1) planning, constructing and administering of the wholesale market; (2) other reform related programs and (3) direct intervention. The main sources of income, then have been from Central Market facility rentals and gross profits on sales. Other reform programs, such as market information bulletins and radio programs, basic marketing research, educational programs to merchants, and promotion of new social and business organization, have as their primary characteristic the public good. Yet, although they may produce great social benefit, producers of the goods cannot capture enough benefits to make their production lucrative.

Historically, operational profits were very low and recently financial losses have been high (Table 5). And Corabastos' huge losses on direct intervention programs explain only partially its poor

Table 5. Corabastos and CABSAs Main Financial Statements and Ratios for 1974 and 1975

	Corabastos	CABSAs	Consolidated
	(Millions of pesos)		
INCOME STATEMENT			
Total gross revenue in 1974	28.3	36.7	77.0
Total gross revenue in 1975	11.3	49.0	60.3
Total operational expenses in 1974	(92.6)	(36.6)	(129.2)
Total operational expenses in 1975	(51.0)	(48.5)	(99.5)
Profits (losses) before taxes in 1974	(64.3)	0.1	(64.2)
Profits (losses) before taxes in 1975	(39.7)	0.5	(39.2)
Profits before taxes in 1973	3.2	2.0	5.2
Financial costs in 1974	(30.2)	(15.6)	(45.8)
Financial costs in 1975	(31.6)	(14.6)	(46.2)
Fin. costs/op. expenses in 1974	0.33:1	0.43:1	0.35:1
Fin. costs/op. expenses in 1975	0.62:1	0.30:1	0.46:1
BALANCE SHEET ON DEC. 31, 1975			
Liquid assets	5.6	16.7	18.3
Fixed assets	193.9	182.7	282.6 ^a
Total assets	199.5	199.4	300.9 ^a
Current liabilities	153.2	71.6	220.8 ^a
Long run liabilities	17.5	14.4	31.9
Stockholders' equity	28.8	113.4	48.2 ^a
RELATIONSHIPS ON DEC. 31			
Working capital in 1973	(32.5)	(31.3)	(63.8)
Working capital in 1974	(110.0)	(49.4)	(159.4)
Working capital in 1975	(147.3)	(54.9)	(202.2)
Current ratio in 1975	0.04:1	0.23:1	0.10:1
Stockholders' equity/assets, 1974	0.27:1	0.57:1	0.40:1
Stockholders' equity/assets, 1975	0.14:1	0.57:1	0.16:1
AT MARKET PRICES ON DEC. 31, 1975			
Total fixed assets	--	--	448.3
Stockholders' equity/assets	--	--	0.42:1

Source: Estimates derived from Corabastos and CABSAs financial statements. Bogotá, 1973-1975.

^aCorabastos owns 94 million pesos equity in CABSAs but has 4 million current liabilities to CABSAs.

financial performance. In fact, CABSA has paid no dividends on Corabastos' stocks (94 million pesos at book value). This capital has an actual cost to Corabastos estimated at 22.6 million pesos annually.¹⁸ Had Corabastos been paid that income, its accumulated operational financial losses would have been reduced to 69 million at most in 1974 and 1975. On the other hand, CABSA's accumulated losses would have increased to 45 million, at least. Thus, the two organizations would have a more similar financial position.

It follows, then, that not only was direct intervention a major source for losses, but also the Central Market facility has been producing losses. In fact, this research estimated, using several methods, that selected food wholesalers were being subsidized with 25 million pesos during 1974, and, consequently that to arrive at a market price, rental rates should be increased 140 per cent. CABSA's negative working capital is due to rental rate subsidies and almost half of the consolidated negative working capital is explained by rental rate subsidies, too.

Rental rates are not fixed in a competitive market but in a power game between organized wholesalers and Corabastos, a game initially played within CABSA's Board of Directors. Wholesalers have had power conferred on them by skills in negotiation, assets ownership, voice in Congress and in national trade organizations, capacity to organize and ability to coerce non-payment of rental rates, threats to remove

¹⁸ Since Corabastos has been paying an average interest rate of 24 per cent on its liabilities, this rate is applied to give an estimate of the cost of this capital (at book values) in CABSA.

CABSA's director from office and to abandon en masse the central facility. Corabastos' power, on the other hand, comes from its authority as a public sector entity. But this power has been atomized. That is, an individual member on the Board represents his/her public agency with interests in distinct areas and is jealous of other members since all are not united as representatives with common public interests. This was clear at least during the period from 1973 to early 1975.

Paradoxically, the poor financial position gave Corabastos power in the eyes of merchants. First, Corabastos did not have much to lose by being exposed to wholesalers' coercive power. Also, central and municipal government authorities, concerned with Corabastos' poor finances, advised and supported publicly, through mass media, a substantial increase in rental rates. Thus, after non-fruitful negotiations, rental rates were increased by 60 per cent (unilaterally) through a Corabastos majority vote in CABSA in mid-1975.¹⁹ Almost all Central Market wholesalers were united in a single organization, got support from congressmen and decided collectively not to pay the new rental rates. And so, the harmony between merchants and Corabastos from which merchants had profited for three years was broken. However, the merchants' organization had flaws of its own. Large merchants in grains and processed food did not want to risk their position and high profits, since there was a threat of the government taking over directly. Thus, after six months of conflict, it seems that the great majority finally individually decided to pay the new rental rates.

¹⁹ It was the first time that Corabastos actually exerted its majority vote on the CABSA Board of Directors.

If Corabastos and CABSAs merge, substantial rental rate increases would not allow a financial recovery by 1980.²⁰ Yet without merging and without government help, the probabilities of Corabastos surviving as an independent enterprise are dim. And the legal bankruptcy of Corabastos will badly hurt not only CABSAs, but also the commodity exchange and the neighborhood store cooperative chain. It seems that the government is not willing to pay that price.

The Minister of Agriculture has thus requested a budget for stock purchases in Corabastos-CABSAs in 1977 and 1978 for 103 million pesos.²¹ Meanwhile, bank creditors will subscribe stocks out of their past due accounts receivable before merging is completed. In negotiations all steps are a precondition to merger. Thus, banks will buy stock if Corabastos gets government help, and Corabastos will merge only after the previous step is completed. In fact, Corabastos merging with CABSAs before such previous arrangements being accomplished can be an incentive to creditors of the new company (Corabastos-CABSAs) to bring their dispute into the courts because of the significant resources at market prices which are under CABSAs's ownership and control.²²

Corabastos' accounts have already estimated a capital gain of 73 million by market pricing land under its control. Otherwise, its stockholders' equity would have been 45.2 million pesos on December 31, 1975, everything at book prices, and their 55 million pesos

²⁰Projections in Corabastos, "Informe a la asamblea-Marzo de 1976" pp. 17-23.

²¹Letter from the Minister of Agriculture to the National Planning Head, April 1976.

²²In which, of course, Corabastos has its major resource as majority stockholder.

subscribed capital would have been lost. Hence, Corabastos would have been in complete indebtedness.

But this leads to the issue of introducing market prices to all fixed assets and then estimating capital gains which would allow re-estimating (1) stockholder share of total equity and, (2) gains in surplus value²³ which may have contributed to the wealth of the organizations. It is clear from Table 6 that fixed assets are undervalued at book prices. Commercial value in 1975 is about twice as much as book value, with the difference between the two values about 240 million pesos. If Corabastos previous valuation of 73 million is included, the value differential is still 167 million, a figure which is an estimate of the undervaluation of fixed assets by CABSAs. At market prices, it is clear that the stockholders of the consolidated organization still have a relatively large share of total equity (42 per cent). Thus, actually consolidated and at market prices this organization will not be at an extreme point of indebtedness.

However, the difference between commercial value and book value does not indicate that the organization made a net capital gain of 239.9 million pesos, and, hence, is wealthier because of big gains in the land, warehouses and building business. It seems, instead, that land holdings have produced and are expected to produce land surplus gains. Still, once the land, buildings and warehouses are included, the net fixed asset surplus gain is only 40 million pesos, less than

²³ Surplus value gain (or loss) of a fixed asset is defined here as the difference between its original price and the price in a later period, both measured in the same monetary unit and under the assumption that the asset has not changed its quality or quantity by owner's use or improvement.

the land surplus gain²⁴ (see Table 6). This surplus gain can be counted as net income that society provides free to the fixed asset owner. In other words, the asset earns value as a result of other people's activities, i.e., the general urbanization process. The price differential due to inflation can be considered only as a monetary problem, a result of using different units of measurement. However, there is one particular point of interest here. Since the rate of inflation²⁵ was higher than the interest rate (16 per cent) charged by the National Savings Fund, there was an actual flow of funds from the creditor to CABSAs because of the negative real interest rate. Thus, in this case inflation has made some contribution to the wealth of the organization, and the net income (hence the wealth increase) is larger than the estimated surplus.

The large financial losses of direct intervention programs are partially compensated for by the net income realized in land sales and by unrealized gains in net income due to asset valuation. Thus, the financial position of Corabastos-CABSAs is better than their own accounting systems show. Financial losses are still high, but consolidated the organizations are not in great indebtedness. The problem remaining, then, is one of no liquidity.²⁶ The government budget allocated for 1977 and 1978 can be seen as an investment in

²⁴Land surplus was estimated in 60 million. Corabastos' very early policy was to make profits on land by selling 68 hectares; 32 would be used to the construction of the Central Market.

²⁵From June 1972 to June 1973, June '74 and June '75 the rate of inflation was 29, 32 and 26 per cent, respectively.

²⁶Corabastos-CABSAs will keep a 45 hectare parcel for future expansion and sell a 10 hectare parcel for 30 million pesos.

Table 6. Book Value of Land, Buildings and Warehouses for Corabastos and CABSAs, and Estimates of Market Prices Using Money Purchasing Power Indexes and Actual Valuation by the National Geographic Institute

Year	Index of Col \$ Purchasing Power June 1970=100 ^a	Book Value (Depreciation Included)	Estimated Value at Current Pesos (Depreciation Included)	Estimated Commercial Value at Current Pesos (Depre- ciation Included) ^b	Difference between Commercial Value and Book Value	Gains
1970	100	8.0	8.0	8.0	0.0	0.0
1972	75	201.2	203.2	--	--	--
1975	35	190.1	390.1	430.0	239.9	39.9

Sources: Estimates of the research using data from: Corabastos income statements, Bogotá 1970, 1972, 1975, and:

^aDepartamento Nacional de Estadística, Boletín Mensual de Estadística (Bogotá), No. 293 (Feb. 1975), p. 172.

^bCorabastos, "Informe a la asamblea-Marzo de 1976" pp. 14, 26.

fixed assets and part of a solution to liquidity of the consolidated group.

Comments on Leadership

Here leadership is treated, in connection with other institutional variables, through a general approach.

In the development of institutions, if "one man is the dominant personality and if he has innovative commitments, organizational capabilities and political skills, the enterprise is equipped with a precious resource."²⁷

Corabastos founder and first general manager for four years (1970-74) had the above qualities in high degree. He was committed to and learned the LAMP marketing approach. Also, he was firmly dedicated to the nation's Conservative party doctrine and leadership. He was able to organize groups of leaders to form linkages and work with market participants in many ways. One of the most important and successful ways was by investing with them in joint ventures and setting up new organizations: CABSAs, Coratiendas and the commodity exchange. Market participants and previously outside leaders and technicians were involved in active participation, interaction and learning by being members of the Board of Directors, warehouse leaders groups, unions of workers (in wholesaling), stockholders meetings, formal training courses and even in sport championships. This innovative group work then started a self-supporting process of change (see following chapters).

²⁷ Esman, "The Elements of Institutional Building," p. 12.

Mass media was widely used. Wholesalers serving voluntary chains recognized that sales were improved when they used Corabastos labels in packaging. In two years Corabastos had acquired national prestige and was a household word.

Success of programs improved their access to credit sources. Thus, the organization in 1973 was able to obtain loans for almost any program it wanted (see liabilities and working capital series - Table 5). The leader wanted more and faster innovation.²⁸ He alone undertook very high risks and wanted to take advantage of every opportunity. He was committed to one party (his party) in a two-party political system. He also took high risks to support the presidential candidate of his party, probably expecting to get more resources for the corporation if he were elected, though he was not.

Despite such successes, planning, as well as monitoring, was weak. Plans had to be made fast and the leader's personality was so influential that technical studies may have produced results biased in the direction the leader wanted. Monitoring was loose and so programs were initiated and soon terminated. Moreover, the accounting system was confusing. In 1974 operational costs were concealed or registered as assets. Hence, income statements either did not show losses or reduced them. Auditing was also weak. Accounting and auditing of Corabastos subsidiaries was better organized.

The government in power (1970-1974) placed heavy emphasis on personal relationships rather than on institutional ones, an emphasis

²⁸After visiting the grain exchange in Buenos Aires, Argentina, he asked his technicians to make a feasibility study and set up a commodity exchange within one month.

reflected in Corabastos. In transactions with government a triangular relationship was developed.

The leader had close political ties with the president. As a result, main policies and decisions were discussed personally between the president and the general manager. The president then gave his instructions to government agencies, which were stockholders in Corabastos, to take action.²⁹

Thus, the relationship with government agencies became dependent on personal rather than institutional relationships. And such a personal and political relationship conferred on the Corabastos general manager a great deal of decision-making power and authority in policy-making. Board of Directors members were then in a passive relationship of executing orders from the president and were not actively involved in Corabastos' destiny. Once the leader left his job, just before the liberal president was inaugurated, the Board of Directors began discovering the weak financial position of Corabastos, but members of other government agencies were not very committed to finding a solution.

Two acting general managers alternated in the job between mid 1974 and 1975 . The main job was to appraise the financial position and close some programs. Their leadership and also the institutional linkages of Corabastos were not strong. In addition,

²⁹Government agencies were directed by the president to buy stocks in Corabastos. Other government agencies, such as national planning, could not complete their operating procedures in the study of the National Saving Fund loan to Corabastos because the president asked to approve it.

proposals to find a solution were not well supported, so no financial solution was found. Meanwhile, the financial cost of previous commitments were piling up.

The general manager in charge since August 1975 is a well-qualified technician with some political experience and he is committed to the organization. He has a single main goal: to find a financial solution and to make a financially sound long-run plan. He has rationalized every investment and cost, organized the accounting system and contracted financial analysis. He has made clear and workable proposals to government and bank creditors in a process of institutionalizing relationships. He has also organized the few personnel resources remaining under Corabastos and has given leadership to their subsidiaries, thus creating new optimism and long range, well structured plans. The merging with CABSAs is being prepared very systematically.

In sum, Corabastos was able to organize innovative programs, to set up subsidiaries to carry out market improvement programs which may have large social benefits in the short and long term (see next chapters). But personal ties of the leadership with the leaders of one party, in a two-party political system, though useful in securing resources in the early period, later resulted in partisanship pressures which may have led Corabastos away from its original market reform approach. Thus, direct intervention programs, not well planned, combined with subsidies in several programs, resulted in poor performance. High financial losses were incurred which led to a tarnished image and a slow and difficult period of financial recovery. Consequently planning and promotion of new reform programs will be more difficult in the near future.

CHAPTER IV
IMPACT OF FOOD WHOLESALING REFORM PROGRAMS ON
PRODUCTION AND ASSEMBLY

Farm production and assembly are considered an integral part of the food marketing system. Indeed, decisions and actions of farmers in response to market opportunities are part of the marketing system coordinating function. Nevertheless, in this study the structure of production, despite its great influence upon the marketing system, was considered as a given variable and not examined. The reason is that market reform programs were expected to only marginally change production structure in the short term.

The following components were considered within the production-assembly-wholesale market interface¹: farmers within Bogotá's food shed area, assemblers serving Bogotá's wholesale market, long haul truckers, Bogotá's wholesale merchants and, finally the commodity exchange authority and participants. The following programs have had major impacts on this interface:

1. Wholesale market reform which includes: relocation of the wholesale market to the periphery of Bogotá, separation of wholesalers from retailers, new social and technological environment, new organizations and new power structures, new written and unwritten laws and new conditions of entry and exit.

¹Market interfaces refer here to food marketing system phases having wholesaling as the common boundary. Two main interfaces are studied: production, assembly-wholesale market and wholesale-retail.

2. Corabastos-CABSA programs with implications for market information.

3. The commodity exchange related programs.

Chapters IV and V give emphasis to the impact of major reform programs on market structure and conduct within the production-assembly-wholesale market interface. References are made to the interaction of the interface with the marketing system as a whole. In addition, some references are made to performance, which is considered in Chapter VI.

The Old Wholesale Plaza España Market²

Plaza España was the main place for food wholesaling and retailing in Bogotá from 1953 to July 1972. The market area included 40 blocks within a low income residential area in downtown Bogotá (Figure 4). Plaza España developed as a result of conflict between government forces and merchants over food market locations. Merchants finally resisted harassment in the España Park. Then, the area was slowly adapted as a commercial center by market forces.

The area encompassed nine plazas in which both food wholesaling and retailing functions were performed. In addition, in the eastern part of the area hundreds of houses were converted to warehouses for grains, processed food and potatoes. Moreover, many wholesalers performed their functions on trucks and many retailers on stairs and on muddy street sidewalks around plazas and warehouses. There were

²This section is based upon in-depth case studies and information borrowed from: CID, Informe de la Plaza España, and from IDEMA's check point study (1970).

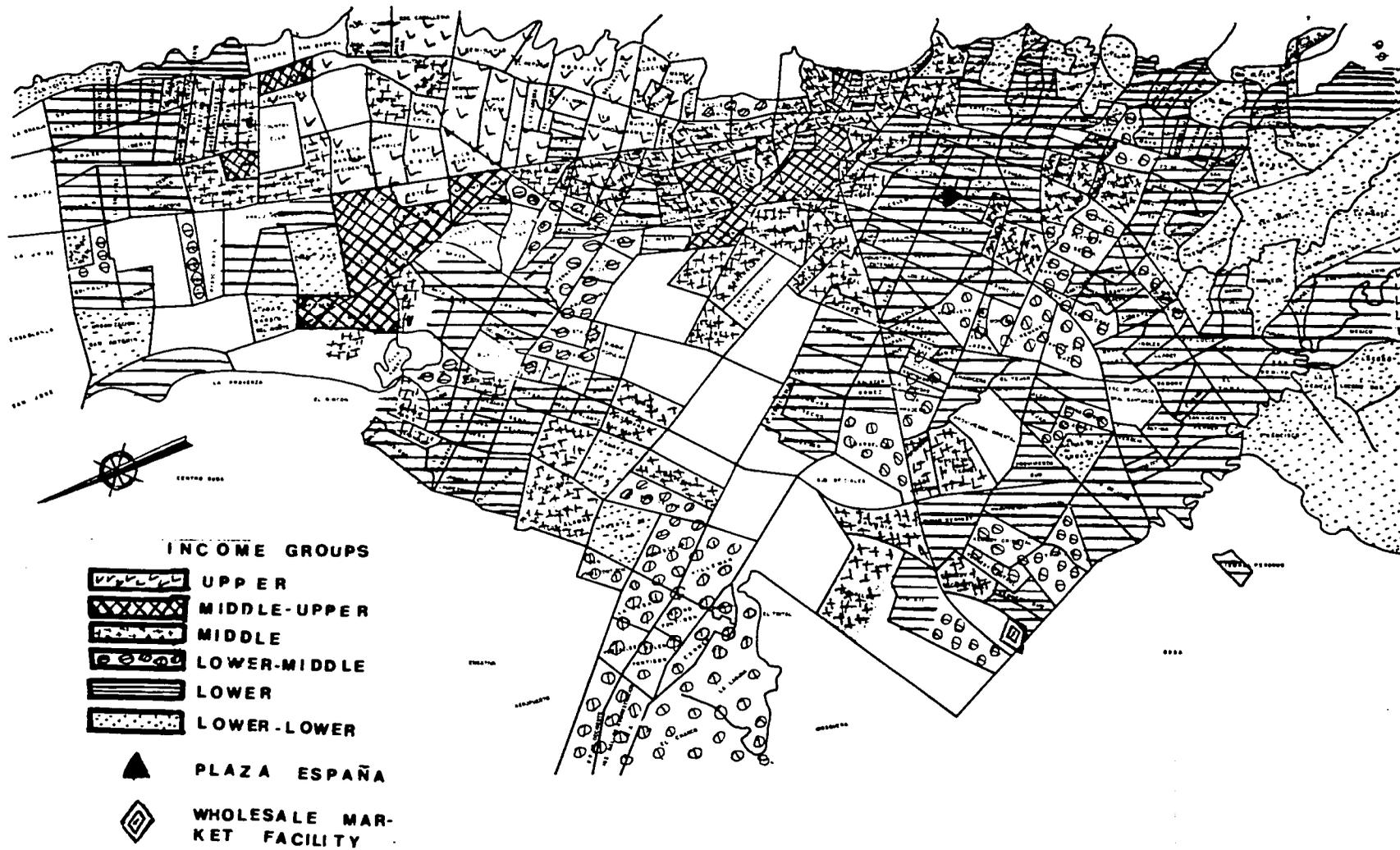


Figure 4. Bogotá Map Indicating Location of Income Groups, Plaza España and Wholesale Market Facility.

Source: DANE (1970).

no packing, loading or unloading zones, no specially designed market facilities.

Although there was some specialization by groups of food products, it was possible for retailers to buy almost all of their food products in one plaza. In Plaza España almost any kind of food could be found such as, (1) grains, (2) processed food, (3) potatoes, (4) plaintain-cassava, (5) fresh fruits and vegetables and (6) a small percentage of the market for beef, port, fish and even livestock, along with industrial inputs for agriculture.

Moreover, Plaza España did not specialize in food alone. Once food brought customer traffic, market opportunities for non-food products were present and entrepreneurs would come to take profitable advantages of these opportunities. Thus, family type specialized businesses in wholesaling and, mainly, retailing of clothing, technological agricultural inputs, hardware, drugs, transportation related activities, theaters, hospitals, schools, banks, notaries, industries of many kinds, cafeterias and beauty shops grew quickly. In addition, other market related services flourished, i.e., restaurants, night-clubs, passenger hotels and prostitution hotels.

As the city of Bogotá grew in population, size and income so did Plaza España in numbers of businesses and in scale. But problems grew, too. Perhaps urban problems were the most pressing for local authorities as a result of congestion, deterioration and crime in a downtown zone. About 30,000 vehicles (trucks, buses, taxis, animal and hand-pull carts) entered the area daily.³ (Figure 5).

³Estimates of CID, Informe de la Plaza España.



Figure 5. An Overview of One Warehouse and One Street Within the Plaza España Wholesale Market Complex.

Source: Corabastos' Files, 1971.

In addition, thousands of consumers, merchants, workers and resident families were entering, exiting, or doing business there and thus adding more to congestion. Also, the flow of heavy trucks to a downtown area increased congestion in bordering places and caused damage to streets not actually built for this kind of traffic.

The problems of deterioration and crime in a large downtown area became closely intertwined with the poor performance of food wholesaling. How could crime be controlled where thousands of market participants were mixed with thieves and prostitutes in streets, restaurants and nightclubs and everybody was doing his "own" business? Consequently values and attitudes toward intermediaries as parasites, held by the public and by public officials, were reinforced by this job environment. Merchants themselves were ashamed of their jobs and of the low status afforded them. Insecurity and threats⁴ increased the risks for merchants, yet they had no choice but to accept them if they wanted to remain in business.

Congestion and insecurity made interpersonal communication more difficult and reduced the range of choice as to whom to sell to or from whom to buy. In fact, to complete the traditional transactions by inspection buyers and sellers should meet. Thus, many farmers would choose to sell to nearby wholesalers rather than spend time looking for others or running the risk of being robbed. And once the truck with one's cargo finally found a parking place, the range of choice as to whom to sell to was limited to a short distance that

⁴Thieves charged a fee to merchants to protect them from other thieves.

allowed unloading (Figure 5). Therefore, the nine plazas were still, to some extent, physically separated and the flow of market information among them was also limited. Moreover, there was no public information system. How could such a system be carried out and who would take the risk of assault? Wholesaling was a poor coordinating link between retailers and assemblers and farmers. How could food market performance be improved within this physical and social environment?

The system was then poorly coordinated. Transactions were completed secretly in restaurants, bars, warehouses and streets. Prices varied between plazas and between individual transactions, and price fluctuations were also extreme. This added more to risks, and high risks deter the acceptance of yet another, newer risk, that of adopting innovations. The system was thus stagnant and remained at a low equilibrium with high costs, high physical product losses, poor product quality and few offered services. And the high monetary and non-monetary cost of the system resulted in high margins (relative to its services) and, finally, high real prices to millions of consumers and low prices to thousands of farmers. Ultimately, this costly system was contributing to a retardation of regional economic growth.

If the above situation had continued through 1974, it would have become worse since more volume and more services would have had to have been provided within those very limiting constraints.

The Process of Relocation from Plaza España
to the New Wholesale Market Facility

Despite all problems in Plaza España, the plan to construct a wholesale market facility did not arouse automatic support from merchants. Incentives for relocation were not clearly perceived in the early 1970s. To overcome resistance Corabastos organized a major promotional effort in 1971 and early 1972. Educational campaigns, social work, mass media propaganda, meetings with leaders and visits to the market facility, then under construction were organized. Negotiations with leaders to get their support were carried forward as were negotiations with groups who argued they would lose. Further, government authorities gave public support. Finally, a group of wholesale leaders decided to support the program being implemented and accepted relocation.

Nevertheless, a group of market participants offered resistance to the relocation of wholesaling and the closing of Plaza España. Some of them, such as plaza owners or administrators, expected to realize financial losses. Their businesses would be closed and their customers would be taken away not by competition, but by government decree. Some went to the courts to present their cases: their rights as free entrepreneurs were being taken away. Finally, several plaza administrators led a group of organized merchants to resist relocation. There were threats to blow up the new central facility.

Thus, to avoid surprises, the government decided to use its coercive power and secret plans were made to insure a successful outcome. The government employed military forces to block all food

entries to Plaza España and Plaza doors were walled. The strategy was to effect the relocation all at once, if possible. The outcome of the conflict was as Corabastos and the government had planned. The political power of Corabastos' leaders and their close linkages with municipal and national governmental officials were decisive.

Corabastos also had to find a solution for Plaza España re-tailers. Thus, one plaza was rented and another built. To somehow compensate Plaza España administrators who continued court battles, the administration of these plazas was initially negotiated with them.

The objectives of relocation were fairly achieved. Food perishables, wholesaling and retailing were removed from Plaza España. A small share of grains and processed food still remains.

Characteristics, Operation and Ownership of the New Wholesale Market Facility

The construction, operation and administration of the new wholesale market have been the major focus of activities and investments of Corabastos and CABSAs. The facility is located on the outskirts of the city, not very far from a low and middle income residential area in the western part of the city. It is well connected to the city by different avenues and there are roads coming from production areas. The facility also has modern and functional parking, loading and unloading facilities and green zones along with good services to facilitate the functioning of the wholesale market (Figure 6).

The central wholesale market facility occupies 384,677 square meters, divided as follows; 37,905 for services (administration, banks,

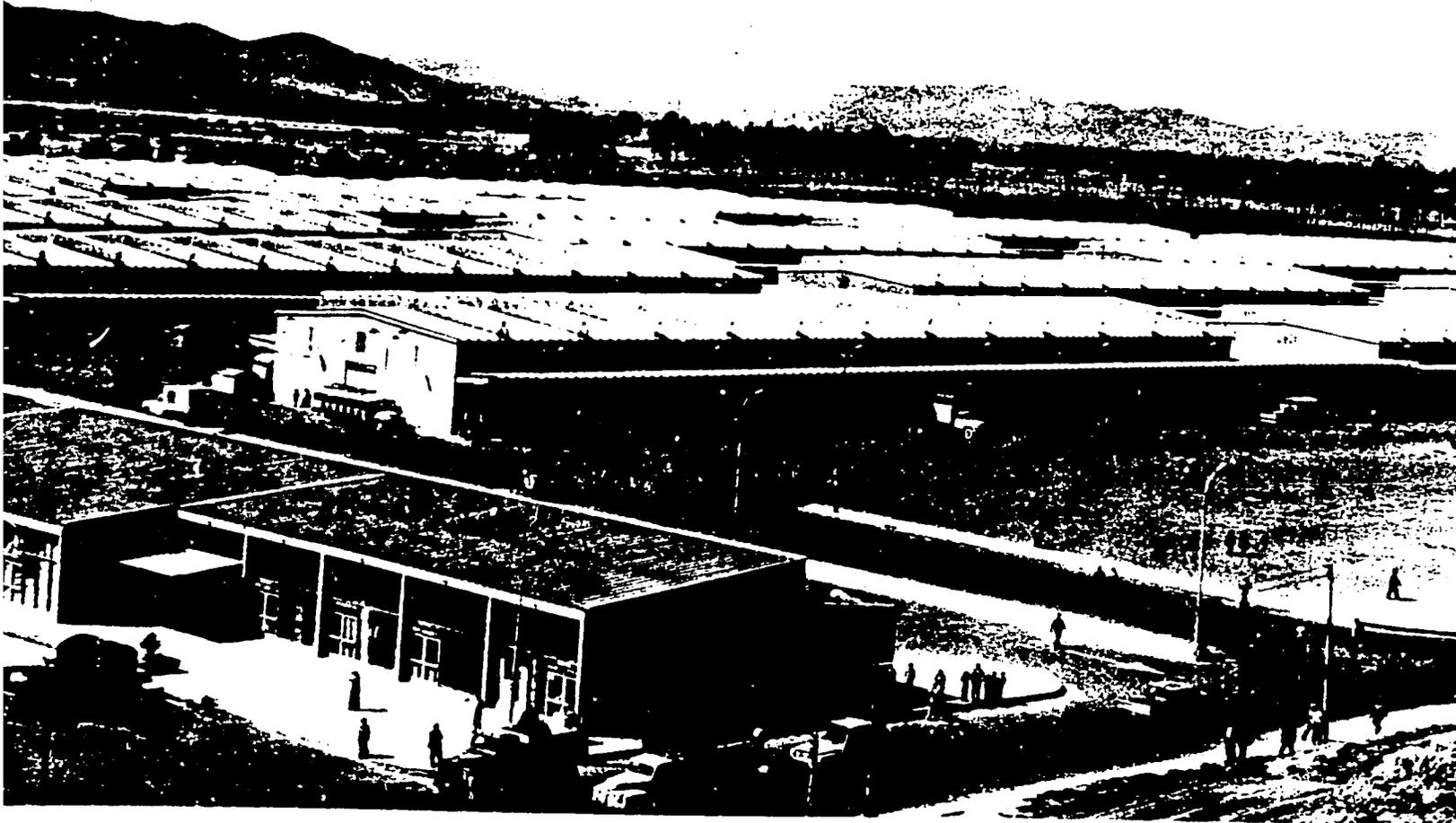


Figure 6. An Overview of Bogotá Wholesale Market Facility.

Source: Corabastos' Files, 1972.

drugstore, communication, cafeterias, etc.) and 346,722 for total warehouse related areas (25 non-refrigerated warehouses, 71,850; loading, unloading, parking and transaction areas and streets, 184,730; and green zones, 90,192).⁵

The Interamerican Development Bank (IDB) approved a loan for expansion in 1973. The expansion plan involved a 10,000 square meter refrigerated warehouse, for five non-refrigerated warehouses 10,000 square meters and 106,000 square meters for streets, green zones, loading, unloading and parking areas, for a total of 126,000 square meters. Expansion, however, has been postponed.

The latest plan of Corabastos indicates that it will build only three warehouses identical to the one now in operation between 1977 and 1981.⁶ The current warehouses each have 2,000 square meters of interior floorspace. There are eleven warehouses separated by interior walls, so that merchants rent spaces of 82.5, 165 or 330 square meters, according to their needs for handling grains, processed food and potatoes. The other fourteen warehouses have no interior walls, but are divided by lines painted on the floor in 10 to 12 square meter selling areas, which are rented to merchants. These areas are occupied by the many small fruit and vegetable merchants (Table 7).

⁵See details in: Centro de Estudios e Investigaciones sobre Mercadeo Agropecuario, Central de Abastecimientos de Bogotá, S.A. (Bogotá: CABSAs, 1973), pp. 1-10, and in: CABSAs, "Solicitud de financiación al BID por conducto de Cofiagro," loan application to IDB, Bogotá, 1973, pp. 1-21. (Mimeographed).

⁶The plan is projected to 1994. Corabastos, "Informe a la asamblea: Marzo de 1976," pp. 22-23.

Table 7. Sales and Warehousing Area of Central Market Facility Wholesalers and Other Bogotá Wholesalers

Food Groups	Central Market Facility-Bogotá				Other Places of Bogotá				Total Bogotá Wholesale Area sq. m.
	Monthly Sales per Merchant Col. \$	Sales/sq.m.	Area per Merchant sq. m.	Total Warehousing Area sq. m.	Monthly Sales per Merchant Col. \$	Sales/sq.m.	Area per Merchant sq. m.	Total Warehousing Area sq. m.	
Grains and Processed Food	2,695,000	25,355	106.3	18,927	1,780,000	15,110	117.8	15,903	34,830
Potatoes	554,700	8,875	62.5	10,692	200,000	8,000	25.0	625	11,317
Vegetables	215,800	15,986	13.5	8,082	165,000	13,000	12.7	1,270	9,562
Plaintain-Cassava	222,500	16,360	13.6	3,142	114,000	9,500	12.0	420	3,562
Fresh Fruits	402,370	24,094	16.7	5,329	300,000	15,000	20.0	1,200	6,529
Weighted average	568,290	19,141	31.3	46,172	782,894	15,320	51.1	19,418	65,590
Additional space needed (Wholesalers' opinion)			15.0	22,140			14.0	5,320	27,460

Source: Wholesalers and retailers surveys and case studies conducted for this research, Bogotá, 1974.

The warehouses have functioned basically as selling areas. Few merchants use space for repacking. Grains, processed food and potato merchants utilize space for their own offices and for holding short term inventories. About 2/3 of the rented area is occupied by grains, processed food and potatoes, but this space is rented by only 20 per cent of the total merchants (Table 8).

All warehouses have big doors and 7 meters of vertical space (5 meters can be actually used.) Although traditional practices are employed, there are no refrigerated warehouses, nor are platforms or pallets used. The market is operated with concern for hygiene, illumination, maintenance and security for both property and people. These last conditions were mainly provided by CABSA's administrative actions.

In contrast with Plaza España, no warehouse is owned by private individuals. The wholesale market facility belongs to Corabastos-CABSA stockholders.

General rules of the game, in terms of who enters the market, opening and closing hours, rental rates and subsidies, were formulated by CABSA's Board of Directors and implemented by CABSA's administrative apparatus. Wholesale merchants had several mechanisms by which to influence the rules of the game and react to them. With 17 per cent of CABSA's shares they controlled 43 per cent of the Board of Directors. But when merchant interests were at stake, i.e., entrance of large scale competitors and rental rate changes, they seemed to have had more power in the Board of Directors than the public sector representatives.

Table 8. Relative Importance of Food Groups in Value, Warehousing Area and Number of Wholesalers in the Central Market

Food Groups	Percentage of Value	Percentage Warehousing Area Occupied	Percentage Wholesalers
Grains	35.1	41.0	10.6
Processed Food	18.4		
Potatoes	11.5	23.2	11.6
Vegetables	14.9	17.5	40.4
Plaintain and Cassava	5.6	6.8	15.7
Fresh Fruits	14.5	11.5	21.7
Total	100.0	100.0	100.0

Source: Wholesalers surveys and case studies conducted for this research, Bogotá, 1974.

The two main consequences of wholesaler power were: (1) subsidized rental rates, (2) despite CABSA's rules to rent facilities to several groups of market participants, almost 100 per cent occupation of the facility by wholesalers.

The Central Market Significance in Bogotá Food Wholesaling

The Central Market facility provides warehousing facilities for independent wholesalers, but not for all. There are independent wholesalers scattered in other locations of Bogotá. Also, integrated retailer chains have their own warehouses in several places but not in the Central Market.

The relative importance of independent wholesaling seems to be closely related to both general economic development of a nation and the development of production-distribution systems for specific commodities. Economic development, specialization and urbanization seem to be closely intertwined. Rurally based societies with no major specialization may not need sophisticated exchange systems. Farmers can sell their output to local town retailers and buy from them some of the locally made goods. But as specialization and urbanization increase, each specialized farmer may find it very uneconomic to sell to each retailer in a big city.

Wholesalers would appear to solve this problem, reducing the number of transactions and gaining economies of scale. At this stage, wholesalers' share of retailers purchases will tend to rise. But, as development continues, retailing, wholesaling and processing tend to become more vertically integrated in order to gain the

competitive advantages of economies of scale, reduction of risks and transaction costs. Large corporate or cooperative retailing chains have their own Central warehouses. Wholesalers are inclined to sponsor voluntary chains with retailers. And processors tend to buy under contracts from large scale farmers and sell a large volume to integrated retail chains.⁷ Thus, independent wholesalers face strong competition and tend to lose a share of retailers' purchases. The food system in the Bogotá shed area, especially for modern retailing and processing, seems to have followed this trend since about the late 1950s. Consequently, food wholesaling, though increasing sales rapidly, would be losing a share of retailers' purchases (Figure 7).

Up to 1974 almost all of Bogotá's wholesalers could still be classified as independent. And, for the selected food products, this research estimates that independent wholesalers had a 70 per cent share of total retail purchases in 1974 (Point B in Figure 7; see also Figure 8). The development of specific commodities production distribution systems has also influenced the relative importance of independent wholesalers. Food processing is controlled by

⁷For figures from several developed countries on this subject see: Leonard R. Kyle, W.B. Sundquist, and Harold D. Guither, "Who Controls Agriculture Now? - The Trends Underway" in Who will control U.S. Agriculture? Policies Affecting the Organizational Structure of U.S. Agriculture (Urbana, Illinois: North Central Regional Extension Publication 32, 1972), pp. 7-9. Also see: Food and Agriculture Organization of the United Nations, Development of Food Marketing Systems for Large Urban Areas: I. Latin America, Report of the technical conference on the development of Food Marketing systems in Large Urban Areas in Latin America, held in Buenos Aires, Argentina, May 8-17, 1973 (Rome: FAO, 1973), pp. 15, 26-29.

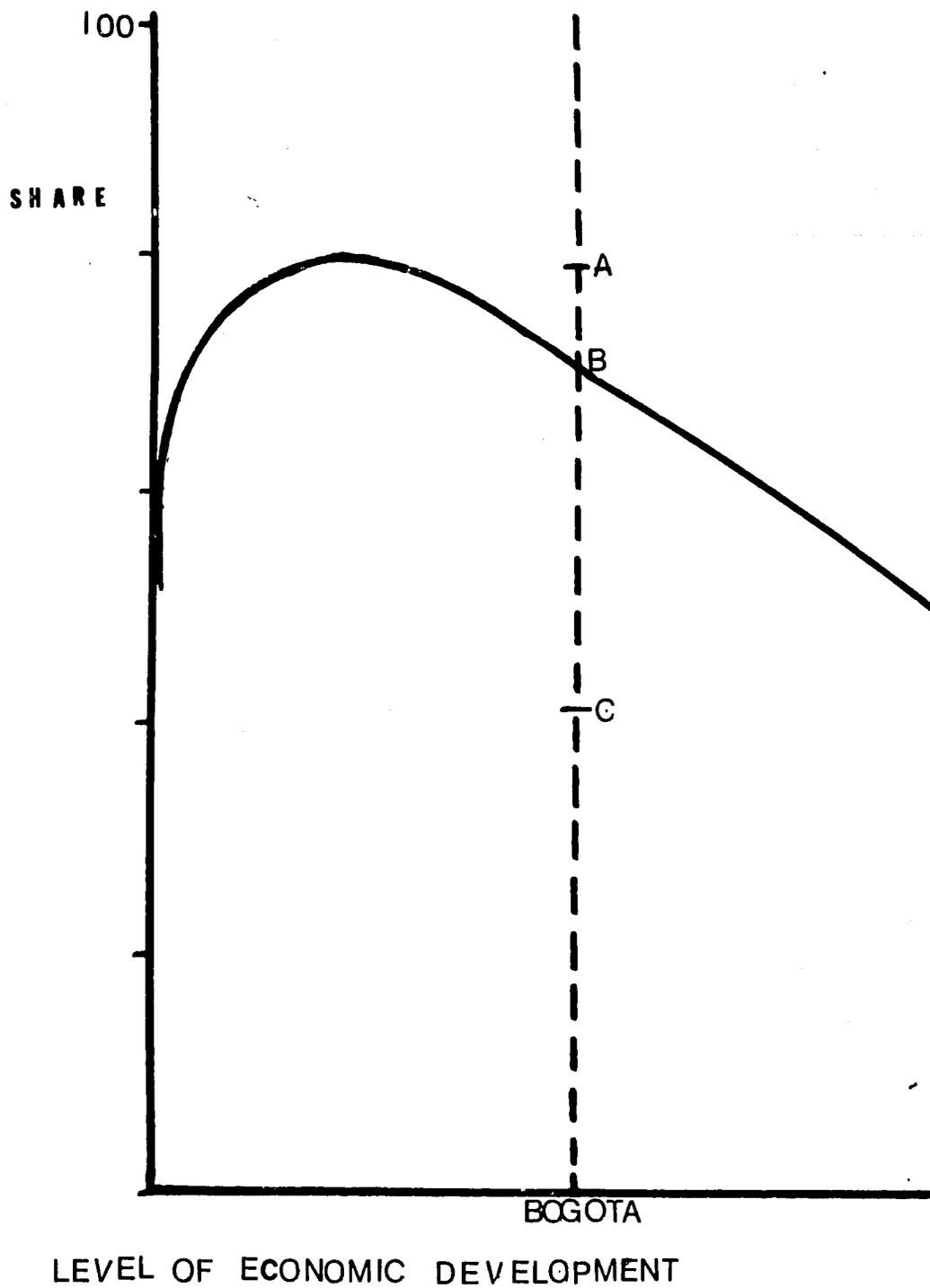


Figure 7. Independent Wholesalers' Share of Retailers' Purchases in Large Cities As a Generalized Function of Level of Economic Development, with Special Reference to Bogotá.

Source: Generalized function from discussion and Figures of : FAO Food Marketing Systems for Large Urban Areas, pp. 15, 26-29.

large, conglomerate-type processors⁸ which can serve directly not only large scale integrated retailers but also organize their own distribution systems in order to bypass independent wholesalers. Thus, independent wholesalers' share of retailers' purchases of processed food is rather small (point C in Figure 7; also, see Figure 9). But for perishables, which are produced on many scattered farms and in which independent small scale family firms are dominant in retailing, the demand for wholesaling services is high, hence, wholesalers' share of retailers' purchases is also high (point A in Figure 7; see also Figure 10).

How do Central Market wholesalers fit into the overall pattern of independent wholesaling in Bogotá? The data from this research indicate that the Central Market is the principal wholesale market of the city of Bogotá and its area of influence. Farmers make a large share of their sales to wholesalers located in the Central Market (Figures 8 and 10). In addition, wholesalers located in other places go to the Central Market to buy about 18 per cent of their purchases from farmers and assemblers. They also buy about 25 per cent of their total purchases from wholesalers located in the Central Market (Figures 8, 9 and 10 and Table 9).

Central Market wholesalers get the largest share of Bogotá retailers' purchases. In fact, for grains and processed food the share is larger than it was for the old Plaza España in 1970, though for

⁸Gabriel Misas, "Contribución al Estudio de la Concentración en la Industria Colombiana," DANE-Boletín Mensual de Estadística (Bogotá), No. 266 (1973), pp. 104-105.

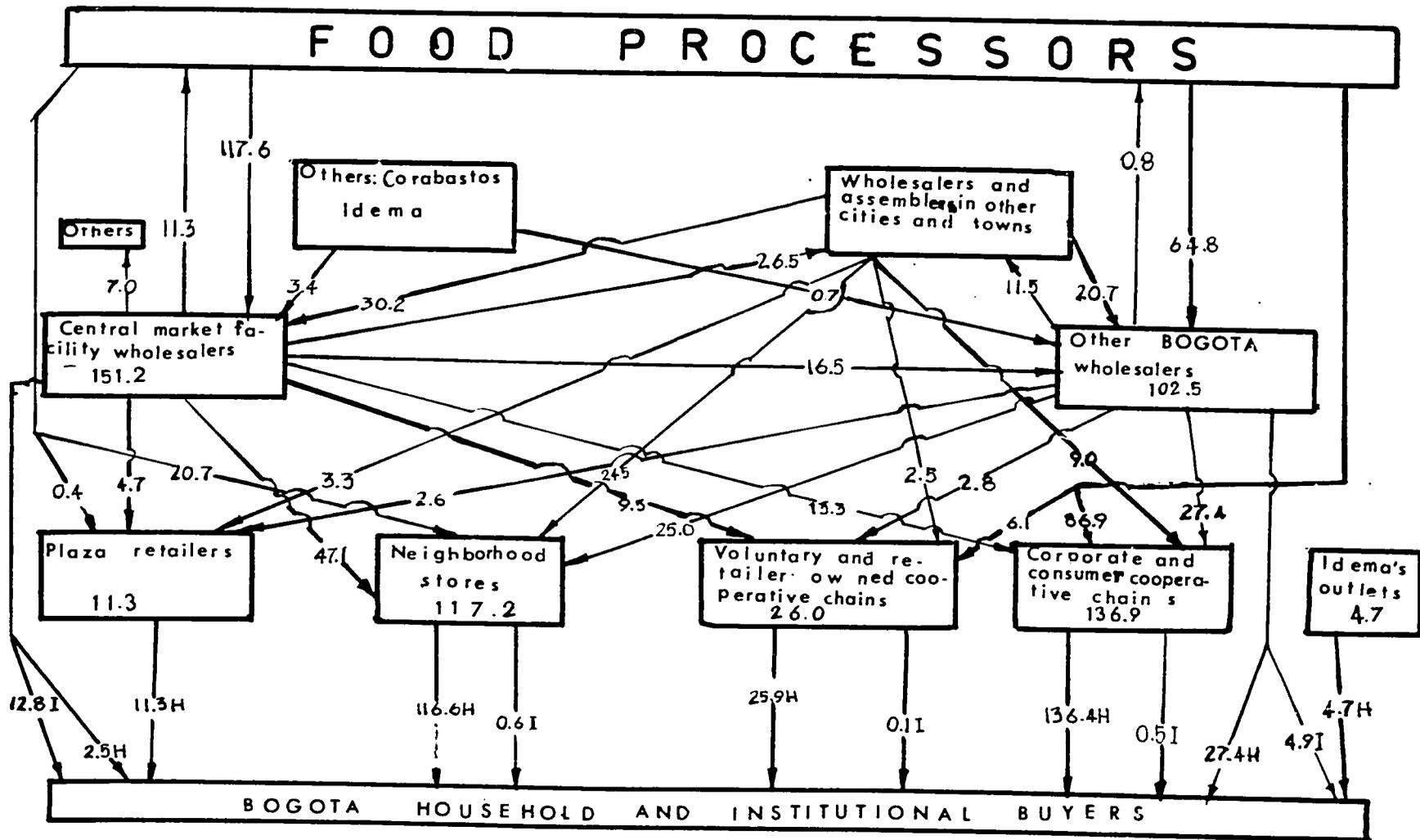


Figure 9. Simplified Processed Food Transaction Channels, Mill. Pesos Per Month.

Source: Wholesalers and retailers surveys and case studies, Bogotá, 1974.

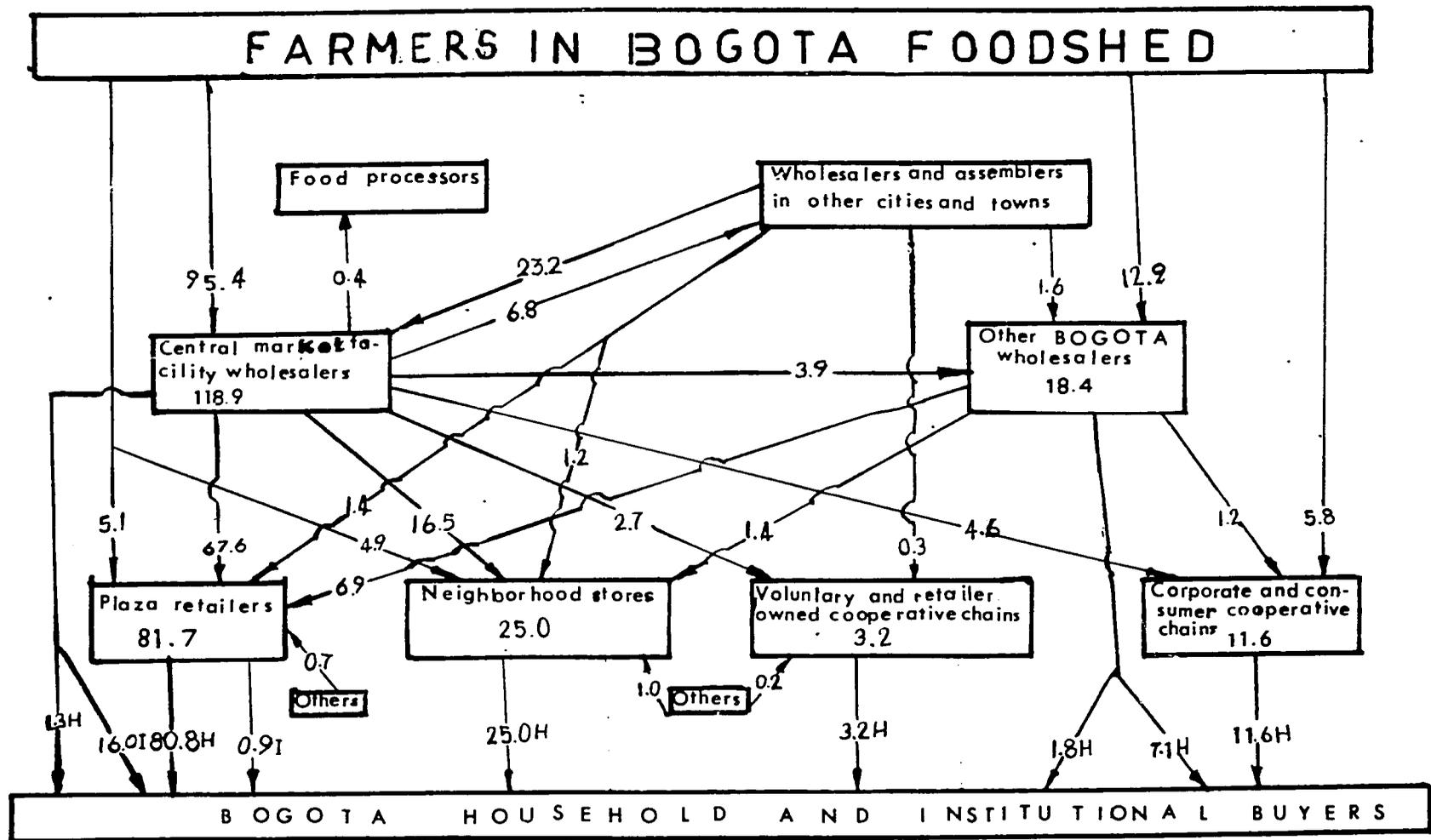


Figure 10. Simplified Fresh Fruits Transaction Channel, Millions of Pesos Per Month.

Source: Wholesalers and retailers surveys and case studies, Bogotá, 1974.

perishables it is slightly lower (Table 10). It seems that certain wholesalers located in retailing plazas get some advantage from their proximity to retailers. There is also an indication that a policy of physical separation of retailers from wholesalers is more successful for larger scale merchants than for lower scale, daily buying retailers. In addition, the volume handled in the Central Market is larger than it was in Plaza España mainly as a result of Bogotá's population and per capita income growth.⁹

The Central Market includes about 70 per cent of the independent wholesalers area in Bogotá and 78 per cent of the number of wholesalers (Tables 7 and 11). The average wholesaler in grains and processed food has a larger sales volume than the average wholesaler in perishables (Table 7). And in a product by product group basis comparison a wholesaler in the Central Market has a larger volume than a wholesaler in another location of Bogotá, although, the weighted average sale per wholesaler is smaller in the Central Market. This is so because the market share of wholesaling in the Central Market is smaller in grains and processed food than in perishables (Table 7). The largest wholesalers in any product are located in the Central Market.

Finally, the Central Market serves other towns and cities in the area of influence of Bogotá. Central Market wholesalers' sales have a national coverage. In fact, about 15 per cent of their total

⁹The volume entering Plaza España for the selected food groups was about 18,520 tons from May 18 to 25 in 1970, according to IDEMA's checkpoints study. In a comparable week during 1975 for the same products, the volume entering the Central Market was 27,796 tons, or 50 per cent. From 1970 to 1975 Bogotá's population grew about 34 per cent.

Table 9. Suppliers of Wholesalers Located in the Central Market Facility and in Other Places

Supplier	Grains		Processed Food		Potatoes		Vegetables		Plantain Cassava		Fresh Fruits		All Selected Food	
	Central Market	Other Places	C ^a M	O ^a P	C M	O P	C M	O P	O P	C M	C M	O P	Central Market	Other Places
(Percentages of Value)														
1. Farmers selling	<u>42.7</u>	<u>32.2</u>	--	--	<u>91.0</u>	<u>89.6</u>	<u>90.0</u>	<u>48.0</u>	<u>57.5</u>	<u>22.4</u>	<u>74.1</u>	<u>70.0</u>	<u>52.1</u>	<u>25.9</u>
a. Outside Bogotá	27.2	9.1	--	--	39.5	77.8	26.5	28.0	30.8	22.4	38.7	40.0	--	--
b. In Central Market	15.1	17.7	--	--	51.5	10.0	63.5	20.0	26.7	--	34.0	30.0	--	--
c. Other Bogotá places	0.4	6.4	--	--	--	1.8	--	--	--	--	1.4	--	--	--
2. Processors	<u>16.0</u>	<u>8.7</u>	<u>70.0</u>	<u>61.0</u>	--	--	--	--	--	--	--	--	<u>19.0</u>	<u>26.0</u>
3. Wholesalers and assemblers from other cities and towns	<u>32.7</u>	<u>22.9</u>	<u>18.0</u>	<u>19.5</u>	<u>8.7</u>	--	<u>5.0</u>	--	<u>31.7</u>	<u>14.9</u>	<u>18.1</u>	<u>8.8</u>	<u>21.1</u>	<u>18.5</u>
4. Bogotá wholesalers	<u>7.6</u>	<u>34.0</u>	<u>10.0</u>	<u>18.8</u>	--	<u>10.4</u>	<u>5.0</u>	<u>52.0</u>	<u>10.8</u>	<u>62.7</u>	<u>7.4</u>	<u>21.2</u>	<u>7.0</u>	<u>28.3</u>
a. In Central Market	7.6	30.0	10.0	15.5	--	10.4	5.0	52.0	10.8	58.2	7.4	21.2	7.0	25.1
b. Other Bogotá places	--	4.0	--	3.6	--	--	--	--	--	4.5	--	--	--	3.2
5. Others	<u>1.0</u>	<u>2.2</u>	<u>2.0</u>	<u>0.7</u>	<u>0.3</u>	--	--	--	--	--	<u>0.4</u>	--	<u>0.7</u>	<u>1.3</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Farmers' and wholesalers' surveys and case studies conducted for this research, Bogotá, 1974.

^aCM refers to central market and OP to other places of Bogotá.

Table 10. Relative Importance of the Central Market for Serving Bogotá's Demand for Selected Food, in Comparison to Plaza España

Food Group	Bogotá's Consumption at Wholesale Prices, 1974 Million Col. \$ per Month	Sales from the New Central Facility to Local Wholesalers-Retailers and Retailers					Percentage Based on Physical Units Passing through Plaza España 1970
		By Wholesalers		By Farmers and Assemblers		Total 1974	
		Million Col. \$ per Month	%	Million Col. \$ per Month	%	Million Col. \$ per Month	
Grains	424.6	224.2	52.8	38.0	262.2	61.8	44.8
Processed Food	343.7	113.4	33.8	--	113.4	33.0	29.4
Potatoes	102.6	71.9	78.1	7.0	78.9	76.9	87.8
Vegetables	135.1	104.0	77.9	7.0	111.8	82.9	92.4
Plantain and Cassava	52.2	40.8	77.6	3.3	44.1	83.6	87.8
Fresh Fruits	147.7	112.6	76.2	8.0	120.6	81.2	87.2
Total	1205.9	567.7	55.4	63.3	730.0	60.7	--

Source: Wholesalers and retailers surveys and case studies conducted for this research, Bogotá, 1974.
Calculated from IDEMA's check points study, 1970.

Table 11. A Comparison of Total Number of Wholesalers in the New Wholesale Market Facility and in Plaza España by Food Groups.

Food Groups	No. of Wholesalers in 1974 ^a		No. of Wholesalers 1970	Change between Plaza España (1970) and New Wholesale Facility (1974) (Percentages)
	New Wholesale Facility ^a	Other Locations in Bogotá	Plaza España	
Grains and Processed Food	157	135	128	22.7
Potatoes	171	50	214	(-21.1)
Vegetables	597	100	149	300.7
Plantain and Cassava	231	35	74	212.2
Fresh Fruits	320	60	161	98.8
Total	1476	380	726	103.3

Source: Population estimates from this research, 1974.
 CID, Distribución de Víveres, op. cit., vol. V, pp. 13-19, for 1970.

^aWholesaler-retailers are included (see Table 18).

sales are made to merchants outside the Bogotá area. For some products, i.e., potatoes and vegetables, the Central Market could be defined as a national assembly center.

In summary, then, independent wholesalers may be handling a declining share of total retailers' purchases but at the present time independent wholesalers have a large percentage of Bogotá's retailers' purchases. The Central Market accounts for a very large share of these purchases, and it seems that a group of wholesalers is becoming oriented towards serving the national market.

Impact of Food Market Reform on Farmers and Assemblers

The agricultural production share declined from 38.2 per cent to 26.7 per cent of the gross domestic product (GDP) of Colombia between 1950 and 1972.¹⁰ Farm production was estimated at 23.3 per cent and farm products processing and distribution was estimated at 26.7 per cent of the GDP. Thus, the food system would account for slightly less than 49.9 per cent of the GDP in 1972.¹¹

Agricultural production has been classified in two broad sectors: commercial and traditional sectors.¹² Commercial agriculture tends to be located mainly in fertile lands, to use a capital intensive technology

¹⁰Salomon Kalmanovitz, "La Agricultura en Colombia: 1950-1972," DANE -Boletín Mensual de Estadística (Bogotá) Nos. 276, 277, 278 (1974), Vol. 276, p. 106.

¹¹Grupo de Mercadeo-Oficina de Planeamiento del Sector Agropecuario, "Participación Porcentual en el P.I.B. por Ramas de Actividad en General y de los Sectores de Producción y Distribución Agropecuaria, 1972." Unpublished data, OPSA, Bogotá.

¹²Jaime Nova, "La Planificación del Mercadeo y los Planes de Desarrollo Nacional" (Paper presented at the first seminar of agricultural marketing, Bucaramanga, Colombia, June 21-23, 1976), p. 9.

represented by machines, technological inputs and irrigation, and to involve a relatively low use of labor. In contrast, traditional agriculture is located in the more mountainous zones, is comprised of small scale farmers using little mechanization or technological inputs but making intensive use of family labor. The traditional sector produces mainly food, 95 per cent of its total output. It also provides about 55 per cent of total Colombian fresh food production and 20 per cent of agricultural products used as raw materials in manufacturing.¹³ The commercial sector produces less than half of total fresh food output but almost all raw agricultural inputs for manufacturing, and most of agricultural exports. Its output has grown 7 per cent per year since 1970. In contrast, the traditional sector is stagnant and grew at only a rate of 3.3 per cent in the same period.¹⁴ Both kinds of agriculture produce mainly to serve market demands. In fact, traditional agriculture sends between 80 and 90 per cent of its outputs to markets.¹⁵

The two sub-sectors encompass different marketing opportunities and channels. Commercial agriculture uses modern systems for transactions and transportation, has economies of scale in transactions and transportation and makes direct transactions with food industries and volume wholesalers. And, in general, it has financial capabilities

¹³ DNP, Para Cerrar la Brecha, p. 28.

¹⁴ Ibidem, p. 115.

¹⁵ Estimates based on information from Instituto Colombiano Agropecuario, "Proyecto Integral de Desarrollo Rural de la Cordillera Nor.-oriental de Colombia," Bogotá, 1974, Vol. II. Section 3.6. (Mimeographed).

and bargaining power in the market. On the other hand, the traditional sector farmers have an expensive assembling process to negotiate the sale of small volumes following long channels, utilize a traditional system for transaction, transportation, packaging, etc. and have scarce financial resources and low bargaining power.

Given the foregoing description of food production, how could wholesale market reform programs affect food production in the short run? It seems that the major impact affecting farmers is channel simplification, security of goods and people in the Central Market and market transparency. Other changes appear to affect production only marginally and are very difficult to detect in the short run.

One of the most important changes in the production-assembly-wholesale market interface is the increase in the direct transaction between farmers and Central Market wholesalers. Thus, assemblers appear to take losing market share. To draw a comparison between 1970 and 1974 it is necessary to make adjustments in the available data. In Table 12 the word "merchants" includes both wholesalers and assemblers. Many wholesalers buy at the farm. Therefore, the direct transaction between farmers and wholesalers in 1970 is estimated as follows:¹⁶ grains and processed food, 47 per cent, potatoes and plantains, 67 per cent, vegetables, 73 per cent, and fresh fruits, 47 per cent. These percentages, in comparison to Table 9, indicate that there was a significant increase in direct transaction between farmers and wholesalers from 1970 to 1974.

¹⁶The data are adjusted based upon information from in-depth case studies conducted for this research.

Table 12. Suppliers of Selected Food to the Old Plaza España Market

Suppliers	Grains and Processed Food (Percentage) of Volume	Potatoes, Cassava Plantain (Percentage) of Volume	Vegetables (Percentage) of Volume	Fresh Fruits (Percentage) of Volume
Farmers	40.0	57.2	58.5	32.2
Merchants	33.5	41.5	40.3	64.6
Cooperatives	3.9	0.5	0.2	0.9
IDEMA	4.3	0.0	0.0	0.0
Others ^a	18.3	0.8	1.0	2.3
Total	100.0	100.0	100.0	100.0

Source: IDEMA's Check points study, Bogotá. May 18 to 25, 1970.

^aMainly processors located outside Bogotá.

This increase in direct transactions between farmers and wholesalers does not imply that the assembling functions and costs were eliminated, but rather that they were transferred to wholesalers or farmers. Now, if there is a competitive market the transfers would imply an increase in efficiency. Assemblers would have to increase efficiency if they did not want to lose a share of the market. The increase in efficiency may result from reduction in the number of transactions in the subsystem, from a reduced physical handling of products and from increase in the speed of transactions. In addition, risks in the process of transactions may have been reduced.

Channel simplification can be a product of changes in the structure of rewards. Farmers were given incentives to assume some assembling function, and wholesalers were encouraged to buy at the farms. However, assemblers' ability to compete was reduced. Further, farmers have been stimulated to make sales at the wholesale market, especially because of the new conditions of security and speed in transactions so that risks and time for selling in wholesale market have been reduced (Table 13). The risks of robbery have greatly decreased. Finally, some farmers perceive a more transparent market.

There is a definitive shift toward greater vertical integration. Many wholesalers and assemblers are also farmers and some farmers conduct assembling and wholesaling functions. About one third of the farmers interviewed argued that assembly was their second most important activity (Table 14). How can a farmer-assembler be differentiated from an assembler-farmer? In this research farmer-assembler was defined as a farmer who buys from a few of his neighbors (2 to

Table 13. Selected Characteristics of Farmers Interviewed in the Wholesale Market Facility

Food Group	Size of Farm and of Main (selected food) Crop (<u>Fanegas</u> = 6,400 sq. mt.)								Permanent Workers		Time Spent in the Wholesale Market	
	Mean		Median		Minimum		Maximum		Family No.	Hired No.	Hours:Minutes	
	Farm/Crop	Farm/Crop	Farm/Crop	Farm/Crop	Farm/Crop	Farm/Crop	New Central Facility 1974	Plaza España 1970				
Grains	65	31	25	12	7	3	223	150	1.7	4.3	1:30	2:50
Potatoes	44	31	18	14	2	1	350	232	2.0	4.8	2:30	4:50
Vegetables	15	11	5	2	-	1	180	180	2.4	3.5	3:00	5:50
Plaintain-Cassava	21	10	9	5	3	2	133	55	2.6	6.3	2:30	5:30
Fresh Fruits	7	3	6	3	2	1	12	5	2.8	2.4	2:30	4:20

Source: Farmers surveys conducted for this research, Bogotá, 1974.

Table 14. Marketing Functions Carried out by Farmers Interviewed
in the Wholesale Market Facility

Farmers by Food Group	Frequency in the Central Market			Assembly Functions	Truck Ownership	Has Partnership with		
	Seldom	Usually	Almost Daily			Other Farmers	Truckers	Merchants
(Percentage of farmers)								
Grains	20.0	73.3	6.7	66.7	26.0	33.3	-	-
Potatoes	50.0	36.4	13.6	13.6	44.6	50.0	-	-
Vegetables	31.6	36.8	31.6	16.2	29.0	50.0	-	5.3
Plaintain-Cassava	33.3	20.0	46.7	33.3	26.0	-	6.7	-
Fresh Fruits	44.4	22.2	33.3	50.0	10.0	40.0	10.0	10.0
Total	36.0	38.0	26.0	29.0	30.0	39.0	2.0	3.0

Source: Farmers surveys conducted for this research, Bogotá, 1974.

5) but his main function and income comes from agriculture. In addition, farmers have taken advantage of new incentives in transportation. About 30 per cent of the farmers interviewed in the Central Market were truck owners.

However, it seems that the incentives to farmers are not equal for all kinds of farmers. It appears, from the previous data, and from the following, that farmers carrying out assembling functions tend to belong to the category of commercial farmers according to Colombian standards. In fact, farmers who sell in the Central Market have the following characteristics. The size of farms is relatively high; 41 hectares vs. a national average of 27.5. Half of the farmers that sell in the Central Market have farms of 16 hectares or less and 53.6 per cent of farmers, nationally, have farms of less than 4 hectares. The use of modern technology is relatively high with mechanization and use of technological inputs. Production is sold to markets (98.1 per cent of what is produced) and is relatively specialized (3.3 different crops per farm). Farmers have a relatively high educational level: all are literate, 8 per cent have had some kind of high school studies and 1 per cent have had university studies. Finally, 83 per cent were using banking credit.

In sum, Corabastos-CABSA programs have stimulated vertical coordination, especially of commercial farmers, toward the wholesale market. On the other hand, wholesalers, especially volume wholesalers, are making more transactions with farmers in assembling centers or at farms. This can be attributed to general economic trends, although conditions in the Central Market have also contributed to free

wholesalers' time to carry out these activities. In fact, wholesalers have saved time as a result mainly of the physical separation of retailers from the Central Market and of the new security conditions in the market area. Because of physical separation retailers cannot make more than one purchasing trip a day early in the morning, so selling hours in the Central Market are mainly from 6 to 11 a.m. In Plaza España selling hours went until 5 or 6 p.m. Thus, wholesalers have saved selling time which now can be spent out in production areas contacting farmers and making more aggressive sales efforts, and in other business activities.

More security in the Central Market and increased, and increasing, status for wholesaling activities have permitted merchants to let their wives and workers do routine selling for them while the wholesalers themselves tend to specialize in buying and selling to sophisticated clients. This specialization of roles may have resulted in increased efficiency. Wholesalers have also saved time because they do not have to spend it protecting themselves from thieves. This is so not only because CABSA assumed the function of providing security with a specialized force, but also because the wholesale market is separated from any crime area.

Volume wholesalers have a competitive edge over other wholesalers in carrying out assembling functions as a result of their entrepreneurial ability, economies of scale, integration with transportation and financial capacity. Despite the competition of wholesalers and farmers in performing assembly functions, assemblers still have a high competitive edge in assembling products, mainly from scattered and

traditional farms. They spend several days buying at assembly centers and then travel to wholesale markets to sell personally.

Assemblers were hurt by the new rules of the wholesale market. In Plaza España assemblers could sell freely from parked trucks, sack by sack, to the small scale retailers. Also, assemblers could temporarily rent warehousing space and thus act as wholesalers. But in the new market, this selling from trucks is forbidden (of course, large scale retailers can buy a full truck load). In addition, warehouses are rented on a permanent basis which makes them unavailable or uneconomic to assemblers. Hence, assemblers have lost the opportunity to earn a wholesaling margin and bargaining power. Consequently, the new rules affected them adversely immediately after the new market began operation. As a result, they lost a substantial market share.

Nevertheless, in the long run the structure of production seems to significantly affect the competitive ability of assemblers. In fact, traditional farmers, scattered and in separated regions and selling small quantities, demand the services of small scale assemblers because of the extreme difficulties they encounter in performing assembling functions themselves. And it is the farmers of products interplanted and with continuous harvest periods, small scale farmers or farmers located in regions very far from Bogotá (i.e., far out in the eastern plains) who tend to demand the services of assemblers. Thus assemblers have high marketing shares for fruits from coffee regions, for corn and cassava from the eastern plains and for potatoes from Boyacá. Assemblers then buy small quantities (sacks or boxes) to be sold personally at the wholesale market. The average assembler in perishables

makes three round trips per week from production areas to wholesale markets, while the average assembler of grains makes one round trip per week.

Assemblers are traditional farmers with low financial capacity but with entrepreneurial abilities. Their ability to remain in business is closely related to the existence of their target supplier: the small scale farmer. But if farmers increase scale, wholesalers and farmers themselves will take over more of the assembling activities.

Assemblers tend to be specialized or diversified depending on their target suppliers. In fruits, they carry a broad line (20 products) because the farmers they serve bring several products (though in small quantities) to markets. But they are also specialized in a few regional products (i.e., plaintain and corn from Eastern plains area) because of the specialization of the farmers they serve. Very few assemblers have working capital beyond the value of a truck load¹⁷ (from 5,000 to 100,000 pesos); they experience relatively fast capital turnover (3 to 10 times per month) and make sales between 40,000 pesos and 600,000 pesos per month, per merchant.

Despite some of the disincentives mentioned above, the number of assemblers increased between 1971 and 1974, according to the perception of the assemblers interviewed. About 1,000 assemblers sell in Bogota, but this figure cannot be supported by collected population data. In fact, the estimate comes from an index developed with the

¹⁷This causes inefficiencies in the use of trucks because truckers have to wait until assemblers get paid before departing from the market.

help of the assemblers and then applied to truck entrance. The figure was tested against the opinion of assemblers. If assemblers are seen within a wholesale market selling small quantities of food products, then one may conclude that they number too many. But in local assembly centers the number of assemblers seems to be low (from 4 to 20) because traditional farmers may not have another alternative but to sell to the few.

Impact of Food Wholesale Market
Reform on Long Haul Transportation

There has been no specific Corabastos program for food and agricultural products transportation. However, as a result of the wholesale facility, important real cost savings were expected from elimination of congestion and insecurity. It was expected that the food market reform would only marginally affect the structure and organization of cargo transportation, which seems to be influenced more by general economic trends and broader public regulation of the trucking industry.

Characteristics of Transportation and Food Agricultural Products

The characteristics of food transportation follow the general situation of transportation in Colombia¹⁸ where transportation is a private business and vehicles must be affiliated with companies that operate with low capital and with relatively inefficient organization.

¹⁸Departamento Nacional de Planeación, "El Transporte Automotor de Carga" (National planning Doc. UINFT-09, Bogotá, 1973).

The main service to the affiliate is the issuing of cargo control forms.¹⁹ Tariffs, routes and schedules are determined by supply and demand which change seasonally. Time spent in complementary activities, such as loading, unloading and searching for return cargo is very high in relation to line-haul (over the road) time. Additionally, trucks, on the average, are used below capacity and the economic profitability seems to be low. Finally, the Colombian topography characterized by three ranges of mountains, poor road characteristics and the high cost of equipment make this activity difficult and expensive.

Agricultural food transportation has some specific characteristics. That agricultural production is geographically scattered, undertaken by small farmers and seasonal are general conditions which give competitive advantages to smaller vehicles to serve small traditional farmers in fruits, vegetables and plaintain. There is an excessive supply of transportation services in the nonharvest season but a shortage in the harvest season for most agricultural products. Large trucks tend to serve a more geographically specialized commercial and industrial agriculture with less seasonality in transportation activity and with good paved roads.

Case studies conducted for this research found that agricultural transportation was not highly profitable. The smallest vehicles, in atomistic markets, had the lowest profitability. Trucks within 7 to 10 tons obtained profits of about 30 per cent yearly and heavier

¹⁹ Nelson Suarez and César Bonilla, El Sistema de Transporte de los Productos Alimenticios en la Zona de Influencia de Cali, Colombian Marketing research project-PIMUR, Michigan State University. Technical Report No. 8 (Cali:CVC-PIMUR, 1970).

trucks (tractor-trailors), higher earning capital ratios. In order to improve their net income, small truck owners combined transportation with production and acted as assemblers or wholesalers. Truck drivers acted as assemblers or had authority to carry out some transactions. In contrast, the largest truck operation is a specialized activity.

The efficiency in the use of vehicles is greatly affected by the time spent on complementary activities. The operator of a 3 ton truck indicated that he spent 7 hours and 20 minutes in long-haul transportation and 20 minutes unloading, but 12 hours and 40 minutes in activities such as waiting in the vicinity so that he could arrive at the Central Market at 4 a.m., waiting until the cargo was inspected and negotiated, waiting until he obtained his fare, etc..

But complementary time is reduced by integration of transportation with wholesaling, assembling and/or production. This time is lowest for trucks owned by wholesalers who move part of their own cargo.

The low private profitability and the difficult supervision of vehicles may have deterred the development of big food transportation companies, especially for the service of small scale farmers and for low capacity vehicles.

Impact of Corabastos-CABSA Programs on Long-Haul Agricultural Products Transportation

Given the above characteristics and the congestion in the old market, one would expect that an organized wholesale market could contribute to reduced time spent in complementary activities, especially loading and unloading and entering and exiting the market. However, it might be difficult to find major changes in transportation structure,

technology and organization as a result of Corabastos programs.

It was estimated that in Plaza España, a loaded truck would spend 6 hours entering, loading, unloading and leaving the market area while in Central Market it spends only 2 hours and 30 minutes. That is a saving of 210 minutes per truck entrance (Table 15).

Moreover, the wholesale market may have stimulated the use of larger vehicles. First, the 25-ton trucks are now being used (Table 16). Secondly, vehicles of 6 to 11 tons have increased in number very rapidly (120 per cent in comparison to 9 per cent of all vehicles between 1973 and 1974). Thus, the new physical facilities and organization permitted an increase in the scale of transportation and, thus, lower cost per unit. Large scale trucks are used for grains, some processed food (sugar, fats, oils) and potatoes. As a result, market participants in these products have also been benefiting from larger scale transportation. Finally, the small cargo vehicles have a tendency to lose importance in intermunicipal transportation (Table 16). However, in fruits and vegetables they are still competitive because of their advantage in traversing narrow and poor roads for collecting small cargo from many low scale scattered farms. About 37 per cent of trucks entering (loaded) into the Central Market have less than 6 tons capacity and 13 per cent, less than 3 tons capacity (Table 6).

In summary, the Central Market facilities, the new policies and the new social-environmental conditions have created incentives for more direct and efficient transactions between farmers and wholesalers and for the use of larger scale trucks and their easier flow.

Table 15. Average Time Spent by Trucks Entering and Exiting, Loaded or Unloaded, in the Wholesale Market Facility at Different Hours of the Day

Entrance Hour	Entering Loaded				Entering Unloaded				Total	
	<u>Exiting Unloaded</u> No. of Trucks Observed	<u>Hours:</u> Min.	<u>Exiting Loaded</u> No. of Trucks Observed	<u>Hours:</u> Min.	<u>Exiting Loaded</u> No. of Trucks Observed	<u>Hours:</u> Min.	<u>Exiting Unloaded</u> No. of Trucks Observed	<u>Hours:</u> Min.	No. of Trucks	Hours: Min.
4:30 to 6:00	294	2:33	80	3:24	73	2:15	17	1:53	464	2:37
6:00 8:00	80	2:55	63	2:25	220	1:50	41	1:40	404	2:12
8:00 10:00	51	1:40	70	4:12	138	2:05	23	2:07	282	2:33
10:00 12:00	33	1:34	31	0:36	36	1:36	16	1:12	116	2:27
12:00 16:00	17	1:00	21	4:22	44	2:00	12	2:09	94	2:23
AVERAGE	<u>475</u>	<u>2:23</u>	<u>265</u>	<u>3:35</u>	<u>511</u>	<u>2:02</u>	<u>109</u>	<u>1:48</u>	1360	2:27
Average time - hours:minutes		2:50				2:00				

Source: Special traffic flow survey: A sample of 16% trucks taken on August 8 and 9, Bogotá, 1974.

Table 16. Percentage Change between 1973 and 1974 and Relative Importance of Vehicles by Capacity Entering the New Market Facility per Day in 1974

Capacity	Percentage Increase between 1973 and 1974	Daily in 1974					
		Total		Long Haul		Urban Distribution	
		No.	%	No.	%	No.	%
More than 12 ton trucks	+ 5	7	0.2	7	0.8	0	0.0
6 to 12 ton trucks	+ 120	300	8.3	300	36.1	0	0.0
3 to 5.9 ton trucks	- 10	1025	28.5	415	50.0	610	22.0
Less than 3 ton trucks	+ 15	2139	59.5	108	13.0	2031	73.4
Carts drawn by horses	- 25	127	3.5	0	0.0	127	4.6
Total	+ 9	3598	100.0	830	100.0	2768	100.0

Source: CABSAs files, Bogotá, 1973-1974.

Special traffic flow survey: A 16% sample of trucks taken on August 8 and 9, Bogotá, 1974.

Though assemblers lost a share of the assembly function, the Central Market has become the principal wholesale market of Bogotá and an important national assembling center.

CHAPTER V

COMPETITION AND PRICE FORMATION IN THE FOOD PRODUCTION-ASSEMBLY WHOLESALE MARKET INTERFACE

This chapter analyzes the impact of the market reform on the degree of economic concentration, the level of market information, price discovery institutions and agencies or individuals engaged in collecting, analyzing and disseminating market information.

The Nature of Competition in the Interface

From transaction channels¹ it follows that wholesalers as buyers and producers and assemblers as sellers are the largest transacting group - within the interface. Thus, the primary focus is on this first major market dyad.²

Degree of Economic Concentration. Producer-Wholesaler Market.

The degree of economic concentration is one of the most important variables in describing the structure of a market. This chapter follows Bain's classification by degree of concentration (Table 17).

The degree of concentration estimated here is only a gross approximation. First, it refers to specific food products; consequently, the effect of good substitutes is excluded. Second, it refers to wholesalers

¹See Figures 8, 9 and 10.

²Bain defines a market as: "a closely interrelated group of sellers and buyers." Joe Bain, Industrial Organization (2nd ed.; New York: John Wiley & Sons, Inc., 1968), p. 7.

Table 17. Degree of Sellers' Concentration

Category	Total Number of Firms	Percentage of Sales by	
		4 Largest	8 Largest
Monopoly	One seller	-	-
Oligopoly			
Very highly concentrated	Few sellers	75-100	90-100
Highly concentrated	Several	65-75	85-90
High moderate concentration	20 to 100	50-65	70-85
Low moderate concentration	Many	35-50	45-70
Low concentration	Many	Less than 35	Less than 45
Atomism: No interdependence among many sellers		-	-

Source: Adapted from Bain, op. cit., pp. 137-144.

located in the central wholesale facility without taking into account alternative channels and other national sellers and buyers. Third, there are no reliable data on sales or capital of every market participant, so the estimation was done by several wholesalers themselves since no better alternative was feasible.

If the total number of merchants (buyer side of the dyad) is analyzed by product groups, it is evident that the total number of competitors is superabundant.³ Nevertheless, if this market dyad⁴ is isolated so that it can be studied in more detail, some initial special characteristics can be found. First, wholesalers are specialized in one or few products. But after separation by product, the total number of wholesalers is still large (Figure 11). Moreover, within each product wholesalers do not perform the same functions. In other words, within wholesaling it is possible to find several market dyads. Only a few wholesalers can buy truck load lots and several truck loads per day. Many wholesalers cannot enter that market dyad as buyers because they do not have the financial capacity. Thus, after measurement of who controls what market share and then summation, it is found that in most products studied there are oligopsonies. In other words, relatively few merchants control high market share despite a relative high number of actual or potential competitors. There are highly concentrated oligopsonies in the following food products: rice, cassava and carrots; in plaintain and oranges, however, there are oligopsonies of low concentration.

³See Table 11, especially for the number of merchants in perishables.

⁴Producers and assemblers as sellers and wholesalers as buyers.

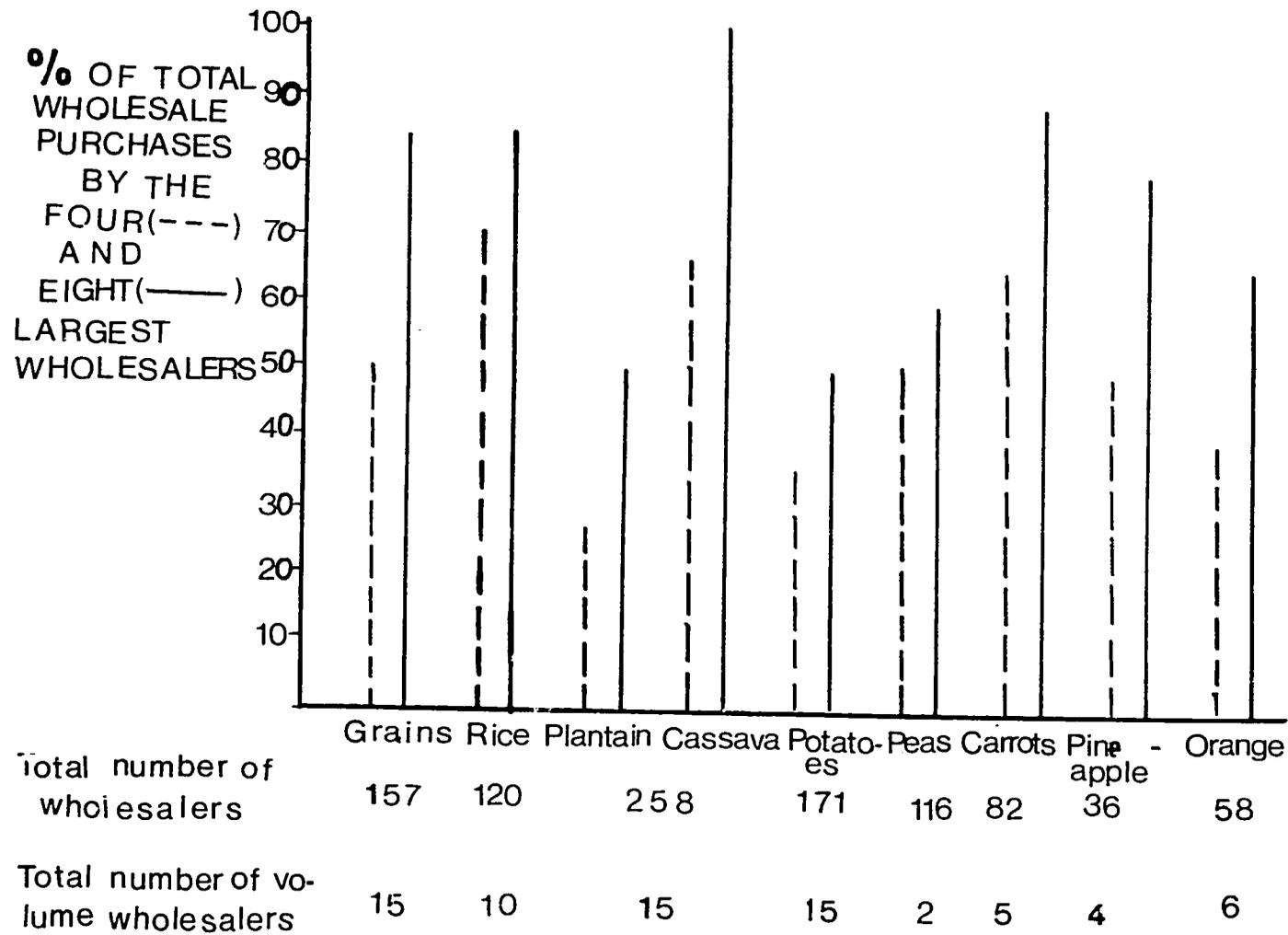


Figure 11. Degree of Economic Concentration in Bogotá Wholesale Market for Food.

Source: Case studies conducted for this research, Bogotá, 1974.

From the sellers' side there are several situations. There is a very high degree of concentration of food processors.⁵ In most cases there are from two to four sellers. Most of the food processing industry is vertically and horizontally integrated; a processor handles several complementary products and services and thus becomes a conglomerate.⁶ In this case, for Bogotá's wholesale market, there is a bilateral oligopoly along with a high degree of seller concentration (food processors) and a low degree of buyers' concentration (wholesalers).

Moreover, this research uncovered no information on the degree of concentration of farmers and assemblers in grains and perishables as sellers in this market dyad. Though several studies indicate that there are thousands of independent farmers and assemblers dispersed geographically all over the country.⁷ Thus, as sellers, farmers and assemblers are not individually able to affect price. As a result, in these products at the Central Market of Bogotá there are oligopsonies in this market dyad, that is low to high concentration from buyers' (wholesalers) side with atomism from the sellers' (farmers and assemblers) side.

⁵Misas, op. cit., pp. 104-105.

⁶A Colombian food processor Grasco is an example of conglomeration. Grasco produces oils, fats, many subproducts, has investment in related industries, in feed concentrates, and even in the housing construction industry. See details in: Ibid., p. 140.

⁷The research estimated 1,000 assemblers selling constantly in Bogotá. Figure 1 indicates the national geographic dispersion. In most fresh food products there are from several thousand to several hundred thousand independent small scale farmers: Oficina de Planeamiento del Sector Agropecuario, Programas Agrícolas (Bogotá: Ministerio de Agricultura, Dec. 1974), pp. 141, 149, 203, 215, 271.

In isolated assembly centers, with few assemblers-buyers (4 to 20) and hundreds of traditional producers as sellers, the market can present oligopsonistic characteristics. Previous research has indicated that in those assembling centers price is fixed by agreement between the larger assemblers.⁸ But studies of a Cáqueza region-assembly center for Bogotá reported that assemblers compete for supplies in trying to achieve a better utilization of personnel and trucks which tend to be badly underutilized.⁹

Causes in Formation of Oligopsonistic Markets

How do oligopsonies evolve from markets with many buyers? First, oligopsonies are not new. Although there were no concentration studies in previous research, in-depth-case studies conducted for this research permitted attainment of estimates that indicate that in most products there were oligopsonies in Plaza España. In some products the degree of concentration has decreased slightly in the Central Market, while in several grains and processed food the degree of concentration has increased. Farmers and wholesalers themselves perceive that there is a long run trend toward market concentration because the larger firms growth is occurring at a faster rate than smaller ones. In addition, CABSAs information on merchants exit indicates that the smallest merchants are leaving and the largest are asking for and/or getting more warehouse space. Therefore, competition is eliminating inefficient

⁸Torrealba, op. cit., p. 127-128.

⁹H.G. Zandstra, K.G. Swanberg, and C.A. Zurberti, Removing Constraints to Small Farm Production: The Cáqueza Project (Ottawa: International Development Research Center, 1976), p. 22.

merchants and leading the system to a more concentrated oligopolistic competition.

Nevertheless, the same degree of concentration in Plaza España actually implies less competition than exists in the Central Market. This is so because in Plaza España there were several "plazas" separated physically with poor information flows among them. In this sense the Central Market, by unifying plazas, despite maintaining about the same degree of concentration, contributed to improved competition. In addition, open and tacit collusion was easier in the separated "plazas" as reported by several wholesalers interviewed in depth-case studies.

Second, sellers do not confront the homogeneous wholesaler classified by CID¹⁰ as larger, less large and small merchants. In-depth case studies conducted for this research indicate the existence of four wholesaling institutions qualitatively and quantitatively different and in a dynamic evolutionary process: (1) volume wholesalers and (2) broadline wholesalers are characterized as large scale, innovative merchants; and (3) traditional wholesalers and (4) wholesaler-retailers, as small scale, non-innovative merchants.

The development of volume wholesalers and broadline wholesalers may have evolved recently to meet the demands created by the urbanization process in Colombia and particularly in Bogotá. The volume wholesaler handles one or few products and tries to solve the problems created by volume discrepancies, while the broadline wholesaler tries to solve the problems created by assortment and variety discrepancies.

¹⁰CID, Distribución de víveres, V, 85-87.

The traditional wholesaler is a small scale merchant, specialized by product, who uses very traditional marketing practices, and wholesaler-retailers are small scale merchants who handle several products but who sell to very small scale retailers and to final consumers.

Although the number of merchants increased with the relocation of the wholesale market, the degree of concentration was not reduced because the merchants that entered were traditional wholesalers and wholesaler-retailers who depend on supplies from other wholesalers. Their capacity to buy from farmers and assemblers is low. To become a volume or broadline wholesaler certain barriers must be overcome. These barriers include lack of credit, lack of entrepreneurial capacity and, recently, barriers created by volume and broadline wholesalers: threats, coercion, collusion, and power in the CABSA Board of Directors to decide who can and cannot rent space in the wholesale market.

Farmers and assemblers face the demand of mainly volume wholesalers; the other groups may not have the financial capacity to buy from them and depend partially on the volume wholesaler for their purchasing. Consequently, concentration can be explained because of the existence of the four groups and directly by the existence of volume wholesalers who are the main buyers in the market dyad under study (Figures 11 and 12).

The Long Channel of Wholesalers-Competition

The way wholesaling has evolved has resulted in a long transaction channel from farmers to retailers. This may be so because of the coexistence of an evolving modern large scale channel from

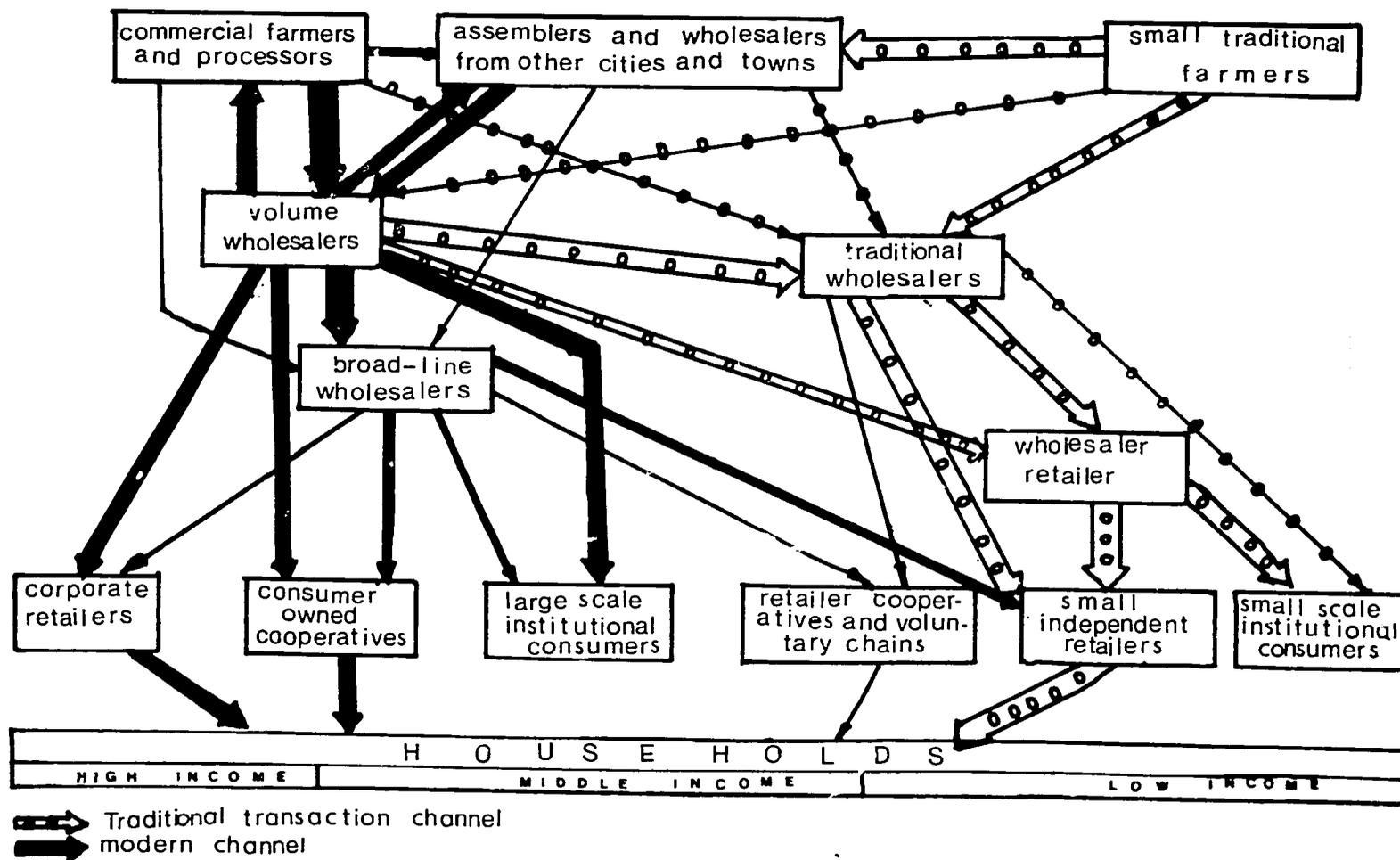


Figure 12. Simplified Food Transaction Channel with Emphasis on Transactions Between Wholesalers.

Source: Farmers, wholesalers, retailers, institutional consumer case studies, Bogotá, 1974.

production to consumption and a traditional small scale channel (Figure 12). The marketing channels were oversimplified in that wholesalers were considered as one step.¹¹ But wholesaling seems to be more complex as is represented graphically in Figure 12. To understand the way the system works, wholesaling institutions must be defined and described in more detail.

The Traditional Wholesaler: For many years he has been the most common wholesaler in Bogotá who basically fulfills the function of "breaking volume." In perishables he typically handles one or two products and between ten and 150 in grains and processed food. He has been specialized in these products for many years and has been repeating the same transaction and logistic practices (Table 14). He earns a low net income and has low working capital and a small warehousing area (most are 10 to 12 square meters), but he does have high marketing margins (Table 18).

Most of Bogotá's wholesalers (about 70 per cent) are traditional wholesalers, especially in fruits and vegetables (Table 18). They comprise one or two man firms, are not vertically nor horizontally coordinated, but do get some clients as a result of friendship and godparents. For their closer commercial relationships they trust only relatives. Thus, these relationships are dominated by familialism. Exit and entry are relatively easy, though entry has a barrier imposed by CABSAs' rules and available warehousing space. However, many lease (in black markets) part of their already small warehousing areas.

¹¹See Figures 8, 9 and 10.

Table 18. Contrasting Characteristics of Food Wholesaling Enterprises Classified by Category and Location

Characteristics	Traditional Wholesaler	Wholesaler-Retailer	Volume Wholesaler	Broadline Wholesaler
Number located in Central Market	1055	221	80	120
Number located in other places in Bogotá	176	182	8	14
TOTAL NUMBER IN BOGOTÁ	<u>1221</u>	<u>403</u>	<u>88</u>	<u>134</u>
Number of products handled				
-Grains and processed food	10-150	--	5	150-600
-Perishables	1 or 2	10	1 or 2	80-100
Most common warehousing area				
-Grains and processed food (sq.m.)	82	--	330	165-330
-Perishables	10 to 12	10	80	50
Target customers	Local neighborhood & plaza retailers	Local small retailers and consumers	National wholesalers, national industries and supermarket chains	Broadline retailers and institutional consumers
Monthly sales (Col. \$)	60,000 to 1,000,000	50,000 to 1,000,000	1,000,000 to 30 million	1/2 to 10 million
Monthly net income (Col. \$)	2,000 to 20,000	2,000 to 20,000	50,000 to 400,000	40,000 to 200,000
Common margins in grains and processed food (Percentages)	5% to 7%	6% to 12%	1.5% to 4%	4% to 6%
Common margins in perishables (Percentages)	10% to 12%	12% to 20%	3% to 5%	10%

Source: Wholesalers surveys and case studies conducted for this research, Bogotá, 1974.

Traditional wholesalers remain in business because of the demand for their personal services by many small neighborhood stores and plaza retailers.

Traditional wholesalers, small scale does not permit them to buy one truck load from producers or assemblers, so they depend on volume wholesalers for purchasing and short-term (3-4 hours) financing. Thus, since they cannot buy from farmers and assemblers, few volume wholesalers specialized by product can control a high market share as buyers in this market dyad.

Wholesaler-Retailer: These are small scale wholesalers who sell to small scale retailers and to households. In perishables they are called arroberos.¹² Arroberos handle about ten different products and depend on supplies mainly from traditional wholesalers (see Figure 12). Their volume is low, and they have low-working capital and low incomes, though high margins.

Wholesalers located in other places of Bogotá tend to be more wholesaler-retailers because they are closer to final consumers. Some of these in grains and processed food can have a relatively large volume of sales, depending on their location.

Volume Wholesaler: The Volume Wholesaler is a modern wholesaler firm, with three to fifteen employees, which specializes in creating and reducing volume discrepancies. It handles few products, normally between one and five, but large volume (between 10 and 30 million pesos monthly in grain and processed food). Its clients (both in

¹²The merchant trading unit is arrobas (12.5 Kgrs.).

buying and selling) are large firms including local wholesalers and wholesalers from other cities. A typical grains wholesaler in the Central Market has the following sales distribution: 46 per cent to Bogotá wholesalers, 32 per cent to non-local wholesalers, 9 per cent to processors and institutional consumers, 10 per cent to supermarkets and 3 per cent to small retailers.

Volume wholesalers sell and buy in the main cities, assembling centers and production regions of the nation, and even handle imports and exports. They have permanent access to banking credit, low margins and very low profits per unit sold, but they do have high net total income (100,000 to 400,000 pesos monthly) and a high rate of return on working capital (Table 18).

There are volume wholesalers in almost every product. About eighty are located in the Central Market and about eight in other places of Bogotá. Entry to this group is difficult since it is serving a market niche that requires entrepreneurial ability, good will and high volume of equity capital and banking credit, skills and capital requirements which protect them from new competitors. In addition, they are becoming integrated backwards with transportation, processing and farming operations; thus, their businesses are acquiring greater stability, more ability to compete and lower costs. Some volume wholesalers have their own selling force, assume calculated risks and tend to become specialized in market information. These volume wholesalers also handle large volume, have low margins, and rapid inventory turnover and tend to become commission agents in direct competition with commodity exchange brokers.

Corabastos-CABSA programs have provided incentives to volume wholesalers. For example, the largest vehicles that serve them can enter and exit the market quickly in contrast with the impossibility of flow through the congested old Plaza España. Such ease of entry and exit has resulted in lower per unit cost which gives them higher profits and more competitive advantages.

Broadline Wholesalers: The main broadline wholesalers' function is to reduce assortment and variety discrepancies. That is, they create assortments more similar to those demanded by retailers and consumers.

Broadline wholesalers in grains and processed food have existed for several years. Since relocation from Plaza España their size and product line has increased. They are firms of six to twenty employees and carry a line of between 150 to 600 products, commonly 200 to 400 products (Table 18). In perishables broadline wholesalers appeared after the new wholesale market was in operation in late 1972. Handling a broad line was made possible once minimum conditions of security, warehousing, cleanliness and stable rules were provided. By 1974 there were fourteen broadline wholesalers firms in perishables, all located in the Central Market. However, there are no warehouses with refrigeration in the Central Market. Hence, some wholesalers have rented refrigerated warehouses elsewhere for short-term storage.

Broadline wholesalers have been serving consumers-owned cooperatives, institutional consumers and larger neighborhood stores. Their business activities are becoming more coordinated and/or integrated forward with urban transportation. Broadline wholesalers have been

carrying perishables in consumer-owned cooperative outlets. The cooperative has been charging 2 per cent on sales to the wholesaler for selling space and administrative expenses.

In perishables these merchants still have a low volume of sales (around one million pesos per month) and, because of the personal practices of buying, they depend mainly on purchases from other wholesalers. In grains and processed food, broadline wholesalers buy from farmers, industries, assemblers and volume wholesalers. To facilitate and institutionalize transactions among volume wholesalers and broadline wholesalers, the twenty largest organized a new firm: Fedema Ltd.

Moreover, broadline wholesalers are serving market niches with little competition, especially in perishables. Such niches are protected by certain barriers to entry: (1) limited credit; (2) need for high entrepreneurial ability; (3) scarce refrigerated facilities for perishables. The market niche and broadline wholesaler businesses are growing fast. But since one of the reasons for concentration is the specialization of wholesalers per product, in the medium and long run this group tends to reduce concentration in each product. If all merchants had a broad product line, then they would compete among themselves across a large number of products.

Transactions Among Wholesalers and Degree of Concentration

A second dyad between wholesalers has been identified and their market concentration estimated qualitatively (see Figure 12). The main sellers are volume wholesalers and the main buyers are broadline wholesalers, traditional wholesalers, wholesaler-retailers, large scale retailers and volume wholesalers from other cities. Volume

wholesalers are the powerful sellers in this (market) dyad. They are few and (in most products) are faced by many buyers who actually depend on them for their purchases and working capital. In most products this market has oligopolistic characteristics. The transaction unit is a truck load.

A third market dyad can be identified as follows. The sellers are: broadline wholesalers, traditional wholesalers and wholesaler-retailers. And the buyers are: neighborhood store operators and plaza retailers (Figure 12). This market dyad seems to be atomistic: there are hundreds of sellers and hundreds of buyers. The transaction units are sacks, boxes, etc., and transactions are completed by inspection.

Why is there a long channel with institutionalized transactions between wholesalers? Does it result in more or fewer transactions for the system as a whole? The existence of longer channels does not imply a larger number of transactions for the system as a whole. In fact, the present long channel may have fewer transactions than a short channel of direct selling by thousands of farmers to thousands of retailers. But, the smaller the scale of farmers and the smaller the scale of retailers, the longer the channel will be to link both, if inspection is necessary to carry out transactions. Many small farmers, (scattered geographically) require the services of many assemblers, and many scattered small scale retailers then require daily services of many traditional wholesalers. When scale increases in farming (or processing) and in retailing, even wholesaling can be bypassed. On the other hand, Colombia has become urbanized. Thus, it is necessary

to move large volumes of goods long distances to large cities or between large cities. Volume wholesalers can arrange these product movements on a large scale.

Broadline wholesalers, especially in perishables, do not yet have enough volume to buy directly from commercial farmers or even, in some products, from volume wholesalers. Thus, the channel remains long. But this is a short-term phenomena since broadline wholesalers in grains and processed food as well as in perishables are gaining scale and market share which will allow them to buy in larger scale and through more direct channels.

In sum, the simplification of channels implies institutional changes, technological changes (i.e., classification of products and massive impersonal selling) and administrative changes (ability to administer more variables). But these changes are interdependent and are needed at different levels of the channel.

Fedema Group and Financial Groups

Fedema Ltd. was mentioned above as a new food wholesaling business firm. Since the twenty wholesalers who are the stockholders of Fedema Ltd. are becoming a group with closer business transactions among themselves and with some general common interests to defend, they are referred to here as the Fedema group.

Half of all volume wholesalers in grains and processed food are Fedema members. The group has actual and potential market power in several products. One example is the wholesale rice market which is a highly concentrated oligopsony (Table 17 and Figure 11). However,

the four and the eight largest scale merchants are all members of Fedema group who have close, almost daily, commercial and personal contact through Fedema's office. The opportunity for them to make open or tacit collusion is thus present. If perfect collusion were accomplished, the market of this product locally would almost be a monopsony.

Fedema existed in Plaza España, but it was formalized in the Central Market. One of its members has been president of CABSA's Board of Directors since 1972. The group has great power in decisions that may be crucial to them, especially in policies related to rental rates and entrance of competitors such as cooperatives and national retailer chains. In addition, they have been able to get all the largest warehouses (330 sq. m. each) for themselves.

Fedema leaders have expectations as to how the market will evolve and how the group would be affected. Because they fear that other groups may dispute their present power in grains and processed food wholesaling, processing and transportation, they are opposed to neighborhood stores chains since they could bypass wholesalers or at least increase the bargaining power of retailers. In addition, they fear the increasing investments of financial groups in food marketing activities. Few financial groups in Colombia are centralizing several kinds of capital resources. A financial group, led by a large bank and formed by many subsidiaries and interlocking companies,¹³ has

¹³ Héctor Melo, Observaciones Sobre el Papel del Capital Extranjero y sus Relaciones con los Grupos Locales de Capital en Colombia (Bogotá: CID-Universidad Nacional, 1973), pp. 56-59.

investments in insurance companies, industry and communication media, in the production of agricultural inputs, in large, modern storage facilities and in brokerage of agricultural products, inputs and services. Should financial groups invest heavily in marketing, the Fedema group would be very dependent on them, not only for credit, but also for marketing service. Moreover, the financial groups would compete with Fedema for large scale supplies and large scale customers. Dependence and competition would reduce power.

This research does not deal directly with food marketing investments of financial groups. However, financial groups are shareholders in the commodity exchange authority and have warehousing subsidiaries (or grain elevators) which also act as brokers on the exchange. And, in the near future three of the main financial groups could act on the Corabastos-CABSA Board of Directors. After the merger of Corabastos and CABSA, the Fedema group will lose power on the Board of Directors of the organization in charge of administering the wholesale market. Further, the Fedema leader may have to give up the presidency of the Board of Directors.

In addition, when modern technology can be applied to production processes, larger investment and scale are possible. Financial groups have most of their investment in industries and banking. However, as grains and processed food have become more modernized, financial groups have been able to invest in the food system. Thus, one would predict that as modernization continues in the food system, new investment opportunities will appear to financial groups.

On the other hand, Fedema Ltd. already has the support of large scale wholesalers, competitive ability and open banking credit. In the intermediate or long run, the Fedema group could merge in one large broadline wholesaling firm with great power in the national market and in importing and exporting.

Market Information and Competition

Market information seems to be an important variable in the nature of competition. Although the degree of concentration in Plaza España was similar in many products to their degree of concentration in the Central Market, better information flows make the later more competitive. Moreover, information in a market is not an abstract concept but rather an effective tool to enhance the profits of some groups who have invested in their own superior information facilities.

Government investments in physical facilities, communication infrastructure and organization of producers and merchants have changed the nature and access of different groups to market information. Also, the government has tried to develop programs of market news.

Theoretical Considerations

A marketing system can also be considered as a communication system. Participants interchange relevant information to carry out transactions and physical exchange. Poor information can result in poor decision-making with high price fluctuation, high risk and high cost, and isolated markets, as a result of a poor information system, can become oligopolized or monopolized.

Market information messages are divided into two components: content and flow. Content of market information refers to prices, supplies, expectations, storage, cycles, etc. and flow refers to communication. Market information exists only when messages are effectively communicated from one source, through a channel, to a user who can send a message back. To improve marketing systems, therefore, it is also necessary to produce messages, improve communication, and send accurate and timely messages from sources to target users.

Corabastos Programs Related to Market Information

Corabastos has been preparing price information bulletins as well as improving interpersonal communication flows by eliminating congestion and unifying separate markets, i.e., the "auction-like" markets in potatoes.¹⁴ Moreover, CABSA finance and security conditions have allowed the development of radio programs on price information and expectations. Finally, neighborhood store chains have become efficient information channels for their affiliates.

Information Programs and Market Participants

Corabastos price bulletins have a very restricted diffusion. As one would expect, their published reports were practically unknown by

¹⁴A large yard in the Central Market has become a place for potato price discovery and transactions. Between 100 and 200 trucks (5 to 6 tons) come daily to the yard at 4:30 a.m. Farmers, assemblers, wholesalers, meet there, exchange information, estimate volume and form their own expectations. The price discovery may take 30 to 50 minutes. Wholesalers the previous day have estimated how much was left in inventories in their competitors' warehouses. Volume wholesalers may have information of national supply and demand conditions. Farmers and assemblers may have estimations on weather conditions and crops conditions. The system is similar to an auction in the sense that most of the sellers

almost all (96 per cent) farmers, plaza retailers and assemblers interviewed. Still, some use of the reports was being made by grains and processed food wholesalers and neighborhood stores affiliated to PAN or Coratiendas (27 per cent) and by cooperatives and supermarkets.

The information in the price bulletin has limited usefulness as an input in business decision-making for three reasons. First, the information, especially in perishables, arrives late in a market where prices fluctuate daily. Second, the prices are based upon a few private wholesale transactions. Third, there is a lack of standardization of products, weights and packages so that information refers to a known unit. The bulletin is, after all, oriented to provide a price series to government agencies rather than to serve private market participants.

The Central Market facility has affected content and flow of messages. It has facilitated interpersonal communication among market participants and thus inhibits the isolation of farmers that was practiced by merchants in Plaza España and some of the common small plaza collusions. In addition, the unified and organized wholesale market has facilitated for market participants the estimation of daily volumes entering the market and present in warehouses. In perishables daily volume determines prices (assuming the demand function is stable) because there is no refrigerated storage and thus, almost daily turnover. In addition, national markets are not well connected by information and do not have refrigerated transportation. Therefore, information on daily volume of perishables is crucial.

and buyers are together and that (once the price has been discovered) transactions are completed rapidly. But, transactions are completed privately between each seller and buyer.

In perishables the improvement in this estimate was dramatic for 90 per cent of the wholesalers, but less important for grains and processed food because these markets were relatively well organized and concentrated in a geographical area in Plaza España. Most retailers have not been able to obtain or use a better estimation of volume in the wholesale market (Table 19). Moreover, volume wholesalers need good information about volumes in the market and, consequently, have received the largest benefits. Traditional wholesalers, especially in perishables, and traditional retailers receive, for the most part, local information (see Table 20). In contrast, volume wholesalers get information from national and world markets.

The information of commodity exchange transactions and quotations is widely disseminated by mass media. About 27 per cent of the wholesalers handling grains and processed food use this information. Volume wholesalers argued that farmers were bargaining harder by using prices quoted in commodity exchange just a few months after the exchange began operating.

Farmers have also improved their level and quality of market information as a result of better estimates of volume in the new market, easy interpersonal contacts in the market and new radio programs. But their information is still very limited. Farmers producing vegetables, plaintain and cassava take great price risks because of such poor market information. About 73 per cent of plaintain farmers get information about prices only a few minutes before the sale is completed. In other food groups (grains, fruits, and potatoes) farmers search for more information.

Table 19. Wholesalers' and Retailers' Opinions on Their Estimations of Volume in the New Wholesale Market Facility as Compared to Volume Estimation in Plaza España.

Merchant	Estimation Is Not Easier or Not Relevant	Estimation is Easier	
		Get a Feeling of Volume %	Estimate Actual Volume %
Wholesalers	<u>24</u>	<u>47</u>	<u>29</u>
Grains and Processed food	43	21	36
Potatoes	30	52	18
Vegetables	10	57	33
Plantain-Cassava	10	80	10
Fresh fruits	8	46	46
Retailers	<u>77</u>	<u>18</u>	<u>5</u>
Independent plaza retailers	82	14	4
Neighborhood stores	75	19	6
Retailers' cooperative and voluntary chains	73	23	4
Corporate chains and consumer owned cooperatives	83	17	-

Source: Wholesalers and retailers surveys conducted for this research, Bogotá, 1974.

Table 20. Wholesalers' and Retailers' Search for Market Information Classified by Geographic Spread

Merchant	Do Not Search	Bogotá			Bogotá and Assembling Centers	Other Cities and Assembly Centers	National Level	National and World Markets
		Neighbors	Local Suppliers	Several Places				
Wholesalers (Percentage)	<u>8.4</u>	<u>7.5</u>	<u>23.4</u>	<u>5.6</u>	<u>31.8</u>	<u>13.1</u>	<u>7.5</u>	<u>2.8</u>
-Grains and Processed food	-	-	6.9	17.2	31.0	13.8	20.7	10.3
-Potatoes	7.4	3.7	33.3	3.7	29.6	17.5	3.7	0.0
-Vegetables	8.7	21.7	30.4	0.0	39.1	0.0	0.0	0.0
-Plantain-Cassava	8.3	25.0	0.0	33.3	16.7	16.7	0.0	0.0
-Fresh fruits	18.8	6.3	25.0	0.0	25.0	18.8	6.3	0.0
Retailers (Percentage)								
-Plaza retailers	9.4	4.7	81.8	0.0	3.1	1.6	0.0	0.0
-Neighborhood stores	7.8	7.8	70.9	13.6	0.0	0.0	0.0	0.0
-Cooperative affiliates and voluntary chains	0.0	4.5	81.8	13.1	0.0	0.0	0.0	0.0
-Corporate chains and consumer owned cooperatives	0.0	0.0	83.3	0.0	0.0	16.7	0.0	0.0

Source: Wholesalers and retailers surveys conducted for this research, Bogotá, 1974.

The main information channels for producers selling in the Central Market are merchants, truckers, radio programs and producers (Table 21). CABSA sponsors market price information in a radio program which was listened to by 31 per cent of interviewed farmers and used that information for their business decisions.

Assemblers have not significantly improved their level of information. To make purchases they know the prices in the Central Market when they last sold. But, as they go back to their assembly center, they do not know the prices and quantities transacted in other assembling centers. Thus, individual assemblers may decide to bring a large volume of any one product to the Central Market in Bogotá where prices may fall below their expectations and force them to accept losses. In fruits assemblers handle several products so that high profits earned in any one product(s) compensate losses in other product(s). Assemblers gained information as a result of market reform but less information than wholesalers. As a result, assemblers' relative bargaining power was reduced.

Final Consideration on Market Information

Several Corabastos' programs have facilitated the production and diffusion of more information, though it seems that the program with the least impact on information improvement has been the price bulletin. The several programs discussed above have contributed to reduce market imperfections because of better information. But wholesalers and especially modern wholesalers seem to be best suited to take advantage of the new opportunities for market information searching.

Table 21. Market Information Channels Used by Farmers Selling to Wholesalers in the Central Market Facility

Channels	Not Used %	Used Occasionally %	Used Frequently %
Other farmers	79.8	11.1	9.2
Retailers in Bogotá	92.9	2.0	5.2
Truckers	51.0	19.4	29.6
Bogotá wholesalers	22.0	7.0	71.0
Other buyers	24.5	2.0	73.5
Corabastos price bulletin	94.8	3.1	2.0
Radio programs	74.5	16.3	9.2

Source: Farmers surveys conducted for this research, Bogotá, 1974.

Market information from public and private sources and channels continues being scarce and, thus, risks in the market channels are high. The public sector does not have a national market information strategy. Nevertheless, several government agencies have independent price bulletins, price collection and processing teams. Among them are Corabastos, IDEMA, Coffee Federation, Cavasa (Cali's Marketing Corporation) and Colombia's commodity exchange.

Different market participants have need of different kinds of messages. Assemblers need reliable price information and information on volumes being transacted in the Central Market of Bogotá and other assembly centers. Modern wholesalers need more sophisticated information: interpretation of the implications of monetary policies, production expectations, national and international demand expectations and prices. Thus, there are great opportunities to improve market information to serve target groups.¹⁵

Colombia's Commodity Exchange,
Competition and Price Information

The rapid urbanization process, the development of the Andean common market, the need to modernize the marketing system to be competitive in world markets and certain production and marketing characteristics of some products (i.e., storage and standardization), were the main arguments for the implementation of the commodity exchange which was set up in September 1973 and began operating in March 1974.

¹⁵The marketing group of the agricultural sector planning office is developing a national program for improving food marketing and is giving high priority to market information.

The commodity exchange may have implications for food price discovery and competition in the food system by three mechanisms. First, it is a new transaction channel. Second, price quotations are published immediately by the mass media and could become a guide in other channels. Third, the exchange is trying to organize an agricultural information center.

A Description of the Colombia Commodity Exchange Authority

The Colombia Commodity Exchange Authority Corporation which is in charge of the administration and promotion of the commodity exchange system, was set up in September 1973 by the Bogotá stock exchange corporation (33 per cent of equity capital) and the Banco de Bogotá (Bank of Bogotá) (33 per cent), with Corabastos representing the public sector (33 per cent).

Objectives and Programs: The objectives of the exchange can be summarized as follows: to implement an institutional infrastructure to facilitate transactions and price formation on present and future major agricultural commodities markets, to publish quotations so that market participants in other channels are oriented, and, by this, to contribute to improvement of the functioning of the food marketing system and agricultural development.

The following are its intermediate and long run programs: first, to find some mechanism of short term finance for transactions through the commodity exchange; second, to promote the system by getting support from public sector agencies; third, to add imports of wheat to the trading list; fourth, to use the Commodity Exchange Authority organization to supervise other marketing business contracts; fifth,

to initiate transactions with world markets; and sixth, to introduce livestock, refrigerated chickens and eggs to the trading list.

Participant Groups in Commodity Exchange: A commodity exchange functions with the following groups: a formal organization, sellers, buyers, brokers and speculators.

The formal organization is the exchange authority. Created to promote cash and future markets to provide the infrastructure so that transactions can be completed, it has a tribunal for settling disputes and publishes price quotations, places of delivery, quantities transacted and date of delivery. Sellers of agricultural products have been mainly producers' associations, merchants and IDEMA (about 70 per cent of sales in 1975), while the buyers are mostly feed concentrate industries. The big retail chains have not been buyers yet. In 1974 and 1975 in agricultural inputs there was conflicting information as to who the sellers and buyers were. The president of the exchange argued that sellers were factories and buyers were farmers, and a broker argued that sellers and buyers were merchants.

A broker is a commission agent who buys or sells on behalf of others and does not take possession of the merchandise. There are eleven brokers in the Colombia commodity exchange: three are grain elevators (Almaviva, Almacenar y Almadelco) and the others are stock exchange brokers, firms in real estate, etc.

Speculators "are people who are willing and happy to take the risk of price changes for the hoped for reward gain."¹⁶ It seems that

¹⁶Richard L. Kohls and W. David Downey, Marketing of Agricultural Products (4th ed.; New York: Macmillan Company, 1972), p. 316.

this specialized group of risk takers has not yet developed in the commodity exchange of Colombia.

Cash and Future Markets

The commodity exchange of Colombia has two markets: cash and futures. In the cash market a specific quality and quantity of a merchandise is transacted by description, on the basis of a certificate issued by a warehousing company. There is a process of public price discovery through bids placed by brokers, and price and place are determined for delivery of the commodity in the next few days. This system is new in Colombia for domestic food agricultural product transactions.

In the futures market a contract is negotiated which specifies delivery of a specified quantity and quality of a commodity at specified time, place and price. Both seller and buyers deposit 10 per cent of the value of the contract as collateral in case of price fluctuation.

In the commodity exchange of Colombia all futures negotiated have had actual delivery. Thus, these are defined as "futures with actual delivery." In well developed commodity exchanges (i.e., Chicago), however, only an extremely low percentage have actual delivery. The seller (or buyer) offsets such a commitment with a purchase (or sale) of a similar contract before the contract matures.¹⁷ The futures markets are then used not as an alternative transaction or flow

¹⁷Ibid. p. 311; William G. Tomek and Kenneth L. Robinson, Agricultural Product Prices (Ithaca: Cornell University Press, 1972), pp. 257-276.

channel but as a means to either (1) hedge against cash transaction in a search for protection against price fluctuations or (2) speculate on future price fluctuations with the expectation to earn some profits. The first group wants protection against price fluctuation, while the second group -the speculators- is willing to accept risk of price fluctuations.

The "futures market with actual delivery" has a share of 8 to 10 per cent of the total transactions in the commodity exchange. A cash transaction gets the balance (Table 22). Thus, the Colombia commodity exchange is used as an alternative channel for cash transactions. The future contracts seem to be used by the seller as price protection of inventories held and by the buyer as protection against shortages of raw materials which are common in the Colombian environment.

There are several conditions that have prevented a more rapid development of the future market.

1. Market information and intelligence, especially related to anticipated harvests and demand outlook, are practically non-existent. Therefore, risks of price changes are very high which may discourage speculators. And future contracts where both seller and buyer want protection may not allow high numbers of traders and high volume of transactions because of the high risk of price changes that nobody is willing to take.

2. Colombian markets are relatively thin and fragmented so it is more difficult to make predictions with a high degree of accuracy.

3. Colombia's commodity exchange is new and not very well known among producers, exporters, merchants and industrialists.

Table 22. Transactions Completed through the Commodity Exchange and Commissions Charged

	Grains 1974	Agricultural Inputs 1974	Total 1974	Total (First 5 Months) 1975
Delivered future market transactions Million Col. \$	6.59	0.00	6.59	22.00
Cash market transactions Million Col. \$	56.45	21.52	77.97	242.00
Total - Million Col. \$	<u>63.04</u>	<u>21.52</u>	<u>84.56</u>	<u>264.00</u>
Brokers' commissions- Million Col. \$	0.66	0.14	0.80	--
Commission to the Commodity Exchange Authority - Million Col. \$	0.33	0.07	0.40	--
All commissions - Million Col. \$	0.99	0.21	1.20	--
All commissions as % of sales	1.57	0.99	1.42	--

Source: Estimated from Colombia's commodity exchange statistics, Bogotá, 1974 and 1975.

4. The traditional Colombian agricultural markets have long years of accepted practices and so the adoption of new practices and institutions may take some time.

5. The government of Colombia has changing policies which are difficult to predict, and thus, new risks are added.

6. Producers may not feel the need of further protection against price fluctuation in some grains because IDEMA has price floors.

7. Finally, small scale production, and other structural characteristics of production and marketing make it difficult for potential traders to meet the minimum of 10 tons required for a futures contract.

The volume of all transactions increased from 9 to 53 million pesos monthly between 1974 and 1975, but sorghum and corn made up for about 90 per cent of cash market transactions (Table 23). This is a rapid rate of growth but it is still a very low total volume. In fact, the volume is comparable with that of a volume wholesaler.

It seems that the commodity exchange is entering into a consolidation period, especially for the two most important products, as a result of the following factors: first, IDEMA entered mainly as a seller and was responsible for about 70 per cent of the sales in the first semester of 1975; second, the feed concentrates industries are decisively using the commodity exchange for their procurement; third, brokers are making more contacts with farmers, processors and merchants; fourth, transactions were more regular in 1975 as compared with 1974; fifth, transactions in the futures market are acquiring some significant volume.

Table 23. Products Negotiated through the Colombia's Commodity Exchange

Product	March - December 1974: Million Col. \$			January - June 1975: Million Col. \$		
	Total	Monthly Average	Session Average	Total	Montly Average	Session Average
Sorghum	57.41	5.74	0.73	140.98	28.20	3.61
Corn	5.20	0.52	0.07	111.15	22.23	2.85
Rice	6.41	0.64	0.08	4.49	0.90	0.12
Agricultural inputs	25.46	0.25	0.32	7.39	1.48	0.19
Total	94.48	7.15	1.20	264.01	52.81	6.77

Source: Estimated from Colombia's commodity exchange statistics, Bogotá, 1974 and 1975.

Moreover, there are still some unexploited market opportunities for transactions. For example, the big retail corporate and cooperative chains are not buying through the exchange. In addition, the exchange has had no international transactions. To foment these transactions there is a search for brokers well connected with Ecuador's and Venezuela's food market. Finally the trade volume on the exchange of the two main products (corn and sorghum) and others (e.g., rice and wheat) was very low in comparison to the national production crops: about 5 per cent of the national production of sorghum in 1974 and around 20 per cent in 1975 and far below 1 per cent in corn or any other product.¹⁸

Competition

Relative Volumes Among Brokers and Long Run Projections: In 1974 transactions were dominated by grain elevators, with three grain elevators getting 77 per cent of all commissions in 1974 and most of their transactions being "crossed" (88 per cent of commissions). That is, one broker represented both the buyer and the seller. In contrast, the nongrain elevator brokers made fewer cross transactions (46 per cent of their commissions). Also in 1974, 68 per cent of the commissions came from transactions made by three grain elevators and 50 per cent of those came from cross transactions of one grain elevator. In 1975 cross transaction and concentration may have been reduced mainly

¹⁸ See Table 23. The value of annual production of sorghum in 1974 was estimated at 1.1 billion Col. pesos and 1.3 billions in 1975 (proj.): OPSA, Programas Agrícolas, pp. 238, 240.

because of IDEMA entry with high volume and selling or buying through the exchange authority "as broker."

Despite their relative high volume of transactions on the exchange, grain elevators act more as independent brokers. The commissions earned in the exchange were a small percentage of their total commissions as brokers. Moreover, their activities as grain elevators and as members of a financial group gave them a large competitive advantage for finding clients. The commodity exchange could gain volume quickly if grain elevators decide to do most of their brokerage transactions through the exchange. And, in doing so, grain elevators could maintain a strong position (as in 1974) in the exchange for many years if they wish.

In the long run, financial groups could have new market opportunities if the commodity exchange evolves toward futures market transactions. "The carrying of inventories of seasonally produced commodities is facilitated by the existence of futures markets."¹⁹ The owner of inventories can reduce the risk of price changes by hedging, that is "making simultaneous but opposite transactions on the futures and cash markets."²⁰ These opposite transactions are made with the expectation that prices tend to move in the same direction in the two markets.

Hedged products are better collateral than non-hedged because the owner does not have the high risk of losing money if prices fall.

¹⁹Tomek and Robinson, op. cit., p. 257.

²⁰Kolhs, op. cit., p. 314.

Hence, lenders would be more likely to lend to owners whose products are hedged. But, in the long run, a financial group not only could offer (with fewer risks) cleaning, drying and storage services for hedged grains, but also could act more competitively as brokers for future trade transactions. Then the financial group could lend the money with a safer collateral and finally, act as commission agents for sale. This could also be done in agricultural inputs.

The above argument does not mean that the commodity exchange will create conglomeration in food marketing, but that conglomerates already existing in the economy have better chances of entering new sectors when there is modern technology and large scale. They have taken advantage of urbanization, and development of grain production and distribution, by investing in modern storing facilities.

Commissions and Margins: Both sellers and buyers pay a service commission of 30 pesos per ton of grain and 0.5 per cent in inputs. The commission is divided as follows: 2/3 goes to the brokers and 1/3 goes to the Commodity Exchange Authority. The average commission paid was about 1.4 per cent of sales and in agricultural products, about 1.57 per cent. This is about one-half of wholesalers' margins (excluding transportation and credit) which is estimated at 1.8 per cent for rice and 2.7 per cent for corn, but a volume wholesaler has margins for these products closer to the exchange commissions. Thus, for rice of the same quality the volume wholesalers have 1.1 per cent and the exchange 0.5 per cent. It follows that the exchange, though operating with low volume, already has a competitive commission. Further, as long as transactions are in relative large scale (minimum of 10 tons) these institutions compete with volume wholesalers.

A farm-owned cooperative, that was conducting a wholesaling operation in the Central Market, was considering abandoning wholesaling in favor of organizing assembly for affiliates and selling through the commodity exchange. Most of the merchants were interested in becoming users of price information from the exchange.

In summary, several new marketing institutions in the interface are evolving and/or growing fast as a result of market reform programs. These new institutions have increased their size and have been able to gain and improve market information. An oligopolistic and dynamic competition is emerging among volume wholesalers, broadline wholesalers, organized groups of merchants (Fedema), brokers in the commodity exchange and financial groups, etc.. Traditional small scale market participants, such as independent small scale farmers, assemblers, traditional wholesalers and wholesaler-retailers, seem to remain as price takers and to be losing competitive ability. Markets have become more transparent and the new institutions and organizations not only compete but also create new market opportunities amongst themselves. However, there continues to be a need for further changes and for new market reform programs.

CHAPTER VI

PERFORMANCE OF THE FOOD PRODUCTION-ASSEMBLY- WHOLESALE MARKET INTERFACE

The impact of Corabastos reforms that have been discussed so far were focused on market structure and conduct. This chapter discusses the impact of the reforms on performance for which the following criteria were selected in the research: efficiency, innovation, groups benefited and the long run trends for future competition.

Consequences of Market Reform on Efficiency in the Interface

The following efficiency variables were used: first, transactions efficiency; second, long-haul transportation efficiency; third, efficiency in the use of the warehousing area; fourth, change in physical product losses; and fifth, pricing efficiency.

Changes in Transactions Efficiency

Transactions efficiency is defined here as the cost incurred to complete the transaction of one product unit in the interface. Change in transaction efficiency as a result of market reform can be due to: (1) increase in speed in the transaction process due to new transaction methods, better facilities, faster price discovery; or (2) reduction in the number of transactions in the interface due to economic specialization of market participants and increase in the unit of transaction.

The most important new transaction method was the commodity exchange. However, because the volume of food transaction was very low

(Table 23 and Figure 8) and was in a process of promotion in 1974, estimates of this method's transaction efficiency in comparison to traditional methods are not available. Also, there is no estimate for reduction in the number of transactions due to the increase in direct transaction between wholesalers and farmers.

The most feasible method, for measuring transaction efficiency changes for market participants in both the old and new market facilities was to estimate the time spent in searching for information, buying, selling, bill collecting and supervising loading and unloading of goods. In spite of the fact that traditional transaction practices have been maintained, time savings in transactions have been dramatically reduced, especially in perishables, as is indicated by wholesaling buying and selling hours (Table 24). The main reason for this time reduction seems to be the physical separation between wholesalers and retailers. In fact, as a result of this separation, retailers cannot buy more than once daily in the Central Market. Thus, the transaction unit was automatically increased (after the relocation), hence, the time spent by wholesalers in sales was reduced. In addition, the reduction of congestion, the definition of schedules by CABSA, and the formation of auction-like areas for procurement are the main factors that have contributed to speeded up transactions for wholesalers, farmers and other market participants.

Time saved in transactions by interviewed wholesalers was being used by some for relaxation and by others for expansion of their buying and selling activities, and participation in training classes and in other jobs and businesses. Increase in transaction efficiency also

Table 24. Wholesalers' Transaction Times, Total Time Spent and Time Saved in the New Market Facility Compared with the Old Wholesale Market^a

Product Groups	Activity	Schedule				Time Spent		Daily Time	
		Central Market 1974		Plaza España 1971		Central Market Facility	Plaza España	Savings per Wholesaler	Col. &
		Starting Hour	Ending Hour	Starting Hour	Ending Hour	(Min.)	(Min.)	(Min.)	
Grains and Processed Food	-Purchasing	6:30	9:00	6:30	9:00	--	--	0	--
	-Sales and bill collecting	7:00	15:00	8:30	18:00	480	570	90	150
Potatoes	-Purchasing	5:00	6:30	4:00	7:00	90	180	90	75
	-Sales and bill collecting	6:30	14:00	7:00	16:00	450	540	90	75
Vegetables	-Purchasing	5:00	5:30	3:00	5:00	30	120	90	45
	-Sales and bill collecting	5:30	11:00	5:00	16:00	330	660	330	165
Plantain-Cassava	-Purchasing	5:00	5:30	2:00	5:00	30	180	150	75
	-Sales and bill collecting	5:30	11:00	5:00	16:00	330	660	330	165
Fresh Fruits	-Purchasing	5:00	7:00	2:00	6:00	120	240	120	80
	-Sales and bill collecting	7:00	10:00	6:00	18:00	180	720	540	360

Source: Wholesalers case studies conducted for this research, Bogotá, 1974.

^aTransaction time also includes loading, unloading, searching for information, bill collecting.

represents less cost for the wholesale firm per unit of product sold, e.g., in personnel.

This time saved was converted into monetary terms¹ (Table 24). The total savings of wholesalers due to increased transaction efficiency were estimated at 133.4 million pesos in 1974. About 77 per cent of this amount was contributed through time saved by fruits and vegetables wholesalers. Farmers also had savings in transaction time and a more convenient schedule. First, in auction-like markets located in areas within the wholesale market facility, wholesalers, farmers and assemblers can easily meet together and transactions are rapid. The farmers' surveys conducted for this research indicated that the average time spent in the wholesale market by farmers was reduced from 4 hours 20 minutes to 2 hours 15 minutes. For farmers selling grains the time was reduced from 2 hours 15 minutes to 1 hour 10 minutes, and for those in vegetables, from 5 hours 50 minutes to 3 hours. This research estimated that there were 265 farmers in the market during a typical day and their time savings were estimated to be worth 4.3 million pesos for the year of 1974.

There is no reason to believe that the transaction time between farmers and assemblers has changed. Assembling transaction time remains long mainly because every lot must be inspected before the transaction is completed which implies that the assembler has to go

¹The major limitation of these estimates is in assigning value to time saved. For wholesalers the estimation includes the reduction of costs achieved by operating less hours as a business firm. For other market participants time savings are estimated for one person's salary equivalent.

from farm to farm to make purchases and to travel back to the Central Market to make personal sales. Assemblers' selling transaction time has been reduced mainly because now they sell to wholesalers while in Plaza España many of the sales were made to retailers. Thus, there is no way to accurately estimate time savings of assemblers in transactions.

In sum, transaction time saved by wholesalers and farmers is due to increased transaction speed and to larger transaction units. Not only have the number of transactions been reduced, but also the scale of each transaction has increased, especially by volume wholesalers. And scale of transactions may have impact on long-haul and urban transportation scale economies.

Changes in Long-Haul Transportation Efficiency

Trucks are the only long-haul transportation units delivering food to the Bogotá wholesale market. And there has been a major change in long-haul transportation efficiency as a result of the wholesale facility and its administration. In fact, the wholesale market relocation resulted in a drastic reduction of congestion in the Plaza España area² and in an easy flow of traffic in the new wholesale market facility. The time saved at the Central Market had an estimated value of 63 million pesos savings in 1974 (210 minutes per truck per day at one peso per minute).³

²The research did not make any estimate of cost savings in downtown Bogotá as a result of reduction in congestion.

³The estimate is based upon Table 15 which contains data from 1974. For data of Plaza España is based upon in-depth case studies conducted of this research. The value assigned per minute per truck is based upon information from case studies.

There are opportunities to reduce the average time of a loaded truck entering the market, unloading and exiting from the wholesale market. The larger part of the time in the Central Market is spent waiting for the actual sale of the load and getting paid for the hauling charge. In addition, there is a good deal of time spent in trying to meet the 4:30 a.m. hour of entrance.

Finally, the efficiency per ton transported may have increased because the proportion of vehicles with larger capacities has increased (Table 16), but no monetary estimate of this cost saving was actually made.

Efficiency in the Use of Warehousing Area

Warehousing area in the Central Market is used as a sales and inventory management area rather than a storing facility. In perishables it is basically a sales area with almost daily inventory turnover because there is no refrigerated warehouse. Thus, this research selected sales per square meter as an efficiency measurement. Since there is no reliable data from Plaza España, efficiency comparisons were made between wholesalers located in other places of Bogotá and wholesalers located in the central market facility. An effort to discover opportunities to improve efficiency was also made. Wholesalers located in the Central Market had a larger volume of sales per unit of area in comparison to wholesalers located in other places in 1974 (Table 7). Central Market wholesalers also had a more rapid inventory turnover and a higher volume of sales per employee. Therefore, Central Market wholesalers more efficiently used their warehousing area than did other wholesalers, an efficiency which may reflect the

fact that wholesalers in other places have a greater tendency to be wholesaler-retailers and, therefore, their transaction units were smaller.

There was great variability in sales per square meter among products. Grains and processed food had the highest sales per square meter and potatoes the lowest in 1974 (Table 7). The difference can be an indication of efficient use of warehousing area, but before acceptance of that conclusion several other variables related to warehousing efficiency and sales must be discussed: (1) the height of stacks used in different products; (2) the value of the product per unit of volume; (3) the speed of inventory turnover; (4) the existence of some completed transactions originating from the Central Market, though the actual product does not flow through the Central Market warehouses; and, (5) hours of operation per day.

First, wholesalers in grains and processed food are utilizing all the potentially usable height of their warehouses while potato wholesalers use their vertical space relatively efficiently. However, wholesalers of fruits, vegetables, plaintain and cassava make very inefficient use of vertical space. Indeed, the height of their stacks may reach in a peak hour only 2 meters out of 5 that are potentially usable. The existence of a super-abundant number of traditional wholesalers (Tables 11 and 18) is a deterrent to achieving more efficient use of vertical warehouse space. A traditional wholesaler makes sales by personally inspecting each sack. He has approximately three hours per day of sales and an area of 12 sq. m. in a big warehouse. Consequently he has an institutional barrier to using his vertical

space most efficiently.⁴

Second, though being relatively efficient in the use of their warehousing height, potato wholesalers have the lowest sales per square meter. One reason is that potatoes are bulky and their value per unit of volume is low in comparison to other products. Grains and processed food have the highest value per unit of volume; some indication of this is presented in Table 8.

Third, inventory turnover, also affecting sales per square meter, occurs almost daily in fruits and vegetables and every three days in potatoes. The latter situation of course makes potato wholesalers appear more inefficient in terms of sales per square meter. However, the very fast inventory turnover of all perishables contributes to high daily price fluctuations and is related to the lack of refrigerated warehouses. Only the new broadline wholesalers in perishables could efficiently use refrigerated warehouses. Traditional wholesalers would have similar problems in using refrigeration as they have to achieve more efficient use of warehouse height.

Wholesalers in grains and processed food have slow inventory turnover in comparison to wholesalers handling perishables. Volume wholesalers had between three and four inventory turnovers per month and broadline wholesalers about one per month. In addition, all volume wholesalers, and some broadline wholesalers in grains and processed food, store in grain elevators. In this case, wholesalers are playing

⁴For efficient use of warehousing height for perishables investments on racks and/or other handling techniques to avoid physical damage may also be necessary.

a role of obtaining scale economies by keeping massed reserves for short periods of time.

Fourth, volume wholesalers in all products, but especially in grains and processed food, make sales from their warehouse by phone.⁵ In many cases the product flows from grain elevators to other cities without entering the Central Market. In addition, a truck may enter the Central Market and only be rerouted without unloading,⁶ or the cargo may be passed directly from one truck to other. Thus, warehousing efficiency measured by sales per square meter may appear higher than the actual physical movement of products through their warehouses. This difference may be significant in grains and processed food.

Fifth, a last measure of efficiency is the length of time that a warehouse is used during the day. Paradoxically, the increase in transaction efficiency in perishables has resulted in fewer hours of use of warehousing facilities. In perishables the actual utilization of the warehousing area occurs between 5 a.m. and 11 a.m., with intensive use between 5 a.m. and 9 a.m. The rest of the day and night these warehouses are almost empty. The warehouse area is used exclusively as a sales area and, since sales are concentrated now between 6 a.m. and 9 a.m., almost all inventories are sold and the warehouse remains unused. Also, parking zones and access streets are

⁵Volume wholesalers in grains and processed food make about 50 per cent of their purchases by phone and 80 per cent of their sales by phone.

⁶The largest volume wholesaler in carrots has no warehouse. He simply buys in the "auction-like" market, has contracts with farmers and immediately sells truck loads or fractions of truck loads to traditional wholesalers. At 7 a.m. he leaves for his job in an electric appliances corporation.

underutilized most of the day. On the other hand, warehouses, access streets, parking, loading and unloading zones are becoming congested in peak hours of market activity.

Warehouses for grains, processed food and potatoes are use permanently to hold inventories and even for short term storage. In these product lines, selling and buying were spread more evenly during the day. There is some congestion in potato warehouses in peak hours of market activity but almost none in grains and processed food.

Is there any particular reason for short hours of market operations in perishables? It seems that the short time period is related both to the perishability of products and to the structure of production and marketing. Because of physical separation of wholesalers and retailers, the latter make one purchase a day. And since most of the plaza retailers are practically one-man businesses, they need time to make sales during the day (sales in retailing plazas start at 8 a.m.). Hence, they have to make purchases early in the morning which means that farmers and assemblers have to sell even earlier in the morning. Otherwise, their produce could not be sold by wholesalers the same day as it would deteriorate because of lack of refrigerated facilities. Broadline wholesalers handling perishables use the warehousing area more evenly during the day for sorting, washing and packing. This is possible because they have contracts with large scale retailers and institutional consumers. Also a few of them have rented refrigerated facilities elsewhere for short-term storage.

In sum, the warehousing area is being used very efficiently by grains and processed food wholesalers in the Central Market and particularly by volume wholesalers and broadline wholesalers. Volume wholesalers in potatoes utilize it very efficiently; they buy, sell, load and unload, serving several cities during most of the day. On the other hand, traditional wholesalers in potatoes use warehouse facilities less efficiently. Broadline wholesalers and volume wholesalers in perishables are utilizing warehousing facilities relatively efficiently, though many of them have space difficulties and small places in several warehouses, and traditional wholesalers in perishables are using their warehousing facilities very inefficiently.

Despite these inefficiencies, (many of them out of the control of the individual merchant) there is congestion in peak hours in the Central Market. There are many merchants with poorly adapted warehouses in other locations (Tables 7, 11 and 18). Ceteris paribus, there is a current need for relocation of wholesalers who had about 19,418 square meters in all places of Bogotá in 1974. Also there was a demand by all wholesalers for about 27,460 additional square meters.⁷ These warehousing needs would be equivalent to the size of the present wholesale market facility. However, trying to provide warehouse space to every wholesalers is socially expensive. If such provision is subsidized by government, then the government is subsidizing the inefficiency of many traditional, small scale wholesalers. Changing the

⁷These estimates were made from surveys applied to samples of wholesalers and then projected to population of wholesalers.

structure of both wholesaling and retailing may result in an aggregate increase in warehousing efficiency and hence less area would be needed.

Changes in Physical Product Losses

Physical product losses are defined as those costs due to damages and weight losses of products incurred by the several intermediaries while owning the product. The data are based upon surveys conducted for this research. Each market participant made an estimate of his physical losses in 1971 and in 1974 (Table 25).

At the wholesale level there is a clear reduction of physical product losses (Table 25). Moreover, the physical losses of wholesalers located in Central Market were lower than those of wholesalers located in other places in 1974. Savings at the wholesale levels were estimated at 37.6 million pesos in 1974 for all the selected food products. The reduction in product losses has not been dramatic in the opinion of wholesalers. The main reasons are: (1) in most products inventory turnover was also very rapid in Plaza España; (2) most wholesalers (traditional wholesalers) have maintained the same practices of packing, handling, loading, unloading and transporting products; (3) there are no refrigerated warehouse facilities for perishables in the Central Market and there is no refrigerated transportation. What reduction of losses did occur is due to better protection of the products from weather conditions the elimination of rodents and less handling.

Modern wholesalers (volume and broadline) are slowly changing their handling and transaction practices and this is reflected in

Table 25. Average Physical Product Losses Estimated by Wholesalers and Retailers Before and After the New Wholesale Market Operation

Product	Wholesalers		Wholesaler-Retailers		Independent Plaza Retailers		Independent Neighborhood Stores		Retailers' Cooperative and Voluntary Chains	Corporate Chains and Consumer Owned Cooperatives	
	1971 %	1974 %	1971 %	1974 %	1971 %	1974 %	1971 %	1974 %	1974 %	1971 %	1974 %
Rice	0.5	0.2	0.4	0.3	0.2	0.2	0.3	0.3	0.7	0.4	0.3
Corn	0.3	0.2	1.0	1.0	0.2	0.0	0.6	0.5	0.4	-	-
Potatoes	2.5	2.6	2.6	2.6	19.4	11.0	6.5	3.2	3.4	3.2	3.2
Tomatoes	7.0	5.7	-	-	9.9	11.1	14.0	11.5	10.2	5.0	6.0
Cabbage	1.7	1.7	5.0	2.5	10.8	8.1	6.7	5.9	7.0	5.0	5.0
Carrots	2.0	1.8	-	-	9.9	9.9	4.9	5.8	4.9	5.0	5.0
Plantain	2.1	1.9	3.3	2.6	5.8	6.7	8.4	7.6	5.7	5.0	5.0
Oranges	1.8	1.7	4.0	2.7	13.8	14.6	19.8	18.9	7.5	-	-

Source: Wholesalers and retailers surveys and case studies conducted for this research, Bogotá, 1974.

lower physical product losses. Assemblers interviewed argued that the physical losses had not been reduced as a result of the relocation of the wholesale market. However, they had high physical product losses that normally range from 3 to 20 per cent in perishables. Yet assemblers may not be very conscious about physical product losses because they buy and sell in the same sack and these losses are more evident to wholesalers and especially to retailers who unpack the product.

Pricing Efficiency

The concept of pricing efficiency refers to the role of prices in making the food system responsive to consumer demands.⁸ The major concern here is with how national markets are connected and how prices change through time. The central issue is, after all, market information flow.

From previous chapters it should be clear that the market became more transparent as a result of easier estimates of volume and better market information flow among market participants. In addition, the commodity exchange, by quoting prices in the main cities and assembling centers, and by disseminating this information, is contributing to improved linkages between several regional grain markets.

Price fluctuations in grains and processed food are affected by national and international supply and demand conditions because these markets are relatively well interconnected nationally and have been relatively well organized. Therefore, particular situations at the Bogotá Central Market do not significantly affect prices on a national basis.

⁸See details in: Kohls and Downey, op. cit., p. 11.

In perishables price fluctuations are frequent and substantial, and the several regional wholesale markets are poorly connected. Thus, the local market situation heavily influences daily prices. Several market participants argue that price fluctuations have been affected only minimally by market reform programs. However, prices among different warehouses are more homogeneous as compared to those in earlier periods in Plaza España. But daily and weekly price fluctuations continue to be great and are one of the main risks facing market participants.

Seasonal, daily and weekly price fluctuation indexes for perishables did not indicate a reduction of price fluctuations for Bogotá as compared with Cali and Medellín in 1972 and 1973 as a result of the operation of a wholesale market in Bogotá. In some products, such as apples and tomatoes, the weekly price variation coefficient increased in Bogotá between 1972 and 1973 (from 16.9 to 27.9 per cent and from 16.6 to 20.2 per cent, respectively), but also increased in Cali and Medellín about the same proportion. For cabbage and cassava, the variation coefficient decreased in Bogotá (from 53.0 to 36.8 per cent and from 18.9 to 13.5 per cent, respectively), but it also decreased in Cali (49.0 to 32.7 per cent and 23.0 to 19.2 per cent, respectively) and in Medellín (46.0 per cent to 23.3 per cent and 21.0 to 26.3 per cent, respectively)⁹ and in about the same proportion, with the exception of cassava, in Medellín. Consistently, neither city has the highest nor the lowest price fluctuations. Prices of perishables may

⁹Data from: Federación Nacional de Cafeteros: Programa de Desarrollo y Diversificación Cafetera, Series de Precios de Productos Agrícolas Perecederos (Bogotá: Fedecafé, 1974).

follow different directions in several cities for weekly periods. Moreover, the differences in the average monthly prices of perishables, among seven Colombian cities, were very high. These differences were within a range of 92 to 182 per cent in potatoes in 1974. In contrast, for grains and processed food the differences in prices were low among cities. For example, in rice these differences were within a range of 23 to 36 per cent in 1974.¹⁰

How are prices discovered and determined in grains and perishables in the Bogotá wholesale market? Could this method of determination somehow explain the big price fluctuations and high price differences of perishables among cities?

In perishables inventory turnover occurs almost daily at the wholesale market, while in potatoes inventory turnover occurs about every three days. This rapid turnover can be explained by the almost complete lack of refrigerated storage. Most perishables lose quality after one or two days in inventories, according to the wholesaler's perception, and have to compete with fresh products. In addition, holding inventories ties up scarce working capital.

In the absence of short term storage, daily supply and demand and very short term expectations tend to determine daily prices in the Central Market. In fact, once products have reached a terminal market, the high cost of transportation, perishability and risks of price changes make rerouting very unlikely. Thus, the question goes back to how do assemblers make decisions as to where, what and how much should be sent to terminal markets?

¹⁰DNP, Para Cerrar la Brecha, p. 120.

In making decisions assemblers have poor information. While purchasing, assemblers do have the information of a previous day in a terminal market, and in some assembly centers merchants from different places can interchange personal information about the terminal markets they serve. Thus, the prices in an assembly center may respond to expectations of supply and demand in several terminal markets, as perceived by several assemblers. But there is no information on the quantities bought and the prices paid in other assembling centers, nor is there information as to where products will be sent.

Thus, farmers and merchants from several assembly centers may send too much product to specific cities based upon the information of previous days. As a result of such poor information, some particular terminal markets can be over supplied. Then there is little possibility of trans-shipping some volume to other terminal markets and little possibility of holding inventories until the next day. Therefore, prices fall in that terminal market.

Wholesalers in the Central Market, with their experience, can predict daily demand function. Demand changes according to consumer buying habits and specific days of payment of wages and salaries. Once the demand function is estimated, then experience indicates how much would be taken at different prices. Thus, the demand function is relatively stable as determined by levels of income, population, tastes and substitutes.

It follows then, that daily price fluctuations are due mainly to fluctuating daily volumes entering the market and to poor information between assembly centers and between assembly centers and

terminal markets. Hence, volumes of perishables entering a terminal market have an important random component.

In sum, the main factors determining high daily and weekly price fluctuations and high price differences among cities are: first, poor market information between assembling zones and terminal markets; second, insufficient information among terminal markets; third, lack of refrigerated storage and refrigerated transportation equipment; fourth, small scale merchants at all levels oriented to serve only a local market. As long as these factors are not changed substantially by market reform, major improvements in the price mechanism can not be expected. Rather, monthly trends become a result of seasonal production and lack of storing facilities; thus, in perishables prices continue to fluctuate drastically and thus, high risk remains along channels which may discourage innovation and farm production. However, as long as market reform has created incentives for the development of large scale wholesalers, who are building their own market information networks, daily and weekly price fluctuations would tend to be reduced.

Consequences of Market Reform on Institutional and Technological Innovations

Technological and administrative innovations are related to new institutions. Traditional wholesalers and wholesaler-retailers have made practically no technological nor administrative innovations. And, since they represent about 94 per cent of wholesalers, the first impression, and the result of a random survey would be that the system remains unchanged. Traditional wholesalers and wholesaler-retailers

maintain the same practices of packing, buying and selling by personal inspection. Many of them, especially in perishables, do not use platform scales, remain specialized by product and have a very low volume of sales. Moreover, 42 per cent of wholesalers of perishables never use checks in paying for their purchases.

Market operators are changing slowly in response to their new work environment. Wholesalers perceive that they are now socially acceptable and are realizing that their profession has been dignified. Many of them feel proud of being merchants. In contrast, in Plaza España most of them were ashamed of being merchants. And, wholesalers, especially those handling grain and processed food, are participating in courses organized by Corabastos and CABSA (Table 26). But, the attainment of formal education is still not widespread; 3 per cent have not attended primary school at all and only 2 per cent have received education above the high school level.

Case studies indicate that volume and broadline wholesalers are adopting innovations in response to economic incentives. For example, they have introduced new technology in office equipment and in communications and they are training their personnel. They are also handling their inventories very efficiently, studying the location of different products. They have increased their product line, make use of mixed margins pricing techniques, offer store delivery service and new packaging, use many bank services, look for a rapid working capital rotation and have a policy of relatively low margins but high volume.

Traditional wholesalers and wholesaler-retailers are superabundant and remain static. Meanwhile, volume and broadline wholesalers

Table 26. Wholesalers and Retailers Attending Courses Organized by Corabastos from 1970 Through 1974

	No Participation %	Attended One Course %	Attended Several Courses %	Number of Merchants that Attended
Wholesalers:				
In Central Market	78.5	16.2	6.3	339
-Grains and Processed food	50.0	43.7	6.2	89
-Perishables	81.2	12.5	6.3	250
In other places, Bogotá	100.0	0.0	0.0	0
Retailers:				
Independent plaza retailers	96.9	1.6	1.6	236
Independent neighborhood stores	99.0	1.0	0.0	90
Retailers cooperative and voluntary chains	77.3	9.1	13.6	307
Corporate chains and consumer owned cooperatives	100.0	0.0	0.0	0

Source: Wholesalers and retailers surveys conducted for this research, Bogotá, 1974.

serve oligopolized market segments but are adopting innovations. Assemblers as sellers in the Central Market are in atomistic competition and also remain very static in operating practices.

Several authors¹¹ argue that a few innovative firms can become channel leaders and improve coordination of marketing channels. This improvement could result in risk reduction along the channels. Then, farmers facing fewer risks would be expected to respond by increasing production, as long as prices were at a remunerative level. And indeed, the perception of the farmers interviewed, with respect to incentives due, to the new wholesale market seems to confirm this hypothesis. In fact, more than 82 per cent of farmers interviewed argued that since they had more security and confidence in product sales they had increased production. Moreover, they felt that they were getting higher real prices in this market in comparison with what would have been if Plaza España were still operating as the main wholesale market. About one-half of them argued that they had been stimulated to apply new technology in response to market changes.

Distribution of Costs and Benefits of Market Reform
Among Market Participants

The increase of efficiency due to market reform has produced social benefits. But who benefits? Is there any group that might lose? Analysis of the distribution costs and benefits among market participants is based upon information and concepts developed in

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Such as Richard Holton, Peter Drucker and J. C. Abbot as quoted by Riley, Improving Internal Marketing Systems, p. 3. and Harrison, op. cit., p. 103.

previous chapters. The most important concepts and information deal with concentration, changes in access to market information, vertical and horizontal integration and coordination, organized groups of merchants, tacit and open collusion and market segment opportunities.

Degree of Concentration, Benefits Passed to Consumers, and Excess Profits

The foregoing analysis on concentration and market information may indicate that not all the benefits produced by market reform programs have been passed to the consumer in the form of lower real prices. But neither were all benefits kept by the market enterprises that increased efficiency. Benefits produced by time-saving transportation may not have remained as extra profits to specialized truck owners because this industry is very competitive. Thus, part of the savings would benefit producers and final consumers. On the contrary, above average transportation savings gained by wholesalers owning trucks may have increased the profits of the owner. This is expected because there are few volume wholesalers who very effectively combine the two activities.

It was estimated that wholesalers have captured a large share of market reform benefits. Farmers (79 per cent of the interviewed) and retailers (47 per cent) perceived that wholesalers located in the Central Market have captured the largest benefits of the reform.

The right of renting warehouse space in the central facility has a positive acquisition value. In fact, rights of renting are bought and sold at high prices in a black market. The value of a right to rent is designated as coupon value. A coupon is any written

or unwritten method that given someone the right to rent; and circumvent, if necessary, CABSAs rules of renting.

A profit-maximizing wholesaler would sell his coupon (not his trademark) if he can increase profits by acting as a wholesaler elsewhere (or by doing another job) and by earning interest on the money obtained by selling his coupon. Thus, the actual interest or the opportunity cost of a coupon value is a pure profit due to having the right of rent warehousing space. That pure profit here is called warehousing surplus. Warehousing surplus in the Central Market is but one form of pure profit which indicates, and is a result of CABSAs subsidized rental rates.

A relatively small proportion of wholesalers have decided to sell their coupons in a black market. Some merchants, though profitable for them, would not sell their coupons because their wholesaling activity is a way of living and/or they may not want to accept further risks to open a wholesale business elsewhere. Also some risk is involved in selling their coupons in a black market.

All coupons command a positive value for all food groups and warehousing places. It follows that there are pure profits (above normal profits) for most wholesalers in the Central Market. But, as expected, coupon values vary according to product, location of the warehouse and location of the merchant within a warehouse. A 12 square meter area could have had a coupon value of between 5,000 and 100,000 Colombian pesos in 1974. Moreover, by use of averages per food group, a warehousing surplus was estimated at 30 to 90 pesos per square meter monthly in 1974.

This warehousing surplus is a measure of CABSAs rental rate subsidies. If CABSAs had "market" rental rates, the warehousing surplus would be zero. And if "market" rates were charged, CABSAs would have obtained a rental income of 44 million pesos in 1974 instead of 18.2 million pesos for the selected food-occupied area. In sum, then, CABSAs had rental rates that were 42 per cent of "market" rates in 1974.

Case studies indicated that the warehousing surplus explained the difference between the net income that traditional wholesalers and wholesaler-retailers were earning and the income they expected they could earn elsewhere in 1974. But the warehousing surplus explained just a small part of volume wholesalers' and broadline wholesalers' net income. Thus, even after paying "market" rates, modern wholesalers have had pure profits, the sources of which can be identified as follows: better access to information, serving oligopolistic market niches, collusive practices and barriers to the entry of new competitors.

Volume wholesalers have build information networks. Several volume wholesalers in grains and processed food informed the researcher that they improved their incomes with inflation because they were able to find information as to when prices were going to have larger increases. Then they increased their inventories by tying up working capital for a short period of time. This happens especially in products under government price controls and is one example of how superior information can generate profits.

Moreover, wholesalers have several ways of controlling competitors' entry: first, organizing groups, such as Fedema, with power in

the CABS Board of Directors, second, by collusion, not so much on price fixing, but in chasing out new competitors that do not follow the tacit rules; dumping prices are used so that the intruder cannot meet them and so loses and finally exits the market; third, at a warehouse level there are barriers to entry of certain competitors from any other warehouse; thus, prices are not determined in an "ideal" competitive environment. Collusion has an impact on profit, but how much is difficult to measure.

How are partially excessive profits being spent? Case studies indicate that profits are spent in luxurious consumption and invested in areas related to food marketing. Most of the volume wholesalers and broadline wholesalers, and even a few traditional wholesalers, are buying brand new personal cars. Some wholesalers are purchasing more luxurious cars more frequently (despite heavy taxation on these luxuries - 300 per cent). There are also some volume wholesalers who buy luxurious houses and who travel widely. But it is evident that the largest share of profits is invested in trucks, agricultural production, food processing and commercial infrastructure. Thus, excess profits are used not only on conspicuous luxurious consumption but also in vertical and horizontal integration investments.

Are there some other groups within the interface that captured benefits as a result of market reform?

Assemblers gained between 2 and 6 per cent, net income on sales, a figure which appears high, though in absolute terms net income was low as a result of a low volume of sales. Real income in this group has increased, however, except for fruit and vegetable assemblers

who it may have decreased as result of market reform programs. In addition, commercial farmers have benefited by real higher prices in comparison with prices they would have obtained had there not been any reform. All market participants have benefited from hygiene, better security of goods and persons and convenience in the new wholesale facility.

Several groups may have been hurt by market reform programs. About 41.5 per cent of farmers interviewed maintained that small scale farmers were economically hurt, while only 1 per cent argued that they benefited. It seems that small scale farmers, who bring several products to the market lost their opportunity to sell directly to retailers. In addition, small scale farmers may have some problems selling their miscellaneous small cargo in specialized warehouses. Thus, some small farmers may have lost bargaining power and a wholesaling margin and may have had extra selling costs. Also, assemblers, who are not allowed to sell to retailers, may have lost both bargaining power at the wholesale market and the wholesale margin. Thus, they may get lower real prices, though this real lower price would be passed back (at least partially) to traditional farmers in the locally oligopsonistic assembling centers.

Price Margins

Margins are discussed here in order to discover indications of market reform benefits being passed on to farmers and/or consumers.

Price margin here is defined as $(\frac{SP - PP}{SP}) 100$ where SP is

selling price and PP is purchasing price.¹² Price margins are used as an estimation of marketing margins and are equal when the product is not processed and there are no product losses in the flow from producer and to consumer. Thus, when the prices are measured for exactly the same product unit, price margins are equal to marketing margins.

¹²The estimation of margins, in the Colombian environment, is very difficult. Selecting comparable units is rather a puzzling problem. Obtaining reliable information is also difficult. If comparisons are made between two different research studies, the problem may increase.

In Table 11 the population of wholesalers estimated by CID in Plaza España for 1970 is very small in comparison to the estimate in the Central Market. There is evidence from case studies that, in fact, population of wholesalers was increased. But also, data from CID (e.g. size of warehouse) indicate that, in CID's wholesaler population, wholesaler-retailers were excluded and, probably, small scale traditional wholesalers were also excluded. These wholesalers, in turn, may have been included as retailers. To make the data (Table 23) somehow more comparable, CID's wholesalers are compared with this research's wholesalers (excluding wholesalers-retailers). The reader must be aware that CID retailers margins may tend to be lower because they may include some wholesalers and wholesaler-retailers.

The reader must also be aware that for products with slow inventory turnover, especially at the retail level, inflation may affect margins. Notice that if prices were measured with the same monetary unit, the deflation index for the buying price would be lower (by the rate of inflation of the holding inventories period) than the index for the selling prices. Since inflation was low in 1970 and high in 1974, as a rule of thumb at the retail level (Table 23), margins for grains and processed food would be reduced by 1 to 2 per cent if the effect of inflation were eliminated in 1974, and about 0.5 per cent to 0.9 per cent in 1970.

Finally, the reader must be aware that margins are percentages that tend to be high when prices are low (in a harvest period) and relatively low when prices are high. This is so because merchants have fixed costs that do not vary with the price of the product. The cost of transporting a sack of high priced-potatoes is the same as the price of transporting low priced-potatoes. The data collection of CID began in November, 1970 (CID, Distribución de Víveres, Vol I, p. ii.), a non-harvest period for most food products, while these research surveys were conducted in late July and early August, 1974, during the main harvest period for most commodities. Thus, CID margins tend to be lower than this research's margins because of this harvest vs non-harvest effect. This is more valid for margins of retailers and assemblers which include transportation.

The average margin (transportation and credit excluded) for wholesalers has been reduced for almost all products in comparison with Plaza España (Table 27). Case studies substantiate that reduction. Also, margins are lower for wholesalers located in the Central Market (1.24, 1.78 and 11 per cent) than for wholesalers in other locations (2.44, 3.50, 2.25 and 17 per cent for rice, sugar, corn and potatoes, respectively). Aggregated margins for grains and processed food are also lower in the Central Market (4.22 vs 5.7 per cent) as compared to wholesalers in other locations. Margins in the Central Market are lower not only because wholesalers may be more efficient, but also because there is a lower proportion of wholesaler-retailers (Table 18 and 27).

A volume wholesaler handling a line of five products has an average margin of 2.5 to 3.0 per cent. But he handles great volumes and makes transactions in great volumes, too. Broadline wholesalers, however, have aggregate margins of about 4.2 per cent. Certainly, margins are lower for products with rapid inventory turnover, such as rice, and products with slow inventory turnover have larger margins, i.e., liquors. Broadline wholesalers in perishables have relatively low wholesale margins, while traditional merchants at low scale, though having low incomes, have large margins.

Thus, part of the increase in efficiency in wholesaling, savings in transportation and part of CABSAs' subsidies are being partially passed to other channel levels in the form of lower margins. Even if margins were equal benefits still would have been passed to other channel levels.

Table 27. Price Margins for Selected Food Products at Wholesale and Retail Levels as Compared Before and After Market Reform, Bogotá

Product	Plaza Retailers		Neighborhood Stores		Retailers' Cooperative Affiliates	Voluntary Chains	Consumer Owned Cooperatives		Corporate Chains		Wholesaler-Retailers	Whole-salers	Assemblers ^a	
	1974 %	1970 %	1974 %	1970 %	1974 %	1974 %	1974 %	1970 %	1974 %	1970 %	1974 %	1974 %	1970 %	1974 %
Rice	18	14.5	17	15.4	12	11	7	11.0	10	11.5	6.0	1.8	3.0	4.9
Corn	23	18.4	23	22.5	10	13	8	16.5	8	20.0	9.5	2.7	6.6	14.0
Refined sugar	15	19.0	15	16.6	9	15	10	17.5	12	19.7	6.8	1.8	2.5	--
Potatoes	30	10.0	32	15.1	22	27	17	5.4	17	12.5	13.6	11.0	13.7	16.0
Tomatoes	30	--	35	--	28	33	--	--	17	--	--	11.0	15.0	--
Plain-tain	27	--	28	--	26	26	--	--	23	--	12.0	11.5	11.1	31.0
Oranges	22	--	25	--	19	--	--	--	--	--	15.0	10.0	14.1	12.0

Source: Assemblers, wholesalers, retailers surveys and case studies conducted for this research Bogotá, 1974

CID, Distribución de Víveres, Vol. IV, 80 and Vol. V, 81-83, for 1970.

^aTransportation costs are included.

Although the CID studies did not report a transaction channel between wholesalers, case studies conducted for this study indicated that it existed in Plaza España and that it had not changed substantially (Figure 12). Margins are different for the different transaction channels. Thus, prices paid by retailers may vary depending upon what their sources of supply are.

Some estimates were made for specific products for 1974 (channel margins are overestimated because margins are just arithmetically added).¹³ In grains and processed food the most common channel within wholesaling is volume wholesaler-broadline wholesaler. Thus, the total channel price margin would be: for rice, 3.7 per cent (1.2 of volume wholesalers plus 2.5 per cent of broadline wholesalers); for white corn, 11 per cent (2 volume wholesalers and 9 per cent broadline wholesalers). In perishables, for example plaintain, the total margins seem to be very high. For the largest possible channel, volume wholesaler (2.8), traditional wholesaler (11.5) and wholesaler-retailer (12.0), the margin would be 26.3 per cent, and for the most common channel volume wholesaler-traditional wholesaler, the margin would be 14.3 per cent. This indicates that a wholesale margin is not always an average of all wholesaler's margins.

It follows that long wholesale channels result in higher margins and prices. Modern, vertically integrated retailers have important savings because of reduction in the number of transactions and

¹³ Estimates are made on channels in Figure 12. Information from Table 27 is used along with data from case studies. The basis of the percentages is the selling price of the wholesaler. See also Figures 13 and 14 for a modern channel and a traditional channel. In these Figures basis of the percentages is the price paid by households.

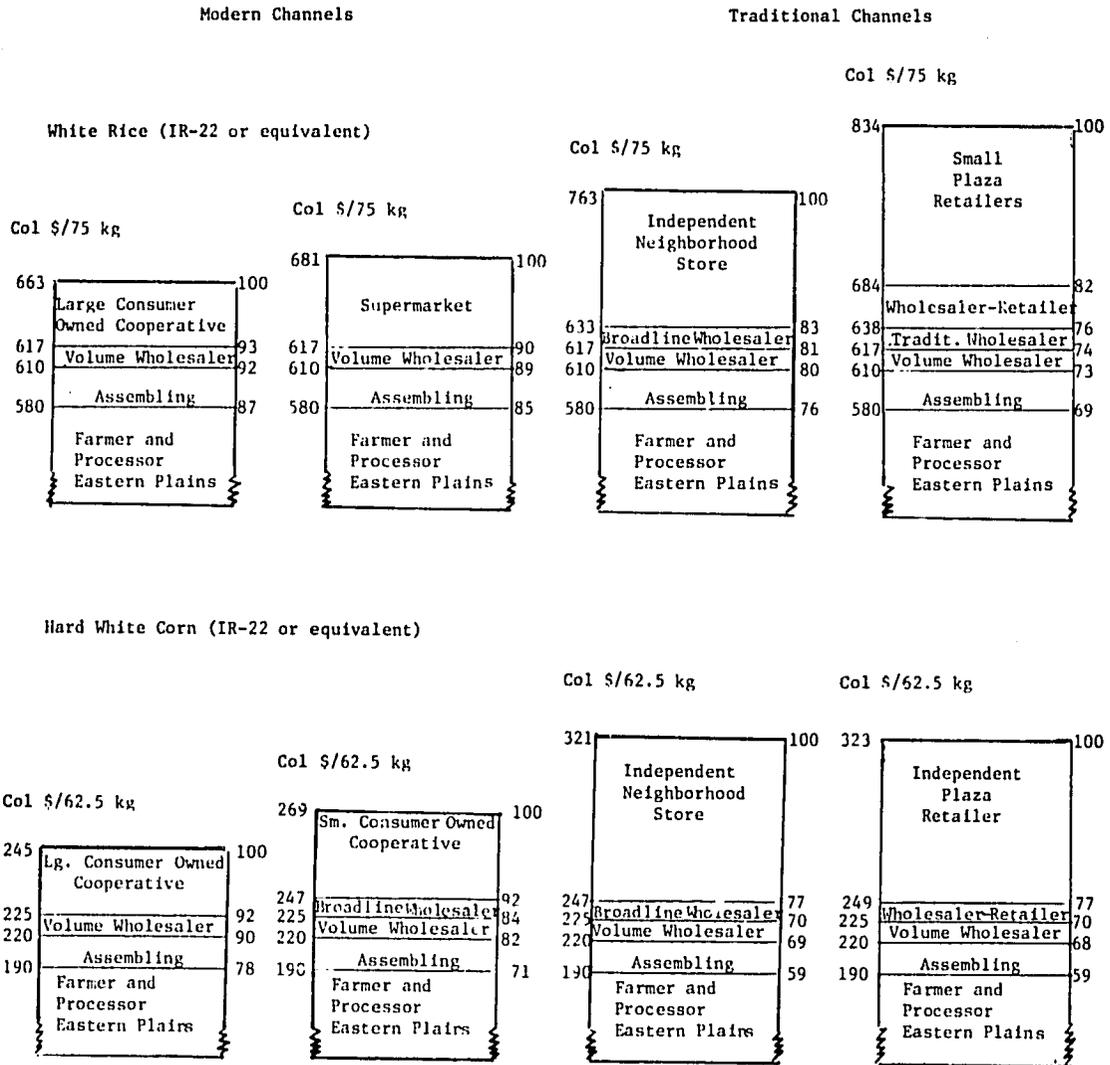


Figure 13. Comparison of Grains Price Margins by Alternative Channels.

Source: Estimated from assemblers, wholesalers and retailers surveys and case studies, Bogotá, 1974.

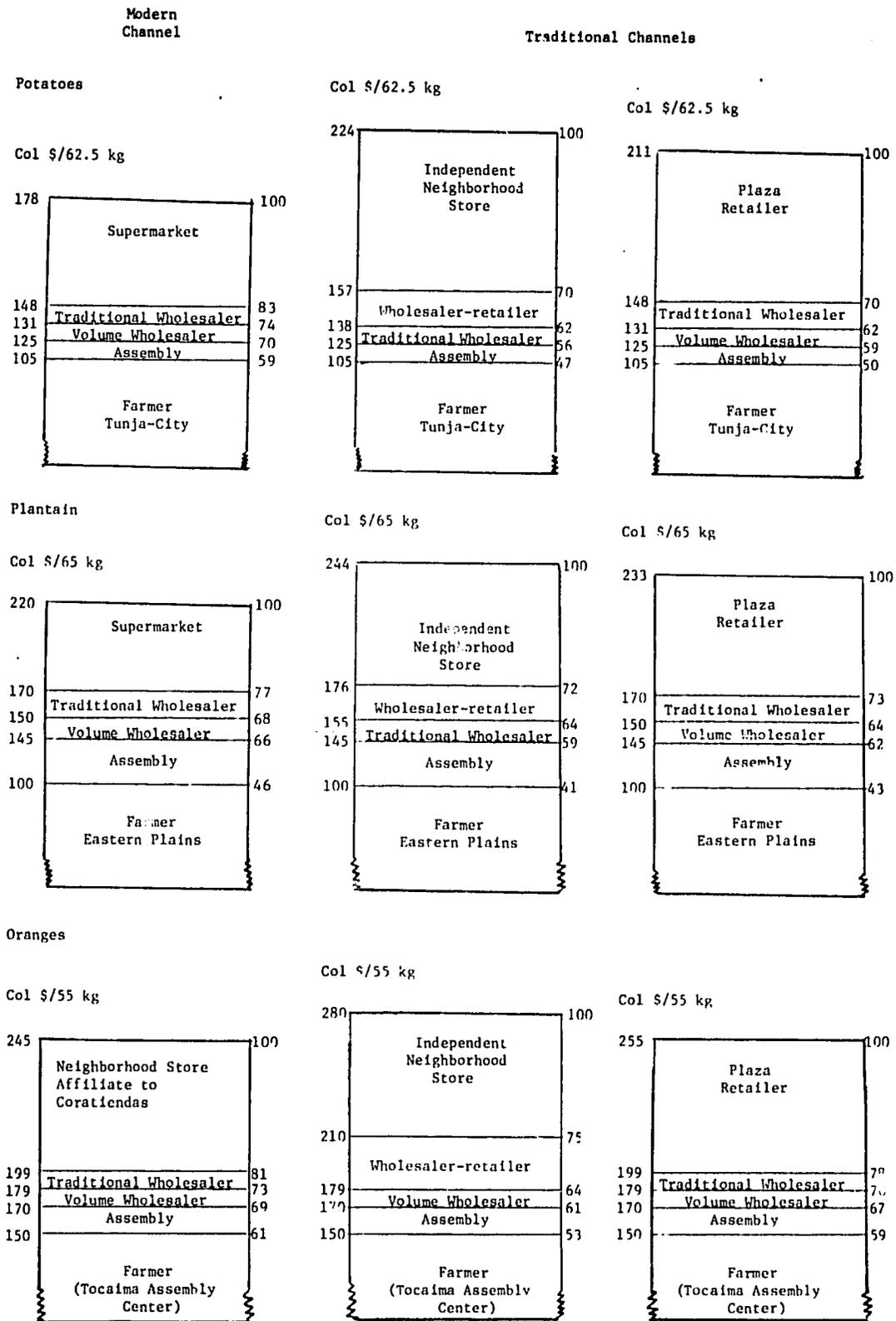


Figure 14. Comparison of Perishables Price Margins by Alternative Channels.

Source: Estimated from assemblers, wholesalers and retailers surveys and case studies, Bogotá, 1974.

economies of scale that allow them to buy from volume wholesalers or commercial farmers or processors. A large scale consumer owned cooperative can buy corn from a volume wholesaler who has a margin of 2 per cent, whereas small neighborhood stores would have a wholesale margin of about 11 per cent.

If channels are divided between modern and traditional (Figure 12), margins would also be estimated for modern and traditional channels (Figures 13 and 14). What becomes clear is that modern channels are short and their margins relatively low. In contrast, traditional channels are long and margins are relatively high. If, for exactly the same quality of product, comparisons are made, it follows that traditional channels would have the higher margins and prices. Even in some products the price at which a small scale traditional retailer buys is equal to or even higher than the selling price of a large consumer owned cooperative. In several interviews with very small scale retailers they indicated that, when possible, they bought some commodities from a nearby, large, consumer owned cooperative.

In the subsystem assemblers still play an important role (Figures 8, 9 and 10). Assembling margins, including rural-urban transportation, ranged from 5 per cent in rice to 31 per cent in plantain (Table 27). Products with lower unit value have larger margins because transportation cost is charged by weight or volume units. Margins of assemblers may have been reduced slightly, as a result of lower per unit profits, to face competition from farmers and wholesalers who has been entering the assembly function.

Projection of Institutions and the Nature of
Competition in the Long Run

Some of the main marketing reform changes will continue to have impacts on the structure, conduct and performance of the food system over the longer run. Several of the reforms were directly promoted by Corabastos, such as the commodity exchange and retail chains. But other changes have been a result of market incentives from the Central Market and/or other CABSAs programs. Principally, these changes include the faster development of volume wholesalers and broadline wholesalers, as well as the trends to vertical and horizontal integration and coordination (in the interface).

Volume wholesalers are becoming more backwardly integrated with farming, processing, transporting and assembling. Farmers are also assuming more marketing activities. Broadline wholesalers are becoming integrated or coordinated forward with retailers; this trend is expected to continue.

Some volume wholesalers are becoming information specialists and may evolve into commission agents in direct competition with commodity exchange brokers. Merchants with their own organized system of market information will gain power because public information is relatively unorganized.

Changes are occurring at different speeds. In fact, market incentives have stimulated more rapid and permanent changes for wholesalers, but Corabastos' direct promotional programs (i.e., public information, organization of neighborhood chains) have been slowed down. The social cost of the different speed of these structural changes,

at least in the short term, is that volume wholesalers and broadline wholesalers will reap excess profits until institutional competition is promoted.

In the long run, if the trends continue, traditional wholesalers and wholesaler-retailers will continue to lose share and eventually will exit the market.

CHAPTER VII

FOOD WHOLESALE-RETAIL MARKET INTERFACE

This chapter is primarily concerned with the market dyad in which food wholesalers act as sellers and retailers as buyers. Some consideration is given to market relationships between retailers and households. The Corabasots market reform programs which operated in this market dyad were the wholesale-retail voluntary chain (PAN), a retailer owned cooperative (Coratiendas) and the wholesale market (CABSA). The effects of these programs on food retailing is emphasized in the analysis. The following institutions were considered within the interface: modern wholesalers (volume wholesalers and broadline wholesalers) and small scale wholesalers (traditional wholesalers and wholesaler-retailers) as sellers, and retailers, institutional buyers, urban food transportation firms and households as buyers and sellers. The emphasis of this chapter is on food retailing.

Retailing Institutions

There are several kinds of food retailing institutions. However, for the purpose of this study they were divided into two major groups: modern retailer chains and traditional independent retailers.

Modern Retailer Chains

This group included: corporate chains, consumer owned cooperatives, neighborhood store chains and IDEMA outlets.

Corporate chains are private firms owning several retailing outlets and performing wholesaling functions for these outlets. Some are supermarket chains specialized in selling food. The main firms in this group are Carulla and Marion. Other corporate chains (Ley and Tía) have a small food department in their stores located in middle and low income areas. However, the newest type of store (1975-76), located in upper income areas, is the hypemarket which carries thousands of non-food and food items and includes a large food department.

Consumer owned cooperatives comprise several retailing enterprises that have in common the operation of stores aimed at selling food and other products at low prices, especially to the group that has organized them or provided them with equity capital. In this group are included the conventional cooperative belonging to employees of major companies and the fast growing Cajas de Compensación.¹ The main Cajas de Compensación in Bogotá are Colsubsidios and Cafam.

Neighborhood store chains include two pilot programs organized by Corabastos. A wholesale-retail voluntary chain program, PAN, a group of three wholesalers with close relations with several hundred retailers. And a neighborhood stores owned cooperative which is a private firm in which Corabastos and 82 retailers subscribed capital, called Coratiendas. Coratiendas performs wholesaling functions for its affiliates and may become a cooperative.

¹Cajas de Compensación and fondos rotatorios are enterprises that receive capital from private and public enterprises and their employees by legal provision. They are in charge of providing several social services. Thus, Cajas de Compensación have established low priced supermarkets, drug stores, medical services, recreational facilities and educational services.

IDEMA is the public agency in charge of direct intervention. It had 37 retail outlets, including "trailer-trucks" and supermarkets (Table 28).

Traditional Independent Retailers

Independent food retailers can be divided into two major groups: independent plaza retailers and miscellaneous neighborhood stores.² These groups are family organizations which generally have one small retail outlet. There are thousands of these outlets (Table 28).

Plaza markets are public or private facilities in which retailers rent small sales areas. In 1970 there were 35 plazas: sixteen municipal and nineteen private.³ This study identified fifteen municipal plazas and 30 private plazas in Bogotá in 1974.

General Economic Environment and Retailing Characteristics

Food retailing in Bogotá has been changing rapidly. Supermarket chains appeared in the mid-50s and since then have been gaining food market share. The structure of food retailing is shaped primarily by the following general economic variables: physical aspects of the urbanization process in Bogotá, its population growth, the general socio-economic situation, especially the level of unemployment, and the purchasing power and consumption habits of the various social groups.

²There is also a large group of specialized neighborhood stores, such as meat stalls, milk stores, egg stores, etc.. These retailers were not included in this study.

³CID, Distribución de Víveres, IV, 13.

Table 28. A Comparison of Total Number of Retail Outlets for Selected Food, 1970 to 1974

Retailing Outlets	1970 Total Nos.	1974 Total Nos.	Percentage Increase
Independent neighborhood retail outlets	10,039	9,050	--
Voluntary chain affiliated retail outlets	--	1,050	--
Retailers' cooperative affiliated retail outlets	--	82	--
Total miscellaneous neighborhood stores	<u>10,039</u>	<u>10,182</u>	<u>1.4</u>
Independent plaza retailers	6,445	7,380	14.5
IDEMA outlets	--	37	--
Corporate chains and consumer owned cooperative outlets	87	120	37.9
Bogotá's population	2,397,116 ^a	3,026,369 ^a	26.2

Source: Estimates of this research from municipal tax records, several plaza administrations, and Corabastos files, Bogotá, 1974.
CID, Distribución de Víveres, IV, 10, 15, 18, for 1970.

^aEstimates from DANE's censuses of 1964 and 1973.

Bogotá is a horizontally extended city, about 19,000 blocks inhabited by more than 3 million people and characterized by rapid population growth. Migrants usually do not easily find productive employment. Indeed, there is a high rate of open and disguised unemployment,⁴ although the unemployed and underemployed find alternative sources of income, sometimes by entering food wholesaling and retailing.

Bogotá has a low per capita income but it is the highest income area in Colombia. Income is distributed very unequally. High income groups demand high volume and a great variety of food and marketing services and have private cars to do their shopping. On the other hand, large groups of low income households demand a small volume and variety of food and who purchase frequently at stores within walking distance from their homes.

The above factors explain the coexistence of the most modern retail institutions, i.e., the hypermarket vis a vis the most traditional small scale neighborhood store. Both have a demand for their services and/or employment opportunities.

The private supermarket is serving the middle and upper income consumers who can use their own cars for shopping. Supermarket outlets are located in middle and upper income areas (Table 29). However, a corporate chain--Ley--is serving middle and low income groups. Its stores in these lower income areas have always had small

⁴DANE reports 11.09 per cent open unemployment for Bogotá in June 1974: Departamento Nacional de Estadística, "Población, Empleo y Desempleo Urbano en Barranquilla, Bogotá, Cali y Medellín," Boletín Mensual de Estadística (Bogotá), No. 291 (Oct. 1975), p. 53.

Table 29. Location of Retailing Institutions by Income Strata Areas in Bogotá, 1974

Income Strata	Independent Plaza Retailers	Neighborhood stores			Traditional Consumers' Cooperatives	IDEMA Outlets	A super-Market Chain (Carulla)	A Corporate Chain (Ley)
		Independent	Affiliated Voluntary Chains	Affiliated Retailers' Cooperative				
Upper	0.0	5.5	1.25	3.1	0.0	0.0	46.0	7.1
Middle upper	0.0	2.2	6.25	4.9	0.0	4.8	27.0	-
Middle	8.7	23.1	17.50	17.4	31.0	9.5	27.0	50.0
Middle lower	27.0	12.1	16.25	19.8	10.3	19.0	0.0	7.1
Lower	63.1	53.8	51.25	49.9	58.7	57.2	0.0	35.8
Lower lower	1.2	3.3	7.50	4.9	0.0	9.5	0.0	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Estimates from samples or from population data of this research; also refer to DANE map (See Figure 4).

food departments. Recently this firm has entered high income areas with "hypermarkets." Cooperatives tend to serve middle and middle-lower income consumers. In order to serve this growing market, corporate chains and consumer owned cooperatives opened new outlets at a fast rate and gained market share between 1970 and 1974 (Tables 28 and 30).

Neighborhood stores, independent plaza retailers and IDEMA outlets are serving all income groups, but mainly middle and low income consumers. Entry is easy and so is exit; thus, their numbers may fluctuate with the level of unemployment. Population of these traditional retailers is superabundant and growing. In fact, the density of neighborhood stores is relatively high in low income areas in order to meet their customers' demand to be at a walking distance from their houses (Tables 28 and 29). Neighborhood stores continue being family businesses with little use of hired labor (Table 32). They buy frequently (fifteen to twenty trips to the wholesale market per month), a purchasing pattern which is related to both handling perishables without refrigeration facilities and having low working capital. Such familialism in investment, purchasing and selling are major limitations to increased size and expanded product assortment (Table 32).

Wholesaling is affected by both retailing demands and retailing structure. Large scale retailers and institutional buyers demand the services of large, modern wholesalers. Retailers also buy directly from farmers and processors (Table 31 and Figures 8, 9, 10 and 12).

Table 30. Retailing Institutions' Food Market Share in 1970 and 1974

Retailing Institutions	Selected Food Market Share (%)		Food Groups' Market Share (%) in 1974				
	1970	1974	Grains and Processed Food	Potatoes	Vegetables	Plantain and Cassava	Fresh Fruits
Independent plaza retailers	28.1	24.8	7.0	36.1	61.4	40.7	67.2
Independent neighborhood stores	37.0	33.9	35.5	46.8	25.5	43.5	20.6
Retailers' cooperative and voluntary chains	-	6.7	8.2	6.0	3.3	6.1	2.6
Corporate chains and consumer owned cooperatives	30.8	33.5	47.5	9.9	9.8	9.7	9.6
IDEMA	4.1	1.1	1.8	1.2	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Retailers surveys conducted for this research, Bogotá, 1974.
 Estimated from CID, Distribución de Víveres, for 1970.

Table 31. Retailers' Procurement Channels by Food Groups (Percentages)

Food Groups by Retailing Institutions	Farmers Transacting				Processors	Assemblers and Wholesalers from other Cities and Towns	Bogotá Wholesalers			Others Total
	Outside Bogotá	In Central Market	Other Places in Bogotá	Total			Central Market	Other Places	Others	
<u>Grains</u>										
Independent plaza retailers	6.5	--	--	6.5	6.5	--	77.9	15.7	0.4	100.0
Independent neighborhood stores	--	11.8	1.3	13.1	2.6	1.0	56.4	28.5	6.4	100.0
Retailers cooperative and voluntary chains	--	--	--	--	3.7	3.7	48.5	19.6	24.5	100.0
Corporate chains and consumer owned cooperatives	6.0	--	--	6.0	40.0	--	28.8	25.2	--	100.0
<u>Processed Food</u>										
Independent plaza retailers	--	--	--	--	23.5	29.2	4	23.0	2.7	100.0
Independent neighborhood stores	--	--	--	--	17.7	28.8	40.2	21.3	--	100.0
Retailers cooperative and voluntary chains	--	--	--	--	23.5	9.6	36.5	10.8	19.6	100.0
Corporate chains and consumer owned cooperatives	--	--	--	--	63.8	6.5	9.7	20.0	0.2	100.0
<u>Potatoes</u>										
Independent plaza retailers	1.7	0.5	4.1	6.3	--	4.8	82.2	4.2	1.9	100.0
Independent neighborhood stores	3.5	14.4	1.8	19.8	--	4.6	65.8	5.6	4.2	100.0
Retailers cooperative and voluntary chains	0.5	0.5	--	1.0	--	5.5	83.6	1.8	8.1	100.0
Corporate chains and consumer owned cooperatives	23.1	--	23.1	46.2	--	--	39.6	9.9	4.3	100.0
<u>Vegetables</u>										
Independent plaza retailers	1.7	0.5	4.1	6.3	--	1.7	82.7	7.3	2.0	100.0
Independent neighborhood stores	3.5	14.3	1.8	19.6	--	4.8	65.7	5.4	4.5	100.0
Retailers cooperative and voluntary chains	2.5	5.0	2.5	10.0	--	5.0	85.0	--	--	100.0
Corporate chains and consumer owned cooperatives	22.5	--	22.5	45.0	--	--	45.0	10.0	--	100.0
<u>Plantain-Cassava</u>										
Independent plaza retailers	1.7	0.5	4.1	6.3	--	1.8	82.8	7.4	1.7	100.0
Independent neighborhood stores	3.5	14.4	1.8	19.6	--	4.6	65.7	5.6	4.5	100.0
Retailers cooperative and voluntary chains	1.0	0.6	1.0	2.6	--	4.8	83.3	1.3	8.0	100.0
Corporate chains and consumer owned cooperatives	22.8	--	22.8	45.6	--	--	44.1	10.3	--	100.0
<u>Fresh fruits</u>										
Independent plaza retailers	1.7	0.5	4.0	6.2	--	1.7	82.7	8.2	1.2	100.0
Independent neighborhood stores	3.5	14.4	1.8	19.6	--	4.8	66.0	5.6	4.0	100.0
Retailers cooperative and voluntary chains	--	--	--	--	--	9.4	84.4	--	6.2	100.0
Corporate chains and consumer owned cooperatives	25.0	--	25.0	50.0	--	--	39.7	10.3	--	100.0

Source: Retailers surveys and case studies conducted for this research, Bogotá, 1974.

Table 32. Food Retailing Firms' Organizational and Operational Characteristics

Retailing Institution	Product Line		Selling Area		Phone Purchasing %		No Use of Checks in Purchases %	Permanent Family	Workers Hired	Total Purchases of Selected Food Col. \$/per Month per Outlet
	(No. of Products)		sq. m.		%					
	1971	1974	1974	Additional Needed	1971	1974				
Plaza retailers	12	13	6.6	2.1	4.8	5.1	77.3	0.3	0.2	34,377
Independent neighborhood stores	39	40	21.7	4.0	6.1	8.8	51.0	0.6	0.5	38,475
Retailers cooperative and voluntary chains	104	115	34.6	21.8	22.6	28.8	5.0	0.6	1.5	60,512
Corporate chains and consumer owned cooperatives	700	1000 ^a	730.8	91.7	23.8	47.1	0.0	0.0	40.0	2,865,000

Source: Retailers surveys and case studies conducted for this research, Bogotá, 1974.

^aCarulla, the most important supermarket chain, had a line of 4,500 products in 1971 and 9,000 in 1974. It had about 1100 employees and 700 suppliers.

However, the thousands of independent plaza retailers and neighborhood stores with low scale and personal buying practices demand the services of hundreds of small scale traditional wholesalers and wholesaler-retailers. Yet, about 43 per cent of the grains and processed food and more than 80 per cent of perishables are flowing through these traditional retail outlets (Table 30).

Market Reform Programs and Market Opportunities

In the short run the programs of Corabastos may have changed the coordinating links between wholesalers and retailers. In fact, some programs separated wholesalers from traditional retailers and thus may have diminished coordination between them, though other programs promoted closer links between them. In fact, the main strategy was to physically separate wholesaler from retailer once the Plaza España was eliminated and a specialized wholesale market was set up. On the other hand, directly or indirectly, Corabastos stimulated vertical integration of neighborhood stores with wholesaling functions and better coordination between wholesalers and retailers.

Voluntary Chains of Wholesalers and Retailers (PAN)

Corabastos promoted a so-called nutritional food supply program, PAN, which had the following objectives: to improve bargaining power, efficiency, volume, services and product assortment in neighborhood stores, to maintain stable, low prices for basic products, and to be a channel to implement government policies.

PAN began operating in July 1971 with 120 affiliated retailers and seven food products. Initially, it was an administered price program which included three supplier institutions, a cooperative federation (Fedeconsumo), a private supermarket (Marión) and a private wholesaler, and which had a board of directors made up of representatives from IDEMA, Corabastos and the Superintendent of Price Controls, along with two wholesalers and three affiliated retailers. This board established prices and IDEMA gave support to the program by selling merchandise on 30 days credit (with a limit of 10 million pesos). Wholesalers were responsible for the credit and agreed to give fifteen day payment terms to affiliate retailers. Cofiagro also provided 9 million pesos credit to the program. Corabastos was cosigner for these credits.⁵

Corabastos was also the main coordinator of the program, but later became a direct supplier of goods. In addition, Corabastos participated in fixing prices and margins, deciding about volumes and product lines, affiliating new retailers, organizing mass media propaganda, compiling statistics, analyzing and evaluating specific product suppliers, finding credit for wholesalers and retailers and, finally, providing technical assistance and education, to wholesalers and retailers (Table 26).

The program was an unusual mix of different government policies: price control, direct intervention of government and promotion of

⁵See details in Corabastos, PAN-Programa de Abaratamiento Nutricional-Informe (Bogotá: Corabastos, 1972), pp. 1-60; and: Corabastos, "Información General y Reestructuración Sugerida del Programa, PAN," Bogotá, 1972. (Mimeographed).

reform through the private sector. Contradictions arose within the program and PAN, in its original structure, was in operation for less than two years. In fact, price controls were frequently in contradiction with private interests of affiliate wholesalers and retailers. When the prices fixed by the program were higher than market prices, neither wholesaler distributors nor retailers wanted to buy from IDEMA. On the other hand, when fixed prices were lower than market prices and mass media propaganda was used, retailers ended up without inventories or sold at higher prices. Further, the program had many supply problems which provided incentive for Corabastos to enter the market, buying and selling food products. By early 1973 the program had 1200 affiliate retailers and sales (of the affiliate wholesalers to affiliate retailers) were 4.3 million pesos monthly.

The original structure of the program disintegrated in early 1973. Wholesalers and retailers followed their own initiative, practically acting on their own, and Corabastos kept the function of statistical compilation. Corabastos' activities of technical assistance and training for affiliates were also canceled.

Then, the program evolved into a structure similar to that of voluntary wholesale retail chains. Sales from the three affiliate wholesalers to affiliate retailers of the program increased to 15.4 million pesos per month in 1974. It was estimated that affiliate retailers made about 35 per cent of their purchases, which were mainly grain and processed food, from the three affiliate wholesalers. But the links between some retailers and their wholesalers were increasing. About 50 per cent of the affiliate retailers were buying half of their

purchases from the three wholesalers in late 1974. Phone buying had increased substantially and wholesalers were providing or contracting the transportation services. Therefore, affiliate wholesalers and retailers were becoming more coordinated and the program was evolving into three small voluntary chains in 1974.

One PAN wholesaler interviewed had the following channels: 75 per cent of his purchases were bought from processors, 20 per cent from farmers and only 5 per cent from volume wholesalers in 1974. Thus, the PAN program may have contributed to channel simplification (Figure 12).

Neighborhood Store Chain - Coratiendas

Drawing from PAN experience, in May 1973, the first neighborhood store chain was legally organized by 82 retailers and Corabastos (77 per cent equity capital). Coratiendas provides wholesaling functions for its associated retailers, but affiliate retailers keep independent ownership of their retail outlets, though they may have some common merchandizing practices.

Coratiendas was buying about 8 per cent directly from farmers, about 28 per cent from assemblers, 50 per cent from processors and only 14 per cent from Bogotá wholesalers in 1974. And the affiliated retailers were buying about 30 per cent of their total purchases from Coratiendas. These products were basically grains and processed food which were the only ones carried by Coratiendas in 1974. Coratiendas' sales, by semester, indicate that it has been entering into a stable stage of growth (Table 33). Sales in real terms increased very rapidly after the first semester, but later decreased. An upward

Table 33. Sales and Financial Ratios of the Wholesale Operation of Coratiendas from 1973 to 1975

	1973-B ^a	1974-A	1974-B	1975-A	1975-B
-Sales by semester					
Thousands of current pesós.	8,030	20,427	18,192	18,410	22,492
Thousands of constant pesos (pesos of June 1973).	7,380	16,447	13,088	11,756	13,404
Real sales index.	100.0	222	177.3	159.3	181.6
-Index of real working capital	100.0	106.0	66.4	83.9	96.7
-Current ratio:					
Current assets/current liabilities. . .	2.22	1.75	1.43	1.54	1.51
-Working capital turnover (times per month)	1.04	2.18	2.77	1.97	1.95
-Gross (margin (%))	2.6	3.7	3.3	3.6	3.4
-Operating expenses on sales (%)	6.5	2.3	3.4	2.7	2.7
Pretax rate of return on stockholders' equity per month.	(-3.34)	2.46	(-0.58)	1.14	1.31

Source: Estimates from Coratiendas financial statements, Bogotá, 1973-1975.

^a"A" refers to the semester January-June and "B" to the semester July-December.

and more stable trend began after this decline which was a side effect of Corabastos financial difficulties in late 1974. In fact, since mid-1974, Corabastos has had an overdue bill to Coratiendas. Thus, the working capital of the chain was suddenly reduced by almost one half in real terms (Table 33), though sales were reduced by only 25 per cent because Coratiendas increased working capital turnover. This financial problem was a strong test for an organization just being started. Since then, the organization has exhibited a more stable growth.

The product line has been broadened. Coratiendas initially carried six products but by late 1975 was carrying about 500 (non-perishable) products. Inventory turnover has been slowing down as new products have been added to its line (Table 33). Coratiendas and a broadline wholesaler handling grains and processed food have become more alike.

Physical Separation of Central Market Wholesalers from Retailers

The Central Market is specialized in wholesaling and is located on the periphery of the city. In contrast, Plaza España included both food wholesaling and retailing and was located downtown. This section reviews some of the implications of these separations for retailers who operated in Plaza España, for households buying in the Central Market and for the structure of urban food transportation.

Relocation of Food Retailing: There were about 2,000 retailers in Plaza España in 1972. Retailers were relocated (at the same time

as wholesalers) in several plazas. Initially, 25 per cent of them were relocated temporarily in the central wholesale facility. Later, a retail plaza was built for them in the nearby Central Market. Other retailers were relocated in other plazas and many moved to other downtown plazas as peddlers on the streets and sidewalks. Some who were more aggressive might have entered as wholesalers, adding to their numbers (Table 11). Yet, physical separation of wholesalers from retailers was not absolutely completed. More than 300 wholesalers have flourished in other locations of Bogotá (Table 11 and 18). Also, the wholesale Central Market still has some retailing function though on a very small scale as compared with the Plaza España market (1970). A great percentage of households probably patronized Plaza España. In fact, in 1970 about 60 per cent of households patronized retailing plazas, and Plaza España had about 30 per cent of all Bogotá's plaza retailers.⁶

Now, since the new market is located on the periphery, households may have been discouraged from buying at the new wholesale facility. However, actual counting of households and short interviews conducted for this research indicated that final consumers were still buying at the wholesale market, though only about 2 per cent of Bogotá's households did some regular buying there (every two weeks) in 1974. These were mainly middle income consumers, owners of private cars (67 per cent) and refrigerators (94 per cent). These families

⁶Estimates from data in: CID, Distribución de Víveres, IV, pp. 14, 119.

saved by buying a relative large volume (300 to 3,000 pesos per trip). Families who were non-owners of private cars seem to have been discouraged from buying in the Central Market. Still, the area surrounding the Central Market is becoming urbanized which may encourage more buying by households in the wholesale facility in the near future. The Plaza España area has remained, without any major urban renewal. The municipal government was planning to invest in a big housing project. However, the plans were changed and the deteriorated area will be released for private entrepreneurs' investments in mid-1976.

Changes in the Structure of Urban Food Transportation: The main impact of the Central Market on the structure of urban food transportation was an alteration in the mix of transportation modes. However, it seems that the structure of the transportation system did not undergo a major change. This structure seems to be closely related to the characteristics of the retail and wholesale participants that the system serves. Independent, small scale retailers rent small scale transportation (less than 3 tons and very old vehicles), though, of course, a large fleet of vehicles⁷ is necessary to serve small scale retailers. Thus, the market structure of urban food transportation service is atomistic from the standpoint of the sellers (vehicle owners) and from the standpoint of the buyers (plaza retailers and neighborhood stores). In a few cases broadline wholesalers and neighborhood store operators own vehicles. Also, corporate

⁷This research estimated about 1,700 vehicles which made 1.6 round trips per day from the Central Market to retail stores in 1974.

chains own vehicles for their use. But, in general, the typical urban food transportation firm is individually or family owned and each transportation firm owns one or two vehicles. Moreover, most vehicle owners do not belong to associations. Effective organization of the vehicle fleet has not been possible despite some CABSA experiments. Consequently, tariffs are determined in atomistic markets by supply and demand. Because there is a permanent excess supply of old vehicles (old out-of-service taxis are converted into urban transportation trucks) tariffs are not profitable to truckers. There is also an excess capacity of vehicles in non-peak hours. This excess capacity is partially due to the few hours of daily sales of perishables in the wholesale market.

The location of the wholesale market on the periphery of the city and the separation of wholesalers and retailers has resulted in a new mix of transportation modes. Short distance transportation modes have tended to disappear in favor of longer distance, larger capacity transportation, such as animal and man powered carts, have had a tendency to disappear. City buses are not presently used to carry plaza retailers' purchases (Table 34). This is also a clear indication that the small retailers' practice of making several purchases a day has been eliminated and that the transaction unit has increased.

It should be noted, finally, that plaza retailers still demand transportation modes using man and animal energy either because they are located near the wholesale facility or they buy from wholesaler-retailers located in the retail plaza.

Table 34. A Comparison of Changes Occurring Between 1970 and 1974 in Food Urban Transportation Modes Used by Retailers as a Result of Market Reform

Retail Institution	Man's Back	Animal Drawn Cart	Bus	Taxi	Pick-up Truck	Small Truck (3 tons)
Corporate chains and consumer owned cooperatives (%)	--	Dissappeared	--	--	Decreased from 45.0 to 16.7%	Increased
Independent neighborhood stores (%)	1.0%	Decreases from 13.2% to 2.6%	Decreased from 25.2% to 1.7%	Decreased from 19.6% to 6.0%	Increased from 23.4 to 37.9%	Increased to 51%
Independent plaza retailers	Decreased from 21.3% to 7.6%	Decreased from 29.6% to 10.6%	--	Decreased from 7.4 to 0%	Decreased from 17.6 to 9.1%	Increased to 73%

Source: Retailers surveys conducted for this research, Bogotá, 1974
 CID, Distribución de Víveres, IV, 51, for 1970.

Market Information

Independent plaza retailers and independent neighborhood stores seek out face to face market information. A few of them occasionally use the phone (Table 35). In addition, they have the lowest information index⁸ among all market participants. Less than 1/3 of the plaza retailers and independent neighborhood stores interviewed felt they were well informed. In contrast, more than 2/3 of retailer affiliates to neighborhood store chains perceived that they were better informed (see Table 36).

Affiliate retailers have gained information from the relationship amongst themselves and with their wholesaler organizations. Specifically, Coratiendas' affiliates gained access to information because they informally meet at Coratiendas' warehouse to exchange market information. In addition, they now know their retailer colleagues and can phone them for market information.⁹ Finally, Coratiendas has information on all its products. In general, then, chain organization, by improving market information may improve bargaining power of the organization and of its affiliates.

But why did a group of independent retailers believe that there had been a loss in information? Case studies of plaza retailers indicate that the physical separation of wholesalers from retailers has made it more difficult for retailers to seek out face to face information. In Plaza España many retailers might have been asking

⁸An information index was developed in the research which included geographic spread of information, several channels, and several sources.

⁹These personal and market relationships have also given them a sense of belonging to their organization.

Table 35. Retailers and Wholesalers Market Information Gained Through Use of Phone and/or Telex

	No Use %	Occasionally Used %	Frequently Used %	Very Frequently Used %
Wholesalers	<u>46.7</u>	<u>17.6</u>	<u>19.6</u>	<u>15.9</u>
Grains and Processed food	0.0	27.6	37.9	34.5
Potatoes	40.7	29.6	14.8	14.8
Vegetables	87.0	0.0	8.7	4.3
Plantain-Cassava	91.7	8.3	0.0	0.0
Fresh fruits	50.0	12.5	25.0	12.5
Retailers	<u>80.2</u>	<u>11.7</u>	<u>6.1</u>	<u>2.0</u>
Independent plaza retailers	93.9	3.0	1.5	1.5
Neighborhood stores	83.5	12.6	2.9	1.0
Retailers cooperative and voluntary chains	40.9	27.3	31.8	0.0
Corporate chains and consumer owned cooperatives	0.0	49.0	16.7	33.3

Source: Wholesalers and retailers surveys conducted for this research, Bogotá, 1974.

Table 36. Merchants' Opinions on Level and Quality of Market Information They are Acquiring Due to New Central Market Facility

	Worst Informed	Equally Informed	Better Informed	Much Better Informed
Wholesalers	<u>0.9</u>	<u>30.2</u>	<u>34.9</u>	<u>34.0</u>
Grains and Processed food	3.4	34.5	13.8	48.3
Potatoes	0.0	28.6	46.4	25.0
Vegetables	0.0	31.8	36.4	31.8
Plantain-Cassava	0.0	25.0	50.0	25.0
Fresh fruits	0.0	26.7	40.0	33.3
Retailers	<u>23.4</u>	<u>40.6</u>	<u>31.3</u>	<u>4.7</u>
Independent plaza retailers	21.5	49.2	27.7	1.5
Neighborhood stores	26.0	39.0	31.0	4.0
Retailers cooperative and voluntary chains	15.6	27.3	48.9	18.2
Corporate chains and consumer owned cooperatives	20.0	40.0	40.0	0.0

Source: Wholesalers and retailers surveys conducted for this research, Bogotá, 1974.

for prices several times a day and observing the quantity of inventories still held by wholesalers. But once they are separated, retailers can only gain an appreciation of volume and prices when they are buying early in the morning.

If independent retailers did not gain market information they might have lost bargaining power and ability to compete vis a vis all other groups of retailers and especially wholesalers who did gain information. In fact, the great majority of wholesalers perceived gains in market information. Loss of market information and lower bargaining power seem to be economic sanctions against small scale businesses.

Performance of the Food Wholesale-Retail Market Interface

This section attempts to indicate how the reformed system is performing in terms of efficiency, innovation, those who benefit and who might lose and the shaping of the system for the future.

Changes in Efficiency and Innovation

This section refers mainly to operational efficiency. The analysis attempts to identify sources of cost reductions or cost increases for merchants performing certain activities or providing certain services.

Transaction Process: Independent retailers have maintained their traditional personal inspection transaction process. Thus, everyday thousands of retailers travel in urban buses to the Central Market and walk from warehouse to warehouse making their purchases. Their personal traveling time is now twice as much as it used to be because bus transportation services tend to be better for a downtown

area (where Plaza España was located) for the new wholesale market. But the number of transactions has been reduced and the retailer buying schedule has been concentrated in the morning (Table 24). In contrast, corporate and cooperative chains reduced their traveling time from 50 minutes to Plaza España to 25 minutes to the wholesale market facility (Table 37).

In addition, plaza retailers are spending more time (buying fruits and vegetables) within the Central Market than in Plaza España, while neighborhood stores are spending about the same time. This is a paradoxical situation because there has been a significant reduction of congestion of people and vehicles and wholesalers' savings in transaction time have been great. However, walking into the market and walking among several specialized warehouses takes time. In Plaza España retailers found most goods in the same specific plaza. Finally corporate and cooperative chains as well as large scale institutional consumers have been taking advantage of the new physical facilities. Their transaction time decreased from 150 minutes to 70 minutes.

The loss in transaction efficiency turns out to be an economic sanction on personally buying by inspection, and low scale businesses and an incentive for a more rapid growth of broadline wholesalers in perishables. In spite of such a sanction, plaza retailers and neighborhood stores increased phone purchases only slightly between 1971 and 1974 (Table 32). In contrast, those affiliated with neighborhood store chains (PAN and Coratiendas) increased phone purchases to 29 per cent in 1974. Corporate chains increased their phone or telex

Table 37. Impact of New Wholesale Market on Retailers' Personal Transportation and Transaction Time

Retailing Institutions	Time to Go to the Wholesale Market - One Way		Time Spent in the Market Area	
	Plaza España 1971 (Min.)	New Wholesale Facility 1974 (Min.)	Plaza España 1971 (Min.)	New Wholesale Facility 1974 (Min.)
Independent plaza retailers	27	52	113	134
Independent neighborhood stores	25	52	121	119
Retailers' cooperative and voluntary chains	34	35	151	136
Corporate chains, and consumer owned cooperatives	50	25	150	70

Source: Retailers surveys conducted for this research, Bogotá, 1974.

buying up to 47 per cent, especially for processed food, but also for perishables bought from commercial farmers. The most modern chain store groups (i.e., Ley) indicated that they were planning to introduce computer teleprocessing to automate purchasing to a greater extent. Certainly, purchasing automation is easy for standardized products, and for transactions under permanent contracts with suppliers. But, small wholesalers and retailers handling non-standardized perishables must continue to buy by personal inspection.

Selling practices are similar to buying practices. While plaza retailers and neighborhood stores continue to use personal selling and bargaining on each price, PAN and Coratiendas' affiliates are slowly adopting self-service practices and prepackage pricing practices.¹⁰ Corporate chains and consumer-owned cooperatives have adopted self-service merchandising.

It follows that transaction efficiency not only depends on physical aspects (such as a wholesale facility) which facilitate rapid movement of goods and of market participants, but also on the nature of participating institutions and on the technological environment in the economy. Modern corporate chains are taking advantage of communication and mass data processing technology for automated purchasing. Yet a lack of enforceable grades and standards in perishables increases transaction costs for both modern and traditional retailers.

In sum, the marketing reform has influenced transaction efficiency selectively; traditional groups may not have increased their transaction efficiency, but modern groups have improved in this area.

¹⁰The adoption of this new technology as well as the better vertical coordination has allowed neighborhood stores' affiliates to

Changes in Urban Food Transportation Efficiency: Both the reduction of congestion in the Central Market and the use of larger scale transportation modes could have resulted in increases in efficiency, and, thus, total transportation costs may have been reduced. Since the small truck has the largest urban food transportation share, this mode is considered in some detail.

Transportation time can be divided into the following activity centers: (1) time associated with the process of loading; (2) line-haul time; (3) delivery and collecting.¹¹ These activity centers are used in the analysis in order to relate the practices and development of transaction channels to transportation. The impact of market reform is also selective with respect to transportation, depending upon the retailer group being served.

Modern retailing groups or large scale institutional buyers, buying from a few broadline wholesalers or volume wholesalers and transporting in their own medium size (5 tons) trucks, have experienced great savings as a result of the market reform. In the process of loading, it was estimated that they saved 1 1/2 hours, in line-hauling, 1 1/2 hours, while in unloading there was no change. Time savings result from the existence of modern wholesalers, good highways and easy vehicle flow, parking and loading in the central market facility (as compared to Plaza España).

Coratiendas to reduce costs and increase volume as compared to a traditional neighborhood store (Table 38).

¹¹This classification has some similarity with the cost centers concept developed by Donald J. Bowersox, Eduard S. Smykay, and Bernard J. La Londe, Physical Distribution Management: Logistics Problems of the Firm (New York: Macmillan Company, 1968), p. 165.

Table 38. Estimates of Income Statements for Three Neighborhood Stores

	Neighborhood Stores Affiliated to Coratiendas (Retail Coop.)				Independent Small Neighborhood Store	
	Large Progressive		Small		Col.\$	%
	Col.\$	%	Col. \$	%		
Annual sales	4,176,600	100.0	840,000	100.0	180,000	100.0
Cost of goods sold	<u>3,696,291</u>	88.5	<u>684,600</u>	81.5	<u>144,000</u>	80.0
Gross income	480,309	11.5	155,400	18.5	36,000	20.0
Fixed expenses	57,120	1.4	25,200	3.0	6,000	3.3
Variable expenses	277,200	6.6	84,000	10.0	8,232	4.6
Operating income	145,989	3.5	56,200	6.7	21,768	12.1
Estimated salary to owner or manager	60,000 ^a	1.4	36,000 ^b	4.3	21,600 ^b	12.0
Profits before taxes	85,989	2.1	10,200	1.2	168	0.1

Source: Retailers case studies, Bogotá, 1975.

^aThis estimate is the actual salary paid to the store manager.

^bThese estimates are based on the salary that they would expect to earn elsewhere.

But small vehicles (less than 3 tons) which serve six to ten small scale neighborhood stores have not been able to take full advantage of the physical opportunities because of the atomistic structure of the transaction channel. In line-haul (over the road) there were savings of about 1 1/2 hours, but in the other activity centers small vehicles continue spending about the same time. In the process of loading, they spent an average of 2 1/2 hours, in spite of modern facilities. This occurs because they have to look for clients, wait until they make their purchases, receive their purchasing receipts, collect in the several warehouses, sack by sack, and load, using human power. The longest time is spent in the delivery process. Wherein they have to deliver (store by store) small volumes (about six sacks per store), a process which for ten clients can take about 3 hours.

Retailer chain affiliates, and clients of broadline wholesalers save time in loading because a broad product line can be loaded from the same warehouse. Also broadline wholesalers are selling by phone and with store delivery service (about 15 per cent of their sales). On the other hand, traditional wholesalers make very low sales by phone and cannot offer store delivery service.

The result of all the above factors, is that transportation costs for corporate chain, large scale institutional consumers and neighborhood store chain affiliates have been greatly reduced in real terms. Meanwhile, transportation costs, in real terms, for independent small scale retailers may have been slightly reduced on the average (Table 39).

Table 39. Average Retailers' Transportation Cost from Plaza España, 1971, and from New Central Wholesale Facility, 1974

Retailing Institutions	Transportation In \$ of 1971 (1)	Cost in 1971 Equivalent in \$ of 1974 (2) ^a	Transportation Cost in 1974 (3)	Relation at Current Prices (3 ÷ 1) 100	Relation with Same Monetary Unit - 1974 (3 ÷ 2) 100
Independent plaza retailers	2.62	4.46	4.0	153	90
Independent neighborhood stores	2.70	4.60	4.40	163	96
Retailers cooperative and voluntary chains	3.60	6.13	3.96	110	65
Corporate chains, and consumer owned cooperatives	<u>3.00</u>	<u>5.11</u>	<u>3.00</u>	<u>100</u>	<u>59</u>
Average	2.84	4.83	3.80	1.34	79

Source: Retailers surveys conducted for this research, Bogotá, 1974

^aNational consumer price index: 1971=100, 1974=170.4 (DANE).

Total social savings were estimated at 26.7 million pesos for 1974 from urban food transportation cost reduction. About 2.6 million pesos were collected by CABSAs charges on urban transportation vehicles and 24.1 million pesos were retailers' savings.

Physical Product Losses at the Retail Level: Other things being equal, one would predict that better wholesale product handling conditions would result in fewer physical product losses at the retail level. However, despite better handling at the wholesale level, it seems that physical product losses increased for some fruits and vegetables handled by plaza retailers, according to their perception.

It appears, then, that other things did not remain equal. Instead, plaza retailers increased their purchasing unit by reducing their frequency of purchasing. Thus, some fruits and vegetables held in inventories without refrigeration may deteriorate because of the longer periods of time in retailers' inventories (Table 25). Nevertheless, plaza retailers experienced savings in less perishable products and neighborhood stores obtained significant reductions in spoilage which can be attributed to the functioning of the new wholesale market. Net savings of all plaza retailers and neighborhood stores were estimated at 58.8 million pesos in 1974. Finally, neighborhood store chain affiliates obtained considerable reduction (Table 25) in physical losses in fruits and vegetables as a result of better handling (even without refrigeration). Thus, savings were estimated at 3.1 per cent and at 4.3 million pesos in 1974.

Changes in Entrepreneurial Ability: Corabastos' organized vocational training has had a very significant impact on neighborhood

store owners' entrepreneurial ability. They have learned to apply modern marketing concepts and techniques regarding more efficient use of shelves, adoption of self-service, bookkeeping and adoption of a broader line of products and a strategy for increasing sales volume and reducing margins. In sum, they have transformed their stores from a traditional way of life into efficient and aggressive small businesses.

Distribution of Reform Benefits
among Market Participants

The more efficient and progressive retail groups are more able to take advantage of market opportunities resulting from market reform programs. The more traditional retailers (independent plaza retailers and neighborhood stores), however, have not been able to capture significant benefits. Thus, the reform has provided both economic incentives and sanctions. Still, the most traditional, very small scale merchants will find survival more difficult.

Have retailers passed on lower real cost reductions to consumers as a result of market reform through lower real prices? To give some indication of this situation, 1970 price margins were compared with 1974 price margins.¹² Independent plaza retailers and neighborhood stores increased their margins in several products (Table 27). Plaza retailers argued that in fact their average margin was increased two

¹²Price margins from two different studies are used. Margins are very difficult to estimate in the Colombian environment, so they are used only as an indication of trends. (See Chapter VI, footnote 12 and Table 27).

percentage points due to the increase in their costs. However, the actual increase may be due to reasons discussed in Chapter IV, footnote 12. They may not be passing along all the reform benefits, produced elsewhere in the channel, to their low income customers (Figures 13 and 14).

On the other hand, Coratiendas has reduced both its costs and its margins (Table 38). Coratiendas (at the wholesale level) was also able to reduce its costs from 6.5 per cent in 1973 to a 2.7 per cent average thereafter, and profits on sales passed from -3.8 per cent to 1.4 per cent (Table 33). The financial situation of PAN's wholesalers is not very clear. The Marion-PAN director argued in late 1974 that its activity as a PAN wholesaler was not profitable and Fedeconsumo, a cooperative federation, which acted as a PAN wholesaler, went into bankruptcy in 1975 though for other reasons than being a PAN wholesaler. Coratiendas, at the wholesale level, had lower margins than a grain and processed food wholesaler (3.5 vs. 4.2 per cent) in 1974. Also, the Marion-PAN-wholesale distributor had approximately a 3.5 per cent margin (an additional 2 per cent was charged in case of store delivery service). Therefore, these chains have been passing on part of their profits in the form of lower prices to their neighborhood stores affiliates.

In addition, neighborhood store affiliates to chains also have had lower margins than plaza retailers and independent neighborhood stores (Tables 27 and 38) as a result of higher scale and efficiency and, thus, lower per unit costs. Therefore, affiliated retailers, especially Coratiendas, have passed large benefits on to

low and medium income consumer groups through lower real prices (Table 38). Consumers interviewed argued that they were buying in those stores because of: (1) proximity, (2) low prices and (3) broader product line. Finally, Coratiendas' retailers have had prices similar to or lower than "popular" corporate outlets (i.e., Ley and Marión located in middle income areas) and consumer owned cooperative chains.

Corporate chains have been able to reduce their margins partially as a result of their procurement cost reduction and large scale buying (Figures 13 and 14). They also have significantly increased their food line (Table 32). These chains, (like Marión), serving higher income groups, are now entering middle income group areas. In addition, lower and middle income oriented chains (i.e., Ley) have been entering the high income areas with the most modern hypermarkets (1975 and 1976). Thus, corporate chains and large retail owned cooperatives may have passed on the larger reform benefits to middle and high income consumers (who have been their main patronizers) as well as taking advantage of new economic market opportunities and modern technologies.

Retailers and wholesalers interviewed argued that low income groups were worse off as a result of the wholesale market relocation (20 per cent of wholesalers and 47 per cent of retailers). Moreover, consumers located in the downtown-western area (Calle 26 to 37-south and east of 68 Avenue) and all of the southern portion of the city make up a high per cent of low income groups in Bogotá and they were closer to the old Plaza España than they are to the new Central

Market (Figure 5). A high percentage of retailers located in these areas argued that losses were inflicted on low income consumers.

In addition, 20 per cent of the retailers interviewed argued that they were hurt because of their long distances from the new Central Market. Most of these retailers, however, were located in the south-eastern area of the city (south of First Avenue and east of Thirteenth Avenue - Figure 5) which is also made up of very low income groups. Though, geographically, retailers located in the north-eastern part are farther from the Central Market, they have fast avenues to the new central facility, which south-easterners so far must use relatively slow streets with many turns.

Therefore, location of the wholesale market actually may have inflicted costs on some low income consumers. However, including all benefits and costs of market reform that may have affected them, they may not be worse off. On the other hand, middle and low income consumers, closer to the Central Market than to Plaza España, have undoubtedly benefitted (southwestern part of the city - Figure 5).

Longer Run Institutional and Competitive Trends in the Urban Food Distribution System

To begin with, the urban food distribution system in Bogotá has become more widely divided between a modern sector and a traditional sector since the mid-50s. The former has been very dynamic in response to market opportunities but has used capital intensive technology. Data from this research tend to indicate that they have taken advantage of incentives created by market reform programs. The latter has been a stagnant, traditional sector which responds very slowly to

market forces. Nevertheless, the two pilot projects involving neighborhood store chains have demonstrated that traditional firms can change and adopt innovations using labor intensive technology and so reduce costs and prices to consumers (Table 38 and Figures 13 and 14). However, market forces with a permanent impact have been widening the gap between a modern and a traditional sector and this seems to be a long run trend (Figures 12, 13 and 14).

The modern institutions at the wholesale and retail level are becoming vertically and horizontally integrated. They are handling a larger volume and broader product line and are using techniques that are permitting them to serve a growing mass market. Middle and high income groups, especially those who own cars, are the main patronizers of the modern channels. And modern channels are expected to serve a growing market share in this middle and higher income area. Corporate chains are only timidly entering lower-middle and low income areas and they probably will not be able to gain a significant market share in the long run.

In spite of their lower operational efficiency neighborhood stores and plaza retailers have some competitive advantage of their own, to serve middle and low income consumers. As family type businesses, plaza retailers and neighborhood stores have the advantage of low wages or low opportunity costs for the family labor employed. The small firm hires few non-family workers (Table 32) and so it does not face workers' unions and does not have to comply with the Labor Code requiring the payment of minimum salaries, extra salaries for work during the night and holidays and fringe benefits. Thus,

neighborhood stores can offer long hours of service during the night and holidays with family labor which otherwise would be unemployed. Besides, location at walking distances from middle and low income consumers who do not own private cars gives these stores additional competitive advantages.

Traditional channels, although losing some of their market share, will stay in business for many years. However, changes in their operational efficiency, as a result of competition from modern channels and, in general, from market forces, are going to be slow. Thus, they may not significantly increase their operational efficiency without public promotional action. Yet market forces or promotional organizational assistance may have the side effect of forcing the lowest scale retailers out of business.

CHAPTER VIII

SUMMARY AND CONCLUSIONS

The Organization in Charge of Market Reform

Corabastos, a semi-public agency, was created in 1970 as a formal organization to promote adoption of innovations in food marketing in the area of influence of Bogotá. Corabastos quickly organized programs under the market reform approach and strategy learned from LAMP and also set up new organizations to help in the process of inducing social change. Three subsidiaries were established: (1) CABSAs, in charge of the administration of the new central wholesale market, in 1972, (2) Coratiendas, a retailer owned cooperative, in 1973 and (3) the Commodity Exchange Authority, in charge of promoting cash and futures' markets, in 1973. These three subsidiary organizations have been effective and have maintained a permanent and viable program of reforms. Currently, they are in a growing stage of an innovative life cycle.

Corabastos has maintained its own legal identity as a separate corporation, but, most of its personnel and resources were used, between mid-1973 and mid-1975, to set up risky direct intervention programs of buying, selling, importing, exporting, storing and processing food products, although these programs were contrary to its original objectives and reform approach. Such direct intervention programs resulted in huge financial losses in 1974 and 1975, and their

social benefits were doubtful, except for the beef program which, ironically, did not produce financial losses. Because of these programs which were forced to close out, and the resulting financial situation, Corabastos as a separate legal unit has been in a declining innovative cycle since late 1973. A possible remedy for this situation may occur via a merger with its main subsidiary, CABSAs, which is expected in mid to late 1976. The new organization "Corabastos-CABSAs" may again start a new innovative life cycle after some years of financial recovery.

The deviation of Corabastos, the organization in charge of promoting market reform, from its original doctrine and strategy could be explained as follows. Corabastos' linkages with the public sector were based upon personal relationships with authorities and leaders who belonged to one political party in a two party system. In fact, both the Corabastos general manager and the president of the nation (1970-1974) were members of the same party and maintained a close personal relationship. That relationship gave great support to fast innovation early in Corabastos life cycle. However, it seems that the Corabastos' leader had personal political ambitions for higher office and that his compromises to political personalities of the Conservative party were binding. Thus, direct intervention and massive propaganda might have been motivated towards the creation of an environment which would have encouraged voters to favor the presidential candidate of the Conservative party. Nevertheless, the election of 1974 was won by the Liberal party candidate.

The new Liberal president supported an institutionalization of relationships between the several units of government. Corabastos has had no strong institutionalized links with the public sector, but to solve its financial difficulties government help has been needed. However, the process of getting government support has been a long one. Meanwhile, the financial situation has gotten worse (except for Corabastos subsidiaries). As a result, several government units have been supporting a financial solution to strengthen the total organization of Corabastos and subsidiaries. Bank creditors would convert their claims into Corabastos stocks, which the government would buy back in 1977 and 1978. "Corabastos-CABSA's" major source of net operating income would then come from the central market facility rental charges.

Market Reform Results

The food marketing system, in response to demands created by the process of development and urbanization, seems to have been evolving in two parallel channels: a modern channel, serving mainly middle upper and upper income groups, and a traditional channel, tending to serve middle and low income consumers. The modern channels seem to have been taking advantage of economies of scale, broadline, access to capital and new capital intensive technologies, while the traditional channels have apparently been in a process of slow change and have been using family labor intensively and remaining competitive because of high open and disguised unemployment.

Most of Corabastos' programs have been oriented toward inducing innovations in the traditional channels. Yet the main programs have

had implications for both traditional and modern channels. For example, the organization of Coratiendas and the promotion of PAN, the latter of which eventually has evolved into voluntary chains, have represented specific efforts to improve coordination and operational efficiency of the traditional urban food distribution system. In contrast, the promotion of the commodity exchange future and cash markets has been an effort to improve the efficiency of modern channels. Although, the central wholesale market was intended to induce innovations in traditional channels, it has had consequences for both modern and traditional channels.

The reform programs have effected changes which may have the following characteristics: simultaneity, selectivity and dynamic character. That is, the reform programs have had an impact at several levels of the food marketing channel, but the impact may affect the several social groups differently. The changes seems to be self-sustaining with long-run effects. Moreover, changes affecting structure and conduct in a market dyad (of sellers and buyers) produce performance results that become incentives (or sanctions) affecting the same dyad and other market dyads. This interaction between dyads and phases of the marketing system is called simultaneity. Further, changes generate incentives that are selective and do not affect all of the participants equally. Some groups can take greater advantage of the new market opportunities than others. Some groups may even lose. Finally, some changes are dynamic, i.e., one change generates another. Thus, changes in structure and conduct during an initial period may produce performance results that, at the same time,

are incentives for change in later periods. Market reform programs, then, have produced self-reinforcing changes. This study analyzed mainly short term changes.

Changes in Modern and Traditional Channels

Traditional assemblers appear to have lost market share in the food assembly function to commercial farmers and wholesalers. In fact, market reform may not have created incentives for both assemblers and small scale farmers as compared to large scale wholesalers and commercial farmers. However, small scale assemblers buying personally by inspection continue being competitive in serving geographically scattered small farmers. Given this technological and institutional environment of traditional agriculture, assemblers carry out their function in a relatively efficient way and obtain normal profits, though in many instances they do earn only subsistence incomes. Moreover, because of such an environment, the process of assembly has a high cost eventually paid by consumers.

Market reform has created incentives for commercial agriculture. In fact, farmers and wholesalers are carrying out more assembling functions in response to incentives created by market reform and commercial farmers and volume wholesalers are increasing their sales activity between themselves. Commercial farmers and processors are beginning to make transactions involving a few products through commodity exchange brokers. This direct transaction of aggressive and well-informed volume wholesalers and brokers with more market-oriented farmers will result in a better coordination of the food

system in the medium and long run. Moreover, news about transactions completed through the commodity exchange are nationally disseminated by mass media which creates better coordination among the several markets.

Volume wholesalers have taken advantage of incentives created by the new Central Market. They have had access to larger amounts of bank loans and their capital has grown quickly from the reinvestment of their large profits. Most of these profits have been invested in farming, processing and long-haul transportation businesses. Volume wholesalers are becoming channel captains, then, because they are beginning to play the role of marketing channel leaders at the regional and even national level, thus creating discipline in the channel because of their increasing power and superior information. It would seem that volume wholesalers are taking advantage of economies of scale and achieving better coordination between rural food production and the large urban centers.

The wholesale reform programs have also created incentives for the emergence of broadline wholesalers in perishables and for the growth of broadline wholesalers handling grains and processed food. These wholesalers are beginning to provide store delivery service and are contracting with retailers, thus improving the coordination of urban food distribution in Bogotá and of food distribution in some cities and towns in Bogotá's regional area of influence.

Modern corporate and consumer owned cooperatives and institutional buyers have taken advantage of the emergence and growth of modern wholesalers as well as of the new social, economic and

physical environmental conditions of the Central Market. Their risks have been reduced as well as their procurement costs, both for transactions and transportation. In sum, market reform programs have created incentives for faster growth of modern food channels.

Traditional, independent, small scale retailers buying by personal inspection have experienced increased transaction costs due to their separation from wholesalers and to the relocation of the market facility on the periphery of the city. Also, this separation has become a disadvantage to those small scale retailers that seek out face to face market information. Still, thousands of retailers buy small volume by inspection almost daily and so demand the services of hundreds of traditional small scale wholesalers and wholesaler-retailers. In turn, small scale wholesalers depend a great deal on volume wholesalers for supplies. Thus, the traditional channels have been long and expensive, and have become less able to compete after market reform.

Nevertheless, traditional channels have obtained direct benefits from reform programs as a result of reduction of food spoilage and reduction of traffic congestion. In addition, Corabastos has experimented with two pilot projects to induce changes in small scale neighborhood stores: PAN (voluntary wholesale-neighborhood stores chain) and Coratiendas (neighborhood stores owned chain). Besides organizational assistance, these affiliate retailers have had credit and a minimum level of occasional technical assistance and basic training. The resultant changes in efficiency and innovations have been significant, especially in the Coratiendas' program. Volume and product

assortment have been increased and costs and prices (in real terms) have been reduced.

Summary of Major Results of the Food Market Reform Program

It is difficult to accurately compare the costs of the new food system and those of the old system that existed prior to the reform program. However, estimates were made based upon surveys and more detailed case studies in order to get some approximation of the cost consequences of the principal market reforms. These are summarized below for the year, 1974.

I. Changes in Transaction Efficiency

- A. Farmers saved time by selling to wholesalers in the new Central Market in comparison to the old market. Farmers selling in the Central Market saved 135 minutes per farmer-day or 4 million pesos.
- B. Wholesaler firms benefited by faster purchases, product handling, and sales: the time saved for all was estimated at 133 million pesos.
- C. Modern retailers saved time going to and purchasing in the new wholesale market: about 130 minutes per purchasing trip.
- D. Traditional retailers spent more time to go by buses and do their personal buying by inspection: this amounted to 69 minutes per trip or 40 million pesos.
- E. Affiliates to chains spent less time per trip (17 minutes). In addition, purchasing by phone has been increased.
- F. Transactions through the commodity exchange have been made by description, so time could be saved. However, there is no estimate.

II. Transportation Savings

- A. Congestion of trucks has been significantly reduced. Each truck saved 210 minutes in entering and exiting the wholesale market. That amounted to 63 million pesos for all intermunicipal trucks.

- B. Urban distribution truckers serving large insitutional buyers and modern retailers saved 180 minutes per line haul entry to and exit from the wholesale market. These market participants saved around 14.6 million pesos in real costs in 1974.
- C. Neighborhood stores affiliates to chains saved in transportation around 3.4 million pesos.
- D. Traditional retailers saved very little in transportation in comparison to other groups, estimated at 9.0 million for all of them.
- E. Intermunicipal truck size (on the average) has been increasing. Tractor trailers have had easy access to the new market as compared to the old downtown congested market. Urban transportation has changed: pick-up trucks have gained, while man and animal-powered vehicles, carts, buses and taxis have decreased as a means of food transportation.

III. Physical Product Losses

A estimated total of 101 million pesos were saved because of reform programs: 38 million pesos by wholesalers; 59 million pesos by traditional retailers (especially neighborhood stores); and 4 million pesos by the group affiliates to neighborhood store chains.

IV. Marketing Channels

It seems that channels have been simplified because transactions directly between wholesalers and commercial farmers have increased. Neighborhood store chains may have simplified channels. But still there have been long channels, especially at the wholesale level, to serve small scale farmers and retailers. The wholesale market has become a terminal market for Bogotá and a national assembly center for food produced in the vicinity of Bogotá. Wholesaling in Plaza España was eliminated in perishables and the area no longer has any real importance in grains and processed food. Volume wholesalers and broadline wholesalers have gained prominent roles in the new market.

V. Competition

Competition may have improved due to the consolidation of wholesalers from the several plazas that made up the Plaza España into one Central Market which now has a relatively easy flow of information. But in all products there

were oligopsonies, oligopolies, and collusion, especially for controlling the entry of new aggressive competitors. Vertically and horizontally integrated groups have obtained competitive advantages. National markets in some grains have been better coordinated, due to the commodity exchange and its market information dissemination program. Wholesalers' bargaining power has improved, relatively, because of their increase in assets and their position as CABSA shareholders, and as a result of their formation of an association.

VI. Rental Rates

CABSA-Corabastos has maintained subsidized rental rates. The subsidy in 1974 was estimated in 25 million pesos. Rental rates have since been adjusted upward.

VII. Price Margins

Traditional wholesalers, volume wholesalers and broadline wholesalers have had slightly lower margins. Neighborhood stores and public plaza retailers may have slightly increased their price margins, while supermarkets, corporate chains and cooperatives have had substantially lower margins. Neighborhood store chains (PAN and Coratiendas) also have had substantially lower margins. Security, hygiene and cleaning conditions in the wholesale market were substantially better than in Plaza España but no quantitative estimates are available as to the effects of these factors on costs and benefits.

VIII. Benefit Distribution

Middle-high and high income consumers have obtained considerable benefits, but benefits for middle and low income consumers have been more modest. There have also been considerable benefits for clients of neighborhood stores affiliated to chains (PAN - Coratiendas), and commercial farmers have experienced large benefits as a result of direct transactions with wholesalers and savings in transportation. On the other hand, traditional farmers have benefited modestly, while volume wholesalers and broadline wholesalers, especially those handling grains and processed food, have taken advantage of new market opportunities and gained extraordinary profits.

Aggregate Benefits and Distribution of Benefits

The agency in charge of market reform has had problems with its internal organization and planning and with its linkages to the public sector. Thus, direct intervention and subsidies have resulted in a difficult financial situation for Corabastos-CABSA. Financial losses were estimated at about 100 million pesos in direct intervention programs in 1974 and 1975. Most of these programs produced low social benefits and probably most of the benefits were captured only by small groups of market participants (except the beef program).

On the other hand, promotional activities have produced considerable social benefits. The market reform is a long term process, and the impact may continue to be realized for many years. The research, however, only studied results occurring very early in the reform process (i.e., one to four years but most of the programs were in their second year of operation in 1974). Social benefits were estimated at 289 million pesos in 1974 for the selected food groups. These savings were about 2.9 per cent of net sales of wholesalers located in the Central Market. If CABSA's rental subsidies are added to savings the net benefits plus transferred income can be estimated at 314 million pesos for 1974 (3.14 per cent of Central Market wholesalers sales). Finally, the reform programs' financial operating costs and operating income were close to a break-even point in 1974. If a market interest rate were imputed to the stocks of Corabastos in its subsidiaries, corrected-operating losses of market reform programs would be smaller than the total subsidies (25 million pesos) in rental rates passed on to Central Market wholesalers. On the other

hand, Corabastos-CABSA would have benefited from a subsidized National Savings Fund loan because its interest rate was lower than the rate of inflation, and from a fixed-asset-surplus value gain because of valorization (after correction of any inflationary effect) due to urbanization in the area around the Central Market facility.

Large scale farmers may have obtained benefits due to their increase in direct transactions with volume wholesalers and the more transparent market along with their increase in bargaining power as information from the commodity exchange has become widespread. Traditional farmers may have obtained fewer benefits due to the increased difficulty for some in selling a broad product line in specialized by product warehouses, the lost opportunity of selling directly to retailers and the loss of bargaining power of assemblers in the Central Market. However, they may have benefited from a more transparent market, reduction in transportation cost and a CABSA sponsored radio market news program.

Volume wholesalers and broadline wholesalers may have been the group most directly benefited because of market reform programs. In fact, there is a trend toward larger scale units and market structure concentration, especially in grains and processed food. Thus, volume wholesalers as well as broadline wholesalers have been able to capture a significant share of market reform benefits. A gross estimate indicated that the extraordinary profits of Central Market wholesalers totaled about 106 millions pesos in 1974. These profits have gone up partially because these wholesalers have been able to take advantage of market opportunities opened up by market reform programs. And they

will continue for some time to have high, pure profits because there are major institutional barriers to the entry of competitors with scale and ability to compete with the few. Nevertheless, a better connection, by information and transportation among several regional wholesale markets, and the growth of countervailing power forces may tend to shrink pure profits. In addition, as broadline wholesalers increase their scale and broaden their line, they become strong competition to volume wholesalers and could compete among themselves across many products. This may tend to squeeze profits, too.

Middle and high income consumers have benefited by purchasing through the more modern channels which may be passing on to them part of their savings, from the market reform, in the form of lower prices and better marketing services. However, lower-middle and lower income consumer groups, who patronize small independent neighborhood stores and plaza retailers, may have obtained fewer benefits from the market reform programs. These independent retailers apparently lost bargaining power and their personal inspecting process of buying may have become more costly. Still, if the total system is considered, it would seem that poor consumers have received net benefits of a reformed system as compared to a non-reformed system due to lower real prices, better quality of products and more convenience. One must recognize that benefits due to reduction of product losses and reduction in transportation costs are higher than the increase in cost of transactions for procurement of the independent retailers and, consequently, that low income consumers may have been receiving net benefits from the reformed system. In addition, better coordination and a more

transparent market may have stimulated increases in production which would tend to reduce real food prices. The opportunities for further improvement of the traditional small scale retailers seem to be great as indicated by the experience of Corabastos with its programs, Coratiendas and PAN. Corabastos followed its four point strategy (Chapter III) and, consequently, the IAMP approach to market reform (Chapter II), with respect to its activities promoting market reform programs. Nevertheless, several of the programs remain without major support and are just in experimental stages.

CHAPTER IX
OPPORTUNITIES FOR CHANGE AND
RECOMMENDATIONS

This study has provided the basis for discussion of a set of opportunities to carry forward food market reform programs. An attempt has been made to suggest actions which are consistent with the current national development strategy and goals, as set forth in the national plan,¹ and with Corabastos' objectives, experience and original approach to market reform. Thus, the actions proposed refer mainly to the public sector role of stimulating improvements in the private marketing system to attain social goals.

The reform strategy must therefore provide private incentives to market participants; at the same time it must attain social goals and, consequently, address itself to the following issues: (1) how to promote structural changes while avoiding extraordinary profits and without discouraging innovators in key roles in the marketing channels who are motivated by market opportunities; (2) how to facilitate vertical coordination and vertical integration in order to gain economies of scale and at the same time attempting to avoid greater economic concentration; (3) how to stimulate socially desirable changes when

¹The general goals established can be summarized as follows: to change the quality of economic growth as it benefits mainly the poorest 50 per cent of the population. See: DNP, Para Cerrar la Brecha, p. vii.

existing groups have already established positions of power.

Given the present food marketing trends, and the need to deal with the above issues, the suggested actions are mainly related to the creation of new institutions by direct organizational assistance efforts of public agencies. These new institutions, working through the market mechanism, can stimulate changes in the food system and reduce extraordinary profits by creating countervailing power and new market opportunities. However, short term extraordinary profits may remain for the efficient and the innovative entrepreneurs.

To achieve the national goal of equity, it seems that market reform must be selective. The channels serving the millions of middle and low income consumers and small scale farmers would have priority in the market reform programs. On the other hand, the alternative of trying to improve all neighborhood stores, plaza retailers and traditional wholesalers may be costly to society as a whole and may produce small benefits. It seems, from Corabastos' experiences that through the selection of innovative participants in the traditional channels that good performance results can be obtained. As a result, the most inefficient traditional merchants may have to face increased competition. Some traditional merchants may improve efficiency, but many would have to exit the market.

In summary, to attain social objectives and improve food marketing performance in Bogotá this research has identified target market participants and a mix of market reform policies aimed mainly at these selected market participants. The target market participants selected here are: (1) progressive neighborhood stores located in the middle

and lower income area in Bogotá; (2) volume wholesalers and broadline wholesalers in perishables, and wholesalers changing over to volume or broadline; (3) small scale farmers with potentialities to become commercial farmers.

A market reform agency and other government agencies could provide these market participants with an appropriate mix of market reform policy instruments, among which are the following selected as being crucial: (1) promoting the organization of market participants into chains and/or cooperatives; (2) providing training, technical assistance and specialized service by specialized group of technicians; (3) using supervised credit to direct change; (4) constructing market facilities; (5) charging economically sound and equitable rental rates, interest rates and fees; (6) providing market information, a commodity exchange and auctions.

Establishment of Wholesale-Retail Chains

One market reform program that may have high priority is aimed at providing organizational assistance and permanent technical assistance to neighborhood stores, both voluntary and cooperative chains and to wholesale and retail affiliates.

Neighborhood Store Cooperative and Voluntary Chains

Chains can be corporate or cooperative enterprises owned by affiliate neighborhood stores which would carry out food wholesaling activities for their affiliates, coordinate retail merchandising practices and initiate common advertising. Voluntary chains are organizations of retailers under the leadership of a wholesaler.

One conclusion of this research is that low income consumers have received limited benefits from major market reform programs. The lack of benefits for this important segment of the market can be attributed to the relative inability of the traditional small scale wholesalers and retailers to adopt newer methods of operation.

At the retail level, the main outlets serving middle and lower income groups are independent neighborhood stores and independent plaza retailers. But plazas are not located within walking distance for many low income consumers.² In addition, plaza retailers are rather specialized in fruits and vegetables, while traditional neighborhood stores tend to be specialized in grain and processed food, or meat, or dairy products. However, many progressive neighborhood stores are already handling not only grains and processed food but also fruits, vegetables, meat and dairy products. Thus, one would predict that better organized neighborhood stores will gain market share from plaza retailers and other specialized outlets because of their close proximity to middle and low income consumers, the convenience of a food broadline, the economy of scale of a broadline and the longer service hours. Consequently, a major market reform effort must be to improve the efficiency of the traditional neighborhood stores. Corabastos experience indicate that improvements can be attained by organization of chains and technical assistance.

The promotion of chains may have several attainable long-run targets. First, the volume of sales (in pesos of equal purchasing power), operating costs, level of profits and product line and services

²There are about 45 plazas but 18.878 blocks in Bogotá (See Table 41).

of the average affiliate in 1990 must be close to the best neighborhood Coratiendas store of 1975 (Table 38). This is a store with sales over 4 million pesos per year and about 120 square meters in size. Second, affiliate retailers must have the largest food share of all retailers groups in middle and lower income areas (Table 40). To

Table 40. Suggested Changes in the Structure of all Food Urban Distribution in Middle and Lower Income Areas of Bogotá.

	1975	1990
Share on sales of		
Independent plaza retailer	20.5%	14.0%
All independent neighborhood stores	48.8%	18.6%
Neighborhood stores affiliates to chains	5.2%	41.3%
Total neighborhood stores and plaza retailers	74.5%	73.9%
No. of independent food outlets	21,702	16,992
No. of affiliates to neighborhood store chains	1,041	6,751

Source: Table 41 in the appendix.

achieve these targets, about 3,082 miscellaneous neighborhood stores could be organized into retailer owned chains³ and 3,800 of neighborhood stores are expected to belong to formally organized voluntary chains.

A program aimed at improving neighborhood stores may have the effect, through competition, of keeping the total number of specialized

³About 30 new neighborhood store owned chains assuming 100 affiliates per chain.

neighborhood stores, independent miscellaneous neighborhood stores and plaza retailers, by 1990, equal to the number estimated for 1975. However, they will be competing for the increasing demand for food in Bogotá which is estimated to be over three times larger than that in 1975 (Table 41 Appendix). The average innovative neighborhood store in 1975 might have had sales of about 1.2 million pesos. To attain the sales target, is required and, consequently major institutional, managerial and technological innovations will be necessary. Thus, there must be an improvement of entrepreneurs, the assistance and formation of a technical team and, of course, the development of capacities to train the technical teams. Chains could allocate a percentage of their sales for the support of a technical assistance team, that would provide specialized services (i.e., accounting and advertising) and also give chains and affiliates technical assistance on a wide range of management problems.

It is predicted that, as a result of competition from neighborhood owned cooperative chains and from the fast growing corporate chains and consumer-owned cooperatives, broadline wholesalers will tend to coordinate their business activities with neighborhood stores. Therefore, voluntary chains and store delivery service would be stimulated. However, this process would be better supported by organizational and technical assistance to broadline wholesalers.

Coratiendas experience indicates that for a wholesaler chain to carry perishables, without refrigeration, is risky and can be costly. Instead, perishables could be carried after the chain has experience and access to refrigerated facilities. Thus, affiliates

can purchase their perishables from traditional wholesalers in the short run. But in the long term, with the introduction of refrigeration wholesale chains or broadline wholesalers can carry perishables for neighborhood store affiliates.

The Corabastos experience with wholesale-retail chains and food marketing theory may allow the prediction that the operation of neighborhood store chains, with the assistance of a specialized team, would greatly improve the efficiency and equity of the traditional urban food distribution channels by: (1) reduction in the number of transactions resulting from larger scale and greater routinization of the buying process so that affiliate retailers can specialize in selling. This can result in cost reduction for affiliate retailers; (2) cost reduction of handling inventories by every affiliate retail outlet since inventories would be conveniently kept by their chain and thus free working capital at the retail level; (3) economies of scale of transporting, handling and advertising which would permit operational cost of affiliate retailers to be reduced; (4) improvement of the bargaining power of neighborhood stores vis a vis processors, and modern wholesalers, and effective competition for modern retailers, which would allow some of the pure profits of all these groups to be passed on to consumers; (5) reduction of risks resulting from vertical integration and coordination. If supplemented by permanent training and technical assistance, a strong process of innovation may be fostered in the food system; (6) a combination of modern food management technology, economies of scale, vertical integration and the competitive advantages of the traditional neighborhood store,

location at walking distances from consumers (who do not own cars), long service hours and the use of family labor during hours for which the labor code would require payment of high wages and benefits for hired laborers (i.e., night hours, holidays, Sundays and overtime); (7) lower real food prices (5 per cent in 1990), due to cost savings of retailers, which would benefit low and middle income consumers. Their demand, for food and non-food items may help stimulate economic growth and employment in other sectors of the economy, and farmers and processors may find these new channels less costly and risky.

Cost and Financing of a Neighborhood
Store Owned Wholesale Chain

The technical assistance team is a non-profit enterprise. It is not expected, in the intermediate term, that private entrepreneurs will invest in this activity. However, it is expected that the team's costs will be covered by charges for services rendered to all kinds of market participants. One of the sources of finance would be a percentage charge on neighborhood stores sales (about 0.8 per cent).

For the operation of a chain, income statements and balance sheets are estimated in the Appendix (Tables 42 and 43). Table 44 estimates a flow of investments from three sources (if it is assumed that only grains and processed food are carried): processors' credit on sales, subscription of shares by neighborhood stores and retained earnings and a long term loan to be used as working capital (1.5 million pesos).

There are no estimates of investment in warehousing facilities, transportation equipment and refrigeration equipment. Also, there

is no estimate of investments of retailers made to increase sales or to carry a broader line. Nevertheless, retailers can be part of a program of supervised credit which will be discussed later.

The social rate of return estimated for the impact of neighborhood store owned wholesale chain would be very high (52.4 per cent) and a time adjusted private rate of return would be relatively low (9.8 per cent). The rates of return would be higher than the estimated cost of capital of 7 per cent for Colombia (if no inflation is assumed). Because of high risks involved in organizing chains and long term investment before dividends are paid (13 years, Table 41, Appendix), it seems that private entrepreneurs, despite the high social rate of return, would not be encouraged by this private rate of return to start this organization by themselves. However, affiliate retailers could be encouraged to invest because they not only would obtain benefits as shareholders, but also profits would be expected to increase in their individual affiliate businesses (Table 38).

Broadline Wholesalers and Volume Wholesalers

At the wholesale level concentrated development efforts are recommended on volume and broadline wholesalers in perishables, including meat and dairy products. Broadline wholesalers would be the target group, and efforts would accelerate present trends of vertical coordination and integration of broadline wholesalers forward in the channel with retailers and of volume wholesalers backward in the channel with inter-municipal transportation processing and farming.

Neighborhood store affiliates and chains would increasingly demand the services of broadline wholesalers in perishables. Wholesaling chains might demand the service of volume wholesalers. Thus, the strategy suggested at this level is to stimulate the existing volume and broadline wholesalers and wholesalers that have the potential to become volume and broadline operators. Simultaneously, the many traditional wholesalers and wholesaler-retailers would be left alone to face competition and would probably exit the market as independent firms in the long run. The main market reform policies which can be used are: construction and allocation of warehousing facilities, rental rates and supervised credit with technical assistance. Supervised credit and technical assistance are treated in the section on human resources development.

Warehousing Facilities

The space occupied by wholesalers in other locations of Bogotá (side of the Central Market), and the additional area that all wholesalers argued they would need in the short term, added up to 46,878 meters (Table 7), which is equal to the area of the present wholesale market facility. However, the vertical space has been very inefficiently used by wholesalers in fruits and vegetables because their individual small scale (10 to 12 square meters) simply does not allow efficient use of vertical space. Broadline wholesalers, however, could use the vertical space efficiently if they were allowed to have larger horizontal space in one warehouse instead of several small areas scattered in all warehouses. Therefore, institutional changes

may result in less need for sales space in the Central Market. Yet broadline wholesalers also have the possibility of using short term refrigerated storage, instead of the daily turnover of inventories practiced by traditional wholesalers. In that case more warehousing area would be needed, though there is no estimate of how much more.

Corabastos-CABSA's enlargement plans for the Central Market are not very clear.⁴ A loan application to the Interamerican Development Bank for U.S. \$2 million was approved in early 1973 in order to build 10,000 square meters of warehousing area, identical to existing non-refrigerated warehouses, and a 10,000 square meter warehouse for perishables with refrigeration areas available. But in the latest plans only 6,000 square meters of warehouses (identical to those existing) are planned. These warehouses will be completed by 1981, and the plan has projections up to 1994.

There is currently some congestion in peak hours in the Central Market. Also, some wholesalers are located in other areas all over the city, and the demand for food by 1990 may triple the 1975 demand. Thus, 6,000 square meters is obviously a very limited space addition. Furthermore, it seems that to stimulate a major change in the handling of perishables, refrigerated space may be necessary.

Given the financial difficulties of the agency in charge of market reform, it is recommended that a feasibility study be made

⁴ CABSA, "Solicitud de Financiación" and Corabastos, "Informe a la Asamblea-Marzo de 1976" p. 9.

considering the following alternative. Corabastos may consider jointly with EDIS⁵ the building of a warehouse facility for perishables, including meats. This facility could be rented, with priority given to neighborhood store chains, broadline wholesalers in perishables and volume wholesalers. From the financial point of view, refrigerated facilities are a large investment and risks are also high, but they may be very desirable from the social point of view because such facilities can support major structural and technological changes in urban food distribution and thus allow the increase in volume and broader line of wholesalers and retailers. Also, the great price fluctuations in perishables may be reduced.

Corabastos, which still would have about 40 hectares of land for enlargement, may follow a long term leasing strategy by contracts with processors, volume and broadline wholesalers of grains, processed food and perishables, corporate retail chains and consumer owned cooperatives so that each firm could build its own facilities. These private companies could then be responsible for part of the credits granted by IDB and would contribute with the Colombian counterpart funds.

Prefeasibility and feasibility studies for wholesaling market facilities must consider wholesaling and retailing trends and alternative desired changes jointly. The alternative suggested for building and allocating facilities attempts to stimulate vertical integration

⁵EDIS is planning to buy a 10 hectare parcel from Corabastos land to build a slaughter-house. A slaughter-house near the Central Market would facilitate the addition of meat to the product line of broadline wholesalers and miscellaneous neighborhood stores.

and coordination of food processing, wholesaling and retailing, major technological changes, broader product line and larger scale, for wholesalers and retailers.

Since Bogotá, by 1990, may have about 8 million people and may occupy a large area (about 31 thousand blocks), the possibility of having more than one central market facility must be studied for alternative arrangements of wholesale-retail integration and coordination.⁶ If the alternative of more than one Central Market is socially desirable, Corabastos' plans could be speeded up for developing a commercial and industrial center in the present location, while it studies new locations for new wholesaling facilities.

Rental Rates

Rental rates in the central wholesale market have been subsidized and comprised a very low percentage of sales (less than 0.4 per cent on sales late in 1975). It seems that rental rates would be both the main source of net income for the agency in charge of market reform in Bogotá and a tool to promote efficiency in the food system. In fact, rental rates at market prices may facilitate the exit of the most inefficient small scale wholesalers. Hence, in the long run higher rental rates may result in lower consumer prices. In addition, a market mechanism can be allowed to allocate warehousing facilities, and rights to rent new warehouses or warehousing areas

⁶A study for the city of Buenos Aires with more than 8 million inhabitants in the early 1970s came to the conclusion that the alternative of more than one central wholesale market for fruits and vegetables would be a lower cost alternative than a single wholesale center. One of the reasons was the small and frequent inspection purchases of retailers. See: Norberto Frigerio, "Alternative

left by existing merchants may be auctioned. If the agency in charge of market reform does not auction these rights, wholesalers in black markets would do some auctioning and the price would benefit the existing merchant and other merchants with positions of power.

However, the bidding up of rental rates will stimulate interest in alternative and possibly lower cost locations. A few volume wholesalers, broadline wholesalers and neighborhood stores chains may look for other than the Central Market locations, depending on economies of transportation and prices of land or rental rates elsewhere. Nevertheless, such a possibility may be considered as an alternative to building new central markets in other Bogotá sites.

Assembly and Small Scale Farmers

Small scale farmers with potentialities to become commercial farmers compose the third group selected as a target for proposed market reform programs. These programs are directed towards the improvement of vertical coordination in marketing serving this small farmer group.

The national government is committed to a large program of organizing small scale farmers and providing them with an integrated set of services, such as, extension and technical assistance, credit, warehousing facilities in key assembling centers and market news. Several government agencies would be involved. The food marketing programs would be in charge of a mixed economy cooperative of farmers, the Central de Cooperatives de Reforma Agraria (CECORA).

wholesale facility arrangements for fresh fruits and vegetables in the Buenos Aires Metropolitan region" (Unpublished Ph.D. dissertation, Department of Agricultural Economics, Michigan State University, 1973), pp. 188-193.

Farmers' organizations, i.e., cooperatives, would carry out assembling functions for their affiliates. Because the product assembly process within the environmental conditions of traditional agriculture is relatively complex and costly, farmers' organizations may consider contracting the services of progressive assemblers (many of whom are farmers, too) to take advantage of their experience in the assembly process. The program can be conceived as a device to foster competition, efficiency and innovation in this market interface. Nevertheless, independent assemblers may have to face the increasing competition from farmer organizations and wholesalers to perform assembling functions.

Corabastos-CABSA may have to carry out several activities to support the small farmers' government program. For example, Corabastos-CABSA may organize training and provide technical assistance to extension agents, farming leaders and credit agency personnel on managerial activities of food marketing. In addition, it may have to sponsor activities to coordinate transactions between farmers organizations and neighborhood store chains or broadline wholesalers. Such supportive programming may imply organizing lists of suppliers, truckers and buyers, devising some formula pricing, arriving at certain grades and standards of products and packages and designing some methods of contracting.

Market Information, Commodity Exchange and Auctions

These programs can directly and indirectly serve both target and non-target market participants. Market information, one of the

programs that may have high priority, is a program of national scope⁷ in which regional organization of market reform must play an important and clearly defined role. In the short run farmers and merchants handling perishables need information on prices paid at wholesale and assembly markets. However, an improved rudimentary system of product classification and standardization of package size and weights would be required. Government market news must be useful for making transactions. Thus, any government news system dealing with perishables must inform market participants of the major commodity prices at assembly centers and wholesale markets in major Colombian cities. In the intermediate and long term, however, besides prices, estimates of volumes in the markets, expected harvest must be communicated. And to be truly useful, sources of information must be accurate and channels must reach target users of market information.

In the intermediate term probably the best way to speed up transactions and provide a basic source for private and public information for transactions in perishables is the organization of auctions in a few major consumption and assembling centers for perishables of large volume (potatoes, carrots, cabbage, etc.). Such a set-up would foster a mass media movement toward complete coverage of market news. Auctions can speed up transaction time for organization of farmers, broadline wholesalers and retailer chains. Also prices

⁷The marketing group of the Ministry of Agriculture Planning Office is giving priority to development of programs in this area. IDEMA and the commodity exchange authority and several other agencies are improving their information programs.

quoted can be used as the basis for formula pricing in contracts.

Market information in grains may in the short run need, not only price information but also information on volume stored, expected harvest and present and expected international prices. In addition, the technical assistance team may be able to interpret and analyze the consequences of major government policies on production, exports and imports of major grain commodities and livestock. Thus, short articles could be published frequently by mass media with some market outlook on major commodities. These articles must be practical and be able to be used by the team in providing technical assistance and permanent training to market participants.

In sum, the main recommendation is to conduct prefeasibility and feasibility studies of a comprehensive market news program. Recommended inclusions are: sources of information (such as auctions) at the national level with specific strategies for groups of commodities and definition of market information channels for potential users.

Human Resources Development: A Technical
Assistance Team and Supervised Credit

Human resources development is a critical part of the set of programs outlined and suggested here. Indeed, there is a need for training of market participants and their employees in many areas. In most cases managerial training and training in the handling food is of vital importance to a successful market reform program. Efficient food retailing, administration of chains, broadline wholesaling firms and market information schemes demand team work and skills.

Skills, of course, can be learned so attention must be paid to training and technical assistance.

In several parts of this set of recommendations a technical assistance team has been mentioned for promoting new organizations and providing specialized services and technical assistance to affiliate retailers, chains, wholesalers, farmer organizations and to the organization in charge of market reform. A technical assistance team is a group of people who are very well trained and have practical experience in the food business locally and/or abroad. They must know foreign and local technology. Thus, the group is seen as a mix of technicians with vocational and/or university training. On-the-job training experience in food wholesaling and retailing in the Colombian environment would be also desirable.

Technical assistance must cover areas in which traditional neighborhood stores and modern wholesalers and organized farmers are weakest: basic training, assistance in the daily technological and managerial practices of food business, legal and tax matters, plans for new investment and applications for and securing of supervised credit. The team can be assembled as a department of the organization in charge of market reform. Professional services and services of private and public agencies can be contracted on a full and part time basis. Most of the team efforts would be in the promotion of chains and assistance of affiliates. Their activities would be to provide vocational education, technical assistance and managerial consultations. Selecting firms to be affiliates is seen as a managerial job which implies gaining support of good food managers and in choosing stores well located and of efficient size.

Organizing and maintaining a highly competent and practical team may be a difficult task. Technicians would either go into business by themselves or they would be hired with high salaries by the modern corporate retailing and processing firms. Although from the social point of view this is not a major problem, since the team, after all, would become supportive of changes and development within the food business as a whole, from the standpoint of the agency in charge of market reform and of the market participants, however, it implies that as the technical assistance team becomes established members must be paid well or there will be a rapid rotation of people.

Higher paid technicians would result in higher costs of technical assistance that must be paid or at least shared by market participants. These higher costs could result in an incentive for retail chains and volume and broadline wholesalers to develop their own internal technical competence, including management skills and in-service training of affiliated store personnel in the intermediate and long term. If the market reform agency is not able to pay high salaries, its best trained personnel will probably accept higher paid jobs. However, new technicians can be hired and trained for the technical assistance team. Also, the agency in charge of market reform and the national and agricultural planning office, may become an important coordinating link for helping to design sound research and training programs at vocational and university levels which would support a long lasting market reform program.

Human resources development as part of a market reform program may require institutionalized public investments; otherwise, lack of

skills may become a major bottleneck. If a market reform program were to be identified as a high priority by the national government, the Ministry of Education could earmark part of the budget for specific research and training programs to support the reform effort.

Supervised credit can be a market reform policy instrument very useful for directing market reform programs and pressuring the system participants to accept technical assistance. In the intermediate term the requirement of technical assistance, similar to that existing for agricultural production loans, may also be utilized for food assembling, wholesaling and retailing. Although in the short run this requirement may not work effectively since a technical assistance team could be a major limitation, in the intermediate and long run this scheme could be a major source of financing strong public and private technical assistance teams. On the other hand, the technical assistance team at the beginning may have to make a major effort to help target market participants in developing sound plans and applying for commercial credit to finance them.

Modernization of the traditional food system is a large enterprise, based very much on human effort. It is expected that the system will continue using a labor-intensive technology in contrast with corporate chains and large consumer owned cooperatives which are increasingly employing modern, capital intensive technology. Thus, marginal labor productivity of channels serving low income consumers would be still lower than marginal labor productivity of channels serving high income consumers. Consequently, labor flowing from neighborhood stores to corporate chain and consumer owned cooperatives

would further increase the output of the economy. Similarly, capital would have a higher marginal productivity in neighborhood stores than in corporate chains or consumer owned cooperatives. Thus, some capital flowing toward neighborhood stores chains may increase the output of the economy.

The above analysis brings up several questions. Should a program of retail chains be subsidized, instead of finding banking credit at market interest rates? How can the new program compete against large consumer owned cooperatives (i.e., Cajas de Compensación-see Chapter VII) with interest free capital sources? What would be the implications of free capital sources? What would be the implications of free capital for the kind of technology adopted?

The recommendations of this research follow a strategy of removing institutional barriers so that all groups can have access to banking credit at market rates.

The Agency in Charge of Market Reform

The main lesson learned from the Corabastos experience is that organizations in charge of market reforms need careful planning and organization. Both internal structure and external linkages must be well organized and institutionalized.

Excellent market reform strategies logically linked to the fostering of economic development can be effectively implemented or poorly implemented. Organizations may set up programs consistent with or against their approach. Yet the formal organization in charge of implementation of market reform is responsible for the results. Both internal structure and linkages could favor or work

against setting up programs closely related to the organization's approach and goals, and consequently, to its economic and financial performance.

Since market reform implies some investments in the production of public goods, agencies in charge of reform must be public or mixed economy corporations. In some cases the reform agency could arrange specific projects with the government finances by budget appropriations. The author suggests several changes and/or characteristics in the structure of the mixed-economy corporation in charge of market reform (Bogotá case), both for public and private stockholding.

The public sector may hold stocks of the agency in charge of market reform. However, one agency of the public sector may be the stockholder instead of many government agencies acting independently among themselves. But, if several agencies hold stocks as in the case of Corabastos-CABSA, then the government may find a mechanism to coordinate these agencies so that they act united as a public sector in the Board of Directors of the agency in charge of market reform. Thus, the government, as a solid unit, rather than independent agencies, would have responsibilities, power and leadership to draw up policies in both the formal organization initially created to promote market reform and the new organizations set up to promote specific reform programs.

The following suggestions are highlighted for private sector stockholding in the market reform corporation. Several private groups, if at all possible, must be stockholders, i.e., wholesalers, retailer chains (corporate, cooperative etc.), farmers' organizations, food

processors and creditor banks. These private groups on the board of directors can balance their conflicting interests as well as apply pressure for economic rationality of investments. However, the private groups must have less than 50 percent of equity capital and of representation on the Board of Directors. Thus, the government should not only coordinate the groups but also have the power to encourage the organization of programs with public goods characteristics.

The LAMP recommendation of setting up regional rather than national corporations in charge of market reform seems to be a "good" alternative after Corabastos' experience. But to have a consistent national market reform program there must be some mechanism of coordinating the several regional corporations. Three mechanisms of formal coordination are suggested here.

First, regional organizations in charge of market reform should have small planning groups in which the city and national planning offices have one representative. The planning groups should suggest, study and evaluate plans and programs which are consistent with national guidelines.

Second, investments of the national government in market reform mixed-economy corporations may be provided or coordinated by one government agency which can coordinate actions of the regional corporations through their Board of Directors.

Third, large investments and loans should follow regular government channels for their approval. This procedure seeks to avoid these agencies getting involved in overly ambitious ventures, contrary to their own reform approaches, especially in programs of direct

intervention. The national government of Colombia may define IDEMA as the only public agency to carry out direct intervention programs.

The experience of Corabastos clearly indicates that agencies in charge of market reform are not well suited to engage themselves in activities of direct intervention competing both with the public and the private sectors. Moreover, the government (or government agencies) may revise the policy of assigning activities of direct intervention to market reform agencies in order to provide them the opportunity to earn some net income. One alternative to this source of income is for IDEMA to carry these activities at a profit as a government agency, and for the government to allocate a budget to specific programs (i.e., organizing an auction) which could be assigned to the market reform agency on a contract basis.

APPENDIX

APPENDIX

CONSIDERATIONS REGARDING NEIGHBORHOOD STORE CHAINS

This research based upon Corabastos' experience, leads to the conclusion that there is a high potential for improvement of urban food distribution serving middle and low income areas of Bogotá. This appendix has the single objective of providing additional discussion of the workings of neighborhood store-owned wholesale chains. In addition, some comments on the implications of the recommendation for organizing such chains are made.

Table 41 illustrates in more detail the author's projections of a desirable pattern of change in the structure of food retailing. Only one alternative, of the many possible and desirable alternatives, is illustrated. Based upon Coratiendas' experiences, Tables 42 and 43 contain projections of balance sheets and income statements for the wholesale chain, while Table 44 attempts to provide a preliminary estimate of rate of returns. This appendix, again only attempts to illustrate and to begin a discussion of programs designed to improve neighborhood stores in Bogotá.

Opportunities for Change in the Structure of Retailing

Improving food stores to serve the poorest 50 per cent of consumers may require a program for an urban area which contains about

Table 41: Changes in Food Retailing Through a Program of Improving Neighborhood Stores Serving Middle and Lower Income Groups

	Estimates for 1975			Projections or Targets for 1990		
	Upper Classes Areas	Middle and Lower	Total	Upper	Middle and Lower	Total
A. Population (All in numbers)						
Population of Bogotá - Nos (6% rate of growth per year)	295,428	2,898,392	3,193,820	708,141	6,947,446	7,655,587 ^a
Number of Food Neighborhood Stores (Specialized and miscellaneous) . .	1,342	15,920	17,262	1,342	15,920	17,262
Number of Independent Plaza Retailers	--	7,823	7,823	--	7,823	7,823
Number of Inhabitants Per Block In Bogotá (Projection with higher density)	118	177	171	172	259	250
Number of Blocks in Bogotá (Projection with higher density)	2,503	16,375	18,878	4,060	26,560	30,622
Outlets Affiliated with Miscellaneous Neighborhood Store Owned Chains .	7	75	82	7	3,075	3,082
Outlets Affiliated with Neighborhood Store Voluntary Chains	124	966	1,050	124	3,676	3,800
Inhabitants per Neighborhood Store and Plaza Retailers	220	122	127	527	293	305
Blocks Per Neighborhood Store	1.87	1.03	1.09	3	1.7	1.8
Blocks Per Outlet Affiliate to Neighborhood Store Owned Chains	--	--	--	--	6 to 9	7 to 10
Total Independent Food Retail Outlets	1,211	21,702	23,953	1,211	16,992	18,203
B. Households Purchasing and Retailers' Sales, Colombian Pesos (of 1975)						
Annual per Capita Food Expenditures (Col \$ of 1975)	13,600	7,224	7,814	17,680	9,391	10,158 ^a
Total Food Expenditures (millions of Col \$)	4,018	20,938	24,956	12,520	65,245	77,765
Total Food Purchasing per Block (millions of \$ Col)	1.6	1.3	1.3	3.1	2.40	2.50
Food Sales Per Independent Neighborhood Store (millions of Col \$) . .	0.70	0.70	0.70	1.5	1.32	1.36
Food Sales Per Affiliate Neighborhood Store (millions of Col \$)	1.05	1.05	1.05	4.0	4.0	4.0
C. Bogotá's Food Market Share of:						
All Neighborhood stores and Plaza Retailers	42.0	74.5	68.7	28.0	73.9	66.5
All Neighborhood Stores	24.0	54.0	49.0	20.0	59.9	53.5
Affiliates to Voluntary Chains	3.2	4.7	4.3	4.0	22.5	19.5
Outlet Affiliates to Neighborhood Store Owned Cooperatives	0.2	0.5	0.5	0.2	18.8	15.9
Independent Retailers	38.6	69.3	64.2	23.8	32.6	31.1
Plaza Retailers	18.0	20.5	19.7	8.0	14.0	13.0

Source: Estimates based upon surveys and case studies of this research and information of CID, Distribución de Víveres, Vols. II, IV, and DANE Censuses.

a. Population of Bogotá in 1990 = (Population of 1975) $\cdot (1 + 0.06)^{15}$. Rate of Population growth for Bogotá is estimated at 6% per year between the two DANE Censuses of 1964 and 1973.

b. Annual per capita food expenditures of Bogotá's households in 1990 = (Per capita food expenditures in 1975) $\cdot (1 + 15 \cdot 0.02)$.

Table 42: Projection to Fifteen Years of the Income Statement of a Food Wholesaling Chain Owned by 10% Neighborhood Stores: all in Thousands of Colombian Pesos of 1975

Items	Years:	10.	20.	30.	40.	50.	60.	70.	80.	90.	100.	110.	120.	130.	140.	150.
Annual Sales		30,000.0	50,000.0	55,000.0	60,500.9	63,525.0	66,701.0	70,036.0	73,538.0	77,215.0	81,076.0	85,130.0	89,386.0	93,855.0	98,548.0	103,475.0
Cost of Goods		28,950.0	48,250.0	53,075.0	58,382.0	61,301.5	64,433.2	67,654.8	71,037.7	74,589.7	78,400.5	82,320.7	86,436.3	90,851.6	95,394.5	100,267.3
Gross Margin		1,050.0	1,750.0	1,925.0	2,118.0	2,223.4	2,267.8	2,381.2	2,500.3	2,625.3	2,675.5	2,809.3	2,949.7	3,003.4	3,153.5	3,207.7
Technical Assistance Team Services (0.8% of Sales)		240.0	400.0	440.0	484.0	580.2	537.6	560.3	588.3	617.7	648.6	681.0	715.1	750.8	788.4	827.8
Fixed Costs		363.2	363.2	363.2	363.2	363.2	363.2	363.2	363.2	363.2	363.2	363.2	363.2	363.2	363.2	363.2
Installation Costs		212.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Variable Costs (1.343% on Sales)		402.9	671.5	738.6	812.5	853.1	895.8	940.6	987.6	1,037.0	1,088.9	1,143.3	1,200.5	1,260.5	1,323.5	1,389.7
Interest (rate 7%)		73.6	104.3	105.0	105.0	105.0	95.1	86.2	75.4	62.6	47.6	34.0	27.8	2.6	--	--
TOTAL Costs		1,292.3	1,539.0	1,646.8	1,764.7	1,829.5	1,887.7	1,950.3	2,014.5	2,080.5	2,148.3	2,221.5	2,297.6	2,377.1	2,475.1	2,580.7
Pretax Profits		(242.3)	211.0	278.2	353.3	393.9	380.1	430.9	485.8	544.8	527.2	537.8	650.5	626.3	678.4	627.0
Net Profits after taxes (taxes: 37% of profits)		(251.2)	132.9	175.3	222.6	248.2	239.5	271.5	306.1	343.2	332.1	370.3	409.6	394.6	427.4	395.0

Source: Estimates based on Coratiendas' experience, Bogotá.

Table 43: Projection to Fifteen Years of the Balance Sheet of Wholesale Food Chain owned by 100 Neighborhood Stores; all in Thousands of Col \$ of 1975.

Items	Year:	1o.	2o.	3o.	4o.	5o.	6o.	7o.	8o.	9o.	10o.	11o.	12o.	13o.	14o.	15o.
Current Assets:																
Cash (Sales) 84		357.1	595.2	654.8	720.0	756.2	794.1	833.8	875.5	919.2	965.2	1,013.4	1,064.1	1,117.3	1,173.2	1,231.8
Inventories (Cost of Goods Sold) 12.5		2,316.0	3,860.0	4,246.0	4,670.6	4,904.1	5,154.7	5,412.4	5,683.0	5,967.2	6,272.0	6,585.7	6,914.9	7,268.1	7,631.6	8,021.4
Fixed Assets		300.0	300.0	400.0	430.0	430.0	430.0	430.0	430.0	430.0	430.0	470.0	470.0	500.0	500.0	530.0
Total Assets		2,973.1	4,755.2	5,300.8	5,820.6	6,090.3	6,378.8	6,676.2	6,988.5	7,316.4	7,667.2	8,069.1	8,449.0	8,885.4	9,304.8	9,783.2
Liabilities and Capital:																
Suppliers credit (0.7 X inventories)		1,621.2	2,702.0	2,972.2	3,269.4	3,432.9	3,608.3	3,788.7	3,978.1	4,177.0	4,390.4	4,610.0	4,840.4	5,087.7	5,342.1	5,615.0
Short Term Liabilities to Banks		--	--	--	142.0	126.4	154.5	183.2	214.2	194.7	188.0	260.1	36.9	--	--	--
Long Term Liabilities to Banks		1,051.9	1,490.2	1,500.0	1,358.0	1,232.6	1,077.1	893.9	679.7	485.0	297.0	36.9	--	--	--	--
Total Liabilities		2,673.1	4,192.2	4,472.2	4,769.4	4,790.9	4,839.9	4,865.8	4,872.0	4,856.7	4,875.4	4,907.3	4,877.3	5,087.7	5,342.1	5,615.0
Capital		300.0	563.0	828.6	1,051.2	1,299.4	1,538.9	1,810.4	2,116.5	2,459.7	2,791.8	3,162.1	3,571.7	3,797.7	3,962.7	4,168.2
Total Liabilities and Capital		2,973.1	4,755.2	5,300.8	5,820.6	6,090.3	6,378.8	6,676.2	6,988.5	7,316.4	7,667.2	8,069.1	8,449.0	8,885.4	9,304.8	9,783.2
Working Capital		1,051.9	1,753.2	1,928.6	1,979.2	2,101.0	2,186.0	2,274.3	2,366.2	2,514.7	2,658.8	2,729.0	3,181.7	3,297.7	3,462.7	3,638.2
Annual Loan		1,051.9	438.3	9.8	--	--	--	--	--	--	--	--	--	--	--	--
Annual Payment		--	--	--	--	142.0	126.4	154.5	183.2	214.2	194.7	188.0	260.1	36.9	--	--
Cumulative Loan		1,051.9	1,490.2	1,500.0	1,500.0	1,358.0	1,231.6	1,077.1	893.9	679.7	485.0	297.0	36.9	--	--	--
Percentage of Profits reinvested		--	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	38.6	52.0
(Loan/working capital) 100		100.0	85.0	85.0	76.0	65.0	56.0	47.0	37.8	27.0	18.2	10.9	1.2	--	--	--
Subscription of Shares		551.2	130.1	90.3	--	--	--	--	--	--	--	--	--	--	--	--
Cumulative Subscription of Shares		551.2	681.3	771.6	771.6	771.6	771.6	771.6	771.6	771.6	771.6	771.6	771.6	771.6	771.6	771.6
Dividends		--	--	--	--	--	--	--	--	--	--	--	--	131.7	252.4	189.5
Gross Margin (price margin)		3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.1

Source: Estimates based on Coratiendas' experience. Bogotá.

Table 44: Estimates of Private and Social Benefits and Costs of a 100 Affiliates Neighborhood Store Owned Chain. Estimates of Social Internal Rate of Return and Time Adjusted Private Rate of Return.

Year:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Sales of the 100 affiliates (millions of pesos of 1975)	120	138	158	181	203	225	247	272	297	320	343	363	382	401	421
2. Gross Margin - Percentage on Sales	17.5%	17.5%	17.0%	16.5%	16.0%	15.5%	15.0%	14.6%	14.1%	13.6%	13.2%	12.8%	12.4%	12.0%	11.5%
3. Percentage of neighborhood stores purchases from their chain	30.3%	43.9%	41.9%	40.0%	37.3%	35.1%	33.3%	31.6%	30.3%	29.3%	28.6%	28.2%	28.1%	28.0%	27.8%
4. Percentage points on sales of cost reduction	-	1.4%	1.9%	2.4%	2.9%	3.4%	3.9%	4.5%	5.1%	5.6%	6.1%	6.6%	7.0%	7.4%	7.8%
Benefits of a Neighborhood Store Owned Chain + Thousands of Pesos															
5. Increase in operational efficiency of stores affiliates due to the chain - Cost reduction (1 X 3 X 4)	00	848	1,538	1,737	2,192	2,684	3,213	3,870	4,584	5,257	5,980	6,763	7,505	8,301	9,121
6. Net Income (imputed interest rate) to processors from credit on sales to the chain (7%)	114	189	208	229	240	253	265	278	292	307	323	339	356	374	393
7. Increase in efficiency by non-affiliate wholesalers and retailers due to competition from chains (10%)	00	85	126	174	219	268	321	387	458	526	598	676	750	830	912
8. Value of households time savings and reduction of traveling cost in buying a larger proportion of their food bill at walking distances (due to the impact of one average chain)		55	82	112	142	174	208	251	297	342	388	439	487	539	591
9. Net income produced by the chain owned by neighborhood stores in its wholesaling operation (before taxes and before paying interest rates).	(-169)	315	383	458	499	475	517	560	607	575	612	670	629	678	627
10. Scrap value of all assets at the end of the period															9583
11. TOTAL SOCIAL BENEFITS	(-55)	1492	2057	2710	3292	3854	4524	4836	6238	7007	7901	8887	9727	10722	20227
Costs (Investments) of a Neighborhood Store Chain + Thousands of pesos.															
12. Flow of Loans	1052	438	10	0	0	0	0	0	0	0	0	0	0	0	0
13. Flow of investment of retailers and profits reinvested	551	263	266	223	248	240	272	306	343	332	370	410	395	165	206
14. Flow of Investment (long run) of processors on credit sales to the chain	1621	1081	270	297	164	175	180	189	199	213	220	230	247	254	273
15. TOTAL SOCIAL COSTS	3224	1782	546	520	412	415	457	495	542	545	590	640	642	419	898
16. Net Private (to a chain) Benefits Before Taxes and Interest (or imputed) Rates (No. 6 + No. 9 + No. 10 - No. 12 - No. 13 - No. 14)															
Net Cash Inflows - Flows of Investment (Processors, loan and retailers)	(-3279)	(-1278)	45	167	327	313	330	342	357	337	345	369	343	633	9705
17. Present Value of Net Private Benefits (Summation equals zero - discounted by $i_p = 9.8\%$)	(-2986)	(-1056)	34	15	204	179	172	162	154	132	123	120	102	171	2390
18. Net Social Benefits (No. 10- No. 15)	(-3279)	(-290)	1511	2190	2080	3439	4072	4341	5696	6462	7311	8247	9085	10303	19329
19. Present value of Net Social Benefits (Summation equals zero - discounted by $i_s = 52.4\%$)	(-2152)	(-125)	427	406	351	275	213	149	129	96	71	53	38	28	35

Source: Estimates from Tables 38, 40, 41, 42, 42. Also CID, Distribución de Víveres, especially volume II.

90 per cent of the population of Bogotá (Table 41).¹ In fact, the lowest income consumers are often scattered through some higher income areas. These target consumers purchased almost 75 per cent of all their food bill from plaza retailers and specialized and miscellaneous neighborhood stores; about 54 per cent of their bill was purchased from neighborhood stores in 1975 (Table 41). Such a purchasing pattern provides an opportunity for improved traditional store management to have significant impact on the target group by reduction of costs and prices.

This research found that the main reason behind the high costs of traditional food outlets were low scale, traditional practices, high costs of procurement, due to personal, and low bargaining power. Moreover, Corabastos' programs with voluntary and cooperative neighborhood store chains have had a significant impact on improving their efficiency an impact which is a result of better vertical coordination of retailing and wholesaling, economies of scale, adoption of new technology and the traditional competitive advantages, such as location at walking distances from consumers' houses, long hours of service and use of family labor in an economy with high open and disguised unemployment.

By meeting such competitive advantages neighborhood stores if improved, have a higher potential to competitively serve the target group than do plaza retailers. Which type of organization, then,

¹This estimate is based upon a consumption survey by CID, Distribución de Viveres, II, 35-36.

should be selected as an ideal, voluntary or cooperative chians? Is there any other alternative to serve low income consumers?

Probably there is no ideal standard store for every income area of Bogota. However, to give some indication of the implications of major changes, the most progressive neighborhood store in 1975, an affiliate of Coratiendas, is selected here as a desirable model for the average store in 1990 (a year selected arbitrarily). This store has the following characteristics: it handles a broad food line: meat, dairy products, grains and processed food, fruits and vegetables, liquors and some non-food items; it has adopted self-service, along with most of the merchandizing practices of large supermarkets: its sales were above 4 million pesos on food in 1975 and it comprised 120 square meters of sales area and employed eight to ten persons; it can be defined as a superette (Table 38).

To have superettes, such as the one described, seems to be an easy target for a 15 year period. However, one must consider that the average neighborhood store, including specialized and miscellaneous, would have had sales of only about 0.7 million pesos per year in 1975 (Table 41 for sales of all food groups in 1975; and compare with Table 32 for purchases of the selected food groups in 1974). And even if the innovative stores (which may have had sales of about 1.2 million pesos) are to be improved, the target of 4 million pesos may still not be an easy one to reach. Indeed, it may imply a sales rate of growth of 10 to 15 per cent in the early part of the 15 year period (Table 41 and 44) which will require technical assistance. In addition, trying to capture all the 75 per cent food market share

of traditional retailers seems to be very optimistic for a period of 15 years. Just for the sake of illustration, one might say, arbitrarily, that 40 per cent can be assumed as an attainable market share by improved stores. What are the implications of such a market share? What is first implied is a large program of improvements. Thus, there would have to be 6,882 (including stores affiliated to chain in 1975) in Bogotá by 1990. Organizational and technical assistance probably would require beginning with a few stores and, by the end of the 15 year period, trying to reach the target of 6,882 superettes. Of course, such scheduling would mean fomenting faster sales for the stores which would begin their process of improvement in the last part of the 15 year period.

In addition to the strategy just suggested, two alternatives can be offered for improving efficiency of food distribution in middle and low income areas of Bogotá.

The first alternative is Cajas de Compensación (Chapter VII) which seem to represent the main government policy for improving food retailing. This research did not have the study of Cajas de Compensación as its major concern. However, from Figure 13, Table 27 and in-depth case studies it appears that Cajas may have high operational efficiency, low operational costs and low margins and prices. But Cajas have "free" capital (see Chapter VII) and, due to their large scale, they hire a relatively large number of workers. Thus, Cajas may be required by the Labor Code to pay a premium for night and holiday work, fringe benefits and minimum salaries. Moreover, they may have to face workers unions. Therefore, there are

strong incentives for the use of labor saving technology while open and disguised unemployment is high, a technology which is apparently employed by Cajas for their modern and large hypermarkets. In addition, Cajas are not and probably would not be within walking distance of poor consumers; therefore, to the lower prices paid by consumers must be added the extra costs of transportation, transaction time and some home inventory.

A second alternative to the suggested strategy is the LAMP recommended voluntary chains for the city of Cali.² LAMP suggested that neighborhood store affiliates be about 200 to 300 square meters in size, with annual sales of 11 to 16 million pesos (1975 pesos). The planned area of influence per store was about 16 blocks with a food market share of about 70 per cent. Operation efficiency would be better than that of the superettes suggested earlier and gross margins projected, slightly lower. Nevertheless, it appears that the stores suggested by LAMP would employ a technology with a relatively greater utilization of capital than the suggested superettes. Still, in a program of superettes some stores located in shopping areas would be as large as those suggested by LAMP.

In addition to the above possibilities, there are probably many alternatives and combinations of institutional arrangements for urban food distribution, but their discussion is beyond the scope of this study. The discussion that does follow turns to the

²Riley, Market Coordination-Colombia, pp. 97-108.

wholesaling activity of a chain owned by about 100 neighborhood store affiliates.

Costs and Benefits of a Wholesale
Chain Owned by Neighborhood Stores

This section deals with one wholesale chain owned by neighborhood stores and, basically, is a projection of Coratiendas' experiences with some minor changes. The estimates provided here give insights into the consequences of finance, costs and benefit flows expected from one chain

A wholesale chain is assumed to carry only grains and processed food, while neighborhood store affiliates may carry a broader food line. With this assumption, then, sales of chains are estimated for the period 1975 to 1990. The estimate is based upon Coratiendas' trends and the target sales set for affiliates at 10 per cent and later 5 per cent. Next, income statements and balance sheets are projected using indexes estimated from Coratiendas (Tables 42 and 43). This information is employed to estimate social and private rates of return. All the estimates assume an economy without inflation and all are made in pesos of 1975 (equal purchasing power).

Gross margins are projected to decline slightly during the 15 year period. It is expected, too, that fixed costs may not vary with the increase in volume of sales by chains. Other operational costs are divided into variable costs which are defined as costs that vary proportionally with sales. Additional costs are kept separate, such as services rendered (0.8 per cent of sales) by a technical assistance team, which are incurred by the permanent services of

accounting and technical assistance to the chain and technical assistance to affiliates (mainly training courses). Installation costs, incurred in promoting and organizing the chain, may be paid by the wholesale chain to the technical assistance team. Finally, operational costs do not include delivery services. If these services were provided by the chain, the costs may be paid directly by the affiliated stores.

Values of fixed assets are also projected from Coratiendas' experience. It is assumed that the chain may rent warehousing facilities and may not buy transportation equipment. Thus, fixed assets are a small percentage of total assets and are mostly made up of office equipment. Other assets are calculated by the use of ratios estimated from Coratiendas' financial statements: Cash = $\frac{\text{sales}}{84}$; Inventories = $\frac{\text{cost of goods sold}}{12.5}$ (Table 43). Liabilities and equity capital are estimated as follows. Short term credit from processors = 0.7 (inventories). The difference between total assets and suppliers credit is, then, liabilities to banks and equity capital. To separate the two, the following criteria are applied. The organization in charge of market reform is probably unable to subscribe capital in the chains, given its financial difficulties, and affiliated retailers' initial stock ownership should be kept as low as possible because their capital is scarce and because, by subscribing capital in chains, they leave less for the rapid development of their retail stores. Thus, it is advisable to finance working capital with a long term loan. In addition, it is considered that the neighborhood store chain must be kept at acceptable level of solvency every year and should use

retained earnings as a source of equity capital and of funds to pay back the loan. Once bank liabilities are estimated, this information is used to estimate the interest expense in the income statement. In sum, income statements and balance sheets of this wholesale chain are estimated jointly (from Coratiendas' experience and from projection of sales) for the 15 year period.

Costs of a Neighborhood Store Owned Wholesale Chain

Operating costs are included in the estimation of the net operating income (Tables 42 and 44). Thus, the costs of services paid to the technical assistance team are automatically included in Table 44. Operational losses are included as a negative net operating income. Costs of the program are seen as a flow of investment and are estimated from Table 43 and presented in Table 44. Working capital is financed by a long term banking loan of 1.5 million pesos, a loan completely paid back in the thirteenth year (Table 42 and 43). In addition, processors' short term credit on sales can be seen as a long term investment which is increased annually as sales and inventories increase. The incremental figure is calculated year by year as a flow of investment. Finally, affiliate retailers also invest in the chain in two ways: by buying stocks in the first three years and by reinvesting profits from the operation of the chain (retained earnings). Dividends are paid only after the twelfth year.

The larger initial investment sources are the working capital loan and the credit of processors. But the increase in sales and the payback of the loan are financed by retained earnings. Total social costs and total private costs are assumed to be equal because shadow

prices are not used and costs inflicted on other parties are not obvious.

Benefits Flowing From a Retail Chain (Wholesaling)

The operation of a neighborhood store wholesale chain is expected to produce net income above interest charges and taxes (Tables 42 and 44). In addition, processors are expected to give short term credit on sales without charging interest but at a higher price than for cash purchases. Therefore, an actual cost of capital is paid. A 7 per cent interest rate is applied to suppliers' credit in Table 43, and this is the net income to processors in Table 44. A total net income is obtained before any actual or imputed interest rate and before taxes. Finally, the chain at the end of the 15 year period has assets (cash, inventories and fixed assets) which have a market value; (Tables 43 and 44). The above benefits are defined as private because they are captured by creditors and investors in the chain (before taxes) as a direct result of the operation of the chain.

Based upon the experience of Coratiendas, the main benefit (around 70 per cent of the total estimated) of the neighborhood store owned wholesale chain and of technical assistance paid by the chain is anticipated to be an increase in efficiency at the retail level as a result of: economies of scale in transactions and transportation, routinization of procurement and sales and adoption of new technologies. The increase in efficiency may result in a reduction of operational costs (Table 44), although not all this cost reduction is due to the investment in chains. Neighborhood stores may need to invest in fixed assets, inventories and even in extra technical assistance

to improve their businesses and to carry perishables, investments which are not measured here as part of the chain investments. Therefore, as a rule of thumb, only a percentage equal to the share purchased from the chain is considered, due to the investment in the wholesaling operation of a chain.

With the assumption that chains do not carry perishables, neighborhood stores may not have lower operational costs than broadline wholesalers in grains and processed food. But it is expected that gross margins are lower due to lower net profits. This may pressure broadline wholesalers to increase efficiency or reduce profits.

Thus, chains and affiliates, by competition and demonstration effect, are anticipated to generate an environment which would lead to an increase in efficiency of other wholesalers and retailers and to a speed up in the formation of voluntary chains (Table 43). Neighborhood store affiliates are expected to gain market share from plaza retailers. Thus, consumers in middle and low income areas may save time and traveling costs by buying a higher proportion of food at walking distances from their homes (no more than 2 to 3 blocks), rather than traveling to plazas. This estimate is made for the corresponding reduction of plaza retailers' market share. The share is estimated in pesos per year (for 1990). The amount is estimated for only 100 affiliates to one chain and finally converted into numbers of trips to plazas by dividing by the size of a purchase per trip per family.³ Value of time savings and travel costs is estimated

³Purchasing practices used here are similar to those described by CID, Distribución de Víveres, II, 46, 79, 80.

per trip (the amount saved is multiplied by the percentage of purchases by affiliates from their chain).

Other benefits may result from the program in other sectors of the economy, but quantification is not made. Urban food distribution is considered a part of the total food system and part of the social system since such changes in this part of the system are expected to influence other parts. Processors and organized small scale or commercial farmers may have alternative channels. Some processors may change their strategy of selling directly to small scale retailers and sell to chains, while farmers may sell directly to retailer chains rather than to assemblers. The new channels (one shorter and the other longer) in both cases can result in a reduction of transactions for processors and farmers and economies of scale.

On the other hand, price reductions that are expected to be passed on to consumers may allow consumers to increase their demand for food and non-food items. Producers may increase output in response to the new demands and at the same time demand more inputs which can foster growth in another sector of the economy. But quantification of the secondary effects is very difficult.

Rates of Return of a Wholesale Chain Owned by
Neighborhood Stores (Coratiendas).

The rate of return is used as an economic indicator of social and private desirability of the program. Two rates of return are estimated: a social (or economic) rate of return and a private (or financial) time adjusted rate of return. Both rates are defined as "the rate of discount which makes the present value of the benefits

exactly equal to the present value of the costs."⁴ The difference between the two emerges from the definition of social costs and benefits vis a vis private costs and benefits.

Since the estimates are made for an economy without inflation, the rates of return are compared with a real rate of interest (after correction from inflation) which indicates the opportunity cost of capital. The real rate of interest at 7 per cent charged by commercial financing institutions for long term housing loans, is used here as an approximation of the opportunity cost of capital. The social rate of return of capital invested in a neighborhood store chain, including payment of services to a technical team, is estimated at 52.4 per cent. This figure indicates that investments in chains, if efficiently implemented, would be socially desirable. The private rate of return estimated is 9.8 per cent, a figure which alone may indicate that entrepreneurs may invest in chains and pay (0.8 per cent on sales) for the services of a technical assistance team. However, if the risks of organizing chains are taken into account, along with the long term investment before dividends are paid (thirteenth year) and some institutional barriers (lack of basic training, or lack of an organized technical team), then the 9.8 per cent rate of return may not appear to be a sufficient economic incentive. This rate does indicate, however, that it may not be very difficult to motivate neighborhood store operators to invest because they may have additional incentives

⁴E.J. Mishan, Economics for Social Decisions: Elements of Cost-Benefit Analysis (New York: Praeger Publishers, Inc., 1973), p. 123. Also see: Charles T. Horngren, Accounting for Management Control: An Introduction (2nd ed.; Englewood Cliffs: Prentice-Hall, Inc., 1970), p. 430.

since, in the short term, their individual stores are expected to increase profits.

The large social rate of return, in comparison to the private rate of return, may indicate that in order to organize chains, at least in the more difficult low income areas, it may be advisable to provide technical assistance as a governmental extension service and without charge. Such service may be used as an incentive for neighborhood stores' cooperation in organizational and technological improvements.

Due to data limitations, estimates here depend heavily on assumptions made, targets established and Coratiendas' short experience. Thus, partial estimations are only illustrative and have the objective of providing insights into the opportunities for further market improvements. Any action may require prefeasibility and feasibility studies for a program as a whole. Nevertheless, at least the high social rate of return estimated here should once more, give an indication that this area deserves further research and that several alternatives must be explored to take advantage of the potentialities to improve food distribution for middle and lower income areas.

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