

1. SUBJECT CLASSIFICATION	A. PRIMARY Economics
	B. SECONDARY Agricultural Marketing

2. TITLE AND SUBTITLE  
 Market processes in La Paz, Bolivia

3. AUTHOR(S)  
 (101) Michigan State University Latin American Studies Center

4. DOCUMENT DATE 1969	5. NUMBER OF PAGES 254 p.	6. ARC NUMBER ARC
--------------------------	------------------------------	----------------------

7. REFERENCE ORGANIZATION NAME AND ADDRESS  
 Michigan State University, Department of Agricultural Economics,  
 East Lansing, Michigan 48824

8. SUPPLEMENTARY NOTES (*Sponsoring Organization, Publishers, Availability*)  
 (In Latin American Studies Center, Research Report No. 3)

9. ABSTRACT

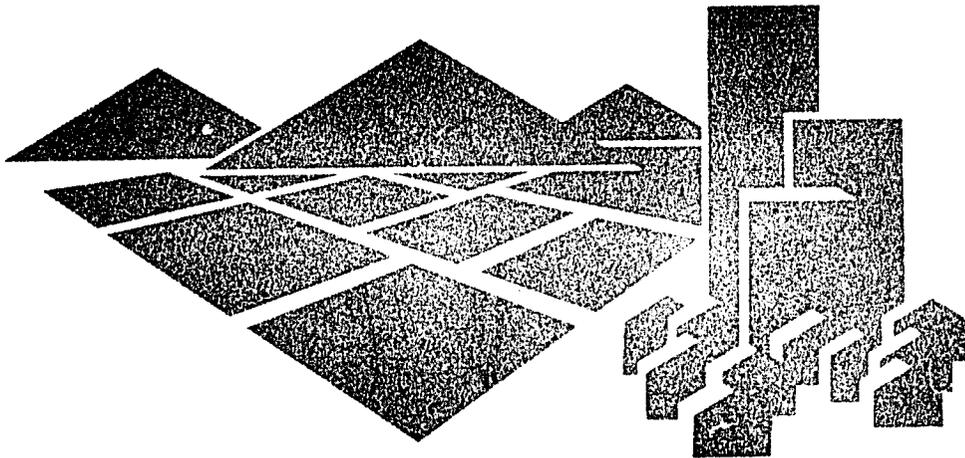
A description and analysis of the food production-marketing system and suggestions for changes. Among the findings were that one of the most urgently needed reforms is the creation of larger-scale retailing and wholesaling establishments in La Paz. A major impediment to the establishment of a modern food distribution system is the apparent lack of management talent, especially at the retail level. Substantial reductions in the price of food can be gained by full-line retailing and wholesaling of all foods other than fresh fruits and vegetables. The key to increased scale and reduced prices is the offering of the four staples -- beef, bread, potatoes, and rice -- through one outlet; several private sector efforts already are setting up large-scale, modern retail outlets. Progress toward large-scale retailing and wholesaling of fresh fruits and vegetables will be less rapid than for the four staples. Daily market broadcasts could help to lessen price fluctuations and increase production. Finally, government reforms to foster market reforms and a review of the philosophy underlying the laws and regulations of market processes are needed greatly.

10. CONTROL NUMBER PN-AAC-250	11. PRICE OF DOCUMENT
12. DESCRIPTORS Bolivia Consumers Food industry La Paz, Bolivia?	13. PROJECT NUMBER
	14. CONTRACT NUMBER CSD-786 Res.
	15. TYPE OF DOCUMENT



**RESEARCH REPORT NO. 3**  
**LATIN AMERICAN STUDIES CENTER Michigan State University**

# **MARKET PROCESSES IN LA PAZ, BOLIVIA**



**MARKETING IN DEVELOPING COMMUNITIES SERIES**

Library of Congress Catalog Card Number 70-627682

Distributed by the Latin American Studies Center,  
Michigan State University, East Lansing, Michigan  
48823

## FOREWORD

During the past three years, a Michigan State University research team has conducted studies of marketing systems in three Latin American communities. Field research operations were carried out in Puerto Rico in 1965-66 and in Bolivia and Northeast Brazil during 1966-67. This report summarizes the results of the Bolivian study. A monograph entitled *Market Processes in the Recife Area of Northeast Brazil* has been released by the Latin American Studies Center of Michigan State University. Another monograph, entitled *Food Marketing in the Economic Development of Puerto Rico*, is due to be released shortly.

This research program has been carried out under two inter-related contracts financed by the U.S. Agency for International Development. The first contract, A Comparative Study of Food Marketing Systems in Selected Latin American Countries (AID/TCR-786) was conducted for the Technical Cooperation and Research Branch of USAID, Washington. It has two interrelated goals: (1) to provide developing countries with information to assist in the design of improved food marketing systems, and (2) to formulate a more adequate conceptualization of the role of marketing in the development process. The second contract created the Latin American Market Planning Center (LAMP) at Michigan State University (AID/1a-364) which operated through the Latin American Bureau of AID, Washington. The LAMP Project expanded the scope of the research program to include the marketing of farm inputs and selected industrially produced consumer goods. It also expanded the efforts to develop systems models as an analytical technique to evaluate the economic consequences of alternative marketing reforms. Advisory activities to AID missions and foreign government agencies on market development programs have been a part of this second contract. The LAMP Center is presently engaged in field research dealing with market processes in the Cauca Valley of Colombia.

## ACKNOWLEDGEMENTS

This was a pioneering effort to describe and evaluate the exchange processes for consumer goods and foods in La Paz, Bolivia. Because of the nature of the research and the complexity of the market processes of any community, this study was appropriately the task of the Latin American Regional Bureau of AID, for the research ranges over subjects including agriculture, commerce, finance and business regulation, and thus has no neat position within the present administrative framework of AID or the Government of Bolivia.

The support given this project by Irving Tragen, Director of the AID Mission to Bolivia, David Lazar, Edmund Faison and others of the AID Mission in Bolivia made it possible for us to complete in less than a year's time a rather wide-ranging research task and to develop recommendations that permit a new direction in development planning.

Martin Stoller of the Latin American Bureau of AID has provided continued encouragement, interest, and help through the life of this project. We are also indebted to Dr. Walt W. Rostow, then Chairman of the Policy Committee of the United States Department of State, for his encouragement and support in the initiation of this project.

This investigation of marketing of food products in the city of La Paz as well as the zones that supply it is a product of Bolivians and Americans working together. The project was aided by the interest and support of persons in positions of responsibility within the Government of Bolivia. The Ministry of Economy and the Ministry of Agriculture sent to the project five outstanding persons who gave valuable contributions. In addition, the Census and Statistics Bureau in the Treasury Department cooperated by making available the data from a 1964-65 study of La Paz family incomes and expenditures, as well as aiding in extending this study to high income areas to make the sample fully representative of the entire city.

Various private groups and public agencies provided aid in the data collection phase of the research. Among these were the National Transit Service, the National Commission for Transportation Rationalization Survey, the National Railroad Enterprise, Community Development, the Peace Corps, various retailing and market

women's unions, and the Federation of Truckers. Through the cooperation of Dean Eduardo Nava Morales of the Faculty of Economics of the University of San Andrés, a staff of university students was developed for the survey research phase of the study.

Continued professional and administrative support from AID officials made it possible for us to carry forward this complex research. Particularly helpful were Milton Lobell, Rural Development Officer of AID/Bolivia; William Brister, Capital Development Officer, AID/Bolivia; and Dr. Edmund Faison, Marketing Coordinator, AID/Bolivia. In addition, helpful professional and technical assistance was received from Jack Morris, John Blumgart, Andy Wilson, George McCloskey, Sandy White and Monroe Rosner.

Since we were principally concerned with the private sector's involvement in and contribution to the food marketing system, the project worked closely with the Bolivian Productivity Center. The Center, under the direction of Lic. Raúl Vivado and Lic. Renato Clavijo, contributed both financially and professionally.

Funds made available by the Midwestern Universities Consortium for International Activities provided additional support for data analysis and the preparation of research material.

Our appreciation and thanks go to all private and government institutions not mentioned here, but without whose cooperation this study would certainly not have been possible. The following are the persons primarily responsible for the investigation.

Senior Research Personnel

Dr. John R. Wish  
Michigan State University  
Co-Director and Chief  
of Party - MSU

Lic. Alfredo Mercado A.  
Ministry of Economy  
Co-Director

Dr. Donald S. Henley  
Michigan State University

Dr. R. Vincent Farace  
Michigan State University

Research Associates

Lic. Marcos Paredes O.  
University of San Andrés  
Mr. David Lindley  
Michigan State University

Mr. Lloyd Jacobs  
AID/Bolivia  
Mr. Michael Moran  
Michigan State University

Research and Administrative Staff

Mrs. Carmela de Sainz  
Mr. Nilo Robles  
Mr. Mario Vizcarra  
Ministry of Agriculture  
Mr. René Verastegui  
Ministry of Agriculture

Mr. Gonzalo Rodríguez  
Mr. Federico Zeballos  
Mr. Roberto Vega  
Ministry of Agriculture  
Mr. Juan Catacora  
Ministry of Agriculture

Mr. Juan Nutkoviez	Mr. Adhemar Molina
Mr. Braulio Mendoza	Mr. Julio Benavides E.
Mr. Alberto Choque	Mr. Said Madde
Mr. Alejandro Madde	Mr. Gonzalo Zavaleta

An interdisciplinary team such as the one fielded to conduct this investigation required sustained teamwork. Thus, it is essential to express appreciation for the spirit of cooperation and coordinated leadership displayed by Lic. Alfredo Mercado and Dr. John R. Wish, who overcame many administrative and financial planning problems to complete the field research and prepare and release the field report on time and within the targets set for the project. Dr. Harold M. Riley, in his role as co-director of the Latin American food studies program, helped develop the general framework of research and analysis used in the project and provided specific support in Bolivia through a field visit and in review of the final manuscript. Dr. R. Vincent Farace provided valuable assistance in the design of the study, in field research, and in final analysis of the data. Dr. Donald S. Henley was involved in much of the field research in Bolivia, and took the major responsibility for the analysis and writing of this final report.

Charles C. Slater, Director\*  
Latin American Market Planning Center  
Michigan State University

July 1969

\*Dr. Slater is currently Professor of Business at  
the University of Colorado, Boulder, Colorado.

## TABLE OF CONTENTS

FOREWORD . . . . .	iii
ACKNOWLEDGEMENTS . . . . .	iv
TABLE OF CONTENTS . . . . .	vii
PHOTOGRAPHS. . . . .	ix

### Chapter

1	INTRODUCTION . . . . .	1
	Bolivia: An Overview. . . . .	2
	The Marketing System: An Overview . . . . .	7
	Market Processes in Developing Societies . . . . .	10
	The Plan of the Research . . . . .	19
2	THE LA PAZ CONSUMER. . . . .	23
	Overview of the La Paz Family. . . . .	25
	Income Distribution and General Spending Patterns . . . . .	26
	Summary. . . . .	39
3	CONSUMER SHOPPING BEHAVIOR AND PATTERNS. . . . .	41
	Characteristics of Food Retailer Clients . . . . .	43
	Retailer-Consumer Interfaces . . . . .	46
	Summary. . . . .	52
4	FOOD RETAILING IN LA PAZ . . . . .	54
	Personal Characteristics . . . . .	56
	Communication Characteristics. . . . .	63
	Economic Characteristics . . . . .	64
	Entrepreneurial Activity . . . . .	76
	Summary. . . . .	79
5	THE WHOLESALER SECTOR . . . . .	82
	Importers. . . . .	82
	Wholesaler-Retailers . . . . .	86
	Fruit and Vegetable Wholesalers. . . . .	95
	Beef Wholesaling . . . . .	108
	Summary. . . . .	109
6	TRUCK TRANSPORTATION SERVING LA PAZ. . . . .	112
	The Marketing System for Trucks. . . . .	113
	Personal Characteristics of Truckers . . . . .	115
	Truckers' Business Practices . . . . .	117
	Trucker Income and Expenditures. . . . .	127
	Route Selection Procedures and Perceived Problems . . . . .	128
	Summary. . . . .	130
7	CHARACTERISTICS AND MARKETING PRACTICES OF FARMERS AND COUNTRY ASSEMBLERS . . . . .	132
	Farmers. . . . .	133
	Country Assemblers . . . . .	150
	Summary. . . . .	158

8	RURAL FAIRS AND PEASANT CONSUMPTION. . . . .	160
	The Environment of Goods: Altiplano Fairs . . . . .	161
	The Media Environment of the Altiplano . . . . .	173
	A Comparison of Two Rural Villages . . . . .	175
	Summary. . . . .	188
9	AN EVALUATION OF MARKET SYSTEM PERFORMANCE . . . . .	191
	System Performance at the Consumer Level . . . . .	191
	The Flow of Products Through the Marketing Channel. . . . .	198
	Opportunities for Urban Marketing Reform . . . . .	204
	Trucking and Assembly Operations . . . . .	216
	Rural Responsiveness to Marketing Reforms. . . . .	218
10	CONCLUSIONS AND RECOMMENDATIONS. . . . .	225
	Urban Marketing Reforms. . . . .	226
	Marketing Reforms in Assembly and Production . . . . .	234
	Government Reforms to Foster Market Development. . . . .	241



A retailer of perishables making a sale to a housewife in one of La Paz's major public markets.



Street vendors display their wares in La Concha market, Cochabamba's principal open-air retail market.



Public market stalls are a major outlet for beef, pork, lamb, and fish in La Paz.



Small-scale retailing of housewares in La Paz.



An outdoor market area in La Paz devoted to sales of kitchen utensils.



A traditional market woman surrounded by her inventory of yard goods and finished goods.



Fresh fruits and vegetables are loaded at a rural assembly point for shipment to La Paz.



Indian women selling derbies in the square of a small Altiplano village near La Paz.

## CHAPTER 1

### INTRODUCTION

Bolivia has undergone profound social and political upheaval since the revolution of 1952, with significant effects on the economic life of the country. For example, the elimination of the *hacienda* system has dramatically altered the peasant's role in the production and marketing of food products. No specific research has been undertaken in at least a decade to delineate the marketing system linking farm and city. Although there are many views as to the functioning of the rural-urban marketing linkage, many of these are hopelessly outdated and few, if any, are based on systematic research. Since a number of programs have either been instituted or are under consideration to increase Bolivia's production of basic foodstuffs, it seemed wise to analyze the marketing practices linking farm and city and to consider their impact on production-increasing programs.

A lack of hard information on the rural marketing system also had its counterpart in the urban center of La Paz. The wholesaling of fruits, vegetables and grains is centered in a sprawling three-market complex near the center of the city. Neither the economic conditions and practices of wholesalers nor the characteristics of their customers was known. The thousands of small operators who retail fruits and vegetables in the public markets and on the streets were also largely unknown quantities to the public officials charged with developing and implementing programs to control the retailing of food. In addition to the urban marketing system for perishable, non-processed agricultural products, there is a system for the wholesaling and retailing of processed goods, e.g., canned milk, pasta, oil and lard. Very little information was available on the workings of this part of the food distribution system.

Given this general lack of information, a Michigan State University team was asked to describe and analyze the food production-marketing system and to make suggestions for programmed changes. Before moving into discussion and analysis of the system, however, it is useful to describe Bolivia and to set forth the role of market processes in developing societies.

## Bolivia: An Overview

For readers not familiar with Bolivia, this brief section sets forth some of the distinguishing features of the country.<sup>1</sup>

### Physical Setting

Bolivia occupies the heartland of South America, having common boundaries with Brazil, Argentina, Paraguay, Chile and Peru. Its area of 411,127 square miles is about equal to the combined areas of France, Spain and Portugal. The country can be divided into three regions, each of which shows marked geographic differences. (See Figure 1.1 for a map of the La Paz foodshed.)

The high plains, which consist of a plateau situated at 10,000 to 14,000 feet above sea level, comprise about 16% of the land area of the country, yet contain approximately 70% of its population. The climate is dry and cold at night, with occasional frosts.

The valleys, which comprise about 14% of the total area of the country, generally start at the edge of the high plains. The drop from about 12,000 feet to about 5,000 feet is severe, and the area consists of hilly and very steep uplands. Rainfall is quite abundant and the climate is generally subtropical (about 70°F) with a humid atmosphere.

The third major region is the eastern lowlands, which occupy about 70% of the area of Bolivia. These large plains run from the Brazilian border in the north to the Paraguayan and Argentinian frontiers in the south. Although they constitute the largest area of Bolivia and provide good possibilities for the development of agriculture, they are thinly populated compared to the valleys and high plains.

---

<sup>1</sup>For those interested in a more thorough general description of Bolivia, the following sources are recommended:

Robert J. Alexander, *The Bolivian National Revolution* (New Brunswick, New Jersey: Rutgers University Press, 1958).

*Area Handbook for Bolivia* (Washington, D.C.: Special Operations Research Office, The American University, 1963).

Charles W. Arnade, *The History of Bolivia* (Gainesville: University of Florida Press, 1958).

Olen Leonard, *Bolivia: Land and People* (Washington, D.C.: Scarecrow Press, 1952).

Harold Osborne, *Bolivia, Land Divided* (London: Oxford University Press, Royal Institute of International Affairs, 1964).

Cornelius H. Zondag, *The Bolivian Economy, 1952-65* (New York: Frederick A. Praeger, 1966).

Figure 1.1 La Paz Foodshed



This vast area of the eastern lowlands can be subdivided into three regions: the Gran Chaco, located in the southeastern part of the eastern plains; Santa Cruz, which lies north of the Gran Chaco and is situated at an elevation of 1,000 to 1,500 feet above sea level; and the tropical plains of the Beni and Mamore Rivers, which cover practically all of the northern part of Bolivia. Here the elevation ranges from 500 to 1,500 feet above sea level. Much of the land is fairly flat and wet during at least part of the year, since the rivers regularly overflow their banks, covering large areas with floods which drain off slowly. The mean rainfall is high and the climate is hot, with tropical forests and dense vegetation interspersed with more open savannah formations.

#### Population

According to the projections of the Economic Commission for Latin America, the total population in Bolivia in 1966 was 4.2 million, consisting mainly of Quechua and Aymará Indians. The Quechua Indians are generally located in the valleys, while the Aymará population is concentrated in the northern high plains areas. These two groups speak different languages and many of them speak no Spanish at all. Apart from the Indian groups, there is a relatively large group of people with mixed blood, many of whom speak Spanish and are located in the Santa Cruz region. There is also a small group of white population consisting of the old Spanish colonial stock or more recent immigrants from Europe.

There are no reliable figures on the ethnic composition of the population of Bolivia. The 1950 census, however, together with later revisions, estimates the ethnic distribution approximately as follows: Indian (65%), European (5 to 15%), mixed or *cholo* (20 to 30%). There are approximately one million Quechua-speaking Indians, 660,000 Aymará-speaking Indians, and 150,000 speakers of other Indian dialects. Population density country-wide is approximately 8.5 persons per square mile, ranging from less than one per square mile in the southern Altiplano and plains to 25 per square mile in the more heavily populated northern Altiplano, Yungas and valleys.

#### Political History

Prior to the Spanish conquest in the mid-sixteenth century, the Bolivian highlands were a part of the Incan Empire. Follow-

ing the conquest, the country's main cities of Sucre, Potosí, La Paz and Cochabamba were established. The country's mineral wealth, especially silver, was a major source of income for the Spanish Empire.

With the breakup of the Spanish Empire in the early 1800s, Bolivia achieved its independence in 1825 under the leadership of Simón Bolívar, who was its first president. A short 15-year period of political stability ensued, but this was followed by years of almost complete anarchy. Prior to the revolution of 1952, Bolivia had 60 presidents in its 125 years of independence. Sixty armed revolts took place during the nineteenth century. No legally elected president served out his term during the 25 years between 1925 and 1950.

The debilitating effect of political turmoil on social and economic progress was multiplied in the late 1800s and early 1900s by a series of disastrous wars. In 1879 a war between Bolivia and Chile over rich nitrate deposits cost Bolivia a major land area and the port of Antofagasto in the Pacific, leaving the country without a seacoast. To this day, the return of Antofagasto remains a major aim of Bolivian foreign policy.

At the turn of the 19th century, another losing war--this time with Brazil--resulted in the loss of the territory of Acre in northern Bolivia, a region once rich in rubber.

It remained for the Chaco War with Paraguay in 1932 to start the downfall of the then ruling class. Not only did Bolivia lose a vast amount of territory, but it had spent some \$60 million and 50,000 lives in a woefully corrupt and mismanaged war effort. Many observers claim that the seeds of the 1952 revolution were sown in the bitter ashes of the Chaco War.

In 1941 the National Revolutionary Movement (MNR) was formed, mainly as a result of increasing dissatisfaction with the ruling oligarchy. The MNR came to power in 1943 through a military coup. During these early years, the MNR contained a number of strongly fascist elements, but these were purged and the party moved toward a Marxist philosophy.

The MNR was overthrown in 1946. The civilian and military governments which followed attempted to return to the pre-1943 status quo. Taking advantage of the dissatisfaction of the politically cohesive miners, the MNR spearheaded a violent revolution in 1952. The 1952 revolution marks a significant milestone in the country's social structure. Without doubt, a series of measures such as land reform, nationalization of the three major

mining companies, and the dissolving and reorganizing of the army under control of the MNR effectively destroyed the power of the oligarchy and established the political power of the miners and *campesinos*. Together with the Mexican revolution in 1910 and the Cuban upheaval in 1959, the Bolivian revolution of 1952 is the only true social revolution in Latin America since the overthrow of Spanish hegemony.

The pattern of political evolution and revolution in Bolivia is paralleled by social change. Prior to the Spanish conquest, the Bolivian peasant was under the complete hegemony of the Inca, with a vast administrative structure providing for his needs from cradle to grave. The Spaniards, following their assumption of power, maintained the status quo, impressing the Indian into a somewhat enlightened slavery.

Following independence in 1825, the new ruling class substituted a feudal system for the Spanish system. While nominally free, the Indian was in fact tied to his *hacienda* under a complete set of regulations governing his responsibilities to the *hacienda* owner both in the rural areas and in the *hacendero's* city home. Severely limited with respect to the acreage he could plant and the number of animals he could keep, the Indian was further restricted to marketing his output through the *hacienda*.

After the revolution of 1952, the Indian was freed from the *hacienda* system. Over the ensuing 15 years he was gradually to enter into the market economy as both a producer and marketer of cash crops and as a consumer of manufactured goods.

#### The Structure of the Economy<sup>2</sup>

Following the accession to power of the MNR in 1952, the country was gripped in a runaway inflation. Starting from a base of 100 in 1952, the cost of living index rose to 4881 in 1957 and the free market dollar quotation rose to 3426. Inflation was slowed considerably after 1957, with the cost of living increasing slightly over 60% between 1958 and 1964.

Gross domestic product dropped after the revolution, falling 12% between 1952 and 1957; it was not until 1962 that the country again reached the 1952 gross domestic product level. On a per capita basis, gross domestic product dropped precipitously following the revolution in 1952 and had not recovered as of 1964.

---

<sup>2</sup>This section is based on Zondag, *op. cit.*, pp. 18-19, 56, and 201-213.

The structure of the economy is relatively simple. Agriculture accounted for 33% of gross domestic product in 1964, absorbing some 70% of the work force. Interestingly, agriculture's share of gross domestic product had risen from 29% in 1952. Part of this increase is attributed to the substantial agricultural investments made in the Santa Cruz area in the past decade.

Mining's importance in the total economy has declined from 15% of gross domestic product in 1952 to 10% in 1964. However, mining remains the major foreign exchange earner, as 95% of the country's exports consist of minerals. Tin alone accounts for 67% of all exports.

Industry continues to be only a small sector in the economy, and has not changed its relative position--12% of gross domestic product--since 1952. Commerce and banking also account for 12% of gross domestic product, and this proportion has not changed since 1952.

#### The Marketing System: An Overview

The food production-marketing system serving La Paz is comprised of a multitude of small-scale units, starting with the rural farmer and ending with the urban retailer. A wide assortment of fruits, vegetables, and grains reaches the city, thanks to the varied climatic conditions of Bolivia.

Temperate zone fruits and vegetables are supplied principally from the Rio Abajo and Cochabamba area, with the former providing approximately twice as much tonnage as the latter. The Rio Abajo area, which is close to La Paz, has a warm climate and abundant water for irrigation, and can be cropped two to three times per year. The Cochabamba valley lies east of La Paz at an altitude of 8000 feet, and is about one day's truck journey from La Paz. Its producing areas supply both La Paz and Cochabamba with fresh fruits and vegetables. The valley is also the primary source of dairy products for La Paz. Farmers in the valley usually market their produce through a system of regularly scheduled weekly rural fairs, to either wholesalers from La Paz or Cochabamba or to country assemblers who link the farmer and the urban marketer. In contrast, farmers in the Rio Abajo area generally sell direct in La Paz to wholesaler, retailer, or final consumer.

The Altiplano area is a major source of potatoes, as well as being the principal secondary source of beef. Farmers, usually Aymará Indians, possess very small landholdings and utilize tradi-

tional agricultural methods. In most places, potato yields are low due to such factors as intermittent freezing, poor soil fertility, lack of rain, poor seed varieties, and lack of fertilizers and insecticides. A number of regularly scheduled rural fairs provide ready market outlets for Altiplano producers. In addition, it is not uncommon for farmers to sell direct in La Paz.

Tropical fruits, primarily citrus, are supplied from the Yungas areas northeast of La Paz. These areas, which are at altitudes of 500 to 1,000 feet, have been recently colonized. Farmers in the Yungas generally sell their output at roadside assembly points, from which the produce is trucked direct to La Paz.

La Paz's principal source of beef is the lowlands of the Beni. A few large *estancias* and a multitude of small ranchers operate in the region. All beef is slaughtered in the Beni at packing houses near airstrips, from which the beef is flown into La Paz in World War II vintage bombers and some equally aged transports. The slaughtering and transport operations are of a very primitive nature.

Perhaps the best agricultural land in Bolivia is to be found in the Santa Cruz area of the eastern lowlands. This area has a subtropical climate with an average rainfall of about 50 inches and a mean temperature of about 70°F. The area supplies approximately 90% of the rice consumed in La Paz and is a major sugar producing area. In addition, rapid strides have been made in recent years in the cultivation of corn and cotton. Some rice farmers sell at the farm, but most sell at one of the mills in the area. After milling, the rice is marketed in La Paz by traders who sell to wholesalers.

As suggested by the above brief overview, rural fairs play a major role in the distribution system for fruits and vegetables. Both country assemblers and wholesalers purchase from farmers. Contrary to traditional wisdom, there is rarely a family or godparent relationship between the farmer and intermediaries in the system. Bargaining relationships are generally at arm's length and on a cash basis.

The wholesaling of fruits and vegetables in La Paz is concentrated in the sprawling three-market complex of Rodriguez, Uruguay and Buenos Aires, with Rodriguez being the primary wholesale center. Some geographic concentration exists for the wholesaling of potatoes and citrus fruits, with storage and selling areas, known as *tamboas*, providing a set place for market trans-

actions. The wholesaling of other fruits and vegetables is virtually impossible to pinpoint with respect to both location and market participants. Farmers riding into La Paz with their produce in one of the many trucks connecting the rural producing areas with the city may sell to wholesalers, retailers, or even to the final consumer. Not only is the level in the distribution channel at which the transaction is taking place difficult to determine, but there is no set location in the market complex where wholesale or retail transactions are centered. The wholesale complex for fruits and vegetables is, then, a kaleidoscope of many small-scale farmers, wholesalers, and retailers, generally of Indian origin, female, and dressed in colorful skirts, shawls, and Borsalino derbies.

Fruit and vegetable retailing tends to be more organized than wholesaling. There are a number of public, roofed markets scattered throughout the city. Retailers, principally native women, operate stalls which are approximately two meters square. As might be expected, sales volumes are small and the operations provide only a bare living wage. Fruits and vegetables are also sold by street vendors, largely Indian and female. Street vendors are usually found on the streets outside the public markets.

Beef wholesaling is handled by some 12 outlets which have refrigeration units and an unknown number of small-scale wholesalers who operate only during the winter months when refrigeration is not required. These wholesalers service two main classes of retailers--public market stalls and *tienda* operations. The public market stalls appear to be the major outlet for beef, with the *tiendas* catering mainly to upper-middle and upper income families.

Wholesaling of dry goods and grocery items takes place through two distinct types of operations. First, there are a handful of large importers who handle industrial and consumer goods as well as food items. These importers sell to the larger retailers in the city and to a class of customer which can best be described as wholesaler-retailers. The wholesaler-retailers, of which there are about 40, act as a link to the multitude of small *tiendas* in the city. In addition, they often sell at retail to consumers purchasing in fairly large quantity. Wholesaler-retailers are concentrated on two streets on the edge of the Rodriguez market.

Retailing of dry goods and grocery items is accomplished principally through small retail outlets known as *tiendas*. These

*tiendas* are usually one-room, street-level establishments located in a house or garage. Run mostly by women, these outlets generate small sales volumes and profits; their usual purpose is to supplement the family income. Some public market stalls handle dry goods and grocery items.

#### Market Processes in Developing Societies

The production and marketing of foodstuffs in the underdeveloped areas of the world is a major element in the economic system. Cities in the underdeveloped countries are growing at explosive rates, putting increasingly heavy demands on the systems which produce and distribute food to the urban areas. While the problem is often perceived as one of supply expansion, there is also a need to consider the degree to which the cost of food inhibits consumption of manufactured goods. That is, the lower half of the income group in most urban areas often spend as much as two-thirds of their family budget on food. As a result, the market for manufactured goods for a substantial portion of the population is severely restricted.

The food production-marketing system is faced with a dual task--to increase the supply of food to urban areas and, at the same time, reduce the cost. Unfortunately, the urban areas are all too often serviced by traditional and small-scale marketing units which utilize only the most labor-intensive technologies and are incapable of vertically coordinating the system to induce supply expansion at reduced cost. Farmers and country assemblers are also small scale and generally incapable of or unwilling to utilize low-cost technology, which often requires increased volume and reasonably assured sales to be profitable.

Early development efforts to increase supply and reduce costs have virtually all concentrated on the producing sector; rarely have programs taken into account the total marketing system for foodstuffs, including assembling, physical distribution, wholesaling and retailing, with a concomitant set of government rules and regulations designed to enhance a smooth functioning of the production-marketing system as a whole.

#### Marketing's Role in Development

Economists oriented to the workings of the perfectly competitive market model have tended to attribute a passive role to "marketing" as part of the economic development process. The relative

neglect of marketing by economic planners was noted by Holton in the early 1950s. He pointed out the incentive role of marketing and suggested that if market channels were less tortuous and less costly to navigate, more goods might flow through them.<sup>3</sup>

Collins and Holton have questioned the validity of assuming that marketing firms will automatically spring up in response to price incentives and provide effective linkage between producers and the ultimate consumer.<sup>4</sup> These authors contend that distribution can play an active role in economic growth by changing demand and cost functions in both agriculture and manufacturing in a way favorable to expansion. They advance several reasons why they believe that the distribution sector may not respond to marketing incentives. These are summarized below:

1. The absence of grading systems, standard weights and measures, and an adequate legal code covering contract rights and obligations complicate negotiations between buyers and sellers and limit the scale attainable by a firm with a given amount of managerial resources.
2. The price mechanism alone may not induce the individual firm to establish certain auxiliary services, such as the provision of market information, because the benefits diffuse among the entire industry. Hence, the profit account of the initiating firm may not accurately reflect the gains from the service.
3. Private entrepreneurs may be blocked from adopting significant innovations because either the initial investment required is too large relative to their credit sources, or they may prefer the status quo to the uncertainties of innovation.
4. A shortage of managerial resources may cause successful merchants to invest not in changes in distribution, but in real estate, foreign securities or other investment. Not only do these investments make more limited demands on their managerial time, but also risks are diversified.
5. Potential innovators may be discouraged because imitators may enter the industry and quickly beat down margins before the innovator can recoup his initial investments or outlays. In addition, the innovator may have control over only a limited portion of the distribution channel, while, for his innovation to be effective, it must be coordinated with changes in other stages in the marketing process.

---

<sup>3</sup>Richard Holton, "Market Structure in Economic Development," *Quarterly Journal of Economics*, Vol. 67 (August 1963), pp. 334-61.

<sup>4</sup>Norman R. Collins and Richard H. Holton, "Programming Changes in Marketing in Planned Economic Development," *Kyklos*, Vol. 16 (January 1963), pp. 123-134.

6. Complicated licensing procedures and closed socio-economic groups collectively resist competitive intrusion by firms such as supermarkets which represent a significant and threatening innovation.
7. Automatic transformation of the marketing system may be impeded if distribution enjoys greater economies of scale than production. In this event, the proper kind of distributive system may not develop until the new pattern of production has already been established. In turn, the establishment of a new production pattern may depend upon the existence of the right kind of distributive sector.<sup>5</sup>

Collins and Holton further suggest that development plans which do give attention to agricultural marketing problems too often emphasize simple cost reduction devices or call for improved physical distribution facilities. Such development plans do not seem to fully appreciate the degree to which externalities affect the market process. Abbott has also detailed the importance of greater marketing inputs into agricultural development planning.<sup>6</sup>

Walt Rostow has put forth the view that economic growth can be greatly enhanced by increased integration of the urban and rural areas of developing countries.<sup>7</sup> He suggests a strategy for "national market integration" which has four interrelated elements, as follows:

1. A buildup of agricultural productivity,
2. A revolution in the marketing of agricultural products,
3. A shift in industrial output toward simple agricultural inputs and cheap consumer goods for the mass market, and
4. A revolution in marketing methods for manufactured goods, especially in the rural areas.

In order to further develop a strategy for improving the exchange process as a major avenue for fostering development, it is necessary to examine the special relationships between internal market processes and the development dilemma.

---

<sup>5</sup>*Ibid.*, pp. 123-34.

<sup>6</sup>J.C. Abbott, "Marketing and Area Development Studies," *Toward Scientific Marketing*, ed. Stephen A. Greyser (Chicago: American Marketing Association, 1964).

<sup>7</sup>See his, "The Concept of the National Market and Its Economic Growth Implications," in *Marketing and Economic Development*, ed. Peter D. Bennet (Chicago: American Marketing Association, 1965), pp. 11-21.

### The Exchange Process and the Development Dilemma

It has been said that the development process consists of increasing the income of a region by utilizing the surplus agricultural product to create specialized capital-intensive tools, primarily for use in the urban sector. Owen stated the problem in his interesting paper, "The Double Development Squeeze on Agriculture":

"How can peasants be encouraged to produce a cumulative surplus of food and fibers over and above their own consumption, and how can the surplus largely be channeled to investment activities in the non-farm sector without requiring in exchange an equivalent transfer of productive values to the farm sector?"<sup>8</sup>

In order to accomplish this development goal, Owen concludes:

"In the developing countries the emphasis clearly should be placed, not on immediate equity between farm and non-farm incomes, but on the maximization of the growth in agriculture and a maximum immediate diversion of the resulting increased increments to the protection and support of the emerging non-farm sector and of the generally differentiated and interdependent features of a more highly developed economy. (This) has not been described primarily to show how agriculture tends to be an unduly exploited sector in economically advanced countries, but rather to identify a tested and relatively painless method whereby the inevitable 'painful' or sacrificial process of domestic capital accumulation can be set in self-sustaining motion and progressively accelerated in the traditional agrarian economy. But first must come the will and wit to effect those structural reforms which are necessary in most underdeveloped countries to condition the application of this method of accumulation."<sup>9</sup>

Marketing processes in a developing community are one of the institutional groupings through which this transformation may occur. Thus, it is appropriate to set out how we are considering market channel coordination and its impact on development. Development can be seen as increasing the level of income within a community and its related foodshed, at the same time equalizing the distribution of that income within the community to expand the consumption of the lower income elements of the society. Development therefore has a twin set of goals. There is an inherent conflict between equalizing distribution and increasing the level of income; the latter requires investment to achieve changes in tech-

---

<sup>8</sup>Wynn F. Owen, "The Double Development Squeeze on Agriculture," *American Economic Review*, Vol. LVI (March 1966), pp. 121-135.

<sup>9</sup>*Ibid.*, p. 134.

nology usually associated with increases in the level of real income. Increases in investment imply an increase in either savings or outside investment, and it is important to appreciate that for a self-reinforcing, dynamic growth process, it is usually necessary for a limited amount of outside investment to trigger internal savings and hence, investment.

It has been universally observed that savings are indulged in by the wealthier members of the community. Thus, to increase the level of savings in the community, it is usually necessary to increase the concentration of income. Therefore, the second goal of increasing the consumption potential of low income people by redistributing income is in contradiction to the goal of increasing the level of income through increased savings. A redistribution of income to the lower income groups in a society which has a very low propensity to save results in an increase in consumption but a decrease in savings.

This dilemma or conflict between goals is fundamental in the development problem. As savings increase, an increase in the concentration of income is usually required in order for the average propensity to save of a society to rise. Therefore, an increase in concentration conflicts with the goal of income redistribution if internal savings are to be a primary source of capital. External capital can rarely be sufficient in quantity to achieve the needed levels of capital investment. To achieve the order of increase in real income associated with the goals of development, concentration in income distribution is a likely concomitant to increases in real income.

The political art of development consists of balancing capacity-expanding, income-generating activities with demand-expanding, income-redistributing or "unconcentrating" activities. The issue boils down to the efficiency with which savings get translated into income changes through the financial markets of the less developed communities. It is precisely because the financial markets in less developed communities are usually inefficient in translating private savings into effective income-expanding investment that improvement in the efficiencies with which the production-marketing system operates may be crucial in improving the reinvestment process.

#### A Strategy for Market Development

A preliminary diagnosis of market coordination problems in less developed countries suggests that a low productivity-low income equilibrium exists. To increase productivity and raise

incomes will probably require major efforts to introduce new technologies and new institutions that would start a series of adjustments toward higher output and a more productive system. An overall strategy that includes four entry points into the system is suggested by the conceptual approach developed in this project. One entry point is the urban food distribution system, a second is the rural markets for assembly of agricultural products, a third is the distribution of agricultural inputs, and a fourth is the urban industrial system.

Figure 1.2 is a conceptual illustration of how a series of interrelated marketing reforms can stimulate economic growth. For example, the initial entry point may be a program to reduce food marketing costs through improvements in the urban food distribution system with complementary reforms in the rural assembly markets for locally produced foodstuffs. The dynamic adjustments which might result from this marketing reform program are described below.

The traditional small-scale and poorly coordinated urban food distribution system could be transformed into a more efficient system through loans and technical assistance to private operators, accompanied by an appropriate consumer education program. A suggested strategy is to begin by fostering the establishment of a few large volume, low margin supermarkets capable of reducing retail prices on staple foods through more efficient procurement and handling procedures. These larger retail outlets can also place additional downward pressure on prices of staple foods by following a mixed-margin pricing policy of low margins on staples and higher margins for less essential food and non-food items. Such a differential pricing policy favors the low income families who must limit their food expenditures almost entirely to low-cost staples.

After the initial price-lowering impact of the large retailers, reductions in retail food prices can be extended to a larger segment of the urban market through programs to improve the efficiency of traditional food marketing firms. The effect of the larger outlets will be to create a competitive reaction among smaller store operators and wholesalers, who will then respond more favorably to programs to assist them in improving their methods of operation.

Since food expenditures usually make up more than one-half of total family living expenditures in urban areas of less developed countries, a reduction in food prices can have a significant effect on "real family income." In such a situation, a 10% reduction in food prices could increase total purchasing power (real income) by

Figure 1.2 A Strategy for Reforming Marketing Processes

A SEQUENCE OF CHANGES IN THE MARKETING PROCESS	PRIMING ACTIONS SEEMINGLY NEEDED TO FOSTER DEVELOPMENT	POINTS OF ENTRY
<p><b>INCREASE URBAN INCOMES</b></p> <p>Reduce marketing costs for locally produced food products</p> <p>Lower food prices</p> <p>Increased demand for food</p> <p>Increased food production</p> <p>Increased rural incomes</p> <p>Increased demand for farm inputs from urban areas</p> <p>Increased rural demand for urban produced consumption goods</p>	<p>Capital and technical assistance to urban marketers to foster:</p> <ol style="list-style-type: none"> <li>1. Discount supermarkets</li> <li>2. Improvement in efficiency of traditional food marketing systems</li> <li>3. Employment opportunities for urban marketers displaced by above reforms.</li> </ol> <p>Foster backward vertical coordination of food marketing</p> <p>Capital and technical assistance to rural assemblers &amp; transporters</p> <p>Improve public storage, roads, exchange rules, grades, etc.</p> <p>Improved market information systems</p> <p>Price stabilization programs</p> <p>Supervised credit programs</p> <p>Increased extension of technical information on agricultural production</p> <p>Improved farm input distribution</p> <p>Improved rural consumption goods marketing</p>	<p>Urban food distribution system</p> <p>Rural assembly market systems</p> <p>Rural distribution system for farm inputs and consumer goods</p> <p>Industrial sector</p>

5% or more. The result would be an increase in "effective demand" for both food and non-food products.

One effect of this program, which reduced prices of staple foods, would be to shift the relative flow of income toward low income families who have higher propensities to consume and low propensities to save. What then is the effect on investment? It seems likely that the increased spending by low income families would generate rising levels of demand and greater internal investment among firms whose profit accounts are favorably affected.

In the short run, the income effects of reduced retail food prices would bid up the wholesale prices of available food and non-food products.<sup>10</sup> The increased demand for food would then be reflected back through rural assembly markets to farmers who would be stimulated to expand output. This would tend to increase farm incomes and expand rural demand for industrially produced farm inputs (fertilizer, insecticides, etc.), and consumer goods (clothes, medicines, household equipment, etc.). The increased rural demand for industrial products would add to the increased demand by urban consumers, who would also seek to purchase manufactured items with part of their increased real income resulting from lower food prices.

In the longer run, the increased use of modern, industrially produced agricultural inputs and related technical advances in farm production practices would lead to expanded output, lower production costs, and reduced product prices. Similarly, adjustments in industry would tend toward the adoption of capital-intensive technologies, rising levels of wage payments, rapidly expanding output and an increased variety of products. During this development process, a smaller proportion of the population would be needed in agricultural production, thus resulting in heavy migration from the rural areas to the cities where they would seek employment. This points out the need for a development strategy which emphasizes a balanced approach with careful attention to stimulating a dynamic interaction between the rural and urban areas. The strategy is to break the low-level equilibrium condition and create a chain reaction of economic adjustments which lead toward the desired development goals.

---

<sup>10</sup> Programs to aid in the production and handling of food-stuffs (e.g., credit expansion, price supports, storage and handling facilities) may be needed to enhance supply expansion and should be dovetailed with urban marketing reform programs.

The particular strategy described above emphasizes initial improvements in the assembly and distribution system for basic, locally produced food products. The principal impact was to increase effective demand by reducing food prices, especially to the lower income families.

A case can also be made for market reform programs which are initially directed toward improvements in the rural assembly markets. Improvements in physical facilities for transporting, storing and processing agricultural products can reduce food marketing costs and stimulate economic growth. Improved information systems and government price stabilization programs may also reduce uncertainty and lower production and distribution costs. These kinds of market improvements would stimulate resource use efficiency in the agricultural production-distribution system which will ultimately be passed on to consumers through lower food prices. In certain cases, reform programs in the rural areas may be necessary before programs can be implemented in the urban areas.

In national or regional economies where substantial quantities of food are imported, it may also be possible to reduce food prices and increase economic activity by the introduction of new agricultural technologies. A desirable sequence of changes could be triggered by marketing reforms which increase the availability and reduce the costs of industrially produced farm inputs such as fertilizer, machinery and insecticides. Increased demand for these products would, in turn, increase employment in the industrial production and distribution system, thus expanding demand for food and other products. A word of caution should be noted, however. Unless there exists the possibility for local production to displace food imports or to initiate exports, a program which emphasizes a technological revolution in agricultural production may quickly lead to sharp declines in product prices as increased output meets the relatively inelastic consumer demand schedules.

A fourth entry point for initiating marketing reforms is through an industrial development program oriented toward the production and distribution of low-priced consumer goods and simple agricultural inputs. However, the development achievements might again be severely limited by the constraints of consumer purchasing power.

The above arguments lead to a tentative conclusion that a comprehensive and coordinated market reform program is required to stimulate effective interaction between rural and urban areas.

The interrelationships of the agricultural and industrial sectors emphasizes the need for improved market linkages that will facilitate an upward spiral of economic activity. Economic development can thus be enhanced by marketing reforms which significantly reduce the risks and uncertainties confronting market participants, thereby increasing their willingness to expand output, to adopt more productive technologies, and to submit to regulations or institutional changes which increase economic opportunities.

The transfer of resources as a result of changes in marketing institutions is neither automatic nor necessarily trouble-free. Of great importance is the fact that the food marketing systems of underdeveloped areas are usually very labor-intensive, and most reforms reduce the proportion of labor needed to carry forward the marketing tasks. Usually, the market people have few alternative occupational opportunities, and they are a vocal, urban group. Thus, marketing reforms may not automatically receive a welcome from those now responsible for the traditional marketing system. It is, therefore, important to know: (1) the extent of increased consumption due to income effects, (2) the amount of discretionary income diverted to non-food consumption expenditures as a result of the lower-priced but more plentiful foods, and (3) the extent and timing of displacement and unemployment caused by the marketing institutional reforms. Some of these market reforms can be expected to displace labor, even though gross product changes may more than offset the unemployment. Therefore, coordinated labor-absorbing activities may be needed as reforms are implemented.

A suggested approach to market development planning is to conduct comprehensive diagnostic studies of the marketing system in specified geographic areas. These studies provide needed descriptions of the existing marketing system and assist in identifying the economic and social barriers to modernization. Systematic surveys of market participants can provide useful information on economic organization, communication activities, and respondent attitudes toward their environmental conditions and possible changes in marketing institutions. These studies can provide the information base from which institutional reforms and the judicious injection of capital along with technical assistance can be focused upon the market barriers to the achievement of development goals.

#### The Plan of the Research

The research reported here involved local study of the internal market processes of the La Paz urban food market and selected

rural consumer markets in the foodshed serving La Paz. The purpose of the research was to develop recommendations concerning marketing reforms which would foster internal market integration. The following areas were included in the research:

1. Consumers Living in the La Paz Market. Initially it was planned to utilize two sources of data on La Paz consumers, i.e., the Productivity Center's consumer study conducted during late 1966 and the Ministerio de Hacienda's study of consumer income and expenditures. It was necessary to supplement the Ministerio's study with an additional sample of high income families to make the survey representative of La Paz. Unfortunately, the Productivity Center's study was not ready for inclusion in this report.

2. The Food Retailing and Wholesaling Institutions of La Paz. In this phase, a series of cross-sectional studies were made of various institutions in the market process, with emphasis on isolating institutional characteristics. The work developed information regarding product, service and communication flows between institutions, as well as information regarding attitudes about other participants in the market process.

Three classes of food retailers were considered--street merchants, market women, and *tiendas*. Since detailed information regarding type and location of food retail establishments was not available, the study team undertook a census of these establishments in La Paz. The data gathered in the census included location by zone, street and address (or market), type of outlet, and type of product sold. Although the principal purpose of the census was to provide a sampling framework for retailer surveys, a number of useful by-products emerged, including a basis for determining the number of food categories handled by types of retailers.

Using the census data, surveys were made of the three types of retailers. A number of unstructured interviews with selected establishments were also conducted to detail specifically some of the areas to be included in the questionnaires. A final questionnaire was then developed, pre-tested and put into the field. Approximately 350 retailers were studied using structured interviews.

In addition to the structured interview phase described above, an in-depth retailer diary study of 48 food establishments was conducted. Preliminary information gathering suggested that detailed data regarding product flow and social relationships between retailer and consumer could not be obtained by structured questionnaires. The researchers spent the entire day in a store during each observation period, noting all transactions and social relationships.

Wholesalers of four distinct groups of products were studied--dry goods, potatoes, bananas, and fresh

vegetables. Each group was administered a structured interview lasting approximately one hour. Virtually all wholesalers of dry goods were included in the final sample of 39. A probability sample of potato and banana wholesalers was taken, utilizing census material developed by the study group. Approximately 30 wholesalers in each group were surveyed. Finally, a purposive sample of some 50 vegetable wholesalers was undertaken.

In addition to the above interviews, a series of in-depth, unstructured interviews was conducted with five of the principal importers of foods. These wholesalers dealt principally in lard, vegetable oil, canned goods, and rice. Questions focused on marketing practices as they applied to food distribution in La Paz.

3. Food Transport System. Trucking is the principal method of transporting food products from the rural foodshed areas to La Paz. A structured questionnaire was utilized to determine truckers' personal characteristics, business practices and costs. With respect to business practices, we considered the extent to which truckers operate as buyers and sellers of merchandise in addition to their primary task of hauling people and goods. A purposive sample was conducted in each of the major food-producing areas, with the proportion of truckers interviewed in each area weighted on the basis of the importance of that area in total food supplied to the city.

In addition to the structured interviews, in-depth discussions were held with various truck unions and cooperatives.

4. Food Producers and Country Assemblers. Farmers and country assemblers were interviewed in each of the major producing areas serving La Paz. Since no census data were available, purposive samples were used. Each respondent was administered an hour-long structured questionnaire dealing with demographic characteristics, communication channels for general and marketing information, and production and marketing practices. Specific questions regarding the marketing of potatoes, rice, beef, bananas, and selected green vegetables were included in the structured questionnaire.

5. Rural Fairs and Peasant Consumption. An important part of the national market concept is the counterflow of manufactured goods--both farm input and consumption--to rural areas. To help shed light on this area, studies were made of the availability of consumer and farm input goods on the Altiplano, as well as communications media. Five rural fairs were investigated with respect to the availability and price of goods.

In addition to the study of goods and message availability on the Altiplano, studies were made of inhabitants in two rural villages. Respondents were administered a series of structured interviews dealing with demographic characteristics, innovative propensity, mass media communication exposure, and consumption of manufactured goods.

The findings of the above research are presented in the following chapters. Chapters 2 and 3 are concerned with the La Paz consumer; Chapter 2 covers economic characteristics of La Paz residents, while Chapter 3 investigates the social-economic interface between consumer and retailer. The urban marketing system is detailed in Chapters 4 and 5, with the former covering retail operations and the latter wholesale operations.

Chapter 6 describes and analyzes operations in trucking, a critical physical distribution link in the marketing system. Chapters 7 and 8 present data on the rural area, with Chapter 7 concentrating on the farmer as a producer and marketer of foodstuffs and Chapter 8 covering his role as a consumer.

Finally, Chapter 9 presents an analysis and evaluation of the marketing system as a whole. From this analysis, Chapter 10 details a series of recommended urban and rural reforms to rationalize the production and marketing of foodstuffs in La Paz and its foodshed area.

## CHAPTER 2

### THE LA PAZ CONSUMER

The purchasing patterns of the 400,000+ residents of La Paz were of vital importance to the over-all research study. To obtain information on these spending habits, two sources of information were pooled. The first source was a probability sample of 650 families in the low and middle income zones of La Paz conducted by the Bolivian Ministry of Hacienda in 1964-65. The Ministry provided the MSU research project with the data from these interviews; to supplement the data with respondents from high income zones, the Ministry's personnel conducted 93 additional interviews in a proportional probability sample of homes in the upper income areas of the city. These latter interviews, in combination with the original 650, yielded a sample of 743 respondents. However, it should be noted that a two- to three-year lapse occurred between the middle and low income and upper income interviewing. The data, therefore, probably understate somewhat the income and expenditure level of low and middle income families.

Before moving into a discussion of spending patterns, we should note that there have been substantial indications of recent rapid population growth in the city of La Paz, especially in lower income areas. Other Latin American capital cities which have experienced rapid population growth have also experienced rising food prices. While a country's monetary and fiscal policies undoubtedly have a great influence on inflation, there is also little doubt that inelasticities in food supply and rigidities in marketing channels have historically contributed to rising food prices.

Unfortunately, the last population census for Bolivia was made in 1950, two years before the *campesino*-miner revolution of 1952 and three years before the Agrarian Reform of 1953. The population actually counted for the city of La Paz in the 1950 census was 276,000. In addition, an upward adjustment of 45,000 was made, giving a total population of 321,000. In the intervening years, the Indian has been integrated into Bolivian society, entered the money economy, and moved into the urban areas. At the same time, and especially during the mid-fifties, the country was afflicted with extremely high rates of inflation, capital flight, and forced or voluntary exile of pre-revolution elite groups.

The effect of these social, political and economic upheavals of the fifties on urban population is difficult to determine. A sample made in early 1960 to verify population estimates based in 1950 could have been expected to shed light on this issue. However, the methodology used in the 1960 population study was suspect. Further, preliminary results showed a decline in the La Paz population, a result politically unacceptable to the administration in power. Consequently, the preliminary findings of the 1960 study were discredited and never published.

The next attempt to enumerate La Paz's population was made in 1963. On the basis of a survey, the Bolivian Census Bureau reported the city's population to be approximately 328,000. A further attempt to determine the population of La Paz was made in 1967 through a joint effort by the Bolivian Census Bureau and the Michigan State University research team. A head count of families and population was conducted in April and May of 1967.<sup>1</sup> Slightly over 410,000 inhabitants were counted in the 1967 study. An upward adjustment of 31,000 was made to take into account those residing at army installations, hospitals, or prisons, as well as transients, resulting in a total population estimate of 441,000.

A number of interpretations on population growth are possible, given the ambiguity of much of the data. First, it is possible to assume that the 1960 study showing no population growth, or even decline, in the city's population since 1950 was accurate. Given the social and economic upheavals of the 1950's, this is not unlikely. Then, given a population estimate of 328,000 in 1963, the city's population grew at a rate of less than 1% per annum between 1960 and 1963 if the adjusted 1950 figure of 321,000 is utilized as a base. If, however, the unadjusted count of 276,000 is utilized, then the city grew at a rate slightly greater than 6% between 1960 and 1963. Further, taking the unadjusted head count of 410,000 in 1967, the growth rate in the period 1963-1967 is also slightly greater than 6%; on the basis of the adjusted estimate of 441,000 in 1967, the growth rate between 1963 and 1967 is slightly less than 8%.

One can also assume that the 1960 sample was, indeed, inaccurate. Starting from that assumption, the city's growth rate

---

<sup>1</sup>The city was divided into zones, with teams of enumerators given specific responsibility for certain geographic areas of the city. Each family was counted, as well as the number of people in the family.

in the period 1950-63 was only 1.5% per annum, rising thereafter through 1967 at the rate of 6 to 8%.

It is somewhat difficult to determine, therefore, whether the city's rapid growth commenced in 1960 or 1963. It does seem clear, however, that this increasing urbanization has been taking place over a four- to seven-year period. Strikingly clear visual evidence of the city's population expansion can be seen in the burgeoning lower income *barrios* on the Altiplano overlooking La Paz proper.

#### Overview of the La Paz Family

The families in the consumer study reported an average size of 5.5, with 58% of the families having four to six members. In general, the head of the family is male; only one out of seven (14%) respondents reported a female head of the family. There is an average of 1.6 wage earners in each family. Half of the respondents reported only one source of income in the family; another two-fifths reported two wage earners. Virtually no unemployment was reported, although there is doubtless underemployment in the city. One-tenth of the heads of family reported being professional men or administrators. Twenty-seven percent of the sample reported that the family head was an office employee or salesman, while 58% were skilled and unskilled laborers. One-fourth of the family heads worked in manufacturing, with 49% reporting employment in commerce or service industries. Only one in twenty reported working in the construction industry.<sup>2</sup> Thirty-nine percent were employed in the public sector; 45% were employed in the private sector; and a small percentage (6%) were self-employed or owners of businesses.

With regard to housing, 20% of the respondents lived in a private home, 24% lived in an apartment, and the remainder (56%) lived in a single room or a few rooms. One-third reported owning the structure in which they lived; the remaining two-thirds rented. Eighty-nine percent of all dwellings had adobe walls, with the remainder having brick or concrete block walls. Slightly more than two-thirds of the roofs were of corrugated tin, with the remainder of tile. Most residences had wood, tile or cement

---

<sup>2</sup> It is likely that this figure has increased in recent years, since La Paz has undergone a construction boom since 1966.

floors, with the exception of one in eight (12%), which had dirt floors. The average residence had 3.6 rooms; however, nearly half had only one or two rooms.

Private sanitary services and running water were found in about one-third of the residences. Another third shared running water and sanitary facilities. The remaining third depended on communal services outside the residence. Nearly all residences (97%) had electrical service.

The average age of the head of family was 43.2. Thirty-nine percent had only a primary school education, while 34% had a high school education. One in eight (13%) reported having a university education. The remainder had professional or technical school education.

#### Income Distribution and General Spending Patterns

Data from the respondents described above indicate that the mean yearly income of families in La Paz is approximately \$1500, or a mean yearly per capita income of \$272.<sup>3</sup> The mean income is skewed considerably higher than the median; the median yearly family income is about one-third less, at \$1000. Further evidence of the unequal distribution of income in La Paz is shown in Table 2.1.

Cumulative % of Families	% of La Paz Income	Cumulative % of La Paz Income	Mean Family Income
0 - 25.0%	8%	8%	\$480
25.1 - 50.0	16	24	960
50.1 - 75.0	23	47	1,380
75.1 - 90.0	22	69	2,150
90.1 - 98.5	21	90	3,740
98.6 - 100	10	100	10,300

SOURCE: Ministerio de Hacienda, La Paz, Bolivia, and Michigan State University, Latin American Market Planning Center.

<sup>3</sup>Unless otherwise specifically noted, all money values in this report are denominated in U.S. dollars. The exchange rate utilized in the translation of currency was 12 Bolivian pesos to 1 U.S. dollar.

Table 2.1 shows the income distribution and the yearly mean family income for six population groups, ranked according to their share of the city's total income. The poorest quarter of families received only 8% of the city's total income. The upper quarter of the population, however, had slightly over half of total income in the city. The mean family income for each population group is revealing. The poorest one-fourth of the population has a mean yearly family income of less than \$500, while the second quarter has twice the annual income at about \$1000. The richest one-fourth of families have a yearly income of \$3180. Even in this top group, however, there is substantial skewness in the distribution of income. The 75th to 90th percentile averages \$2150 per family, whereas the 91st to 98.5th percentile averages \$3740, or three-fourths more than the 75-90 percentile group. The top 1.5% of the population has a mean yearly family income of \$10,300.

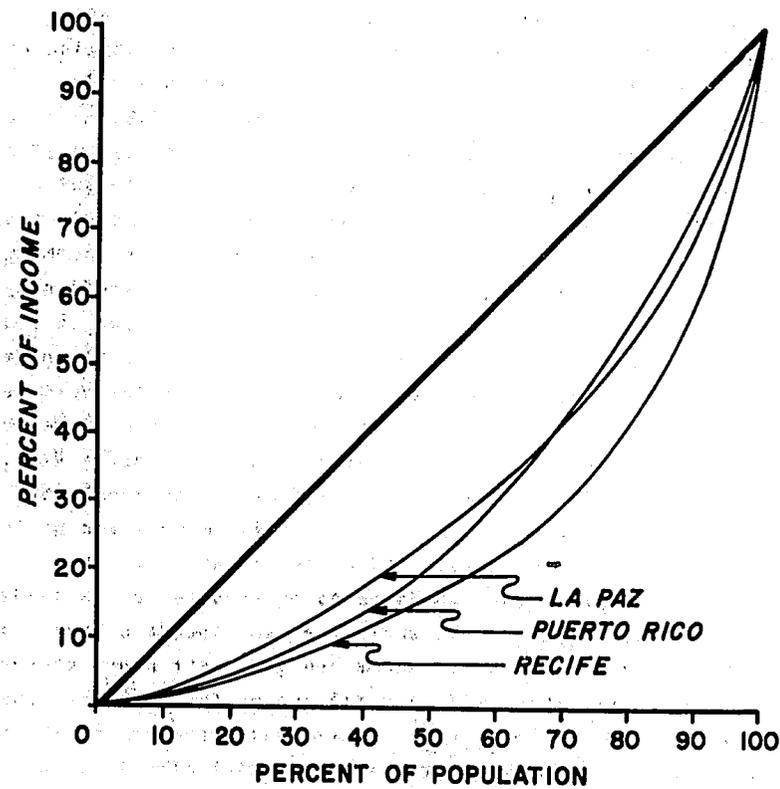
While the distribution of income in La Paz is clearly skewed, it should also be noted that the disparities between income groups are less severe than in other Latin American areas studied by MSU researchers. For example, as seen in the Lorenz curve in Figure 2.1, while families in the lowest income third in La Paz have only 14% of total income in the city, they are still relatively better off than the lower one-third in Recife, Brazil, which have only 7% of that city's income, or the lower one-third in Puerto Rico, which have only 10% of that island's income. The middle third in Puerto Rico, on the other hand, has slightly more share of income than in La Paz, at 40% versus 38% of the island's income.

An overview of the annual spending reported by respondents is shown in Table 2.2 below, where the mean spending levels and percentages of total family income are given for eight consumption categories. More than half of total income in La Paz is expended on food. It seems clear that any meaningful reductions in the retail price of food would have a substantial effect on the standard of living in the city. The next largest expenditure--clothing--is a distant second to food at 14% of the family budget. Rental expenses absorb 9% of family income. Savings are reported to be quite low, only 0.7% of total income.

While spending patterns of the "average" family are of interest, it is perhaps even more useful to discuss spending patterns exhibited by different groups within the sample of La Paz families.

Several classification variables were examined in order to select a basis for grouping families along a dimension which

**Fig.2.1 DISTRIBUTION OF FAMILY INCOME  
(LORENZ CURVE)  
1966-1967**



SOURCE: Consumer surveys carried out in 1966 and 1967 by MSU research teams in Puerto Rico; La Paz, Bolivia; and Recife, Brazil.

Expenditure	Mean Annual Value of Expenditure	Percentage of Mean Family Income
Food & Beverages	\$811	53.5%
Clothing	208	13.9
Rent	141	9.3
Household Maintenance	61	4.0
Recreation & Amusement	58	3.9
Light & Power	38	2.5
Medical	23	1.5
Other	160	10.7
Savings	10	0.7

SOURCE: Ministerio de Hacienda, La Paz, Bolivia; and Michigan State University, Latin American Market Planning Center.

consistently differentiated their spending behavior. These included total annual family income, per capita income, education, occupation of main wage earner, and age of head of household. Total annual family income was the strongest and most consistent differentiator of spending patterns among the classification variables we examined and will be used to distinguish spending behavior in this report. Education ranked closely as a useful discriminator of spending patterns, as did occupation of the main wage earner. Respondent families were divided into thirds, with the lowest third having an annual income up to \$833, the middle third having an annual family income from \$834 to \$1499, and the upper third having annual incomes in excess of \$1500. The average reported family income in each of these groupings is as follows: lower third--\$560, middle third--\$1096, and upper third--\$2914.

Expenditures in four main categories--food and beverages, clothing, household and living expenses, and miscellaneous expenses--were determined for each of the three income groups. The results are seen below in Table 2.3. As can be seen, there is an apparent high level of dissavings in both the low and middle thirds of approximately 20% of expenditures and 10% of expenditures, respectively, while the upper third saves approximately 5%. It is doubtful that either past savings or consumer credit are in sufficient supply to permit dissavings of the magnitude suggested for the low and middle income groups. A more reasonable assumption is that income has been understated. The tendency to understate income is seen in the following. The head of the

family was asked his (or her) income on the first day of the consumer study (which consisted of a week-long diary of expenditures) and the last day. The figure reported on the last day was 16.5% higher than that reported the first day, suggesting that as confidence in the interviewer built up, the family was more inclined to state actual family income.

Table 2.3 Income and Expenditures by Income Class

	Lower Third	Middle Third	Upper Third
Family Income	\$560	\$1096	\$2914
Food Expenses	437	717	1308
Clothing Expenses	80	155	446
Housing Expenses <sup>a</sup>	72	167	403
Miscellaneous Expenses <sup>b</sup>	77	189	622
Savings (Deficit)	(106)	(132)	135

<sup>a</sup>Includes rent, taxes, light, washing and maintenance, home textile articles, kitchen articles and equipment, and furniture.

<sup>b</sup>Includes health care, personal care articles, recreation, tobacco, education, trips, vehicle purchases, gasoline and oil, communications and other miscellaneous expenses.

SOURCE: Ministerio de Hacienda, La Paz, Bolivia, and Michigan State University, Latin American Market Planning Center.

Of course, expenditures could be overstated, but this is perhaps less likely. As a check, relative expenditures on food products as indicated by the consumer study were compared with relative sales of like food products in *tiendas*. As reported on page 72, the relative weightings are sufficiently close to suggest accurate reporting of expenses.

We therefore assumed that income was understated and adjusted it upward to match expenditures in the case of low and middle income categories. Income was also correspondingly adjusted upward for families in the upper third. When these income adjustments are taken into account, a savings rate of about 5% for La Paz as a whole is indicated. The percentage of income (or average propensity to consume) in the four major categories is shown in Table 2.4. The preponderant role which food expenditures play in the total consumption of low and middle income families is clear; nearly two-thirds of family income for families in the

lower third and nearly three-fifths of family income in the middle third goes for food, as opposed to only two-fifths for the upper income families. In terms of absolute values, upper income families spend nearly three times as much on food as do lower income families.

	<u>Lower Third</u>	<u>Middle Third</u>	<u>Upper Third</u>
Food	.657	.584	.390
Clothing	.120	.126	.133
Housing and Household	.107	.136	.121
Miscellaneous	.116	.154	.185
Savings	.000	.000	.171

SOURCE: Ministerio de Hacienda, La Paz, Bolivia, and Michigan State University, Latin American Market Planning Center.

All three groups spend approximately one-eighth of their income on clothing, with average propensity to consume and absolute expenditures correlated positively with income. Each group appears to place clothing at approximately the same place in its hierarchy of consumer demands. Housing and household expenses show an interesting pattern. Middle income people apparently spend conspicuously for this item, as they have the highest average propensity to consume. Or, in terms of disposable income and available housing of a type which they consider suitable, they are being squeezed. Average propensities to consume miscellaneous items, which appear to be largely "luxury" items, follow the expected pattern, with both middle and upper income families spending more on this category than on any of the other categories except food. The share of income spent by the lower third on this category is surprisingly high. The data show that low income people devote more of their income to personal expenses than to housing.

#### Food Expenditures

The "average" La Paz family appears to have a reasonably well-balanced diet, with a high percentage of the food budget devoted to protein foods. Mean weekly food expenditures by major product categories are shown in Table 2.5. As can be seen,

protein foods (meat, poultry, fish, milk products, and eggs) account for 38% of food expenditures. The next major category of expenses is fresh fruits and vegetables, which comprise one-fourth of the average family's food budget. Cereals are also a large item in the food budget, at 19% of total food expenses. (Within the cereal category, bread accounts for nearly 60%.) Spices (of which sugar is the main item) and fats and oils are minor items in the food budget, at less than 10% of all expenses. Finally, coffee and tea, canned and dried fruits and vegetables, and miscellaneous foods together account for only 6% of the food budget.

Table 2.5 Mean Weekly Family Food Expenditures by Major Product Category

	Value	Percentage
Meat and Poultry	\$ 4.01	27%
Fish	.25	2
Milk and Eggs	1.30	9
	<u>\$ 5.56</u>	<u>38%</u>
Fresh Vegetables	\$ 1.39	10%
Potatoes	1.24	9
Fresh Fruits	.84	5
Legumes	.10	1
	<u>\$ 3.57</u>	<u>25%</u>
Cereals	\$ 2.71	19%
Spices	\$ 0.95	7%
Fats and Oils	\$ 0.79	5%
Coffee and Tea	\$ 0.53	4%
Canned and Dried Fruits and Vegetables	\$ 0.12	1%
Miscellaneous Food Items	<u>\$ 0.22</u>	<u>1%</u>
Totals	\$14.45	100%

SOURCE: Ministerio de Hacienda, La Paz, Bolivia, and Michigan State University, Latin American Market Planning Center.

The data just presented suggest that the food production and distribution system performs adequately in terms of providing a well-rounded diet to the city of La Paz. That is, even though the consumer spends a substantial portion of his income on food, the relative prices at which he can purchase are such that his diet is high in proteins and fresh fruits and vegetables. Of course, we have thus far looked only at an "average" family. As

noted earlier, family income correlates highly with food expenditures. It is therefore appropriate to determine whether the mix of food purchases differs by income groupings.

As expected, the diet of consumers in low income brackets is more heavily oriented toward starches and carbohydrates than are the diets of families in the higher income brackets. However, the disparity is not nearly as great as might have been expected in a very low income country. As seen in Table 2.6, consumption of meat and poultry, milk and eggs, and fish, is correlated with family income. While 34% of the family food budget for low income families is devoted to these protein foods, middle and high income families devote 40% and 44% of their income, respectively, to these items. It is interesting to note, however, that the major difference between the three groups is in the consumption of milk, eggs and dairy products, with high income families spending five times as much as low income families on these commodities. In contrast, they spend only 2.6 times as much on meat and poultry, and only three times as much on fish.

Table 2.6 Weekly Food Expenditures by Income Group and Product Category

	Annual Family Income					
	\$0-833		\$834-1499		Over \$1500	
	\$	%	\$	%	\$	%
Meat & Poultry	2.20	27	3.78	29	5.74	30
Milk & Eggs	0.44	5	1.12	9	2.18	12
Fish	.13	2	0.24	2	0.38	2
	<u>2.77</u>	<u>34</u>	<u>5.14</u>	<u>40</u>	<u>8.30</u>	<u>44</u>
Fresh Veg.	0.83	10	1.30	10	1.88	10
Potatoes	0.94	12	1.25	9	1.44	8
Fresh Fruits	0.08	1	0.28	2	0.62	3
Legumes	0.04	1	0.09	1	0.16	1
	<u>1.89</u>	<u>24</u>	<u>2.92</u>	<u>22</u>	<u>4.10</u>	<u>22</u>
Cereals	2.03	25	2.88	22	3.58	19
Fats & Oils	0.48	6	0.78	6	1.11	6
Spices	0.68	8	0.93	7	1.17	6
Misc. Foods	0.36	4	0.52	4	0.67	4

SOURCE: Ministerio de Hacienda, La Paz, Bolivia, and Michigan State University, Latin American Market Planning Center.

Within the general category of meat and poultry there are definite differences with regard to the types of meat consumed. For example, beef is sold in three broad categories--beef with bones, beef without bones, and fillet. Nearly four-fifths of beef expenditures are made on the cheapest cuts, i.e., beef with bones, with the level of expenditure correlated with family income. Nineteen percent of the family budget spent on beef is expended on beef without bones. To a great extent, this quality of cut is purchased by the higher income families. This middle quality grade is not purchased by 60.4% of all families. Slightly over half of the upper income families purchase this quality, compared with 42% of middle income families and only 28% of lower income families. Finally, only 5% of the families purchase fillet, and these are in the higher income brackets. We see, then, that while beef consumption is relatively high for low income families, they purchase primarily the cheaper grades of beef, which consist largely of bones.

With regard to other kinds of meat, only 10% of families reported purchasing pork. One-half of the families did not purchase lamb, which was purchased mainly by families in the high income category. A consumption pattern similar to that of lamb is also found for fish. The low consumption of fish by lower income families is surprising, since fish from Lake Titicaca is relatively abundant at a low price and, given the high altitude and low temperatures, is generally unspoiled and edible.

Cereals are a more important part of the diet for low income families than they are for middle and upper income families. Whereas low income families spend 25% of their food budget on cereals, upper income families spend less than 19%. Within the general category of cereals, bread is by far the most important item. All three income groups devote slightly more than half of their cereal expenditures to bread. Rice and pasta are the next most important categories, at 12% and 9%, respectively, of cereal expenditures across each of the income groups.

Each of the three income groups spends approximately the same percentage of its food budget on fresh vegetables and legumes--about 10% for the former and less than 1% for the latter. There is, however, a substantial shift from potatoes to fresh fruits as income rises. Whereas low income families spend nearly 12% of their food budget on potatoes, high income families spend about 8%. Conversely, low income families spend less than 1% of their food budget on fresh fruits, whereas high income families

spend 3%. Thus, potatoes are seen to be an "inferior" item, notwithstanding the high proportion of the budget devoted to this food even in the high income families. And, fresh fruits are a "superior" item.

The less important goods in the food budget tend to be consumed in equal proportion by all three income groups. Fats and oils, for example, constitute slightly under 6% of the budget for each group. On the other hand, low income groups spend more on spices than do high income families. Coffee and tea expenditures show the same tendency as spices, although to a lesser degree.

Milk and eggs, meat, and fresh fruits are, then, superior goods. Cereals, potatoes, and spices are inferior goods, although still important in the diets of all three groups. In general, population increases in the city, insofar as they occur in the lower and middle income groups, will result in less than proportional demands on food supply, given the lower than average expenditures on food by these income groups. The demand will be on virtually all elements in the diet, although relatively more so on cereals and potatoes. If income increases, or food prices decline, we can expect to see an increase in food consumption by low and middle income families. A shift into meat, milk and eggs, and fresh fruits is likely, with a relative decline in importance in the food budget for cereals and potatoes.

#### Clothing Expenditures

Expenditures on clothing constitute the second largest individual expense item for La Paz families. As noted previously, the average family spends \$208 annually on clothing, with the lowest income group spending \$80, the middle group \$155, and the upper income group \$446. Approximately 13% of the family budget is devoted to clothing, with the lowest percentage spent by lower income families. Income expansion in the lower income families is likely to result in a slightly more than proportional increase in clothing expenditures. Expenditures on clothing in the city of La Paz total nearly \$17 million.

A breakdown of clothing expenses by type of expenditure is shown in Table 2.7. Ready-made clothing accounts for 84% of the family clothing budget, with material for home-made clothing taking only 16%, a seemingly small amount in a low income economy. Clothing for men, boys, women and girls take an equal share of

the budget, each with slightly over two-fifths of all clothing expenditures. Spending on children's clothing is minor. Footwear absorbs almost one-fifth of the clothing budget for both sexes, making an annual market in La Paz for shoes of approximately \$3 million at retail prices.

Table 2.7 Annual Clothing Expenditures by Type & Income Group

	Income Group			
	La Paz Average	Lower Third	Middle Third	Upper Third
Total Clothing	\$208	\$80	\$155	\$446
Men's and Boys'	88	28	63	174
Footwear	20	9	16	38
Women's and Girls'	85	36	63	196
Footwear	20	10	16	43
Children's	2	2	2	4
Material for home-made	33	14	27	72

SOURCE: Ministerio de Hacienda, La Paz, Bolivia, and Michigan State University, Latin American Market Planning Center.

There are some differences between income groups in expenditure patterns. For example, women's clothing takes the largest share of the clothing budget in both low and high income families, whereas in middle income families men's and women's clothing have the same share. Purchases of shoes take a larger share of lower income expenditures (24%) than upper income (18%). Interestingly, purchases of material for home-made clothing absorb approximately the same share of the family clothing budget in each income group.

#### Housing Expenses

Household expenditures are a third major expense category. Table 2.8 shows, by income group, expenses for major items within this category. As can be seen, rent and taxes take the largest share of income in this category, ranging from 20% for low income families to 37% and 38% for middle and upper income families, respectively. Cleaning and maintenance of the household is also a major expense item, at \$60 per year. Soap and detergents account for 25% of the cleaning and maintenance budget, constituting a market in La Paz of approximately \$1.2 million annually, at retail

prices. Upper income households devote 29% of total household expenses to cleaning and maintenance, with a major share of the outlay going for servants. Expenditures on light and fuel are another major item, especially for lower income families, who devote one-third of their housing expenses to this item. Upper income families, on the other hand, spend only 13% of their household budget on this item.

Table 2.8 Annual Household Expenditures by Type & Income Group

	Income Group			
	La Paz Average	Lower Third	Middle Third	Upper Third
Total Expenses	\$226	\$72	\$167	\$403
Rent <sup>a</sup>	75	14	61	153
Cleaning & Maintenance	60	19	39	116
Light & Fuel	42	24	34	54
Home Textiles	14	6	10	22
Furniture	12	4	8	21
Kitchen Equipment	9	2	6	15
Tableware	5	1	3	7
Miscellaneous	9	2	6	15

<sup>a</sup>The rental figure does not include an imputed cost for privately owned housing.

SOURCE: Ministerio de Hacienda, La Paz, Bolivia, and Michigan State University, Latin American Market Planning Center.

No other individual household expenditure accounts for more than 10% of the total expenditure in this category. Household textiles (sheets, towels, tablecloths, etc.) take from 5 to 8% of the household budget. It should be noted that a number of households reported no expenditures in this category, ranging from one-fourth of the high income households to three-fifths of the low income households. Furniture purchases are approximately 5% of the household budget. Four-fifths of all respondents reported no expenditures in this category, ranging from two-thirds of the high income families to almost nine-tenths of the low income families. Approximately one-half of all respondents reported no expenditures on tableware and three-fifths reported no purchases of kitchen equipment. The total market size for various household items appears to be quite small, especially when one considers the number of items included in each category. For example,

furniture includes bedroom, living room, and dining room furniture, as well as rugs. Tableware includes flatware and glassware. In any case, the total annual market seems to range from \$0.25 million for tableware to \$1.0 million for home textiles. Most of the market, as might be expected, is to be found in the upper income families.

#### Miscellaneous Expenses

The last major expense category to be discussed is miscellaneous expenditures. The type of expenses included in this category and spending by income groups are shown in Table 2.9. There are major differences between income classes in spending in this group of items. Recreation expenses account for nearly one-fourth of all expenditures in this category. In relation to their total budget, however, middle income families devote a larger share (26%) of

	Income Group			
	La Paz Average	Lower Third	Middle Third	Upper Third
Total	\$262	\$77	\$189	\$622
Recreation	62	17	50	101
Education	54	15	47	84
Personal Care	39	14	34	59
Health Care	24	6	18	41
Tobacco	15	12	14	25
Travel	9	2	9	15
Other <sup>a</sup>	59	11	17	297

<sup>a</sup>"Other" includes vehicle purchases, gasoline and oil, communications, and miscellaneous.

SOURCE: Ministerio de Hacienda, La Paz, Bolivia, and Michigan State University, Latin American Market Planning Center.

income to this item than do low and upper income families. Upper income families, despite having the largest absolute expenditure on recreation, devote only 16% of their miscellaneous expenses to this item. The pattern of relative expenditures in recreation also holds for educational expenses. While the average La Paz expenditure on this item is 20% of all miscellaneous expenses, middle income families spend 25% and upper income families only

14%. Again, upper income families spend the largest absolute amount. Middle income families devote over half of their miscellaneous expense budget to these two items, as opposed to two-fifths for low income and three-tenths for upper income families.

Personal care articles and services are the third major expense item in the miscellaneous expense category. In terms of relative expenditures, low and middle income families allocate twice as much money to these items as do upper income families--18% vs 9%. Within the category of personal care items, there appears to be a total annual market in the city of La Paz of approximately \$0.4 million for toilet soap, \$0.6 million for toothpaste, and \$0.5 million for cosmetics, at retail prices.

Tobacco expenditures show an interesting pattern. Lower income families, while spending a lower absolute amount, devote relatively 2 to 4 times as much of their income to tobacco as do the other two income groups. The major portion (48%) of upper income families expenditures in the miscellaneous category is devoted to "other," which consists largely of expenditures on automobile purchases and maintenance.

#### Summary

As in most underdeveloped areas, income in La Paz is at a low level and highly skewed. The data show an average annual per capita income of \$272 and an average family income of approximately \$1500. The poorest 25% of families in La Paz have only 8% of the city's income, giving them an average annual family income of \$480. On the other hand, the richest 1.5% of the families have 10% of the city's income and an average annual income of \$10,300. However, even though income in La Paz is unequally distributed, the poorer families have a greater share of the city's income than do their counterparts in other Latin American areas studied by Michigan State University research teams.

Expenditures on food absorb by far the major share of family income. For La Paz as a whole, food expenses are 54% of income. Upper income families spend an average of 40% of their budget on food, while lower income families devote an average of 66% of their income to food purchases. The mix of foods consumed in the city suggests a well-rounded diet high in protein foods. Interestingly, there are no great disparities in food mix between income classes, although upper income families spend relatively more on fresh fruits, milk and eggs, and better quality beef. There are,

of course, differences between income groups in the absolute amounts spent on food; upper income families spend three times as much on food as do lower income families.

The food production-marketing system appears, therefore, to be performing well in terms of relative prices among various classes of food. Further, there is no outward evidence in the city of malnutrition and starvation. However, the high percentage of income spent on food sharply limits expenditures on manufactured goods. Data on the consumption of manufactured goods show how very small the market is for these products, especially in the lower and middle income groups. Many of the manufactured goods now consumed in the city are either locally produced or suitable for local production. Thus, a lowering of food prices could have a significant impact on the consumption of clothing, personal care articles, and household goods.<sup>4</sup>

The recent population growth of 6% to 8% annually in the city of La Paz may present problems for the food production-marketing system. There is some question as to whether this growth dates from 1960 or 1963. There is, however, little question that the city has seen a sizeable addition to the population in the '60s. Clear visual evidence is seen in the housing tracts on El Alto overlooking the city. Clearly, this population growth has implications for the provision of various public services. It also has implications for the food marketing system. While rapid population growth had not, through 1967, severely stressed the food marketing system in terms of major food shortages or rapidly rising prices, there may well be problems in the future.

<sup>4</sup>Market size for manufactured goods may also be greatly affected by the marketing policies followed by producers of these goods, especially their price and product policies.

## CHAPTER 3

### CONSUMER SHOPPING BEHAVIOR AND PATTERNS

As noted in Chapter 2, expenditures on food absorb a major share of family income, especially for low and middle income families. The extent to which downward shifts in the price of basic foods will reorient consumers' purchasing patterns into other foods and non-foods has been suggested. Investigation of the retail and wholesale establishments which distribute food in the city of La Paz, as well as the truckers, traders, and farmers who produce and handle food products in the rural foodshed, is therefore necessary to determine possibilities for increased efficiency, i.e., greater supply, better mix, or reduced costs and prices in the food production-marketing system.

Before moving into an analysis of the flow of food into La Paz, however, it is useful to consider the consumer's relationships with retail outlets, i.e., shopping behavior. A number of issues appear to be of importance. For example, who does the shopping for the family and does this vary by type of product and type of food outlet? How frequently do people purchase and in what quantity, and does this vary by type of product or type of outlet? Do consumers appear to be loyal to certain outlets? For example, neighborhood stores might operate as social centers, thus impeding a shift to more efficient, but impersonal, large-scale outlets. Or, credit extension might be prevalent and pervasive, and thus a powerful force in the attraction and maintenance of clients. As a special sub-set of the social center consideration, bargaining could be an integral part of purchasing activity, with consumers consequently hesitant to shift to the one-price, non-haggling situation found in large-scale retailing.<sup>1</sup>

In this chapter we describe the nature of the interaction which takes place between the public market and *tienda* retailers

---

<sup>1</sup> Lauchlin Currie, for example, notes that the Colombian consumer was thought to be committed to haggling and bargaining, thus foreordaining to failure impersonal, fixed-price large-scale food and non-food retailers. However, he points out that these large-scale outlets have prospered, the pull of low prices being stronger than that of tradition. See his "Marketing Organization for Underdeveloped Countries," in Moyer and Hollander (eds.), *Markets and Marketing in Developing Economies* (Homewood, Ill.: Richard D. Irwin, 1968), p. 118.

and their customers. To obtain data on these interactions, interviewers were placed in 36 *tiendas* and 12 public market stalls, where they observed each transaction at close hand. The interviewers, as part of their over-all data gathering efforts, maintained a "diary" for each customer with whom the retailer dealt. The exact conversation between the two was transcribed, the products purchased were recorded, estimates were taken of the personal characteristics of the customer, and inquiries were made to the retailer about credit, discounts, acquaintance with the customer, etc.

The 36 *tiendas* were randomly selected from our larger retailer survey, 12 each from the city's low, medium and high income zones. However, several substitutes within income zones were made for retailers who would not allow further interviewing, particularly since the interviewer was to be present for an entire day. The sample of 12 retailers in public markets was balanced between low and high income zones in the city. None of the originally interviewed market women would participate in the interviewing, and a purposively selected group was substituted.<sup>2</sup> In all, 1,248 "diaries" of the communication and purchasing transactions were recorded in the 48 food retailing establishments.

There are several limitations of our findings in terms of generalizing them to all such transactions. Although our sampling of *tiendas* was reasonably random, the public market women were not randomly selected and hence are of unknown representativeness of all market women. Our interviewers were not assigned randomly across days, and thus we do not feel justified in generalizing our findings to the seasons of the year or particular weeks or days. Finally, our interviewers seldom worked beyond 5 or 6 p.m., and thus missed the evening customers in *tiendas*.<sup>3</sup>

While the above comments define the limits of this phase of work, these data nevertheless provide many substantive insights into the retailer-customer interaction. The first major section

---

<sup>2</sup>The public market retailers had already been interviewed once, or perhaps twice if involved in follow-ups in the sample survey. The flow of customers past them made it imperative that they work to attract customers and they had little spare time to spend with the interviewers. Finally, the public market retailers were generally more recalcitrant than the *tienda* operators in any of our data gathering attempts.

<sup>3</sup>Public market stalls generally close by 5 and hence were not affected in this dimension.

of this chapter describes the food retailer clients in terms of their sex, age, and income zone in which they shopped. The second section discusses the communication exchange between retailer and client. The third section deals with the purchase transaction in terms of products, amount spent, etc. The final section deals with the uses of non-price competitive tools, e.g., granting of credit.

#### Characteristics of Food Retailer Clients

Females were more likely to be shoppers in both retail outlets. However, males comprised a large minority of the shoppers in *tiendas*. Where only one in nine (11%) of shoppers in the public markets were males, 45% of the shoppers in *tiendas* were male.

Two major age differences were noted between *tienda* and public market customers (see Table 3.1). Teenagers and young adults comprised about the same proportion of total customers in both *tiendas* and public markets. Children were more likely to shop at *tiendas*, and middle-aged and old adults were more likely to be clients in the public markets. This undoubtedly reflects the neighborhood nature of *tiendas*; there are usually one and often two or three *tiendas* per block, whereas the markets are highly centralized. Children apparently are often sent out to pick up one or two items from the *tiendas*, but are not as likely to be sent to a public market which may be a substantial distance away. In any event, adults more frequently patronize the food retailer than do teenagers or children; an adult is about twice as likely to be a customer than is a pre-adult.

	Public Markets	<i>Tiendas</i>
Children	13%	21%
Teenagers	18	15
Young Adults	29	33
Middle-aged and Old Adults	40	31

SOURCE: MSU Retailer Survey (1967).

In order to describe more fully the demographic characteristics of the customers shopping in each type of retail outlet,

we compared them by sex, age, and income zone location<sup>4</sup> of the retailers. Comparisons were made separately for public market and *tienda* customers.

As previously noted, male shoppers were a small minority (11%) of all public market customers. Seventy percent of all male shoppers fell into the children and teenage category, as opposed to only 26% of female shoppers in this category. Male shoppers were also more likely to be found in low income markets than were female shoppers; whereas 18% of all shoppers in the low income markets were male, only 4% of all shoppers in the high income markets were male. Shoppers' age differences were also noted between income zones. Thirty-nine percent of all shoppers in low income zones were children and teenagers. In the high income zones, on the other hand, 23% were children and teenagers, while 46% of all shoppers were middle-aged and older adults.

A large minority of all *tienda* shoppers were males. As in the public market case, male shoppers tended to be younger than female shoppers. The age spread was not, however, as pronounced as in the case of public markets, since 44% of all male shoppers in *tiendas* were children or teenagers, with 27% being middle-aged and older adults. Male shoppers comprised about the same percentage of total shoppers in all income zones, although they were slightly more dominant in middle income zones. Although no major differences were noted, *tienda* customers in low and middle income zones were more likely to be children and teenagers, whereas customers in upper income zones were more likely to be young adults.

The frequency with which customers shopped in retail outlets, as estimated by the retailers themselves (see Table 3.2), is about once a day or less in the public market and about twice a day in the *tiendas*. Where about 85% of shoppers in the public markets went there once a day or less, nine out of ten (90%) of *tienda* shoppers went there one or more times a day.

The figures in Table 3.2 omit the 29% of customers in both retail outlets whom the retailers said had not shopped there before. The data on the public markets may be somewhat distorted, inasmuch as many middle and upper class shoppers buy their coming week's food supply each Saturday. Unfortunately, we were not able to persuade the market women to permit us to observe them during this critical shopping day.

---

<sup>4</sup>Income zones were defined by the Ministry of Hacienda.

	Public Market	Tienda
Two or more times per day	15%	58%
Once per day	52	32
Less than once per day	33	10

SOURCE: MSU Retailer Survey (1967).

Among the public market customers, shopping frequency was related to the income zone in which the market was located (see Table 3.3). In both lower and upper income zones, about half of the customers shopped once each day. However, shoppers in high income zones were less likely to shop twice a day or more than were public market shoppers in low income zones (15% vs 33%), and more likely to shop less than once a day (38% vs 18%).

	Low Income Zone	High Income Zone
Twice a day or more	33%	15%
Once a day	49	47
Less than once a day	18	38

SOURCE: MSU Retailer Survey (1967).

The income zone location of *tiendas* was also related to the frequency of shopping there, although somewhat differently than for public market customers (see Table 3.4). Fifty to sixty percent of *tienda* customers in each income zone shopped twice a day or more. However, *tienda* customers shopping at a frequency of once a day or less were more prevalent in low income *tiendas* (19%) than in either middle (8%) or high income (7%) *tiendas*. This is the reverse of the findings noted above for public markets.

We have already noted that *tienda* customers shopped more frequently than public market customers. At least one consequence of this is found in the greater tendency of *tienda* operators to recognize which of their customers had shopped previously at their

outlets. Where 67% of public market customers were said by the retailer to have shopped there previously, 75% of *tienda* customers had done so. However, it is important to note that in both types of retail outlet nearly seven out of ten of all customers were said by the retailers to have shopped there previously. This suggests a fairly strong pattern of retailer-customer relationships in terms of habitual shopping tendencies.

Table 3.4 Frequency of Shopping by City  
Income Zone Location of *Tiendas*

	Low Income Zone	Middle Income Zone	High Income Zone
Twice a day or more	52%	60%	62%
Once a day	29	32	31
Less than once a day	19	8	7

SOURCE: MSU Retailer Survey (1967).

#### Retailer-Consumer Interfaces

##### Length of Transaction and Communication Patterns

The communication transaction between customer and retailer was explored in order to gain insight into the extent of such conversations, the content dimensions involved, and the apparent role of the retail outlet in social functions other than the exchange of food.

Our initial concern was with the amount of time and topic variety of the conversations involved in the transaction. In conversations such as the following, for example, very little other than simple economic exchange topics seem involved:

Customer: "Give me a pound of rice."  
Shopkeeper: "Here . . . one peso."

The amount of time spent in the shopping transaction in these outlets is an indication of the potential importance of conversation in the purchasing transaction. For each customer, the times of entering and of leaving the store were recorded. A minimal amount of time is spent in the shopping process, as seen from the data in Table 3.5.

In both public markets and *tiendas*, over 70% of all shoppers spent less than three minutes in the retail establishment

and over 90% spent five minutes or less. Fifty-one percent of *tienda* shoppers, as opposed to 35% of public market shoppers, spent one minute or less in the retail outlet. Thus, we found very little indication that any significant amount of time was being spent at either retail outlet.

	<u>Public Market</u>	<u>Tienda</u>
One minute or less	35%	51%
Two or three minutes	37	29
Four or five minutes	25	17
Over five minutes	3	3

SOURCE: MSU Retailer Survey (1967).

To obtain some evidence on the conversations which occurred in the shopping visit, the interviewers recorded word-for-word the conversation between the customer and the retailer. If a second customer entered while a conversation was being recorded, the interviewers were able to transcribe that one as well. The conversations were coded by Bolivian staff members on the basis of three levels of social interaction. The simplest level (commercial interchange only) referred to conversations such as the one mentioned above, in which only the items desired, their purchase prices, or the payment were involved. The intermediate level of communication (commercial interchange plus salutation) referred to conversations where, in addition to the information above, a minimal amount of social amenities was added, such as "good day, goodbye, thank you." The final category (extended conversation) was used for conversations which went beyond the second level, e.g., conversations giving any indication of bargaining, comments about the items, or discussion on any other topic. The distribution of conversations in each of these categories is given in Table 3.6.

The great majority of these conversations involved a direct request for the desired items. Two-thirds or more of the transactions in both retail outlets were directly to the point of the economic transaction. Only about one conversation in fourteen involved more extended social interaction. Purchases made in

	Public Market	Tienda
Commercial interchange only	65%	73%
Commercial interchange plus salutation	29	20
Extended conversation	6	7

SOURCE: MSU Retailer Survey (1967).

*tiendas* were somewhat more likely to involve the briefest of conversations--73% of conversations during purchases in *tiendas* were of this low level, as against 65% of the public market conversations. The conversations in public markets were relatively more likely to include the added component of salutatory greetings. Three out of ten conversations in public markets were of this nature, while only 20% of the *tienda* conversations involved communications at the intermediate level.

The conversations at the "extensive" interaction level were analyzed for the content dimensions which occupied the customer and retailer. Two potential dimensions were specifically investigated--whether bargaining took place between the retailer and client, and whether attempts were made by either individual to persuade the other on marketing topics.

There are very few *tiendas* which mark their prices, and hence direct bargaining over the price of a specific item might be expected. We expected to find relatively more bargaining in the public markets, where variations in product quality are likely to be higher than in *tiendas* and much more directly comparable from retailer to retailer. Bargaining might also be more common in public markets because of the effect on prices of day-to-day fluctuations in the supply of various items. However, in the extensive conversations there was very little indication of bargaining in either *tiendas* or public markets.

The apparent lack of bargaining runs counter to the conventional wisdom, which has long held that bargaining is an important variable in the exchange process in developing countries, having both social and economic overtones. In La Paz, bargaining appears to have been replaced by an arrangement known as the *casera* relationship. In the public markets, a steady shopper soon develops rapport with a few market women. As this rapport grows, the vendor

is expected to provide the best quality and quote the best price for that quality given the shopping patterns of the client. At times the vendor may counsel the customer to wait a few days for a shipment of better quality or lower price. The client, in turn, is expected to purchase with regularity from the vendor. Under these conditions, then, we would have been surprised to observe price bargaining in the public markets.

Persuasive messages can also flow between the retailer and client during the economic transaction. An enterprising retailer might seek to predict his customer's desires and encourage him to greater consumption. From the customer's point of view, the transaction offers the opportunity to comment on the quality, price and other features of the items he is buying, thus conveying his feelings to the shopkeeper. We found very little dialogue in which one conversant tried to persuade the other about some aspect of the specific purchase, about other items, or about the retail outlet in general.

Several content dimensions which are not directly related to the economic exchange might also appear in these conversations. The shopkeeper could serve as a frequently used source of information and opinions on a variety of topics for customers, i.e., as an "opinion leader." Or, he might fulfill a relay or liaison function, passing on comments and information from person to person without interjecting his own interpretations to any great extent. Finally, the shopkeeper's store might serve as a gathering place where persons discuss topics of mutual interest. There was little indication that any opinion leader role was being filled by the retailer. There were few instances noted where two or more people were in the outlet at the same time and hence there seems to have been little use of the establishment as a social gathering spot.

The majority of the extensive conversations originated from the retailer rather than from the client. The topics involved were likely to involve the health and well-being of the two participants or persons known to both of them. To a lesser extent, the conversations dealt with the actual purchase itself.

The amount of conversation which took place between the public market retailer and customer was related to the city income zone in which the market was located and the sex of the customer. In *tiendas*, conversational length was also related to the income zone location of the *tienda*, to the customer's age, and to the length of time spent in the store.

In the conversations recorded in public markets, the minimum transaction necessary for a commercial exchange was more common in low income zones than in high income zones. Four-fifths of the conversations occurring in low income zone markets involved the commercial exchange, while only one-half of conversations in high income zones were exclusively of a commercial nature.

Female customers in public markets were more likely to engage in conversations extending beyond a commercial exchange minimum than were male customers. Where nearly three-fifths of female customers engaged in the more extensive conversations, only one male in ten did so.

Minimal commercial exchange was more predominant in *tienda* transactions than in the public markets. Some difference was noted between income zones. Shoppers in high income zones were slightly more likely (10% vs 6%) to engage in extended conversation than were shoppers in low and middle income zones. On the other hand, shoppers in low and middle income zones were more likely (22% vs 15%) to use some sort of salutation in addition to strictly commercial interchange than were high income zone shoppers. Older customers were more likely to engage in extended conversation and use salutations than were either young adults, teenagers, or children. Here again, however, the differences were minimal and two-thirds or more of all shoppers in each age group engaged in nothing more than commercial interchange.

It is also interesting to note that time spent in the *tienda* (or public market) has little relationship with social interchange. As might be expected, social interchange increased as customers spent more than one minute in the *tienda*, but again, two-thirds or more of all customers engaged in commercial interchange only.

#### Exchange Patterns

Food shoppers in La Paz buy only a few items each time they visit an outlet. The data in Table 3.7 show the extent to which consumers purchase only a few items at each retailer. *Tienda* customers were more likely to purchase only one item, while public market customers were slightly more likely to purchase two or more items. Very few customers buy more than three items.

The extent to which only a few items are purchased at each shopping visit is reflected in the average value of these purchases. To those accustomed to \$10, \$15, and \$20 purchases at U.S. supermarkets, average purchases in La Paz seem absurdly low. In *tiendas* the mean customer purchase was about \$0.21 and the median purchase

	Public Market	Tienda
Bought nothing	2%	4%
Bought one product	75	81
Bought two products	17	11
Bought three or more products	6	4

SOURCE: MSU Retailer Survey (1967).

was \$0.08. The mean purchase in the public markets was \$0.15 and the median purchase was \$0.08. As examples of the number of units purchased, the customer with one peso (\$0.08), the median amount spent, could buy any of the following items in a *tienda*: 5 pieces of bread, 1 pound of sugar, 1.5 eggs, 1 pound of rice, or 0.5 pound of shortening. In the public market, one peso will purchase about 1 pound of potatoes, 1.6 pounds of tomatoes, or 6 ounces of beef bones.

In both public markets and *tiendas*, males were most likely to make the smaller purchases. This is not surprising, since male shoppers were predominantly children and teenagers, especially in the public markets. Older customers generally made the largest purchases in both public markets and *tiendas*. High income zone customers spent more per shopping trip than did low and middle income zone customers. However, it should be noted that even in high income zones, purchases are often no larger than \$0.15 to \$0.25.

#### Non-Price Competitive Tools

An attempt was made to assess the retailers' use of two non-price competitive tools, the extension of credit and the use of *vendaje*<sup>5</sup>. Very few instances of credit extension were recorded. In both *tiendas* and public markets, better than nine out of ten purchases were paid for in cash. *Tienda* operators were slightly more inclined than public market operators (7% vs 3% of all transactions) to give credit.

In those cases where credit was given, the value of the purchase was substantially higher than the means and medians noted

<sup>5</sup>*Vendaje* can be compared to a "baker's dozen." Many Bolivian customers traditionally expect a free addition to their paid-for purchase.

earlier for all purchases. This suggests that retailers were willing to use credit as a marketing tool for their better customers. The mean value of credit purchases was \$0.81 and the median value was \$0.32 for *tiendas*, or approximately four times the mean and median values for all *tienda* purchases. For public market retailers, the mean size of credit purchases was \$0.40, or slightly under three times the mean value of all purchases recorded in the public markets.

Credit was more likely to be given by *tiendas* located in the middle and upper income zones of the city. The granting of credit by *tienda* operators also varied with the frequency of shopping, the amount purchased, and the type of social interchange between the shopkeeper and his customer. Those who shopped once a day or more were more likely to receive credit than those shopping infrequently, i.e., less than once per day. Customers who purchased in larger quantities were also more likely to receive credit.<sup>6</sup> Moreover, those purchasing in larger amounts were generally given longer credit terms. Finally, the data show that customers engaging in extended conversation were considerably more likely to obtain credit than those who had only minimal commercial interchange.

The granting of *vendaje* by public market operators and *tienda* keepers parallels the pattern of credit extension described above. That is, in both the public markets and *tiendas*, *vendaje* is more likely to be given to customers who shop frequently, spend more, and have a greater degree of social interchange with the retailer.

#### Summary

Shopping behavior in La Paz is, to a certain extent, a function of the type of outlet, i.e., public market vs *tienda*. The major differences in shopping patterns between these two types of outlets are the sex of the shopper and the frequency of shopping. Shopping for fruits and vegetables in the public markets is done mainly by women, whereas nearly half of the *tienda* customers are male, many of them children or teenagers. The neighborhood nature of *tiendas* doubtless explains this pattern. *Tienda* customers shop

<sup>6</sup>It must be remembered, however, that large spenders were classified as those spending more than \$0.13 at one visit. Thus, the term has a different meaning than in, for example, the United States.

frequently, often twice a day or more, while public market customers are less frequent visitors. Apart from the study reported in this chapter, there is evidence that many people, especially in the middle and upper income brackets, do the bulk of their public market shopping on Saturdays. No such weekly pattern appears to exist in the case of *tiendas*.

There is some loyalty to certain retailers by customers, as some two-thirds of all customers observed were said to have purchased previously from the retailer. In many cases, the loyalty appears to derive from the customer's proximity to the retailer's place of business. Retail outlets do not seem to serve a social function. Fully two-thirds of retailer-consumer conversations were strictly to the point of commercial interchange, with no social amenities. Less than 10% of the conversations recorded were of an extended social nature. More than two-thirds of all customers spent less than three minutes at the retailing establishment. With regard to credit extension, only one-tenth of the transactions recorded were made on a credit basis. Thus, only limited store loyalty would seem to exist along this economic dimension.

Customers generally bought in small quantities. Most shoppers purchased only one item per visit. Rarely did a customer purchase three or more items. The dollar value of purchases was extremely small; for *tiendas* the mean purchase was \$0.21 and for public markets \$0.15.

The data suggest that loyalty to existing outlets is tenuous, based more on habit than on social or economic grounds. Thus, the introduction of modern, large-scale food outlets is not likely to meet with social resistance, nor with economic resistance if credit is not extended. The effect of frequent, small-quantity purchasing in *tiendas* on large-scale, self-service outlets is unclear. Many families may prefer to purchase in small quantities to reduce the problem of storage in the home, with subsequent possible spoilage or "pilferage" by the family's children. And, many families undoubtedly live on a hand-to-mouth basis and cannot afford infrequent, large-quantity purchasing. However, the pattern seen in weekly shopping for perishables may transfer to self-service outlets, especially if price reductions accompany modernization.



## CHAPTER 4

### FOOD RETAILING IN LA PAZ

The data presented in Chapter 2 show the extent to which family income in La Paz is devoted to purchases of food, especially for lower income families. From the data in Chapter 3 describing the consumer and his relationship with retailers, one concludes that consumers are likely to shop frequently (especially in *tiendas*), purchase relatively small amounts at any one outlet on each shopping excursion, obtain little credit from retailers, and derive little in the way of social interaction at any retailing outlet.

In this chapter, a description is given of food retailing establishments in La Paz, as well as an analysis of existing and/or possible entrepreneurial activities in this sector of the distribution channel. Four major characteristics of retailers are discussed: (1) personal, (2) communications, (3) economic, and (4) entrepreneurial.

There are three distinct types of retailers in La Paz--street merchants, market women, and *tienda* keepers. In general, street merchants and market women are fresh fruit and vegetable vendors, while *tiendas* are purveyors of dried and processed food-stuffs. While market women operate in fixed, assigned stalls in public markets, street merchants--as the name implies--sell their wares while seated on street corners. Street merchants often operate on the fringes of the public markets, but may also be seen in areas remote from public markets. A further critical difference between street merchants and market women is in their relationships with the municipal government. Market women pay a business tax; street merchants do not. Market women, however, are, in effect, subsidized by the municipality in its provision of public facilities, while street merchants are under constant threat--occasionally carried through--of banishment from the streets.

Since no up-to-date listing of La Paz food retailers existed at the time of this study, it was necessary to develop a list from which a sample could be drawn for interviewing. A census was conducted by the MSU project in December 1966 and January 1967. The city was divided into zones, with canvassers assigned

to each zone. The canvassers noted the address (or location) of each retailer, type of retailer, and type of goods sold.

With regard to types of retailer, the three-way classification described previously was used, with a further subclassification made in the case of *tiendas*. *Tiendas* were classified as "small" if the sales area could accommodate one to three people, "medium" if four to eight people could be handled, and "large" if there was a sales area for nine or more customers.

Approximately 10,000 retailers were located by the canvassing. The preponderance of small *tiendas* and the paucity of large outlets is seen in Table 4.1. There are likely to be some 15% more *tiendas* and market women than were counted. Depending on the time of day and the day of week, there will be variations in the number of market women in their stalls and selling. Under-reporting was most likely to have occurred in the case of street merchants. Again, the time of day and day of canvassing affect the presence of street merchants at their normal place of business. Furthermore, the census was taken in non-harvest months; personal observations indicated a far greater incidence of street merchants in the harvest months. An estimate of under-reporting of street merchants of 20 to 25% from peak selling periods is probably realistic.

	Total	Dry		Fruits	Canned		
		Goods	Meat	& Veg.	Goods	Bev.	Poultry
Street Merchants	2255	265	190	1782	70	121	68
Market Women	3106	433	689	1951	208	67	218
<i>Tiendas</i>	4445	3697	182	606	2819	4126	1037
Small	3456	2871	74	497	1999	3222	617
Medium	833	707	76	98	702	770	375
Large	156	119	32	11	118	134	45
Total	9806	4395	1061	4339	3097	4314	1323

SOURCE: MSU Retailer Census (1966-67).

The data in Table 4.1 clearly show the degree to which certain types of foods are sold in specialized outlets. For example, 86% of all fruit and vegetable outlets are of the street merchant-public market type. Meat outlets are also highly concentrated in one retailer type, with nearly two-thirds being in the public

markets. Less than one-fifth of all meat outlets are self-contained, individual store operations. Sales of non-perishable and processed foods are to be found mainly in *tiendas*. Of the three main classifications of non-perishables and processed foods, 83% of all dry goods outlets and over nine-tenths of canned goods and beverage outlets are of the *tienda* type. With respect to the degree to which La Paz retailers specialize by product line, the census showed that slightly over half of all retailers sold only one product line, while only 1% sold all six classes of products. To a great extent, meat and fruit and vegetable retailers tended to specialize in only one product type. The data in Table 4.1 show that, because of a limited product line, only a very few retailers have the opportunity to employ mixed-margin merchandising policies.

Some idea of the plethora of food retailers may be had by considering the number of retailers per family. Taking into account the degree of product specialization, there is approximately one meat retailer per 75 families, one retailer of non-perishables per 18 families, and one fresh fruit and vegetable retailer per 18 families. In contrast, the United States has approximately one food retailer for every 700 families.

A random sample of food retailers was drawn from the total census. Of the sample size of 392, 85% of the interviews were valid and comprise the data base for the description and analysis in this chapter. Approximately 20% of each interviewer's questionnaires were validated by return visits of a senior researcher to the retailer. The degree of coincidence with original responses was surprisingly high and we feel confident of the accuracy of the data presented herein.<sup>1</sup> The data in this chapter are based on the following distribution of interviews: street merchants--78, market women--100, and *tienda* keepers--155.

## Personal Characteristics

### Demographic Characteristics

For the most part, food retailing in La Paz is handled by women. The male-female mix is significantly different between

---

<sup>1</sup>The only exception to this is in the data on sales volume. These data appear to be badly understated. In view of the apparent validity of the other data, we feel that responses to sales volume were largely understated because of ignorance, and not intention to mislead.

the three types of retailers, but in no case are more than 25% of the retailers men. Approximately nine-tenths of street merchants and market women are likely to be females, while only three-fourths of *tienda* keepers are likely to be women.

There are also significant differences between the three types of retailers with respect to age. Street merchants have a mean age of 34, market women of 37, and *tienda* keepers of 41. Table 4.2 shows relative age distribution for the three groups. As can be seen, *tienda* keepers tend to be older than retailers in the other two categories.

	Age		
	14-32	33-42	43+
Street Merchants	45%	29%	26%
Market Women	46	28	26
<i>Tienda</i> Keepers	25	37	38

SOURCE: MSU Retailer Survey (1967).

Approximately one-third of the retailers interviewed were single, separated, or widowed, and thus apparently dependent on income from their food business. Street merchants were more likely to be single (42% of the respondents), while nearly one-third of both market women and *tienda* keepers were single.

*Tienda* keepers reported the largest size families, with a mean of 5.5. Market women had nearly one person less per family, with a mean of 4.7 persons, while street merchants had a mean of 4 people per family. Thus, while street merchants may be more dependent on their business, they have slightly fewer people to support.

Illness is apparently not a major problem in food retailing. When asked whether they had missed work in the last month because of illness, only one out of eight *tienda* keepers responded in the affirmative, while 20% of the market women and 26% of the street merchants reported having been ill. The mean number of days missed was 10 for *tienda* keepers and market women and 9 for street merchants.

### Levels of Education

*Tienda* keepers had a substantially higher level of education and reading ability than street merchants or market women. Over three-fifths of street merchants and market women were illiterate, while two-thirds of *tienda* keepers were able to read well.<sup>2</sup> As seen in Table 4.3, the differences between street merchants and market women are not great, but between these two and *tienda* keepers there is a significant difference.

Table 4.3 Ability to Read by Type of Retailer			
	Ability to Read		
	Unable	Partial	Able
Street Merchants	62%	13%	25%
Market Women	65	3	32
<i>Tienda</i> Keepers	27	4	69

SOURCE: MSU Retailer Survey (1967).

The ability to read, as shown above, is consistent with the degree of schooling claimed by respondents. Again, street merchants and market women were at nearly the same level, with respective mean years of schooling of 1.5 and 1.6. In contrast, *tienda* keepers had a mean of 5.2 years. Three out of five street merchants and market women reported having no formal education, compared to only one out of five *tienda* keepers.

In addition to the above indication of literacy, we tested for educational aspirations. Interviewees were asked what degree of education they desired for their oldest child. Respondents were then asked whether they thought the desired level could be achieved. As can be seen from Table 4.4, *tienda* keepers had higher expectations than respondents in the other two groups. Better than two out of three of *tienda* keepers desired a university education, while approximately half of street merchants and market women desired this level for their oldest child. Interestingly, street merchants were more likely to desire a university education for their eldest child (52%) than were market women (46%). More

<sup>2</sup> Reading ability was measured through administration of a sentence in Spanish containing six words. Respondents were judged on the number of words they could read in the sentence, their speed of reading, and their comprehension.

than nine-tenths of the *tienda* keepers expected to achieve their high level of aspiration, while 88% of the street merchants and 85% of the market women expected to achieve a lower aspiration.

	Technical School	High School	University
Street Merchants	27%	10%	52%
Market Women	28	19	46
<i>Tienda</i> Keepers	14	10	70

SOURCE: MSU Retailer Survey (1967).

#### Degree of Mobility and Group Membership

As one indication of receptiveness to new ideas, we looked at the degree to which each respondent had historically been exposed to new people and places. A series of questions was asked regarding (1) military service, (2) years of residence in other provinces, (3) years of residence in present location, and (4) travel outside of Bolivia. A mobility index was constructed from these variables. On the basis of a three-way split, as seen in Table 4.5, *tienda* keepers have the highest mobility, with street merchants next, and market women least mobile.

	Low Mobility	Medium Mobility	High Mobility
Street Merchants	23%	45%	32%
Market Women	34	43	23
<i>Tienda</i> Keepers	11	50	39

SOURCE: MSU Retailer Survey (1967).

An examination of the various components of the mobility index may help shed additional light on the degree to which retailers have been exposed to new ideas, customs, ways of life, etc. Each interviewee was asked whether she (or he) or spouse had served in the military for six months or more. *Tienda* keepers or their spouses were more likely to have had this

experience, with 88% having served. For street merchants and market women, affirmative responses were substantially lower, at 71% and 68%, respectively.

Approximately two-thirds of those interviewed had never lived in another province. Street merchants and *tienda* keepers were more likely to have lived longer in another province.

*Tienda* keepers were much more likely to have traveled outside of Bolivia than either of the other two groups. Fourteen percent of *tienda* keepers reported out-of-country travel, vs 7% for street merchants and 1% for market women.

Retailers were also asked about membership in three types of groups--unions, market women's organizations, and cooperatives. Very low membership patterns were reported (see Table 4.6). Virtually none of the respondents reported membership in a cooperative. Market women were far more likely to hold membership in the other two groups under consideration, but in no case did membership exceed 25% of those interviewed. It would appear that retailers are little influenced by such group membership. The apparent lack of influence is further substantiated by the low degree to which those reporting membership say they receive help from those organizations. Approximately one-fourth of participating market women say they receive help from their union and/or market women's group. Street merchants reported only slightly greater help (one-third of those who held membership) from the union to which they belong. Thus, group membership is low, and apparently of no great help.

Table 4.6 Group Membership by Type of Retailer			
	Union Member	Market Women's Group	Cooperative
Street Merchants	18%	4%	1%
Market Women	24	25	2
<i>Tienda</i> Keepers	2	2	2

SOURCE: MSU Retailer Survey (1967).

#### Family Relationships and Sources of Other Income

Reforms in the distribution systems of underdeveloped economies have traditionally been viewed as likely to increase unemployment. We therefore attempted to determine the degree of extended family involvement in food retailing and the degree to which family groups had access to other sources of income.

With respect to street merchants and market women, we were interested in the extent to which these retailers acted as outlets for relatives who were farmers. People in La Paz who were familiar with the retailing of perishables had thought that this was prevalent. Our survey data suggested that the retailer-farmer relationship was not of a familial nature. Only 5% of street merchants and 4% of market women reported selling for their husband or relatives.<sup>3</sup>

Some extended family relationships appear to be in existence in the marketing of perishables. Slightly over one-fourth of street merchants and over one-third of market women reported having relatives in food retailing. A mean of 1.8 relatives in food retailing was reported for those street merchants indicating this family relationship, with a higher mean of 2.8 for market women reporting this relationship. In addition to having relatives in other food retailing operations, some retailers reported that immediate family members worked with them in their operations. Only 4% of street merchants reported this practice. Almost one-fifth of the market women reported that immediate family members worked with them. In the case of *tiendas*, 20% of the respondents said that immediate family members worked in the business. The evidence seems to suggest moderate extended family relationships for street merchants and more involved family relationships for market women.<sup>4</sup>

Less than one-tenth of food retailers reported having other jobs. *Tienda* keepers were twice as likely (9%) as street merchants (4%) and market women (4%) to have additional sources of income. A mean outside monthly income of \$42 was reported by the *tienda* keepers holding outside jobs. The three street merchants who held other jobs reported a mean monthly outside income of \$18.

A substantial minority of retailers reported family income accruing from other members of the immediate family. Table 4.7 indicates the situation for each of the three retailing groups. Twenty-three percent of street merchants reported that family members had other jobs. Of 17 respondents, seven were able to specify the monthly income of immediate family members; a mean monthly

---

<sup>3</sup>There was some indication in the farmer surveys that farmers' wives from the Rio Abajo-Palca area brought family produce into La Paz for sale. These people sold mainly in the Rodriguez-Uruguay complex.

<sup>4</sup>Although not statistically reliable, preliminary in-depth interviews in the Sopocachi market revealed a grandmother, mother, niece, and two daughters operating separate stalls. Positions in the market were apparently handed down through generations.

income of \$32 was reported. Approximately one-third of the market women and *tienda* keepers interviewed reported that immediate family members provided additional income. In the case of market women, 18 out of 33 were able to give income data; a monthly mean of \$22 was reported. For *tienda* keepers, 34 out of 54 indicated a mean monthly income for immediate family members of \$65.

Table 4.7 Monthly Income of Immediate Family Members

	Percentage of Respondents	Monthly Income <sup>a</sup>
Street Merchants	23%	\$32
Market Women	34	22
<i>Tienda</i> Keepers	32	65

<sup>a</sup>The mean for street merchants is based on data from 7 of the 17 who reported immediate family members with outside income. The proportion for market women is 18 out of 33, and for *tienda* keepers, 34 out of 54.

SOURCE: MSU Retailer Survey (1967).

A sizeable minority of retailers have access to monthly income separate from their retailing operations. Combining those retailers who have other jobs with those who have other family sources of income, we find that 27% of the street merchants have a mean monthly outside income of \$28. More than one-third of market women have a mean monthly outside income of \$21. Finally, 43% of *tienda* keepers reported a mean monthly outside income of \$59.

#### Perceptions of Progress

Retailers were asked a series of questions relating to their perception of the progress which they and Bolivia were making. In general, they were dissatisfied about progress in the previous five years, both for themselves and Bolivia. Street merchants were the most unhappy. *Tienda* keepers were most likely to feel that progress had been made. When asked about Bolivia's progress in the last five years, only 11% of street merchants, 18% of market women, and 28% of *tienda* keepers thought that Bolivia had made good progress in the preceding five years. Perceptions of individual progress were slightly more gloomy, with only 9% of street merchants, 15% of market women, and 20% of *tienda* keepers feeling they had made good progress.

A generally more optimistic view of the future prevailed, however. Retailers were asked whether conditions five years in the future would be "better," "the same," or "worse." Slightly over three-fifths of market women and *tienda* keepers feel that conditions will be "better" five years hence, compared with only one-third of street merchants. On the other hand, 15% of the *tienda* keepers, 18% of the market women, and 32% of street merchants felt that conditions would be "worse" five years hence.

#### Communication Characteristics

Two types of communication exposure were investigated--mass media exposure and inter-personal communications. With respect to the former, respondents were studied for exposure to newspapers, magazines, movies, and radio. As could be expected, given their much higher level of reading ability, *tienda* keepers were much more likely than other retailers to be exposed to printed media. Fifty-seven percent of *tienda* keepers read or had newspapers read to them, compared with 33% of street merchants and 26% of market women. The same relationships, although at a lower level, also held true for magazine readership.

Most retailers are not exposed to either the advertising at movies or the modernizing effects of the film itself. *Tienda* keepers (41%) were most likely to have attended a movie in the month preceding the interview, compared to 24% of market women and 23% of street merchants. Less than one-tenth of the street merchants and market women attended movies three or more times per month, compared to 17% of *tienda* keepers who attended this often.

The majority of retailers listen to the radio. Nine out of ten *tienda* keepers reported listening to the radio, compared with 70% of market women and 63% of street merchants. *Tienda* keepers also had the most exposure, with two-thirds reporting listening to the radio three or more hours per day. Data on exposure to radio are shown in Table 4.8. The most popular radio station in La Paz is Nueva America, with 63% of street merchants and 61% of market women reporting this as being the station they listen to most. Three-fourths of *tienda* keepers also reported that Nueva America was their first choice of stations to listen to.

*Tienda* keepers quite clearly are exposed to mass media to a far greater extent than street merchants and market women.

Both printed and broadcast messages can be utilized to reach them. On the other hand, it seems clear that broadcast messages are needed to reach the majority of street merchants and market women.

	<u>0</u>	<u>1-2</u>	<u>3+</u>
Street Merchants	37%	36%	27%
Market Women	30	52	18
Tienda Keepers	9	24	67

SOURCE: MSU Retailer Survey (1967).

In an attempt to determine who might be the best communicator of information to retailers, we asked each interviewee who was the best source of business information. As seen in Table 4.9, other merchants were clearly the most mentioned source, ranging from nearly one-half for *tienda* keepers to two-thirds for street merchants. The government was considered the best source by approximately 20% of the respondents. Truckers and neighbors were two other sources mentioned. Although retailers indicated that their best sources would be someone in close proximity, i.e., other merchants, only one in ten in each group reported discussing business methods with other businessmen in the month preceding the interview. Thus, while interpersonal sources potentially may have credibility, they are apparently rarely used.

	<u>Merchant</u>	<u>Government</u>	<u>Trucker</u>	<u>Neighbor</u>
Street Merchants	66%	20%	12%	2%
Market Women	52	18	22	5
Tienda Keepers	48	24	11	16

SOURCE: MSU Retailer Survey (1967).

#### Economic Characteristics

##### General Business Practices

La Paz food retailing is characterized by small-scale units which operate long hours. Entry and exit appear to be easy. The

ease of entry and exit is perhaps seen most clearly in the number of years retailers said they had been in the food business. While the over-all mean for all retailers was 7.9 years, the median was only 3.0 years. Market women had been in business a mean of 9.8 years, in contrast to a mean of 6.2 for *tienda* keepers and a mean of 4.9 years for street women. The greater longevity for market women is probably a consequence of the guaranteed access to customers provided by a fixed market stall. Also, there are obviously only a limited number of stalls. Half the *tienda* keepers reported having been in business two years or less, while half the market women reported having been in retailing nine or more years.

Entry into food retailing is eased by the fairly low initial investment required. For all retailers, a mean of \$68 was noted, with a range from \$12 for street merchants to \$18 for market women to \$108 for *tiendas*. The median investment is considerably lower; median investment was less than \$8 for both street merchants and market women, compared to a median of \$38 for *tiendas*. These amounts are probably not large enough to deter prospective entrants.

Personal funds were the main source of investment capital, followed by loans from private individuals, and then commercial loans. As seen in Table 4.10, market women were least likely to use personal funds, even though nearly half utilized this source. Nearly two-thirds of *tienda* keepers resorted to their own capital. One-fifth of the market women were able to obtain commercial loans, probably from suppliers.

	Personal Funds	Private Loan	Commercial Loan
Street Merchants	57%	22%	13%
Market Women	48	28	19
<i>Tienda</i> Keepers	66	24	6

SOURCE: MSU Retailer Survey (1967).

Very little modern retailing equipment was used by the retailers interviewed. The data in Table 4.11 show the equipment used by type of retailer. As can be seen, refrigerators, freezers and cash registers are generally not to be found in food retail outlets. Further, the data in Table 4.11 do not convey the age and the hand-made nature of much of the equipment used by retailers,

including balances and scales. When asked the market value of their equipment, only 20% of the *tienda* keepers were able or willing to give an estimate; the mean value was put at \$136. Street merchants and market women generally could not assign a value to their equipment.

Table 4.11: Equipment Usage by Type of Retailer

	Street Merchants	Market Women	<i>Tienda</i> Keepers
Balance	17%	41%	34%
Scale	18	48	79
Counter	8	26	92
Display Shelves	3	2	51
Glass Showcase	5	1	84
Refrigerator	0	1	1
Freezer	0	1	0
Cash Register	0	0	1
Tables	25	11	39
Boxes	21	34	56
Chairs	5	1	40

SOURCE: MSU Retailer Survey (1967).

The small scale of food retailing is evidenced by the physical size of the operations surveyed. Street merchants and market women rarely occupied areas more than five feet on a side. *Tiendas* were also small; a mean store size of 160 square feet and a median of 110 square feet were reported. Quite often a *tienda* was no more than a garage in a private home or a room opening on the street. Indeed, 62% of all *tienda* keepers reported living on the same premises in which they had their business.

Retailers claimed that extension of credit was fairly common practice. Four out of ten street merchants and half the market women and *tienda* keepers said they extended credit. Of those who claimed to extend credit, only 10% of street merchants and market women said they sold a majority of their sales on credit, while 28% of *tienda* keepers said a majority of their sales were on credit.<sup>5</sup> The mean number of days for which credit was given ranged

<sup>5</sup> See page 51 for a different view of credit practices. When diary records were kept of credit transactions, less than 10% of all purchases recorded were made on a credit basis. Since the transaction records report actual behavior as opposed to claimed behavior, we conclude that, in fact, credit extension is not a common practice.

from 10 days for street merchants to 14 for market women to 20 for tienda keepers. In general, no charge was made on credit sales.

#### Supplier Relationships

Market Women and Street Merchants - Data on the relationship between supplier and retailer are available for six perishable products--potatoes, tomatoes, onions, carrots, oranges, and bananas. These are the fruit and vegetable items on which La Paz families make their greatest expenditures. They account for slightly more than half of all fruit and vegetable purchases.

Fruits and vegetables are purchased quite frequently by both street merchants and market women. Both types of retailers shop an average of approximately three times per week (every other day) for the six products mentioned above.

Street merchants are likely to have only one supplier per product, while market women reported having between one and two. When asked to specify the total number of suppliers they had, street merchants reported a mean of 2.5 and market women a mean of 3.6. In-depth interviewing suggested, however, that retailers of perishables are not steady customers of one wholesaler, but shop for the quality and price which they desire.

As might be expected with frequent purchasing, the average value of the "last purchase" made by the retailer is quite low. The data in Table 4.12 show, surprisingly, that the mean purchases of vegetables by street merchants are higher than those of market women. On the other hand, market women had larger mean and median purchases of fruits. It seems clear that retailers of perishables are, with few exceptions, not likely to have any great leverage over their suppliers.

	Street Merchants		Market Women	
	Mean	Median	Mean	Median
Potatoes	\$13.75	\$7.33	\$5.83	\$3.33
Tomatoes	2.42	0.83	1.17	1.00
Onions	1.92	1.17	0.92	0.67
Carrots	1.92	0.67	1.08	0.83
Oranges	3.25	1.25	3.67	2.50
Bananas	2.67	1.00	5.58	1.67

SOURCE: MSU Retailer Survey (1967).

Market women were more likely to obtain credit from their suppliers. As will be shown later, market women reported higher sales volumes than did street merchants; this higher level of business, as well as their fixed location, is probably a major factor in their access to supplier credit. Nearly half of the market women reported receiving credit, as opposed to 29% of the street merchants.

Credit extension was for less than a week for all products and for both types of retailers. Street merchants obtained an average of 5.4 days credit and market women an average of 4.4 days. Over half (56%) of market women who received credit paid an average of 7.7% for that credit. If, as seems likely from the responses, this is a charge per purchase, the interest rate on an annual basis would be phenomenally high.

With regard to the type of supplier, market women were much more likely to buy principally from market wholesalers than were street merchants. Table 4.13 shows the most important supplier reported by each type of retailer. The great majority of market

	<u>Street Merchants</u>	<u>Market Women</u>
<b>Potatoes</b>		
Farmer	27%	18%
Wholesaler	73	73
<b>Tomatoes</b>		
Farmer	43	8
Wholesaler	57	92
<b>Onions</b>		
Farmer	44	9
Wholesaler	56	88
<b>Carrots</b>		
Farmer	47	5
Wholesaler	53	90
<b>Oranges</b>		
Farmer-trucker	9	41
Wholesaler	91	59
<b>Bananas</b>		
Farmer	11	33
Wholesaler	89	67

SOURCE: MSU Retailer Survey (1967).

women selling vegetables buy from wholesalers as opposed to buying direct from farmers. The majority of street merchants selling vegetables also buy from wholesalers, but nearly half say they buy direct from farmers. With regard to fruits, the situation is reversed. Some 90% of street merchants buy from wholesalers, while approximately two-thirds of market women buy from wholesalers.

*Tiendas* - Data were gathered on supplier relationships for seven products--bread, sugar, rice, pasta, fats and oils, canned goods, and soft drinks. With the exception of bread, which is purchased largely on a daily basis, these products were purchased approximately every three weeks. For the most part, retailers are obliged to go to the wholesaler to buy and to provide transport for items purchased. Bread and soft drinks are usually delivered to the retailer by the manufacturer. For the other items on which we have information, 27% of the respondents indicated that their suppliers delivered. As in the case of street merchants and market women, *tienda* keepers were likely to have only a few suppliers per category of product sold; the average for the seven products reported on here was 1.6. *Tienda* keepers reported having a total of 6.5 suppliers. Data on purchasing frequency, delivery service, and number of suppliers are shown in Table 4.14.

	Purchasing Frequency (times/month)	Number of Suppliers	Delivery Service
Rice	1.7	1.6	40%
Bread	26.3	1.4	79
Sugar	1.2	1.1	27
Pasta	1.1	1.3	22
Oils and Fats	1.0	1.2	26
Soft Drinks	3.4	3.1	96
Canned Goods	1.1	1.4	22

SOURCE: MSU Retailer Survey (1967).

The small scale of La Paz *tiendas* is reflected in the value of their "last purchase." The data in Table 4.15 suggest that few retailers, if any, have sufficient purchasing power to greatly

influence their suppliers. A retailer could, of course, aggregate his purchases and thereby achieve some measure of leverage over a supplier. If mean purchases of rice, sugar, pasta, oil and shortening, and canned goods are summed, the average purchase could reach \$70. It is possible to buy all these items at one of a limited number of wholesalers, but even this aggregated figure is rather low.

	Mean Value	Median Value
Rice	\$12.00	\$7.08
Bread	3.58	1.25
Sugar	19.17	6.67
Pasta	7.75	8.33
Fats and Oils	21.33	6.67
Soft Drinks	13.92	4.19
Canned Goods	9.00	5.00

SOURCE: MSU Retailer Survey (1967).

Very few *tienda* keepers reported receiving credit from their suppliers. An average of 7% of the respondents reported receiving credit, ranging from 1% of those purchasing soft drinks to 13% of those purchasing bread. An average of 22 days credit was extended. Soft drink and bread suppliers did not charge for credit. Of those retailers who received credit on the other items reported on here, nearly one-fourth reported being charged an average of 5%. If a repayment period of three weeks is assumed, the charge is equivalent to an annual rate of some 85%.

With the exception of sugar, on which 88% of *tienda* keepers reported obtaining a quantity discount, there was little evidence of incentive to purchase in quantity. Not counting sugar, an average of 15% of *tiendas* received quantity discounts. These discounts averaged 8%, ranging from 6% for pasta to 13% for soft drinks.

#### Sales, Margins and Profits

An accurate estimate of sales volume by type of retail outlet was not easily obtained. One measure of sales volume was obtained through the survey questionnaire. Respondents were asked for their sales "yesterday" and "last week." These sales were

then projected to a yearly volume and averaged. Since none of the street merchants or market women interviewed kept books, and only two *tiendas* did, it seemed impractical to ask directly for figures on annual sales. Some bias was built into a question asking for "yesterday's" sales, since sales volume probably varied by the day of the week. Sales "last week" probably gave a better estimate when projected annually, but we found a sizeable minority of retailers who could specify only "yesterday's" sales.

In addition to sales data derived from the survey questionnaire, information was available from the diary study of *tiendas*.<sup>6</sup> In this study a full inventory (at retailer cost) of each *tienda* studied was taken at the initial visit. A return visit was made two to three weeks later and a detailed final inventory was taken. In addition, the value of purchases made by the retailer in the period between inventories was recorded product-by-product. It was thus possible to determine sales volume during the period under consideration and then project to an annual basis. Completed inventories and purchases were available for 22 *tiendas*; average annual sales for these stores was calculated at \$5680, approximately three times greater than annual sales reported by these outlets in the survey questionnaires.

Given the method for determining annual sales in the diary study, it is highly likely that the \$5680 figure is accurate. As a further check of the reliability of the diary sales figures, we looked at the relative distribution of sales by product types in the *tiendas* covered in the diary study and compared these with the relative distribution of consumption of these product types as reported in the consumer study (see Table 4.16). The distributions are sufficiently similar to suggest that the diary study is comparable to the consumer study, and reliable.

Since the survey data on *tienda* sales proved to be understated by a factor of three, corrections were also made to the reported sales volumes for street merchants and market women. Estimations were made on the basis of consumption reported in the Ministry of Hacienda consumer study and the retailer census conducted by the MSU research team. Final estimates of sales by retailer and product type are given in Table 4.17.

---

<sup>6</sup>As noted in Chapter 3, the *tiendas* studied in depth were randomly drawn from the larger retailer survey sample and are therefore considered to be representative of *tiendas* in general.

	<u>In-Depth Diary Study</u>	<u>Ministry of Hacienda Consumer Study</u>
Food Products	81%	83%
Soft Drinks	4	4
Beer	5	4
Non-foods	10	9
	100%	100%

SOURCE: Ministerio de Hacienda, La Paz, Bolivia; and MSU Retailer Survey (1967).

	<u>Processed and Dried Fruit</u>	<u>Fruits and Vegetables</u>	<u>Meat</u>
Street Merchants	\$2760	\$2750	\$ 9090
Market Women	3580	3680	13550
<i>Tienda</i> Keepers	5680	--	10900

SOURCE: MSU Retailer Survey (1967).

As part of the survey questionnaire, each retailer was asked his buying and selling prices for a number of specified products. Gross margins were then calculated on the basis of selling price less buying price divided by selling price. Two methods were then used to determine an over-all gross margin for the retailer. A rough approximation was obtained by asking the retailer for his three largest-selling products, and then averaging the gross margins for these three products. A more detailed figure was obtained by calculating the weighted average gross margin of all products sold through the various outlets. The weightings were based on consumption data derived from the Ministry of Hacienda consumer study.

Gross margins by product, weighted gross margins, and the reported average gross margin for the three largest-selling products are shown in Table 4.18 for dry and processed food retailers and in Table 4.19 for fruit and vegetable retailers. The data in Table 4.18 cover some 90% of the value of products flowing through dry and processed food retailers, while the data in Table 4.19 cover approximately 65% of the value of the products flowing

Table 4.18 Gross Margin Estimates for Dry and Processed Food Retailers	
<u>Product</u>	<u>Reported Gross Margin</u>
Bread	17.2%
Sugar	12.8
Canned Milk	11.7
Vegetable Oil	12.1
Rice	15.7
Eggs	12.2
Soft Drinks	26.4
Pasta	14.0
Shortening	14.0
Beer	9.4
Canned Goods	12.5
Miscellaneous	15.0 (est.)
Coffee/Tea	
Cigarettes	
Soap	
Wax	
Weighted average gross margin	14.8%
Reported average of three largest-selling products	13.9%

SOURCE: MSU Retailer Survey (1967).

Table 4.19 Gross Margin Estimates for Fruit and Vegetable Retailers		
<u>Product</u>	<u>Reported Gross Margin</u>	
	<u>Street Merchants</u>	<u>Market Women</u>
Potatoes	16.8%	15.4%
Onions	19.7	20.8
Bananas	20.9	26.2
Tomatoes	22.6	19.5
<i>Chuña</i>	16.0	13.9
Oranges	23.4	23.6
Carrots	22.9	21.3
Peas	21.8	19.2
Beans	19.7	24.9
Corn	28.8	21.7
Lettuce	20.5	21.6
<i>Loooto</i>	27.2	20.9
Weighted average gross margin	20.1%	19.3%
Reported average of three largest-selling products	20.2%	17.8%

SOURCE: MSU Retailer Survey (1967).

through fruit and vegetable outlets. The approximation derived from averaging the gross margins of the three largest-selling products is quite close to the projected weighted average figure.

Most of the *tiendas* studied carried the items shown in Table 4.18. The in-depth diary study data showed that *tiendas* carried an average of 23 product types, of which 19 were food and 4 non-food. The average value of inventory carried by the *tiendas* in the diary study was \$177. Data from the diary study of market women showed that these retailers carried an average of nine types of fruits and vegetables with an average inventory value of \$21.

As seen in Table 4.18, dried and processed goods gross margins are within a narrow range of 10% to 15%, with the exception of bread at 17% and soft drinks at 26%. The same pattern of margin uniformity is seen in the data in Table 4.19, with the exception of potatoes and *ahuña* (dried white potatoes), which have lower margins. In neither case do the largest-selling products have appreciably smaller margins, nor do the slower moving products have appreciably higher margins. Mixed margin possibilities are clearly not being utilized.

The data developed on sales and gross margins can now be combined with reported data on expenses to determine profit and loss statements.<sup>7</sup> Given the apparent inaccuracies of the reported sales figures, questions may be raised regarding the validity of the data on expenses. No independent data is available against which to check these data and they must be used as is. "Profits" are extremely low in all food retailing establishments except meat outlets, and any reasonable bias in reporting of expenses will not alter the apparent profitability of retailing to any meaningful extent. Profit and loss statements for dry and processed food retailers, fruit and vegetable retailers, and meat retailers are shown in Tables 4.20, 4.21 and 4.22, respectively.

Most retailers are earning little more than wages through their entrepreneurial activity. As noted earlier in this chapter, a majority of retailers are the only source of income for their families. With the exception of meat retailers, whose "profits" are greater than average family income in La Paz, retailers' "profits" are only one-fourth to one-half of average family income

---

<sup>7</sup>The profit and loss statements do not include a charge for the retailer's time; thus, the profit figure which is developed is a return on the retailer's time (i.e., wages) as well as return on his invested capital.

in the city. Thus, these operators are investing capital and long hours for virtually no return other than low wages. It seems clear that few retailers would be in a position to re-invest in their businesses.

Table 4.20 Annual Profit and Loss Statements for Dried and Processed Food Retailers			
	<u>Street Merchants</u>	<u>Market Women</u>	<u>Tiendas</u>
Sales	\$2760	\$3580	\$5680
Gross Margin	<u>.148</u>	<u>.148</u>	<u>.148</u>
Gross Profit	\$ 409	\$ 530	\$1010
Expenses:			
Rent	\$ 0	\$ 0	\$ 135
Electricity	0	0	25
Taxes	11	16	26
Delivery Costs	10	8	18
Maintenance	4	8	13
Packaging	<u>2</u>	<u>5</u>	<u>8</u>
Total Expenses	\$ 27	\$ 37	\$ 225
Net Profit	<u>\$ 382</u>	<u>\$ 493</u>	<u>\$ 785</u>

SOURCE: MSU Retailer Survey (1967).

Table 4.21 Annual Profit and Loss Statements for Fruit and Vegetable Retailers		
	<u>Street Merchants</u>	<u>Market Women</u>
Sales	\$2750	\$3670
Gross Margin	<u>.201</u>	<u>.193</u>
Gross Profit	\$ 553	\$ 708
Expenses:		
Delivery	\$ 26	\$ 36
Taxes	13	18
Maintenance	6	.9
Packaging	<u>5</u>	<u>6</u>
Total Expenses	\$ 50	\$ 69
Net Profit	<u>\$ 503</u>	<u>\$ 639</u>

SOURCE: MSU Retailer Survey (1967).

Table 4.22 Annual Profit and Loss Statements for Meat Retailers			
	<u>Street Merchants</u>	<u>Market Women</u>	<u>Tiendas</u>
Sales	\$9100	\$13,500	\$10,900
Gross Margin	<u>.202</u>	<u>.160</u>	<u>.185</u>
Gross Profit	\$1840	\$ 2,160	\$ 2,020
Expenses:			
Rent	\$ 0	\$ 0	\$ 150
Electricity	0	0	30
Taxes	15	49	25
Delivery	90	118	95
Maintenance	11	12	10
Packaging	<u>24</u>	<u>33</u>	<u>25</u>
Total Expenses	\$ 140	\$ 212	\$ 335
Net Profit	<u>\$1700</u>	<u>\$ 1,948</u>	<u>\$ 1,685</u>

SOURCE: MSU Retailer Survey (1967).

Somewhat surprisingly, fruit and vegetable market women earn more than dry and processed goods retailers. Margins are substantially higher. In the case of market women, the fixed number of stalls tends to restrict entry and hence, perhaps, competition. Interestingly, street merchants appear not to be competitive in the sense of offering products at a reduced margin; indeed, their gross margins are higher than those of market women. Expenses are also lower for street merchants and public markets, as they are relieved of rent and electricity costs. The municipality is thus subsidizing fruit and vegetable retailers, especially those in the marketplace.

#### Entrepreneurial Activity

The description presented thus far of food retailing in La Paz suggests a traditionally static, small-scale operation. The level of operations, except in a few cases, does not provide funds for anything other than minimal reinvestment. Nor does the nature of the operations studied suggest "bankable" loans even if commercial money for retailing were available. Entrepreneurial activity might therefore have been expected to be at a low level.

A series of questions were asked retailers in an attempt to determine historical investment activity. Very few food retailers had invested in their businesses in the two years prior to the

interview. An average of only 8% of the respondents said they had invested in their businesses in the last two years, ranging from a low of 4% for street merchants to 12% for market women. About half of those who said they had invested had put their funds into merchandise; the bulk of the remaining half had invested in minor equipment and tools. Respondents were also asked whether they had moved the location of their business or enlarged their physical facilities in the preceding five years. Less than 5% had changed their location and virtually none had enlarged their physical facilities.

Retailers were also quizzed regarding their entrepreneurial plans for the future. The most important measure of this variable was probably obtained by the question, "Do you need more money for your business?" This is, of course, a leading question and it might have been expected that most retailers would answer "yes." A "yes" response by only one-third of the respondents is further evidence of the low level of entrepreneurship in La Paz food retailing. We also asked those who said they needed more money whether they had actually tried to get the needed funds or to obtain those items which they wished to have. Only one-fourth of those who desired funds had tried to obtain them.

A more general measure of intention to change was obtained by asking the following questions:

1. Have you thought of opening other food retailing outlets?
2. Have you thought of changing the location of your store?
3. Have you thought of enlarging your operation?

Approximately one retailer in ten indicated having thought of making changes along the lines suggested by the questions. However, of those who said they planned to do something, perhaps one-third had a reasonably clear idea of what they planned to do and what the cost would be.

When one considers that food retailing is largely handled by women who are either (1) very traditional operators of street locations or public market stalls or (2) women running *tiendas* to supplement their family's income, the findings just discussed are probably not surprising.

To get further insight into the operations of public market stalls and *tiendas*, day-long interviews were held with a subsample of retailers. In addition to collecting the information on consumer-retailer interaction described in Chapter 3, interviewers were instructed to engage the retailer in conversations relating to a series of topics which had not been treated extensively in the

larger retailer sample. In general, these questions dealt with the retailers' reasons for entering the business, the changes they had considered and/or made, and the barriers they perceived as preventing them from being more successful. The interviewers recorded the comments verbatim, and probed for clarification and further details. The responses were translated and analyzed for their main themes, which are summarized below. Our main aim was to provide insights into the retailers' operations, not to develop statistically precise population estimates.

The retailer was asked to comment on whether he had operated another retail food firm previously, and when and why he began the firm currently being operated. Very few retailers had moved from another location to the present one. A small number had had commercial or marketing experiences elsewhere. Reasons given for entering the business often centered on some pressing financial need--such as widows faced with children to support, or the necessity to augment the main wage earner's meager income--and that no other option was available for them.

Two questions probed the personal aspiration of the retailers. One question dealt with the changes they desired in the firm itself, and the second dealt with their desires to change to a new line of work. In terms of improving their present business, most of the retailers said they would like to have a wider assortment of products.

The broader question concerning whether they would like to change occupations indicated considerably more desire to change among *tienda* retailers than among the public market retailers. Many of the public market retailers took the traditionalist stance by stating that they "had never thought about changing" and "had always been in the business." The *tienda* retailers were much more likely to say they desired a change in occupation; about two-thirds made specific comments of this nature. They named operating a taxi, a boarding house, or a tea shop as occupations to which they aspired. However, these dissatisfied *tienda* retailers had an apparently fatalistic view of the possibility of such change occurring. Most of them coupled their expressed willingness to change with the comment that capital was very difficult to obtain and hence achieving such a change was unlikely.

The retailers were asked to note all changes made in their firms during the past few years, including the products they had added or dropped. The public market retailers did not report any changes at all to their stalls or their products. Similarly, over

half of the *tienda* retailers reported making no changes whatsoever. Among *tienda* retailers making some additions to inventory, most of them commented that the changes were made to make their shop appear well-stocked, even though they knew that many of the new items had very low rates of turnover.

*Tienda* retailers who ceased selling certain products seemed to do so primarily as a ready way to obtain cash, even at the expense of decapitalizing their firm. They were most likely to drop staples so that they could meet short-term cash needs. However, staples are difficult for them to purchase on credit, and thus a little decapitalization was likely to make it impossible to restock the item.

The retailers were also asked about the barriers they perceived to bringing about changes in their operations. The dominant comment is expressed as follows:

"It isn't worthwhile to invest more money in this business because I'm afraid I couldn't sell all the products, and since I have no money, everything would have to be on credit. I possibly couldn't pay it back and instead of making it easier it would be harder on me."

The responses to questions about change seem to revolve around the following line of reasoning. Expansion is impossible without more capital, but low profits and current needs make a firm a very sluggish capital provider. Outside capital can only be obtained if one has collateral and can pay interest rates of from 3 to 5% per month. Most retailers don't have the collateral, and furthermore see a significant risk involved in taking on such a debt. Many retailers don't care to be in debt, for the cost of failure is forfeiture of what little they have arduously accumulated. In recent years their economically precarious position has not improved because of the large number of new retailers entering the *tienda* business.

While the *tienda* operators argued that competition was a significant threat, the public market retailers voiced only minor discomfiture on this topic. This is probably because the number of stalls in the public markets is controlled by the municipality, and the stall rate of growth has been negligible.

#### Summary

The data developed in this chapter clearly show the fragmented and small-scale nature of retailing operations. The average street merchant has a weekly sales volume of \$50; the average

market woman has a larger sales volume, but still only \$70 per week. *Tiendas* have even larger sales volumes, but the average weekly volume reaches only \$110. According to our survey data, beef retailers have the largest sales volumes, at \$200 to \$250 per week. Low sales volumes have their counterparts in low returns, with few retailers earning more than wages for the time and capital invested in their operations.

There is a high degree of product specialization in retailing. Only 1% of retailers censused carried a full line of produce, meat, and groceries. The high degree of specialization, together with low sales volumes, has resulted in virtually homogeneous margins within any commodity group. That is, there is little or no difference in margins between fast-moving staples and slow-moving items.

None of the retailers surveyed appear capable of either coordinating or simplifying the supply channels. The average fruit and vegetable retailer purchases in quantities of \$2 to \$10. Clearly, no demands for quality can be enforced, nor is the retailer capable of bypassing intermediate points in the supply channel. *Tiendas* also purchase in small quantities and appear incapable of channel coordination.

Given the population growth indicated by the data in Chapter 2, together with the extent to which food expenditures absorb the income of the average La Paz family, two important pressures are put on the retailing system. First, will it be capable of expanding to meet increased demand? Second, is it capable of contributing to lowered food prices in the city? With regard to the first question, it may be possible to merely expand the number of retailers in the city, although this would appear to complicate even further the process of supplying each of these retailers with the small quantities of product demanded of them.

With regard to the second question, the present group of retailers appears incapable of reducing the price of food. The degree of product specialization and the low sales volume of the average retailer make mixed-margin merchandising virtually impossible. Reductions in the price at which the retailer purchases also appear unlikely, given the miniscule amount of economic power available to the average retailer. It must be concluded that price reductions are highly doubtful unless larger-scale retailing and wider product line offerings are developed.

Few retailers appear capable of change. Street merchants and market women operate in a highly traditional manner and have little

education. It may be possible to coordinate the market women's activities, but this will not be easily done. *Tienda* operators are more literate and perhaps more capable of change. However, in-depth interviews suggest that many operators are in retailing only to supplement the family income and take a highly traditional approach to their business.

## CHAPTER 5

### THE WHOLESALE SECTOR

A large number of relatively small firms handle the wholesaling of food in La Paz. These operations are generally one-person or family concerns, with few employees outside the immediate family circle. The data in Chapter 4 showed the plethora of food retailers served by the wholesale sector and the small quantities in which these retailers purchased. It is, therefore, not surprising to find that a major share of wholesaler sales are made in quantities which are indicative of retail, rather than wholesale, operations. If there is any one feature which characterizes all but a handful of La Paz wholesalers, it is an apparent inability to achieve scale economies.

Broadly, there are four distinct groups of food wholesalers in La Paz: (1) large importers, (2) small wholesaler-retailers dealing in dry and processed foods, (3) fruit and vegetable wholesalers, and (4) meat wholesalers. Within each of these categories, there are further breakdowns. For example, some importers handle a range of food products, while others operate, as does Nestlé, with only one product or brand. Fruit and vegetable wholesalers tend to specialize in specific products, e.g., oranges, bananas, potatoes or onions. In this chapter, we will discuss the groups separately, as each has its own characteristics and functions.

#### Importers

Five large firms dominate the importing and wholesaling of flour, canned goods, pork lard, and, to a certain extent, edible oil. In addition, a few of these houses deal in rice. These importers are the only true food wholesalers in La Paz, in terms of operating primarily as intermediate institutions in the marketing channel.

Although the large houses will, in principle, sell to anyone, there are, in practice, limits to such a policy. For most importers, minimum purchase quantities have been established which generally restrict sales to the larger retailers. One wholesaler, for example, has set minimum purchase quantities at 50 cans for lard and 100 cans for oil. At the same time, one

case is usually the minimum for canned goods. Another importer will sell as little as one case of canned goods or vegetable oil. This firm has no minimum order quantity for lard if the purchaser is a retailer, and a minimum order quantity of five to ten cans if the customer is a private individual purchasing with cash.

The above examples are representative of the major La Paz importers. Quite clearly, these limitations on order size are symptomatic of the scarcity of large retailing establishments in the city. It simply is not possible, for example, to require retailers to purchase canned goods in lots of five, ten, or fifteen cases. On the other hand, one importer noted that few retailers purchase in large enough quantity to justify a discount. His firm gives a discount of 2 to 4% on orders of 25 to 50 cases of canned milk. A purchase of 100 cans of lard is required to obtain a quantity discount. This wholesaler appears to have oriented his sales efforts toward the wholesaler-retailer rather than the pure retailer.

Importers do not appear to have a set policy regarding quantity discounts. The discount policy for a number of products varies at any point in time depending on the price at which the importer purchases. If the purchase is large enough and conditions propitious, a price deal can be made. As one importer noted, "There are no loyal customers; each one is continually bargaining for a better buy."

Each of the importers interviewed is prepared to give credit, largely on the basis of letters of guarantee. A very few old, trusted customers are permitted to purchase on open credit accounts. Credit terms generally reflect the turnover time of the article sold. For example, basic items such as flour, lard and edible oil are sold on the basis of 15 to 30 days credit. Canned goods, on the other hand, command 60 and occasionally 90 days credit. Credit sales comprise approximately 50% of the total sales of the large importers. Bad debt losses appear to be minimal; companies interviewed reported less than 0.25% of sales. None of the companies interviewed charged for credit *per se*, although some had differential pricing depending on whether the purchase was credit or cash. The majority of credit sales appear to bear no charge.

While each of the import houses has two or three salesmen, they seem to be order-takers only. One or two firms gave indications of more intensive field sales efforts, but apparently had no concrete plans. Minimal control appears to be exercised over the

sales force. Monthly incomes for salesmen ranged from \$125 to \$333. All were paid a basic salary plus commission.

Delivery service was provided by all but one of the importers interviewed. For most firms, one truck was sufficient to handle the volume of delivered goods. One firm offered its customers the option of a reduced price if the customer would do his own transporting of purchased products. Another firm would not deliver flour because of the low margins on that item.

Gross margins range between 2% and 25% depending on the product. Sugar margins are regulated by the Government and were 3% at the end of 1966. Canned milk is sold at approximately a 10% gross margin. Canned goods generally bring a gross margin of 20 to 25%, justified mainly by the low turnover in this item. Lard and vegetable oil command very low margins, usually 2 to 5%. Competition from smugglers bringing oil in from Argentina keeps the oil margin at a negligible level. One importer told of certain operators purchasing Argentine pesos in the black market at a 20% discount. (The peso was then under devaluation pressures.) The operator then used these pesos to purchase Argentine oil in one of the northern border towns and sold the oil purchased with these "cheap" pesos in La Paz.<sup>1</sup> The edible oil price dropped 20% in a very short time. Margin stability in lard is virtually impossible because of the varying prices at which lard can be bought at any given point in time from a variety of international sources.

The coming of large retail outlets will undoubtedly affect the operations of the large importers. As in other countries, importers with exclusive distributorships can hold, or attempt to hold, the line on certain branded products. However, any breaking

---

<sup>1</sup>There is a twice weekly train between La Paz and the Argentine border at La Quiaca. The main business on this route is transportation of women who handle contraband between La Paz and Argentina. One member of the research staff took this 30-hour train ride and was amazed at how well organized the entire operation is. There was one women merchant who directed in La Quiaca the loading of her goods by her crew of five persons into, around, over, and under her seat in a second-class car for more than an hour. While five assistants was uncommon, it was obvious the second-class car was really a freight car for food products. Before the Argentine peso devaluation in April of 1967, these merchants brought radios, record players and other minor consumer durables from La Paz and sold them in Argentina for an exchange of processed foods. On the trip back to La Paz, these same merchants set up shop every time the train stopped. If it was a short stop, goods were displayed in windows. When train engines were changed, the women merchants would leave the train and set up market on the station platform.

of the price line in equivalent substitutes usually forces the price maintainer to follow suit. One distributor fully intends to sell to any large retailer entering the market at the same price as to a smaller *tienda*; the policy is to avoid giving a competitive advantage to any one of the firm's customers.

Another importer indicated that he was prepared to make substantial shifts in policy should any large-scale retailers appear on the scene. For example, he was considering permitting the direct importation by a supermarket of his products in return for a 5% commission. At the same time, credit of 60 rather than 15 to 30 days would be extended. Still another large wholesaler was frank in admitting that no policy had yet been developed. While this manager knew that he would have to adjust to a new environment, it was not clear to him what his new environment would require. Of one thing he was sure--large retailers, because of their greater purchasing power, would purchase at lower prices than present customers.

One importer stated most clearly the dilemma which seems to face most wholesaler-importers--a large retailer could quite easily purchase direct such key items as rice, lard, sugar and oil. This importer claimed that a supermarket could purchase at the same price as the traditional importer. It should be noted, however, that the latter are the recipients of 120 to 160 days credit from certain suppliers, and this is not inconsequential capital saving in a country where interest rates range from 12 to 20%.

Thus, as one looks at the traditional importers, they seem to be providing a needed service at fairly low cost to the economy. While margins in canned goods are perhaps somewhat high, there is a certain logic in the mixed-margin approach used. In the present Bolivian situation, canned goods are a luxury and are not likely to move out of that category without drastic changes in the production and marketing policies of local food processors. Given present conditions, margins of 10% or less in canned milk products do not appear excessive. Certain wholesalers have indicated they would reduce even this low margin if large retailers started operation.

In the primary necessity products of flour, sugar, lard and oil, the margins enjoyed by the wholesaler-importer are not high. While margins of less than 5% are expected in large volume, rapid turnover items in a developed economy, they are not necessarily the rule in a market in which the wholesaler has to deal with literally hundreds of small customers.

### Wholesaler-Retailers

The minimum order quantity and the quantity discount policies of the large importers are such that many retailers in La Paz would not have access to importer-wholesalers. As a result, an intermediate step in the channel has developed. A number of wholesaler-retailers are clustered in a few blocks in the principal market area of La Paz. These intermediaries sell at retail, but they also sell at a discounted price to other, smaller retailers who purchase in broken lots. In a city with some 5000 small food stores, the development of wholesaler-retailers was perhaps inevitable. The large importers were not interested in coping with the paperwork and administration required to deal in tiny transactions with small retailers, nor could they monitor the credit extension desired. Thus, within the past ten years, a number of entrepreneurs responded to a clear-cut need.

#### Personal Characteristics

Fifty-six percent of the wholesaler-retail outlets are managed by men.<sup>2</sup> Thus, we see an extension, albeit less pronounced, of the domination of food retailing by women. All of the respondents were married (civil or common law) and reported an average family size of just over five persons. Their mean family size, then, corresponds to that of the city as a whole. The mean and median age of wholesaler-retailers was 39, roughly comparable to the age of *tienda* keepers. Age distribution ranged fairly evenly from 20 to 65. One has a picture, then, of fairly mature and stable operators with definite family obligations.

The educational level of these entrepreneurs was surprisingly high. Over four-fifths were fully literate and able to read, while the remainder were able to read, but at less than full proficiency. None of the respondents were unable to read. The level of reading ability is doubtless a reflection of formal education. Wholesaler-retailers reported a mean of 7.9 years of formal schooling, by far the most of any group surveyed in retailing or wholesaling.<sup>3</sup> Slightly more than half of all respondents had had six or more years of schooling.

---

<sup>2</sup>The 39 operations interviewed provided coverage of virtually all wholesale-retail operators. The data can be considered universe parameters.

<sup>3</sup>Specific demographic characteristics of the managers or owners of import houses were not developed.

This group also exhibited a major interest in education for their children. Nearly four out of five desired a university education for their eldest male child, while one-fifth aspired to secondary or technical school education. All of those interviewed thought their educational goals would be achieved.

A fair number of respondents appear to have been exposed to other ways of life. For example, 44% reported having traveled outside Bolivia. This was by far the largest percentage for any of the wholesaler or retailer groups surveyed. In contrast to the large number who reported traveling outside of Bolivia, only one-third reported having lived in another province. Finally, 83% reported that either they or their spouses had served in the military for at least six months.

Very few respondents reported membership in group organizations. Less than one in ten belonged to a union and only 2% belonged to a cooperative.

#### Communications Exposure

Access to wholesaler-retailers appears to be possible through a number of mass communication channels. With regard to printed media, 63% reported having read the newspaper "yesterday" and almost three out of ten reported that they read magazines. Broadcast media also provide ready access to wholesaler-retailers. Four out of five respondents reported having listened to the radio "yesterday." Respondents said they listened to the radio an average of 3.5 hours per day. Movies also provide a means of access; wholesaler-retailers averaged twice per month attendance at the cinema.

Interpersonal discussions regarding business methods in the month preceding the interview were reported by less than one-fourth of the respondents. In addition to determining the extent to which wholesaler-retailers talked with other businessmen, we also asked who the best source of business information was. Over half reported that other merchants would be the best source. Less than one respondent out of ten would look to the government (8%) or truckers (5%) for business information. One-third of the respondents could not suggest a "best" source.

The data suggest, then, that this group of entrepreneurs can be reached through a number of mass media outlets. However, they are not very likely to view the government as a "best" source of business information. Other businessmen were most likely to be a "best" source, but less than one-fourth of the wholesaler-retailers

had availed themselves of this resource in the month preceding the interview.

#### Business Characteristics and Practices

The development of wholesaler-retailer intermediaries in the food marketing channel appears to be of fairly recent origin. Respondents reported being in business an average of only eight years. Approximately two-fifths had been in business nine years or less. The data, therefore, suggest recent entry, as was the case in retailing.

In terms of capital required, barriers to entry do not appear to be high. The mean initial investment reported was \$490.<sup>4</sup> Personal funds were the major capital source for 62% of the respondents, while 20% obtained their original capital through personal loans. The remainder claimed to have obtained commercial loans.

The average store size is approximately 200 square feet. Only two stores were substantially larger than average--one was approximately 500 square feet and the other 650 square feet. Clearly, most operations are not geared to large volume business. A minimal amount of equipment is utilized. Virtually all firms had a balance, scale, and counter. Very few had display cases or wall shelving. None had refrigerators, freezers, cash registers, or material handling equipment. The minor amounts of capital equipment further indicate that these firms are not geared to bulk handling.

Long hours appear to be typical for these operations; the average number of hours open for business as reported by the interviewees was 72, or six 12-hour days per week. Indeed, 11 out of the 39 respondents reported working in excess of 80 hours per week.

In discussing the development of wholesaler-retailers with the large import houses, it was suggested that credit extension was a main *raison d'être* for this intermediary. It was somewhat surprising, then, to find that only half reported extending credit. Of those who did extend credit, the largest share (57%) gave credit on one-quarter of their sales, while only 43% provided credit on half or more of their sales. Credit was extended an average of 17.5 days, with some stores (about 25%) giving credit up to 30 days. No charge was reported for credit sales.

---

<sup>4</sup>This figure is based on responses from 26 interviewees; 13 respondents could not recall or would not give their initial investment.

An additional service which might be expected of wholesalers is delivery service. However, only 3 out of 39 respondents (8%) reported providing delivery service. None reported having a truck or a salesman.

It appears that the major service offered by wholesaler-retailers is the breaking of bulk, i.e., selling in small quantities to small retailers. The data in Table 5.1 suggest the extent to which they provide this service. Indeed, one may even question whether we are investigating a "wholesale" operation. In four out of the five products, some 50% or more of sales are made in broken lots. And in the remaining product, lard, a full lot is only one can; thus, almost one-third of the sales in the product category are by the kilo. It is perhaps not surprising that a substantial volume of sales are made at retail, i.e., to individual consumers. Only 20% of the respondents reported that 75% or more of their sales were to retailers; the sales of half were divided equally between retailers and private individuals; and one-fourth had the majority of their sales (67%) at retail. Thus, while these operators perform only a quasi-wholesaling role, they perform a useful intermediary function at this stage of La Paz's market development.

Table 5.1 Percentage of Product Sales by Quantity Sold		
	<u>Broken Lot</u>	<u>Full Lot<sup>a</sup></u>
Canned Goods	71%	29%
Lard	31	69
Sugar	47	53
Edible Oil	79	21
Rice	55	45

<sup>a</sup>A full lot is defined as: (1) one case of canned goods, (2) one can of lard, (3) one quintal of sugar or rice, and (4) one case of edible oil.

SOURCE: MSU Wholesaler Survey (1967).

#### Desire for New Facilities

Some traffic congestion is apparent in the area where the wholesaler-retailers operate, since most are located on two short streets in the main market complex of La Paz. In an attempt to determine whether the wholesaler-retailers themselves viewed congestion as a problem, we asked them whether they had any difficulties in unloading. Only 25% said "yes," with their problems

centered mainly around inadequate stevedoring services rather than congestion *per se*. We were also interested in determining this group's receptivity to new wholesaling facilities. Specifically, we asked whether they would be willing to move to a new modern central terminal at the same rent they were now paying. Less than half (46%) said they would be willing to move. At a proposed rent increase of 50% to use these new facilities, the acceptance rate halved, as only 20% said they would be willing to move. Those who were willing to move indicated a desire for at least twice as much space as they now had.

#### Supplier Relationships

Data on supplier relationships were developed for six products: edible oil, sugar, rice, lard, canned milk, and canned sardines. Information on various facets of the relationship between wholesaler-retailers and their suppliers are shown in Table 5.2.

	Edible Oil	Sugar	Rice	Canned Milk	Canned Sardines	Lard
Mean No. of Suppliers	1.3	1.8	2.2	1.6	1.5	1.8
Most Important Supplier						
Trucker	36%	11%	74%	---	21%	3%
Farmer	---	---	7	---	---	---
Merchant	---	---	4	---	---	---
Local Factory	---	68	11	---	4	---
Import House	58	21	4	100%	54	97
Smuggler	3	---	---	---	---	---
Other	3	---	---	---	17	---
Percentage of Suppliers Who Give Credit	58	87	30	76	63	72
Mean No. Days Credit	20	17	19	23	21	26
Average Credit Charge per Transaction	0.2%	0.0%	0.0%	0.5%	0.5%	0.7%
Percentage of Suppliers Who Give Quantity Discount	27	16	41	40	33	42
Percentage Discount	4.5	7.8	7.6	4.7	3.1	3.8

SOURCE: MSU Wholesaler Survey (1967).

The mean number of suppliers per product category averages 1.7 and ranges from 1.3 for edible oil to 2.2 for rice. Very few wholesaler-retailers reported having more than two suppliers in

any one product category. The data probably understate, however, the supplier options open to wholesaler-retailers.

Local manufacturers are the major supply source for only one product--sugar. Import houses are apparently important minor suppliers of sugar, but play a far greater role in canned sardines, edible oil, lard, and canned milk. In the latter two categories they are virtually the only sources noted. On the basis of the data presented in Table 5.2, truckers would appear to play a substantial role in the supply of a number of products. These data may be of doubtful validity, however. For example, nearly three-fourths of the respondents claimed that their main rice supplier was a trucker. Return interviews to validate this information showed that the rice was brought in trucks from Santa Cruz, but was in the possession of merchants and market women who bought at the rice mills for resale in La Paz. In only a few instances was the actual seller a trucker. In the case of edible oil and canned sardines, we suspect that those suppliers labeled "truckers" are actually smugglers, since contraband is said to be a major factor in these products.

With the exception of rice, more than half of all respondents reported that their suppliers in various product categories extended credit. To a great extent, those who did not receive credit purchased in small quantity. Credit was extended for approximately 20 days in all product categories, ranging from a low of 17 in the case of sugar to 26 days for lard. Few respondents reported any charge for credit received. In no case did the average charge reach 1%.

Less than half of the respondents in any product category received a quantity discount. Less than one wholesaler-retailer in six said they received a quantity discount when purchasing sugar. On the other hand, some two out of five reported obtaining a discount when purchasing rice, lard, and canned sardines in quantity. Discounts received were in all cases less than 10%, ranging from 3.1% for canned sardines to 7.8% for sugar.

#### Sales, Margins and Profits

Although the sales volumes of wholesaler-retailers are some five times greater than those of *tiendas*, their gross margins are sufficiently lower to make this commercial activity marginally remunerative. Data regarding gross margins for each of the six products studied are shown in Table 5.3. Gross margins are shown for each of the quantity breaks at which these products are sold.

As expected, gross margins are highest on sales made in small quantities. Gross margins on sales made in wholesale lots are low, generally being less than 5%.

Table 5.3 Gross Margin by Product Category for Wholesaler-Retailers			
	Percentage Mark-up	Percentage of Product Sales	Wted. Average Gross Margin
<u>Sugar</u>			
Sold in less than 25-lb lots	10.7	22	
Sold in 25-lb lots	4.5	25	
Sold in 100-lb lots	1.5	53	4.3%
<u>Edible Oil</u>			
Sold by the liter	9.5	16	
Sold by the can	3.0	16	
Sold by the case	2.9	21	4.0%
<u>Lard</u>			
Sold by the kg	17.5	31	
Sold by the can	2.0	69	6.8%
<u>Canned Milk</u>			
Sold in lots of 1-10 cans	8.5	42	
Sold in lots of 11 <sup>+</sup> cans	9.4	26	
Sold by the case	1.4	32	6.5%
<u>Canned Sardines</u>			
Sold in lots of 1-10 cans	9.1	45	
Sold in lots of 11 <sup>+</sup> cans	5.6	28	
Sold by the case	2.0	27	6.2%
<u>Rice</u>			
Best selling quality:			
Sold in less than 25-lb lots	11.1	25	
Sold in 25-lb lots	5.0	30	
Sold in 100-lb lots	3.2	45	5.7%
Next best selling quality:			
Sold in less than 25-lb lots	16.3	31	
Sold in 25-lb lots	9.8	29	
Sold in 100-lb lots	7.8	40	11.0%
Over-all gross margin in rice (based on 75-25 split in sales between best & next best quality)			7.1%

SOURCE: MSU Wholesaler Survey (1967).

A weighted average gross margin was determined for each product, taking into account the percentage of sales made at each quantity break. The highest gross margin was 7.1% for rice and the lowest was 4.0% for edible oil. As discussed earlier, a substantial portion of sales are made in broken lots, thus tending to bring up the gross margin for each product. Nevertheless, sufficient sales volume occurs in full lots to make the weighted average gross margin slim indeed. As with the large importers, the margin obtained by wholesaler-retailers is not excessive.

An average profit and loss statement for wholesaler-retailers is shown in Exhibit 5.1.<sup>5</sup> Although mean annual sales were \$32,416, there were a number of respondents with far lower sales. Slightly over one-fifth reported sales of less than \$8333 per year and 31% showed annual sales between \$8333 and \$16,666. Five respondents (14%) claimed annual sales of over \$83,000. Thus, we see that there are a few large wholesaler-retailers, and a substantial number of much smaller operations.

Exhibit 5.1 Average Annual Profit and Loss Statement for La Paz Wholesaler-Retailers			
Sales		\$32,416	100. %
Cost of Goods Sold		<u>30,475</u>	<u>94.2</u>
Gross Profit		\$ 1,941	5.8%
Expenses:			
Rent	\$400		
Employees	225		
Taxes	193		
Transport	112		
Maintenance	40		
Packaging	37		
Electricity	35		
Insurance	<u>28</u>		
	\$1,070	\$ 1,070	3.4%
Net Profit		<u>\$ 871</u>	<u>2.4%</u>

SOURCE: MSU Wholesaler Survey (1967).

<sup>5</sup>The profit and loss statement shown does not include a charge for the owner's time. Thus, the "profit" is a return on both his labor and capital.

Gross margins averaged only 5.8%. This average was determined on the basis of the relative sales volumes and gross margins of the six products on which specific information was obtained. This figure was then applied to the total annual sales reported by each respondent. While it is possible that gross margins were higher for products on which we do not have specific knowledge, the narrow range of gross margins on which we have information suggests that the data in Exhibit 5.1 are not too unrealistic.

Expenses averaged 3.4% of sales, at \$1070 per year. The largest expenditure was for rent, with labor and taxes the next most important expenses. The stevedoring and transporting of products to the wholesaler-retailer's place of business was also a major expense item.<sup>6</sup>

On the basis of reported sales, margins and expenses, net profits were low indeed. Returns to these fairly well-educated entrepreneurs are apparently less than the average family income in the city of La Paz. There are, of course, possibilities of error in the reported financial data. The substantial under-reporting of sales noted earlier in the case of retailers suggests that this factor may also be at work in the case of wholesaler-retailers.

In the case of retailers, we suggested that under-reporting was probably a function of lack of knowledge. This is less likely in the case of wholesaler-retailers, as 61% said they kept books. Unfortunately, no reliable validity check, such as the retailer diary, exists with which to adjust sales figures. Consumption data on the six specific food items (at wholesale price levels) suggest under-reporting in the order of magnitude of 3 to 9 times. However, the sales of large import houses direct to retailers is not known, nor is the volume of sales of direct purchases of retailers from truckers, smugglers, manufacturers, etc. If we assume an under-reporting of 2 times, then net profits treble to \$2645. Assuming that sales are 50% greater than expected, then net profits double to \$1717. We rather doubt that sales are more than twice as much as reported, nor do we think that they are as low as reported. Thus, annual net profits of \$1666 to \$2500 are likely. While this would provide better than average family income, profits, on the average, are not so high as to provide substantial resources for reinvestment. It should be

---

<sup>6</sup>A number of suppliers did not deliver or delivered only at curbside.

noted, however, that those five firms with the highest sales had net profits ranging from \$5000 to \$10,000. If possible under-reporting is taken into account, these five wholesaler-retailers of dry groceries are in a position to reinvest and expand their operations.

#### Fruit and Vegetable Wholesalers

Fruit and vegetable wholesaling in La Paz is carried on largely in the major market complex of Uruguay-Rodriguez-Buenos Aires. Within this complex are fairly well-defined market areas (called *tambos*) for the sale of oranges, bananas and potatoes. The former two are usually located in the same *tambo*, whereas potato wholesalers operate in geographically distinct areas. Certain groupings of potato wholesalers are also located in set areas in the streets of the Uruguay-Rodriguez-Buenos Aires complex. Vegetable wholesaling does not take place in any set area, nor are these wholesalers likely to group closely together. Rather, they are scattered throughout the market area, causing difficulty in identification.

With the exception of some potato wholesalers, fruit and vegetable wholesaling operations are small in scale. The system appears to function fairly well in terms of providing a consistent link between the rural farmer and urban retailer. However, as we shall see, transport costs and spoilage rates are high and could perhaps be substantially reduced by fostering larger-scale operations.

Three specific types of fruit and vegetable wholesalers were studied: (1) potato wholesalers, (2) banana wholesalers, and (3) vegetable wholesalers who carried one or more of the following items--tomatoes, lettuce, cabbage, carrots, and onions. We will discuss the groups together, noting the major similarities and differences.

#### Demographic Characteristics

In contrast to the dry goods wholesalers, the majority of fruit and vegetable wholesalers are women. The preponderance, however, is not as great as in the case of food retailers. Banana and vegetable wholesalers are predominantly women--73% and 81%, respectively. Potato wholesaling is more evenly divided between the sexes, with 57% being women.

Of all the groups engaged in the retailing and wholesaling of food, fruit and vegetable wholesalers are the youngest. Vegetable wholesalers had the lowest mean age of the three groups discussed here--30.6 years. Banana wholesalers had a mean age of 31.5 and tended to be skewed toward the lower ages. Potato wholesalers had the highest mean age (33.5), with 40% being 36 or older.

With respect to marital status, fruit and vegetable wholesalers differ substantially from dry goods wholesalers and among themselves. Whereas none of the dry goods wholesalers reported being single, separated or widowed, nearly half of the vegetable wholesalers reported being in this status. Approximately one-third of banana wholesalers also reported being single. Potato wholesalers were most likely (71%) to be either married or living under a common law arrangement.

Notwithstanding the substantial minority of banana and vegetable wholesalers who were single, each group reported important family obligations. Both banana and potato wholesalers had a mean family size of 4.5, while vegetable wholesalers had a slightly higher average family size of 5.0. Thus, fruit and vegetable wholesalers generally followed the pattern of family size which we have seen in other wholesalers and retailers and in the city of La Paz. None of the banana and potato wholesalers reported having other employment, and only 1 respondent out of 50 in vegetable wholesaling reported having other employment. With regard to other family members having outside income, none of the potato wholesalers reported another source of family income and only 6% of the banana wholesalers and 11% of the vegetable wholesalers said that there was another source of family income.

Thus, we have a picture of a fairly young group of entrepreneurs with substantial family obligations who discharge these responsibilities largely through income from their wholesaling businesses. If the figures are to be believed, the male in the family does not contribute financially. It should be noted, however, that there may have been a reluctance to divulge information on how much income the family had.

#### Educational Levels and Aspirations

Fruit and vegetable wholesalers were far more likely to have reading ability than were their counterparts in the retailing of perishables. As seen in Table 5.4, banana wholesalers had the least reading ability, with 38% being completely illiterate. In all three groups, approximately two-fifths of the respondents had

only partial reading ability. Thirty-nine percent of the potato wholesalers and 37% of the vegetable wholesalers had full reading ability.

Table 5.4 Ability to Read by Type of Wholesaler			
	<u>Unable to Read</u>	<u>Partially Able to Read</u>	<u>Completely Able to Read</u>
Bananas	38%	41%	21%
Potatoes	22	39	39
Vegetables	26	37	37

SOURCE: MSU Wholesaler Survey (1967).

Ability to read corresponds with the degree of formal education which each group had. Potato wholesalers, consistent with their greater reading ability, had attended school a mean of 3.8 years. Vegetable wholesalers followed with a mean of 3.2 years, and banana wholesalers, with a mean of 2.7 years, had the least amount of schooling.

With regard to the level of schooling desired for the eldest child, potato wholesalers had the highest aspirations. Two-thirds of the potato wholesalers desired a university education for their oldest child, whereas banana and vegetable wholesalers were more likely to aspire to a secondary school. Most respondents saw their aspirations as achievable. It is interesting to note that potato wholesalers had both higher aspirations and greater expectations of reaching their goals than did vegetable wholesalers.

#### Mobility and Group Membership

Fruit and vegetable wholesalers exhibited roughly the same degree of mobility as did fruit and vegetable retailers. The data in Table 5.5 suggest a fair degree of exposure to different ways of life. In general, potato wholesalers show the highest degree of exposure and vegetable wholesalers show the least. Four out of five potato wholesalers interviewed had lived in another province vs half of the banana wholesalers and slightly more than one-fourth of the vegetable wholesalers. With respect to military service, potato wholesalers (or their spouses) were most likely to have seen service, with vegetable wholesalers (or their spouses) least likely. The differences between the three groups is not, however, as pronounced as in the case of residence in another province. None

of the banana or potato wholesalers and only 4% of the vegetable wholesalers reported having traveled outside Bolivia.

	<u>% Who Have Lived in Another Province</u>	<u>% Who Have Served in the Military</u>	<u>% Who Have Traveled Outside Bolivia</u>
Bananas	50%	71%	0%
Potatoes	81	79	0
Vegetables	26	63	4

SOURCE: MSU Wholesaler Survey (1967).

In contrast to their higher degree of mobility, potato wholesalers were least likely to be members of an organized grouping. Less than one in ten of the respondents in any group reported belonging to a union, with 9% of the banana and vegetable wholesalers claiming membership as against 3% of potato wholesalers. One-fourth of the vegetable wholesalers interviewed said they belonged to a market women's group, as compared to none of the banana or potato wholesalers. With regard to cooperative membership, 31% of the banana wholesalers indicated this alliance, compared to 2% of the vegetable wholesalers and none of the potato wholesalers.

Thus, we see that there is apparently no access to potato wholesalers through group organizations, and only limited access to banana and vegetable wholesalers.

#### Communication Characteristics

Potato wholesalers appear to have the most exposure to mass media, although none of the three groups is exposed to any great extent. Table 5.6 shows the degree to which the three types of wholesalers are exposed to various mass media. With regard to the printed word, one-fourth or less reported reading (or having read to them) a newspaper on the day prior to the interview and less than one in eight reported exposure to magazines. Vegetable wholesalers are least exposed to printed media.

Broadcast messages are more likely to reach potato wholesalers, as 46% reported listening to the radio on the day prior to the interview, as opposed to 41% of banana wholesalers and 38% of vegetable wholesalers. The disparity between the three groups is further evidenced in the average number of hours spent listening

to the radio per day. Potato wholesalers reported listening an average of 2.3 hours, compared with 1.7 and 1.9 for banana and vegetable wholesalers, respectively. Only one-fifth of each group said they had attended a movie in the month preceding the interview.

Table 5.6. Mass Communication Exposure by Type of Wholesaler

	% Who Read a Newspaper "Yesterday"	% Who Read a Magazine "Yesterday"	% Who Listened to the Radio "Yesterday"	% Who Attended a Movie "Last Month"
Banana	23	13	41	19
Potato	25	7	46	21
Vegetables	13	6	38	19

SOURCE: MSU Wholesaler Survey (1967).

Few wholesalers reported interpersonal communication on business methods. Approximately one out of seven banana and potato wholesalers reported having discussed business practices with other businessmen in the month preceding the interview, compared with only one out of twelve vegetable wholesalers. Respondents were also asked who was the best source of business information. Fifty-four percent of potato wholesalers thought that other merchants were the best source. Vegetable wholesalers were also likely to specify other merchants. Banana wholesalers who could give a specific response were split evenly between truckers and other merchants. It is interesting to note that none of the respondents volunteered that the government was the best source of business information.

#### Business Characteristics and Practices

A substantial minority of fruit and vegetable wholesalers have been in operation three years or less. The data in Table 5.7 suggest the extent to which there are new entrants into this sector of the food distribution channel. Potato wholesalers are most likely to be new entrants, while vegetable wholesalers are most likely to have considerable longevity. The mean number of years in wholesaling reported by banana and potato wholesalers was roughly similar at 7.3 and 7.0 years, respectively. The mean number of years in food wholesaling for those handling vegetables was 10.2.

	Number of Years		
	<u>1 - 3</u>	<u>4 - 9</u>	<u>10+</u>
Bananas	31%	38%	31%
Potatoes	39	29	32
Vegetables	27	30	43

SOURCE: MSU Wholesaler Survey (1967).

Original investment in fruit and vegetable wholesaling is 10 to 33% of that reported for dry goods wholesalers. Conversely, initial investment was 3 to 10 times greater than for food retailers of perishables.<sup>7</sup> Potato wholesalers reported the highest original investment at \$160. Vegetable wholesalers were next highest at \$120; banana wholesalers started with considerably less capital at \$50. Original funds were devoted primarily to obtaining of supplies, i.e., for working capital and not for fixed capital needs

Less than one in ten of those interviewed reported obtaining their initial capital on a commercial basis. Sources of original funds are shown in Table 5.8. Nearly four-fifths of banana and vegetable wholesalers used personal funds, compared to slightly over three-fifths of potato wholesalers. Personal loans from family or friends were the second most important source of capital and were twice as likely to be used by potato wholesalers as by the other groups.

	<u>Personal Loans</u>	<u>Commercial Loans</u>	<u>Private Funds</u>
Bananas	13%	10%	77%
Potatoes	30	7	63
Vegetables	15	6	79

SOURCE: MSU Wholesaler Survey (1967).

<sup>7</sup>Initial investment figures are based on responses from 60% of banana wholesalers, 75% of potato wholesalers, and 32% of vegetable wholesalers.

All wholesalers reported devoting a large number of hours per week to their businesses. Vegetable wholesalers averaged 52 hours per week. Banana and potato wholesalers work an average of 78 and 74 hours, respectively. It is interesting to note that 42% of banana wholesalers and 40% of potato wholesalers work more than 78 hours per week. Clearly, these are time-consuming businesses.

Sales areas are small, although they are two to three times larger than for fruit and vegetable retailers. Vegetable wholesalers have the smallest operations, with only 38 square feet. Banana wholesalers are next largest at 50 square feet, and potato wholesalers are largest at 63 square feet. Virtually all of this space is used for inventory. Equipment use is practically nil. Neither the banana nor the potato wholesalers reported having even so much as a scale. Only one out of fourteen vegetable wholesalers had any equipment, and all of these had either a balance or scale. It is clear, then, that these are small-scale operations in terms of physical size and equipment usage.

The majority of wholesalers reported giving credit, ranging from 53% of banana wholesalers to 61% of potato wholesalers to a high of 75% of vegetable wholesalers. Credit was extended for about one week. Banana wholesalers gave the longest terms, at an average of 9.6 days, while potato and vegetable wholesalers gave about one-third fewer days, at an average of 6.3 and 6.5, respectively. Vegetable wholesalers were most likely to extensively use this tool; of those who gave credit, 79% said that 50% or more of their sales were on credit. Of those potato wholesalers who gave credit, far fewer (41%) reported that 50% or more of their sales were on credit. Finally, 56% of banana wholesalers extended credit on 50% or more of their sales.

#### Spoilage

Even though La Paz, at an altitude of 13,000 feet, is in many respects a natural refrigerator, product spoilage appears to be a problem. This is partially a function of the method of transporting goods to market, since few are properly packaged or gently handled, and partially a function of the lack of storage and refrigeration equipment in fruit and vegetable wholesaling. Data on various aspects of spoilage are shown in Table 5.9. As might be expected, spoilage is highest in tomato and banana wholesaling. An average of 20% of banana wholesalers' stocks are sold at an average discount of 23%. Total spoilage reaches a high of

15% for bananas and 13% for tomatoes and carrots and a low of 3% for cabbage. The spoilage problem was less than we had anticipated, but still sufficiently large to merit attention.

	<u>% Sales Sold at Discount</u>	<u>Average % Discount</u>	<u>% Products Completely Spoiled</u>
Bananas	20	23	15
Potatoes	7	7	6
Tomatoes	10	15	13
Onions	6	11	5
Carrots	7	11	13
Lettuce	8	16	9
Cabbage	10	11	3

SOURCE: MSU Wholesaler Survey (1967).

#### Supplier Relationships

In this section we are concerned with the number of suppliers wholesalers have, who these suppliers are and their relationship to the wholesaler, degree of credit extended and the terms under which it is extended, and the extent to which quantity discounts are available. The data in Table 5.10 show the pattern of relationships for vegetable wholesalers. As can be seen, the average number of suppliers (by product category) is between 1.5 and 2.0. These data suggest that each wholesaler has built up a steady relationship with one, two, or three suppliers and apparently will utilize other sources only rarely. The major supplier in 90% or more of the cases is said to be the farmer. Middlemen appear to play only a minor role in the distribution chain.

For the most part, wholesalers are supplied in La Paz by farmers or traders who bring their produce to the city. Less than three wholesalers out of ten go into the country (generally to rural fairs) to buy cabbage, lettuce and tomatoes. On the other hand, more than half of the respondents reported going to the country to obtain their supplies of onions and carrots.<sup>8</sup>

Although we had been told that family relationships were a major factor in the marketing of perishables, the data do not

<sup>8</sup>The reliability of data regarding carrots is questionable, since there were only 9 wholesalers interviewed who carried this product, as opposed to 15 to 25 for the other products.

support this claim. In three products--cabbage, lettuce and tomatoes--less than one in ten reported either a blood or godparent relationship between themselves and their suppliers. About one in four wholesalers carrying onions and carrots reported such a relationship. Since these were the two wholesalers most likely to go to the country to buy, it might be thought that they purchased from a relative or godparent. However, the respondents who went to the country to buy reported no such relationship with their suppliers.

	Cabbage	Onions	Lettuce	Tomatoes	Carrots
Average Number of Suppliers	1.6	1.5	1.6	1.6	2.0
Major Suppliers					
Farmer	94%	100%	94%	92%	89%
Trader	6	--	6	8	11
Percentage Who Buy in Country	28	56	29	23	67
Percentage Who Have a Family Relationship with Supplier	0	25	6	4	22
Percentage Who Receive Credit	72	31	82	69	88
Days Credit Received	5.5	5.8	5.7	6.5	7.6
Charge for Credit	00	00	00	00	0.6
Percentage Who Receive Quantity Discount	22	25	47	27	22
Percentage Discount	5.7	4.8	4.9	4.1	8.0

SOURCE: MSU Wholesaler Survey (1967).

With the exception of onion wholesalers, a substantial majority reported receiving credit from their suppliers. There was little or no charge exacted by the supplier for this credit extension. Credit was extended for an average of five to seven days; the majority of credit transactions were for seven days. It is somewhat surprising to see that the farmer finances the wholesaler. Given the greater financial resources, and probably liquidity, of the wholesaler, we might have expected advances to the farmer by

the wholesaler, especially given the apparent close and continuing relationship between them.

Quantity discounts were reported by only one-fourth of the wholesalers, although 47% of the lettuce wholesalers reported receiving a quantity discount. The discount ranged from 4 to 8%.

There appear to be some important differences in the relationships which banana and potato wholesalers have with their supply sources, compared with those just reported for vegetable wholesalers. Both banana and potato wholesalers claim to have fewer suppliers, averaging 1.2 as opposed to 1.5 or more for vegetable wholesalers. The major supplier for both banana and potato wholesalers is the farmer, although 26% of potato wholesalers listed traders as their major supply source.

A substantial majority (over two-thirds) of both banana and potato wholesalers reported going to the producing areas to purchase their supplies. The Yungas region was the major supply area for bananas; Cochabamba was the main source for potatoes. The incidence of sourcing at the producing area is in sharp contrast with the practices of vegetable wholesalers. Family and godparent relationships between wholesaler and supplier do not appear to be prevalent, with only 16% of banana wholesalers and 10% of potato wholesalers reporting this relationship.

Banana and potato wholesalers were much less likely to be financed by their suppliers than were vegetable wholesalers. Somewhat less than half (47%) of banana wholesalers reported receiving credit, and only 21% of potato wholesalers claimed to receive credit. No charge was made for credit extended. Of those who received credit, the average time extended was 18 days for banana wholesalers and 8 days for potato wholesalers.

Those who received quantity discounts were in a minority, with only 3% (one respondent) of the banana wholesalers and 21% of the potato wholesalers claiming this benefit. The discounts reported averaged 10% for banana wholesalers and 5% for potato wholesalers.

#### Sales, Margins and Profits

At a reported average annual sales volume of \$15,400, potato wholesalers handled by far the largest volume of any of the fruit and vegetable wholesalers. Three operators handled over \$27,100 annually, with one wholesaler reporting an annual sales volume of \$43,300. While these figures are not very high in U.S. terms,

they are substantial operations compared with those of other retailers and wholesalers of perishables, as well as many marketers of dry and processed goods.

Vegetable wholesalers reported average annual sales of \$4600, or only 30% of the sales reported by potato wholesalers. Only one out of eight vegetable wholesalers reported sales of over \$8300. The largest sales volume reported was \$15,000. Thus, the largest vegetable wholesaler sold less than the average potato wholesaler.

Banana wholesalers had by far the lowest reported volume. Their average sales were less than one-fifth of those of potato wholesalers, at \$2825 per year. Nearly half (44%) had annual sales of less than \$2000. Only two of the 32 wholesalers interviewed had annual sales in excess of \$10,000. Clearly, banana wholesaling is not, for the most part, a high volume operation.

Unlike the practices of dry and processed goods wholesaling, the majority of fruit and vegetable wholesalers' sales are made in full lots. While gross margins are higher on broken lot sales, the disparity between gross margins at full and broken lots is not great. Again, this is in marked contrast to the data for dry and processed goods wholesalers. Another point of difference between the classes of wholesalers is found in the level of gross margins. Those for fruit and vegetable wholesalers are some three to five times higher than for dry and processed goods wholesalers. However, as we shall see, these margins are not so generous as to provide ample profits for wholesalers.

Table 5.11 shows, product-by-product, the percentage of sales made at various quantity break points, as well as the gross margin on sales made at those break points. With the exception of banana wholesalers, the majority of sales are made in full lots, ranging from 51% of sales for potato wholesalers to 80% for cabbage wholesalers. If sales by the quintal for onion and potato wholesalers, and by the basket for tomato wholesalers, are considered full lot, then some 60% of all sales are made at a "wholesale" level. It is clear, though, that a substantial minority of sales are made in broken lot quantities. This is especially true in the case of bananas, where two-thirds of all sales are made in small quantities. Most sales are apparently made to retailers, not individual consumers.

Gross margins generally decline with the quantity sold. Gross margins shown in Table 5.11 are not completely consistent with such a correlation, however, and reflect the practice of

Table 5.11 Gross Margins and Percentage of Sales by Quantity Break Points and by Type of Product

	% of Sales	Gross Margins	Weighted Average Gross Margin
<u>Bananas</u>			
Sold in bunches of 7-10	18%	64%	
Sold in lots of 100	48	61	
Sold by the <i>hipa</i> <sup>a</sup>	34	54	59.0%
<u>Potatoes</u>			
Sold by the 1b or kg	3%	18%	
Sold by the <i>arroba</i> <sup>b</sup>	35	22	
Sold by the quintal <sup>c</sup>	11	16	
Sold by the <i>oanga</i> <sup>d</sup>	51	17	18.3%
<u>Tomatoes</u>			
Sold by the 1b	13%	28%	
Sold by the box	7	24	
Sold by the basket	26	31	
Sold by the <i>hipa</i>	54	25	26.9%
<u>Onions</u>			
Sold in lots of 25	10%	42%	
Sold in lots of 100	16	39	
Sold by the quintal	17	34	
Sold by the <i>hipa</i>	57	33	35.3%
<u>Carrots</u>			
Sold in lots of 100	9%	29%	
Sold by the <i>arroba</i>	20	21	
Sold by the <i>oanga</i>	71	22	23.0%
<u>Lettuce</u>			
Sold by the head	5%	44%	
Sold in lots of 100	37	38	
Sold by the <i>hipa</i>	58	21	28.6%
<u>Cabbage</u>			
Sold by the head	20%	22%	
Sold by the <i>hipa</i>	80	23	22.6%

<sup>a</sup>A *hipa* is a net rawhide bag containing approximately 300 pounds.

<sup>b</sup>An *arroba* equals 25 pounds.

<sup>c</sup>A quintal equals 100 pounds.

<sup>d</sup>A *oanga* equals 225 pounds.

SOURCE: MSU Wholesaler Survey (1967).

some wholesalers of selling only in certain quantities. That is, the number of observations are different at each quantity level. Gross margins are highest for bananas, at an average of 59%.

While this figure seems very high, high costs and spoilage dictate the need for high margins. Potato margins are considerably lower than for the other products and doubtless reflect the high sales volume on this product, as well as tight governmental controls.

A profit and loss statement for each type of wholesaler, based on average figures, is shown in Exhibit 5.2.<sup>9</sup> It is clear that fruit and vegetable wholesaling is not a lucrative business, especially for banana wholesalers. Vegetable wholesalers net some 25% more than their retailing counterparts, but this is not enough to make their operations anything more than a low-wage provider. Potato wholesalers net a sufficient amount to provide a family income in the middle third of all La Paz families.

Exhibit 5.2 Annual Profit and Loss Statement by Type of Wholesaler			
	Bananas	Potatoes	Vegetables
Sales	\$2825	\$15,400	\$4600
Cost of Goods Sold	1150	12,400	3320
Gross Profit	\$1675	\$ 3,000	\$1280
Expenses:			
Transport	\$1320	\$ 1,180	\$ 417
Taxes	105	90	33
Rent	75	78	59
Maintenance	--	2	--
Personal Expenses	200	200	--
	\$1700	\$ 1,550	\$ 509
Net Profit (Loss)	(\$25)	\$ 1,450	\$ 771

SOURCE: MSU Wholesaler Survey (1967).

There are, of course, some high earners. Some 10% of all vegetable wholesalers net over \$1666 per year, with one reaching \$4080 and another \$7500. In like manner, 25% of all potato wholesalers net over \$1666 per year, with one at the \$3920 level and two at the \$6250 level.

The largest expense item for all three classes of wholesalers is transportation. As noted earlier, a large number of wholesalers go to country fairs to purchase supplies. Banana wholesalers have the largest expenses in this category, paying out 54%

<sup>9</sup>No charge is imputed for the operator's wages. Thus, profits are a return to labor and capital.

of every sales dollar. The major share of this cost is for transporting the wholesaler and his produce, with a smaller (but still significant) cost for personal living expenses while on the road. Potato and vegetable wholesalers both report spending 9% of their sales dollar on obtaining and transporting their supplies. Taxes and rental space are the other two major expense items reported by wholesalers.

We have noted for both retailers and dry and processed goods wholesalers that under-reporting of sales figures is likely. If we assume that sales are under-reported by half, potato and vegetable wholesaling appear much more rewarding and banana wholesaling becomes profitable. Gross margin percentages and expenses other than transport costs are assumed to remain constant. Only sales and transport expenses vary. Under these conditions, an assumed doubling of sales results in a net profit of \$390 for banana wholesalers, \$3325 for potato wholesalers, and \$1642 for vegetable wholesalers.

#### Beef Wholesaling

There are two main channels supplying the La Paz market with beef. The Beni region is the main producing area and supplies an estimated 70% of the beef consumed in La Paz. The Altiplano supplies the remaining requirements of the city.

Beef coming from the Altiplano generally does not originate from commercial producing operations. While some farmers raise a few head of cattle specifically for the market, others simply bring work animals to market when in need of cash. Most farmers bring only one or two head at any one time to the rural fairs which are the initial assembly points for cattle destined for the La Paz market. Country assemblers buy at the fair and truck or drive the cattle to the slaughterhouse in El Alto, a *barrio* on the outskirts of La Paz. The cattle are then sold on the hoof to a wholesaler, or slaughtered on a custom basis and sold to a retailer. Transactions are usually on a cash-and-carry basis.

Operations in the Beni are on a more commercial basis. All beef from the Beni is air-transported to La Paz after slaughter at facilities near the airstrip. In some cases, assemblers buy from ranchers and drive to the slaughterhouse at the airstrip, where the cattle is sold to a wholesaler. Some ranchers bring their own cattle to the airstrip and sell to wholesalers. Finally, there are a number of *estancias* which are integrated forward through slaughter,

transport to La Paz, and wholesaling. In general, the air transport firms also perform the wholesaling function, maintaining refrigerated holding facilities in La Paz.

Slaughtering takes place during the night, with the meat flown into La Paz the next day. The planes are not refrigerated, but the beef is gradually chilled as altitude is gained to reach the 13,500-foot-high airport at El Alto. Upon arrival in La Paz, distribution is often made direct to meat stalls in the public market and to *tiendas*. Some beef is refrigerated and stored before sale to the retail outlet.

Significant waste occurs in slaughtering at the airstrip. Beni plants do not have the equipment to render by-products, so blood, horn, hooves, bones, most of the viscera, heads, hide, and meat scraps are wasted.

There are approximately 30 wholesalers of beef in La Paz, with 12 having refrigeration facilities. Generally, wholesalers without refrigeration equipment operate in the winter months when cooling is not required and drop out of business in the summer.

Those wholesalers who combine slaughter, transport, and wholesale operations appear to be most troubled by the price controls set by the municipality. In order to protect the low income consumer, prices on poorer quality cuts, which comprise 80% of the carcass, are held low. However, prices on the better quality cuts are also restricted to a low level. Municipal regulations allow a difference of only \$0.08 per pound between the cheapest and most expensive cuts. There is consequently little incentive to fatten cattle to bring out better cuts or to slaughter carefully. The major wholesalers claim that there is little likelihood of changes in producing, slaughtering, and wholesaling if the present price regulations remain in effect.

#### Summary

In contrast to the retailing sector, the wholesaling sector appears to contain elements capable of modernization and expansion. The data suggest that at least some dry goods and potato wholesalers have the personal characteristics to be sensitive to growth opportunities. That is, they have a fairly high level of literacy--especially the dry goods wholesaler-retailers--and a high degree of exposure to mass media. Perhaps more importantly, some wholesalers in these two groups have achieved a volume of sales and a level of

profits which suggest both business acumen and the resources to fund at least a part of their growth internally. To a far greater extent than in the case of retailers, certain wholesaling operations could be considered commercial banking prospects.

The large importer-wholesalers represent a special case. Although they are financially large and possess certain administrative skills and structure, their operations are geared to a variety of product categories of which food is only one. There is some question whether they would see themselves as change agents in the distribution channel. Rather, they are more likely to respond and adjust to large-scale retailing--and wholesaling--than to lead the way.

In essence, both backward and forward integration seem feasible for some wholesalers. As we have seen, the dry goods wholesalers are already, to a greater or lesser degree, in the retail segment of food distribution. This is also true, to a more limited extent, of potato wholesalers. Thus, one can at least perceive of a movement forward into the channel, given proper financial and technical assistance.

Backward integration and gaining of scale are the more traditional avenues for greater efficiency in wholesaling. The gains in these areas are likely to be meaningful in terms of systems efficiency. For example, large-scale wholesalers could pursue the option of purchasing directly at the rice mills in Santa Cruz, with consequent cost reductions, rather than purchasing from market women who now perform this intermediary function. In the case of fruits and vegetables--principally bananas and potatoes--many small wholesalers travel to the country for their supplies. Large-scale purchasing would doubtless reduce travel and transport expenses. Finally, spoilage rates, while not excessively high, are still a substantial cost to the system. These rates could be reduced through better packing and handling procedures and by increased availability of storage facilities. Clearly, improvements in these areas are not likely to be implemented by small operators. Larger-scale operations and improved business methods are needed.

To a great extent, the specialization by commodity which exists in retailing has its counterpart in wholesaling. In fruits and vegetables, wholesalers could achieve greater scale by handling a number of products. To do so, however, suggests increased capitalization for both fixed and working capital, and greater assurance of scale in selling. To achieve the latter may require that the

wholesaler take the lead in convincing groups of market women to purchase cooperatively, thus reducing transaction and intra-city transport costs for the wholesaler.

Wholesalers of dry and grocery goods may also be able to achieve scale by taking the lead in forming buying groups of *tiendas*. Or, they must be prepared to aggressively service large-scale retailers should they appear. Most likely, a wider assortment of dry and grocery products, as well as non-foods, would have to be carried to gain scale. Since beef is such a major factor in the La Paz diet, it may be necessary for full-line wholesalers to stock this item. Of course, the retail sector would have to be on a full-line basis also.

Changes in the present method of beef wholesaling do not appear likely given the present municipal price regulations and the small scale of retailers. However, adjustments in either of these conditions may permit a new direction in beef handling and cutting. Alignment of beef wholesaling with dry goods wholesalers may be possible if large-scale operations are started in the retail sector.

## CHAPTER 6

### TRUCK TRANSPORTATION SERVING LA PAZ

The department (state) of La Paz is a rock-strewn 13,000-foot-high plain the size of Illinois bounded by mountains ranging from 16,000 feet to over 20,000 feet. As of September 1967 there were 25 miles of paved road in the department outside the city of La Paz. The entire department has 1.5 million people and 1100 miles of road. Forty-six percent of the roads are classed as temporary, while the remainder are called "good" roads.

There are three main roads leading out of the city of La Paz. (See Figure 6.1 for a map of the major food areas serving La Paz.) One leads to the Altiplano and is the principal access to the Cochabamba and Santa Cruz areas. The former is a main source of potatoes and temperate vegetables; the latter is the principal source of rice for the city. A second road leads directly under the glacier of Illimani, a 22,000-foot mountain rising over La Paz to the Northeast, to the valley of the Rio Abajo, an alpine area where a wide variety of temperate crops are grown. These are brought down the sides of the valley on mule-back to meet the daily convoy of about ten to fifteen trucks that serves the area. The third road leads to the Yungas, or jungle, which is the main source of tropical fruits (principally bananas and oranges) for the city.

Trucking is a critical communication and commercial linkage in the market processes of La Paz and, indeed, all of Bolivia. Virtually all food comes to La Paz by truck, except for beef flown in by B-17 Flying Fortresses and other transport planes from the Beni to La Paz. In addition, almost all trucks to the Altiplano carry many passengers and their loads to market and back to their villages. Much prestige appears to be associated with truck ownership.

For all these reasons it seems useful to examine the marketing system for trucks which is bringing vehicles to Bolivia at such a high rate, then to look at the survey results describing truckers, and to conclude with a cost analysis to understand the problems and contributions of truckers to the marketing of Bolivia.

### The Marketing System for Trucks

The number of trucks in both La Paz and Bolivia as a whole has been growing at a rapid rate (see Table 6.1). From 1963 to 1966, the number of trucks registered in the department of La Paz more than doubled, increasing from 1,172 to 2,372. Over the same time period, the total Bolivian truck population grew 40% from 25,596 to 35,784. Both sets of figures reveal a steady growth rate, although still a very small international market for trucks.

Table 6.1. Number of Trucks in the Department of La Paz

	Privately Owned	Public Service	Total Trucks	Total % Increase Over Previous Year
1962	290	576	866	--%
1963	513	659	1172	35
1964	692	734	1426	22
1965	881	914	1795	26
1966	1010	1362	2372	32

- SOURCES: 1. National Traffic Survey.  
 2. Table IV-C Integrated Study of Bolivian Transport, First Report, July 1967.  
 3. *Boletín Estadístico, Dirección General de Estadística y Censos.*

One major reason for the large increase in the truck population since 1963 has been the new and intense competition engendered by the Japanese truck manufacturers. Before 1963, there were almost no Japanese-made trucks operating in the department of La Paz. By the end of 1966, Toyota held the second largest market share. The manufacture of all trucks registered in La Paz is shown in Table 6.2.

International holds the largest market share, and is generally thought to be the highest quality truck. International also offers a wider selection of models than many of the other manufacturers. However, International's position is being challenged since other manufacturers have lower prices and better credit terms.

In our trucker survey<sup>1</sup>, we found that 56% of respondents purchased their vehicles new from an import house, while the

<sup>1</sup>The survey sample is described on page 116.

remainder purchased second-hand trucks. Importers will usually give a discount of up to 10% for cash payment. Cash purchases were made by only one out of ten respondents.

Table 6.2 Market Share Held by Truck Manufacturers in the Department of La Paz, December 1966

	<u>Percent</u>
International	30
Toyota	27
Chevrolet	13
General Motors	9
Others	<u>21</u>
	100

SOURCE: National Transit Authority.

Importing firms generally grant credit according to the policy established by the manufacturer. Credit varies from 45% to 65% of the vehicle's total value, with from 9 to 18 months to pay. A charge of 1-1/2 to 2% a month interest is made on time payments. Further, the importing firms demand different types of guarantees, which vary from a mortgage to a purely personal guarantee, depending on the credit rating of the purchaser as well as the policies of the seller. In most cases, importers demand the extension of registered bills of exchange for monthly payments, duly endorsed by known firms or individuals. When buying on credit, the purchaser is obliged to get complete insurance for the vehicle, with the policy endorsed to the firm. The signed contract has a special clause by which the vehicle remains the importer's property until complete payment is made. The purchaser cannot sell or transfer the vehicle, because it is registered with the government in the importing house's name.

Table 6.3 indicates prices and payment conditions of the three firms that represent the greatest percentage of vehicle makes in the department of La Paz. Only the most popular sizes sold by these firms are listed.

Table 6.3 reveals that Toyota is offering lower prices on the five-ton model than either International or Chevrolet, and longer terms than International. Toyota also offers a smaller truck (three-ton capacity) than other principal suppliers. Thus, the Toyota price, credit and product policy all combine to explain their recent market successes in Bolivia. General Motors

Table 6.3 Truck Price and Credit Policies  
in La Paz, by Manufacturer

Importing Firm	Make Re-presented	Tonnage	Cash Price	Credit Price	Mos.	Initial Payment	Monthly Payment
MacDonald y Cfa.	Inter-national	6	\$8,500	\$9,050	12	\$4,250	\$400
"	"	10	13,600	14,492	12	6,800	641
Toyota	Toyota	3	4,350	5,346	18	1,800	197
"	"	5	5,700	6,986	18	2,450	252
Cobana	Chevrolet	5.5	9,167	10,083	18	4,125	331
"	"	7	12,333	13,560	18	5,550	445

SOURCE: Personal interviews by MSU research team (1967).

and Dodge have recently entered the Bolivian market with more tentative programs, but have not been able to maintain parts supply; buyers seem less willing to risk purchase of these trucks in an environment where spare parts availability is critical.

Transporters work their vehicles very hard during the first two years, for a good truck doesn't present mechanical problems during this time. As soon as the vehicle starts to fail, the long distance transporter usually sells it to buy a new one. While such a policy seems costly, it probably makes economic sense since any breakdown on the road usually means that the truck will be out of service several days, thus losing revenue.<sup>2</sup> The larger trucks of five- and ten-ton capacities are usually employed in long-haul runs during their first year. As the risk of breakdown grows, the trucks are often sold for use closer to the city. Depreciation is usually 40% during the first year and 50 to 60% of the remaining value the second year. Four out of five truckers interviewed said they expected to use their present truck less than three years in "over the road" hauling. Three-fourths said they would sell their truck after taking it off inter-city hauls.

#### Personal Characteristics of Truckers

A representative sample of truckers actively engaged in transporting food into La Paz from the key foodshed areas could not be obtained from truck ownership statistics. Instead, truckers were interviewed by selecting trucks departing from La Paz for their

<sup>2</sup>The only place that has repair facilities in the entire department is the city of La Paz.

rural destinations. Usable interviews were obtained by contacting 115 drivers at the city of departure, riding with them to the rural destination, observing their business practices, and conducting the interviews. Secondary data were collected from the Government Bureau of Roads, as well as from rail, air and automotive firms.

The number of interviews conducted, by area, was:

	<u>Number</u>	<u>Percent</u>
La Paz	8	7%
Yungas	25	22
Rio Abajo	63	55
Altiplano	13	11
Santa Cruz	6	5

The average age of the truckers interviewed was 36, with 80% under 45 years of age. Four out of five were married; average family size was six individuals.

Compared with most retailers and wholesalers, especially those dealing in perishables, truckers are highly educated. Slightly over three-fifths were completely literate, while nearly two-fifths had partial reading ability. This high level of reading ability corresponded with their educational level; as a group, truckers had an average of six years of schooling. As expected, many had a high regard for the value of education. Sixty-three percent said they aspired to have their oldest child complete a university degree; virtually all felt this was an attainable goal.

Not surprisingly, truckers are a mobile group. Even though they reported living in their present area of residence an average of 19 years, 42% had lived in other provinces in Bolivia. Fully one-third had traveled outside Bolivia, a larger percentage than any other group surveyed in the course of this study. Finally, a high percentage (88%) had served at least six months in the military.

Truckers ranked relatively high in their exposure to mass media. Approximately one-fourth had listened to the radio the day before the interview. Seventeen percent reported never listening to the radio, while the remainder (83%) reported a usual listening time of just under three hours per day. The next major source of mass media exposure was movies, with 40% reporting having attended a movie in the month preceding the interview. Despite the relatively high level of reading ability, newspapers and magazines provided the least mass media exposure. One in four

respondents reported having read a newspaper the day before the interview and one in eight reported reading magazines. The better educated truckers generally have more exposure to mass media.

Truckers were more inclined to use interpersonal communications as a source of information than were other groups studied. Slightly over one-third said they had discussed business methods with others in the month preceding the interview. The merchants with whom they worked were said to be the major source of business information for 63% of the truckers interviewed. Only 16% reported that they had an awareness of commodity prices in the cities they serviced. This response runs counter to the traditional wisdom which suggests that truckers are sharp arbitrage agents keenly aware of prices who exploit farmers through purchases on their own account.

About two-thirds report being members of a truckers' union. Of those who are members, 37% say that union membership is a help to them in their business. Those who do obtain aid from the union get it in the form of medical help and credit extension.

Truckers were more optimistic with regard to past and future progress than retailers had been. Approximately one-third felt that Bolivia, as well as themselves, had made acceptable progress in the past five years, whereas approximately 10% felt that no progress had been made, either for themselves or Bolivia. Nearly three-fifths, however, thought the country and themselves were making only slow progress. With regard to future expectations, truckers were quite optimistic, with 88% expressing the view that Bolivia would be better five years hence than it was at the time of the interview.

#### Truckers' Business Practices

As we have seen in Chapter 5, food wholesaling is largely centered in the large, sprawling complex of the Rodriguez, Buenos Aires and Uruguay markets. To the stranger, these markets appear to be confusing, noisy and unsanitary places. To those who work there and serve the markets, there is an order and a rationale for many of the procedures. It is probably true that better information and better sanitation (which would reduce spoilage) could improve the efficiency of the markets, but the cost of these changes has not been estimated.

Although perhaps not aesthetically pleasing, these market locations are functional. Trucks use the streets primarily at

night to unload their cargo, and docking costs are thus non-existent.

Truck service into these wholesale markets is organized on a regular basis. As seen in Table 6.4, transportation between La Paz and various outlying cities is organized by day, hour and place of departure. In addition, arrival in La Paz of transport from these various cities and towns is also specified with regard to time and location. Freight and passenger costs are specific and generally known. Points of arrival are related to the markets where an area's produce is sold in the city.

Major foodsheds, e.g., Rio Abajo, Yungas, Cochabamba, and Santa Cruz, have daily service. Some small towns on main routes, such as Sica Sica, are also served every day. More remote locations such as Copacabana may be covered only once or twice a week.

The present transport system appears to foster competition. Rates are lowest for passenger and freight traffic originating in La Paz, where competition is potentially keener. Owners, chauffeurs and assistants try to pick up as many passengers as possible in these streets by calling out "We're leaving soon" or "Just a few more passengers and we start." It is well known to the truckers, merchants, and *campesinos* that during various days of the week fairs take place in different areas of the Yungas and Altiplano. Once the truckers have filled their cargo and/or passenger capacity, they pretend they are leaving immediately. They start circulating around a nearby street, blowing the horn to get more passengers and calling out the name of their destination.

The truckers usually drive the same route each time out. As a result, they become known for a specific quality of safety, a faster trip, friendliness, etc. Thus, there are persons who prefer to ride a given truck, and each trucker appears to have a certain hard-core clientele.<sup>3</sup>

Once the truck has started on the trip, it picks up or leaves passengers all along the way. The merchants and/or producers, who are generally peasants living in small towns or

---

<sup>3</sup>One of the staff members rode to Puerto Acosta with a trucker who had driven that particular route for 19 years without an accident. The trucker spoke Aymará and Spanish and joked with persons all along the way. As one might have surmised, he had more business than the other truckers. The same person took another journey to one of the valley villages. On the second trip the driver showed his driving skill by coming out of the valley--a climb of 10,000 feet in 20 miles--in 45 minutes less than any of the other trucks. He was marked for his speed and audacity.

Table 6.4 Days, Hours and Places of Departure and Arrival of Trucks from and to the City of La Paz Connecting Rural Villages and Districts in the Interior

Rural Population or Interior Districts	Day of Departure	Hours of		Places of		Passenger Charge (pesos)		Freight Rates (pesos)	
		Departure	Arrival	Departure	Arrival	Out	Back	Out	Back
Achacachi	Thursday Sunday Sometimes every day	6-8	14-19	Av. Bs. Aires	Antonio Gallardo, Zona Cementerio, Garita de Lima	3	3	2/qq <sup>a</sup>	2/qq
Batallas	Same as above	5-8	14-18	Av. Bs. Aires	Av. Bs. Aires, Garita de Lima, Chijini, Zona Cementerio	2	2	1/qq	1/qq
Copacabana	Friday Saturday	5-8	14-17	Av. Bs. Aires & Tumusla	Zona Cementerio, Garita de Lima Pedro de la Gasca	10	10	3/qq 4/qq	3/qq 5/qq
Caranavi	Every day	9-12	9-20	Isaac Tamayo	Mercado Uruguay	10	12	6/ch <sup>b</sup>	6/ch
Caracoto	Wednesday	10-12	18-20	Isaac Tamayo	Isaac Tamayo	6	10	4/qq	4/qq

(continued on next page)

Table 6.4 (continued)

Rural Population or Interior Districts	Day of Departure	Hours of		Places of		Passenger Charge (pesos)		Freight Rates (pesos)	
		Departure	Arrival	Departure	Arrival	Out	Back	Out	Back
Corocoro	Sunday Thursday	6-8	17-19	Av. Bs. Aires & Tumusla	Garita, Exaltacion	6	6	2/qq	2/qq
Cochabamba	Every day	Any time	Any time	Leon de la Barra	Mercados, Tambos, Domicilios	18	20	8/qq	8/qq
Coroico	Wednesday Saturday Sunday	9-12	18-20	Leon de la Barra	Santa Cruz	7	10	3/ch	5/ch
Coripata	Tuesday Friday	8-12	18-20	Isaac Tamayo & Sagarnaga	Tambo Santa Cruz	6	12	3/ch	5-6/ch
Chullumani	Every day	8-12	18-24	Leon de la Barra	Tambo Gran Poder	6	10	5/ch	7/ch
Desaguadero	Tuesday Friday	4-7:30	14 on	Tumusla & Bs. Aires	Zona Cementerio, Garita de Lima, Tumusla	5	5	3/qq	3/qq
Guaqui	Tuesday Friday	4-7	14-19	Bs. Aires & Tumusla	Zona Cementerio, Garita de Lima	4	4	2-2.50/qq	2-2.50/qq

(continued on next page)

Table 6.4 (continued)

Rural Population or Interior Districts	Day of Departure	Hours of		Places of		Passenger Charge (pesos)		Freight Rates (pesos)	
		Departure	Arrival	Departure	Arrival	Out	Back	Out	Back
Huarina	Every day, especially Sundays	n.a.	n.a.	Av. Bs. Aires	Zona Cementerio, Garita de Lima	3	3	1.50/qq	1.50/qq
Irupana	Every day	8-12	17-24	Leon de la Barra	Tambo Carmen	8	12	5/ch	7/ch
Lahuachaca	Wednesday	6-8	18-20	Av. Bs. Aires	Zona Cementerio, Garita de Lima	7	7	3/qq	4/qq
Luribay	Wednesday	5-8	20-23	Isaac Tamayo	Isaac Tamayo	15	15	5/qq	5/qq
Oruro	Every day	Any time	Any time	Leon de la Barra	Mercado Rodriguez, Domicilios, Mercados	10	10	4-5/qq	4-5/qq
Patacamaya	Wednesday Sunday	6-8	14-20	Av. Bs. Aires, Calle Calderon	Garita de Lima	6	6	2.50-3/qq	2.50-3/qq
Pocota	Wednesday	6-7:30	14-18	Tumusla, Garita de Lima	Zona Cementerio, Garita de Lima	2	2	1/qq	1/qq

(continued on next page)

Table 6.4 (continued)

Rural Population or Interior Districts	Day of Departure	Hours of		Places of		Passenger Charge (pesos)		Freight Rates (pesos)	
		Departure	Arrival	Departure	Arrival	Out	Back	Out	Back
Pucarani	Wednesday Sunday	6-8	14-18	Av. Bs. Aires & Tumusla	Zona Cementerio, Quijarro	3	3	2/qq	2/qq
Puerto Acosta	Thursday Saturday	5-6	12-14	Av. Bs. Aires	Estacion Fca. Vita.	9	12	5/qq	5/qq
Puerto Perez	Thursday	6-8	14-18	Av. Bs. Aires	Av. Bs. Aires	3.50	4	2/qq	2/qq
Rio Abajo	Every day	8-9	14-17	Mercado Rodriguez	Mercado Rodriguez	2.50-3	4	1.50/ch	1.50/ch
Santa Cruz	Every day	Any time	Any time	Leon de la Barra	Av. Montes, Tambos, Markets, Lodgings	30	30	16/qq	16/qq
Sica Sica	Every day	6-8	14-18	Av. Bs. Aires	Zona Cementerio	7	7	3/qq	3/qq
Sapaqui	Wednesday Sunday	10-12	18-20	Isaac Tamayo	Max Paredes, Santa Cruz	5	8	4/qq	4/qq
Sorata	Thursday Sunday	6-8	17-20	Av. Bs. Aires	Zona Cementerio, Garieta de Lima	9	10	4/qq	4/qq

(continued on next page)

Table 6.4 (continued)

Rural Population or Interior Districts	Day of Departure	Hours of		Places of		Passenger Charge (pesos)		Freight Rates (pesos)	
		Departure	Arrival	Departure	Arrival	Out	Back	Out	Back
Tablachaca	Friday	5-8	19-22	Isaac Tamayo	Max Paredes	10	12	6/qq	6/qq
Tiquina	Friday	5-8	15-18	Tumusla, Av. Bs. Aires	Pasaje Litoral	6	6	2/qq	2/qq

<sup>a</sup>qq = quintal = 100 pounds

<sup>b</sup>ch = *chipa* = a bundle of 1000 bananas weighing 300 to 350 pounds

SOURCE: MSU Trucker Survey (1967).

villages, go out to the road to board the trucks. The helper, who rides the back of the truck, helps the passenger climb up and get his cargo on top of the truck. At the destination (frequently a fair, but sometimes a market square) the people jump off with their cargo. After the truck is unloaded, it is parked in line with other trucks waiting their turn to start the return trip.

While he waits, the owner or driver tries to get cargo. He goes through the village visiting known clients, or friends, trying to make arrangements to pick up cargo in any other place where products are concentrated. Once he finds a client, the quantity of cargo and the freight rate are established. The driver will usually pick up cargo from wherever the client indicates.

Contacts between truckers and their clients in the major foodshed cities of Santa Cruz and Cochabamba take place in much the same manner as in La Paz. In Santa Cruz, cargo and passengers are to be found at various specified street locations, near the sugar and rice mills, at small outlying towns, and at the offices of large wholesalers. Transporters also frequently park their trucks at the doors of lodging houses, where clients deliver their cargo.

Cochabamba transporters in Santa Cruz own a cooperative agency, FESTACO, where truckers gather. This is one of the few examples of a freight-forwarding organization in Bolivia. Through this office, truckers receive help in getting cargo directly from sugar mills or large wholesaling houses such as Hansa or Sidec. The La Paz Federation (truckers' union) does not have a similar organization to aid member truckers in getting cargo in an organized way.

In Cochabamba, major truck assembly points can be found in small outlying villages, next to the railroad warehouses, and in certain specified market locations. Trucks are often hired for express trips carrying vegetables, cereals, potatoes, etc., to La Paz. The cargo owners make the trip on the same truck and start selling their products off the trucks within one or two days. These cargo owners or middlemen are not charged for this layover period in La Paz; it is part of the truckers' "service." It may be, however, an inefficient use of the equipment. Larger wholesale buyers capable of handling a full load could displace this practice.

Nearly half of the truckers interviewed reported a willingness to accept cargo on consignment to be delivered to a third person or consignee. Although this custom is already established, the transporters apparently have little interest in, or perhaps capability for, installing freight-forwarding offices in the city, in rural towns or in other districts. Very few offices were found that would accept cargo on consignment. This lack exists even though truck drivers are willing to help clients by accepting this type of cargo.

Sixty percent of the cargo accepted on consignment by truckers is transported for people with whom they have no relationship except that of client to truck driver. One-third of consignment cargo is transported for friends and less than 10% for relatives. Contrary to traditional wisdom, the spiritual relations (such as *compadres* or *comadres*) are not a crucial factor in consignment handling. Only one out of seven transporters who accept cargo on consignment add an additional charge (\$2.88 per hundred weight) for this service. The average cargo on consignment is only 400 pounds per trip.

In order to secure more cargo, 41% of the truckers interviewed took cargo on credit. To have a guarantee on collecting credit for freight, 63% of those granting credit give it only to friends or relatives. When a truck is stopped at a customs or checkpoint, the driver will frequently advance the money to pay the taxes.

Nearly three-fourths of the truckers claimed trucking as their only source of income. Nineteen percent answered "yes" when asked, "Do you or any member of your family buy farmers' products and sell them?" From the observation of interviewers, it seemed that the trucker's wife usually did the buying in the minority of cases where the trucker traded in farm products. Two-fifths of those involved in trading handled salt, rice, sugar, corn or wheat, with 29% dealing in potato products exclusively. Thus, while some trading is done by truckers, it doesn't appear to be a major practice.

The data in Table 6.5 show the extent to which trucks are idle while waiting for cargo and passengers. For roughly one-third of the truckers, turnaround time in both La Paz and the rural areas is less than three hours, which is perhaps a reasonable down-time. Approximately another one-third wait from three to eight hours to pick up cargo and passengers. Finally, another one-third appear to be forced to spend eight or more hours

to develop a full load. It would appear that reductions in turn-around time could be achieved by freight-forwarding systems and better information systems, especially in the rural areas.

	Wait in La Paz	Wait in Rural Areas
0 - 3 hours	33%	31%
3.1 - 8 hours	34	29
8.1 - 24 hours	22	31
More than 24 hours	11	9

SOURCE: MSU Trucker Survey (1967).

Nearly three-fifths of the respondents reported obtaining credit for truck parts and repairs. The "last loan" received was utilized as shown in Table 6.6. Two-thirds of those receiving credit got the money from relatives. Money so obtained had an average interest of 4.5% monthly, equivalent to 54% annual average, or well above the prime rate of 16 to 20%. These personal loans were obtained for an average of almost seven months, with the average amount of the "last loan obtained" being \$520. One-third of the respondents got credit for spare parts from importing houses at 2.2% interest (26% per annum) for an average term of 4.3 months. The "last loan obtained" by those who applied at the importing houses for spare parts was \$415. Apparently truckers have either little confidence in commercial banks or no access to them.

Purchase of tires	24%
Purchase of accessories and spare parts	21
Motor adjustment	11
Minor repairs	10
Payment of open credit account for unspecified products	22
No answer	12

SOURCE: MSU Trucker Survey (1967).

### Trucker Income and Expenditures

Poor road conditions and relatively long waiting times for cargo may not be a problem if income per trip is sufficiently high in relation to costs. The average income per round trip, as reported by respondents, was \$53. Truckers averaged 10.8 trips per month; thus, total revenue per month was \$573. On the basis of 3070 miles traveled each month, revenue per mile was less than \$0.19, a very low figure indeed. Before proceeding further in the analysis, it should be noted that the revenue figures cited here are for the month of May, a busy harvest month.

Projection of the above data to annual figures is somewhat tenuous. The rains, which are quite heavy from December through February, make travel over dirt roads difficult and in some areas impossible because of high water, landslides, or the road being washed away. During depth interviews, truckers said that for the two to four months of the rainy season business is only 10 to 30% of what it is during the harvest season. To obtain a range of revenue and costs, we have made two estimates (shown in Table 6.7).

	High Estimate	Low Estimate
Revenue	\$6820	\$5470
Fixed Costs:		
Depreciation (5 years)	\$1225	\$1225
Municipal and Federal Taxes	12	12
Insurance	268	268
Total Fixed Costs	\$1505	\$1505
Semi-Fixed Costs:		
Driver Salary	\$ 589	\$ 526
Helper Salary	158	141
Total Semi-Fixed Costs	\$ 747	\$ 667
Variable Costs:		
Garage	\$ 56	\$ 65
Tires	1130	906
Gas and Oil	2820	2260
Maintenance and Repair	859	688
Total Variable Costs	\$4865	\$3919
Total Costs	\$7127	\$6091
Profit (Loss)	(\$ 307)	(\$ 621)

SOURCE: MSU Trucker Survey (1967).

For the first, we assume that business and revenue during May (a harvest month) are projectable for the full year. For the second, and probably more realistic of the two estimates, we assume that May results can be extended for nine months, and that business and revenue for the remaining three months drop to 20% of a harvest month.

The data in Table 6.7 show that, on the average, truckers are eating into their capital. Taking into account depreciation, truckers are losing \$300 to \$600 per year. Disregarding depreciation, truckers are making between \$600 and \$900 per annum on their trucking operations alone. While this perhaps compares favorably with per capita income reported in Chapter 2, a family income measure is probably a more relevant comparison. Less than one trucker in eight reported an outside income, averaging \$72 per month for those who had this additional source of revenue. Another one-fifth reported that other family members had outside jobs, averaging \$40 per month. It seems clear, then, that most truckers are dependent on their trucking operations for the bulk of their income. If the figures in Table 6.7 can be believed, trucking not only does not bring large returns, it involves negative returns.

#### Route Selection Procedures and Perceived Problems

Since truckers on the average appear to be losing money, it is well to have some idea of the ways in which they select the routes they use and also to get a better picture of their perceived problems.

The truckers' reasons for using particular routes are shown in Table 6.8. Two-thirds of the respondents logically claim to use the route they do because of greater profits. "Good roads" as a reason for using a particular route is very infrequently stated. This is surprising and suggests that major road improvements may be less needed than penetration roads. Truckers operating on the Altiplano appear to be more influenced by tradition and friends in their choice of routes than do those working other areas of Bolivia. Cochabamba-Santa Cruz truckers seem to be influenced exclusively by relative profit potential.

Truckers' perceptions of their main problems are shown in Table 6.9. Two-fifths saw a lack of cargo and excessive competition as their main problem. This concern is probably a result of the increased truck population in the past few years. Surprisingly,

Routes	More Profits	Tradition, Friends, or Good Roads
Altiplano	61%	39%
Valleys	76	24
Cochabamba-Santa Cruz	95	5

SOURCE: MSU Trucker Survey (1967).

28% suggested that "bad roads" were a major problem, although few had earlier stated that "good roads" were a factor in their choice of routes. Finally, 15% considered lack of parking space to be a major problem.

Lack of cargo, too much competition	40%
Bad roads	28
Lack of parking space	15
Government interference; too many toll houses	11
Mechanical failures	6
	<u>100%</u>

SOURCE: MSU Trucker Survey (1967).

Truckers were also asked specifically if they had problems in other aspects of their business. Surprisingly few truckers had spontaneously mentioned that mechanical failures were an important problem. Yet, when asked directly whether the truck had been out of commission for lack of parts, 46% said it had been. The average number of days out of service was 21. This down-time is extremely costly when fixed costs are as high as they are for truckers. Upon probing it was revealed that some of the time truckers wait for parts because they have no money to buy them. This suggests the need for increased supplier and commercial credit.

Truckers were also asked specific questions regarding loading and unloading in La Paz. Some 10% said they had no problem in this regard. Approximately one-third mentioned difficulties with lack of parking. A large number of respondents (over 40%)

were unable to specify a problem, while at the same time they did not state categorically that there was no problem in loading and unloading in La Paz.

#### Summary

The available data suggest that trucking is a far from profitable operation, with profits low or non-existent for most operators. The poor quality of under-capitalized maintenance stations increases the cost of maintenance and repair. Although hand labor is very cheap, spare parts and repair materials are relatively expensive. Since depreciation, both physical and financial, is rapid, truckers are forced to replace their vehicles after a fairly short time. There are indications that many will find this replacement difficult to effect in the future, as an increasing number of used trucks will drive down the price for a second-hand truck, which typically provides the down payment for a new truck.

The rapid increase in the truck population from 1963 to 1966 can, to a large extent, be attributed to Japanese firms offering a smaller truck, lower down payment, and longer terms. Many financially marginal entrepreneurs have been attracted to transport, often because of its prestige value. Although little evidence is available, the amount of business has apparently not kept pace with the increase in trucks. There has, therefore, been downward pressure on rates to the point where they are lower than in 1956. The immediate outlook looks grim unless these truckers can cooperate and/or organize into fleets in order to cut costs and provide more rational service.

Cargo consignment agencies might cut waiting time for passengers and cargo. The agencies could start operating in the interior, thus guaranteeing cargo consignment, schedules and adequate cargo storage, insurance and security of payment. Although a cooperative for truck parts failed in the past, encouragement should be given to the organization of a new one. The main objective of this cooperative will be to stock spare parts and accessories on a large scale, providing low-cost parts and credit to members of the cooperative.

From a private viewpoint, the problem of over-capacity and falling profits may be a personal problem, but a reasonable business risk. From a public viewpoint it may be a more serious problem. The economy is tied to trucking and, given the rapid depreciation of vehicles on Bolivia's roads, there is a constant

need for replacements. Careful attention to credit policies and importation is needed to assure a steady stream of low-cost replacement vehicles. The community must be concerned to prevent the present over-expansion of trucking to be followed by a swing in the opposite direction.

## CHAPTER 7

### CHARACTERISTICS AND MARKETING PRACTICES OF FARMERS AND COUNTRY ASSEMBLERS

The peasant in many developing countries is generally considered to be illiterate and little exposed to a modern way of life. He is often thought to know little about market conditions and to be generally unresponsive to changes in market demand. However, there is reason to believe that the peasant in Bolivia is aware of market factors and plays an active role in the larger community around him.

The agricultural sector in Bolivia has undergone considerable change since the revolution of 1952. A system of landholding and agricultural production-marketing centered on the *hacienda* has been changed by the Agrarian Reform of 1953. Peasants now own their own land and market their own products. A variety of public and private services have been extended into rural areas. The government has provided credit, price support activity, and technical assistance. Truckers have expanded their routes into many major producing areas. Merchants have, through an increasing number of rural fairs, brought modern farm inputs to the producing areas.

The above factors have been at work in the La Paz foodshed, as well as in the rest of the country. Several areas supply food to La Paz. Vegetables and potatoes come from the Altiplano, Cochabamba, and valleys near the city. Some vegetables are imported from Peru. Rice is supplied mainly from the Santa Cruz area. Beef comes principally from the Beni region during the dry season and from the Altiplano during the wet season. Tropical fruits--primarily bananas and oranges--are shipped in from the Yungas and Alto Beni. It is well to re-emphasize that topographic and climatic conditions in the La Paz foodshed vary from the harsh, cold Altiplano at 13,000 feet above sea level, to the temperate valleys at 5,000 to 8,000 feet, down to the steaming, tropical lowlands under 1,000 feet. These conditions provide widely varied supply sources, in most cases within less than 10 to 12 trucking hours from the city.

In this chapter we deal first with the demographic and communication aspects of farmers. Their marketing and economic practices and characteristics are then discussed. Regional similarities and differences are considered, with four distinct areas--

Yungas, Altiplano-Rio Abajo, Cochabamba, and Santa Cruz--analyzed. Following the discussion of farmers, we turn to discussion and analysis of country assemblers, who act as intermediaries either between farmer and wholesaler or between farmer and retailer.

Since Bolivia has not taken an agricultural census since 1950, no recent enumeration of farmers or farm production was available.<sup>1</sup> Therefore, the interviews reported in this chapter are drawn from a judgmental, area quota sample. Interviewers were sent to geographic regions where products of interest in the research study were grown. In each area, interviewers were instructed to interview both farmers and country assemblers. Respondents were contacted at their farms, at weekly fairs (on the Altiplano), and at wholesale markets or rice mills in Santa Cruz, Cochabamba and La Paz. The number of completed interviews in each geographic area is shown in Table 7.1.

Area	Products of Interest	Interviews Completed		Total
		Farmers	Country Assemblers	
Yungas, Alto Beni	Rice Bananas	63	1	64
Rio Abajo, Altiplano	Potatoes Vegetables Cattle	75	62	137
Cochabamba	Potatoes Vegetables	42	21	63
Santa Cruz	Rice	<u>83</u>	<u>22</u>	<u>105</u>
		263	106	369

#### Farmers

##### Personal Characteristics

The farmers interviewed ranged in age from 17 to 72, with a mean of 39 years. Ages of respondents varied by region (see Table 7.2). Farmers interviewed in the Yungas and Altiplano-Rio Abajo are younger than those in the other two regions. A possible reason for the younger respondents in the Altiplano-Rio Abajo region may be the shorter life span in that area because of the

<sup>1</sup>Most production estimates depend upon projections made from the 1950 census.

altitude. The younger group in the Yungas probably reflects the more recent colonization programs in that area.

	Age		
	<u>Less than 34 years</u>	<u>35-42</u>	<u>over 43</u>
Yungas	42%	42%	16%
Altiplano-Rio Abajo	55	31	14
Cochabamba	29	26	45
Santa Cruz	14	35	51

SOURCE: MSU Farmer-Country Assembler Survey (1967).

The number of years of schooling reported by the farmers interviewed was surprisingly high, with an average of 4.6 years. One-fifth reported no schooling, while another fifth reported having more than a primary education, i.e., over six years. As seen in Table 7.3, Santa Cruz respondents clearly had the highest level of schooling, with three-fourths having completed six or more years. Cochabamba respondents presented a bi-modal pattern, with two-fifths having little education and two-fifths having a fair amount. Yungas and Altiplano-Rio Abajo respondents were both biased on the low side.

	Years of Schooling		
	<u>2 or less</u>	<u>3-5</u>	<u>6 or more</u>
Yungas	38%	42%	20%
Altiplano-Rio Abajo	36	46	18
Cochabamba	40	21	39
Santa Cruz	10	15	75

SOURCE: MSU Farmer-Country Assembler Survey (1967).

The level of schooling reported by producing area is generally reflected in the reading ability of farmers interviewed (see Table 7.4). As expected, Santa Cruz farmers are the most literate. Respondents in the Yungas had a higher degree of reading ability

than their years of schooling would suggest, whereas Cochabamba farmers had a lower level of reading ability than expected.

	Ability to Read		
	Unable	Partially Able	Completely Able
Yungas	18%	52%	30%
Altiplano-Rio Abajo	41	52	7
Cochabamba	50	30	20
Santa Cruz	17	14	69

SOURCE: MSU Farmer-Country Assembler Survey (1967).

Farmers were asked several questions to determine their previous patterns of geographic mobility; these questions were formulated to provide an estimate of the degree of contact which respondents had had with different kinds of people and places which might influence their "way of life." The data in Table 7.5 show the degree to which farmers in each region have been exposed to other ways of life. Respondents in the Altiplano-Rio Abajo region appear to have had the least amount of geographic mobility. The high level of mobility exhibited by Yungas farmers doubtless reflects recent colonization; many farmers in that area were military conscripts who had originally been sent to the Yungas to clear land and develop the area, later returning as residents. Many Santa Cruz farmers work in Argentina during that country's harvest season, thus explaining the high level of travel outside Bolivia for Santa Cruz farmers.

	Percentage of Respondents Who Have:		
	Served in the Military	Lived in Another Province	Traveled Outside Bolivia
Yungas	98%	92%	27%
Altiplano-Rio Abajo	43	20	6
Cochabamba	84	48	10
Santa Cruz	75	47	61

SOURCE: MSU Farmer-Country Assembler Survey (1967).

The following questions were asked to determine farmers' perceptions of Bolivia's progress, as well as their own.

1. Do you think Bolivia has been progressing?
2. Do you think you have been progressing?
3. What progress do you think Bolivia will make in the next five years?

In general, farmers were more satisfied with their own and Bolivia's progress than were other participants in the marketing system. This may very well be a reflection of the expanded participation of the *campesino* in Bolivia's political and economic life following the 1952 revolution and the 1953 Agrarian Reform.

There were no significant differences between regions with respect to farmers' views of past personal progress. Twenty-seven percent felt they had been making good progress, 18% felt they had made no progress, and the remainder (55%) thought there had been slow progress. When asked about Bolivia's past progress, Santa Cruz respondents were clearly most satisfied; whereas only about one-fourth of the farmers in other areas thought Bolivia had been progressing, over one-half of the Santa Cruz respondents felt that progress was being made. On the other hand, about one-fourth of the Cochabamba farmers felt that Bolivia had, in fact, been retrogressing. Finally, when asked whether Bolivia would be better off five years in the future, all of the Santa Cruz respondents, four-fifths of the Yungas and Altiplano-Rio Abajo farmers, and three-fifths of the Cochabamba respondents thought the country would progress.

These data suggest, then, that Santa Cruz farmers are optimistic about the future whereas Cochabamba farmers are generally more negative. The attitudes of the Santa Cruz farmers are probably a function of the progress made in rice cultivation in that area, in large measure a result of government programs designed to increase output through credit and price support programs.<sup>2</sup> In Cochabamba, on the other hand, farming has suffered in recent years from poor weather conditions. Also, Cochabamba had been the major wheat-growing area, and Bolivian production of this crop has been affected by imports of United States P.L. 480 wheat flour.

---

<sup>2</sup>Conditions in the Santa Cruz area are hopeful, as suggested by Norman Gall in "The Legacy of Che Guevara," *Commentary*, December 1967. Gall comments, "The revolutionary thrust of the United States in creating new conditions of life has been most apparent in the Santa Cruz area of Bolivia. Here the U.S. Government has invested close to \$100 million since 1956, in what is now one of the few notable successes of the Alliance for Progress in regional development."

Another question tapped the farmers' propensity to allocate a windfall increase in income (\$1666) among several specific alternatives, e.g., children's education, buying a new truck, buying a house, or investing in a business. As seen in Table 7.6, Yungas farmers have by far the greatest tendency to invest in education for their children. Santa Cruz and Cochabamba farmers were most likely to invest in a business. Rio Abajo-Altiplano farmers tended toward investment in a truck or house. Since buying a house is generally associated by the group interviewed with moving to a city or market town, and buying a truck implies (to the respondents) a move into a new occupation, it appears that a majority of both the Rio Abajo-Altiplano and Cochabamba respondents are oriented toward leaving the land.

Table 7.6 Farmer Allocation of a Windfall \$1666 by Area

	Buy a Truck	Buy a House	Invest in a Business	Children's Education
Yungas	4%	7%	37%	52%
Rio Abajo-Altiplano	32	28	27	13
Cochabamba	21	31	48	0
Santa Cruz	8	14	61	17

SOURCE: MSU Farmer-Country Assembler Survey (1967).

#### Communication Characteristics

This section describes the farmers' use of radio, newspapers, magazines and movies, as well as their business information sources. As indicated by the data in Table 7.7, radio is the most frequently

Table 7.7 Use of Mass Media by Farmers

Channel	Percent Using
Listened to the radio yesterday	63%
Went to a movie last month	27
Read a newspaper yesterday	17
Read a magazine last week	12

SOURCE: MSU Farmer-Country Assembler Survey (1967).

used mass medium, and hence the one most effective in reaching a majority of the farmers. Sixty-three percent of the farmers listen

to the radio, 27% attend movies, 17% read newspapers, and 12% read magazines.

Cochabamba respondents reported the greatest exposure to radio. Two-thirds said they listen to the radio two hours or more each day. Yungas, Rio Abajo-Altiplano and Santa Cruz farmers had lower exposure to the radio (see Table 7.8).

Table 7.8 Number of Hours Listened to Radio by Farmers by Area Interviewed			
	Hours		
	<u>0</u>	<u>1</u>	<u>2 or more</u>
Yungas	22%	45%	33%
Rio Abajo-Altiplano	27	40	33
Cochabamba	20	13	67
Santa Cruz	26	40	34

SOURCE: MSU Farmer-Country Assembler Survey (1967).

Santa Cruz respondents reported the most frequent use of the newspaper, reflecting, perhaps, their relatively high level of literacy as compared to other farmers interviewed. Thirty-five percent said they read the newspapers, while 15% from Cochabamba and only one in twelve from the Yungas and Rio Abajo-Altiplano regions read newspapers. The low usage of newspapers among Yungas farmers is explained in part by the general unavailability of newspapers in the area.

The data indicate that Santa Cruz respondents have the highest mass media usage.<sup>3</sup> When the mass media usage of all farmers is compared, 55% of the high users are from Santa Cruz (see Table 7.9). The lowest users of mass media are the Cochabamba respondents.

Respondents were also asked about their sources of business information. Truckers, merchants, government, friends not in business or government, and other farmers were listed as potential sources of business information (Table 7.10). This question was asked to help determine the relative importance of these information channels on topics affecting the farmers' market activities.

<sup>3</sup> A mass media usage index was constructed taking into account radio listening, movie attendance, and newspaper and magazine readership.

	Level of Usage		
	<u>Low</u>	<u>Medium</u>	<u>High</u>
Yungas	24%	65%	11%
Rio Abajo-Altiplano	24	35	41
Cochabamba	33	31	36
Santa Cruz	17	28	55

SOURCE: MSU Farmer-Country Assembler Survey (1967).

<u>Source</u>	<u>Percent of Farmers</u>
Merchants	58%
Government	24
Truckers	14
Neighbors	3
Friends not in farming or government	1

SOURCE: MSU Farmer-Country Assembler Survey (1967).

Nearly three-fifths of the respondents said that merchants were their best source of business information. One-fourth relied on the government. A majority of farmers in the Rio Abajo-Altiplano and Cochabamba areas indicated that merchants were their best source of business information (see Table 7.11). The Santa Cruz rice growers relied heavily on the government as their most important source of business information. Government information has been readily available in this region and is usually directed towards production practices, such as planting methods, seed, and pest control. Such information is relayed by agricultural extension agents. Outside the Santa Cruz area, the government plays a very small role in supplying business information, at least as reported by the farmers.

To help determine the degree of interpersonal affiliation among farmers, their membership in various organizations was investigated. About three out of ten farmers interviewed belonged to a union and about one-third were cooperative members. Only 21% of the cooperative members indicated that they received some

Table 7.11 Source of Business Information of Farmers by Area Interviewed

	Trucker	Merchant	Government
Yungas	20%	77%	3%
Rio Abajo-Altiplano	31	61	8
Cochabamba	19	69	12
Santa Cruz	3	40	57

SOURCE: MSU Farmer-Country Assembler Survey (1967).

help from the cooperative, while 11% of the union members said they received help from the union. Group affiliations could play an important role in program implementation, e.g., in administering credit to small farmers. Thus, it is important to know which farmers have the highest degree of affiliation. Among the regions studied, the Rio Abajo-Altiplano respondents had more than twice the proportion of union members than any other group, with 67% reporting membership. One-fourth of the Yungas respondents said they were union members, followed by Santa Cruz with 11% of the respondents and Cochabamba with none.

Of those farmers who were cooperative members, Yungas farmers appeared to be receiving the most benefit from the organization. Almost one-half indicated they received some help from the co-op. One-fourth of the Santa Cruz farmers also were recipients of some co-op assistance. However, co-op assistance in Rio Abajo-Altiplano and Cochabamba was practically nil.

In summary, it appears that Santa Cruz respondents have the highest mass media usage. There is also a considerable amount of co-op affiliation among the farmers in that area. The Yungas farmers also have a fair amount of media usage, and evidence the highest level of co-op affiliation. Cochabamba farmers reported the lowest usage of mass media and practically no membership affiliation. Rio Abajo-Altiplano farmers have about the same degree of media usage as Yungas farmers, very high union membership, and limited participation in cooperatives.

#### Marketing and Economic Characteristics

On the average, 20% of the production of all farmers interviewed was marketed in La Paz without intermediate processing. Yungas and Rio Abajo-Altiplano respondents marketed the highest proportion of their product directly in La Paz (see Table 7.12).

Table 7.12. Percentage of Production Marketed by Farmers in La Paz, by Area			
	Percent Marketed in La Paz		
	0	1-80	81 or more
Yungas	57%	5%	38%
Rio Abajo-Altiplano	49	33	18
Cochabamba	49	51	--
Santa Cruz	98	2	--

SOURCE: MSU Farmer-Country Assembler Survey (1967).

About two-fifths of the Yungas respondents reported marketing more than 80% of their output directly in La Paz. One-half of the Cochabamba respondents marketed at least some proportion of their production to La Paz, despite the 150 miles separating the two cities.

A great number of weekly agricultural fairs have come into being since the 1952 revolution. There are now 50 to 75 weekly fairs on the Altiplano. Only a few areas do not have a fair within a day's walk of most villages.<sup>4</sup> Farmers exchange a growing portion of their output at these rural fairs. Santa Cruz farmers sell a high proportion of their product at the local rice mill. Over nine-tenths of the Cochabamba farmers interviewed sell their product at a country fair (see Table 7.13). Also, 69% of the Rio Abajo-Altiplano respondents sell their product at fairs, but none sell more than 70% through this channel. About three-fourths of the Yungas farmers do not sell at fairs. In general, Yungas farmers who do not take their produce to La Paz sell their output at roadside pick-up platforms.

Farm sales were least important in terms of proportion of production sold through the various channels. Only 12% of the production of all farmers interviewed was sold at the farm level. This, together with the preceding data, suggests that farmers are taking an active part in marketing their products. The present role of the farmer in marketing his output is in sharp contrast to what had generally been thought to be the practice. Many observers of the marketing of farm products thought the distribution system between farm and city worked as follows:

<sup>4</sup>The Santa Cruz equivalent to the fair is the rice mill, where rice is processed for eventual farmer consumption or sale through commercial channels.

1. The *rescatador* (country assembler) goes to a country fair, where he obtains produce from a *compadre* or *comadre* (farmer with a godparent relationship to the *rescatador*);
2. A sales price is agreed upon, but payment is made after the sale in La Paz;
3. At the time of payment, the *rescatador* always claims a low price was received in La Paz and pays less than the agreed-upon price;
4. All risks are taken by the *campesino*; if any losses occur, the amount is deducted from the final payment.

Table 7.13 Percent of Farmers' Production Marketed at Fair or Mill by Area Interviewed

	Percent Marketed at Fair or Mill		
	<u>0</u>	<u>1-67</u>	<u>68 or more</u>
Yungas	74	6	20
Rio Abajo-Altiplano	31	69	--
Cochabamba	8	68	24
Santa Cruz	36	18	46

SOURCE: MSU Farmer-Country Assembler Survey (1967).

The average gross sales for all farmers for the month preceding the interviews were \$198. The average number of months during which farmers sold their products was 5.7. Thus, the average annual sales for farmers interviewed was about \$1120. It should be noted, however, that there exist sharp variations in sales between the areas interviewed and for months falling within and outside the harvest season in each region.

When reported sales were divided into thirds, 42% of the Santa Cruz producers were in the top sales category in the month preceding the interview. The sales of Yungas and Rio Abajo-Altiplano respondents were most likely to fall in the medium and low sales categories (see Table 7.14). About three-fourths of the Cochabamba respondents were in the middle sales category. Thus, Santa Cruz farmers, followed by Cochabamba farmers, had the highest sales volume, while Yungas and Rio Abajo-Altiplano respondents had smaller total sales.

Total returns from product sales are greatly affected by price instability and the necessity of selling at low prices. One-fourth of the respondents indicated that during the 1967 or

previous crop, there was a time in which they could not sell their products. Three out of five reported sales at very low prices.

	Total Sales		
	0-\$33.33	\$33.34-\$116.60	\$116.61 or more
Yungas	46%	47%	7%
Rio Abajo-Altiplano	55	38	7
Cochabamba	15	76	9
Santa Cruz	24	34	42

SOURCE: MSU Farmer-Country Assembler Survey (1967).

Farmers from Rio Abajo-Altiplano were least likely to be able to sell their products, while Santa Cruz rice farmers were most likely to be able to sell theirs. One-fourth of the Yungas and Cochabamba farmers said that they could not sell their product last year or during the present harvest. Producers were also asked whether they ever had to sell at very low prices. This question sought to determine perceptions of price stability and the alternatives that exist for farmers seeking to avoid low prices. Fifty-five percent of the Yungas and Rio Abajo-Altiplano respondents indicated that they sold at very low prices. The perishable nature of the goods produced in both of these areas should be noted, however. This factor probably gives the farmer little opportunity to store and wait for high prices. Thirty-six percent of the Santa Cruz respondents--principally rice farmers--also reported selling at a low price. Inadequate credit or storage facilities may account for the inability of Santa Cruz farmers to hold their product off the market at periods of low price. Cochabamba interviewees were the least likely to sell at very low prices. Only one in twelve indicated they sold at low prices.

To determine the various alternatives that exist for farmers in selling their products when faced with low prices, we asked: "If you had known before harvest that the market was full and the price low, what would you have done?" Eighty-four percent of the Yungas respondents reported that they would harvest and take the very low price. Three out of five of the Cochabamba and Santa Cruz farmers interviewed were likely to do the same. The Rio

Abajo-Altiplano farmers were least likely to harvest and sell at a very low price. The implication is that Yungas farmers, most of whom produce a highly perishable product (bananas), are most likely to sell at a very low price in order to realize some return on their investment rather than lose everything.

When a similar question was asked concerning their alternatives after harvesting the products, 58% of the Yungas respondents indicated they would sell at the low market price. Again, the inability to store bananas probably accounts for their lack of options. Thirty-nine percent of the Rio Abajo-Altiplano respondents said that they would market immediately under the posited conditions. Only 35% of the Cochabamba farmers and 26% of the Santa Cruz farmers indicated they would sell at the low market price. Hence, the latter two groups appear to have more alternatives in marketing their products than either Yungas or Rio Abajo-Altiplano farmers. Also, the data suggest that the type of product, e.g., degree of perishability, plays an important role in determining which alternative the farmer will select in selling his products.

Almost two-thirds of the respondents store some of their product. Santa Cruz farmers used storage facilities more than did the other farmers interviewed (see Table 7.15). Their use of storage was suggested by the fact that three-fourths indicated they would seek other alternatives if given a low price after harvest or the saturated market conditions as described in the preceding paragraph. Yungas farmers, as expected, were the least likely to store, while 53% of the Rio Abajo-Altiplano farmers store some of their product. Somewhat unexpected was the fact that only one-third of the Cochabamba farmers stored some of their product. As mentioned earlier, 33% indicated they would sell at a low market price given a saturated market and low prices at harvest time. This suggests that they may have other market outlets and are not restricted to market demands from one area for their product.

#### Channels Used in Marketing Agricultural Products

The main sales channel for agricultural products was the fair or mill (see Table 7.16). Approximately two-thirds of the respondents indicated they sold through this channel. About one-fourth of the respondents sold in La Paz, and about the same percentage sold at the farm. Producers reported very little consignment selling in La Paz. Those farmers selling on consignment go

through a variety of intermediaries, e.g., country assembler, trucker, or other farmer.

	<u>Do Not Store Products</u>	<u>Store Some Products</u>
Yungas	74%	26%
Rio Abajo-Altiplano	47	53
Cochabamba	67	33
Santa Cruz	30	70

SOURCE: MSU Farmer-Country Assembler Survey (1967).

<u>Channel</u>	<u>Percentage</u>
Selling in La Paz	24%
Consignment to La Paz	10
Selling in fair or mill	65
Selling on farm	<u>22</u>
	111% <sup>a</sup>

<sup>a</sup> Responses add to more than 100%, since some farmers sell through more than one channel.

SOURCE: MSU Farmer-Country Assembler Survey (1967).

Over half of the respondents from the Yungas, Rio Abajo-Altiplano and Cochabamba areas (52%, 67% and 55%, respectively) had at some time in the past sold in La Paz. Less than one out of ten Santa Cruz respondents reported having sold in La Paz at some time in the past. The Yungas figure is surprisingly high. It may be that many had sold in La Paz before coming from the Altiplano to the Yungas as conscripts (and later becoming colonists).

Farmers making the most frequent trips to La Paz in the month preceding the interview were from the Rio Abajo-Altiplano and Cochabamba areas. About half from each group had made one or more trips. Only 11% of Yungas farmers had made a trip to La Paz in the month preceding the interview. Only two Santa Cruz respondents had made the long trip of about 355 miles to La

Paz in the month preceding the interview. The high percentage of Cochabamba respondents traveling to La Paz is surprising, but is probably attributable to the fairly accessible truck transportation to La Paz and the higher prices prevailing in La Paz for temperate zone vegetables.

Our data indicate that neither family nor godparent relationships play an important role in the marketing of Bolivian agricultural products. Less than 3% of the farmers using any particular channel reported that a family or godparent relationship existed between himself and the buyer of his goods. This lack of extended family relationships suggests that the producer is accepting and dealing with the risks and uncertainties of an open market.

#### Fair and Mill Marketing Activities

The fair or mill is the producer's main sales channel. Cochabamba respondents reported the highest percentage of farmers selling at fairs in the month preceding the interview, suggesting that there are many accessible and active fairs in the Cochabamba area (see Table 7.17). Ninety-one percent sold in four or more fairs, compared with 52% of the Rio Abajo-Altiplano respondents and only 13% of the Santa Cruz farmers who made that many trips to the fair or mill. Yungas respondents apparently go to fairs infrequently, with 73% not attending any fair in the month preceding the interview. Road pick-up seems to be the prevalent system for sending produce to La Paz.

Table 7.17 Number of Fair or Mill Trips by Farmers in the Month Preceding the Interview, by Area

	Number of Fairs or Mills		
	<u>0</u>	<u>1-3</u>	<u>4-8</u>
Yungas	73%	27%	0%
Rio Abajo-Altiplano	32	16	52
Cochabamba	7	2	91
Santa Cruz	25	62	13

SOURCE: MSU Farmer-Country Assembler Survey (1967).

Country assemblers were the most important buyers at the fair or mill for all farmers interviewed, as seen in Table 7.18. The "housewife" category needs explanation. It was observed that some peasant and city housewives operate as merchants during

holidays and on weekends. They usually go to various fairs, taking ready-made clothes or money to exchange for farm produce. Upon returning home, these merchant-housewives sell to family, neighbors, and other acquaintances.

<u>Occupation</u>	<u>Percentage</u>
Country Assembler	77%
Housewife	16
Trucker	3
Other	4

SOURCE: MSU Farmer-Country Assembler Survey (1967).

Farmers were also asked whether they always sell to the same buyer at the fair or mill (see Table 7.19). Three-fourths of the Yungas respondents selling in fairs sold to the same buyer, suggesting either that they are highly traditional or that fairs are small. Two-thirds of the Rio Abajo-Altiplano farmers sell to the same buyer, again suggesting somewhat traditional marketing activities at the fair. About one-fifth of the Cochabamba and Santa Cruz respondents sell to one buyer. The remaining four-fifths sell their products to several buyers, indicating a more competitive environment and a more progressive selling activity.

	<u>Percentage</u>
Yungas	76%
Rio Abajo-Altiplano	65
Cochabamba	21
Santa Cruz	22

SOURCE: MSU Farmer-Country Assembler Survey (1967).

An additional measure of farmers' participation in the marketing process was obtained by asking whether they actively offered their products to various buyers at the fair or mill or waited for buyers to come to them. As seen in Table 7.20, almost all the Santa Cruz respondents reported offering their products to various

buyers. Half of the Cochabamba respondents actively solicit buyers. As expected from the discussion in the previous paragraph, Rio Abajo-Altiplano and Yungas respondents were most likely to sit and wait for a buyer to approach them.

Table 7.20 Farmers' Methods of Offering Their Products, by Area		
	<u>Wait for Buyers</u>	<u>Solicit Buyers</u>
Yungas	94%	6%
Rio Abajo-Altiplano	65	35
Cochabamba	51	49
Santa Cruz	7	93

SOURCE: MSU Farmer-Country Assembler Survey (1967).

#### Farm Marketing Activities

Less than one-fourth of all producers interviewed sold their output on the farm. Santa Cruz respondents were more likely to sell on the farm than were producers in other areas (see Table 7.21). Rio Abajo-Altiplano farmers were least likely to sell on the farm, while about one-fourth of the Yungas and Cochabamba respondents sell at the farm.

Table 7.21 Percentage of Farmers Selling at the Farm, by Area	
	<u>Percentage</u>
Yungas	26%
Rio Abajo-Altiplano	7
Cochabamba	24
Santa Cruz	32

SOURCE: MSU Farmer-Country Assembler Survey (1967).

The principal buyer of agricultural products on the farm was the country assembler in 87% of the cases. Merchant-housewives and truckers were equally reported as buyers by the remaining 13% of the farmers. Nearly half of the respondents selling on the farm said they always sold to the same buyer. This traditionalism appears to be compatible with on-farm selling. Godparent and/or family relationships did not play an important role; only 2% of

the respondents stated that they had such a relationship with the buyer.

### Summary

In general, the farmers interviewed are active in the marketing process. That is to say, they are not the traditional subsistence farmer, but have entered the market economy at the fair or mill level and some have sold at the wholesale and retail level in La Paz.

The average years of education for all farmers interviewed is approximately four and one-half. Furthermore, the data suggest that, in general, there exists a fair amount of mobility among farmers, especially for the Santa Cruz and Yungas respondents, most of whom are first-generation colonists. These two groups of farmers also expressed a greater desire to invest in business or education for their children, given a windfall gain in personal income. In contrast, Rio Abajo-Altiplano and Cochabamba respondents reported a propensity to buy a truck, bus, or home. This suggests some desire to leave the land and move to market towns or cities.

In general, the majority of the respondents had positive, though moderate, views about Bolivia's progress, as well as their own. The most pessimistic group in both regards was the Cochabamba farmers.

All farmers reported a fair amount of radio listenership, but relatively little usage of printed media. The Santa Cruz and Rio Abajo-Altiplano respondents exhibited the most usage of mass media, while Cochabamba and Yungas farmers indicated relatively little exposure. Generally, education and reading ability were reflected in the mass media usage and exposure of the farmers included in the study.

The majority of the respondents reported that merchants were the best source of information affecting their market activities. Only the Santa Cruz rice farmers reported that the government was more important than merchants in terms of business information.

Group affiliation was generally low throughout all regions. About three out of ten respondents were members of a union or a cooperative. Cochabamba farmers reported the least group affiliation of all producers interviewed. Cooperative membership was most evident in the Yungas and Santa Cruz areas, while Rio Abajo-Altiplano farmers were most likely to be union members.

The main sales channel for agricultural products was the fair or mill. About one-fourth of the farmers interviewed sold in La Paz, while slightly less sold on the farm. Approximately two-thirds indicated they sold at fairs or mills. The most important buyer of farm products is the country assembler, who tends to specialize in marketing one product as opposed to many. Godparent or family relations do not appear to play an important part in marketing the agricultural output of the farmers interviewed.

Price and market instabilities were quite variable, depending on the crop and region studied. In general, one-fourth of the respondents could not sell some part of their output during the last two harvests. Further, some three-fifths indicated they had sold their product at very low prices at some time during the past two years. Cochabamba farmers were the least likely to sell low, while Rio Abajo-Altiplano and Yungas respondents were the most likely to do so.

Over 60% of the farmers reported storing part of their product. However, given the number of respondents who sell at very low prices, it appears that relatively small amounts are stored. Santa Cruz rice farmers were most involved in storage practices, while Yungas banana farmers were the least involved. This is not unexpected, given the nature of the two products.

The average annual gross sales for all farmers interviewed was \$1120, with Santa Cruz respondents reporting the highest gross sales. This was followed by Cochabamba respondents, with Yungas and Rio Abajo-Altiplano respondents reporting low sales returns.

#### Country Assemblers

We now turn to a discussion of the personal characteristics and marketing practices of the 106 country assemblers interviewed. Sixty-two of these assemblers were from the Rio Abajo-Altiplano area, 22 were from Santa Cruz, and 21 were from Cochabamba (see Table 7.1).<sup>5</sup>

#### Personal Characteristics

The age distribution of country assemblers is shown in Table 7.22. The distribution closely parallels that obtained earlier

---

<sup>5</sup>Country assemblers play only a small role in the marketing of bananas, the principal agricultural product of the Yungas, and were therefore not surveyed in that area.

for farmers, i.e., respondents from Santa Cruz and Cochabamba were oldest, and Rio Abajo-Altiplano respondents were youngest.

	Age		
	35 or less	35-42	43 or more
Rio Abajo-Altiplano	45%	36%	19%
Cochabamba	14	33	53
Santa Cruz	10	35	55

SOURCE: MSU Farmer-Country Assembler Survey (1967)

As seen in earlier discussions of the marketing of perishables, women play a major role in the country assembling phase of food marketing (see Table 7.23). Nearly three-fourths of the country assemblers interviewed in the Rio Abajo-Altiplano area were women. These women probably were first involved in the wholesaling of produce from the family farm, eventually expanding into full-time traders. Women were less likely to perform the country assembling function in the Cochabamba area. In Santa Cruz, all country assemblers were men.

	Sex	
	Male	Female
Rio Abajo-Altiplano	28%	72%
Cochabamba	48	52
Santa Cruz	100	00

SOURCE: MSU Farmer-Country Assembler Survey (1967).

The average assembler had 3.6 years of formal schooling. However, the median was 1.0 years, indicating that while some assemblers have had a primary school education or beyond, about half have had only one year or less. Lack of formal schooling is particularly evident among Rio Abajo-Altiplano and Cochabamba assemblers; Santa Cruz assemblers were most likely to have had schooling beyond one or two years (see Table 7.24).

Ability to read corresponds closely with the degree of formal schooling which country assemblers had. As seen in Table

	Years		
	<u>2 or less</u>	<u>3-5</u>	<u>6 or more</u>
Rio Abajo-Altiplano	59%	36%	5%
Cochabamba	52	24	24
Santa Cruz	10	5	85

SOURCE: MSU Farmer-Country Assembler Survey (1967).

7.25, respondents in the Rio Abajo-Altiplano area were most likely to be illiterate. On the other hand, 85% of the Santa Cruz respondents were completely able to read.

	<u>Unable to Read</u>	<u>Partially Able to Read</u>	<u>Fully Able to Read</u>
	Rio Abajo-Altiplano	61%	32%
Cochabamba	52	19	29
Santa Cruz	10	5	85

SOURCE: MSU Farmer-Country Assembler Survey (1967).

The mobility experiences of the assemblers are shown in Table 7.26. Nearly all of the Cochabamba traders had spent at least six months in the military; about two-thirds of the Santa Cruz and Rio Abajo-Altiplano traders had had this much contact with the military. Santa Cruz traders were considerably more likely to have traveled outside Bolivia (95%) than were either Cochabamba (29%) or Rio Abajo-Altiplano (12%) traders. Santa Cruz traders have relatively easy access to Argentina.

	<u>Served in Military</u>	<u>Traveled Outside Bolivia</u>
	Rio Abajo-Altiplano	62%
Cochabamba	95	29
Santa Cruz	68	95

SOURCE: MSU Farmer-Country Assembler Survey (1967).

When asked how they would allocate a windfall increase in income of \$1,666, a majority of Cochabamba (53%) and Santa Cruz (61%) assemblers said they would buy or invest in business. However, 59% of Rio Abajo-Altiplano traders indicated they would use the money to buy a house. Less than one-fifth of all respondents selected any of the other alternatives offered (see Table 7.27).

	Buy Truck or Bus	Buy House	Invest in Business	Children's Education
Rio Abajo-Altiplano	9%	59%	20%	12%
Cochabamba	12	35	53	--
Santa Cruz	17	11	61	12

SOURCE: MSU Farmer-Country Assembler Survey (1967).

When asked whether they felt conditions in Bolivia were progressing, standing still, or falling back, Santa Cruz respondents were most optimistic of the three groups (see Table 7.28). About three out of five said they thought progress was being made. Two-fifths of the Cochabamba assemblers and one-fourth of the Rio Abajo-Altiplano assemblers perceived Bolivia's recent progress as favorable. This latter group was most likely to say (57%) that in fact the country was "standing still." These perceptions are fairly close to those of the farmers in these regions.

	Progressing	Standing Still	Retreating
Rio Abajo-Altiplano	24%	57%	19%
Cochabamba	44	28	28
Santa Cruz	57	42	--

SOURCE: MSU Farmer-Country Assembler Survey (1967).

#### Communication Characteristics

The principal mass media link to the country assemblers is radio, as shown in Table 7.29. About three-fifths of the assemblers reported use of the radio the day prior to being interviewed.

Cochabamba respondents were the heaviest listeners, followed by Santa Cruz and Rio Abajo-Altiplano country assemblers. Movies are nearly as important a mass communication link, with two-fifths of the respondents having attended this principally entertainment-oriented medium at least once in the month preceding the interview. The printed media--newspapers and magazines--reach only a small proportion of country assemblers in the Rio Abajo-Altiplano and Cochabamba areas. However, four-fifths of the Santa Cruz respondents reported having read a newspaper on the day preceding the interview.

Table 7.29 Mass Media Usage by Country Assemblers	
Medium	Percent Using
Radio	59%
Newspaper	16
Magazine	8
Movie	44

SOURCE: MSU Farmer-Country Assembler Survey (1967).

The principal business information source of assemblers is farmers; truckers are the second most frequently mentioned source. Relatively little business information is obtained via the government or other sources. Truckers were more frequently mentioned as a source of business information by assemblers than by farmers (36% vs 14%), but the government plays a less important role (10% vs 24%).

Table 7.30 Main Sources of Business Information of Country Assemblers	
Source	Percent Mentioning
Merchants	51%
Government	10
Truckers	36
Neighbors	2
Other persons	1

SOURCE: MSU Farmer-Country Assembler Survey (1967).

**Marketing and Economic Characteristics**

As might be expected, the importance of La Paz as a market center for country assemblers is a function of their distance from La Paz. Some three-fourths of the Santa Cruz assemblers interviewed had never sold in La Paz (see Table 7.31). Cochabamba country assemblers were more likely to have sold in La Paz, and nearly all the traders in the Rio Abajo-Altiplano region had sold in La Paz. A further measure of the importance of La Paz as a market area is seen in Table 7.32. Nearly half of the Rio Abajo-Altiplano assemblers made more than one selling trip per week to La Paz in the month preceding the interview. It is interesting to note that one out of ten of the Santa Cruz assemblers made frequent trips (4 to 6) to La Paz in the month preceding the interview, as did one out of seven of the Cochabamba respondents. The higher prices to be obtained for goods in La Paz have undoubtedly been important in drawing some Cochabamba assemblers into the La Paz market.

Table 7.31 Percentage of Country Assemblers Who Have Ever Sold in La Paz, by Area	
	Percentage
Rio Abajo-Altiplano	90%
Cochabamba	38
Santa Cruz	27

SOURCE: MSU Farmer-Country Assembler Survey (1967).

Table 7.32 Country Assembler Trips to La Paz in the Month Preceding the Interview, by Area			
	Number of Trips		
	0	1-3	4-6
Rio Abajo-Altiplano	19%	36%	45%
Cochabamba	68	16	16
Santa Cruz	82	9	9

SOURCE: MSU Farmer-Country Assembler Survey (1967).

Sales in country fairs or at the mill are more important for Cochabamba and Santa Cruz assemblers than for Rio Abajo-Altiplano country assemblers. As shown in Table 7.33, 59% of the Cochabamba

respondents sold in five or more fairs in the month preceding the interviews; 53% of the Santa Cruz assemblers interviewed sold in one to four fairs; and 88% of the Rio Abajo-Altiplano respondents sold in no fairs in the month preceding the interview.

Table 7.33 Country Assembler Trips to Fair or Mill in the Month Preceding the Interview, by Area			
	Number of Trips		
	<u>0</u>	<u>1-4</u>	<u>5-8</u>
Rio Abajo-Altiplano	88%	5%	7%
Cochabamba	24	19	57
Santa Cruz	19	53	28

SOURCE: MSU Farmer-Country Assembler Survey (1967).

Finally, an additional measure of the importance of the La Paz market to country assemblers in various areas was obtained by looking at the distribution of their sales volume. As seen in Table 7.34, half of the Rio Abajo-Altiplano respondents made all their sales in La Paz, although one-fourth reported no sales in La Paz. Some three-fourths of both the Cochabamba and Santa Cruz assemblers made no sales in La Paz. However, one-fifth of the Santa Cruz respondents made all their sales in La Paz, suggesting a sizeable group of intermediaries who devote themselves exclusively to the marketing of rice in La Paz.

Table 7.34 Percentage of Country Assembler Sales in La Paz, by Area			
	<u>0</u>	<u>10-90</u>	<u>100</u>
	Rio Abajo-Altiplano	25%	25%
Cochabamba	72	22	6
Santa Cruz	76	5	19

SOURCE: MSU Farmer-Country Assembler Survey (1967).

Country assemblers reported average sales of \$660 per month for the two months preceding the interview. Santa Cruz assemblers had by far the largest sales (see Table 7.35). In general, Rio Abajo-Altiplano assemblers were in the lowest sales category.

Three-fourths of the Cochabamba respondents were in the middle sales category. With the exception of Santa Cruz, where three-tenths of the respondents said they bought before harvest, the great majority of the country assemblers interviewed did not buy or contract for produce before the harvest.

	<u>\$0-\$41</u>	<u>\$42-\$125</u>	<u>Over \$126</u>
Rio Abajo-Altiplano	58%	34%	8%
Cochabamba	12	76	12
Santa Cruz	17	17	66

SOURCE: MSU Farmer-Country Assembler Survey (1967).

#### Summary

Regional differences among country assemblers were marked. The first major difference noted was in the sex of the respondents. Country assemblers in the Rio Abajo-Altiplano region are primarily women, thus extending the predominance of women in the marketing of perishables from retailing through country assembling. Cochabamba respondents were much less likely to be women. On the other hand, all of the Santa Cruz respondents were male.

Rio Abajo-Altiplano respondents had the lowest level of schooling and reading ability, while the Santa Cruz country assemblers interviewed had the highest levels. Indeed, over 85% of the Santa Cruz respondents had 6 or more years of formal schooling. Cochabamba and Santa Cruz respondents were most likely to allocate a large monetary windfall to business investment, whereas Rio Abajo-Altiplano assemblers were more likely to use such funds to buy a house.

The principal mass media channel for reaching country assemblers is the radio. With the exception of Santa Cruz respondents, few country assemblers reported reading the newspaper.

In general, it can be said that the further from La Paz the main base of the country assembler's operation is, the least likely he is to sell in the La Paz market area. Most of the Rio Abajo-Altiplano assemblers interviewed had all or a major part of their sales in La Paz, although a few operated in smaller towns and in the rural fairs. Cochabamba respondents concentrated their efforts in Cochabamba and the many small surrounding towns. A substantial

minority, however, were involved in the La Paz market. Since retail prices seem to be substantially higher in La Paz, it is somewhat surprising that more Cochabamba assemblers do not take advantage of the La Paz market. Most Santa Cruz assemblers sell in the Santa Cruz area. However, one-fifth report operating solely in the Santa Cruz-La Paz rice channel.

Santa Cruz respondents reported the highest monthly sales, with Cochabamba next, and Rio Abajo-Altiplano assemblers having the smallest volume of sales.

#### Summary

The farmer interviews show that the *hacienda*-based production system has changed substantially since the 1952 revolution. A substantial number of farmers sell in the various country fairs, as well as direct in the large urban centers of Cochabamba and La Paz. While some farmers continue to sell at the farm gate, it is clear that an increasing number have penetrated further into the distribution channels.

Contrary to conventional wisdom, the farmer operates in a strictly commercial environment. He is not tied to arrangements with blood relatives or godparents. There is apparently little consignment of produce. Thus, the farmer enters directly into the open market, with all its risks and opportunities.

Substantial differences in personal characteristics were evident in the four regions studied. Santa Cruz respondents were better educated, more exposed to mass media, more optimistic about the future, and relatively modern in their marketing practices. Rio Abajo-Altiplano respondents were generally illiterate, accustomed to marketing in a traditional way, apparently interested in getting off the land, and had low sales volumes. Cochabamba farmers fell somewhere in the middle, but were generally pessimistic about future conditions. Finally, Yungas farmers, who seem to be recent colonists, had low sales volumes and generally traditional marketing habits, but seemed to be optimistic about the future.

To a large extent, the personal characteristics and marketing habits of the country assemblers interviewed paralleled those for farmers. That is, Santa Cruz assemblers--who were all men--were better educated, had higher sales volumes, and were oriented toward trading as a business. Cochabamba assemblers--50% men--were moderately traditional. For the most part, they concentrated their selling efforts in the Cochabamba area, notwithstanding the

fact that higher prices prevailed in the La Paz market. Finally, Rio Abajo-Altiplano assemblers--28% male--were generally poorly educated, little exposed to new ideas, had low sales volumes, and appeared to be interested in leaving their present business.

## CHAPTER 8

### RURAL FAIRS AND PEASANT CONSUMPTION

For modernization of the rural sector to occur, traditional orientations must change. One force for reorientation is the communication and marketing channels which tie the rural and urban sectors together. The information and goods which flow to the rural areas have been termed a "counterflow." Other chapters in this report have dealt with the flow of food goods into the urban sector from farms in the rural areas. This chapter is concerned with the impact of goods and information coming to the rural sector from the urban sector. Here we will be discussing the availability of consumer and production-investment goods in the rural market system, the availability of mass media information, and the communication and consumption behavior of the rural population.

Rostow has suggested that the growth gap between the urban and rural sectors of developing countries can be reduced by creating a truly national marketing system--a system in which the mutual facilitation of growth can occur in both sectors.<sup>1</sup> To integrate the two areas, productivity in the countryside and the rural markets must be improved and the industrial output of the urban sector must be expanded. The increased ability of the agricultural sector to supply the urban population with lower cost food goods will ultimately facilitate industrial efficiency. The added efficiency of the industrial sector will, in turn, enable it to provide more and cheaper goods to the rural market. The impact of these consumer and production-investment goods on the rural producer is of major concern, as is the impact of the information which parallels these goods. To what extent does a market for goods and information exist in the rural areas? How are these inputs used and to what extent might their use be expanded? Finally, will expanding the availability of goods and information in the rural areas have an impact on productivity?

The purpose of this chapter is to investigate the extent to which one segment of the agricultural sector of Bolivia is ready for and/or actually participating in a national market system and to consider the extent to which the urban sector might recognize

---

<sup>1</sup>Walt W. Rostow, "The Concept of a National Market and Its Economic Growth Implications," *Proceedings, American Marketing Association*, Fall 1965.

and expand upon willingness of the rural population to respond to the overtures of the urban sector, both in terms of consumption opportunities and offers of technological help.

Data were collected in five rural fairs and two villages in the Altiplano region near La Paz. In addition, interviews were conducted with directors of two La Paz radio stations which are frequently heard by the *campesinos* in this area. Fifty-four interviews were conducted in the five rural fairs to determine what was being sold, how large the inventories of the sellers were, where they bought their goods, how much they paid for them, and how much they sold them for. The inventories were not exhaustive; only those items which constituted a sizable proportion of their goods were noted. If, for example, a seller of plastic shoes also sold a few flashlight batteries, or some sewing needles, or other small quantities of miscellaneous items, these latter items were not inventoried. Determination of the buying and selling prices for all miscellaneous items sold in addition to the main items seemed likely to put undue stress on interviewer-interviewee rapport and was therefore not attempted. For this reason the inventory figures presented are probably understated by 10 to 15% of actual value.

Information was also collected on the residence of the sellers, the number of years they had been selling in these fairs, and the number of other fairs at which they sold during the week.

In the two rural villages, 70 interviews were conducted, 42 in one of the villages and 28 in the other. All respondents were chosen randomly and information was collected on their communication, consumption and modernizing behavior.

#### The Environment of Goods: Altiplano Fairs

The rural fairs of the Altiplano region are one indication that two overlapping ways of life still exist in Bolivia. There are clear signs that the pre-revolution economy is slowly being replaced by a newer commercialism. Aging Aymará women still sell traditional remedies for the grippe, llama fetuses for luck, and multicolored candies for the favor of the "Earthmother." An *arroba* (25 pounds) of potatoes can still be traded for seven eggs, one kilo of beef, or two to three dozen oranges. Alongside this traditional economy, however, is a growing economy of flashlights, cameras, bicycle parts, radios and even some simple cosmetics. The older sellers of 'home' remedies are being replaced by vendors of Alka Seltzer and aspirins. The sale of agricultural products

has moved to the side streets and manufactured goods are becoming the central focus of the fairs. The fair system is in a state of change which will eventually have an impact on the development of the entire rural area.

Although there is no exact count, there are from 50 to 75 rural fairs held weekly in the Altiplano region. An average fair may attract from 200 to 400 people during the day it is being held. A small fair may attract as few as 50, while a large fair may draw upwards of 1,000 people. In all but the very smallest fairs, most of the activity is concentrated around a central plaza. The most typical pattern is one in which the sellers of radios, phonographs, and other more expensive items are found in the center of the plaza. Surrounding the vendors of these items are sellers of bicycle parts, clothing, hardware, and sundry items. The sale of agricultural products usually takes place in the side streets surrounding the plaza, or at least is separated rather distinctly from the sale of other goods.

Many independent sellers travel to the fairs from surrounding towns in trucks and buses, each seller carrying his own load of goods destined for sale. There are only a few fairs in which fixed stalls or store buildings are used to house sellers. There are, however, predetermined locations in which a given seller may lay out his goods, and in some fair towns a tax is levied for use of these locations. Whether a tax is levied or not, there usually is some control regarding who may sell in the fair. There is a *maestro* in charge of each group of sellers (sellers of radios, sellers of clothes, sellers of grains, etc.) who keeps a record of who is selling a given product in the fair, levies taxes (if applicable), and reports needed information about his sellers to the local government officials running the fair.

#### Goods Sold in the Fairs

All sellers of non-agricultural products were surveyed at the fairs studied. The survey was conducted to determine roughly the number of vendors of non-agricultural products in each fair and the different categories of goods each seller was offering for sale. The number of vendors selling different product assortments in each of the five fairs is presented in Table 8.1.

Over half of the vendors in all fairs sold only clothing of one kind or another, including such items as cotton pants, wool suits, cotton and dacron dresses, stretch socks, underwear, cotton and wool sweaters, dacron pile-lined jackets, caps, slippers, etc.

Table 8.1 Number of Vendors by Type of Product in Five Rural Fairs

Product	Fair				
	Acha-cachi	Batallas	Desaguadero	Huatajata	Lawa-chaca
Athletic equipment	--	--	1	--	--
Cloth	11	10	5	1	9
Cloth, yarn, dyes, thread	1	--	1	1	2
Clothes	66	60	121	2	78
Clothes & misc. goods	3	7	2	1	4
Clothes & shoes	2	3	--	1	4
Clothes & sundries	8	7	1	2	2
Clothes, shoes, & sundries	3	6	--	--	2
Comic books	--	--	1	--	--
Cosmetics	--	--	1	--	--
Dyes only	4	8	--	--	3
Hardware only	1	2	15	--	3
Hats	15	9	28	--	6
Insecticides	--	--	1	--	--
Jewelry only	--	--	4	--	1
Kitchen utensils only	4	1	--	--	3
Musical instruments	--	--	--	--	1
Patent medicine	--	1	1	1	--
Phonograph records	--	--	2	--	--
Radios only	--	1	8	--	1
Rubber sandals	5	6	--	--	7
Seeds & insecticides	--	--	--	--	1
Shoes & kitchen utensils	--	--	--	--	1
Shoes only	2	2	--	--	6
Suitcases	--	--	1	--	--
Sundries <sup>a</sup>	8	6	10	2	17
Sundries & bicycle parts	--	--	3	--	--
Sundries & kitchen utensils	--	--	4	--	2
Sundries & shoes	1	--	--	--	--
Toys	--	--	--	--	1
Total No. of Sellers	134	129	210	11	154

<sup>a</sup>Sundries include such diverse items as flashlights, batteries, pens, pencils, paper, rulers, thread, needles, padlocks, pins, razor blades, toothbrushes.

SOURCE: MSU Counterflow Study (1967).

The remaining vendors specialized in either one, two, or three different types of goods. The vendors of sundry items carried flashlights, batteries, stationery material, and many other "dimestore" articles. The vendors of cloth sold only one or two types of wool or cotton homespun and muslin. The hardware for sale consisted of plow tips, files, hammers, nails, trowels, etc.

Other assortments of items were made up of some combination of goods such as plastic and leather shoes, dyes, radios, kitchen utensils, jewelry, patent medicine, etc. Most of the assortments, however, contained only one type of good; approximately one out of ten vendors carried a mixed assortment.

#### Source of Goods: Country of Origin

The goods which are imported into La Paz, and finally find their way into the rural fairs, come from all over the world. There are locks, saws, pocket mirrors, watches, enameled cups, and knives from Germany. Japan supplies bicycle parts, dishes, cameras and radios. England is a source of bicycle parts and razor blades. Tools and kitchen utensils come from Czechoslovakia. And from the United States there are clothes, batteries, and pencils. (Table 8.2 gives a detailed description of the country of origin of different types of products; Table 8.3 shows the percentage of products in each category of goods coming from different countries.)

Bolivia is the source of most of the medicines (75%), shoes (67%), hardware (43%), jewelry (42%), and clothes (76%). Germany is the source of one-fourth of the bicycle parts and kitchen utensils and one-fifth of the hardware items being sold. Japan accounts for 90% of the radios and 47% of the bicycle parts. Peru supplies 25% of the shoes and 12% of the clothes. The role of the United States seems to be considerably less than that of the three major foreign suppliers (Germany, Japan and Peru). It is interesting to note that Bolivia is the major source of clothes, medicines, shoes, hardware and jewelry, indicating that import substitution has begun to take place in the country.

#### Source of Goods: Suppliers of the Vendor in Rural Fairs

Each vendor interviewed was asked where he bought the goods he was selling. Most items were bought in La Paz, while a very few were bought in other large towns near the fairs in which they were sold. Those goods purchased by the vendor in La Paz were obtained in one of five types of outlets: retailer, agency, factory, importer, or the black market. The remaining goods were handmade by the vendor.

A surprisingly large number of vendors said that they bought their goods from a retail outlet, i.e., an outlet in which the general public may also buy. All of the jewelry; half of the shoes, medicines and kitchen utensils; and approximately one-third of the

Table 8.2 Country of Origin of Various Goods Sold in Five Rural Fairs

<u>Argentina</u>	<u>Brazil</u>	Rat poisons	Drills
Belts	Keychains	Saws	Fingernail clippers
Colored pencils	Shoelaces	Scales	Light generators
Earrings	Toothbrushes	Scissors	Pens
Erasers	Toothpaste	Tire patches	Radios
Ink	Watchbands	Trowels	Rear-view mirrors
<u>Austria</u>	<u>Chile</u>	Watches	Rulers
Files	Plastic shoes	Wheel spokes	Screwdrivers
Picks	Shoe polish	Wire snips	Screws
<u>Bolivia</u>	Suspenders	<u>Hong Kong</u>	Shovels
Cloth	Thread	Enameled cups	Silverware
Clothing	<u>England</u>	Enameled plates	Tape recorders
Combs	Bicycle parts	Flashlights	Wheel forks
Copybooks	Folding rulers	Locks	Wrenches
Cups	Razor blades	Spoons	<u>Netherlands</u>
Hats	<u>Germany</u>	<u>Hungary</u>	Batteries
Knives	Bicycle axles	Knives	Radios
Medicines	Bicycle locks	Locks	<u>Poland</u>
Mirrors	Clocks	<u>Italy</u>	Levels
Necklaces	Enameled cups	Film	Trowels
Paint	Face creams	Pens	<u>United States</u>
Picks	Hair clippers	Thread	Bandages
Records	Insecticides	<u>Japan</u>	Batteries
Ribbon	Locks	Bicycle bells	Erasers
Shoes	Mousetraps	Bicycle brakes	Pants
Shovels	Pencils	Bicycle pedals	Pens
Silverware	Pens	Cards	Pencils
Thread	Pocket knives	Dishes	Soldering paste
	Pocket mirrors		

SOURCE: MSU Counterflow Study (1967).

Table 8.3 Origin of Goods Sold in Five Rural Fairs

Country of Origin	Bicycle Parts	Clothes	Hardware	Jewelry	Kitchen Utensils	Medicines	Radios	Shoes	Sundries <sup>a</sup>
Argentina	--%	1%	--%	8%	--%	8%	--%	--%	--%
Bolivia (handmade goods)	--	35	37	--	--	--	--	--	1
Bolivia (manufactured goods)	--	41	8	41	39	75	--	67	37
Brazil	--	--	--	33	--	--	--	--	4
Chile	--	1	--	--	--	--	--	8	1
Czechoslovakia	10	--	5	--	6	--	--	--	3
England	19	--	2	--	--	--	--	--	1
Germany	24	1	21	--	26	8	5	--	21
Italy	--	--	--	--	2	--	--	--	4
Japan	47	--	14	--	16	8	90	--	11
Peru	--	12	2	17	--	--	--	25	7
United States	--	1	3	--	2	--	--	--	7
Other	--	5	8	--	8	--	5	--	1

<sup>a</sup>Pens, pencils, combs, mirrors, paper, rulers, sun glasses, cameras, film, cards, flashlights, batteries, locks, copybooks.

SOURCE: MSU Counterflow Study (1967).

hardware, cloth, sundries, and clothes were bought in retail outlets.

Another source was manufacturer's agencies, outlets which buy initially from the factory and sell both to other retail outlets and to the general public. Shoes (27%) and cloth (41%) are the primary products purchased by the vendors in these outlets for resale in the rural fairs.

Factories supplied about two-fifths of the medicines sold by the vendors interviewed, one-fifth of the kitchen utensils, and less than one-tenth of the cloth, clothes, and shoes. Importers supplied more than three-fourths of the radios, better than half of the bicycle parts, and a smaller proportion of sundries and kitchen utensils. These purchases were in the retail outlet of the importer. The black market was a source of a small proportion of most of the goods being sold by the vendors, but not a major source for any one type of product.

The large number of goods of all types being bought by the vendors in retail outlets indicates that they are paying more than they would if purchases were made at an earlier point in the marketing channel. For example, only 4% of the vendors interviewed bought shoes from the factory which manufactures them, while a majority bought from a retail outlet which buys from the factory and adds its handling costs to the price paid by the vendor.

It is possible, however, that the reason so many vendors buy at retail outlets is because they do not buy in sufficient quantity to take advantage of wholesalers' and manufacturers' discounts. If this is the case, the small quantities in which they buy should be reflected in the size of their inventories.

#### Vendor Inventories

As seen in Table 8.5, the average value of inventories are small by U.S. standards, but vary considerably within each fair and across the five fairs. The highest average value of inventories--\$316--was found in Desaguadero. The eleven vendors interviewed in this fair reported inventory values ranging from \$9 to \$1,254. It should be noted, however, that the Desaguadero fair is not a typical rural fair since it is an exchange point for goods crossing the Bolivian-Peruvian border. Many of the customers come from La Paz and are not the rural people who ordinarily frequent the country fairs. For this reason, the goods carried by the vendors often reflect the urban dweller's buying power and not that of the rural population. For example, the vendor with \$1,254

Table 8.4 Source of Supply of Goods Sold in Five Rural Fairs									
Product	La Paz						Desaguadero	Copacabana	Oruro
	Retailer	Agency	Factory	Importer	Black Mkt.	Handmade			
Bicycle parts	18%	--%	--%	52%	--%	--%	--%	29%	--%
Cloth	34	41	10	--	7	7	--	--	--
Clothes	26	2	10	--	23	39	--	--	--
Hardware	33	6	--	--	3	32	--	--	26
Jewelry	100	--	--	--	--	--	--	--	--
Kitchen utensils	47	2	20	20	10	--	--	--	--
Medicine	54	--	38	--	8	--	--	--	--
Radios	22	--	--	78	--	--	--	--	--
Shoes	54	27	4	--	11	--	4	--	--
Sundries	35	6	1	30	21	--	--	--	5

SOURCE: MSU Counterflow Study (1967).

Table 8.5 Mean Selling Price Values of Inventories in Five Fairs & Projected Value of Inventories for All Non-Food Sellers in Each Fair

<u>Fair</u>	<u>Mean Selling Price Value of Inventories for Vendors Interviewed</u>	<u>Range</u>	<u>Number of Non-Food Sellers in Fair</u>	<u>Projected Selling Price Value of Inventories for All Vendors in Fair</u>
Achacachi (N = 18) <sup>a</sup>	\$ 70.00	\$7-\$206	134	\$ 9,380.00
Batallas (N = 13)	\$134.00	\$17-\$451	129	\$17,286.00
Desaguadero (N = 11)	\$316.00	\$9-\$1254	210	\$66,360.00
Huatajata (N = 6)	\$ 43.00	\$3-\$81	11	\$ 473.00
Lawachaca (N = 11)	\$128.00	\$26-\$369	154	\$19,712.00

<sup>a</sup>N equals the number of vendors interviewed at each fair from whom inventory value at selling price was obtained.

SOURCE: MSU Counterflow Study (1967).

worth of merchandise carried typewriters, tape recorders, short-wave radios selling for over \$40, and phonographs, all of which are infrequently or never bought by the typical rural resident.

In the more typical fairs the average inventory values were not as large. They ranged from \$134 in Batallas to only \$43 in Huatajata. The smallest inventory found was that of a vendor in Huatajata who had only \$3 worth of hardware at selling price; the largest was that of a vendor in Batallas who had 13 radios worth a total of \$451 at selling price.

The values of individual vendor inventories may not appear large. However, in the aggregate, they amount to a considerable value of goods in the rural fairs. The average values of inventories in each fair were multiplied by the total number of vendors in each fair (based on the vendor count previously discussed) to give an approximation of the value of inventories at selling prices for all vendors in each fair. The results shown in Table 8.5 indicate that there is a sizable value of goods in the rural fairs. The largest fair was Desaguadero with an estimated \$66,000 worth of goods, while Lawachaca had about \$20,000, Batallas about \$17,000, Achacachi about \$9,000 and Huatajata less than \$500 worth of goods.

It can be concluded, then, that the rural fairs are composed of many vendors with relatively small inventories, but a large value of goods when taken collectively.

#### Margins on Goods

The buying and selling prices of all goods inventories were used to calculate weighted gross margins for each of the 54 vendors interviewed. The average weighted gross margins for the vendors in each fair are presented in Table 8.6, as well as the range of weighted gross margins on which they are based.

With the exception of Huatajata, the weighted gross margins in all fairs average about 20% and range anywhere from as low as 3% to as high as 56% for specific product categories. The cost, then, to the consumer to have the goods brought out to him in the rural areas varies greatly, but on the average will be about \$20 per \$100. It may be cheaper to be at the fair, however, if the buying cost of the vendor is less than what it would cost the rural consumer to buy the same goods in a retail outlet. But, as mentioned earlier, it appears that many of the vendors are themselves buying from retail outlets and therefore \$20 per \$100 may very well be an accurate "convenience" cost for goods coming to the rural areas.

Table 8.6 Average Weighted Gross Margins on Non-Handmade Goods Sold in Five Rural Fairs		
Fair	Average Weighted Gross Margin <sup>a</sup>	Range of Product Category Weighted Gross Margins in Each Fair
Achacachi N = 18 <sup>b</sup>	19%	3% - 49%
Batallas N = 13	19%	7% - 31%
Desaguadero N = 7	20%	10% - 37%
Huatajata N = 4	36%	12% - 56%
Lawachaca N = 11	20%	5% - 51%

<sup>a</sup>Gross margins on each product were weighted by the inventory value of that product. Thus, the importance of the product was taken into account when determining an average gross margin figure for each fair.

<sup>b</sup>N = number of vendors interviewed at each fair for whom gross margin data was available.

SOURCE: MSU Counterflow Study (1967).

How much this convenience cost varies from product class to product class can be seen in Table 8.7. This table presents the average gross margins for different classes of goods sold in the rural fairs. It is apparent from the information presented that low-value items such as jewelry, medicines and sundries are sold at the greatest profit to the vendor, while high-value items such as radios bring very little profit and other classes of goods all are sold at about a 20% margin. Since potential purchasers have the option of either buying at the fair or in La Paz, it is likely that vendors are constrained to keep their gross profit on an item low enough to discourage travel into La Paz. Whether an average gross margin of 20% is perceived by the rural consumer as too high a price for the convenience of having goods in the country fairs is one of the questions we will be considering in the section on consumption behavior.

#### Sellers of Goods

The assortment of goods sold by individual vendors tends to be relatively consistent. Clothes dealers sell mainly clothes and do not mix product to any great extent. Vendors of hardware sell

only hardware. Occasionally, however, there are vendors who mix assortment, selling some clothes, some shoes, some sundries, and a few kitchen utensils. However, other than these few exceptions, most of the vendors are specialized.

<u>Class of Goods</u>	<u>Average Gross Margin</u>	<u>Range</u>
Bicycle parts	18%	2% - 67%
Cloth	14%	1% - 29%
Clothes	18%	2% - 86%
Hardware	24%	2% - 75%
Jewelry	47%	10% - 72%
Kitchen utensils	23%	3% - 34%
Machines	31%	6% - 77%
Radios	8%	1% - 20%
Shoes	25%	3% - 68%
Sundries	28%	1% - 80%

SOURCE: MSU Counterflow Study (1967).

Vendors tend to visit the same fairs with regularity. When asked how many times during the last month they had sold in the fairs in which they were being interviewed, over three-fifths said four times. (All fairs are held only one day of the week.) Furthermore, most of these vendors had been selling in these locations for an average of three years each. Of interest, however, is the fact that vendors of bicycle parts, manufactured hardware, radios and kitchen utensils have been selling for a relatively fewer number of years than the other vendors. This suggests that these goods have only recently become a standard item of sale.

The average number of fairs visited per week by all vendors interviewed was a little more than two, with some sellers visiting as many as five and six. Forty-three percent of vendors, however, visit only one fair regularly, although more visits per week are possible. About two-thirds of the vendors interviewed lived in La Paz or a nearby community. From La Paz to the furthest fair in which interviews were conducted (Lawachaca) was only a three-hour trip by truck and it was, therefore, entirely possible for these sellers to visit all five fairs during the week and return home each evening.

In summary, the Altiplano fairs can be characterized as having a relatively wide range of articles for sale, the majority of

which are clothing. Margins on these goods are lower than might be expected, but this advantage is offset by the fact that most of the goods are purchased at retail outlets in La Paz. Consequently, prices are higher than they would be had they been purchased at wholesale. Another factor which contributes to the higher prices is the large number of vendors with small inventories whose profit depends on visits to only one or two fairs a week. If it were possible to increase the size of inventories and the breadth of assortment, at the same time reducing the number of sellers in the fair, prices could doubtless be reduced.

#### The Media Environment of the Altiplano

Radio is the most widely available mass medium in the Altiplano. Although there are 15 stations broadcasting from La Paz, only two of these are widely heard by the *campesinos* in the Altiplano. Because of their limited kilowatt potential, the other 13 stations can be heard only by those with more powerful receivers. Of the two stations available, one is commercially operated, the other religious.

Radio Mendez, the commercial station, is by far the more popular of the two. Having 10,000 watts of power, it broadcasts for 20 hours a day to most areas within a 100-mile radius of La Paz. During a given weekday, approximately 15 of the total 20 hours of broadcasting time are devoted to popular, classical, and folk music. The remaining five hours are about equally divided between programs of an informational or educational nature, news, drama, other non-musical entertainment of various kinds, and religious presentations. For the Aymará-speaking population of the rural areas, there are only three hours of programming during the early morning hours.

During a personal interview, one of the two owners of the station commented on the rural audience of Radio Mendez:

"The Indian is apparently becoming an important consumer of transistor radios. Although it is difficult to find out exactly how many transistor radios there are in the Altiplano, I would guess at least thirty to forty thousand.

"... Like other stations in La Paz, we originally began broadcasting only in Spanish. However, my associate came up with the idea of doing programs in Aymará early in the morning. This is a time when the city people would ordinarily be asleep and very few would be listening ... The Aymará program usually consists of folk music ... We go out to the Indian villages

and tape record much of their music. The Indians were very happy to hear programs in their language.

"... The Indians are our best customers. They come to Mendez to place announcements for fairs, to dedicate music, to announce birthdays, etc. ... and they pay in advance for these spot announcements. The Indian is no credit risk ... In general, we often have problems selling advertising time, but with the Indian programs we can usually count on a full schedule of paid-in-advance advertising to carry the programs. This amounts to about \$45 per day."

About those advertisers directing their messages to the rural market:

"... Small shopkeepers also advertise items usually bought by the Indians. We too sell items to the Indian. We sell records of Indian music, fertilizer, etc. for the Altiplano farmers. These products we advertise on our station, and many of the Indians mention having heard the advertisement when they come to buy the product."

Mendez also prints a monthly newspaper directed specifically at the Altiplano Indian:

"... We advertise the newspaper on our radio station. The paper carries a number of different items which might be of interest to the Indian ... there are lessons in literacy, information on the use of fertilizers and other farm equipment, health tips, and even a special comic strip about an adventuresome *campesino* named Pancho Negro. We also publish pictures and stories honoring successful people in different communities ... Indians usually buy the paper in quantity (50 to 100) and then they are resold or distributed within each community. Our total circulation is about 20,000 copies per issue ... So, we are getting into a completely new field. We don't say this is the best newspaper, but we doubt if anyone else sells near this many copies."

With respect to their radio and newspaper policy:

"... We have no station policy regarding the government, but we generally try to keep things calm during tense situations, e.g., during the turmoil with the miners we were careful to present only quieting news ... we always try to quiet things ... occasionally we discuss the astronauts in a simple way."

The other station which broadcasts to Indian areas, San Gabriel, is owned and operated by the local Franciscan Order. It broadcasts 16 hours a day with one kilowatt power and has a radius of approximately 150 miles. Of the total broadcast time, only about seven hours are devoted to music. The remaining nine hours are divided approximately as follows:

General News: 1 hour, 50 minutes  
Farm/Technical Information: 1 hour, 40 minutes  
Literacy Training: 3 hours, 30 minutes  
Religious Training: 15 minutes  
Miscellaneous programs of culture and  
information: 1 hour, 45 minutes

The program context is much more oriented to the needs of the rural Indian than is the program content of Mendez. Furthermore, more than 60% of the broadcasts are in Aymará.

Father Pruss, Director of San Gabriel, feels that the Indian has made great progress within the last decade, and hopes that San Gabriel is partially responsible for that progress. He realizes that with more music and entertainment programs his station might capture a larger audience than it now has, but he is convinced that those who do listen represent a more progressive segment of the Indian population. When asked why he does not solicit more advertising to support San Gabriel's programming, he responded by saying that he has no bias against commercializing the station, but finds it difficult to convince advertisers that he is reaching a significant portion of rural population. At present, less than 15% of San Gabriel's programming is supported by advertising from the commercial sector and, unlike Radio Mendez, the Indians do not extensively use this station for their personal announcements.

The availability of mass media other than radio is limited on the Altiplano. There is no television in Bolivia, movies (with the sole exception of training films) are not shown in small rural villages, and magazines are rarely found outside the city. There is one newspaper printed by Radio Mendez (mentioned earlier) which has rather widespread circulation, but most of the dailies published in La Paz are not distributed in the countryside. Books are not widely available, although some children's books are sold in one or two of the larger rural fairs.

#### A Comparison of Two Rural Villages

##### The Villages Studied

Two villages on the Altiplano were chosen for study, with the following two guidelines used in selecting the villages:

1. Both villages should have Peace Corps Volunteers and a Community Development Village Worker living in the community to help establish interviewer rapport with the respondents in these villages.

2. The two villages should differ with respect to their isolation from both the urban center of La Paz and the rural market system which surrounds it. Access to the main routes of transportation was the initial criterion used to ensure this difference. A count of the number of people in each village having gone to La Paz during the previous week was made in order to substantiate this difference.

Both of the villages selected are situated in the fertile and prosperous area surrounding Lake Titicaca and therefore cannot be taken as truly representative of the entire Altiplano region. San Pablo de Tiquina was the non-isolated village chosen and Siripaca the isolated village.

San Pablo has a population of approximately 600 persons. It is located on Lake Titicaca at the Straits of Tiquina, 30 miles (or 2 hours by car) from La Paz. Cars, trucks and buses traveling from La Paz to the tourist-religious city of Copacabana must stop at San Pablo and be ferried by sailboats to the road on the other side of the Straits. Many of the people living in San Pablo own or operate ferries. Recent increases in tourist traffic across the Straits have reduced the general importance of agriculture as a means of subsistence for many villagers.

Increased traffic through San Pablo has also meant increased contacts with the outside world. The people who travel through the village are generally the urban elite. They bring cameras and radios, wear western clothes, and arrive by bus or private car. These travelers represent an urban way of life that the people of San Pablo have only recently discovered. Travel by villagers themselves has also had an important impact. Some work in the nearby mines, leaving their families and farms for extended periods. Many visit the rural fairs to buy goods, while others travel to La Paz to sell agricultural products or to buy things in its many stores.

San Pablo has never been under the authority of an *hacienda*. The villagers have been free to work their own lands, and many have done so. Or, they have left agriculture for other occupations, principally mining or ferry operations. This freedom of mobility, in turn, is accompanied by an independence of spirit which makes joint community action difficult. The two Peace Corps Volunteers working in the village found the villagers unwilling to engage in community projects. Attempts to muster a community effort directed at the growing number of tourists passing through the village each year were found to be nearly hopeless. Purchase of a fiber-

glass ferry with two outboard motors was proposed, but the boaters would not pool their resources to make the purchase.<sup>2</sup> Interactions within and outside of the village are characterized by self-interest and competition. "What's in it for me?" is a common phrase. The owners and operators of ferries work together to keep outsiders, as well as one another, from taking over all the business. Those whose livelihood is totally dependent on agriculture are usually the poorest and they look on the others in the community as disrupting their traditional way of life. The community is largely disunified and composed of factions.

Siripaca has a population of about 200 persons and is located on Lake Titicaca about five miles from Copacabana. In contrast to San Pablo, the village is off the main road and relatively isolated from other villages in the area. A peasant going to Siripaca from Copacabana must take one of the two trucks which service the village each week and ride it to a crossroad about a mile and a half from the village. From there he must either go on foot or, if he is prosperous, ride his bicycle along a steep and badly repaired dirt road which twists its way down the mountainside to the village on the lakeshore below.

The village is located on a stretch of fertile land which until 1953 was part of an *hacienda*. After many years of working under the authority of a benevolent landowner, the people are accustomed to taking orders and working together toward a common goal. The two Peace Corps Volunteers in the community are treated with great respect and find it extremely easy to mobilize the villagers for community efforts. In contrast with San Pablo, cooperative movements are accepted and undertaken readily, with little questioning. Village meetings are attended by almost all members of the village, and new ideas are sometimes almost passively accepted. It must be emphasized, however, that this community cooperativeness appears to be more a remnant of the subservient

---

<sup>2</sup>The result of this lack of community spirit was that two enterprising young men in the village purchased the new ferry and set up competition with the boating syndicate. Charges of unfair competition were voiced, the Peace Corps Volunteer's house was stoned because he originally suggested the idea, and finally the ferry was allowed to work the Straits only under an agreement requiring that the owners not bring it into direct competition with the other boats. This meant that the new ferry could be used only in a system of "turns," and was not allowed to carry more than one car or truck at a time. They did, however, allow the ferry to be run during rough water or windless hours when the sail-powered boats could not be used.

role that the villagers held under the *hacienda* system than a positive "spirit" generated from within the village. Despite their apparent lack of inner drive, the villagers have made significant community efforts.

For example, at the time of the present study, the villagers were in the process of constructing a new school. The entire project was to be completed with community volunteer labor, with each family devoting equal time and effort. Half of the funds required to purchase the materials came from a community development program sponsored by USAID, while the other half were raised within the community itself. When completed, the school was to be dedicated by the president of Bolivia during a special ceremony planned for that purpose.

The villagers have also tested chemical fertilizers on community plots, and a few individuals have been impressed with the results and done the same on their own land. The community purchased 75 chickens and a house in which to raise them was constructed. Finally, a consumer's cooperative store was in the planning stage at the time of the study, and was expected to be fully functional within four or five months.

#### Personal Characteristics of Villagers

On the whole, the level of education of the respondents was low. Three-fifths of all respondents had no education at all, while 16% had completed no more than two years. Only 5% had more than six years of schooling. There was little difference in educational level between San Pablo and Siripaca.

Sixty-five percent of all respondents were totally unable to read. Only 18% had complete literacy. San Pablo respondents were more likely than were Tiquina respondents to have some (but not full) reading ability.

The ability to speak Spanish is, of course, an important skill in order to function in the world beyond the peasant's village. Half of all the respondents spoke no Spanish, with only one in ten having full command of the language. There was a substantial difference between the two villages with regard to Spanish-speaking ability. Over two-thirds of the respondents in Siripaca spoke no Spanish, as opposed to only two-fifths of the San Pablo respondents. San Pablo respondents were three times as likely to have full command of the language as Siripaca respondents (12% vs 4%). It is apparent, then, that San Pablo respondents, being less isolated, have a higher level of language skills.

The exposure of respondents to new ideas and ways of life was also measured by their degree of geographic mobility. Each respondent was asked questions about where he had traveled and lived in the past. Each was also asked about military service.

Over two-fifths of all respondents had lived outside the province they presently lived in, while 69% had traveled outside the province. A far lower number had either lived (10%) or traveled (20%) outside of the department of La Paz. Only 2% had lived outside the country, with 4% having traveled in a foreign country. Slightly less than one-fifth of all respondents had served six months or more in the military.

As can be seen in Table 8.8, there are substantial differences in geographic mobility between the two villages studied. The San Pablo residents clearly exhibit a greater degree of exposure to other ways of life.

Table 8.8 Geographic Mobility in Two Rural Villages		
	San Pablo	Siripaca
Lived outside of province	69%	18%
Lived outside of department	13	7
Lived outside of Bolivia	4	0
Traveled outside of province	95%	43%
Traveled outside of department	30	11
Traveled outside of Bolivia	5	4
More than 6 months military service	30%	5%

SOURCE: MSU Counterflow Study (1967).

#### Innovative Propensity

When concrete changes in technology have not yet occurred in a particular cultural setting, any measure of innovations actually in use by certain individuals will be a poor index of future behavior. All individuals will be non-users of new technology and it will therefore be impossible to single out with certainty the potential innovators.

In the two villages studied, the use of new technology was either low or non-existent. We have, therefore, reverted to a measure of "potential" innovation which is more likely to detect differences among the respondents than the more traditional measures of use.

Two measures of innovative potential were used. One measured the extent of interpersonal communication, present and planned, about new techniques in farming; the other measured knowledge of these techniques.

Communication about innovations was low in both villages. One-fourth of the respondents had spoken with someone about agricultural techniques during the last three months. Even more important is the fact that under the influence of an interview session only 36% said that they planned to talk with someone the first opportunity they had and only 28% had plans to change their methods of farming in the near future.

One might expect that those who expressed some interest in new agricultural techniques might have had some practical knowledge about them. However, when asked if they knew about specific innovations, the percentage of uninformed respondents was higher than the percentage who did not have an interest in this area. Only 6% of the respondents had heard of any of the improved seeds being used on the Altiplano (compared with about 30% who had expressed interest in new techniques), and the same percentage had actually used them.

The average number of innovations known by all respondents was slightly more than one. This suggests that those who initially expressed interest in new techniques actually had only a superficial desire to innovate and had not translated it into action or knowledge-seeking.

Again, comparing San Pablo and Siripaca, some interesting findings come to light (see Table 8.9). Respondents in Siripaca, the isolated village, communicate more about agriculture and have more knowledge of new techniques than the respondents in San Pablo, the non-isolated village. In San Pablo, however, there is not as great a discrepancy between communication and knowledge as in the isolated village, which suggests that, while interest in agriculture is high, change in the level of practical knowledge does not necessarily increase at the same rate.

Since some of the respondents in San Pablo were involved in boating as well as agriculture, we asked these respondents a series of questions about boating practices. The responses were at substantially the same level as for agricultural innovations.

Another measure of innovative potential is found in respondents' willingness to learn about new business practices. All respondents were therefore asked if they had any interest in learning

Table 8.9 Communication and Knowledge of Farm Innovations in Two Rural Villages		
	<u>Siripaca</u>	<u>San Pablo</u>
<u>Communication:</u>		
Spoke about agriculture in the last three months	43%	11%
Plan to speak about agriculture in the near future	61	13
Plan to change method of farming in near future	35	13
<u>Knowledge:</u>		
Know of steel-tipped plows	7%	6%
Know of chemical fertilizers	11	46
Know about improved seeds	11	3
Know about artificial insemination	0	5
Know about animal shears	96	8

SOURCE: MSU Counterflow Study (1967).

about new techniques related to their major occupation (either agriculture or boating). The results are shown in Table 8.10.

Table 8.10 Willingness to Attend Courses on Business Practices in Two Rural Villages		
	<u>Siripaca</u>	<u>San Pablo</u>
<u>Percentage of respondents:</u>		
Willing to attend a course for free	86%	44%
Willing to attend a course with an attendance fee of \$1.75	36	3
Willing to attend a course with an attendance fee of \$2.50	7	23
Willing to attend a course with an attendance fee of \$3.33	7	13

SOURCE: MSU Counterflow Study (1967).

Siripaca residents appear to be more interested in attending courses than do San Pablo respondents. However, those respondents

in San Pablo who are initially interested in learning more about new technology tend to be more willing to pay for such a course. If this series of questions is treated as a test, and a value of one is assigned for each level of willingness to participate, the differences in average scores are somewhat more in favor of the Siripaca respondents (1.5 vs 1.1). The greater willingness to participate at higher costs in San Pablo probably does not reflect more interest in new technology, but a greater availability of cash. If we look at incomes per month in both villages, the difference is unmistakably in favor of San Pablo; the average monthly income from wage work in San Pablo is \$16.50, as opposed to \$2.20 for Siripaca respondents. This, then, would suggest that the willingness to participate in the course may be understated by the use of monetary costs rather than an equivalent non-currency cost, e.g., a bushel of potatoes.

#### Mass Media Exposure and Use

Each respondent in both villages was asked a series of questions to determine his exposure to the available mass media. Over two-thirds of the respondents in both the isolated and the non-isolated village said that they listened to the radio. Of this group, the majority listen from three to six hours per day. This listening is usually done in the early morning hours (one-third listen between the hours of 5 and 8 a.m.) and just after dinner until about 10 p.m. (two-fifths listen at this time). Most of the respondents reported that they listen with their families (69%), while some listened alone (21%) and others with both family and friends (10%).

It is significant that the two most frequently listened to radio stations--Mendez (59%) and San Gabriel (20%)--are the two which direct more programs at the Aymará than any other radio stations. This demonstrates that if a conscious attempt is made to communicate with the *campesino*, he will respond.

Newspaper advertising as a medium is not as effective as radio. Only one-fifth of all respondents reportedly read at least one newspaper per week, and of this group only 6% read more than one. None read more than three issues per week. The main reason for low readership of newspapers stems from the fact that over half of the respondents were completely illiterate. Of the remainder, almost three-fourths had only partial literacy. Newspapers, then, are an effective medium for bringing the *campesino* into the market for manufactured goods.

Tape recordings of advertisements appearing on radio during the time of the study were used to test each respondent's exposure to advertising. Recall of the advertisements was determined by asking the respondents if they could give the brand name after hearing advertisements from which the name had been "erased." To measure recognition, respondents were asked if they had ever heard the advertisement on radio previous to the interview. Also, each respondent was asked if he had ever purchased the brand being advertised.

The percentage of respondents able to recall and to recognize various advertisements is shown in Table 8.11 and Table 8.12, respectively. As expected, recall was less likely than recognition. Recall ranged from a low of 6% for Grace fertilizer to a high of 88% for Patria soap. Siripaca residents were more likely to recall advertisements than were San Pablo respondents. Recognition ranged from a low of 46% for Grace fertilizer to a high of 100% for Patria soap. Again, Siripaca residents had a higher recognition than San Pablo respondents. The data suggest that rural residents are attentive to commercial messages and remember them. The fairly high

Table 8.11 Advertisement Recall in Two Rural Villages		
	<u>Siripaca</u>	<u>San Pablo</u>
Gilera Motorcycle	8%	18%
Grace Fertilizer	6	10
Induvar Shoes	70	69
Mendez Fertilizer	53	51
Nivea Cream	35	18
Patria Soap	<u>88</u>	<u>59</u>
Average	43%	32%

SOURCE: MSU Counterflow Study (1967).

levels of recall and recognition probably reflect the use of Aymará in the tested advertisements, since only the Nivea cream advertisement was in Spanish. It will be recalled that the respondents studied had a low level of Spanish-speaking ability. Advertisers will probably get better response by using the Aymará language for campaigns directed at the *campesino*.

When asked if they ever purchased any of the products mentioned in the test, three-fifths said that they had purchased at least two of the items mentioned. One-fifth said that they had purchased at least three of them, and 6% purchased four or more. Data on

Table 8.12 Advertisement Recognition in Two Rural Villages		
	<u>Siripaca</u>	<u>San Pablo</u>
Gilera Motorcycle	82%	72%
Grace Fertilizer	88	46
Induvar Shoes	94	95
Mendez Fertilizer	94	90
Nivea Cream	76	51
Patria Soap	<u>100</u>	<u>97</u>
Average	98%	75%

SOURCE: MSU Counterflow Study (1967).

purchasing of advertised items is given in Table 8.13. Although recall and recognition were highest in Siripaca, purchasing was highest in San Pablo. This doubtless reflects the higher cash income level in San Pablo. The percentage of respondents purchasing is highest for those items on which recall and recognition is high.

Table 8.13 Purchasing of Advertised Products in Two Rural Villages		
	<u>Siripaca</u>	<u>San Pablo</u>
Gilera Motorcycle	0%	0%
Grace Fertilizer	0	8
Induvar Shoes	82	95
Mendez Fertilizer	12	38
Nivea Cream	6	20
Patria Soap	94	92

SOURCE: MSU Counterflow Study (1967).

#### Consumption Behavior

Visits to Rural Fairs - Fifty-two percent of the respondents visit only one of the five fairs in the area (not the same fairs reported earlier) on a regular basis. Forty-seven percent pay regular visits to two of the fairs, and only 1% attend three. The two villages differed with respect to the number of fairs visited. Only 30% of the respondents in Siripaca visited two fairs regularly and none visited three. In San Pablo, however, two-thirds visited two fairs regularly and 3% visited three fairs. The accessibility of concentrations of goods, then, seems to be dependent on physical proximity. The difference between the two villages is even more

pronounced if one looks at the number of visits to all markets in the month preceding the interview. In San Pablo, 94% of the respondents made four or more visits to fairs. In Siripaca, only 6% went four or more times to fairs in the month preceding the interview. In fact, the majority of the respondents in Siripaca (71%) had made no more than two trips to fairs.

One explanation for the above differences between the two villages is the lack of transportation to and from Siripaca. Only two trucks come into the village each week, while several trucks pass through San Pablo every day. This difference is reflected in the mode of transportation which the respondents in both villages said they used to go to the different fairs. Only 25% of the San Pablo respondents said that they traveled on foot, compared with 84% of the Siripaca respondents.

Ownership of Goods - Respondents were asked about ownership of 118 different items grouped into five categories: general, household, clothing, hardware and farm equipment, kitchen utensils, and luxury items. The percentage of families owning various types of goods is shown in Table 8.14. Essentials such as clothing, certain farm equipment and cooking utensils are owned by almost everyone. More expensive or less essential items such as flashlights, phonographs, jewelry, and toys are owned by few. It is worth noting that only 3% of the respondents had any fertilizer and none had insecticides. Frequently owned items seem to have one of two characteristics--they are either highly productive, e.g., farming equipment and tools, or they are some kind of clothing.

Clothing, however, is not just a "necessity," but seems to be the sole form of conspicuous consumption of the *campesino*. This fact was partly suggested by the number of clothes being sold in the fairs, but further support is given when we look at the specific quantities owned by respondents. Average quantities per family of certain selected articles were as follows: one jacket, three sweaters, three men's hats, three women's hats, four pairs of pants, four shirts, six dresses, two pairs of men's leather shoes, one pair of men's plastic shoes, one pair of women's leather shoes, and finally, two pairs of women's plastic shoes. Many of the clothes purchases are, therefore, somewhat beyond the level of necessity.

To further illustrate purchase preferences, Table 8.15 presents an inventory of goods owned by one of the wealthiest and one of the poorest families in our sample. Both families were the same size. The wealthy family has more clothing. A major difference in

purchase patterns is seen in the hardware and productive items owned by the wealthy family compared to the poor family.

Table 8.14 Ownership of Goods in Two Rural Villages

More Than 76% Own:	Between 25 and 49% Own:
Beds (100%)	Writing paper (43%)
Men's hats (100%)	Axes (40%)
Women's hats (100%)	Plastic shoes for men (40%)
Pants (100%)	Plastic shoes for women (40%)
Picks (100%)	Cape (37%)
Blouses (97%)	Funnels (30%)
Plowtips (97%)	Pliers (30%)
Shirts (97%)	Watches (30%)
Sweaters (93%)	Bicycles (27%)
Anafre <sup>a</sup> (90%)	Pencils (27%)
Belts (90%)	Shoelaces (27%)
Leather shoes for men (90%)	Ties (27%)
Slips (90%)	Tin roofing (27%)
Empty cans (83%)	
Seeds (83%)	<u>Less Than 24% Own:</u>
Shovels (83%)	Flashlights (23%)
Thread (83%)	Musical instruments (23%)
	Records (23%)
<u>Between 50 and 75% Own:</u>	Batteries (20%)
Sledge hammer (73%)	Clocks (20%)
Leather shoes for women (70%)	Drills (20%)
Rubber sandals (70%)	Overalls (17%)
Tables (70%)	Phonographs (17%)
Radios (67%)	Plumb lines (17%)
Chisels (67%)	Suitcases (13%)
Ponchos (63%)	Toys (13%)
Sewing machines (63%)	Cloths (10%)
Hammers (60%)	Kerosene lamps (10%)
Rope (57%)	Keychains (10%)
Scales (57%)	Trowels (10%)
Books (53%)	Glass (7%)
Jackets (53%)	Jewelry (7%)
Shawls (53%)	Coin purse (3%)
Buttons (50%)	Fertilizers (3%)

<sup>a</sup>Anafre<sup>a</sup> are small kerosene stoves with one or two burners.

SOURCE: MSU Counterflow Study (1967).

In general, the respondents in San Pablo own more goods and appear to have a higher standard of living. The respondents in Siripaca, however, own more hardware and farm equipment. They seem to value those goods with "productive" potential in preference to the less productive (but not necessarily less expensive) goods.

In more than four-fifths of the cases, the male head of the family reported that he made most of the purchases for the family. The female head of the family was most involved in the purchase of

Table 8.15 Household Inventory of a Wealthy and a Poor Family

<u>Wealthy Family</u>		<u>Poor Family</u>	
5 Jackets	8 Suitcoats	8 Sweaters	6 Belts
2 Ties	1 Pair men's plastic shoes	3 Pairs women's plastic shoes	6 Pairs leather shoes
6 Pairs rubber sandals	10 Men's hats	5 Caps	8 Shawls
12 Pairs of pants	9 Sets of underwear	12 Shirts	5 Pairs of socks
3 Blouses	15 Dresses	1 Poncho	1 Ax
1 Kilo of wire	2 Lock hinges	1 Pair pliers	4 Pikes
1 Pail	2 Locks	6 Plowtips	2 Chisels
1 Kilo of nails	3 Sledge hammers	1 Hammer	2 Shovels
15 Bolts	3 Picks	2 Paintbrushes	1 Plumb line
		1 Scale	15 Nuts
		7 Panes of glass	1 Bag of cement
		2 Kilos of stucco	3 Screwdrivers
		1 Drill	

SOURCE: MSU Counterflow Study (1967).

clothing. Even here, however, she made only three-fifths of the purchases, usually on clothing for herself. Most of the reason for male purchasing dominance appears to be related to the place of purchase.<sup>2</sup> More than 90% of all non-food items were reportedly bought in La Paz. Apparently, prices are too high or product

<sup>2</sup>It should be noted that we are reporting here on purchasing activity only. While the male head of the family indicated that he was also the major decision-maker, there is some indication that, as in many societies, the female head of the family also plays a major role in the decision-making process. Some people intimately familiar with rural life claim that the female head of the family maintains control of the "purse strings," even though the male does the actual purchasing.

offering unsuitable in the fairs serving Siripaca and San Pablo. If prices could be reduced by cutting margins, more purchases might be made in the fairs.

Each respondent was also asked if he planned to make any purchases of household items, clothing, farm equipment, or certain luxury items (radios, bicycles, phonographs, etc.) during the coming month. A month later, each respondent was then asked if he had actually purchased any of the items he had planned to buy during the previous month.

Fifty-three percent of the respondents questioned said that they had specific plans to make non-food purchases within the next month. All were able to specify what these purchases would be. Two-thirds were planning to buy equipment or tools for their farms, half said they were going to buy new clothes, and two-fifths anticipated buying something for their home. This hierarchy of planned purchases appears to correspond closely to the goods ownership pattern noted earlier. When asked whether they might turn to others for advice before purchasing these things, 70% said that they would make the decision alone; the remainder said they would consult with someone else before buying.

Although 76%, 89%, and 74% of the respondents, respectively, said that they would make the decision alone for household, clothing, personal and luxury items, 58% said that they would consult another person before buying farm supplies and equipment. Apparently they feel that money spent on a capital investment is more than just a matter of "taste."

On the average, respondents in both villages planned to purchase four items during the next month. Eighty-three percent of purchases planned by Siripaca respondents were actually made, as opposed to only 10% of planned purchases in San Pablo. Siripaca respondents are apparently better able to plan for the future, or are less likely to be distracted by competing goods.

#### Summary

In the years since the 1952 revolution, a substantial number of fairs have come into being on the Altiplano. These fairs, which operate on a scheduled basis, serve as market areas for farm produce and as supply points for manufactured goods.

---

<sup>3</sup>It will be recalled that the fairs discussed earlier in this chapter are not those serving San Pablo and Siripaca, although they are thought to be representative of fairs in the Altiplano.

Fairs are limited in their ability to expand the market for consumption goods on the Altiplano. Although the *campesino* has increased his cash income considerably in the years since the revolution, marketing institutions have not yet adjusted to this fact. Thus, no effort has been expended by wholesalers or retailers in La Paz to reach the rural market. Instead, traders covering the rural fairs purchase their inventory in La Paz, generally at retail outlets. Mark-ups ranging from 1% to 86% and averaging 20% are applied to what is already a retail price. These mark-ups are generally lower on high-cost items. The net result is that purchasing power is severely restricted if the *campesino* buys exclusively in the rural fairs.

Data from the communications and consumption study of two rural villages suggest that the *campesino* is a viable consumer for certain types of goods, principally clothing and productive equipment. However, even "luxuries" such as bicycles and sewing machines are in use in the Altiplano and apparently in growing numbers. Information on purchase location shows that most non-food items are purchased in La Paz, probably reflecting the higher cost of items offered in the rural fairs.

The *campesino's* receptivity to radio and advertising is further evidence that he is involved in the larger community around him. Respondents reported listening to Radio Mendez and Radio San Gabriel, especially during the hours when the broadcasts were in Aymará. Recall and recognition of advertisements were quite high, suggesting that the *campesino* is a receptive audience for commercial messages. The generally low language skills in Spanish indicate, however, that messages should be broadcast in Aymará.

Although still limited in purchasing power, the *campesino* does present a potential market for certain categories of manufactured goods. His participation in the marketing system is limited, however, by weaknesses in the distribution system serving him. Efforts should be made to involve wholesalers and retailers in La Paz in servicing this market and bringing down the price level at the fairs. Even though the market is presently small, it merits cultivation, especially in clothing and simple agricultural equipment.

Not only must distribution channels be adjusted, but manufacturers need to be apprised of the potentialities of the rural market. Products may have to be tailored for this lower income market. Advertising messages will need to be keyed to this specific

market segment. More information is required on consumption patterns and income levels before manufacturers can be induced to re-orient their thinking, which has traditionally been geared to the upper income urban consumer.



## CHAPTER 9

### AN EVALUATION OF MARKET SYSTEM PERFORMANCE

Thus far in this report we have concentrated primarily on a description and analysis of the various institutional participants in the food marketing channels. In this chapter we turn to system operation and performance, attempting to delineate opportunities for reform and constraints on more efficient operation of the system.

First, the system is discussed in terms of performance at the consumer level. Various aspects of consumer food prices are considered, as well as the importance of food in the budget and the quality of the diet of La Paz residents. Second, an overview of the flow of food products through the distribution channel is presented. Third, the performance of urban marketing institutions, i.e., retailers and wholesalers, is analyzed with a view to identifying opportunities for (1) increased efficiency within these institutions and (2) coordination and rationalization of the supply channel. Fourth, the assembly and transport system connecting the farmer with urban marketers is considered. Finally, the role of the farmer in the marketing system is analyzed and an example of supply responsiveness to one type of market integration is discussed in some detail.

#### System Performance at the Consumer Level

Food expenditures absorb over 50% of the average family budget in La Paz, with high income families devoting an average of 39% and low income families an average of 67% of their income to food. These data indicate the potential effect of reduced food prices on purchasing power and income distribution. While lower food prices would probably lead to increased consumption by low and middle income families, there is also likely to be an increase in expenditures on manufactured goods. The data presented in Chapter 2 indicate that the manufactured goods most often purchased by low and middle income groups are ready-made clothing, shoes, personal care items, and soaps and detergents. Many items in these categories are either now being manufactured in Bolivia or could be manufactured given Bolivian technical and human capabilities. Thus, import substitution, not imports, is expected to accompany a reduction in food prices.

The data in Chapter 2 indicate that the food marketing system performed well during the 1964-1967 period in terms of the relative prices of various foods. The diet of the average La Paz family was substantially weighted with protein foods. The major food categories for all income groups are beef, potatoes, cereals--especially bread and rice--and fresh vegetables. There were no glaring differences in diet composition between income groups, although high income families spend three times as much on food as do low income families.

A possible major concern facing the food production-marketing system is the apparent rapid population growth in the city of La Paz. While reliable data is usually scarce in countries which are both underdeveloped and have undergone major socio-political upheaval, available figures show an annual growth rate of 6 to 8% commencing in the 1960-63 period. Evidence of rapid population growth is clearly seen in the rapid growth of the Alto area overlooking the city. This rapid population growth had not, as of the end of 1967, severely stressed the food production-marketing system. However, a more rational and modern system may be needed in the future to cope with the increased demands of La Paz.

Available data show that food prices in La Paz have been rising at a slower rate than the cost of living (see Table 9.1). Food prices increased slightly over 50% in the ten years preceding 1966, compared with a rise of nearly 90% in the cost of living. Clothing prices more than doubled during the ten-year period, while housing costs increased by a factor of ten. However, food prices increased 10% between 1965 and 1966, more than any of the other expense categories shown in Table 9.1. If the data in Table 9.1 are reliable, the food production-marketing system has performed well in meeting La Paz's growing food needs at stable price.

Price movements for various food products important in the La Paz diet are shown in Table 9.2. With the exception of potatoes, price movements in fruits and vegetables were not available. Since the price index of food rose only 53% between 1957 and 1966 (see Table 9.1), it appears that fruit and vegetable prices increased less than that amount, given the larger than 53% increases in such major staples as meat, potatoes and rice. Price increases have been most evident in the case of beef, although it should be noted that the retail price of beef without bones (not the fillet) is only US\$0.30 per pound. Thus, while the price has steadily increased in the past ten years, this commodity is still a very good buy, as evidenced by the high beef consumption in La Paz. Wide

year-to-year price swings are noted in several commodities. Such swings occurred between 1960-61 and 1965-66 in rice and between 1959-60 and 1965-66 in potatoes. The price rise in potatoes between 1965 and 1966 is attributable to poor weather.

Table 9.1 Cost of Living in La Paz 1957-66 (1957 = 100)						
Year	Cost of Living	Food	Clothing	Fuel	Housing	Misc.
1957	100	100	100	100	100	100
1958	103	104	101	85	151	104
1959	124	116	129	93	300	138
1960	138	126	142	89	465	138
1961	149	133	150	85	614	140
1962	158	137	156	89	769	146
1963	156	132	161	84	793	146
1964	172	136	194	94	964	147
1965	177	139	201	104	964	150
1966	189	153	207	107	1055	155

SOURCE: *Indice del Costo de Vida* (La Paz, Bolivia: Dirección General de Estadística y Censos, Ministerio de Hacienda, December 1966), p. vii.

Table 9.2 Retail Price Index in La Paz for Selected Food Products (1957 = 100)							
Year	Bread	Rice	Beef with Bones	Beef without Bones	Sardines	Lard	Potatoes
1957	100	100	100	100	100	100	100
1958	100	111	113	104	85	115	101
1959	125	125	143	125	107	146	79
1960	125	128	176	157	102	131	113
1961	125	162	196	178	105	148	111
1962	125	166	200	189	105	141	105
1963	125	147	200	173	105	122	99
1964	125	124	200	191	80	158	99
1965	125	126	214	200	75	162	111
1966	125	158	234	219	90	162	173

SOURCE: *Indice del Costo de Vida* (La Paz, Bolivia: Dirección General de Estadística y Censos, Ministerio de Hacienda, December 1966), pp. 8-13.

In addition to consideration of price movements between years, it is useful to consider the extent to which prices fluctuate during the year. Excessive price fluctuations in products which can be

stored suggest that the marketing system is not properly performing the task of equating supply and demand. Of the commodities considered in this study, two products are most susceptible to government action in stabilizing price swings during the year. Price movements in these products--potatoes and rice--during 1966 are shown in Table 9.3. As can be seen, potato prices during at least three months of the year were 200% or more of prices prevailing during the harvest months.<sup>1</sup> While price swings in rice were less severe, they were nonetheless substantial in a product which is so easily stored.

Month	Potatoes	Rice
January	107	154
February	100	130
March	100	130
April	100	100
May	107	100
June	107	115
July	120	108
August	133	115
September	200	115
October	266	115
November	240	115
December	160	115

SOURCE: *Indice del Costo de Vida* (La Paz, Bolivia: Dirección General de Estadística y Censos, Ministerio de Hacienda, December 1966), pp. 9 and 13.

Although the food production-marketing system appears to have functioned well in maintaining reasonably stable prices during the past decade, government price controls on certain key commodities have also contributed to this stability. Price limits on wheat flour and beef, for example, have been strictly enforced in the last few years. In addition, the government has attempted at various times and with varying degrees of success to impose retail price ceilings on rice, lard, and various vegetables. The government has intervened periodically in the marketing of potatoes, an

<sup>1</sup>Although variations in potato prices during 1966 were exceptionally severe because of poor crops, the high points in 1965 reached 50% greater than the low points, suggesting that wide swings are not isolated incidents.

important staple in the La Paz diet. Most of the government's actions have centered around an attempt to reduce seasonal price swings, principally through control of the supply of potatoes reaching La Paz. One element in its program has been the refusal to permit speculation in potato inventories. Any assembler or wholesaler who built up stock was required to sell on the open market at the prevailing price level. Also, the government would on occasion enter the channel at the farmer or assembly level and buy large quantities of potatoes which it would then sell at low prices in La Paz. In general, the government's policies have served to keep prices low during the harvest season by forcing the marketing of output, but they have also had the effect of accentuating the rise in price during the off-season because of a lack of inventory which could be moved into the market.

While government policies have contributed to stability in food prices during the past decade, they have also had some negative effects. According to cattle producers, restrictions in beef prices have discouraged the use of more modern technology in cattle production. Furthermore, the low price of beef has reportedly led to substantial illegal smuggling of beef into the higher-priced Peruvian market.

A final consideration of price aspects in food marketing involves analysis of price and quality relationships for various perishables in different market areas in the city of La Paz. A specific study was undertaken by the MSU research team to determine whether price and quality differences existed between low, medium, and high income zones of the city.

Data were collected on the following 13 products, listed in descending order of their monetary importance in the La Paz diet: potatoes, onions, bananas, tomatoes, oranges, carrots, peas, beans, lettuce, peppers, tangerines, cabbage, and radishes. Three separate trading areas differentiated on the basis of income were studied, as follows: low income zone--Fatima, Victoria, Copacabana, and Bolivar markets; medium income zones--Rodriguez and Uruguay markets; and high income zones--Sopacachi, Comacho, and Obrajes markets. Four women, each assigned on a rotating basis to various specific areas within a market, were utilized as shoppers; two of these women were upper-middle class and two were lower class. Each woman shopped for all 13 products and was instructed to buy the best quality available in her assigned section of the market and to bargain for the best price. Only one market

was shopped each day. The Rodriguez market was shopped on a Saturday.

Upon finishing their shopping, the women deposited their produce with staff members, who weighed the products to obtain a price per ounce. The staff members, who were housewives, then subjectively graded the produce on a 1 to 5 scale, with 1 being the lowest quality and 5 the highest. While no absolute quality ratings are claimed, it is felt that there was consistent relative ranking of products over the period of less than two weeks during which the price study was conducted. Ratings for each product and market were determined by averaging the price and quality obtained by each shopper for each product.

Relative prices between income zones for each of the products studied are shown in Table 9.4. As can be seen, the lowest prices are to be found in the middle income markets of Rodriguez and Uruguay for 10 out of the 13 items. Upper income markets had the lowest price for 4 products. It is noteworthy that potatoes and onions, the major commodities in the fruit and vegetable category, were priced lowest in the upper income markets--some

	<u>Low Income</u>	<u>Middle Income</u>	<u>High Income</u>
Potatoes	1.17	1.10	1.00
Onions	1.21	1.11	1.00
Bananas	1.13	1.00	1.24
Tomatoes	1.18	1.00	1.27
Oranges	1.28	1.00	1.39
Carrots	1.29	1.00	1.08
Peas	1.10	1.11	1.00
Beans	1.05	1.00	1.07
Lettuce	1.29	1.00	1.22
Peppers	1.13	1.00	1.00
Tangerines	1.02	1.00	1.06
Cabbage	1.61	1.00	1.78
Radishes	1.02	1.00	1.09
Weighted Average of All Products	1.12	1.00	1.05

<sup>a</sup>A designation of 1.00 signifies the lowest price per ounce. Average prices in the other market areas are calculated as a multiple of the lowest price.

SOURCE: MSU Price Mapping Survey (1967).

20% below the low income market prices. In no case were the lowest prices to be found in the low income markets. Indeed, these markets were highest priced for five products, most notably potatoes and onions.

It is, of course, possible that the low prices in middle and upper income markets reflect low quality, and that the high prices in the low income zone markets reflect high quality. In fact, however, the reverse is more nearly true. As seen in Table 9.5, the poorest qualities are found in the low income markets for 8 of the 13 products studied, with one of the low quality products being potatoes. Not unexpectedly, the highest quality produce is found in the upper income markets in 9 out of 13 product categories. Produce in the middle income markets varies in quality.

Table 9.5 Relative Quality Rankings of Perishables in Different Income Zones of La Paz<sup>a</sup>

	Low Income	Middle Income	High Income
Potatoes	1.00	1.00	1.16
Onions	1.04	1.00	1.09
Bananas	1.00	1.08	1.17
Tomatoes	1.07	1.00	1.30
Oranges	1.00	1.06	1.08
Carrots	1.00	1.07	1.27
Peas	1.00	1.21	1.10
Beans	1.50	1.00	1.59
Lettuce	1.00	1.43	1.19
Peppers	1.00	1.22	1.10
Tangerines	1.00	1.00	1.03
Cabbage	1.00	1.06	1.15
Radishes	1.25	1.00	1.06
Weighted Average of All Products	1.00	1.01	1.13

<sup>a</sup>A designation of 1.00 signifies the lowest quality. Average quality ratings in the other market areas are calculated as a multiple of the lowest quality.

SOURCE: MSU Price Mapping Survey (1967).

When the relative ratings for each product are weighted by their importance in the diet and summed, the medium income markets have the lowest price level. The upper income markets are next lowest, at 105% of the weighted average price level in the middle income markets. On an over-all basis, the low income

have a price level of 12% greater than the middle income markets. In terms of quality, the low income markets rank lowest. The middle income markets are only slightly better, with a weighted average quality rating of 101% of the low income markets. The upper income markets have a quality rating of 113% of the low income markets.

We see, then, that the low prices in the middle income markets are consistent with their quality ratings. However, the high prices in the low income markets are in inverse relationship with the quality of goods sold, thus providing the worst situation to those least able to afford it. The upper income markets, on the other hand, offer the best price-quality relationship.

There are a number of possible explanations for the observed price-quality relationships in the lower income areas. As we saw in Chapter 4, retailers of perishables run small volume, low profit businesses, and it is probable that those retailers operating in low income neighborhoods have smaller sales than the average. Thus, they must charge more per transaction in order to earn sufficient profit to support themselves and their families. Further, low sales turnover probably contributes to a higher degree of spoilage and lower quality than in the higher income retail outlets. Of course, the consumer has the option of shopping outside his neighborhood, but the additional transport costs would most likely offset any cost savings.

#### The Flow of Products Through the Marketing Channel

Before moving into an analysis of opportunities for reform in various parts of the production-marketing system, the flow of products through the distribution channel should be considered. Our primary concern is with the buildup in price between the rural producer and the consumer in La Paz. Given time and human resource constraints, as well as the complexity of the marketing system, it was not practical to attempt to develop complete channel maps. Indeed, there is little doubt that the channels vary by week and by harvest season for different crops. It is virtually impossible at times to distinguish between producers, country assemblers, wholesalers, and retailers of perishables. At one time the farmer may retail his own produce; at another time he may sell to a country assembler in a rural fair. A market woman may sell at retail to one customer and at wholesale to another.

While the complexity of the system tends to defy a completely rigorous description, it does not prevent the description and analysis of some basic patterns of food distribution. The institutional flows of seven products are shown in Tables 9.6 through 9.12. In general, the flow of products into La Paz follows one of two routes: either (1) producer, country assembler, wholesaler, retailer or (2) producer, wholesaler, retailer. It will be recalled from Chapter 5 that most wholesalers of perishables said they bought from farmers. Examination of purchase prices suggests they were often buying from country assemblers. Again, this indicates some of the difficulties in charting institutional flows.

Table 9.6 Percentage of Retail Price of Onions in La Paz Absorbed at each Level in the Channel<sup>a</sup>

	Initial Sale at Country Fair	Initial Sale in La Paz
Producer	34%	52%
Country Assembler	18	0
Wholesaler	28	28
Retailer	20	20
	100%	100%

<sup>a</sup>The above data is for onions originating in the Cochabamba area. Thirty-three percent of the total sales volume of onion farmers interviewed was sold in country fairs, 30% in La Paz and the remainder on the farm or in towns and cities other than La Paz.

SOURCE: MSU Retailer, Wholesaler, and Farmer-Country Assembler Surveys (1967).

The producer usually receives 60 to 70% of the final retail price when he brings his produce to La Paz. When selling at the fair, the farmer receives on the order of 50 to 60% of the final retail price. This high level of producer "return" reflects the lack of processing, packaging and merchandising in the food distribution system.

Although the higher price received in La Paz is clearly an incentive for the farmer to make the trip to La Paz, it must also be remembered that there are transportation and lodging costs involved. We might hypothesize, then, that only the larger farmers would regularly sell in La Paz. Others might travel to La Paz periodically, combining a business trip with visits to relatives, purchases of manufactured goods, or merely a desire to see "the

big city." In the latter sense, the flow of farmers--as well as their produce--to the city may serve a useful modernizing function. Whether the flow of farmers to the city, with the attendant crowding and higher costs, is a useful activity to encourage is a matter of value judgment. On a purely economic basis, it would appear more rational to have large buyers purchasing in the country, reducing the cost of individual, small-scale trips<sup>2</sup> and thereby reducing the final price of food in La Paz.

The country assembler appears to play a fairly large role in the distribution of food. Upwards of 50% of food moving through commercial channels in the areas studied seems to pass through the hands of a country assembler. As we have noted, however, the definition of people filling this role has been difficult. At times they are housewives operating as part-time merchants. At other times, they may be wholesalers moving further back into the channel. Available data suggest that, with few exceptions, country assemblers are small-scale operators. In the case of the Rio Abajo-Altiplano assemblers--and to a lesser extent the Cochabamba assemblers--they are generally uneducated and traditional in their operations.

Table 9.7 Percentage of Retail Price of Tomatoes in La Paz Absorbed at Each Level in the Channel<sup>a</sup>

	Initial Sale at Country Fair	Initial Sale in La Paz
Producer	45%	59%
Country Assembler	14	0
Wholesaler	21	21
Retailer	20	20
	100%	100%

<sup>a</sup>The above data is for tomatoes originating in the Cochabamba area. Forty percent of the total sales volume of tomato farmers interviewed was sold in country fairs, 35% in La Paz, and the remainder on the farm or in towns and cities other than La Paz.

SOURCE: MSU Retailer, Wholesaler, and Farmer-Country Assembler Surveys (1967).

<sup>2</sup>For the seven products discussed here, approximately one-third of the total sales volume of the farmers interviewed was sold direct in La Paz.

Table 9.8 Percentage of Retail Price of Carrots in La Paz Absorbed at Each Level in the Channel <sup>a</sup>		
	Initial Sale at Country Fair	Initial Sale in La Paz
Producer	48%	60%
Country Assembler	12	0
Wholesaler	18	18
Retailer	22	22
	<u>100%</u>	<u>100%</u>

<sup>a</sup>The above data is for carrots originating in the Cochabamba area. Forty-three percent of the total sales volume of carrot farmers interviewed was sold in country fairs, 27% in La Paz, and the remainder on the farm or in towns and cities other than La Paz.

SOURCE: MSU Retailer, Wholesaler, and Farmer-Country Assembler Surveys (1967).

Table 9.9 Percentage of Retail Price of Cabbage in La Paz Absorbed at Each Level in the Channel <sup>a</sup>		
	Initial Sale at Country Fair	Initial Sale in La Paz
Producer	51%	62%
Country Assembler	11	0
Wholesaler	17	17
Retailer	21	21
	<u>100%</u>	<u>100%</u>

<sup>a</sup>The above data is for cabbage originating in the Cochabamba area. Forty percent of the total sales volume of cabbage farmers interviewed was sold in country fairs, 34% in La Paz, and the remainder on the farm or in towns and cities other than La Paz.

SOURCE: MSU Retailer, Wholesaler, and Farmer-Country Assembler Surveys (1967).

In return for their services, the country assemblers add 10 to 15% to the price of the product handled, except for bananas and rice, where the value added is considerably higher. In the case of rice, transport costs absorb 60% of the assembler's revenue. In the case of bananas, there are, under existing conditions, high spoilage rates to be absorbed.

An important question, of course, is whether the assemblers contribute adequate value in return for their cost to the system. It seems clear that, given the present fragmented nature of whole-

Table 9.10 Percentage of Retail Price of Bananas in La Paz Absorbed at Each Level in the Channel <sup>a</sup>			
	<u>Initial Sale at Farm</u>	<u>Initial Sale at Fair</u>	<u>Direct Sale in La Paz</u>
Producer	32%	52%	77%
Country Assembler	0	25	0
Wholesaler	45	0	0
Retailer	23	23	23
	<u>100%</u>	<u>100%</u>	<u>100%</u>

<sup>a</sup>The above data is for bananas originating in the Yungas area. Twenty percent of the total sales volume of farmers interviewed was sold on the farm, 55% was sold direct in La Paz, and 17% was sold in fairs.

SOURCE: MSU Retailer, Wholesaler, and Farmer-Country Assembler Surveys (1967).

Table 9.11 Percentage of Retail Price of Rice in La Paz Absorbed at Each Level in the Channel <sup>a</sup>		
	<u>Initial Sale at the Farm</u>	<u>Initial Sale at the Mill</u>
Producer	41%	56%
Miller/Assembler	37	22
Wholesaler	5	5
Retailer	17	17
	<u>100%</u>	<u>100%</u>

<sup>a</sup>The above data is for rice originating in the Santa Cruz area. One-third of the total output of rice of farmers interviewed was sold on the farm and two-thirds was sold at the mill.

SOURCE: MSU Retailer, Wholesaler, and Farmer-Country Assembler Surveys (1967).

salers and retailers, the assemblers perform a much-needed aggregation and transportation function in linking the farm and the city. It is also clear, however, that most assemblers do not achieve scale and are probably not capable of price reduction unless they do achieve scale. For example, it is doubtful whether most assemblers handling bananas could institute new handling and maturing methods to reduce the high rate of spoilage or whether new methods of packaging and grading of tomatoes to reduce spoilage in that highly perishable product will be forthcoming from the assemblers. Further, without scale, no reductions in margins are likely. Finally, larger-scale assemblers might well be able

Table 9.12 Percentage of Retail Price of Potatoes in La Paz Absorbed at Each Level in the Channel

Originating in Cochabamba <sup>a</sup>		
	<u>Initial Sale at Country Fair</u>	<u>Initial Sale in La Paz</u>
Producer	61%	69%
Country Assembler	8	0
Wholesaler	15	15
Retailer	16	16
	<u>100%</u>	<u>100%</u>
Originating on the Altiplano <sup>b</sup>		
	<u>Initial Sale at Country Fair</u>	<u>Initial Sale in La Paz</u>
Producer	54%	69%
Country Assembler	15	0
Wholesaler	15	15
Retailer	16	16
	<u>100%</u>	<u>100%</u>

<sup>a</sup>Forty percent of the total sales volume of Cochabamba potato farmers interviewed was sold in country fairs, 28% in La Paz, and the remainder on the farm or in towns and cities other than La Paz.

<sup>b</sup>Fifty-five percent of the total sales volume of Altiplano potato farmers interviewed was sold in country fairs, 40% in La Paz, and the remainder on the farm or in towns and cities other than La Paz.

SOURCE: MSU Retailer, Wholesaler, and Farmer-Country Assembler Surveys (1967).

to reduce transport costs through contract arrangements with truckers. Although trucking rates are not high relative to operating costs, more efficient truckers may be willing to reduce rates in return for guaranteed business.

It appears from the data in Tables 9.6 through 9.12 that backward integration by wholesaler or retailer could cut the price of certain foodstuffs by eliminating the country assembler. If the economic characteristics of assemblers at all resemble those of wholesalers, it would appear that their gross profits are largely devoted to travel expenses and personal wages. Thus, a movement of large-scale operations back down the channel could well reduce costs. However, the movement of small-scale operators into backward integrating activity is not likely to change the cost structure of the total system.

### Opportunities for Urban Marketing Reform

In some respects, one may not be disposed to question the effectiveness of the present food retailers and wholesalers in La Paz. The relative mix and quantity of foods supplied to the city suggest that they are adequately performing the role of transmitting urban consumer demand to rural producers. Further, the gross margins exacted for their services are not high--retailers handling dried and processed goods average 15%, most fruit and vegetable retailers average 20%, and meat retailers average 15-20%. Gross margins are generally in the 20 to 30% range for wholesalers of fresh fruits and vegetables, while wholesalers of dried and processed foods operate at low margins of 5 to 10%.

As previously discussed, La Paz has undergone a rapid growth in population in the '60s. Continued growth will require either a multiplication of the present small-scale units, which appear largely incapable of change, or the introduction of larger-scale units at both retail and wholesale levels which can rationalize a growing flow of products into the city.

In addition to aiding in the smooth flow of food products into La Paz, the introduction of substantially larger-scale retailing and wholesaling institutions should reduce the price of food in the city. In considering possible changes in urban marketing institutions, it is useful to differentiate between the supply system for perishable fruits and vegetables from the systems supplying dried goods, grocery items, beef, and potatoes.<sup>3</sup> We shall first consider prospects for improvement in institutions handling dried goods, grocery items, beef, and potatoes and then turn to analysis of urban marketers of perishable fruits and vegetables.

While retail gross margins are generally reasonable, it is worth noting that margins of 17 to 20% on staples such as bread and beef, which account for approximately 20% and 10% of the food budget of low and middle income families, respectively, are higher than for slower-moving items such as canned milk and vegetable oil (see Table 4.18). Although gross margins of 15 to 17% on potatoes are lower than for most fruits and vegetables, they are nonetheless high for a staple item. The suggested merchandising

---

<sup>3</sup>Potatoes are separated from fruits and vegetables because they can be handled and stored, under proper conditions, for a substantial length of time before spoilage becomes a problem.

policy is one of mixed margins, with high-volume staple items carrying a low margin and slow-moving specialty items carrying high margins. However, data developed in this research clearly show that present food retailers are in no position to follow a mixed-margin policy. At existing sales levels (see Table 4.20), any substantial reduction in margins on staples would severely cut an already low level of return. Substantial changes in capital, technical, and managerial inputs are needed before any entrepreneur could gain the increase in market share which would make economically possible low margins on staple items.

In addition to changes in margin policy, increases in scale at the retail level would permit vertical coordination of the system, reducing the cost of acquisition and thus the final price to the consumer. In some products, e.g., bread, pasta, sugar and soft drinks, large-scale retailers should be able to obtain quantity discounts on the order of 2 to 5% by virtue of their increased bargaining power. While such savings may not appear high, they apply to products comprising approximately 20% of the food budget of low and middle income families.

Points of aggregation for the key staples of potatoes and rice occur sufficiently early in the channel to permit large-scale retail units to reduce acquisition costs by bypassing intermediate institutions in the existing distribution channels. For example, rice production and milling are geographically centered in the Santa Cruz area. At present, milled rice is purchased in Santa Cruz by merchants who then arrange for its transport to La Paz, where it is sold to wholesalers. These wholesalers, in turn, sell to retailers and consumers. Approximately 25% of the retail price of rice is added by these intermediaries. A large-scale retailer could readily purchase direct at the mill and, absorbing the freight costs himself, reduce his acquisition cost by 15 to 20%.

Cost reductions on the order of 20% for potatoes could be effected through direct purchases at early aggregation points in the channel. *Tambos* in the Cochabamba area provide readily accessible assembly points for substantial volumes of potatoes. Transport costs for rice and potatoes could be slightly reduced by contracting with a trucker to haul rice from Santa Cruz to Cochabamba, pick up potatoes in Cochabamba, and deliver both commodities in La Paz.

Beef purchases direct from the larger cattle producers are feasible for very large-scale retail operations. If the government were to relax its regulations on beef prices, retailers

capable of instituting new cutting methods and providing assured outlets would almost surely receive the cooperation of large cattle producers in filling their needs for quantity and quality. It is likely that early entrants into large-scale retailing will continue to obtain their beef supplies from existing wholesalers. However, the quantity at which they buy should permit 2 to 5% reductions in the cost of acquisition. As retailers develop more familiarity with beef operations, integration further back into the channel may be possible.

A key question, of course, is the degree of scale needed to achieve the mixed-margin and direct acquisition policies suggested above. Since no large-scale retail units existed in La Paz at the time of this study, it is not possible to give a definitive answer to this question. However, reasonably accurate *pro-forma* financial statements can be projected to permit analysis of the feasibility of large-scale retailing in La Paz.

Revenue projections are made from the data developed in Chapter 2. Table 9.13 gives data for low and middle income families on their weekly purchases of foods and non-foods suggested for sale in large-scale retail outlets. With the exception of potatoes, no fresh fruits and vegetables are recommended for the product mix in these proposed retail outlets. The inclusion of highly perishable produce items would undoubtedly over-tax the managerial capabilities of these new entrants into food retailing. Furthermore, the political implications of strong competition with market women in the sale of perishables can thus be avoided.

Table 9.14 shows suggested gross margins for the various product categories, as well as expected gross profit per family. With the exception of rice, beef, bread, and potatoes, on which mark-ups have been reduced to 10%, all gross margins for food are maintained at existing levels. No increases in food margins are proposed.<sup>4</sup>

A low income family purchasing the listed items exclusively at a large-scale retail outlet would spend \$7.74 per week, resulting in gross profit to the outlet of \$1.00. The comparable figures for middle income families are \$12.73 and \$1.71. Over-all gross margin for the retail outlet is thus projected at 12.9% for

---

<sup>4</sup>A number of non-food items are suggested for inclusion in the product mix. A gross margin of 20% is proposed on these items. We have no data on existing margins on these items, and have therefore chosen a figure corresponding approximately to margins on food items.

Table 9.13 Weekly Expenditures on Selected Food and Non-Food Items by Low and Middle Income Families		
	Weekly Purchases By:	
	Low Income Families	Middle Income Families
Cereals		
Rice	\$0.23	\$0.32
Bread	0.92	1.33
Other Cereals	0.79	1.10
Meat and Poultry		
Beef	1.74	2.62
Other	0.29	0.90
Fats and Oils	0.48	0.77
Milk and Eggs	0.44	1.12
Potatoes	0.89	1.17
Sugar and Spices	0.68	0.93
Tea and Coffee	0.36	0.53
Soft Drinks	0.11	0.29
Total Food Expenditures	\$6.93	\$11.08
Non-Foods <sup>a</sup>	\$0.81	\$ 1.65
Total	\$7.74	\$12.73

<sup>a</sup>The non-food items suggested for sale are soaps and detergents, personal care articles, plastic shoes, and underwear.

SOURCE: MSU Consumer Survey (1967).

Table 9.14 Suggested Gross Margins and Gross Profits by Product and Income Level			
Product	Suggested Gross Margin	Low Income Family Gross Profit	Middle Income Family Gross Profit
Cereals			
Rice	10%	\$0.023	\$0.032
Bread	10	0.092	0.133
Other	15	0.119	0.165
Meat and Poultry			
Beef	10	0.174	0.262
Other	20	0.058	0.180
Fats and Oils	13	0.062	0.100
Milk and Eggs	12	0.053	0.134
Potatoes	10	0.089	0.117
Sugar and Spices	13	0.088	0.121
Tea and Coffee	15	0.054	0.079
Soft Drinks	20	0.022	0.058
Non-Foods	20	0.162	0.330
		\$0.996	\$1.711

SOURCE: MSU Retailer Survey (1967).

a low income family's market basket and 13.4% for a middle income family's market basket.

On the basis of the suggested product and gross margin mix, *pro-forma* profit and loss statements for a large-scale retail outlet servicing low income consumers, and projected return-on-investment at weekly sales volumes of \$5,000, \$10,000, \$15,000 and \$20,000 are shown in Table 9.15. Operating expense estimates are based on data for equivalent-sized stores in the United States.<sup>5</sup>

Table 9.15 <i>Pro-forma</i> Annual Profit and Loss Statements and Projected Return on Investment for Various Sizes of Retailing Operations				
	\$5,000/week 400 sq.ft.	\$10,000/week 7,500 sq.ft.	\$15,000/week 7,500 sq.ft.	\$20,000/week 10,000 sq.ft.
Sales	\$260,000	\$520,000	\$780,000	\$1,040,000
Merchandise (87.1%)	<u>226,000</u>	<u>453,000</u>	<u>680,000</u>	<u>916,000</u>
Gross Profit:	\$ 34,000	\$ 67,000	\$100,000	\$ 124,000
Expenses:				
Wages	\$ 4,600	\$10,000	\$12,500	\$18,000
Manager's Salary	6,000	9,000	9,000	10,000
Adv. and Promotion	1,200	1,800	2,500	3,600
Utilities	1,200	1,800	1,800	3,000
Depreciation	3,000	7,000	7,000	9,000
Interest	3,000	6,000	6,500	7,800
Misc. Exp.	3,000	7,000	7,000	13,000
	<u>\$22,000</u>	<u>\$42,600</u>	<u>\$46,300</u>	<u>\$64,400</u>
Profit Before Taxes	\$12,000	\$24,400	\$53,700	\$59,600
Investments:				
Working Capital	\$20,000	\$30,000	\$40,000	\$40,000
Equipment	20,000	50,000	50,000	85,000
Building	20,000	37,500	37,500	50,000
	<u>\$60,000</u>	<u>\$117,500</u>	<u>\$127,500</u>	<u>\$175,000</u>
Return on Investment:				
No Debt	20%	21%	42%	34%
50% Debt	40%	42%	84%	68%

<sup>5</sup> Operating data were obtained from *Business Summary and Analysis of Independent Food Stores* (Cooperative Extension Service, Purdue University, October 1966), p. 25.

Bolivian wages were estimated at 20% of United States wages, with the relevant labor expense items so adjusted. Early experience in Puerto Rico suggests that there will be a greater use of labor and a reduced use of capital equipment compared to U.S. operations. The offsetting effects of higher labor inputs and lower capital inputs will probably not greatly affect the projected percent return on investment. The manager's wage was projected at the U.S. rate. This is quite high by Bolivian standards. However, given the general lack of managerial talent in La Paz, it was felt that a high salary would provide a major incentive with which to attract capable personnel. Advertising and promotion expenses were adjusted downward substantially to reflect the lower level of competition and lack of media. It is expected that new entrants into retailing would depend primarily on low-cost handbills and soundtruck advertising. Miscellaneous operating expenses were projected at 50% of the United States rate. Interest charges at 10% per annum were included, assuming a capital structure with 50% debt. Utilities, primarily electricity, were estimated on the basis of data on various business office operations in La Paz. Equipment requirements were calculated on the basis of 200% of capital investment for equivalent-sized operations in the United States. This approximation appears conservative, since experience in Lima, Peru, and Recife, Brazil, suggests a figure of 160% of United States requirements. Furthermore, the proposed product mix does not include perishable produce nor frozen foods. Thus, expensive refrigeration equipment is not needed. The cool climate of La Paz also reduces the need for extensive refrigeration of the beef which would be handled by the proposed outlet. Land and building costs were estimated on the basis of \$5 per square foot. A \$5 per square foot figure is probably on the high side. In practice, the cost might well drop to \$3 per square foot. Working capital needs were assumed to be equal to those for equivalent-sized United States stores.<sup>6</sup> The capital structure was projected at 50% debt and 50% equity, at interest rates of 10%. While private loan funds might not be available initially, public loan funds could well be made available, given the public return on such investment.

The data in Table 9.15 show before-tax returns on investment to be over 40%. The return to the entrepreneur is greater if the manager's salary, as is probable, is actually a wage paid to the

---

<sup>6</sup>*Ibid.*, p. 31.

owner-manager. Also, the generally conservative estimates on capital requirements result in a conservative estimate of return on investment. Thus, large-scale retailing appears to be a highly profitable commercial investment. The volume necessary to attain the projected return on investment is expected to result from consumer response to the reduced retail prices suggested for four key staples--beef, bread, potatoes and rice.

It should be noted that the financial statements shown in Table 9.15 are based on present costs of product acquisition at the retail level. If reduced acquisition costs obtained through increased purchasing power and vertical rationalization of the channel are taken into account, annual before-tax profits are increased by \$11,000 for the \$5,000/week outlet, \$16,500 for the \$10,000/week outlet, \$22,000 for the \$15,000/week outlet, and \$33,000 for the \$20,000/week outlet. These cost savings could be fully passed on to the consumer, either to boost sales in order to achieve desired volume or in response to competitive pressures which are likely to arise as new entrants invest in large-scale retailing. If all cost savings were passed on, food prices would be reduced by 5%. If half of these increased profits were passed on in the form of lower prices, a price reduction of 2.5% would be possible over the full line of products carried by each outlet. If price reductions were not passed on, large-scale retailing would become commercially feasible even with no debt in the capital structure.

Of course, changes in scale must take into account existing shopping habits and the likelihood of changing those habits. The data in Chapter 3 strongly suggest that consumers patronize existing outlets more from habit and limited alternatives than from social or economic inducements. There is no indication that retail outlets perform a social function, nor even that haggling is an important social ritual in the purchasing of food. Credit extension is apparently not prevalent. The extremely small purchase quantities made in frequent shopping trips to *tiendas* raise an area of concern. However, the weekly shopping for perishables which is customary among much of the middle and upper class may well be transferred to dry goods shopping if reduced prices accompany modernization and self-service. The ready acceptance of self-service outlets in many other Latin American countries is further evidence that the shift from traditional to modern retailing is often made with a minimum of difficulty.

It is useful to specify the market area from which the various-size operations projected in Table 9.15 would have to draw. Population clusters needed to support different scales of retailing are shown in Table 9.16. If all their purchases of the items shown in Table 9.13 were made at one large-scale outlet, a minimum of 650 low income families or 400 middle income families would be required to maintain a \$5,000 per week outlet. These numbers correspond to 2.5% of lower income families and 1.5% of middle income families. It appears from the data in Table 9.16 that the maximum-size outlet which might be attempted in low income areas would be 7,500 square feet. Above this size the outlet would have to draw from a fairly large population group which generally lacks transportation, even if all purchases were made at the outlet. The maximum size for middle income areas also appears to be 7,500 square feet, although a 10,000-square-foot outlet may well be possible if situated near upper income areas.<sup>7</sup>

From the public standpoint, the effect of large-scale retailing as described above would be to reduce by at least 3.4% the price of the foods carried, which comprise 87% of low income food budgets and 78% of middle income food budgets. If savings through reduced acquisition costs were passed on completely to the consumer, an additional reduction of 5% in the price of food would be gained. Since food expenditures take 66% of low income family budgets and 58% of middle income family budgets, these savings would have a substantial impact on the standard of living.

A critical question, of course, is whether there are entrepreneurs available to operate outlets of the size projected in Table 9.15. In fact, only a handful of existing retailers appear capable of taking the managerial and technical leap forward into significantly larger-scale retailing. There may, however, be a number of wholesaler-retailers who would see the potential of large-scale retailing and could, with training, perform the necessary functions.

The data just presented show that a substantial increase in scale at the retail level would have a significant impact on food prices. A movement toward large-scale retailing would undoubtedly affect the existing wholesalers of processed and bulk food products. Large-scale retailers would probably buy such items as sugar and

---

<sup>7</sup>No attempt has been made to project the feasibility of large-scale outlets serving upper income areas. If such outlets are feasible in low income areas, they are assuredly feasible, if properly managed, in upper income areas.

Table 9.16 Population Clusters Required to Support Various Levels of Large-Scale Retailing

Percentage of Expenditures by:	Size of Outlet					
	4,000 sq.ft. \$5,000/week		7,500 sq.ft. \$10,000/week		7,500 sq.ft. \$15,000/week	
	No. of Families	% of Pop. Group	No. of Families	% of Pop. Group	No. of Families	% of Pop. Group
<b>Low Income Families</b>						
100%	650	2.5%	1300	5.0%	1950	7.5%
75%	975	3.8	1950	7.5	2925	11.3
50%	1300	5.0	2600	10.0	3900	15.0
<b>Middle Income Families</b>						
100%	400	1.5	800	3.0	1200	4.5
75%	600	2.3	1200	4.5	1800	6.8
50%	800	3.0	1600	6.0	2400	9.0

lard direct from national and international suppliers, thus bypassing the existing wholesalers for these items. Or, they might purchase from the large wholesaler-importers, but at a price reflecting their increased purchasing power. Clearly, then, the import houses will have to adjust their sales policies to meet the needs of any large-scale entrants into retailing. The size and managerial abilities of these importer-wholesalers suggests that they will be able to adjust to a changed market environment.

The ability of the present wholesaler-retailers to adjust to a radically changed environment is less clear. A major factor in the ability of large-scale retailers to reduce food prices is direct purchasing, which entails bypassing existing intermediaries in the channel. This, of course, would result in a substantial loss of business to the wholesaler-retailers. Three alternatives seem to exist for these market participants. First, they could remain as they are and continue to serve *tiendas* and consumers in the present manner. Since, as we have seen, they operate at relatively low margins, the cost to the system of their maintenance in business is not great and they would continue to perform a much-needed function for the many *tiendas* that would doubtless continue to exist as convenience outlets.

The second and third alternatives for wholesaler-retailers entail radical changes in operation. As one option, they could integrate forward into retailing. Since as much as one-fourth of the sales of many of these marketers are made to the consumer, they are already somewhat familiar with requirements at the retail level. The existing scale of operations of wholesaler-retailers, their familiarity with low-margin operations, and their contacts in the supply channels make them prime candidates for entrance into large retailing enterprises. Notwithstanding many of their favorable attributes compared with existing retailers, they will require technical and managerial training, as well as capital assistance.

A third option available to wholesaler-retailers is that of substantial expansion of their wholesale operations in terms of both volume and products carried. While the benefits of increased scale at retail outlined earlier look tempting, there will undoubtedly be a number of problems in finding entrepreneurs, training them, and providing them with necessary capital. It may be more feasible to gain greatly increased scale at the wholesale level and only moderately increased scale at retail. Under such a plan, the present wholesaling system will have to expand to full-line

operations, handling the items shown in Table 9.13. Major adjustments in management and technology will be required to handle an enlarged product line. A more aggressive purchasing policy will also have to be pursued, since it will be necessary for the large-scale wholesaler to rationalize the channel.

To achieve scale at wholesale, however, it will be necessary to increase scale at the retail level, although not to the extent suggested in Table 9.15. Volume on the order of \$1,000 to \$2,000 per week may be sufficient to provide the scale needed for mixed-margin retailing. The wholesaler, in his role as channel coordinator, would bear the burden of reducing acquisition costs. While retail margins would probably not be reduced to the extent suggested in Table 9.13, the managerial requirements of smaller operations would be less taxing and thus, perhaps, more feasible. In order for the wholesaler to operate at minimum cost and mark-up, firm purchasing commitments from a group of intermediate-scale retailers would be needed.

This third option, then, would provide a second route to gaining scale in the urban marketing of foods other than fresh fruits and vegetables. More detailed on-site analysis of the availability of entrepreneurs and costs would be necessary before final decisions could be made.

It will probably be some time before there are major changes in the retailing of fresh fruits and vegetables. Margins at the retail level are not high for perishables. However, the small scale of operations has had certain effects on the channel system. There is little opportunity for scale at the wholesale level, given the fragmented purchasing by retailers. Spoilage, while not overly high, is nevertheless costly and unlikely to be reduced unless better handling methods are imposed on the channel. Since each retailer does her own purchasing, there is an excessive amount of intra-city travel by retailers, each of whom hauls small quantities of produce to her market stall.

The potential for scale exists at each public market if retailers could be induced to participate in a cooperative buying effort. The assured volume thus developed would permit improved technology in packaging and handling at various levels in the channel, with attendant reduction in spoilage and costs. Volume purchasing by retailer groups would foster the development and operation of large-scale wholesalers, who would take over the intra-city transport of produce, thus reducing or eliminating the present movement of retailers into and out of the major wholesale areas.

It is at the wholesale and assembly points that scale operations are most urgently needed in fresh fruit and vegetable marketing. At the wholesale level, operators are generally very small scale. Margins are over 20% at this point in the channel, and must be this high to provide even a marginal return to the entrepreneur, given the high degree of specialization and the low level of sales. For wholesalers--as for retailers--no reduction in margins is possible without scale and a wider product assortment. To achieve these, substantial changes in managerial practices and technological inputs are needed.

Opportunities for lowered cost are likely to be found in spoilage reduction and more efficient purchasing of supplies. While spoilage rates were not as high as might be expected, there are still opportunities for improvement. For example, complete spoilage loss for wholesalers is approximately 15% for bananas<sup>8</sup> and tomatoes. In addition, 15 to 20% of sales in these products are made at reduced price because of spoilage. In part, spoilage represents the lack of adequate storage and handling at the wholesaler's place of business. Necessary physical improvements are unlikely to be made by small-scale operators whose "profits" barely provide a living wage. To the extent that spoilage is a function of poor handling enroute to the wholesaler--and this is undoubtedly a major factor--changes are likely to be made only if investment in handling and packaging equipment is made. At the present stage of farm and assembly operations, such investment will probably not be forthcoming from these channel participants. Again, then, only large-scale wholesalers are likely to be able to take the lead in spoilage reduction in assembly and transport.

A final area in which rationalization of perishables is possible is in the purchasing stage. Many of the wholesalers interviewed went to the rural fairs to buy their produce. Transport and personal expenses averaged 10% of the sales dollar for potato and vegetable wholesalers and over 50% for banana wholesalers. Since not all wholesalers went to the country to buy, it is clear that this cost category is even higher for those who do make buying trips. It would seem to be highly inefficient for a number of small wholesalers to be making repeated trips to the rural areas for supplies. Rationalization should be possible either through

---

<sup>8</sup>Some estimates suggest spoilage rates of 20 to 25% for bananas are common.

scale attainment at the individual firm level or cooperative buying arrangements at the multi-firm level.

Unfortunately, data do not exist to permit *pro-forma* projections under conditions of increased scale in the wholesaling of perishables. The best that can be said is that scale needs to be developed at some point in the channel and the wholesale stage appears to be a promising point of entry. While an increase in scale at the assembly points may also be desirable, there are a sufficient number of fairs and rural markets at the present time to permit large-scale wholesalers to obtain their supplies without excessive difficulty.

The point cannot be emphasized too much, however, that any significant increase in scale at the wholesale level will not be possible unless arrangements can be made for aggregate purchasing at the retail level. While the present small-scale retailers may continue to exist, it is essential to consolidate their purchasing.

#### Trucking and Assembly Operations

A critical linking function between the rural and urban areas is performed by the trucking industry. The data show that truckers rarely perform other than a transportation function, i.e., only one-fifth reported buying and selling agricultural products as a part of their business operations. For the most part, trucking appears to be a financially unrewarding business. Our data show that the average trucker is operating at a loss when depreciation is taken into account. However, for many *campesinos* and assemblers on the Altiplano, trucking is a prestige occupation. Thus, there is a ready supply of new entrants into the industry, entrants who are largely unskilled in business practices. At the same time, international truck manufacturers, principally Japanese firms, are offering smaller trucks for lower down payments and with longer repayment schedules. The results of these two forces has been a rapidly increasing truck population.

There has been continuing downward movement in rates, partially because of competitive pressures and, one suspects, partially because truckers do not know their true total costs. While low or non-existent profits may properly be considered a private matter, the effect of cut-throat competition on the future demand for trucks may also be considered a matter for public concern in a country so dependent on truck traffic. Whether existing entrepreneurs will have the finances to replace their present trucks--which

wear out in three to four years in inter-city hauls--is problematic. The low rate of profits and the over-supply of used trucks in the market may act in concert to substantially reduce the truck population suitable for long distance hauls.

In terms of operating problems, two main difficulties develop from the research data. First, obtaining freight is a time-consuming and uncertain process for the trucker. There are few freight-forwarding offices, and no public freight forwarders who work the interior of Bolivia. Second, the growth of repair facilities and the availability of trained mechanics have not kept pace with the increase in the truck fleet. In addition, stocks of truck parts are reportedly inadequate and high priced. Down-time for repairs appears excessive. It should be noted that few truckers reported dissatisfaction with present conditions in the La Paz terminal markets. Places and time of departure and arrival appear to be well known by those using trucks. Congestion is not perceived to be a major problem by the truckers.

The role of the country assembler in the distribution of food is not as closely defined as we would like. At any point in time, market participants may perform a number of functions or bypass certain institutions in the channel. Available data show that, for most products, the country assembler adds 10 to 20% to the retail price of perishables. Value added is higher in rice and bananas, where freight and spoilage, respectively, are major costs in the system. Gross margins obtained by country assemblers are of the same order of magnitude as those found for retailers and wholesalers of perishables. It is likely that assembler operations are not highly profitable, although we do not have specific data on this point.

Given the present food production system, country assemblers perform a vital function as intermediaries between small farmers and small wholesalers and retailers. However, the introduction of large-scale wholesalers and retailers into La Paz could well change the role of assemblers. In such a case, we could expect backward integration and reduced costs because of scale, lessened spoilage, favorable transport rates, etc. The assembler would still have an important role to play, however, in connecting the farmer with towns and cities outside the La Paz market area.

Assemblers in the Santa Cruz area appear most likely to be able to respond to change, perhaps even to act as agents for large-scale wholesalers and retailers in La Paz. Cochabamba assemblers

seem to be less likely to respond to dynamic change; Rio Abajo-Altiplano assemblers are probably incapable of responding positively to change.

#### Rural Responsiveness to Marketing Reforms

There are encouraging signs that the agricultural sector is capable of responding to demands made upon it by the urban masses. The relative stability of food prices in the 1957-66 period, as well as the mix availability, suggest that farmers have been reacting well to market signals. Available data show that the farmer is actively engaged in marketing his product at various points in the channel. Further, he is unencumbered by spiritual or family relationships, and operates on a strictly commercial basis. The traditional view that the Bolivian farmer is remote from the market economy is no longer true for many rural producers.

There are many limiting factors which inhibit farmers from increasing their output. Among the more important factors are (1) future price expectations and (2) the uncertainty about the level of demand in final buyer markets relative to the supply availability. These factors are more troublesome whenever there is a lack of information about marketing conditions, and/or a lack of insurance against marketing uncertainties. Both of these factors act to minimize the exposure or risk which, given the limits of their capital resources, market participants are likely to tolerate.

When market reforms do in fact reduce risks, then added capital and more technological options may be welcomed by the more innovative producers, and hence result in a positive supply response, i.e., an expansion of production, and hopefully, lower per-unit costs.

One example of output expansion is found in the reactions of Bolivia's rice producers to a series of market reforms initiated by the government in the period from 1959 to 1965. During the ten-year period from 1958 to 1967, rice production increased threefold, enabling Bolivia to shift from being a major importer of rice to a position of self-sufficiency, even though domestic consumption increased. The discussion which follows concentrates primarily on the effects of market reform programs in the Santa Cruz area, where 85 to 90% of Bolivia's rice is grown.<sup>9</sup>

---

<sup>9</sup>For a thorough review and analysis of government rice programs, see Donald G. Tailby, *Bolivian Rice Marketing: Steps to*

While it is always difficult to pinpoint cause and effect relationships in social and economic phenomena, especially a few years after the fact, the response of Santa Cruz rice farmers to government actions suggests possibilities for programs in other areas of Bolivia. A note of caution must be interjected, however. The data in Chapter 7 indicate that Santa Cruz farmers are in many ways distinctively different from their counterparts in other areas of the country. Programs to induce producer response must therefore take into account levels of literacy and education, confidence in the government, expectations for the future, etc. Substantial technical and credit inputs may be needed to obtain the desired response.

Beginning with the 1953 government plan for economic diversification, Bolivia sought to stimulate domestic production of foodstuffs and to curtail the need for imports. Since that date there have been several important factors stimulating rice production. The completion of a road from Cochabamba to Santa Cruz in 1954 brought about significant commercial linkages between the Altiplano and the lowlands of Santa Cruz. Also, colonization was used as part of the Bolivian government program to encourage the agricultural development of Santa Cruz. Other programs and facilitating services such as new land openings and United States support programs were initiated in the later 1950s.

In 1959 the first of several rice programs was instituted. This program's major goal was to help the country achieve self-sufficiency in rice. The program was designed to stimulate increased rice production by assuring producers a favorable return on their investment. Table 9.17 shows the production of rice for Bolivia since the initiation of these early programs. The assurance given to the farmers was a relatively high floor price. With this high price, the government expected to see increased production in succeeding years, since the farmers' price and market uncertainties were reduced.

One effect of the floor price announced in 1959 was to stimulate increased planting of rice for 1960. To cope with the problem of marketing the crop, the Bolivian government employed as

---

*Improvement* (La Paz, Bolivia: USAID, 1966). A review and analysis of the marketing system for rice grown in the Santa Cruz area is given by Michael Moran in *An Evaluation of Market Coordination in the Bolivian Rice Industry* (Unpublished Master's Thesis, Michigan State University, 1968). This section is derived from the above works.

tools a credit program and a floor price on the sale of rice. The floor price was intended to prevent prices from falling below production cost during the peak marketing season, when output is often dumped on the market by farmers in urgent need of cash.

Table 9.17 Rice Production and the Retail Price of Rice in La Paz, 1958-1967

<u>Year</u>	<u>Production<sup>a</sup> (in metric tons)</u>	<u>Retail Price in La Paz<sup>b</sup> (average price in US\$/kilo)</u>
1958	12.5	\$0.180
1959	19.5	0.202
1960	23.3	0.206
1961	24.0	0.262
1962	24.0	0.269
1963	34.0	0.237
1964	27.1	0.200
1965	22.6	0.204
1966	33.7	0.256
1967	42.7	-

<sup>a</sup>Ministerio de Economía, *Informe de Labores*, May 1967, pp. 6 and 8.

<sup>b</sup>Ministerio de Hacienda, *Indios del Costo de Vida*, No. 49, December 1966.

As Bolivia attempted to achieve self-sufficiency in rice, one of the major issues facing the industry was that of the rice marketing system. One of the marketing system's main problems was that the rice growers were mortgaging their crops to a middleman or trader in advance of harvest and were then forced to sell at very low prices in order to repay this debt. It was hoped that a more adequate marketing and credit system, together with improved storage facilities, would permit the grower to avoid disadvantages and risks in negotiations with traders and thus hold his crop off the market until he, himself, could benefit with a better price.

Later in 1960, a national rice committee was formed. This organization was designed to assist in rationalizing the rice marketing producers. The organization was called the National Rice Marketing Committee (CONCA). CONCA began as a semi-governmental institution which was intended to pass into the control and ownership of the growers and operators. CONCA's operations were financed by U.S. counterpart and P.L. 480 funds, and included the

purchase, processing, and marketing of rice in a quantity sufficient to maintain a minimum price to growers.

The national rice program to be implemented through CONCA was to focus on the following points:

1. Technical assistance in land use and use of fertilizers and insecticides and in harvesting and product handling techniques.
2. Administrative guidance to cooperatives.
3. A standard grading system for rice.
4. Minimum prices to producers for each grade of rice.
5. Assistance to processing plants and provision for more adequate equipment to be used by them.
6. Provision for storage facilities for rough and processed rice.
7. Creation of a marketing system with equitable prices to consumers.

Funds were also provided for a warrant loan program and a loan for the purchase of processing equipment and building construction. The warrant loan program with CONCA worked in the following manner. Funds were made available to CONCA to purchase rice at harvest time. Other funds were designated for Grace and Hansa (two large La Paz importer-wholesalers), who would pay CONCA and store the rice until authorized to sell it by CONCA at a price set by the Agency. Upon the sale of the rice, the company would use the proceeds to pay back the loan. Grace and Hansa received a commission for handling their end of the operation.

It was hoped that CONCA's purchases at harvest time, when prices were low, would tend to bring prices up for the grower; and, by storing some quantity over the year, year-end price increases for the consumer would be dampened. In this way, price fluctuations would be avoided, the farmers would receive prices at least equaling their cost of production, and the consumer would pay an equitable price.

Thus, by April 1959 producers began to receive financial aid. The 1959 marketing program was not too successful, however, because government purchasing was started too late (after harvest), and was too small in volume to aid more than a few growers. The retail price of rice in La Paz in 1959 appears to reflect this situation (see Table 9.17). One effect of the announced floor price in 1959 was to stimulate increased planting of rice for 1960. According to the Ministry of Economy figures (Table 9.17), production rose from 19.5 thousand metric tons in 1959 to 23.3 in 1960. Rice production increased slightly in 1961, but remained the same in 1962.

The 1962 figure may be explained by a severe drought which caused rice production to be lower than previously estimated. However, the retail price of rice in La Paz remained quite stable (see Table 9.17).

Actually, the 1962 warrant rice was not sold during the year-end period of 1962, but remained intact until September 1963, when it was sold to COMIBOL (the national tin mines).

CONCA's attempts to increase rice output met with success. Bolivia did achieve self-sufficiency in rice production. However, CONCA bought the rice at prices above those that could be obtained for the sale of rice, thus oversupporting the market. At the demand of the Banco Agrícola, CONCA's assets were turned over to it for liquidation. The demise of CONCA and the consequent price drop affected production for the years 1964 and 1965 (see Table 9.17). When CONCA stopped operating in mid-1963, rice growers feared that there would be no support price for rice, and were discouraged from planting the 1964 crop. This proved somewhat justifiable, for in 1964 prices fell substantially. This tended further to discourage rice production, so that even fewer hectares were planted for the 1965 crop year, and production dropped from 27.1 thousand metric tons in 1964 to 22.6 in 1965.

Although CONCA never handled more than 6% of the crop (in 1962), its introduction was followed by a significant production increase, suggesting that expectations were an important factor in producer response. However, CONCA's ambitious program ultimately gave disappointing results, both financially and administratively. Reasons for this disappointment include (1) a lack of funds at the appropriate time (which curtailed CONCA from timely purchasing of rice, (2) CONCA's buying price was too high relative to its selling price, (3) poor accounting practices were followed and questionable loans were made, (4) there was illegal speculation by some of CONCA's agents, and (5) management was poor.

When CONCA was dissolved, the rice growers were once again faced with the old marketing system with its many abuses: lower prices, mortgaging of crops at high interest rates, and being forced to sell early.

After the failure of CONCA, the next major attempt to control the price of rice in a manner favorable to both producer and consumer was the Federación Nacional de Cooperativistas Arrozeras (FENCA). FENCA had its official inception in February of 1965.

FENCA's general operations included: (1) co-op activities to administer loans to farmers, (2) a marketing and credit program,

and (3) rice mill operations on a partnership basis with co-ops to process rice for members of affiliated co-ops. By mid-1966, less than 5% of the rice growers were members of FENCA and marketed less than 7% of the national rice. FENCA did not provide the solution to Bolivia's rice production-marketing problem. Its costs were higher than those of private mills and merchants in the same industry.

The government has generally allowed free market forces to determine the price of rice in recent years. A fixed price policy at the retail level has been attempted, but without much success. In recent years, especially 1966-67, rice production has increased considerably. The large increase in 1967 was due to the use of newly cleared land for rice cultivation. This land constituted approximately two-thirds of the 1967 crop land. Very favorable weather conditions also contributed to increased output.

In conclusion, supply response to government production and marketing programs seems to have had a substantial effect on rice producers in the Santa Cruz area. It becomes evident, however, that any successful market reform program requires harmonious coordination of all stages of the production and marketing process. Reforms should contribute to the improvement of all stages in the production-distribution system of rice if they are to enhance improvement of the rice industry.

It appears that producers of crops other than rice will also respond to market reforms by increasing production. If great risk and uncertainty prevail in the market, production will probably tend to decrease. Not all farmers, however, have the capacity to increase production in response to increased demand situations. The present and potential supply responsiveness in primitive areas must be carefully considered. Supply response programs, as in the case of rice, presuppose that many basic farm inputs are available. Thus, available inputs, producers' capabilities, and existing market and economic environments will be important factors determining areas with more or less capability of supply response.

As we look at the personal and marketing characteristics of farmers in different regions, certain patterns emerge which bear on supply response to marketing stimuli. Santa Cruz farmers are better educated, more exposed to mass media, and more committed to the land than are farmers in other areas. They have already shown by their response to past government rice programs that, given proper incentives, they are capable of rapidly increasing supply. The data suggest they will be equally responsive in the future.

The degree of producer response which can be elicited in the other producing areas studied is less certain. Yungas farmers may prove receptive to programs directed at them. As recent colonists, they have to some extent shown their willingness to take risks. They appear to be concerned with investing in their farms. The high level of cooperative membership could provide a channel for the introduction of reforms and group efforts.

Abajo-Altiplano and Cochabamba farmers appear to be least susceptible to change. Recent bad weather and the longer-term impact of imports of P.L. 480 wheat may be the cause of pessimism in Cochabamba. Since the area is, at the present time, an important source of many vegetables for the city of La Paz, extra efforts may be needed to evoke the desired response. While conditions in many areas of the Altiplano are admittedly harsh, there are nevertheless opportunities for increased productivity.<sup>10</sup> However, strong efforts in terms of both technical aid and adequate price support and credit programs will have to be made to reach these farmers.

Finally, as we view the rural producer, it becomes clear that the manufacturers and marketers of farm inputs and consumption goods have not developed adequate communication or distribution channels into the rural areas. The counterflow study suggested the degree to which the *campesino* is aware of products, and the degree to which he is a consumer of many manufactured goods. However, the rural fairs (which could be the most convenient purchase locations) are high-cost, perhaps 20% higher than La Paz prices. There is a need, then, for the urban manufacturer and/or marketer to consider realistically the size of the rural market and to take appropriate steps to reach that market.

---

<sup>10</sup> Agricultural experiments by Peace Corps Volunteers have shown that potato yields can be increased tenfold over traditional yields through the use of improved seeds, fertilizers, and insecticides. However, as expected, it has proved difficult to obtain needed extension service and to gain the *campesino's* cooperation.

## CHAPTER 10

### CONCLUSIONS AND RECOMMENDATIONS

At the outset of this report a strategy was suggested for stimulating economic development by improving the marketing system. Essentially, it was proposed that the goals of increased gross product and more equitable income distribution could be fostered by market reforms. This report provides a descriptive analysis which serves as a basis for a marketing reform program in La Paz and the foodshed serving that community.

As we have seen, the case for marketing reform is not, at first glance, an apparently compelling priority. There is a wide variety of food available in the many markets of La Paz. Diets appear reasonably adequate even for low income groups. Food prices have increased less than the average cost of living since 1958, although the price of food rose sharply from 1965 to 1966.

The option of leaving things alone, however, is affected by several important facts. The structure of commerce itself is a heavy burden on the low income people of La Paz, who spend an average of 66% of their income on food. Marketing participants are too numerous and the system too fragmented to be efficient in terms of inducing supply expansion and minimizing mark-ups from farmer to consumer.

Further, the city of La Paz is growing at the rate of about 6% per year. There is some question whether the present market institutions and supply channels can stand still and continue to provide adequate food supplies at a stable price for a rapidly growing population.

Lacking the appropriate credit and credit institutions as well as technical assistance, the present marketing system is not likely to respond adequately to future demands. Later in this chapter we will present some suggestions for the types of credit that seem to be necessary to break the deadlock, as well as a technical assistance program to utilize expanded credit in the marketing system. We will further indicate the kinds of reforms of government policies and regulations that are necessary to make the expanded credit and technical assistance programs functional.

The recommendations offered center around rationalization of urban marketing institutions and marketing programs designed to induce expanded output at the farm level.

## Urban Marketing Reforms

One of the most urgently needed reforms is the creation of larger-scale retailing and wholesaling establishments in the city of La Paz.) Existing urban marketers, with their low sales volume and product specialization, appear to be incapable of reducing the present relatively high margins on staple items, simplifying the supply channel, or inducing the supply channel to provide greater output at lower cost. Data presented in Chapter 9 show the effect which increased scale at the retail level could have on final prices at the consumer level. However, a number of steps must be taken, for varying classes of food products, to rationalize the urban marketing system.

It is not to be expected, of course, that the food distribution system can be transformed overnight. Indeed, substantial social welfare problems could arise if too rapid a shift from a traditional, small-scale distribution system to a modern, large-scale system were effected. Only a small percentage of the existing retailers and wholesalers of food products appear capable of survival in a highly competitive environment. As we have seen, many participants in the food distribution system support their families solely from the proceeds of their business.<sup>1</sup> The phased program which we envision should permit gradual, but meaningful, modernization of the food distribution system.

A major impediment to the establishment of a modern food distribution system is the apparent lack of management talent in the existing system, especially at the retail level. It is clear that to reap the full benefits of modernization and scale entrepreneurs must be found who perceive the possibilities of high volume, low margin operations. In addition, these change agents must take the merchandising steps--beyond those of price reduction--necessary to obtain high sales volume. The most likely source of entrepreneurs in the present system is from within the ranks of wholesalers.<sup>2</sup> Quite clearly, technical help must be provided in order to assure the establishment of proper management policies and practices. Additionally, commercial credit at reasonable rates must be made available to the distribution system. In the

---

<sup>1</sup>It will be recalled, though, that the families of a substantial minority of food retailers had outside sources of income.

<sup>2</sup>There are also some retailers who have attempted to move away from the traditional *tienda* operations. They are a source of entrepreneurial talent.

past, such credit has been largely unavailable to the private sector and has surely impeded the rationalization of food distribution.

#### Reforms in the Marketing of Non-Perishables

(Substantial reductions on the order of 5 to 10% in the price of food can be gained by full-line retailing and wholesaling of all foods other than fresh fruits and vegetables.) Four staples--beef, bread, potatoes, and rice--account for some 50% of the food budget of low and middle income families. The key to increased scale and reduced prices is the offering of all four of these products through one outlet.) At the present time, beef is sold principally through specialized stalls in the marketplaces. Bread and rice are generally sold at the same retail outlet. Potatoes, along with other vegetables and fruits, are sold in the public markets or by street vendors. Very few retailers--none of them large--and no wholesalers offer all four products.

Various routes can be taken to achieve reforms in the urban marketing of these four staples, as well as selected foods and non-foods.<sup>3</sup> The point of change can be at the retail level, with the fostering of large-scale outlets. These outlets would forge new supplier relationships, either bypassing existing channel members in their search for low-cost suppliers or requiring preferential treatment in price and credit from present suppliers. Another point of entry is at the wholesale level, with large-scale, full-line wholesale suppliers acting in coordination with a group of retailers, who would also be full-line. Increased scale over that now attained by *tiendas* is needed to permit mixed-margin merchandising and capital investment to handle beef and potatoes, as well as the more traditional dry goods.

Several private sector efforts are already under way to establish large-scale modern retail outlets.) These early entrants appear to be oriented to the upper income families and foreign colony. Their efforts should be encouraged, even though their main initial impact appears to be primarily on an income group not urgently in need of help.

The support of modern retailing in high income areas is urged for three reasons. First, the aggressive price and merchandising policies of large-scale operations are expected to put competitive pressures on *tiendas* in their market areas, as was the

---

<sup>3</sup>See Table 9.13 for a suggested product mix for a full-line outlet.

case in Recife, Brazil.<sup>4</sup> Second, there is likely to be a demonstration effect on other retailers, with these operations attracting additional entrepreneurs both from within and without the present food distribution system. Third, the efforts made by these early entrants into large-scale retailing to coordinate supply channels should measurably pave the way for later entrants. Hopefully, suppliers will become accustomed to dealing directly with retailers who can assure some measure of stable demand and price.<sup>5</sup>

Depending on the scale they achieve, and the degree of coordination they develop with large-scale outlets in low and middle income areas, these new entrants can play a vital role in the marketing of beef. Since outlets serving different income levels will have differing demands for types of cuts, a pooling of purchases or a central carcass-breaking program is desirable.

In discussions with producers who had attempted in the past to institute a more complex cutting system, we were told that retailers did not have the technical skills to permit such a program. Hence, the need for training and re-orientation of existing practices.

A report by A.F. Gollnick to USAID/Bolivia included the following with regard to price controls.

"We believe that the regulations as they now exist, without regard for quality or type of cut, are responsible for the general low standard of meat handling in Bolivia. This goes right back to the live animal since the cattle owner is not forced to fatten or put weight on his cattle, which is why so many thin and unfinished animals are slaughtered.

"Freeing the better quality cuts from price controls could result in even lower costs for the so-called lower quality cuts than controls now allow. Since the latter comprise some 80% of the carcass, there would be plenty of meat available under control for that majority of the people who prefer meat and bone for boiled dishes ... so the average consumer, for whom controls are designed, may be even better off by adopting our suggestion."<sup>6</sup>

---

<sup>4</sup>See *Market Processes in the Recife Area of Northeast Brazil* (East Lansing, Michigan: Latin American Studies Center, Research Report No. 2, 1969), pp. 6-3 to 6-6.

<sup>5</sup>Of course, negative effects can result if these first attempts at vertical coordination are ineptly handled. It is thus imperative that adequate technical and managerial training and support be made available to these first entrepreneurs.

<sup>6</sup>A.F. Gollnick, "A Special Study on Meat Processing and Marketing - Bolivia" (USAID, La Paz, Bolivia, 1966), pp. 11-13.

It is expected that both rice and potatoes would be handled, even by outlets serving upper income areas. As noted in Chapter 9, direct purchasing of these items at assembly areas in Santa Cruz and Cochabamba is likely. Both rice and potatoes could be packaged in plastic bags by the outlet itself, thus permitting self-service in these two items. Low-cost, labor-intensive equipment is already in operation in La Paz to perform this operation. Plastic bags can be obtained locally.

Concurrent with the development of large-scale retailing outlets to service upper income areas, steps should be taken to increase the scale of outlets serving low and middle income areas. If the entrepreneurial talent proves to be available, operations geared to sales volumes of \$5,000 to \$15,000 per week should be encouraged. The data developed in Chapter 9 suggest that low and middle income areas could each support 10 to 15 such stores. It is not expected, of course, that more than a handful of large-scale outlets would develop in the early years of a capital investment program.

Price and product policy in the four major staples of beef, bread, potatoes and rice will be important areas of management concern. These staples account for some 50% of the food budget for low and middle income families. It is suggested that retailers in low and middle income areas dovetail their beef purchasing with the upper income outlets by taking a higher proportion of the lower-priced cuts. While the municipality will almost surely maintain its price controls on the cheaper cuts of meat, it is possible that selected cuts desired by middle income families could be partially freed. While middle and upper income families thus appear to be marked for higher beef prices, the effect of increased prices may affect supply sufficiently to overcome the periodic shortages of beef in the city. The effective price of beef may thereby be better stabilized during traditional periods of shortage.

The previously suggested direct purchases of rice and potatoes at the assembly points are strongly recommended for the low and middle income markets. If savings are passed on to the consumer, demand will probably justify direct buying of these staples. Without direct buying, it is doubtful that prices can be substantially lowered in these products, although some reduction is possible--and desirable--through margin reduction on these "loss leaders." Packaging can be handled as suggested for the high income outlets. Margin reductions can also be effected for bread, assuming the expected increased volume ensues. Reduced purchase prices are possible if advantage is taken of large-scale purchases to obtain quantity

discounts. It would seem that such discounts could be obtained, thus helping to reduce the food bill for low and middle income families.

Additional sales volume can be obtained by outlets in low and middle income areas if a variety of non-foods are offered for sale. Soaps, detergents, and personal care articles are evident candidates for inclusion in the product mix. Additionally, ready-made clothes for men and women should be stocked, as well as low-cost plastic and rubber shoes and sandals. Some housewares may also be included in the product mix, although these are not major expense items for low and middle income families.

A lack of entrepreneurial talent may make it difficult, if not impossible, to move directly into large-scale retailing to service low and middle income areas. If such should be the case, increased scale at the wholesale level should be strongly encouraged. Full-line wholesalers handling beef and potatoes as well as the more traditional dry and grocery goods will have to take over the functions of channel rationalization and mixed-margin merchandising. Also, to the extent that the government is willing to permit stockpiling of rice and potatoes, large-scale wholesalers may act to reduce the wide seasonal price swings in these two commodities.

The development of large-scale wholesalers does not, however, eliminate the need for increased scale at the retail level. In order to take advantage of the economies gained by expansion of wholesale operations, retailers will have to be capable of handling a full line of products in sufficient volume to permit efficiencies in transaction and transportation at the wholesaler-retailer interface. Thus, technical and capital investment programs will still be needed at the retail level, but lower levels of scale could be tolerated, perhaps reducing the problem of finding managerial and entrepreneurial talent.

In all likelihood, *tiendas* will have a few years to adjust to new competition. Natural attrition will remove some outlets. Those who eventually survive will operate principally as convenience outlets during hours when the large-scale outlets are closed. Municipal regulations in Puerto Rico, for example, limited operating hours for large retailers in order to provide small operators the opportunity to become convenience outlets. Traditional *tiendas* could also reduce costs through the development of a cooperative wholesaling organization. If a substantial proportion of the larger *tiendas* could be induced to participate, small and medium-sized

*tiendas* could provide needed additional purchasing leverage. Thus, the small and medium outlets could purchase on more advantageous terms, with the large *tiendas* gaining a smaller advantage over their present operations. While the consumer would doubtless benefit from the purchasing scale thus achieved, gains of the magnitude obtainable through the development of large-scale, full-line retailers and/or wholesalers would not be achievable.

#### Reforms in the Marketing of Perishables

(Progress toward large-scale retailing and wholesaling of fresh fruits and vegetables will be less rapid than for the products described above.)<sup>p 234</sup> At present, it appears best to maintain the central markets largely as is, and attempt to develop scale at the wholesale level.

As a first step toward reform at the retail level, municipal regulations could be changed to permit market women to operate more than one stall. Those who are capable of managing a large sales volume would thus be permitted to do so.

The market women's association should be encouraged to accept a combined technical assistance and loan program which would assist them in consolidating their purchases and gain bargaining power in the acquisition of perishable items. The program should be on a pre-order basis so that members would not reject the items purchased on their behalf. Quality control will be a problem, but unless the program is such that the orders are firm, it will just add another step in the market channel. Hopefully, the economies of scale in purchasing will be sufficient to offset some of the inherent loss of quality control that individual purchasing now allows. Although no specific grading system now exists in the system, depth interviews with wholesalers and retailers indicated that a rough quality-price relationship is understood by market participants. Thus, while there is clearly a problem in instituting group buying, it may not be insurmountable, especially if the economic gains are meaningful.

The market women's association should be encouraged to accept technical assistance and loans to foster creation of a promotion program for the plaza and, in particular, for the cooperating members. In general, the program would be designed to foster consumer premium merchandising for the market and to reward the market ladies who are members of the buying group. One format might be for a loudspeaker system to call out the number drawn from those pooled by consumers who shopped at the market stalls of cooperating

merchants. The merchants will have received coupons in proportion to the purchases they had made through the central buying program. Thus, the consumers will be encouraged to shop at the stalls of the merchants who have cooperated in the central buying program.

A centralization of purchasing for the various public markets would remove a major obstacle to the gaining of scale at the wholesale level. Aggressive wholesalers could expand their operations substantially in terms of both volume and items carried if they could focus their efforts on a few major, large-volume purchasers. The spreading of major fixed costs, as well as the possibility of taking lower margins with higher volume, should reduce the wholesaler's price to these cooperative purchasers.

The gaining of scale at wholesale should result in savings in transporting produce. The present system is one in which either a multitude of small farmers bring their produce into La Paz for sale to wholesalers or retailers or small wholesalers go to rural fairs and buy in relatively small quantities. Large wholesalers would be able to purchase and transport in quantity from the rural assembly points, probably through arrangements with country assemblers.

Better packaging and handling of perishables, with reduced spoilage, is expected to result from the advent of large-scale wholesaling. The need to maintain quality standards in response to the cooperative buying of public markets will be a major factor. With scale, wholesalers should be able to invest in packaging and handling equipment.

For example, bananas are presently transported from the Yungas in rawhide nets (*ohipas*) lined with banana leaves containing 1000-1200 banana fingers. Upon arrival in La Paz, bananas are ripened in the *ohipa* in a non-controlled atmosphere. The combination of weight, rough handling, and non-controlled ripening results in high spoilage rates. Bananas could, however, be packaged in smaller lots in locally woven nesting reed baskets. Upon arrival in La Paz, the bananas would be placed in special ripening rooms with a controlled atmosphere. Under present conditions, the investment in baskets and ripening rooms is not likely to be undertaken. With the development of larger-scale wholesalers, however, such investment is feasible.

A major problem in fostering scale operations at the wholesale level is the lack of entrepreneurs. Most of the existing operators do not appear capable of responding to, or encouraging, cooperative buying groups in the public markets. The most likely

source of entrepreneurs from within the system are the present potato wholesalers. For the most part, however, new entrants into fruit and vegetable wholesaling will be required if medium- and large-scale operations are to develop. There is little doubt that considerable technical and financial help is required to foster increased scale in the wholesaling of fruits and vegetables.

#### Bus and Truck Terminal Facilities

When this study was undertaken, it was believed that the research would shed light upon the requirements for truck and produce terminal facilities for the community. Our study revealed that many trucks stop at pre-arranged spots in the streets at or near markets. Wholesalers and retailers meet these trucks, often by pre-arrangement, to acquire their requirements for produce. Streets are used at night for the thousands of transactions required to supply fruit and vegetable retailers.

The present system, dispersed as it is, utilizes facilities scattered all over the city. Indeed, a market terminal would be enormously complex and expensive were it to provide an adequate facility for centralizing the exchange process needed by the thousands of small retailers and wholesalers.

Market participants, particularly truckers and wholesalers of perishable fruits and vegetables, did not express a strong sense of need for terminal facilities. Very few truckers spontaneously mentioned a desire for more efficient or modern facilities, nor did they express a need when questioned specifically on the matter. Wholesalers felt there were no special problems and were, in general, satisfied with the present method of physical movement of goods. On the other hand, a substantial majority of wholesalers indicated, upon questioning, that they would be willing to operate out of new facilities and would be prepared to pay a premium to be in these facilities.

It should be noted that existing market areas at present get double use. Wholesaling transactions take place at night or in the early morning hours. The public, on the other hand, utilizes the market areas during the day. The present system, while lacking in aesthetic appeal, is relatively efficient for the present retail market structure.

The traffic and street conditions and geographical constraints of the city constitute a key problem for terminal facilities. The solution appears to lie in dispersing wholesale activities to the perimeter of the city. In order for this to be efficient, however,

there is a need to consolidate retailing purchasing and, consequently, the wholesaling functions of handling and transport. Any attempt to force a reform of physical distribution facilities without attention to needs for scale would only add another trans-loading to the product flow and would likely increase rather than decrease the cost of bringing produce into the city.

The conclusion is, therefore, that now is not the time for "brick and mortar" action to deal with terminal problems. Simplification and consolidation of food marketing channels should precede the building of any terminal.

Once scale is achieved at the wholesale level, wholesale terminal facilities placed on the perimeters of La Paz could very likely improve the efficiency of the city's food distribution system. A large terminal could be utilized at El Alto to serve both the Altiplano region and merchandise being shipped in from Cochabamba and the East. Another terminal would be useful at the entry to Rio Abajo to handle temperate zone fruits and vegetables. A third terminal in Miraflores would be useful to service tropical produce being brought out of the Yungas. Potato and rice storage could be concentrated at El Alto. Rice storage in the Alto would facilitate transport either into the La Paz metropolitan market or for export to Peru.

#### Marketing Reforms in Assembly and Production

##### Market Information Programs

A radio program consisting of interviews conducted at wholesale markets during the early morning each day could be broadcast to reach farmers and shippers in the valley surrounding La Paz. The initial program should be designed to establish credibility, not necessarily utilizing technical agricultural jargon. The reporting should be in the local language of the *campesino*, probably Aymará or Quechua rather than Spanish. (Daily market broadcasts could help to lessen price fluctuations and increase production.) In order to conduct such a program, it might be necessary to have a few foreign technicians in La Paz to help implement the program. The products dealt with initially could include leafy green vegetables, onions, tomatoes, carrots, bananas and oranges. The procedure could consist of two or three men visiting the Sopocachi, Lanza, Camacho, Miraflores and Rodriguez markets each day. The staff could process the price and volume statistics of the La Paz

market area and periodically publish the results, thus helping to prepare farmers to meet future market conditions.

#### Road Improvement Program for Fruit and Vegetable Marketing

There are some farm-to-market roads in the area serving La Paz which are all but impassable during certain parts of the year. Two important growing areas whose development is hindered by the lack of better farm-to-market roads are Rio Abajo and Luribay. Engineering analysis and feasibility assessments are needed in this area, but it is important to keep in mind the low standards of road conditions that would be acceptable and functional.

#### Rice Marketing Reform

A short review of past governmental programs in rice production and marketing was presented in Chapter 9. Continued government action is needed to foster increased rice production, reduce consumer prices in the city, and potentially provide for exports which could be sold or bartered in exchange for imports. A comprehensive program which would reduce price fluctuations for rice in the hull, increase growers' incomes and lower prices to consumers is needed. It is recommended that any rice program undertaken include: (1) crop forecasting, (2) crop financing, (3) financing a portion of needed storage facilities, (4) development of diversification options for rice growers, and (5) legal exports. Existing institutions could be utilized to implement such a program.

The basis for a rice program is a crop forecasting service that would, at the earliest possible date in the crop cycle, report the expected size of harvest and recommend a minimum price. The estimating service could also recommend loan proportions to be used for milled rice purchases and rice in the hull purchases and establish release dates (i.e., due dates on loans) for the sale of rice in the hull. On the basis of crop forecasts, the Bolivian government could set policies for the import or export of rice.

The system should provide funds to (1) provide a reasonable return to the farmer, (2) dampen price rises in non-harvest months, (3) provide export outlets for excess production, and (4) arrange for imports from the world market in years of shortage. Loans should be made to millers and producers.

In the case of millers, loans could be conditioned upon agreement to purchase at the official support price. The miller would have two options: (1) sell to the army or an institution

such as COMIBOL (Bolivian Mining Company), or (2) place the processed rice in warrant storage. If an institution is the buyer, then the lending agency would receive direct payment and would deduct interest and capital repayment. The balance would be remitted to the miller. If a warrant program were used, the miller would turn the rice over to a private firm acting as warrant agent, receiving at that time some percentage of the estimated sales value.

With the use of the first option, i.e., sale to institutions, the miller would receive working capital in installments, adjusted to his rate of delivering rice to the buyer. With the use of warrants, the amount of the loan, less perhaps about a 20% initial payment to the miller, would be turned over to the warrant agent. The warrant agent would store peeled rice, periodically release a portion of its estimated value to the owner, and act as sales agent. The miller would agree to release dates, by which time he would either sell his rice or empower the warrant agent to do so. Thus, excessive stockpiling would be avoided.

Funds marked for warrant loans for rice in the hull could be sub-loaned by a banking agency, probably the Banco Agrícola. Warrant loans would be made in the following manner: (1) the producer would place his bagged unhulled rice in a central warehouse, (2) he would receive a check for a percentage of the peeled rice support price, and (3) he would sign an agreement that his rice would guarantee the advance, and that by a certain date he would either sell the rice personally and repay the loan or allow the warehouse operators to make the sale.

The farmer would therefore have four options during the harvest period: (1) sell to a miller at the support price, (2) store in the hull at a central warehouse and receive an advance, later selling on the open market, (3) sell on the open market at the going price, or (4) store rice in the hull at his house or cooperative and sell later in the year at the going price.

The contemplated loan would be a rotating fund that would be available annually for 20 years. If crops should fail for any reason, this same fund could be used to import rice during that year. By the very implication of crop failure, prices would rise, and support for the harvest would not be as necessary. The crop estimating service would give ample warning of impending crop failure or of the effects of adverse weather during harvest. Thus, the import program could be worked out in time to clear imported stocks before the next year's harvest came in. It is believed that the

use of marketing funds for imports may be more economical than the maintenance of large buffer stocks. The actual decision to authorize imports could be made by the Ministry of Economy, taking into consideration the recommendations of a rice committee.

#### Potato Marketing Reforms

There has been considerable work on production aspects of potato farming, but there do not appear to have been any programs concerned with marketing. As we have seen, potatoes are an important element in the La Paz diet, and are a major cash crop in both the Altiplano and in the Cochabamba area. Small crops during the 1965-67 period--due mainly to adverse weather conditions--were a source of considerable concern to government and municipal authorities. Programs were instituted to prevent stockpiling and speculation in potatoes. As a result, price swings were probably more severe than they need have been.

By applying more modern techniques, farmers could increase their productivity and make use of land now left fallow. However, the present distribution system does not provide incentives to the farmer to increase production. Larger volume only tends to depress harvest prices, since various government actions militate against storage. At the same time, little or no commercial credit is available to help the farmer hold output off the market during harvest periods. If the grower could finance storage of part of his production for a few months, he could obtain higher prices and, at the same time, stabilize the retail price of potatoes during non-harvest months.

A marketing program for potatoes is recommended, to include the following elements: (1) crop forecasting, (2) market news, (3) storage loans at the village level, and (4) storage loans for wholesalers and/or country assemblers. Marketing programs should be closely coordinated with production programs, which would include the following: (1) increased availability of certified seeds, (2) extension services to educate farmers in the methods and benefits of new farming techniques, (3) credits to farmers to permit purchase of fertilizers and insecticides, and (4) continued encouragement of production in new areas.

Although there are many ways in which such a program could be put into effect, care must be taken to include both marketing and production elements. It is not suggested that centralized purchase or storage be used, but that a program be established

which would allow the farmer greater participation in the marketing process.

A crop estimating and market news service should estimate the future crop as early as possible, suggesting a price level as the basis for storage loans, as well as release dates by which stored potatoes would be sold on the market. Loans would be made to individual farmers or to farmer cooperatives. Storage could be at the village level or in approved central warehouses. To the extent that large-scale wholesalers and retailers develop as suggested earlier in this chapter, they could provide warehousing facilities. Care would have to be taken, of course, to ensure proper storage and handling methods.

A program of production encouragement and marketing coordination as suggested above should have a substantial impact on the supply and flow of potatoes. The storage programs should greatly alleviate the wide price swings which now occur in potato marketing, thus providing the farmer with greater income and the consumer with more stable prices.

#### Beef Marketing Reforms

Because of the importance of beef in the diet, the municipality has regulated the price of beef in the city. The impact of this price regulation has been to inhibit the supply of beef reaching the city, rather than to encourage suppliers to serve the La Paz market. The objective of the program outlined here is to maintain relatively low prices on those cuts of beef in demand by low and middle income families, at the same time freeing prices on better cuts consumed mainly by upper income families. Further, it is recommended that an export program be developed.

Consideration should be given to developing a means of offering a wider range of cuts of beef in La Paz. A program permitting retailers of beef to charge higher prices for better cuts of beef should be limited to those retailers who cooperate with an inspection program and follow improved sanitary and cutting practices. These will probably be the large-scale retailers suggested earlier. In order to accomplish this, it would be necessary to supply technical assistance in the form of butchers skilled in the application of better operating techniques and better cutting procedures. Argentine butchers may be the best for this kind of training, as they are more accustomed to cutting grass-fed animals than are United States butchers.

Once specifications have been established for handling and cutting, price levels could be established for the various cuts of beef so that the lower-valued cuts would still be sold at present prices, while the more desirable and expensive cuts would be sold at higher prices. The result would be considerable pressure on the marginal retailers of beef in the city now operating with less than desirable standards of sanitation or control as to cutting procedures. If the meat marketing program of the large retailers is successful, it is quite likely that selected numbers of beef stalls in public markets and *tiendas* could be induced to incorporate some of these same improvements. When these outlets had complied with the standards established by the municipality, they too would be permitted to differentiate between the low and high cuts, charging more for the better cuts. The result would be that while low income people would still be protected in terms of the prices they would pay for the beef that they could afford, the revenue to beef growers and processors would be increased through higher prices on the better cuts.

More than two-thirds of La Paz beef comes from the Beni, with the remainder being supplied from the Altiplano. There is said to be substantial illegal export of beef from the Beni to surrounding countries where the retail price is double that in La Paz. The institution of a wider price spread in La Paz, together with a program for licensing beef exports from the Beni, should help bring these exports under control. For every kilo of beef brought to the metropolitan market, a certificate of release could be granted for the export of a predetermined amount of beef. The value of these certificates in proportion to the amount of beef shipped to the metropolitan market would, of course, vary as a function of the condition of herds and the availability of surplus beef. This, then, requires the establishment of herd-estimating procedures and the estimation of demand levels within the city. Using this information, it would be possible to exercise control of exports and the retailing of beef in the city of La Paz.

#### Improved Truck Transportation of Food

Trucking constitutes the major physical distribution linkage between rural producers and urban consumers. Bolivia is presently enjoying the benefits of an increased truck population, brought about by aggressive marketing by international manufacturers and the prestige element in trucking which has attracted a number of

new entrants into the business. However, the resultant competition has driven freight rates down to the point where trucking, in general, is unprofitable. Thus, a condition of oversupply in the present may result in undersupply in the future.

Some steps can be taken to alleviate repair costs and breakdown time. Trucking unions could take direct action to improve parts availability. Loans should be made available to the unions to enable them to buy tires, batteries and other parts in volume and by direct import. This should cut costs. The unions could also contact factories and encourage them to maintain an adequate level of parts inventory. Repair facilities can be improved by loans to unions or to private repair shops for parts, and training courses for mechanics. Freight-forwarding offices could be organized by the truckers' unions and Federation. At present, there is no real cooperation within the Federation in different departments of the country. The unions themselves could do much to overcome the waiting periods. Many truckers live in villages on the Altiplano and could perform the services of accumulation and forwarding of freight, if the correct safeguards were established.

We see no short-term solution to the problem of cut-throat competition. Improvements in spare parts availability and repair facilities should help relieve the existing profit squeeze. More specific research is needed before major recommendations can be made.

#### Marketing Reforms for Consumption Goods Sold on the Altiplano

There are approximately 50 to 75 fairs held each week throughout the Altiplano. These fairs are attended by *campesinos* who bring with them produce for sale at the fair, and while at the fair, purchase manufactured goods necessary for their life on the Altiplano. Even though many *campesinos* now come into the city in order to make purchases, the fairs are still an important source of exchange for the inhabitants of the Altiplano.

Much of the merchandise sold at the fairs is, in fact, bought at retail in the city and then marked up again to sell to the *campesinos* on the Altiplano. As a result, the cost of manufactured goods is excessively high for the farmers of the Altiplano. We suggest, for some of the rural fairs, a program of mobile retail outlets which could offer an assortment of farm inputs and consumer durable goods at prices that would be somewhat more attractive than the present itinerant merchants offering their narrow lines of goods.

The program should be tested on one or two trucks in order to work out supply arrangements and marketing strategy for the trucking operation. From this limited experiment, a program could be costed. It is likely that some importers, manufacturers, and retail merchants would be interested in undertaking such a program if they received appropriate technical assistance and some limited incentive.

In order to encourage the acceptance of such a program (which would, in effect, interfere with the present merchant's high margin, low volume operations), it is suggested that perhaps the same organization that operates the mobile stores could be encouraged to assist *campesino* cooperatives to become agents for farm input supplies such as fertilizers. Thus, bulky items could be delivered at attractive prices to the cooperatives in the small villages scattered across the Altiplano. The volume of fertilizer is now so small that it is doubtful anyone would be disturbed at breaking the price.

#### Government Reforms to Foster Market Development

The reader familiar with regulation and taxation procedures will have noted that the program of market reforms suggested here involves changes in some of the regulations and, in some cases, a review of the philosophy underlying the laws and regulations of market processes. Indeed, many of the reforms would individually fail if the government did not take action to amend regulations and tax procedures. Unless most of the following changes are undertaken, there is little reason to believe that loans and technical assistance efforts will achieve the desired results. Thus, the following changes should, in our opinion, be part of a program of over-all market development.

The present practice of permitting some villages to chain the roads and extract taxes from truckers results in uneven and uncoordinated tax collection. In and of itself, this procedure raises uncertainty as to the tax burden in the minds of producers and marketers. It has another and more serious effect upon the handling of temperature-sensitive fruits, such as bananas, by forcing some truckers to unload and open fruit packages. At high altitudes, such activities can result in great damage to the product, as well as causing delays in transit. It is suggested that trucks with perishables be permitted to pass without opening the load.

It is recommended that the Ministry of Economy and the Mayor's office agree on a program of agricultural marketing loans, and that a systematically monitored free market be substituted for the present retail price and storage regulations for potatoes and rice.

The affected government agencies should allow greater price spreads between the lower valued cuts of beef and the higher priced cuts of beef. Retailers complying with specified sanitation and meat cutting practices would be allowed to charge more for the better cuts of beef, but would be restricted, as are all other butchers, on the price of lower quality cuts. Further, we urge that a quota system be instituted to allow some export of beef.

Market stalls have remained the same size for many years. The system of renting only one stall to a person has prevented the more enterprising from gaining economies of scale. It is recommended that when market stall operators can demonstrate the necessity for more space, they be allowed to operate multiple adjoining stalls.

The credit available to commercial operations should be expanded. The urban market reforms suggested above will require substantial capital for construction and operations. Thus, the Banco Agrícola or other banks need to offer credit to commercial activities, just as they now assist producers with loan capital. In addition to capital, technical assistance programs will be required to support entrants into large-scale retailing and wholesaling.

Finally, it is recommended that a training program be developed to assist in relocating in other jobs the market women and *tien-da* keepers displaced by the impact of market reforms.