LIBRARY
Michigan State
University

This is to certify that the

dissertation entitled

THE MEXICAN DRY GROCERY SUBSECTOR:
STRATEGIES SUPPORTING THE ESTABLISHMENT
OF VOLUNTARY FOOD CHAINS

presented by

ROBERTA L. COOK

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Agricultural Economics

Harold M. Riley
Major professor

Date August 19, 1985

MSU is an Affirmative Action/Equal Opportunity Institution

0-12771



RETURNING MATERIALS:
Place in book drop to remove this checkout from your record. FINES will be charged if book is returned after the date stamped below.

THE MEXICAN DRY GROCERY SUBSECTOR: STRATEGIES SUPPORTING THE ESTABLISHMENT OF VOLUNTARY FOOD CHAINS

By

Roberta L. Cook

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Agricultural Economics

1985

ABSTRACT

THE MEXICAN DRY GROCERY SUBSECTOR: STRATEGIES SUPPORTING THE ESTABLISHMENT OF VOLUNTARY FOOD CHAINS

By

Roberta L. Cook

This research 1) describes the dry grocery marketing system for the Mexico City foodshed, 2) diagnoses opportunities and barriers to improved performance, 3) assesses the potential for the formation of voluntary food chains, and 4) designs strategies to support the establishment of voluntary chains.

The research was undertaken in response to the low level of vertical coordination present in the Mexican dry grocery subsector. Voluntary food chains represent a strategy which has proved effective in improving vertical coordination and lowering food distribution costs in the U.S. and Europe.

The analytical approach used for this research consisted of an expanded structure-conduct-performance paradigm generalized to analyze vertical subsectors. Standard operating procedures (SOPs) were the primary units of analysis used to enumerate and describe the current buying and selling practices of Mexican marketing firms.

Personal interviews were conducted in Mexico with over fifty officials representing dry grocery manufacturing firms, government marketing agencies, supermarket chains,

and dry grocery wholesaling firms. A survey of 100 small-scale retail establishments was carried out in Mexico City, along with case studies of two incipient voluntary chains.

The study identified forces for change supporting the transformation of traditional wholesale and retail grocery firms to more modern firms incorporating management and technological innovations. A key force for change is increased competitive pressures caused by the rapid growth of the modern supermarket industry.

However, the research suggests that improved performance is impeded by several constraints, including a lack of coordination mechanisms (i.e. full-service wholesalers such as voluntary chains, information on improved marketing practices and technology, and credit).

On-site research conducted in Mexican wholesale and retail establishments indicates that technical assistance on improved technology and marketing practices, appropriate to the needs and constraints of the firm, in conjunction with credit to finance expansion, can lead to improved efficiency and lower food prices to consumers.

The research findings show that the establishment of voluntary chains in Mexico is financially and technically feasible and compatible with the emerging behavior of business enterprises. Nevertheless, the findings also indicate that the development of an effective training and technical assistance effort is a critical factor affecting the potential formation and success of voluntary chains.

ACKNOWLEDGEMENTS

I have had considerable support in making this dissertation a reality. I owe my deepest gratitude to my major professor and research supervisor, Dr. Harold Riley. His insights, patience, and attention to detail were vital to the completion of this study and my professional development.

Dr. John Allen deserves special recognition for improving my understanding of the U.S. food system by providing the opportunity to interact with industry leaders and sharing his expertise. Dr. James Shaffer was an important source of intellectual stimulation in all aspects of my graduate program and his courses were keystones of my training. Dr. Michael Weber offered many helpful comments and suggestions throughout this research project.

The research was funded by FIDEC, the Fondo para el Desarrollo Comercial, a marketing trust fund attached to the central bank of Mexico. I gratefully acknowledge the financial support of FIDEC. In addition, I am grateful to the Director, Lic. Roberto Fernandez Leal, for the assistance he gave me in gathering information, and to Lic. Jose Antonio Gallastegui, the Administrative Subdirector for administrative support. Dr. Luis Villa Issa, the former

Technical Subdirector, merits special thanks for professional support in carrying out the research.

This research would not have been possible without substantial industry participation. Sincere appreciation goes to all of the industry participants that fielded questions and cooperated in the data collection process. Salvador Castillo, the founder of the voluntary chain SPAR in Mexico, along with Enrique Treviño of the voluntary chain Avance Comercial de Monterrey, deserve special recognition.

I also wish to thank Eleanor Noonan for secretarial support and two fellow students, Telmo Oleas and Bruce Koenig, for their patience in teaching me the computer skills necessary to complete the study.

Finally, I want to express heartfelt thanks to my parents and my aunt, Pauline Wright, for their never-failing encouragement and understanding.

TABLE OF CONTENTS

	Page
CHAPTER 1: Introduction	
1.1 Background.	1
1.2 Research Objectives.	5
1.3 Research Methodology.	7
1.4 Conceptual Framework.	10
1.4.1 The Structure-Conduct-Performance Paradigm.	11
1.4.2 Opportunity Sets and the Balance of Power Among Industry Participants.	15
1.4.3 Vertical Coordination.	17
1.5 The Institutional Setting.	18
1.5.1 CONASUPO	18
1.5.2 IMPECSA	20
1.5.3 SECOFI	21
1.5.4 SNA	21
1.5.5 Government Employee Stores	22
1.5.6 Federal District Stores	23
1.5.7 BANPECO	23
1.5.8 FIDEC	23
1.6 Flow Chart of the Dry Grocery Subsector.	25
1.7 Organization of the Study.	25
CHAPTER 2: An Overview of the Development of Voluntary and Cooperative Food Chains in the United States	
2.1 Introduction.	30
2.2 The Origin of Voluntary and Cooperative Food Chains.	30
2.3 Voluntary and Cooperative Groups Defined.	32
2.4 The Development of the Voluntary-Cooperative Group Movement.	34
2.4.1 Voluntary Chains.	34
2.4.2 Retailer Cooperatives.	38
2.4.3 Some Differences Between Retailer Cooperatives and Voluntary Chains and Their Affect on Growth.	39

Page

2.5 Standard Operating Procedures of Voluntary Chains. 41

2.5.1 Expansion of the Scale of Operation of Affiliated Retailers. 41
2.5.2 Key Changes in Standard Operating Policies. 42
2.5.3 Core Retailer Groups. 45
2.5.4 Concentration of Retailer Purchases through the Affiliated Group. 45
2.5.5 Wholesaler Pricing Policies. 47

2.5.6 The Cooperative Advertising Concept. 49
2.5.7 The Provision of Specialized Services to Retailers. 50
2.5.8 Wholesaler Charges for Specialized Services. 52

2.6 Productivity and Operating Costs of Affiliated Wholesalers. 53
2.7 Structural Change in Food Wholesaling and Retailing. 55
2.8 Some Impacts of Structural Change on Food Manufacturers. 57
2.9 Comments on the Experience with Affiliated Groups in Other Countries. 59

2.9.1 The European Experience 59
2.9.2 The Latin American Experience. 61

2.10 Summary of the Causes of Failure and Success of Voluntary Food Chains. 63
2.11 Public Sector Support for the Development of Affiliated Wholesalers. 65
2.12 Conclusions. 67

CHAPTER 3: Dry Grocery Manufacturing in Mexico City

3.1 Introduction. 71
3.2 Food Manufacturing Industry Structure. 72
3.3 Forces for Change and Buyer-Seller Selection Decisions. 75
3.4 Manufacturer Volume and Promotional Discounts. 77
3.5 Manufacturer-Supermarket Interface. 81
3.6 Manufacturer-Wholesaler Interface. 85
3.7 Manufacturer-Traditional Retailer Interface. 87
3.8 Manufacturer-Parastatal Interface. 88
3.9 Some Implications of Product Scarcity for Subsector Standard Operating Procedures. 90
3.10 Stockpiling of Merchandise by Marketing Firms. 93
3.11 Conclusions. 96

Page

CHAPTER 4: Dry Grocery Wholesaling in the Mexico City Metropolitan Area

4.1 Introduction. 99
4.2 A Brief History of La Merced. 100
4.3 The Development of Dry Grocery Wholesaling. 103
4.4 A Taxonomy of Mexico City Wholesalers. 106

4.4.1 Traditional Wholesalers. 107
4.4.2 Innovators of the 1970s. 108
4.4.3 Latecomers. 114
4.4.4 Innovators of the 80s. 116

4.5 Wholesaler Decentralization 118
4.6 The Role of the Central de Abasto in the Dry Grocery Wholesaling Industry. 121
4.7 An Analysis of the Operating Performance of Three Wholesaler Types. 123
4.8 The Medio-mayoreo Sales Method and Inter-wholesaler Buying. 128
4.9 New Competitive Pressures as Forces for Change in the Dry Grocery Wholesaling Industry. 131
4.10 Conclusions 133

CHAPTER 5: The Structure of the Dry Grocery Retailing Industry in the Mexico City Metropolitan Area

5.1 Introduction. 137
5.2 Structure of the Dry Grocery Retailing Industry in the Mexico City Metropolitan Area. 139

5.2.1 Methodology. 139
5.2.2 Retailer Numbers. 144
5.2.3 Retailer Sales and Numbers - Market Structure. 148
5.2.4 Composition of the Modern Dry Grocery Retailing Industry by Store Type and Income Level. 150

5.3 Structural Transformation Trends in Grocery Retailing. 155

5.3.1 Trends in Traditional Retailer Numbers. 159

5.4 Economic Concentration in Dry Grocery Retailing 159

CHAPTER 6: The Modern Retailing Industry

6.1 The Private Self-service Supermarket Industry. 162

6.1.1 The Emergence of the Supermarket Industry. 162

Page

6.1.2 The Institutional Framework Relevant to the Expansion of Supermarket Chains in the Mexico City Metropolitan Area. 165
A. City Licensing Policies. 165
B. Official Price Controls 168
6.1.3 The Convenience Store. 171
6.1.4 A Comparison of Some Mexican and U.S. Grocery Store Operating Results. 173
6.1.5 Recent Changes in the Chain Store Industry. 177
6.1.6 An Analysis of the Performance of Chain Stores in Mexico City. 179

6.2 The Public Sector Dry Grocery Retailing Industry. 181

6.2.1 Conasupo. 181
6.2.2 Government Employee Stores. 184

6.3 Conclusions 186

CHAPTER 7: The Traditional Retailing Industry

7.1 Introduction. 189
7.2 Retailer Survey Design. 190
7.3 Taxonomy of Traditional Retailers. 194

7.3.1 Tiendas de Barrio. 195
7.3.2 Miscelaneas. 195
7.3.3 Locatarios or Public Market Retailers. 197
7.3.4 Ultramarinos. 197
7.3.5 Self-service Independents. 197
7.3.6 Degree of Modernization of Independent Retailers. 198
7.3.7 Comparison of Basic Retailer Types. 199

7.4 The Retailer Procurement Process. 203

7.4.1 Time Devoted by Retailers to Procurement. 204
7.4.2 Procurement Behavior of Tiendas de Barrio, Miscelaneas and Self-service Independent 206
7.4.3 Procurement Behavior of Dry Grocery Public Market Retailers and Ultramarinos. 214
7.4.4 Concerns About the Effect of Current Procurement SOPs on Retailer Growth. 217
7.4.5 Retail Buying Associations or Cooperatives. 220

7.5 Price Levels and Margins in Traditional Retailer Outlets. 221
7.6 A Summary of the Key Characteristics of Retailer Behavior. 225

Page

7.7 Understanding Some of the Factors Influencing Retailer Behavior. 225

7.7.1 Retailer Attitudes Reported in a CONCANACO Survey. 226
7.7.2 Coordination Mechanisms and Their Impact on Retailer Behavior. 230
7.7.3 Price as a Coordinating Mechanism. 234
7.7.4 Trade Associations as Coordination Mechanisms. 236
7.7.5 Governmental Programs as Coordination Mechanisms. 238

7.8 Conclusions. 243

CHAPTER 8: The Establishment of Voluntary Food Chains in Mexico

8.1 Introduction. 246
8.2 A Case Study - Spar, Mexicana, S.A. 248

8.2.1 The Cash and Carry Operation. 250
8.2.2 Spar - A Voluntary Chain. 254

8.3 A Case Study - Avance Comercial de Monterrey. 259

8.3.1 Background. 259
8.3.2 Retailer Meetings as a Strategy for Promoting Voluntary Chains. 263
8.3.3 The Introduction of Retailer Services. 264

8.4. Recommended Standard Operating Procedures. 265

8.4.1 SOPs Designed to Encourage Retailer Concentration of Purchases. 266
8.4.2 Materials Handling Methods. 268
8.4.3 The Use of Credit to Encourage Retailer Modernization. 272
8.4.4 The Development of Retailer Counselors. 273
8.4.5 Case Labels and Standard Order Forms. 274
8.4.6 Store Engineering. 275

8.5 Constraints to the Formation of Voluntary Chains. 277

8.5.1 Some Implications of Product Scarcity for the Formation of Voluntary Chains. 277
8.5.2 Lack of Credit. 279
8.5.3 Licensing and Permits. 280
8.5.4 Wholesaler Relationships with Suppliers. 281
8.5.5 Retailer Tax Constraint. 282

Page

8.6 Conclusions. 283

CHAPTER 9: Financial Simulation Analysis of Marketing Firms

9.1 Introduction. 286
9.2 Methodology 287

9.2.1 The With and Without Analytical Framework. 287
9.2.2 Inflation Accounting. 288
A. Revaluation of Assets. 291
B. Methodology for Calculating Sales. 293
9.2.3 Investment Assumptions. 293
9.2.4 Key Assumptions. 293
9.2.5 Rates of Return on Investment. 295
9.2.6 Discounted Cash Flow and Investment Streams. 296
9.2.7 Alternative Discount Rates. 298
9.2.8 Uncertainty and Sensitivity Analysis. 303

9.3 Presentation and Analysis of Wholesale and Retail Cases. 304

9.3.1 Financial Simulation of Wholesale Businesses. 304
A. Without Wholesale Cases. 304
B. Intermediate Wholesale Cases. 314
C. With Wholesale Investment Cases. 321
9.3.2 Financial Simulation of Retail Businesses. 327
A. Small Scale Retailer Cases. 328
B. Superette Retailer Cases. 337

9.4 Conclusions. 343

CHAPTER 10: A Strategy and Plan for Promoting the Establishment of Voluntary Food Chains in Mexico

10.1 Introduction. 351
10.2 A Strategy and Plan for Modernizing the Wholesaler-Retailer Distribution Channel. 355

10.2.1 Key Elements of a Plan to Promote the Establishment of Voluntary Chains and Other Improved Wholesale-Retail Arrangements. 356
10.2.2 Technical Assistance and On-Site Research. 356

10.2.3 Training Programs for Wholesale and Retail Firms. 358
10.2.4 Targets of Technical Assistance. 360
A. Voluntary Chains. 360
B. Self-service Cash and Carry Wholesalers. 363
C. Narrow-line, High Volume Distributors. 363

Page

10.2.5 Strategies for Implementation of the Plan. 364
A. Applied Marketing Research. 364
B. Collaboration with the Banking Industry. 365
C. Educational Programs for Grocery Wholesalers. 366
D. Collaboration with Trade Associations. 366
10.2.6 Strategies for the Formation of Successful Voluntary Chains. 367
A. Retailer Candidates for Affiliation. 367
B. Wholesaler Strategies to Encourage the Growth of Voluntaries. 370
C. Modifications in Fidec Policies to Encourage Affiliation. 371
10.2.7 The Feasibility of Voluntary Chains. 373

10.3 Conclusions. 374

Appendices 379

Bibliography 402

LIST OF TABLES

Table		Page
2.1	Reasons Given by Wholesalers and Retailers for Organizing Voluntary and Cooperative Food Chains	33
2.2	Supervisory Staff Functions Performed by Affiliated Wholesalers for Their Retailers	44
2.3	Reasons Given by Retailers for Dividing Purchases Between Affiliated Wholesalers and Other Sources	48
2.4	Productivity Increases in Five Affiliated Warehouses Changing to One-Story Facilities, 1949 to 1959	54
2.5	Operating Expenses of Grocery Wholesalers as a Percentage of Sales	56
4.1	Marketing Margins and Operating Costs, By Wholesaler Type	125
5.1	Private Sector Self-service Grocery Stores in the Mexico City Metropolitan Area	145
5.2	Public Sector Grocery Stores by Type and Government Entity	146
5.3	Annual Retail Grocery Sales and Store Numbers in the Mexico City Metropolitan Area, 1982	149
5.4	Annual Sales of the Modern Grocery Retailing Industry and Market Shares by Participant, Mexico City, 1982	151
5.5	Composition by Store Type and Income Level of the Modern Grocery Retailing Industry, Mexico City, 1983	153
5.6	Distribution of National Retail Food Sales by Store Type	157

Table		Page
6.1	Operating Results from Five Mexican Supermarket Chains 1981-1982	174
7.1	Some Traditional Retailer Operating Parameters, by Retailer Type	196
7.2	Degree of Modernization of Dry Grocery Retailers, by Type	200
7.3	Estimated Time Spent by Retailers in the Procurement Process by Retailer Type and Order Method	205
7.4	Average Number of Suppliers by Type Per Dry Grocery Retail Outlet	209
7.5	Reasons For and Against Regular Patronage of Wholesale Suppliers by Type of Retailer	211
7.6	Principal Problems Faced by Dry Grocery Retailers	228
7.7	Five Principal Viewpoints Held by Dry Grocery Retailers	229
8.1	Productivity Gains in Mexican Warehouses, Comparing Three Order Picking Systems	269
9.1	Opening Balance Sheet for Wholesale Cases	305
9.2	Without Wholesale Case Assumptions	306
9.3	Comparison of Liquidity Ratios and After-tax Net Margins for Wholesale Investment Cases	308
9.4	Comparison of Net Benefit to Investment Ratios and Real Rates of Return on Equity and Total Assets for Wholesale Investment Cases	310
9.5	Comparison of Short-term Debt for Wholesale Investment Cases	311
9.6	Intermediate Wholesale Case Assumptions	316
9.7	With Wholesale Case Assumptions	323
9.8	Opening Balance Sheet for Small Scale Retailers	329
9.9	Without Small Retailer Assumptions	329

Table		Page
9.10	Comparison of N/K Ratios and Rates of Return on Equity and Total Assets for Retail Investment Cases	331
9.11	Comparison of Short-term Debt for Retail Investment Cases	332
9.12	Comparison of Liquidity Ratios and After-Tax Net Margins for Retail Investment Cases	333
9.13	With Small Retailer Case Assumptions	335
9.14	Opening Balance Sheet for Superette Retailers	339
9.15	Without Superette Retailer Assumptions	339
9.16	With Superette Case Assumptions	341
9.17	Two Profit Measures for With and Without Wholesale and Retail Investment Analysis	347
A.1	Depreciation Calculation for a Machinery and Equipment Investment Made in 1983	388
A.2	Loan Amortization Table for Machinery and Equipment Investments Made in 1983	391

LIST OF FIGURES

Figure	Page
1. The Structure, Conduct, Performance Paradigm	13
2. Flowchart of the Mexican Dry Grocery Subsector	26
3. Taxonomy of Dry Grocery Retailing Participants	138

LIST OF APPENDICES

Appendix		Page
A.	Questionnaire for Retailer Survey	379
B.	Methodology of Financial Simulation Model	387

CHAPTER 1

INTRODUCTION

1.1 Background

Mexico has undergone fundamental changes in its economy since WWII brought about by sustained economic growth and a rapidly expanding population.[1] The development process has given rise to a more urban, industrially based economy, transformed from a rural, agriculturally based system. Farm production has declined as a percentage of total economic output to 7%, and two-thirds of Mexico's 70 million inhabitants now live in urban areas (BANAMEX; NAFINSA).

Growth and development induce the physical and institutional separation of food production and consumption, making the satisfaction of food needs increasingly dependent on market processes. Furthermore, rising per capita income levels cause an increase in consumer demand for marketing services, signifying that a larger portion of the food dollar is spent on marketing services. These factors contribute to the emergence of food distribution systems in developing economies as a significant part of the total economy, becoming an important concern for development planners.

There are three roles or functions essential to market processes (Timmer; Riley). First, the physical transformation role of food marketing systems signifies the

[1] The Gross Domestic Product grew at an average annual rate in real terms of 6.5% between 1950 and 1981, reaching 9.0% real growth in some years. Annual population growth averaged 3.2% during this same period (NAFINSA).

transformation of agricultural commodities in time, place and form through storage, transportation and processing. Secondly, the **transfer of property rights** (ownership or physical possession) takes place through institutional arrangements governing exchange. Thirdly, **price discovery** is a product of economic exchange in market systems.

The physical handling and transformation roles of marketing processes can be thought of as engineering functions (Timmer). Technical efficiency in their design and operation is necessary to ensure low marketing costs. Moreover, the coordinating role performed by price in marketing systems is essential to the process of matching producer output with buyer preferences.

The effectiveness of the marketing system or the efficiency with which it performs its basic functions has important implications. These are highlighted by considering the broad problem described by Timmer as the "food price dilemma" faced by developing economies. Stable, low prices are required to fulfill the food needs of low-income urban consumers, yet producers require prices sufficiently high to provide a reasonable return on their productive activities. If farm or food manufacturer prices are maintained artificially low to benefit consumers, the result may be reduced production and higher prices in the long run as resources shift out of the food system.

Over the years researchers have asserted that one way to ease this important dilemma is through attention to the

physical distribution process and the activities of marketing firms (Riley;Timmer; Shaffer). Investments in physical facilities and the introduction of improved institutional arrangements to facilitate exchange can improve efficiency and lower marketing costs, benefiting both producers and consumers.

This is the challenge confronted by policy makers and marketing researchers. In Mexico the average consumer expenditure on food as a percentage of total family income is 52.33 percent (Canedo and Vera). Furthermore, in Mexico City traditional retail outlets are the principal place of purchase for dry groceries for 43 percent of low income consumers or 56 percent of all consumers (Instituto Nacional del Consumidor; Banco de Mexico, 1982). Traditional retailers exhibit the highest price levels due to their low operating volumes, signifying that the poor may pay the most for food. Clearly, a reduction in marketing costs brought about by improved marketing arrangements would have important welfare implications.

In Mexico the pressures generated by the dynamic conditions of rising effective demand for food and marketing services are immediate and significant. Yet the nature of the transformation (modernization) process of the food distribution system is complex and gradual. Consequently, as the adjustment process takes place, the existing marketing system is exhibiting a limited ability to adequately perform the food distribution function.

The response of the Mexican government to the poor

performance of the food distribution system has primarily been one of regulation and direct intervention, instituting public sector programs where private sector efforts are deemed most inadequate. The government's marketing policy manifested a changing orientation in 1980 with the establishment of a trust fund, FIDEC (El Fondo para el Desarrollo Comercial), to support and encourage modernization of the private sector marketing system.

FIDEC has the following primary objective: to foment the modernization of those small and medium scale wholesalers and retailers participating in the distribution of "basic and generalized consumption" products (Banco de Mexico, 1984). Food and grocery products are priority targets within this category, hence one of the key underlying purposes of FIDEC is: to decrease food distribution costs through increased distribution efficiency in the private sector marketing system, acting as a catalyst to higher production levels and lower food costs for consumers.

Marketing policies in Mexico have historically been formulated with little basic data and information on the structure, conduct and performance of the food distribution system. The creation of FIDEC marked the opportunity to launch a research program contributing to the gradual development of a knowledge base on the Mexican food marketing system, available for consultation by government policy makers and private industry alike.

The research carried out by the author was one of the

first marketing studies financed by FIDEC. This research was dedicated to the broad concept of exploring strategies to improve food distribution in urban areas. The breadth and complexity of the food marketing system necessitated narrowing the scope of the study along commodity and geographical lines. The specific focus is on the distribution of **dry grocery** products in the **Mexico City** metropolitan area. Dry grocery products are defined as a complete assortment of food and related non-food items. The vertical distribution system for dry groceries is called the "dry grocery subsector."

Mexico City is the largest city in the world at over 17,000,000 people and approximately one-third of national food consumption takes place in the metropolitan area (Canedo y Vera). Moreover, the importance of the distribution system in the federal district is further enlarged by the fact that the majority of grocery products consumed nationally either originate in or pass through the federal district en route to their final destinations.

1.2 Research Objectives

All systems require coordination and the greater the degree of coordination the lower the distribution costs and the greater the match between consumer preferences and seller offerings. Under perfect competition coordination would be a simple process. In reality, since perfect competition, perfect markets, perfect knowledge, rational buyers and sellers and a static environment don't exist, coordination becomes a complex issue (Shaffer). A concern

over the level of vertical coordination present in the Mexican dry grocery subsector is a key factor motivating this study.

Voluntary chains represent a coordination mechanism which serves to more closely link and coordinate the activities of manufacturers, wholesalers and retailers as a means for streamlining the distribution system and lowering food distribution costs. Retailer cooperatives are a similar type of coordination mechanism also in widespread use in the United States and Europe. These two institutional arrangements were selected at the outset of the study as key strategies exhibiting potential for successful introduction in Mexico. Hence, the initial overriding objective of the study was to assess the potential for the establishment of voluntary and cooperative food chains as a strategy for increasing vertical coordination in the dry grocery subsector.

The design of this study was influenced by the need for information on technology and management techniques that could be adapted to Mexican firms and improve performance. The need for identifying both strategies to promote the adoption of innovations and policies aimed at improving performance was also recognized.

However, once on the scene in Mexico it became evident to the researcher that an overwhelming lack of secondary information on the dry grocery distribution system would impede a thorough exploration of the adaptability of voluntary chains to the Mexican setting. Without base line data

it would be impossible to measure the costs and benefits of voluntary chains once established. Furthermore, the usefulness to policy makers of receiving information on the existing marketing system of an applied, descriptive nature was readily apparent.

Hence, the expanded objectives of this study were to:

DESCRIBE....the current dry grocery marketing system, how it functions, who the actors are, their relative importance in terms of volume of sales, how they operate their firms and with what results.

DIAGNOSE....the opportunities and barriers to improved performance, and forces for change present in the system.

PRESCRIBE....new operating practices and institutional arrangements to improve performance, based on the descriptive-diagnostic findings, with special attention to voluntary chains.

ASSESS THE FEASIBILITY...of the prescriptions using financial analysis tools.

DESIGN STRATEGIES....to implement those prescriptions deemed feasible.

A secondary objective of the study was to document the international experience with voluntary chains and retailer cooperatives in order to be able to apply this knowledge to the Mexican setting.

In effect, this study has two general themes, one is a descriptive-diagnostic focus, while the second focus is on the transfer of technological and institutional innovations to Mexican marketing firms.

1.3 Research Methodology

An eclectic research approach was used because of the two-pronged thrust of the study. The research began with an extensive review of the literature on voluntary and

cooperative food chains. In addition to a literature review, the first phase of the research involved personal interviews with retired U.S. food industry leaders to identify the key causes of failure and success of voluntaries and cooperatives in their formative stages. Thirdly, visits to wholesale and retail facilities in different regions of the U.S. permitted the author to become familiar with the technology employed by food marketing firms and its affect on performance.

The remainder of the research was carried out in Mexico and consisted of: 1) an extensive set of confidential personal interviews with manufacturing, wholesaling and retailing personnel and executives; 2) personal interviews with government marketing officials; 3) a survey of traditional retailers; 4) case studies of two voluntary chains; and 5) financial simulation analysis of Mexican marketing firms.

The case studies involved comparative time and movement studies on materials handling methods in Mexican warehouses employing three different levels of technology. The purpose of this research was to demonstrate the benefits of improved technology on efficiency and labor productivity in the warehouse. Research was also conducted on the operations of small traditional retail outlets. The feasibility of introducing self-service sales systems into these stores was examined, along with the necessary store engineering support.

The wholesale and retail businesses selected for investigation were in the early stages of forming voluntary

chains. The purpose of the on-site research carried out in these businesses was to identify and contribute to the adoption of standard operating procedures that would lead to greater efficiency, closer coordination and as a result, lower cost, more competitive marketing firms. Standard operating procedures (SOPs) are the standard practices used by firms in their day to day activities as they procure, merchandise and sell goods.

Standard operating procedures serve as tangible units of analysis representing firm behavior, hence, primary data collection on the existing grocery marketing system focused on and was organized around firm SOPs. A set of nine themes of inquiry was developed to guide the interviewing process. These themes are as follows:

- Procurement patterns
- Materials handling methods
- Delivery and distribution systems
- Promotions and publicity
- Credit terms and conditions
- Marketing margins and profits
- Inventory control
- Technology
- Internal firm management
- Trade associations

The interview process was carried out using the "mirror image" interviewing technique which involves questioning marketing firms on both sides of a vertical interface about

the same theme of inquiry (Purcell). This technique is helpful in determining the consistency of responses and controlling for sources of error where personal interviews are conducted on relatively small sample sizes (McLaughlin). Interviews were organized around the above themes and conducted in a manner permitting open-ended responses.

The closed nature of the Mexican dry grocery subsector and the difficulty in gaining access to participants at all levels of the system, made it necessary to rely on personal contacts which were gradually established over the author's stay in Mexico from September 1981 to October 1983 to select respondents. Contacts made with a key food manufacturer led to introductions to principal wholesalers which eventually led to an extensive set of personal contacts that allowed the author to gain insight into the subsector from numerous perspectives.

Finally, the effect of technological and institutional innovations on firm performance was analyzed using a microcomputer-based financial simulation model of Mexican marketing firms developed by the author. Specifically, this model was used to measure the costs and benefits of voluntary chains from a financial analysis perspective and to identify investment prototypes to guide FIDEC in the loan review process.

1.4 Conceptual Framework

Some salient aspects of the conceptual framework utilized to examine the behavioral and organizational relationships prevailing in the subsector will be presented

below.

1.4.1 The Structure-Conduct-Performance Paradigm

Subsector analysis has emerged around the application of the standard industrial organization framework (IO) which was developed by Bain and Scherer to analyze horizontal industries. The IO paradigm has been modified by Marion, Mueller and others into an expanded structure-conduct-performance paradigm (S-C-P) designed to facilitate analysis of both the horizontal and vertical relationships present in a subsector. The basic concepts and elements of the paradigm are summarized below as drawn from Scherer, Marion, Mueller and Shaffer.

The structure of any industry or subsector is determined in large part by basic technical and economic conditions. For example, some basic conditions on the demand side include the rate of growth of demand; price, income and cross elasticities of demand; and consumer preferences regarding the place of purchase of the good. On the supply side we consider the location and ownership of essential raw materials; production trends; time characteristics of production and marketing cycles; and the durability (perishability) of the product. Other important basic conditions are laws and governmental policies, trade and world markets, and uncertainty including random shocks affecting supply and demand.

Market structure strongly influences market conduct of firms which in turn influences market performance

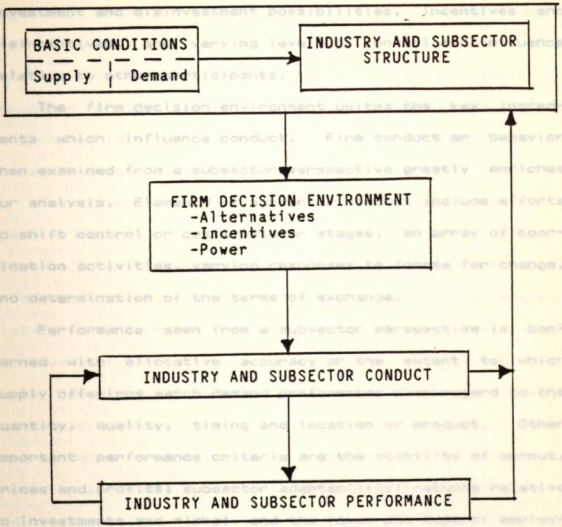
(see Figure 1). Market structure variables include number and size distribution of firms, entry and exit conditions, vertical integration, cost structures and economies of scale.

Market conduct refers to pricing policies, sales promotion actions including advertising, product strategies, legal tactics, research and innovation, and actions by competitors to coordinate market behavior.

Market performance is concerned with operational and pricing efficiency, progessiveness and equity. Operational efficiency includes several components, such as spatial organization, firm operating scales, product spoilage and loss rates, materials handling methods, management practices, and work rules. Pricing efficiency deals with the manner in which prices are transmitted in the system and coordinate supply and demand. Profit margins and price transparency are indicators of pricing efficiency.

The application of the S-C-P paradigm to the systems context of a subsector provides many insights into the vertical relationships that exist between each of the industries comprising the successive vertical levels of a subsector. For example, structure viewed from the vantage point of subsector organization enables us to examine the number of parallel channels and stages, information systems and the distribution of their costs and benefits among subsector actors, and the structure of rights, control, and authority.

Subsector structure and the basic conditions combine



SOURCE: Adapted from "Application of the Structure, Conduct, Performance Paradigm to Subsector Analysis" by Bruce Marion. NC 117, WP-7, November 1976.

FIGURE 1 THE STRUCTURE, CONDUCT, PERFORMANCE PARADIGM

to create a decision-making environment for the firm. The environment perceived by any firm will include alternative investment and disinvestment possibilities, incentives and disincentives, and varying levels of control and influence relative to other participants.

The firm decision environment unites the key ingredients which influence conduct. Firm conduct or behavior when examined from a subsector perspective greatly enriches our analysis. Elements of subsector conduct include efforts to shift control or costs between stages, an array of coordination activities, varying responses to forces for change, and determination of the terms of exchange.

Performance seen from a subsector perspective is concerned with allocative accuracy or the extent to which supply offerings match demand preferences with regard to the quantity, quality, timing and location of product. Other important performance criteria are the stability of output, prices and profits; subsector adaptability; returns relative to investments and risks; and the level and type of employment.

The above discussion summarizes the key elements of the S-C-P paradigm which will underly the analysis presented in this study. It should be emphasized that this paradigm is dynamic. Performance in one period affects structure and in turn, performance in the next period and so on as the system evolves. The on-going, evolutionary nature of the system is a basic undercurrent of the analysis.

1.4.2 Opportunity Sets and the Balance of Power Among Industry Participants

In a market economy buyer-seller bargaining takes place regarding price and the terms and conditions of sale whenever an exchange occurs and ownership is transferred. The outcomes of buyer-seller bargaining processes result in subsector conduct. The ubiquitous nature of buyer-selling bargaining in exchange economies makes it of great interest to many analysts (Hamm).

The outcome of the interaction of subsector participants in exchange processes is partially a function of their relative bargaining strengths. The negotiating strengths of the government, manufacturers, retailers and wholesalers yields, in effect, a balance of power between these actors or levels of the system. The balance of power which prevails at any given point in time serves as an indicator of the manner in which costs and risks will shift vertically in the subsector as the system evolves. The relationship between the balance of power and the direction in which costs and risks shift is hypothesized to be interactive and mutually reinforcing.

Underlying the balance of power are the opportunity sets of the subsector actors. "Opportunity sets" are defined as consisting of resources (including knowledge) and the formal and informal mechanisms guiding relationships among participants, such as via rights, laws, customs and markets (Shaffer). In this manner opportunity sets determine the lines of action that are open to an individual to

pursue (Schmid). Opportunity sets can also be looked at as an expression of the firm decision environment described above.

As exogenous shocks to the system occur, governmental policies change or technological innovations are adopted within the subsector, opportunity sets are modified and hence, the balance of power may change (Shaffer). Opportunity sets determine the ability of each firm or level of the system to minimize the costs and risks relevant to their respective accounting units. Hence, opportunity sets are an important determinant of system performance. Some of the components of opportunity sets that influence the effectiveness of dry grocery firms in attaining their objective functions are set forth below.

It is hypothesized that the relative levels of negotiating strength at the manufacturer-wholesaler and manufacturer-retailer interfaces are partially a function of 1) the degree of concentration exhibited on both sides of the interface; 2) the ability of each actor to access information; 3) the buying power of wholesale and retail firms expressed in terms of financial resources and volume of purchase relative to the sales of manufacturers; 4) the selling power of manufacturers as expressed in terms of the availability of substitutes, consumer brand loyalty, the sales of a manufacturer relative to buying groups, and the amount of product scarcity existing in the system as determined by the quantity demanded and the quantity supplied at the price ceiling for any given commodity; 5) the potential

for vertical integration of buyers and sellers; and 6) the level of marketing services offered by the participant.[1]

The balance of power which results from the interaction of these factors serves as an underlying force shaping the standard operating procedures (SOPs) of subsector actors. Moreover, since SOPs are indicators of the coordinating mechanisms functioning in the subsector (Hamm), both the relative negotiating strengths and standard operating practices of subsector participants will be used as focal points for the forthcoming description and analysis of the dry grocery subsector.

1.4.3 Vertical Coordination

As the earlier discussion implies, the major aim of this study is to increase vertical coordination in the dry grocery subsector via the introduction of new or improved coordination mechanisms. Vertical coordination can be defined as the **process** by which the various functions of a value adding system are brought into harmony regarding the quantity and quality of what is produced and marketed, and when, where and how it is produced and marketed (Marion). Coordination as a process is part of conduct.

Coordination mechanisms on the other hand are part of structure. Coordination mechanisms do not ensure coordination, they are institutional arrangements designed

[1] This list was compiled based on observation of the system in Mexico and partially overlaps with an "enumeration of basic elements defining the power relationships between buyers and sellers" made by Michael Porter and adapted by Larry Hamm.

to influence this process (Marion). Some examples of mechanisms are: cooperatives, bargaining associations, voluntary chains, information systems, vertical ownership (integration), credit services, government programs, and trade associations. Coordination mechanisms were focused on because properly designed mechanisms can modify the conduct of marketing firms and improve performance.

1.5 The Institutional Setting

The response of marketing participants to the opportunities and barriers that emerge in dynamic market systems, is hypothesized to be a function of their opportunity sets, objective functions, and risk preferences. The policies of the public sector toward private sector marketing firms impact the opportunity sets of these businesses and individuals and hence, may affect the investment decisions they make and the rate of modernization they exhibit.

The policy interventions of the Mexican government in food marketing have been in keeping with the "mixed economy" policy it has followed since the Mexican Revolution. Direct intervention in the food marketing system has grown, along with intervention in other areas of the economy. The extent of public sector participation in food marketing and the types of programs established in recent years are described below.

1.5.1 CONASUPO

The government's principal avenue of participation in the marketing system is through CONASUPO, the public sector marketing arm. The origins of CONASUPO trace back to 1937

when CEIMSA (The Mexican Export-Import Company) was created to procure, store, ship and sell any type of merchandise to be exported or imported. CEIMSA later became the first Mexican public institution to purchase and store crop surpluses in order to stabilize and support agricultural prices. By 1961 CEIMSA had evolved into CONASUPO. CONASUPO retained and expanded the price stabilization and foreign trade functions of CEIMSA, in addition to broadening the scope of its activities through forward vertical integration into food processing, wholesaling and retailing. Price stabilization programs are administered for the following commodities: corn, wheat, beans, rice, sorghum, safflower, soybeans and sesame (CONASUPO). Guaranteed prices are established for each of these commodities and the pricing system functions in conjunction with limited commodity purchases.

The involvement of CONASUPO in the marketing system grew significantly during the 1970s as increasing resources were allocated to finance an extensive network of grocery retail outlets established to serve low income target groups in both rural and urban areas. CONASUPO retail operations are administered by the subsidiary DICONSA, now operating over 8000 stores nationally, in addition to several thousand mobile stores housed in trucks and trains serving rural areas (Gibbs). CONASUPO outlets sell at subsidized prices and in urban areas compete directly with private sector stores.

Other CONASUPO subsidiaries include: BORUCONSA, an extensive network of grain storage and processing facilities; LICONSA, responsible for milk imports, reconstitution of powdered milk and direct distribution through a large network of retail outlets; and MICONSA, in charge of processing corn into flour to be used for making tortillas.

CONASUPO markets 20 basic products under the private label Alianza, 15 of which are produced in industrial plants operated by CONASUPO or other state companies (Gibbs).

1.5.2 IMPECSA

CONASUPO's participation in dry grocery retail marketing is augmented indirectly through IMPECSA, a subsidiary that acts as a wholesale supplier of basic grocery products at subsidized rates to private sector retailers. IMPECSA distributes to 130,000 urban stores nationally, although it is generally not a primary supplier (El Afiliado). The objective of IMPECSA is to reduce food costs to consumers by lowering retail procurement costs and improving retailer management skills.

IMPECSA has also incorporated some retailers into a voluntary chain format with a group logo and limited services. However, the voluntary chain concept has never been fully developed due to a lack of technical expertise and insufficient resources allocated to technical assistance and training programs for retailers. Essentially, technical assistance has not gone beyond publication of a monthly magazine providing a limited amount of basic information on efficient retail operating policies for small neighborhood

stores.

1.5.3 SECOFI (The Secretary of Commerce and Industry)

SECOFI plays a major role in the Mexican marketing system, primarily in a regulatory capacity. Most importantly, SECOFI administers a price control program which during the latter part of the 1970s covered thousands of products in all sectors of the economy. Since 1982 price controls have been removed from "non-basic" products, however, a large percentage of food and grocery products are still subject to control.

Price ceilings are generally fixed at the manufacturer and retail levels, although in some instances, price ceilings are also placed at the wholesale level. A large staff of inspectors are employed to police adherence to both official prices and weights and standards. Requests for price increases are negotiated directly between SECOFI and the food manufacturer and generally require a lengthy approval process.

1.5.4 SNA

SNA, the National Supply System, is an integrated program designed to link assembly, transport, storage, and marketing for agricultural products. SNA was originally established by President Jose Lopez Portillo as Sida, an independent program administered by the presidency and interfacing with CONASUPO and other public sector marketing programs. Under President Miguel de La Madrid SNA is administered by SECOFI as a sectoral program. The aim of SNA is to

contribute to the formation of a stable national supply network by: 1) supporting the construction of improved physical facilities at the assembly, wholesale and retail levels; 2) developing a national information network providing current price and production data; and 3) establishing federal standards and grades (SECOFI). To this end SNA serves as a coordinating agency, organizing the efforts of federal, state and local entities, in addition to private sector parties.

SNA performs a strategic planning function, identifying both problems in the existing physical marketing infrastructure and strategic locations for new facilities. In addition, SNA assists in carrying out the necessary feasibility studies for new markets and packaging loan requests to the appropriate agencies. To date SNA projects have been limited to involvement in the construction of wholesale and assembly markets, while efforts to establish a national information system are proceeding at a much slower pace.

1.5.5 Government Employee Stores (Tiendas Gubernamentales)

. The government has steadily increased the number of limited access supermarkets operated for employees of individual governmental agencies, (such as the Social Security Agency, the Department of Commerce, etc.) These stores are highly subsidized and a number of agencies have established national chains to serve their employees throughout the republic.

1.5.6 Federal District Stores (Tiendas del Departamento del Distrito Federal)

The municipal government of Mexico City also operates a large number of stores, primarily in lower income areas and as part of a program to provide a package of basic services to consumers in a convenient location. Therefore, these stores are generally located in small shopping centers alongside post offices, telegraph offices and publicly supported out-patient clinics.

1.5.7 BANPECO

BANPECO is the Bank for Small Businessmen which has existed for many years to serve the short term (90 day) credit needs of small retailers and wholesalers. BANPECO operates many branches in wholesale and retail markets throughout the country and is not authorized to extend loans for capital improvements.

1.5.8 FIDEC

FIDEC, the Fondo para el Desarrollo Comercial, functions under the auspices of the central bank, Banco de Mexico. FIDEC operates as a "second floor" banking institution, rediscounting commercial loans, thereby generating incentives to commercial banking or "first floor" lending institutions to extend credit to marketing firms. Prior to the creation of FIDEC medium and long term credit to finance the adoption of improved technology and physical facilities had been unavailable to the majority of retailers and smaller wholesalers. The private sector banking system was unwilling to handle loans to traditional retailers due to both

the small size of these businesses and their inability to produce standard financial information because of rudimentary accounting practices.

Credit channeled through FIDEC is obtained at concessionary terms complemented with technical assistance and training programs designed to encourage the adoption of improved technology and increase the efficiency of wholesalers and retailers. FIDEC is authorized to finance a wide range of marketing investments, including: assembly markets, wholesale markets and public markets; shopping centers; physical equipment; new construction or the expansion of independent warehouses and stores; and working capital loans. In addition, agricultural producers that market their own products are eligible for FIDEC financing.

The paucity of credit described above, along with the absence of technical assistance or any type of extension efforts to diffuse knowledge on improved marketing practices among traditional wholesalers and retailers, are hypothesized to be important factors constraining the modernization of the traditional marketing sector.

The creation of FIDEC is based on the supposition that the private sector marketing system is capable of modernization if supported by the necessary incentives and stimuli. It is important to appreciate the significance of an institution espousing a facilitory rather than an interventionary approach to improvement of the performance of the marketing system.

1.6 Flow Chart of the Dry Grocery Subsector

To set the stage for the forthcoming discussion of the organization of the dry grocery subsector, a taxonomy of the principal participants and marketing channels in the dry grocery subsector is presented in the form of a flow chart in Figure 2. A more detailed taxonomy, illustrating the variation within each broad participant category, will be put forth as the discussion proceeds. Comprehensive data documenting the volume of sales at each point of exchange are not available. Nevertheless, an idea of the relative importance of each channel will be provided.

The highly participatory nature of the government's role throughout the subsector suggests disaggregation along private sector - public sector lines. Furthermore, the dual nature of food retailing points to the presentation of two separate industries, the traditional retailing industry and the modern. The modern retailing industry is comprised of both private and public sector self-service supermarkets. The traditional retailing industry is composed of private sector firms, either operating personal-service neighborhood stores or public market stalls.

1.7 Organization of The Study

It should be mentioned that the complexity of the subsector, the paucity of secondary data, and the reluctance of marketing firms to provide information to investigators given the highly regulated environment in which they operate, does not permit a complete description and diagnosis of

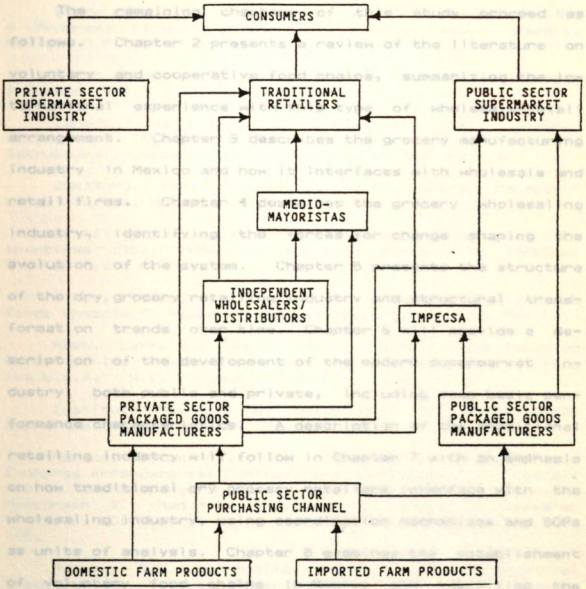


FIGURE 2

FLOWCHART OF THE MEXICAN DRY GROCERY SUBSECTOR

the subsector. Nevertheless, a general description of key structure and conduct elements and the overall performance consequences is set forth for the Mexico City metropolitan area.

The remaining chapters of this study proceed as follows. Chapter 2 presents a review of the literature on voluntary and cooperative food chains, summarizing the international experience with this type of wholesale-retail arrangement. Chapter 3 describes the grocery manufacturing industry in Mexico and how it interfaces with wholesale and retail firms. Chapter 4 describes the grocery wholesaling industry, identifying the forces for change shaping the evolution of the system. Chapter 5 presents the structure of the dry grocery retailing industry and structural transformation trends over time. Chapter 6 will provide a description of the development of the modern supermarket industry, both public and private, including some basic performance characteristics. A description of the traditional retailing industry will follow in Chapter 7 with an emphasis on how traditional dry grocery retailers interface with the wholesaling industry, using coordination mechanisms and SOPs as units of analysis. Chapter 8 examines the establishment of voluntary food chains in Mexico and identifies the constraints to their formation. Chapter 9 analyzes the financial performance of voluntary chains and presents investment prototypes to guide their introduction. Finally, Chapter 10 sets forth a strategy and plan for promoting the development of voluntary chains.

CHAPTER 1

REFERENCES

BANAMEX, 1981. "Mexico en Cifras 1970-1980." Banco Nacional de Mexico.

Banco de Mexico, 1984. "Informe de Actividades en 1983 y Programa Financiero para 1984: FIDEC." Annual Report, Mexico, D.F.

Banco de Mexico, 1981. "Encuesta Nacional de Ingresos y Gastos 1977."

Cañedo, Juan Diaz and Vera, Gabriel, 1981. "Distribucion del Ingreso en Mexico 1977." Serie de Analysis Estructural, Cuaderno Numero 1, Banco de Mexico, S.A.

CONASUPO, 1981. "Message From the General Manager." Annual Report, Mexico, D.F.

El Afiliado, January 1982. "Hablando en Numeros: Perspectivas 1982, IMPECSA." Año 2/Vol.2/Numero 7, IMPECSA, S.A. de C.V., p. 3.

Gibbs, Robert, September 1981. "CONASUPO Sells Basic Foods Cheaply." Research and Development, CONACYT, Mexico.

Hamm, Larry G., April 1982. "Retailer-Manufacturer Relationships in the Food Sector -- Some Observations from the U.S.A." N.C. Project 117 Working Paper No. 64.

Instituto Nacional del Consumidor, 1982. "Encuestas Sobre Habitos de Consumo." Mexico, D.F.

Marion, Bruce W., 1976. "Vertical Coordination and Exchange Arrangements: Concepts and Hypotheses," in Coordination and Exchange in Agricultural Subsectors. NC 117, Monograph 2. Madison: University of Wisconsin, Research Division, College of Agriculture and Life Sciences, pp.179-195.

Marion, B.W. and Mueller, W.F., 1983. "Industrial Organization, Economic Power and the Food System." Chapter 2 in Future Frontiers in Agricultural Marketing Research, edited by Paul Farris, Iowa State University Press, pp.16-37.

McLaughlin, Edward W., 1983. "Buying and Selling Practices in the Fresh Fruit and Vegetable Industry: Implications for Vertical Coordination." Ph.D. Dissertation, Michigan State University.

NAFINSA, 1981. La Economia Mexicana en Cifras. Nacional Financiera, Mexico, D.F.

Purcell, W.D., February 1973. "An Approach to Research on Vertical Coordination: The Beef System in Oklahoma." American Journal of Agricultural Economics.

Riley, Harold, Harrison, Kelly, et al, 1970. "Market Coordination in the Development of the Cauca Valley Region - Colombia." Research Report No. 5, Latin American Market Studies Center, Michigan State University.

Secretaria de Comercio y Fomento Industrial (SECOFI), 1984. "Sistema Nacional para El Abasto."

Scherer, F.M., 1980. Industrial Market Structure and Economic Performance. Rand McNally College Publishing Company, 2nd Edition, Chicago, Ill.

Schmid, A. Allen, 1978. Property, Power, and Public Choice. Praeger Special Studies. New York.

Shaffer, James D., Weber, Michael, et al, 1983. "Influencing the Design of Marketing Systems to Promote Development in Third World Countries." Paper presented at the International Workshop on Agricultural Markets in the Semi-Arid Tropics, Hyderabad, India, October 24.

Timmer, C. Peter, et al, 1983. Food Policy Analysis. A World Bank Publication, The Johns Hopkins University Press.

CHAPTER 2

AN OVERVIEW OF THE DEVELOPMENT OF VOLUNTARY AND COOPERATIVE FOOD CHAINS IN THE UNITED STATES

2.1 Introduction

The first phase of this study involved a review of the literature on voluntary and cooperative food chains in order to describe and assess the international experience with these groups. An extensive set of personal interviews was also carried out with retired U.S. food industry executives in order to better understand the problems faced by voluntary chains and cooperatives as they emerged. The purpose of this inquiry was to enable Mexico to more effectively encourage the formation of voluntaries and cooperatives by determining: the factors instrumental in both their success and failure, and the standard operating policies responsible for greater operational efficiency. This chapter will concentrate on the U.S. experience since voluntary and cooperative retailing groups originated in the U.S. Furthermore, voluntary chains will receive more emphasis than cooperatives in this discussion since the research carried out in Mexico indicated that voluntary chains are a more viable alternative in the Mexican context.[1]

2.2 The Origin of Voluntary and Cooperative Food Chains

After 1910 the chain store organization began to emerge as a major force in food retailing [Voluntary and

[1] More detailed information on both cooperatives and the international experience is available from a report submitted by the author to FIDEC in December 1981, entitled "The International Experience with Voluntary and Cooperative Food Chains."

Cooperative Groups Magazine (VCGM), April 1962]. The chain store entity was brought about by the forward vertical integration of wholesalers. The ownership of the retail outlet by the wholesaler had two important consequences: 1) a merchandising entity was created where the wholesaler determined pricing, advertising and personnel policies at the retail level; and 2) the efficiency of the wholesaler was significantly increased because the wholesaler was assured of a stable flow of orders from the chain of retail outlets (Adams).

Vertical integration enabled chain stores to retail merchandise at a price equal to the wholesale procurement costs for independent retailers (German). Chains introduced innovations in merchandising and advertising, such as "loss leaders," wide product lines, private labels, and improved store cleanliness, lighting and product displays. As the growth of chains increased they were successful in negotiating special discounts and buying concessions from manufacturers, further reducing their costs and stimulating sales. The chain store share of total grocery sales increased from 22 percent in 1920 to 32 percent in 1929 (German).

The advent of the self-service supermarket in 1930 represents the next major innovation in grocery retailing. Although the first supermarkets were opened largely by new entrepreneurs, rather than the established food chains, by the end of the 1930s supermarket retailing had become the province of the chains (Lewis).

The response of independent operators to the competitive threat created by chains and supermarkets, was the formation of retailer-owned cooperatives and voluntary wholesaler groups. The results of a 1932 Federal Trade Commission (FTC) survey of 147 voluntaries and 137 cooperatives on the reasons for forming groups are shown in Table 2.1. The reason for organizing most frequently given was to meet competition.

2.3 Voluntary and Cooperative Groups Defined

Voluntary and cooperative groups represent two distinct types of business organizations. A retailer cooperative is defined as an association of independent retailers, acting cooperatively and pooling their financial strength to organize a business entity to perform the wholesaling function for the association members. Hence, a wholesaling business is created and cooperatives are known in the trade as retailer-owned wholesalers or affiliated wholesalers.

The voluntary wholesaler group or voluntary chain consists of independent retail operators that enter into a contractual agreement with a sponsoring wholesaler. Upon signing a contract with the wholesaler the retailer becomes affiliated with the voluntary chain and must accept certain obligations as a member. In return, the sponsoring wholesaler is obliged to provide specified services for the retailer. Both the wholesaler and the retailer remain independent and the wholesaler has no financial control over members of the group. Voluntary chains are known in the trade as voluntaries, wholesaler-sponsored groups, and

TABLE 2.1 REASONS GIVEN BY WHOLESALERS AND RETAILERS FOR ORGANIZING VOLUNTARY AND COOPERATIVE FOOD CHAINS

Reasons	Retailer-Owned Cooperative	Voluntary	Total
	(Number of Firms)		
Meet Competition	60	78	138
Self-Preservation	24	87	111
Buy Collectively	74	31	105
Improve Character of Retail Store Management	31	69	100
Advertise Collectively	42	41	83
Increase Efficiency of Wholesale-Retailer Distribution	7	46	53
Increase Cooperation Between Wholesaler and Retailer	10	14	24
Obtain Concessions from Manufacturer	4	7	11
Reduce Credit Risks	2	7	9
Miscellaneous	29	24	53
	283	404	687

Source: Federal Trade Commission, 1932.

wholesalers operating voluntary chains are referred to as affiliated wholesalers.

The primary purpose of both voluntary chains and retailer cooperatives is to improve the competitive strength of independent retailers relative to supermarket chains by increasing efficiency and lowering operating costs (Adams). This is achieved by close coordination and a streamlining of operations at the wholesale-retail interface. Affiliated retailers obtain the advantages of group buying, group merchandising, and group advertising (German). Simultaneously, affiliated wholesalers are assured of a stable flow of orders from affiliates and capture the benefits of the services they offer to retailers through increased sales.

In the grocery trade the essential advantage of voluntary chains and retailer cooperatives is described as the creation of a wholesaler-retailer teamwork which emulates the efficiency obtained by chain stores through vertical integration, while maintaining the independence of wholesalers and retailers (Grocers Journal). Although voluntaries and cooperatives share similar objectives they emerged differently due to their distinct organizational structures. This will become clear as the discussion proceeds.

2.4 The Development of the Voluntary-Cooperative Group Movement

2.4.1 Voluntary Chains

To become a member of a voluntary group a retailer usually had to agree to conform to some specific conditions of entry, such as: 1) erect a store sign under a group logo;

refrain from patronizing rival wholesalers; and 3) use the services offered by the wholesaler (Adams).

Wholesalers that formed voluntary chains and began to develop stable and close linkages with their affiliates, had to adopt a new philosophy and attitude toward retailers. If there is one expression that would characterize the affiliated wholesaler it is "think retail" (VCGM, Nov. 1971). Management had to internalize the concept that their future success depended on the competitive and financial strength of retail customers. Therefore, the needs of retailers had to be placed first.

Not all wholesalers were prepared to adopt this new philosophy and many retailers were wary of accepting that they had. Retailers generally were reluctant to collaborate with wholesalers until they had observed visible rewards and until the chain store threat was clearly sufficient to affect their immediate survival. In the meantime, voluntary wholesalers were obliged to continue serving previous customers as unaffiliated retailers in order to generate a profitable sales volume. Most affiliated groups initiated with less than five retailer members.

The aggressive entrepreneurial role of these early affiliated wholesalers was a key factor in the success of voluntary chains. Voluntary wholesalers were leaders in the introduction of innovations at both the wholesale and retail levels. As the benefits of affiliation began to be demonstrated, and the threat to survival created by supermarket

chains grew, the rate of retailer affiliation increased rapidly (Personal Interviews, Retired Voluntary Chain Executives).

The new appreciation of the mutual dependency of wholesalers and retailers facilitated important modifications in the standard operating policies of both (German). Specifically, the development of a retailer-minded attitude caused the conversion of narrow-line, limited service wholesalers into wide-line, full-service wholesalers. The aim of voluntary wholesalers was to eventually offer the affiliated retailer the same products and services provided by chain store organizations to their stores. The introduction of management services (also referred to as retailer services) represented a major innovation and included: retailer accounting assistance, store engineering, site location, inventory control, suggested retail prices, merchandising, joint advertising, and private labels (FTC).

These services permitted affiliated retailers to upgrade their physical facilities, introduce self-service, and modernize their operating practices. The combination of a wide line of competitively priced products and retailer services had two crucial effects: 1) to enable affiliated retailers to concentrate their attention on selling, rather than product procurement; and 2) to differentiate the voluntary wholesaler from unaffiliated wholesale businesses, thereby creating retailer loyalty toward the voluntary (VCGM, Nov. 1971). Loyalty was manifested through retailer patronage, expressed as a concentration of purchases through

the group.

The increased retail sales volume generated by improved selling practices, and procured through the voluntary, increased the average order size of affiliated retailers. In addition, voluntaries introduced pre-established order taking and delivery schedules. Larger and scheduled orders allowed wholesalers to plan sales to a much greater extent, facilitating better inventory management and higher rates of inventory turnover. A larger average order size was also critical because it enabled wholesalers to benefit from economies of scale in the order taking, order processing, order picking and delivery activities. This was an essential factor contributing to the organization of more efficient materials handling methods and the adoption of new technology in the warehouse.

Hence, the closer coordination between voluntary wholesalers and retailers facilitated innovation and improved the operational efficiency of both, thereby lowering costs and contributing to the development of competitive independent operators. Affiliated retailers essentially "grew up" with their groups, becoming modern supermarket retailers and often multi-store operators (Anderson; Foy).

Some voluntary chains are franchised, I.G.A., Red and White, and the Clover Farm Stores are examples of national franchising organizations. The function of the central management team of these groups was to carry out joint buying for wholesaler members, to develop and maintain the

specifications for private label products, and to establish store standards and facilitate the introduction of retailer services.

The national franchises permitted relatively small wholesalers to sponsor voluntary chains by spreading the overhead costs associated with their formation among all members. However, most voluntary chains are not national associations, although many have grown into regional groups.

2.4.2 Retailer Cooperatives

According to several personal accounts from retired cooperative leaders, the retailer cooperative movement in the United States operated in an informal manner. Many groups were very loosely organized and their main function was to buy jointly, frequently without operating a warehouse. Instead, merchandise was picked up and divided among members upon delivery at railroad depots. Retailers also simply pooled their purchases with local wholesalers.

Retailers belonging to these groups usually purchased only a small proportion of their total supplies jointly due to the lack of formal organization or a staff to perform the procurement function. Cooperatives operated by calling upon retailers to volunteer to assist in product procurement during their spare time. Many groups failed during this early period because of the prevalence of free riders and a lack of leadership. Late payments by retailers were common and this often resulted in large losses. Manufacturers were often reluctant or unwilling to supply cooperatives because of their informal organization. There was a critical need

for charismatic leaders that could gain the support and participation of retailers in the operation of the cooperative.

The cooperatives that survived these obstacles eventually acquired warehouses, managers were hired and regular wholesaling functions were performed. By 1930, 93 out of 151 retailer cooperatives performed the warehousing function (FTC). Cooperatives generally absorbed existing wholesale businesses being liquidated by unaffiliated wholesalers, known as general line wholesalers, that had resisted modernization and were unable to compete with affiliated groups.

2.4.3 Some Differences Between Retailer Cooperatives and Voluntary Chains and their Affect on Growth

Voluntary wholesalers emphasized "supervision" for the independent retailer for the purpose of "improving the character of the retail store management" (German). In contrast, the retailer-owned wholesaler emphasized improved buying power and an advertising service for the retailer. In 1930, only 7 out of the 151 cooperatives in existence provided any type of management services for affiliates, while 119 of the 168 voluntary wholesalers offered management assistance (FTC).

Voluntary chains experienced the highest growth rates as these groups emerged (VCGM, April 1962). The advantage of voluntaries relative to cooperatives was that they were sponsored by successful wholesalers, capable of financing the introduction of retailer services and more modern warehouse equipment. A paucity of capital was a major barrier

to the growth of cooperatives (Food Industry Executives, Personal Interviews). In addition, retailers were at a clear disadvantage in terms of knowledge of wholesaling practices and had to learn the wholesaling function.

Furthermore, while voluntary wholesalers continued to serve an existing pool of unaffiliated retailer customers as the groups emerged, retailer cooperatives served only members. Consequently, buying volumes were lower and cooperatives were slower to achieve economies of scale in the wholesaling activity. Many cooperatives were also reluctant to adopt a group logo because of the independent attitude of retailer members. While a group logo is not strictly necessary, it does facilitate group advertising and encourages consumer recognition of group stores. Consumer awareness of the group is beneficial since if the consumer moves to a new shopping district he may continue to patronize the group via the affiliated store located in this area.

Retailer-owned wholesalers gradually began to emulate many of the successful standard operating procedures employed by voluntaries and achieved higher buying volumes and greater financial reserves. By the 1950s many retailer cooperatives had accumulated the capital and know-how to embark on major expansionary plans. The decade of the 1950s was a period of significant growth and consolidation in the retailer cooperative industry. Today retailer cooperatives such as Certified Grocers of California and Spartan Stores, Inc. of Michigan operate among the most modern warehouses in

the United States food industry.

2.5 Standard Operating Procedures of Voluntary Chains

Wholesalers sponsoring voluntary chains have employed many methods to satisfy the need for wholesaler-retailer teamwork. Some more detailed examples of the early operating practices of voluntaries are described below.

2.5.1 Expansion of the Scale of Operation of Affiliated Retailers

One of the most important initial efforts made by wholesalers to improve the strength of retailer members was to strongly encourage larger store sizes in order to permit the adoption of self-service and more efficient technology, and to increase the probability of longer-term growth and expansion. This was done by a variety of means.

For example, unaffiliated independents generally had large amounts of capital tied up in inventories. Affiliation to a voluntary eliminated the need for product storage because the retailer was assured of regular weekly deliveries. In addition, one of the first activities of most wholesalers was to inventory the stock of affiliating retailers and arrange sales to dispose of old stock and slow-moving items. Improved inventory management released capital for expansion.

Voluntary wholesalers also actively assisted retailers in packaging loan requests to obtain bank financing. In some instances wholesalers purchased and upgraded stores and then sold them to retailers unable to expand in their existing locations.

2.5.2 Key Changes in Standard Operating Policies

Affiliated wholesalers recognized the need to modernize all aspects of their operations in order to reduce operating costs and offer the lowest possible prices to retailers. Three of the changes in SOPs most instrumental in reducing operating costs were the elimination of salesmen, unlimited deliveries, and credit. These represented important innovations at the time.

Both voluntaries and cooperatives mandated once-a-week deliveries and minimum order quantities. The thirty-day credit line was abandoned in order to ensure that wholesalers would have the financial liquidity to take advantage of volume discounts and special offers. Many groups required a signed blank check to accompany each order.

The wholesale salesman was replaced by a pre-printed, consolidated order form mailed or telephoned to the warehouse. The pre-printed order form was a significant innovation for several reasons. First, by eliminating the need to employ someone to write-up a retail order the wholesaler was able to train salesmen and convert them to a new function, that of the retailer counselor. Counselors (sometimes called supervisors) played an essential role in the retailer modernization process. Although they act in an advisory capacity and have no direct control over retailers, they provide the retailer with vital technical expertise in a wide range of areas.

A 1970 survey conducted by Voluntary and Cooperative Groups Magazine (VCGM) provides a list of functions carried

out by supervisors, presented in Table 2.2. The VCGM survey reports an average supervisor force of 12.4, serving, on the average, 251.7 stores per company (VCGM, August 1971).

A second impact of the pre-printed order form was to improve retail inventory management by decreasing stock-outs, encouraging an improved product assortment, and providing the retailer with both product acquisition costs and suggested retail prices. The order form is organized according to product families to facilitate recognition of products. Moreover, because the retailer has this product list to work from and compare with physical stock on the display shelf, he is much less likely to order unnecessary or insufficient quantities. Each product is listed with the cost to the retailer and suggested selling prices. This was the first step in establishing organized retailer pricing policies and the use of gross margins by department as a management tool.

The pre-printed order form also had important ramifications for warehouse operations. The changes in materials handling practices adopted by wholesalers included the introduction of first-in first-out inventory control methods and organized systems to specify the location of each product in the warehouse. This was in sharp contrast to the haphazard and disorganized placement of product which had previously been practiced. The pre-printed order form guided the physical lay-out of products. Organization of

TABLE 2.2 SUPERVISORY STAFF FUNCTIONS PERFORMED BY AFFILIATED WHOLESALERS FOR THEIR RETAILERS

Supervisory Staff Function	Percent of Firms Performing
Consulting on local advertising	91.6
Consulting on new store plans or remodeling	83.3
Presenting warehouse promotions	79.2
Arranging for in-store merchandising displays	78.1
Arranging for purchase of store equipment or supplies	75.0
Securing orders for seasonal or in-and-out merchandise	74.8
Providing accounting assistance	70.8
Training new store personnel	58.3
Distributing in-store display material (either wholesaler's or manufacturer's)	54.2
Assisting in hiring store personnel	50.2
Presenting manufacturer promotions	45.8

Source: "Retail Operations Progress Report." Voluntary and Cooperatives Group Magazine. August 1971.

the warehouse by product families corresponding to the presentation of the order form, signified that the orders received by pickers would automatically be selected using the most efficient route through the warehouse. This resulted in a significant increase in labor productivity.

2.5.3 Core Retailer Groups

As voluntary chains emerged the sponsoring wholesalers had to cope with retailer members that were chiefly interested in the price advantages of group buying and did not wish to conform to group standards and use available management services. The strategy developed by many wholesalers to solve these problems was to establish a core group of special-service retailers within the total customer group. Well-operated stores in good locations with receptive owners were chosen for these groups. Special advertising and merchandising programs were offered to the selected retailers, and counselors made a concentrated effort to assist them in understanding and making full use of all services. The benefits experienced by retailers were then publicized to all customers and generated an important demonstration effect, increasing the size and strength of affiliated groups.

2.5.4 Concentration of Retailer Purchases through the Affiliated Group

A factor which is highly correlated with the success of affiliated groups is the achievement of the patronage loyalty of member retailers as reflected in a concentration of purchases through the group. Yet, one study reported that

in 1958 retailers affiliated with the 20 largest voluntary and cooperative wholesalers purchased only approximately 44 percent of their requirements from their affiliated wholesalers (Progressive Grocer, 1960).

One of the factors responsible for the low level of concentration of purchases was the incomplete product assortment which existed in most wholesale businesses. Mass distribution of food through supermarkets preceded the development of the distribution center concept for supplying the supermarket. Prior to and immediately following WWII, corporate chain warehouses as well as affiliated warehouses, were principally distributors of dry groceries (Kochersperger). Most retailers bought perishable products from local specialty wholesale distributors. Fresh meats were supplied directly to supermarkets through meat packers (Bouma).

After 1948 the wholesaling industry began expanding product lines and procuring perishable products such as meat, dairy, produce and frozen food items (Progressive Grocer, 1960). Frozen food was the first new product line to be offered to the retail trade, followed by produce and later meat. As wholesalers expanded product lines the total number of items handled through warehouse facilities increased rapidly. In 1950, wholesalers were carrying an average of 2,470 items, 5,100 in 1960, and by 1965 an average of 6,100 items were handled by wholesalers (Progressive Grocer).

Even after accounting for the incompleteness of product

lines offered by wholesalers, many authorities have concluded that, in general, wholesalers probably had difficulty obtaining full patronage loyalty from affiliates. Some reasons given for dividing purchases are presented in Table 2.3.

This issue has important implications for the development of voluntaries in other countries. For any affiliated group to succeed it must be able to attain a significant degree of retailer patronage. If not, the benefits of the services offered to retailers are not captured by the wholesaler.

2.5.5 Wholesaler Pricing Policies

The adoption of cost-plus pricing policies represents another innovation of the affiliated wholesaler movement. Cost-plus pricing includes three basic components:

1) wholesaler's cost for merchandise
2) service fees expressed as a percentage of the total order value
3) an invariable weekly service charge.

The second component, variable service fees, are graduated on a volume basis such that as order size increases the percentage surcharge declines (Kochersperger). This acted as a crucial incentive for stimulating the concentration of retailer purchases. Cost-plus pricing was originally applied to dry groceries and gradually extended to perishables, such as produce and frozen foods, in the 1950s.

Cost-plus pricing was also important because it established formal pricing guidelines for wholesalers and helped ensure that manufacturer discounts were passed along to

TABLE 2.3 REASONS GIVEN BY RETAILERS FOR DIVIDING PURCHASES BETWEEN AFFILIATED WHOLESALERS AND OTHER SOURCES

Reasons Given	Percentage of Retailers
Obtain items principle wholesaler lacks	40.7
Price differences	37.9
Brand, grade, or quality differences	32.7
Insurance against shortages	10.7
Obtain more than one delivery per week	10.1
Friendship or tradition	7.7
Obtain better services	6.2
Can do better generally	2.5
Can buy in less-than-case lots	1.8

Note: An average of 1.5 reasons was given by each of the 894 grocers surveyed; hence, the column totals more than 100 percent.

Source: Agricultural Marketing Service, Views of Independent Grocers on Wholesale-Retailer Relations (Washington, D. C.: Department of Agriculture, 1953) MRR # 2, p. 14.

retailers. Wholesaler cost was usually defin d as dead net cost, or manufacturer's list price less trade, quantity, and cash discounts. An alternative definition f wholesaler cost often used by cooperatives was a sliding alue of cost, depending on the rate of turnover and the esti ated handling costs of specific items, and the volume purc ased by each retailer. In the latter case the base cost o merchandise can vary for each member and it was customary or committees of retailers to regularly inspect individual i voices.

2.5.6 The Cooperative Advertising Concept

The cooperative advertising concept dev loped in approximately 1934 and involves a complete an expeditious return to retailers of all manufacturer promc ional allowances and rebates (Certified Grocers of Cali ornia Executive, Personal Interview). Manufacturers frec ently require that certain promotional activities be carri d out by retailers to be eligible for an allowance. Vc untaries and cooperatives prepare suggested ad inserts f r affiliates that conform to manufacturer specifications. The retailer sends a copy of the ads run to the affiliated holesaler who handles verification and processing with the manufacturer. This greatly reduces the time spent by retail operators to obtain and qualify for manufacturer ad allowa ces and rebates. It has proved to be an important inc ntive to retailers to buy through the group rather than irectly from manufacturers.

2.5.7 The Provision of Specialized Services to Retailers

It is important to appreciate the small scale, traditional nature of retail businesses, known as Mom and Pop stores, in the formative stages of affiliated groups. The development of specialized services to affiliated retailers is probably the most crucial factor influencing their modernization and rapid growth. To induce the transformation of traditional operators into modern supermarket retailers capable of competing with the corporate chains, the affiliated wholesaler has become a complete distribution and service center for retail outlets.

Specialized services greatly strengthen wholesaler-retailer relations. Independent retailers must compete with chain stores that have access to a wide array of services and they lack the technical expertise and resources to carry out these activities themselves. Consequently, services tend to increase the dependency of the retailer on the wholesaler and increase the costs to the affiliate of withdrawal from the group.

Management services are priced lower than what a retailer could obtain commercially on an individual basis, and are specialized according to the needs of food retailing firms. For example, in the case of retailer accounting the typical accounting plan that has emerged over the years includes the following characteristics: on a monthly basis the retailer submits to the wholesaler his sales sheets, expense records, cancelled checks, invoices and other

accounting records. Each quarter inventories were taken and the wholesaler used this information to prepare monthly balance sheets and operating statements on a departmental basis, in addition to providing comparative figures from previous years (Sheppard).

The preparation of financial statements was important not only as an easily employable tool for analyzing the operational efficiency of stores, but also as an aid to retailers in obtaining financing for expansion from lending institutions. Retailers traditionally did not maintain adequate records and therefore lacked the basic operating and financial ratios necessary to support the evaluation of a loan application (Sheppard).

Additional accounting services provided by some wholesalers are payment of bills and payroll checks, budget preparation, insurance audits and coupon redemption.

Once a standard accounting format had been accepted within a group many wholesalers offered data exchange programs to compare financial operating ratios on an anonymous basis among group members. This helped retailers to spot problem areas in their own stores. The managerial services of the retailer counselor could then be used to follow through and identify the causes and solutions to specific problems.

The introduction of services took place gradually over a period of forty years. The first services introduced by affiliated wholesalers were advertising, managerial advice and store engineering (FTC). Advertising was the most widely

adopted service by both voluntaries and cooperatives. Accounting services developed at a much slower pace than other services despite the vital nature of these services (Progressive Grocer, 1964). This is because retailers were reluctant to permit "outsiders" to have access to their records and did not fully appreciate the managerial and financial benefits of proper accounting systems (Personal Interviews, Retired Voluntary Chain Executives). Because of the greater control members of cooperatives exerted over their groups, they were even slower to introduce accounting services. The greatest stimulus to the acceptance of retailer accounting systems was the widespread adoption of computers in the 1960s. This significantly reduced the costs of accounting services and simplified their implementation.

2.5.8 Wholesaler Charges for Specialized Services

Wholesalers use different pricing policies for the various specialized services offered. Some services are charged for directly (fixed charges or proportional charges based on use), and others are apparently "free." A free service is a kind of nonprice rebate made to the retailer by the wholesaler (Adams).

While in the formative stages of voluntary chains certain services were often subsidized by wholesalers, most groups have now moved to specific charges for each service. Wholesalers have determined that this represents a more effective strategy for stimulating the use of services.

Retailers frequently underestimate or misunderstand the benefits of services which aren't accompanied with direct charges, thereby misusing or underusing them (Personal Interviews). Most groups have annual membership charges and fixed monthly advertising charges.

2.6 Productivity and Operating Costs of Affiliated Wholesalers

Substantial productivity gains in grocery warehousing occurred during the development of affiliated groups. In the 1949 to 1959 period there was a dramatic shift away from the multi-story warehouse to one-story facilities that were less expensive per usable square foot. This facilitated the introduction of racks and forklifts and the elimination of dollies (two-wheeled hand carts) as the primary materials handling method. Operational efficiency (tons per man hour) was improved by an average of 56 percent between 1949 and 1959 for those firms changing over to one-story facilities (Kochersperger). Productivity increases in 5 warehouses are shown in Table 2.4.

To contribute to greater productivity in the warehouse affiliated wholesalers began to reduce the total number of retailers served, concentrating on fewer but larger customers. In 1932 the FTC reported an average of 133 stores per retailer cooperative and 138 per voluntary chain.

Separate cash and carry warehouses were set up to serve the needs of smaller retailers. The establishment of distinct operating policies for these different retailer segments eliminated the cross-subsidization of smaller

TABLE 2.4 PRODUCTIVITY INCREASES IN FIVE AFFILIATED WAREHOUSES CHANGING TO ONE-STORE FACILITIES, 1949 TO 1959

Warehouse and Location	Tons Per Man Hour 1949	Tons Per Man Hour 1959	Improvement Percent
Super Valu Stores, Inc. Bismark, N.D.	1.05	2.06	97
Super Valu Stores, Inc. Fargo, N.C.	1.22	2.10	72
Kelly, Douglas Co. Ltd. Burnaby, British Colombia	1.09	2.01	71
Malone and Hyde, Inc. Memphis, Tenn.	1.28	2.10	64
Fleming Co., Oklahoma City, Okla.	1.40	2.06	47

Source: "Ten Years of Improvement in Warehouse Operations," Voluntary and Cooperatives, May 1960, pgs. 13, 39, 40, as cited by Kochersperger.

retailers by the larger affiliates, in addition to improving operational efficiency in both kinds of warehouse.

The increased productivity of wholesalers was reflected in a gradual decline in operating expenses as a percentage of sales, shown in Table 2.5. Voluntary chains initially had the highest operating costs because of the higher level of services they offer. The gains in efficiency eventually yielded lower operating costs as a percentage of sales relative to unaffiliated wholesalers, despite a growing level of services. Cooperatives continued to have lower operating costs because of fewer services and because of the relatively high percentage (30 to 40 percent) of the total volume of retail cooperatives which was estimated to have been sold on a drop-shipment basis (Sheppard).

2.7 Structural Change in Food Wholesaling and Retailing

In 1935 the United States had over 440,000 grocery retail outlets. By the end of WWII this number had been reduced to approximately 400,000 outlets and the decline in the number of food stores became a consistent trend in the U.S. food distribution system. By 1979 the number of grocery outlets had shrunk to 168,900 (Progressive Grocer, 1960, 1970, 1980).

Marked trends in the market shares of independent stores relative to chain stores over a fifty year period are evident. In 1929 independent store operators represented 69 percent of total grocery sales and chains accounted for 31 percent. In 1972 the share of chain stores had risen to 49 percent. Clearly, the loss in market share of independent

TABLE 2.5 OPERATING EXPENSES OF GROCERY WHOLESALERS AS A PERCENTAGE OF SALES

Wholesale Organization	1935	1939	1948	1954	1963
Voluntary Groups	10.1	10.6	8.3	7.4	6.2
Retailers Cooperatives	5.2	5.2	4.6	4.4	4.5
Unaffiliated	8.9	9.6	8.7	8.9	9.2

Source: Department of Commerce, Census of Business, Wholesale Trade as cited by German.

retailers was due to a decline in the ranks of unaffiliated independents: in 1972 affiliated independents captured 44 percent of total grocery sales while unaffiliated independents accounted for only 7 percent of total grocery sales.

Thus, while independent retailers have decreased in importance relative to chain store organizations, the voluntary and cooperative group movement has proved to be an effective strategy for competing with corporate chains.

A dramatic decline has also taken place in the market share of unaffiliated wholesalers. In 1979 53 percent of sales were made by voluntary wholesalers relative to 18 percent for unaffiliated independents and the remainder for cooperatives (German). The drop in wholesale grocery sales of unaffiliated wholesalers parallels the significant reduction in their numbers. In 1948 there were 3,408 unaffiliated wholesalers compared to 1,266 in 1964 (German).

2.8 Some Impacts of Structural Change on Food Manufacturers

The structural changes which took place in grocery wholesaling and retailing produced various efforts of adversely affected groups to counter the growth of competitors. These efforts generally involved the food manufacturer.

For example, unaffiliated wholesalers responded to the threat of chain stores and affiliated wholesalers by pressuring manufacturers into refusing the sale of their products on a direct basis to chains and affiliated groups. Counter assaults by the chains compelled many manufacturers

to adopt a direct sale policy. Other manufacturers were instructed to sell to the chains and wholesaler-retailer groups by Federal Trade Commission Orders in the late 1920s (Yunker, personal interview).

By the 1930s chain stores had achieved a significant market share and sufficient buying power to pressure manufacturers for special offers and buying advantages. The Robinson-Patman Act was passed in 1936 to prevent chain stores from exacting preferential buying terms from manufacturers and thereby injuring retailer cooperatives and voluntary chains.

The evidence indicates that higher levels of economic concentration in food retailing than those that currently prevail in the U.S. would have resulted without the formation of voluntary and cooperative food chains. Fewer independent retailers would also have further reduced the food wholesaling industry in numbers and sales volume. The impact on food manufacturers of fewer buyers would be to increase the relative importance and negotiating power of supermarket chains, affecting the distribution of risks and costs at the manufacturer-supermarket interface.

Furthermore, the growth of affiliated groups and the improved coordination they achieved at the wholesale-retail interface, had an important impact on the efficiency of the food manufacturing sector for several reasons. Manufacturers were assured that their products would reach a vast number of small customers without bearing the high selling, order processing, collection and delivery costs of direct selling.

The wider product lines, decreased delivery lead time and improved inventory control achieved by affiliated groups signified that stock was in the distribution pipeline for less time and that wholesalers and retailers experienced fewer out-of-stocks (Fulop).

Manufacturers also benefit from the fact that affiliated groups are the best participants in their marketing and promotional programs (Chain Store Age). In addition, the aggressive development of private labels by voluntaries and cooperatives has benefited many smaller manufacturers.

2.9 Comments on the Experience with Affiliated Groups in Other Countries

2.9.1 The European Experience

In Europe voluntaries did not emerge in significant numbers until after WWII. While some had begun during the Depression, the war brought expansion to a standstill. It wasn't until the early 1950s that most voluntary chains experienced significant growth (Lewis). The first European voluntary chain of any importance was SPAR which originated in the Netherlands in 1932 (Mc Fayden). The formation of voluntaries spread from Holland first to Germany, then France, Belgium, Switzerland, Austria and the Scandinavian countries (Lewis). SPAR is the largest voluntary chain in Europe, operating in 14 countries with more than 240 wholesalers and 35,000 retailer members (Mc Fayden).

Most factors which contributed to the development of voluntary chains in Europe are similar to those identified for the U.S. These include the loss of trade experienced

by wholesalers due to backward integration of large scale retailers and the formation of retailer cooperatives. An additional factor in some countries such as England, was the forward integration of manufacturers, particularly of branded merchandise (Fulop).

However, while competition from chain stores provided a critical incentive to independents to form voluntary chains, it must be clarified that centrally owned chains developed much more slowly in Europe than in the U.S. In the late 1960s, Germany had ninety corporate food chains handling about 10 percent of retail grocery sales (Lewis). France had approximately the same number. The supermarket also arrived on the scene much later in Europe. For example, in France, the first supermarket was not established until 1957. The slower development of corporate food chains and the abnormal market conditions created by WWII, help explain the relatively recent establishment of voluntary food chains in Europe.

Cooperatives have evolved to varying stages of development in different European countries, representing different levels of importance in their retail marketing structures. For example, in Scandinavia retailer cooperatives have reached a high level of development. One retailer cooperative alone (ICA) in Sweden accounts for 30 percent of national supermarket sales. In most of Europe cooperatives have experienced the same causes of failure as in the U.S. and both voluntaries and cooperatives have adopted similar

standard operating procedures.

2.9.2 The Latin American Experience

An outstanding success story in improved wholesale-retail arrangements in Latin America is the Costa Rican experience with a retail buying group, La Cadena de Detallistas San Jose, S.A. This group emerged in response to the competitive threat that was created with the opening of the first supermarket in 1960. The National Chamber of Small Retailers sought the assistance of an economics professor at the University of Costa Rica who facilitated retailer meetings as a forum for discussing their problems and proposed the formation of a retailer buying group. Later, assistance from the Agency for International Development (AID) was obtained and the first seminar on food retailing was carried out in 1964 by the National Chamber of Small Retailers under the auspices of AID (La Nacion). Seminars were conducted on a national level, emphasizing pricing, sales methods, cooperative wholesale buying, and inventory control.

In addition, AID initiated a policy of providing scholarships to store owners and eventually to warehouse administrators to visit the U.S. and Puerto Rico for training under the theory that, "seeing is believing" (Douglas).

In 1965 an incorporated buying group was formed with 14 members and experienced a dramatic growth to 250 members by 1967 (Douglas). By 1967 five other cadenas had been formed in other cities and all the cadenas were brought into one central warehouse. The cadenas operate under a joint logo,

conduct joint advertising and promotional programs, and offer store engineering services (initiated by AID marketing specialists).

The group has been highly successful due to both the emergence of able leaders that have elicited the support and enthusiasm of members, and technical assistance from international marketing experts. Members have learned that lower prices can produce increased sales and higher profits and many members increased sales volume as much as 300 percent by 1967 (Douglas).

In addition, three important retailer buying cooperatives exist in Argentina, and a retailer cooperative is present in Colombia, CORATIENDAS (FAO). CORATIENDAS was originally established as a joint venture between the government grocery wholesaling parastatal (CORABASTOS) and a group of 82 retailers. In 1976, after three years of operation it became a privately owned retailer cooperative (FAO).

In Brazil a government sponsored voluntary chain has been in existence since 1978. The "Rede Somar" program represents the voluntary chain where COBAL acts as a wholesaler also providing technical assistance, a private label and services to retailers. This group has expanded to operate a national distribution network with 3,634 affiliates in 1982 (FAO).

FAO reports several causes for the failure of privately supported affiliated groups in Latin America. A lack of capital to finance expansion is a key constraint, in

conjunction with a lack of information on modern marketing technology and SOPs. This suggests a need for facilitory public sector intervention in the form of credit and technical assistance. Official price controls, supply instability for grocery staples, and lack of public sector support are other factors limiting the formation of affiliated groups in Latin America. A not uncommon cause for the failure of retailer cooperatives has also been fraud. For example, at times leaders have succeeded in forming groups only to escape with the membership subscriptions (Guthrie).

Nevertheless, increasing private and public sector awareness of the potential benefits of affiliated groups, in conjunction with greater experience with their formation, may be expected to facilitate their future growth in Latin America.

2.10 Summary of the Causes of Failure and Success of Voluntary Chains

Factors Instrumental in the Success of Voluntaries

1) Private Label Products: Private labels increase the loyalty of the consumer to group retailers and therefore, in turn, the loyalty of the retailer to the sponsoring wholesaler.

2) Development of a Group Plan: Group plans carefully specified the responsibilities, conditions and advantages of both the wholesaler and the retailer as members of the voluntary.

3) Differential Services to Members and Non-Members: As an incentive to retailers to affiliate to the chain the group plan should contain many benefits not available to traditional customers.

4) Formation of a Core Group: The most progressive and efficient retailers should be gathered into a core group and provided with complete advertising, promotional, merchandising and store lay-out assistance. The success of this core group generates a demonstration effect, attracting new members.

5) Volume Incentives: To encourage the concentration of retailer purchases through the group the wholesaler must create price incentives for larger purchases.

6) Retailer-mindedness: The wholesaler must realize that his own success depends on the sales and profits of affiliated retailers. The problems and needs of the retailer must be placed first in order to improve their competitive strength.

7) Specialized Retailer Services: A modern, efficient retailer requires a wide array of services which he can't economically obtain individually. Services greatly increase the loyalty of the retailer to the group.

8) Retailer Supervisors or Counselors: Counselors provide the retailer with management, merchandising and technical expertise to facilitate their modernization.

9) Frequent Contact with Retailers: In the formative stages of voluntaries it is essential that wholesalers visit retailers individually to explain the new philosophy and approach and begin to build retailer confidence. Once the full support of a core group has been attained the wholesaler should begin well planned and enthusiastic retailer meetings to publicize the progress of these retailers and stimulate affiliation.

Factors Associated with the Failure of Affiliated Groups

1) Heterogeneity of Group Conformation: Lack of homogeneity in the size, type and location of retailer members limits the ability of the group to streamline operations and adopt operating policies beneficial to the majority.

2) Lack of Incentives: In order to stimulate the concentration of purchases wholesalers must offer volume discounts, temporary bonuses to encourage the adoption of new policies, private labels, etc.

3) Services Disproportionate to Group Needs: Retailer services can be disproportionate relative to the size and volume of the wholesaler. If they are high, operating costs will be excessive and non-competitive product prices will result. If they are low, the lack of specialized services will retard the growth of the group.

4) Lack of Commitment to Upgrade Retailers: To succeed wholesalers had to constantly work to upgrade retailer management skills and physical store facilities, continually striving to incorporate retailers into the group as full participants in compliance with the group SOPs.

5) The Plan: The group plan had to be well organized and compatible with the area's retailers and the competitive position of the wholesaler. For example, conditions of entry might be overly restrictive or too lax, and the services might not meet competition in the area.

6) Lack of Retailer-Mindedness: To achieve a successful chain the retailer must place complete trust in the wholesaler, he will only do so if it is clear that the primary concern of the wholesaler is the well-being of retailer affiliates.

7) Slow Rate of Retailer Affiliation: While most voluntaries began with very few members, if the rate of affiliation remained slow the innovators might deplete their financial reserves before the group could grow to a viable size.

8) Lack of Capital to Finance Expansion: This has primarily been a constraint for cooperatives since the retailer members must finance expansion of both their own stores and warehouse facilities, without the financial support of a sponsoring wholesaler.

9) Lack of Leadership: In order to induce retailers to affiliate to the group and conform to group standards a strong leader is required. This is particularly true for cooperatives in their formative stages before outside management is hired. A strong leader is required in order to insure active retailer participation in the operation of the cooperative.

2.11 Public Sector Support for the Development of Affiliated Wholesalers

Agricultural marketing research programs carried out by the U.S. Department of Agriculture (USDA) and land grant universities began after 1946 as a result of the Agricultural Marketing Act of 1946 which mandated research to improve the "marketing, handling, storage, processing, transportation and distribution of agricultural products."

This act called for involvement of the State

Agricultural Extension Services and the Federal Extension Service assisted the state extension services in developing marketing programs. During the 1950s the strong demand by marketing firms for extension educational programs caused some states to pass legislation to appropriate additional funds to agricultural marketing research and extension programs (Mohn).

On-site research was carried out in the warehouses and stores of affiliated wholesaler groups to investigate improved standard operating procedures. The "demonstration store" approach was commonly used by researchers. The demonstration store approach calls for a two-way flow of information between the university and/or USDA and the firm. An educational program was provided by the university or USDA, and operating data and cooperation was obtained from the company.

These combined research and extension efforts in wholesaling and retailing with voluntaries and cooperatives made an important contribution to the growth and modernization of affiliated groups. Affiliated wholesalers have publicly credited USDA and university research as a major factor contributing to their ability to develop operating techniques similar to those of corporate chains, and to become a viable competitive force (Anderson). A review of the programs of trade association meetings in the 1950s and early 1960s reveals that USDA researchers were major sources of information on improved SOPs.

Hence, the role of the public sector and land grant

institutions as a source of information and technical assistance to voluntary chains and retailer cooperatives was an important factor contributing to their growth during their formative years. Let us recall that thirty years ago most independents were small operators and had insufficient resources to support internal research.

2.12 Conclusions

The development of affiliated wholesalers as operators of full-service distribution centers has had an important impact on the evolution of the U.S. (and many European) food distribution systems. Voluntary chains and retailer cooperatives are coordination mechanisms that have proved highly effective in improving vertical coordination in dry grocery subsectors. The result has been an increased productivity at all stages of the food system(s), lower overall food distribution costs and greater competitive pressure in food retailing; all serving to yield a downward pressure on food prices.

Support of a strong independent retailing sector is important as: 1) a means for maintaining a competitive balance in food systems; and 2) a mechanism for articulating the preferences of different consumer segments, since historically independents have been more flexible than chains in tailoring their stores to consumer needs.

In the United States, voluntary and cooperative retail outlets have been and continue to be vital to rural areas since national supermarket chains generally do not operate

in small communities. The emergence of effective supply systems for affiliated retail operators located in rural areas provides these consumers with modern, competitively priced grocery products and services.

The key standard operating procedures instrumental in the success of voluntaries and cooperatives have been similar in all countries. Under the varying market conditions of a variety of countries, properly managed voluntaries and cooperatives have led to an expansion in operating scale and greater operational efficiency at the wholesale-retail interface, lowering distribution costs and retail food prices. However, cooperatives have generally been more difficult to introduce because they depend to a greater extent on dynamic leaders. In all instances of successful cooperatives reviewed by the author, the personalities of leaders were essential to their success. This elusive variable was a factor contributing to a decision to focus on voluntary chains in this study. Other factors were the complex legal structure for cooperatives in Mexico, a generally suspicious attitude toward cooperatives on the part of retailers, and the emphasis placed on voluntary chains in the programs and guidelines of FIDEC.

CHAPTER 2

REFERENCES

Adams, Kendall, 1962. "The Acceptance and Use of Special Services by Selected Supermarket Owner-Managers in Michigan." Ph.D. Dissertation, Michigan State University.

Agricultural Marketing Service, 1953. "Views of Independent Grocers on Wholesaler-Retailer Relations." Washington, D.C.: USDA, MRR No.2, p.14.

Anderson, Dale L., Jan. 1977. "White (or Slightly Gray Paper) in Defense of Agricultural Marketing Research." Internal USDA Document.

Bouma, John C., 1979. "Operation of Individual Wholesale Facilities." Internal USDA document.

Chain Store Age, Dec. 1966. "Certified: Growth to Greatness," pp.42-65.

Douglas, Arthur B., 1966. "Reducing Food Prices Through Training and Formation of Food Buying Chains (Cadenas)." Internal A.I.D. Document.

FAO, 1983. "Experiencia Latinoamericana en Cadenas Voluntarias y Cadenas Cooperativas de Comerciantes Minoristas de Alimentos." Servicio de Informacion Tecnica en Mercadeo Agropecuario y Abastecimiento de Alimentos, Merc-5, Santiago.

Federal Trade Commission, 1932. Report Relative to Cooperative Grocery Chains. Washington: United States Government Printing Office.

Foy, Joseph, May 1965. "Lets Free Man for Greater Challenges." Grocers' Spotlight, pp. 9-1 and 22-27.

Fulop, Cristina, 1962. Buying by Voluntary Chains. London: George Allen & Unwin Ltd.

German, Gene, 1978. "The Dynamics of Food Retailing 1900-1975." Ph.D. Dissertation, Cornell University.

Grocers Journal, Feb. 1972. "Fifty Years of Progress Through Cooperation." pp.18-95

Guthrie, Colin, Jan. 1974. "Voluntary Chains of Retail Food Stores in Latin America." Paper presented at International Conference on Marketing Systems in Developing Countries, Tel Aviv.

ICA, 1980. "A Way to the Swedish Consumer."

Kochersperger, R.H., 1978. Food Warehousing and Transportation. Lebhar - Friedman Books, Chain Store Publishing Corp., New York.

La Nacion, Jan. 1976. "La Cadena de Comerciantes Detallistas San Jose, S.A."

Lewis, Edwin, 1968. Marketing Channels: Structure and Strategy. New York: McGraw Hill.

McFayden, Edward, 1971. Voluntary Group Trading, 6 Case Studies. London: Her Majesty's Stationary Office.

Mohn, Paul, Nov. 1959. Extension Service Review, pp. 229 and 246.

Progressive Grocer, April 1960. "27th Annual Report of the Grocery Industry."

Progressive Grocer, April 1964. "31st Annual Report of the Grocery Industry."

Progressive Grocer, April 1970. "37th Annual Report of the Grocery Industry."

Progressive Grocer, April 1980. "47th Annual Report of the Grocery Industry."

Sheppard, James D., 1967. "Wholesale Cooperative (Retailer-Owned) Grocers: Their Operating Methods and Financing." Unpublished thesis, Rutgers State University.

Voluntary and Cooperative Groups Magazine, August 1971. "Retail Operations Progress Report," pp. 14-16.

Voluntary and Cooperative Groups Magazine, Nov. 1971. "The Nations First Retail Voluntary Chain Organization Celebrates its 50th Anniversary." pp. 25-36.

CHAPTER 3

DRY GROCERY MANUFACTURING IN MEXICO CITY

3.1 Introduction

The development of the packaged goods industry in Mexico is comparatively recent. Its origins lie in the impetus for industrial development created by the import-substitution policies promoted during the WWII era, expanded agricultural supply generating both self-sufficiency and export capabilities due to important productivity gains during the 1950s and 1960s, and a major expansion in consumer demand for marketing services obtained from real per capita income gains and changing preferences since WWII.

The emergence of the packaged goods industry as an important part of the total food system involved both the entrance of several new firms, including many well known multinational corporations such as Procter and Gamble, Anderson-Clayton, General Foods, Kimberly-Clark, Carnation, Nestle, etc., and a gradual broadening of the product lines sold. The expansion in product lines was accompanied by multi-media advertising programs to support the introduction of new products and consumption habits to the Mexican public.

During the early development of the dry grocery sub-sector the food manufacturing industry was very dependent on its own distribution networks to reach independent retailers and operated with liberal credit terms. As the economy has evolved and forces for change have yielded new

opportunities and constraints in the system, many standard operating procedures have been modified. There has been a major decline in direct distribution to traditional retailers, a growing part of the distribution function has been shifted to specialized firms and credit has been drastically reduced in recent years.

Several forces for change have worked together to support these trends, including the following: 1) rising distribution costs resulting from inflation and transportation bottlenecks in the Mexico City market, 2) government policies restraining margins and impacting transportation arrangements, 3) the appearance of innovators in the wholesaling industry that improved the quality of wholesaling services and offered an alternative distribution channel, 4) the development of an important supermarket industry which has consistently gained market share relative to the traditional retailing industry, and 5) the increasing prevalence of product scarcity limiting the total amount of certain products to be distributed.

The information presented in this chapter is based on over twenty confidential interviews with dry grocery subsector participants.

3.2 Food Manufacturing Industry Structure

Market structure is an important component of opportunity sets and, hence, a determinant of the manner in which firms interact with buyers and suppliers. To lay the groundwork for our discussion of the food manufacturing industry a general indication of the structure of the industry will be

provided.

The evolution of the dry grocery manufacturing industry has yielded an oligopolistic outcome. While precise information on the level of concentration in food manufacturing is unavailable, it is possible to say that in several product categories approximately three firms dominate the industry. Many of the smaller firms, frequently wholly Mexican owned, have been absorbed by the larger or have simply closed operations for several reasons. In part, this is due to the natural pattern of entry and exit into an industry given the relative resource and efficiency levels which exist among firms. The size of the market relative to scale economies for many products is a critical factor contributing to economic concentration.

Several government policies have also contributed to this trend. For example, the imposition of price ceilings on many grocery products has reduced returns to manufacturers. The nature of price control systems under inflationary conditions is such that costs will eventually reach the price ceiling and inevitably there is a lag in increasing the ceiling to reflect new cost levels. Consequently, firms must operate during the interim with zero or negative profit levels. The higher the rate of inflation the greater the frequency with which lags occur. Furthermore, during inflationary periods when social pressures from low income consumers intensify, there is a strong tendency for lags to increase in length as government officials attempt to

forestall price increases.

This implies that specialized and/or smaller firms may experience serious financial complications. In order to survive periods of negative profit levels in one or several products a firm must either cross-subsidize from profitable areas or where this option is unavailable due to the specialized nature of a firm, it must be able to rely on considerable financial resources that provide it with "staying power." Where these options are not available a firm may be forced to go out of business, reinforcing the trend towards increased concentration in the industry.

Another factor which has affected the level of concentration of industry in Mexico is the high level of transaction costs associated with doing business given the endemic nature of corruption in the system as a whole. Firms respond to high transaction costs caused by corruption by incorporating them into overhead costs. In some instances transaction costs become high enough to create barriers to entry. Consequently, to enter the industry and survive in the system large firms or firms supported by parent companies during the start-up period have a comparative advantage over smaller and independent firms.

The relatively high level of concentration prevailing in the manufacturing industry has numerous implications for our analysis. It was mentioned earlier that the degree of concentration exhibited on both sides of an exchange interface is an important factor in determining the relative levels of negotiating strength of subsector firms.

Concentration is significantly higher at the manufacturer level than at the wholesale or retail levels. While this is true it should also be mentioned that a similar trend toward increased concentration has recently begun in the wholesaling and retailing industries. In order to improve our understanding of the interactions of manufacturers and their customers the individual exchange interfaces will be discussed. However, before considering specific interfaces, general issues affecting relations between food manufacturers, wholesalers and retailers will be examined.

3.3 Forces for Change and Buyer-Seller Selection Decisions

The manner in which forces for change are assimilated in the system and modify opportunity sets depends on prior opportunity sets (Shaffer). Since opportunity sets vary by individual participant and participant type, the ability of firms to minimize the costs and risks relevant to their accounting units or to maximize the potential benefits of a change also varies. Therefore, the standard operating procedures employed by any given firm in exchange transactions with its clients may not be the same for all customer types.

Viewed in another light this implies that forces for change may influence buyer-seller selection decisions, making it more advantageous for a firm to interact with certain customer or supplier types than others. This has implications for the sales and credit terms offered by manufacturers to buyers and in turn, for the relative

importance of different distribution channels. Observation of the system in Mexico indicates that the attractiveness of sales and credit terms offered by manufacturers is positively correlated with the countervailing power of the buyer.

For example, in response to an exogenous shock to the subsector of a rise in interest rates, the following behavior was identified. Many manufacturers have severely restricted credit for traditional retailers, offer some credit to wholesalers, more to supermarket chains, while still permitting liberal credit arrangements with government marketing parastatals.

Three of the components of marketing firm countervailing power found to be directly linked with the sales and credit terms offered by manufacturers in Mexico will be highlighted in the subsequent discussion. These factors are the buying power of marketing firms, the level of marketing services they offer, and the prevalence of product scarcity. This is not meant to infer that all variations in sales and credit policies are related to these factors. Obviously the promotional policies of manufacturers are also correlated with factors such as the acceptance of the product in the market place, market share objectives which may possibly deviate from short run profit objectives, the type of retailing firm attending the target market for a particular brand and, of course, whether the product is subject to official price control.

Nevertheless, in order to be able to explain much of the variation in manufacturer SOP's by customer type, it is

necessary to examine the relative negotiating strengths shaping exchange processes at individual interfaces. This issue is of particular importance in the Mexican context due to the lack of legislation preventing price discrimination. In the U.S. the Robinson-Patman Act was enacted in 1936 to eliminate many of the price advantages obtained from manufacturers by chain stores given a superior negotiating power relative to smaller competitors. Since this type of legislation doesn't exist in Mexico, manufacturers have greater latitude in their relations with buyers, within the constraints imposed by production and selling costs. The resulting manufacturer SOP's regarding pricing policies will now be described to set the stage for the discussion of the exchange interfaces already identified.

3.4 Manufacturer Volume and Promotional Discounts

The design of volume discount tables and the use of promotions and allowances by food manufacturers in wholesaler and retailer buying transactions impact market structure. In order to highlight the implications of this issue for both market structure and firm behavior in Mexico the following approach will be used. The principal components of the Robinson-Patman Act and their relevance for U.S. manufacturer SOP's will be noted and subsequently contrasted with the SOP's employed by Mexican manufacturers.

The Robinson-Patman Act prohibits manufacturers from charging different prices to different buyers of "goods of like grade and quality" where the effect "may be

substantially to lessen competition or tend to create a monopoly in any line of commerce, or to injure, destroy, or prevent competition with any person who either grants or knowingly receives the benefit of such discrimination, or with customers of either of them." Section 2(d) of the Act also prohibits sellers from making payments or providing services to buyers unless the payments and/or services are available to all buyers on proportionally equal terms. This includes promotional and merchandising allowances, inventory credit terms, and display racks. Two main exceptions to the Act are i) where price differences are justified by the manufacturer due to differences in the costs of doing business with different customers, and ii) where the goods sold are perishable, obsolete or bankrupt merchandise.

Due to the difficulty of proving actual cost differences manufacturers have avoided making use of this exception. Since the Robinson-Patman Act places the principal burden of responsibility on manufacturers for insuring that all retailers competing in the same geographic area have access to equally priced products manufacturers have chosen to respond with the following SOP's. Promotional programs are structured so that even the smallest retailer customer in a market area can participate (Hamm). These promotional offers are published and made available to all buyers. Equal access of all buyers to promotions serves a double purpose for manufacturers. It both enables them to comply with the law and resist pressure for preferential treatment from large scale buyers.

In practice legislation of this variety precludes reflecting differences in the cost of doing business with different buyers via the promotional terms offered. The only way manufacturers can pass on lower selling costs is via volume discounts. Volume discount tables are well developed and by definition differentiate buyers according to purchase volume. Thus, unlike promotional offers, the potential cost advantages inherent in volume discount tables are only selectively available to firms.

In Mexico volume discount tables are also used, however, they are not well developed and are limited in scope. The maximum discount attainable for many products is imposed at a relatively low purchase volume, for instance at only 250 cases. Hence, a portion of the decline in selling costs associated with large volume purchases may not automatically be passed on to buyers. While volume discount tables are applied equally to all firms capable of purchasing the required volumes, promotions and allowances are not standard and may vary depending on the specific arrangements negotiated by the two parties.

The limited development of volume discount tables in Mexico and the lack of standard promotions appear to be interrelated, although the direction of influence is unclear. Incentives for large volume purchases may be offered to buyers via promotions instead of volume discounts and may reflect real differences in selling costs.

Nevertheless, the lack of standard promotions

personalizes the procurement process. In otherwords, the procurement process is subject to influence by the personal relationships which exist between buyers and sellers. Price transparency is reduced because negotiated prices are not public information. Since buyers and sellers must engage in individual negotiations procurement transaction costs increase. A common practice in Mexico are luncheons between representatives of suppliers and marketing firms to negotiate the specific terms of a purchase and many actors report concern over the amount of human resources required to carry out the procurement process.

Firms feel obliged to expend these resources given the competitive environment that exists; those businesses which have countervailing power and develop aggressive buying practices do indeed achieve conditions that yield important buying advantages relative to competitors. This has been particularly true for supermarket chains which have extracted concessionary terms that have widened their competitive edge relative to traditional retailers. Therefore, the lack of legislation designed to prevent discriminatory price concessions has probably encouraged the growth of large scale retailers relative to small retailers, yielding a higher level of retailer concentration. A similar outcome can be hypothesized for the wholesaling industry where market structure is exhibiting an increasing level of concentration due to the growth of a small number of very large scale firms that negotiate important buying advantages relative to most wholesalers.

The fact that some marketing firms are able to extract preferential treatment from manufacturers in the absence of price discrimination legislation, also has market structure implications for the food manufacturing industry in Mexico. While the impacts on market structure and performance are less clear than in the wholesaling and retailing industries, one could hypothesize that it has worked against small and medium scale firms because these are the most vulnerable to aggressive buying practices. In otherwords, by serving to reinforce the bargaining position of manufacturers relative to buyers, legislation of the Robinson-Patman variety may encourage the growth of smaller manufacturers. Consequently, the absence of this legislation may foster increased manufacturer concentration.

Further research is warranted to explore in detail the impact of the lack of standardized manufacturer pricing and promotional policies on economic concentration at all levels of the Mexican dry grocery subsector.

3.5 Manufacturer-Supermarket Interface

The success of manufacturers in penetrating and stimulating the growing market for packaged goods was highly interlinked with the development of the Mexican supermarket industry. A synergistic relationship appears to exist between the two. Both industries not only benefited from but also contributed to the expansion of the other.

The supermarket industry enabled manufacturers to gain "high quality access" to a large market exhibiting an

effective demand for both basic and non-essential food items without incurring the costs associated with forward vertical integration.. High quality access refers to the level of marketing services offered by supermarkets, expressed in terms of the attractiveness of the retail outlet to consumers regarding merchandising practices, promotional programs, cleanliness and lighting standards, etc. The supermarket industry offers a highly effective format for mass discount merchandising, advertising and promotional programs important to the preference creation strategies of an emerging industry embarked on a major new product promotion campaign.

The supermarket operator, in turn, was assured of a gradual but consistent increase in the number, width and depth of product lines available to be offered for sale; in addition to being able to rely on the advertising and promotional support of manufacturers to influence preference creation and both short and long run sales, without incurring the associated costs.

The advent of the supermarket industry and the establishment of direct linkages with manufacturers represents an improvement in the vertical coordination of the subsector, yielding a decline in distribution costs. The competitive edge obtained by supermarket retailers given their cost advantage was continually reinforced as sales grew and buying power rose proportionately. Both the increasing buying power and higher level of marketing services offered by supermarket chains have had a significant effect on their

bargaining strength relative to manufacturers.

One of the marketing services important to manufacturers is cooperation in promotional programs aimed at stimulating consumer demand. When selling to supermarkets manufacturers are assured that special promotions and offers will be passed on to consumers rather than be absorbed by the chain stores. This is in contrast to the pricing behavior of traditional retail outlets. This has been a critical factor influencing the ability of chains to negotiate special promotions unavailable to other subsector participants.

Another factor increasing the countervailing power of supermarkets is the development of "private labels." In the past some supermarket chains exhibited a limited degree of vertical integration into manufacturing, however, most chain store manufacturing operations were eliminated in the last ten to fifteen years as part of the process mentioned earlier which involved the exit of many smaller and medium scale manufacturing firms. Nevertheless, chain store interest in manufacturing has recently returned. Unstable supply or unsatisfactory sales conditions, in conjunction with increased interest in strategies encouraging consumer loyalty to the chain given higher competition levels, have combined to create incentives for the development of private label products under contract arrangements with manufacturers. The establishment of private labels creates a force tending to increase competition and reduce concentration in

manufacturing by supporting the growth of medium scale firms.

The success to date of private labels indicates that they will exhibit future growth, expanding both the number and width of product lines covered. Several factors support the growth of private labels, including the current economic recession which generates consumer concern over prices, and the increasing prevalence of product scarcity in the economy.

In Mexico the food manufacturing industry tends to be concentrated around Mexico City and the bargaining power of the food chains has also enabled them to negotiate a direct store delivery system which circumvents the need for chain store central warehouses. Food manufacturers cooperate with chain stores by applying volume discounts to the total volume purchased by a chain and then proceed to deliver individual orders to each store.

Chain stores do operate central warehouses for perishables and in some cases for private label and large volume promotional items. However, the vast majority of chain store purchases do not pass through a central warehouse.

The credit terms negotiated by supermarket chains are also generally more attractive than the terms obtained by other private sector participants. Credit terms have declined dramatically from the 30 to 60 day terms prevailing until the mid-1970s. However, chain stores currently obtain credit terms averaging 21 days in contrast to 10 day terms for wholesalers. Moreover, chain stores often retard

payments beyond the established terms. Chains require that manufacturers comply with rather strict bureaucratic conditions in order to process payments for manufacturer invoices, this SOP has the effect of giving chain stores more leeway in settling accounts with manufacturers, increasing liquidity.

3.6 Manufacturer-Wholesaler Interface

The development of the dry grocery wholesaling industry in Mexico has yielded an increased reliance by manufacturers on wholesalers to carry out the distribution function to traditional retailers. This represents an important change which began to take place in the early 1970s in response to the emergence of innovators in the wholesaling industry. Wholesaler innovators expanded the marketing services offered to retailers in important areas such as delivery, credit and promotions. They exhibited more professional behavior in terms of respect for official prices and the management, materials handling, and accounting systems utilized.

This improved behavior generated a competitive edge relative to more traditional wholesalers and produced new manufacturer confidence in the ability of certain wholesalers to distribute packaged goods in a reasonably efficient and effective manner. The confidence inspired by these changes was acquired simultaneously with the onset of an inflationary process which steadily increased distribution costs. Furthermore, transportation bottlenecks

developed in the Mexico City market area which also served to increase distribution costs to the large population of traditional retailers.

Thus, this provided a strong incentive to manufacturers to respond to wholesaler innovators by channeling a much higher volume of product through these businesses. Preferential treatment was given to five to ten wholesale businesses in recognition of the higher level of marketing services offered by them. This served to widen the competitive edge already created relative to other wholesalers, and consequently further stimulated their growth. Wholesalers obtained countervailing power relative to the grocery manufacturing industry via their increased buying power and marketing services. Countervailing power enabled some wholesalers to negotiate additional advantages from suppliers, which further widened their competitive edge, hence, increasing sales and buying power and, in turn, countervailing power in the next period.

While countervailing power has enabled a few firms to negotiate special promotions from manufacturers, promotions in the wholesaling industry as a whole are still much less prevalent than in the supermarket industry. In some cases this is due to the lower purchase volume relative to chain stores, but it also is a result of the lower level of marketing services offered in the traditional wholesaling-retailing channel, which diminishes the ability of wholesalers to negotiate more liberal terms. Manufacturers express a concern that promotions will not reach the final

consumer when distributed through this channel. While wholesalers might pass on promotions to retailers as a competitive strategy, retailers rarely pass them on to consumers.

Thus, even for the large innovative firms promotions are not as extensive as in the supermarket industry because they are not designed to impact consumer demand. This has important implications for voluntary food chains and their ability to foment the establishment of independent retail outlets capable of competing with supermarket chains. In order for independent retailers to compete effectively with chain stores they need access to similar promotional offers. However, in order to negotiate price advantages with manufacturers voluntary chains must convince them that promotional offers will in fact be passed on to consumers and receive the appropriate merchandising support. The importance of this issue will be highlighted later.

3.7 Manufacturer-Traditional Retailer Interface

The manufacturer-traditional retailer interface is a prime example of the effect of widely dissimilar negotiating strengths on standard operating procedures. The most striking aspect of manufacturer-traditional retailer relations is the greatly reduced importance of this distribution channel. Even where direct distribution networks do exist traditional retailers have been unable to negotiate stable supply systems from manufacturers. Small retailers are frequently the lowest priority customers and while a sales agent may

visit the store periodically and take an order, delivery schedules often prove highly unreliable. Retailers complain that when an order finally does arrive the quantity delivered is frequently much lower than the order size or may consist of unordered products which the retailer is pressed to purchase in order to receive the original item.

Manufacturers offer very limited promotions to retailers since their knowledge of retailer behavior indicates that promotions will not be transferred to consumers and hence, not impact consumer demand. Consequently, the promotions that do exist are generally designed to increase retailer demand for new products or products not usually carried in traditional stores via financial incentives.

Due to the low volume of purchase and level of marketing services offered by traditional retailers they lack countervailing power relative to manufacturers which would permit them to negotiate more attractive conditions. The decline in direct manufacturer distribution and credit to traditional retailers increases the transaction costs associated with the procurement process. This will be explored in the section describing the procurement SOPs of traditional retailers.

3.8 Manufacturer-Parastatal Interface

The manufacturer-parastatal interface is in direct contrast with the above interface. Parastatals probably exhibit the highest degree of countervailing power present in the system due to the superior buying power manifested by the national distribution networks of such organizations as

CONASUPO, ISSSTE and IMSS[1], and the credible threat of backward vertical integration the government presents. Manufacturers offer special conditions to governmental buyers which are frequently unavailable to any other participants in the system.

For example, in the 1983-1984 liquidity crunch many government buyers were still obtaining 60 day credit terms for dry grocery products. This yields a significant comparative advantage relative to private sector firms. Manufacturers are in a sense financing the government since product turnover rates are much higher than the credit terms obtained. This practice represents a serious cost to manufacturers which in the end is partially shifted onto consumers in the form of higher prices.

A common response of manufacturers is to restrict the amount of product sold to the government. This is also done on principle by some manufacturers in certain product areas where they fear becoming too vulnerable and losing negotiating strength if the government were to acquire too large a share of total sales.

Nevertheless, manufacturers often experience a dilemma regarding the credit issue. The superior buying power of the government makes it an important customer, yet the benefits obtained from high volume sales may be offset by extended payment periods given the opportunity cost of

[1] ISSSTE and IMSS are social security and health organizations which operate national chains of dry grocery retail outlets for government employees.

capital at current interest rates. Keep in mind that manufacturers generally do not charge interest to customers, thus, the opportunity cost of capital is not compensated.

Another consideration is the preservation of a favorable attitude on the part of the government about a company. Firms are concerned with maintaining good will towards the government in order to reduce the threat of backward vertical integration and to insure a favorable climate for price ceiling negotiations. Hence, firms may feel constrained by several factors regarding the extent to which sales may be limited to the government.

This issue reached a critical stage in the latter half of 1983 due to the prevalence of product scarcity and many firms did indeed restrict sales to the government. The government is expressing concern and beginning to exhibit a willingness to compromise with manufacturers, exchanging greater supply stability for more prompt payment periods.

3.9 Some Implications of Product Scarcity for Subsector SOP's

Product scarcity represents an obstacle to growth for all subsector participants by constraining sales and has many ramifications for manufacturer-buyer relations. Given the low level of product differentiation in the Mexican grocery industry, product scarcity serves to diminish the negotiating power of all subsector actors relative to manufacturers. Product scarcity is defined as the supply of a product available for distribution relative to the quantity demanded at the prevailing official price level. When a product becomes scarce the manufacturer has a significant

advantage relative to wholesalers and retailers, whether they be government parastatals, the supermarket industry or traditional operators. The greater the brand loyalty of consumers toward the product and the fewer the substitutes, the greater the negotiating power of the producer.

Manufacturers producing less of a product than the quantity demanded at the prevailing price level appear to behave by taking sales as a given and then proceeding to minimize distribution costs. This reflects a change in firm behavior and corresponding SOPs. When conditions of product scarcity do not prevail firms focus on sales rather than distribution costs and act as maximizers rather than minimizers. However, under scarce conditions the critical issue in the short run becomes allocation of a scarce product and the maximization of sales becomes irrelevant.

Firm behavior observed in one company indicates that sales personnel do indeed change their objective function and respond to scarcity by becoming more closely aligned with physical distribution and credit departments, adopting some of their functions. Sales departments appear to behave in this manner not only to streamline operations, but as a strategy for controlling the loss in power associated with limited sales. For products where officially imposed price ceilings at the manufacturer level allow for only narrow margins consistently over time, product scarcity occurs regularly and firms effect permanent reorganizations on the lines indicated above.

Under scarce market conditions sales personnel accept orders mainly from large volume buyers within close proximity to the plant. Consequently, non-Mexico City and/or low volume customers are at a disadvantage, experiencing the greatest procurement difficulties.

Manufacturer behavior may also include eliminating all credit and in some extreme instances requiring payment in advance of delivery, with customers receiving few assurances about the product shipment date and potentially waiting up to a month after payment is made to receive shipment. In addition, all promotions are eliminated for scarce products. Marketing margins are generally squeezed to a mininum or even become negative for some products. Given the current high interest rates and liquidity crunch this type of scenario represents a significant cost to buyers.

A buyer forced to operate under these conditions in order to obtain products important to the success of his business may experience the phenomenon of decapitalization. Ideally, a firm maintains inventory levels which can be rotated in approximately the same period as the credit terms offered by the supplier. In this manner the firm establishes a self-replenishing pool to cover the operating costs of inventory maintenance. Where the period required for product rotation is significantly greater than the available credit terms the firm is forced to expend additional resources on the simple maintenance of inventory.

The financial resources of the firm and the frequency with which it must purchase products on these terms

determine the extent to which this becomes a serious problem affecting the financial viability of the business.

The high levels of inflation prevailing in 1982 and 1983 (95 percent and 78 percent, respectively), caused manufacturer costs to reach the official price ceilings for several products simultaneously. Thus, the scarcity which is always introduced into the system when this occurs was generalized for several products, (including evaporated and powdered milk, cooking oil, shortening, toothpaste, tea, tuna, and instant coffee). This caused a significant decline in sales for all subsector participants.

3.10 Stockpiling of Merchandise by Marketing Firms

Another factor which is highly related to the decapitalization issue is the rate of inflation of the economy. When operating under inflationary conditions the risk of becoming decapitalized increases, as the resources generated from the sale of a product or product line may be insufficient to replace it and maintain the appropriate inventory level in the next period. A common strategy employed by marketing firms in many countries to avoid this problem is to sell existing stock at the expected replacement value.

In the Mexican context, where price ceilings are enforced by the government, firms undertake the risk of legal penalties if they follow this behavioral mode. An alternative response is to stockpile merchandise until a price ceiling is raised and the merchandise can legally be sold at the replacement value. This is a concern commonly

raised and discussed among both the Mexican government and the public. It is generally assumed that a principal cause of product scarcity is stockpiling by marketing intermediaries. Our observation of the system yields a somewhat different conclusion.

Two major factors constrain the ability of wholesalers and retailers to divert product from the market into storage in any significant quantity or length of time. The first consideration is the quantity of product available to be distributed. As was mentioned earlier, when the cost of production has reached the price ceiling and a price increase is anticipated, producers drastically cut back, if not terminate, production. Consequently, the amount of product which could potentially be stockpiled is extremely limited, this acts as a critical constraint to stockpiling.

Secondly, any decisions on storing versus selling a product must take into account the opportunity cost of the capital invested in the product. Given the high nominal level of interest rates prevailing in the economy, the opportunity cost is quite high, and could negate the expected price increase if the product were withheld from the market for any significant length of time.

Nevertheless, over the very short run (e.g. one to two months), incentives to store rather than sell probably do exist, for the following reason. In the case of officially controlled products, at the point when a price increase is expected margins will have been squeezed to a minimum and possibly eliminated by manufacturers. During this period

businesses may actually lose money on the sale of the products in question. Therefore, product storage for short periods of time immediately prior to a price rise may take place as a strategy for recuperating part of the loss incurred in the earlier period, helping firms to generate a profit on an annual basis.

It is important to understand that this behavior does not represent speculative behavior in that it in no way influences the forthcoming price increase. Marketing firms are not attempting an aggressive strategy to create pressure to raise prices since applications for increases in price ceilings to the regulatory agency SECOFI, (Federal Commerce Department), are made and negotiated by manufacturers. Rather this behavior represents a defensive strategy in response to the environment created by the official price control system, which enables them to minimize losses on the sale of specific products.

Therefore, while the potential for stockpiling does exist, it occurs only in the very short run when the opportunity cost of storing vs. selling is lower than the expected benefits, and it may not be realized at all given a critical constraint - the low quantity of product available for distribution. Thus, our analysis indicates that although a limited amount of stockpiling does occur in the marketing system it does not represent the <u>cause</u> of the product scarcity problem. Product scarcity originates at the manufacturer level and is highly interrelated with the

official price control system which constrains returns in both the production and marketing of certain goods, distorting price signals and reducing incentives to production.

3.11 Conclusions

The effect of relative negotiating strengths on grocery manufacturer credit and promotional terms at manufacturer-buyer interfaces was explored. Several impacts of the buyer-seller bargaining process on structural conditions in the buying and manfacturing industries were suggested. For example, since the supermarket industry was the first to develop countervailing power relative to the food manufacturing industry (and in the absence of legislation prohibiting price discrimination) it was able to negotiate conditions which substantially reinforced the buying power advantage already obtained from chain store purchase volumes. This served to further widen the competitive edge of the supermarket industry relative to the traditional retailing industry, stimulate a higher market share and in turn, greater countervailing power in the next period. The full impact of the growth of the supermarket industry on retail structure is demonstrated in Chapter 5.

Product scarcity has also had important implications for subsector structure and performance. By reducing the bargaining power of subsector participants relative to manufacturers, product scarcity has shifted costs away from manufacturers to other industries in the subsector. Traditional retailers have been more adversely affected than supermarkets and wholesalers since they have always

exhibited the lowest level of negotiating strength. The restriction in credit terms, in conjunction with the limited financial resources of traditional retailers, have combined to threaten the financial viability of these businesses. While data are not available to document the number of traditional retailer bankruptcies since the recession began in 1982, trade associations and wholesalers assert that bankruptcies have increased significantly and that many retailers have become seriously decapitalized. Consequently, the bargaining process has had a feedback effect on structural conditions in the retailing industry, which may alter future market performance by further increasing the market share of supermarket chains relative to traditional retailers.

CHAPTER 3

REFERENCES

Hamm, Larry G., April 1982. "Retailer-Manufacturer Relationships in the Food Sector -- Some Observations From the U.S.A." N.C. Project 117, Working Paper No. 64.

Shaffer, James D., May 1980. "Food System Organization and Performance: Toward a Conceptual Framework." American Journal of Agricultural Economics, Vol. 62, No. 2., pp. 310-318.

CHAPTER 4

DRY GROCERY WHOLESALING IN THE MEXICO CITY METROPOLITAN AREA

4.1 Introduction

Dry grocery wholesaling in Mexico City is a highly dynamic industry. In the past, food wholesaling - both dry grocery and fruit and vegetable - took place in La Merced. La Merced is a central market area in downtown Mexico City consisting of a large retail perishables public market surrounded by many blocks of wholesaling and wholesaling-retailing activities conducted in old buildings converted into warehouses. However, in 1983 La Merced was closed and a new central wholesale market (Central de Abasto) was opened in Ixtapalapa, an area on the south-eastern edge of Mexico City.

The establishment of a new central wholesale market is one of several forces for change which are present in the system. This chapter will provide a brief description of the history and development of La Merced, and identify: the forces for change in dry grocery wholesaling, constraints to growth and modernization, a taxonomy of wholesaler types and their corresponding degrees of modernization, and the expected future directions of dry grocery wholesaling in Mexico City. Due to the lack of secondary information on dry grocery wholesaling most of the information presented in this section is based on extensive personal interviews with a wide variety of subsector participants.

4.2 A Brief History of La Merced

La Merced emerged as the principal market area for food wholesaling and retailing at the turn of the century. While La Merced primarily developed to market perishables, many other product lines were also traded there, such as clothing, fabrics, shoes, paper products, housewares, and of course dry groceries. Dry grocery wholesaling represented a significant part of total warehouse space and sales volume. The Urban Development Commission estimates that dry grocery warehouses comprised 20 percent of total warehouse space while other unpublished sources estimate 40 percent. Warehouses were very small-scale, averaging 75 square meters (CODEUR).

Both wholesalers and retailers were originally concentrated in the central commercial district formed by La Merced. As Mexico City grew grocery retailing spread throughout the metropolitan area, reducing the distances between supply and consumer demand points. This involved the construction of several hundred public markets around the city by the city government, the growth of supermarket retailing and the expansion of independent neighborhood grocery stores. With the decentralization of retailing, the majority of dry grocery volume generated in La Merced in recent years was sold on a wholesale or wholesale-retail basis.

La Merced experienced rapid growth induced primarily by two factors. One was the increasing demand for food products

brought on by the high population growth rate of the city as a result of both a high natural birth rate and rural-urban migration. Secondly, the growth of La Merced was due to its increasing importance as a national clearing house for products traded at the wholesale level. La Merced grew from a four block area when it initiated operations to 53 blocks encompassing a 100 hectare zone (CODEUR).

The importance La Merced gained as a supplier of the provincial (non-Mexico City) market was related to several factors. One important factor was the inability of manufacturers to recover through freight charges the increasing distribution costs they faced, given the restrictions against f.o.b. pricing for items covered by price control regulations. (Since prices are generally fixed at the manufacturer and retail levels, wholesalers are not subject to specific restrictions.) Another factor since the 1970s has been the growing prevalence of product scarcity which has given manufacturers incentives to reduce sales to outlying customers. Therefore, manufacturer behavior has forced an increase in the demand of provincial businessmen for the services of Mexico City wholesalers. Most sales to the provinces are to wholesalers rather than retailers as businessmen look to the advantages of large volume orders.

As the city grew from 3,000,000 inhabitants in 1950 to over 14,000,000 in 1979 the volume of product traded in La Merced increased dramatically. Quickly, the physical warehouse facilities in La Merced became inadequate due to the difficulty of modernizing small, low ceiling and frequently

multi-story warehouses. Most warehouses in La Merced were rented, often from third and even fourth parties, further complicating the ability of wholesalers to introduce improvements. Hence, these conditions acted as a barrier to growth, limiting the scale of operations of wholesalers and precluding the introduction of modern warehousing facilities and materials handling methods designed to efficiently manage the large product volumes handled.

In addition, worsening sanitary conditions, garbage collection, and traffic bottlenecks became troublesome issues for the city authorities. Traffic bottlenecks arose from both the entry and exit of traffic into the crowded central city, and traffic congestion within La Merced caused by the increased trading level. Traffic stagnation within La Merced lent to a situation rife for corruption. While businessmen or truckers waited to enter and exit La Merced it was easy for city policemen to collect "transit fees." The emergence of a combination of traffic and associated corruption constraints eventually became important obstacles to doing business.

Consequently, since about 1975 serious consideration was given by high level authorities to the concept of a new central wholesale facility to be constructed somewhere on the outskirts of Mexico City. The impact on the grocery wholesaling system of the eventual opening of the Central de Abasto, along with the manner in which wholesalers responded to the barrier to growth imposed by La Merced prior to its

demise in 1982, will be illuminated as the discussion proceeds.

4.3 The Development of Dry Grocery Wholesaling in Mexico City

The development of dry grocery wholesaling in the Mexico City market area will be described in this section. The reader should keep in mind that fruit and vegetable wholesaling functions differently than dry grocery. Caution should be exercized in making any inferences from this discussion regarding perishables wholesaling or wholesaling in other cities.

Two broad types of wholesalers exist in Mexico, those selling on a wholesale, and those selling on a "medio-mayoreo" basis. Medio-mayoreo literally means half-wholesaling and is typically translated as wholesaling-retailing. This translation appears to be much more appropriate for perishables marketing than for dry grocery in the Mexican context. Selling on a medio-mayoreo basis (for packaged goods) is defined as when products are sold in less than case lots, specifically, half-cases or by the dozen. Thus, they are not actually sold on a retail basis because the wholesalers won't break bulk to the extent of selling individual units. Neither are they sold wholesale which would imply sales on a per case basis.

To avoid the lack of precision of the wholesaling-retailing translation the Spanish term medio-mayoreo will be used. Wholesalers selling primarily on a medio-mayoreo basis are referred to as medio-mayoristas. Medio-mayoreo

sales have important implications for wholesaler and retailer cost functions that will be discussed later.

While La Merced served wholesaler, medio-mayorista, and retailer clients in both Mexico City and the provinces, the standard operating procedures used in each instance were distinct. Until recently Mexico City retailers visited La Merced personally to procure merchandise on a cash and carry basis, known as the "ventas al mostrador" system. In contrast, wholesaler and medio-mayorista clients, both provincial and Mexico City, received delivery from La Merced wholesalers with liberal credit terms, averaging 30 days.

The lack of delivery services for Mexico City retailers until the 1970s was in part due to disinterest among retailers. Before transportation bottlenecks developed retailers were able to visit La Merced with relative ease and transport merchandise to their stores at a low cost. Retailers preferred to visit La Merced and compare prices, feeling that this SOP enabled them to minimize procurement costs.

During the 1970s several factors converged that served to change this situation and cause the creation and expansion of a retailer demand for product delivery services from wholesalers in the Mexico City area. For instance, as traffic problems became exacerbated product procurement in La Merced became so time consuming that the opportunity cost of leaving the store poorly attended was no longer insignificant in terms of lost sales. Also, the "transit fees" mentioned earlier made the transaction costs associated with

personal procurement visits another factor to consider.

Furthermore, retailers had been less concerned previously about taking time to visit wholesalers to procure inventory, due to the existence of direct store delivery by food manufacturers. Direct store delivery was quite prevalent until the late 1970s, retailers purchased a large percentage of their product needs from manufacturer salesmen without having to leave the store. Consequently, the volume of product procured from wholesalers was smaller and more easily handled on a cash and carry basis.

However, as manufacturers began to concentrate on controlling distribution costs and diminished direct distribution accordingly, retailers were forced to pursue new procurement policies and rely more on wholesalers. Hence, the traditional wholesaler-retailer supply arrangements of cash and carry procurement became inadequate for larger volume traditional retailers.

The expansion of retailer demand for delivery services paralleled the emergence of wholesaler innovators that appreciated the opportunities for growth this presented. Manufacturers recognized important changes in the operations of these wholesaler innovators and responded by transferring more of the distribution function to them. A taxonomy of Mexico City dry grocery wholesalers and a description of some of the standard operating procedures they employ is presented below.

4.4 A Taxonomy of Mexico City Wholesalers

In order to highlight the extent of differences among wholesalers the range of SOP's utilized will be described. Standard operating procedures act as effective units of analysis for comparing wholesalers since differences in SOP's impact marketing margins and performance.

Wholesalers can be differentiated according to several criteria, including materials handling methods, accounting methods, pricing policies, customer types served and the services offered. The sales volume of the wholesale firm appears to be correlated with the SOP's employed in these areas.

Five basic services are considered as key indicators of wholesaler type: sales method, width of product line, order taking method, product delivery method, and payment method. A taxonomy of possible customer types served includes traditional retailers disaggregated according to purchase volume and other wholesalers, either provincial or Mexico City. Materials handling methods include the use of (or lack of) pallets, pallet jacks, racks, forklifts, dollies, and four-wheel hand carts for order filling and merchandise storage. Accounting methods can be computerized or manual. Pricing policies may or may not include margin mix strategies, special promotions and adherence to official prices.

The wholesaling industry is quite heterogeneous and many combinations of the above SOP's are encountered. Nevertheless, four basic wholesaler types stand out as

representative of the principal participants operating in the wholesaling industry. These wholesaler types will be referred to as traditional wholesalers, innovators of the 70s, latecomers, and innovators of the 80s.

The wholesaling industry is a traditional industry experiencing a transition to the modern. Although this transition began approximately 10 years ago the industry has not yet developed a dual structure. Progressive elements have been identified but these innovators of the 70s have not completed the transition to the modern. Hence, while the structure of the Mexico City wholesaling industry does exhibit a higher degree of economic concentration brought on by the growth of progressive wholesalers, a complete dichotomy does not exist between the traditional and the progressive operators, as is the case in the retailing industry.

4.4.1 Traditional Wholesalers

Traditional wholesalers still operating businesses along the lines of most wholesale firms in the early 1970's are common. Only a narrow line of products are offered (100 to 300), the sales method is mainly medio-mayoreo, the payment method is cash, no delivery services are provided, orders are taken over-the-counter and warehouse personnel fill orders while the customer waits. The dominant customer type is the small-scale retailer. This system can be summed up as a traditional cash and carry operation and few wholesalers of this type are large scale operators.

Materials handling methods frequently include

unpalletized merchandise and product movement by hand or with dollies. The lack of pallets contributes to higher product spoilage rates and the prevalence of medio-mayoreo sales requires break-bulk operations which contribute to higher pilferage and damage rates and more labor-intensive materials handling methods.

Traditional cash and carry wholesalers generally use limited manual accounting systems which generate only rudimentary information on sales and profits and exclude analysis of the on-going operating performance of the firm regarding margins, operating costs, product turnover rates, pilferage, etc.

Monthly sales of traditional wholesalers in Mexico City in 1984 ranged from 20 to 70 million pesos.

4.4.2 Innovators of the 70s

The emergence of innovators employing new standard operating procedures contrasts sharply with the traditional wholesalers just described, creating a powerful competitive force in grocery wholesaling. The origin of these innovators lies in the growing operating costs associated with doing business in La Merced during the 1970s. In effect, traffic and corruption problems acted as forces for change stimulating an interest in alternative locations for doing business. Wholesalers began to respond to these forces several years before the government constructed the Central de Abasto by opening new businesses outside La Merced, frequently in the periphery of the Mexico City metropolitan area. Some of the

principal businesses to introduce branch warehouses were: the Sahuayo Group (el Grupo Sahuayo) under the direction of the Villaseñor family, Figueroa y Bojorge, Briseño, and El Zorro.

This trend began in 1972 when Sahuayo rented a warehouse on the outskirts of the city in the neighborhood (colonia) Agricola Oriental. The decentralization of Sahuayo was looked on by other wholesalers as a risky move since the pole of all commercial activities was in La Merced. Wholesalers felt that by decentralizing from the center of activity a business would be isolating itself from demand sources. To succeed, Sahuayo's move required a change from a passive marketing strategy of waiting for customers to come to the warehouse to an aggressive marketing strategy designed to seek out retailers and narrow the distance between supply and retailer demand points.

Sahuayo introduced four principal services to retailers that represented a major change relative to the operations of most wholesalers. These were delivery services, a wide line of products, credit, and sales agents visiting stores on a regular basis to take orders.

The move to the periphery had many critical implications for wholesale operations. First of all, it eliminated the constraints to efficient growth associated with doing business in La Merced. Operating in the periphery permitted Sahuayo and others to achieve a larger scale of operation under one-story conditions with loading docks for merchandise reception and dispatchment. Specifically, the

warehouses of innovators vary between 2500 m^2 and 8000 m^2 and are generally owned rather than rented. The transition from multi-story to one-story warehouses began with the move to the periphery, and this switch represents a critical event in the development of modern wholesaling.

Multi-story warehouses are an obstacle to growth, hindering the adoption of efficient materials handling methods and limiting the scale of operation obtainable relative to one-story warehouses with the same cubic space. The transition to one-story facilities took place during the 1949 to 1959 period in the U.S. and facilitated the introduction of improved materials handling methods, initiating the gradual mechanization of warehouse operations over a thirty year period (Kochersperger). The transition to one-story warehouses is also expected to represent a significant turning point in the development of modern wholesaling in Mexico.

In addition, the larger physical space obtained by moving to the periphery facilitated the introduction of wider product lines, usually ranging from 1000 to 2000 products. This represented a major improvement in services to retailers since it presented the opportunity for lowering retailer procurement transaction costs by concentrating purchases with one wide-line supplier. Furthermore, by offering a wider product line the number of products without price controls increases dramatically. Thus, businessmen can employ margin mix strategies which use higher margin

non-controlled items to compensate for the low margins enforced on officially priced items. Wider product lines have proved to be a key incentive to businessmen to respect official prices.

As these businesses grew they recognized the need for more professional management techniques and the financial consolidation of each branch under an organized accounting system. Several firms have hired full-time outside managers, removing the constraint to growth implied by complete family control of a business since expertise in the various areas necessary for expanding a business is generally lacking if only family members are tapped. The introduction of a more professional management system included instituting "buying committees" to realize the procurement function and the development of internal training programs to train employees in all aspects of the business in order to generate qualified personnel to staff new warehouses as established. Currently Sahuayo operates nine warehouses, while both Figueroa y Bojorge and El Zorro operate 6.

Some innovators have introduced computerized accounting systems and all have improved the data processing aspects of doing business. Nevertheless, frequent performance reviews using standard variables and ratios designed for effective analysis of marketing firms is only beginning to be considered important and current practices are still very ineffective. A lack of support services exists in terms of specialized firms with expertise in this area, hence, the rate of change is slowed.

According to some industry observers the improved image of these businesses was reinforced by the more professional behavior exhibited regarding official prices. Most have tended to adhere to official prices, utilizing the advantages of wider product lines to cross-subsidize sales on low profit items where necessary to keep within price ceilings. As a result, innovators have generally benefited from reduced government price surveillance.

In addition, they have carried out aggressive pricing policies, offering frequent promotions by passing on manufacturer special offers to retailers. This, in conjunction with respect for official prices, has contributed to greater negotiating power, enabling them to obtain even more advantageous terms (relative to other wholesalers) from manufacturers, further reinforcing their competitive edge. Hence, the absence of legislation prohibiting price discrimination is hypothesized to be an important factor contributing to the accelerated growth of a core group of innovative wholesaling firms.

Although the materials handling methods of innovators have improved as a direct result of the physical facilities in which they operate (one-story warehouses with loading docks), nevertheless, current practices exhibit clear inefficiencies. While innovators introduced palletized merchandise storage they have been slow to adopt improved order picking methods. Orders are still picked primarily using dollies rather than mobilizing pallets with pallet

jacks. This standard practice is partly related to the manner in which vertical and horizontal space is utilized. Increasing construction costs and property values have recently caused wholesalers to attempt to maximize <u>useable</u> (cubic) storage space, however, given a paucity of knowledge of appropriate methods the results have been less than satisfactory.

Boxes are stacked up to five meters in height without racks or periodic placement of pallets to separate the layers and protect products from damage caused by excessive weight. This system is highly labor-intensive with two to three people required to lower merchandise from the top of stacks to pick each order. This practice also precludes the use of a first-in first-out inventory control system. Narrow aisles are prevalent, complicating the maneuvering of pallets with pallet jacks. Merchandise lay-out systems are not used, hence the location of each product is random and frequently the same product is stored in several locations. This becomes a major constraint as product lines are widened and sales volume increase because much labor time is required to search for products in the order picking process.

The rapid growth of innovators has notably aggravated these problems. Those innovators of the 70s operating 5000 m^2 warehouses average 85 laborers (excluding administrative personnel) per warehouse. Rising labor costs and labor management concerns have caused wholesalers with expansionary plans to seriously examine current labor-intensive materials handling methods.

Innovators have typically focused on traditional retailers as the principal customer type. However, since most sales are on a wholesale rather than a medio-mayoreo basis and minimum order sizes are applied to deliveries, the smallest retailers tend not to be regular customers. Furthermore, the historical focus on traditional retailers is declining currently in favor of the provincial wholesaler market segment. Serving larger customers (wholesalers rather than retailers) enables wholesalers to take advantage of economies of scale in the order picking, invoicing, and collection processes, thereby reducing costs. One key wholesaler reports that non-Mexico City sales increased from 14 percent in 1980 to 38 percent in 1983.

The competitive advantages generated from the advances introduced by innovators has propelled them into the largest scale wholesalers in the industry. For example, annual sales in 1983 for the largest wholesaling firm, the Sahuayo Group, are estimated at over 16,800 million pesos (112 million dollars).

4.4.3 Latecomers

Many wholesalers were slow to respond to the forces for change which emerged during the 1970s and to adopt the innovations introduced by other wholesalers and demonstrated as effective. In the past five years a large number of latecomers have adopted many of the SOP's employed by the innovators of the 70s, including delivery, credit, sales agents, and wholesale (vs. medio-mayoreo) sales. Latecomers

are generally medium scale operators and are still in the process of introducing a broad product line. Many sell from 500 to 800 products and emphasize provincial wholesalers and Mexico City medio-mayoristas, rather than retailers as the dominant customer type.

One of the reasons that latecomers focus on the wholesaler and medio-mayorista market segment, is because their lower sales volume doesn't generate enough revenue to cover the overhead costs required to maintain a large distribution network to small retailers.

Latecomers generally operate in one-story warehouses from 1000 to 2000 m^2 and show some improvement in materials handling methods relative to traditional operators, primarily through the use of pallets. However, pallets are often not individual but rather constructed in large stationary units. Hence while product spoilage rates are reduced the product movement function of ordinary pallets can not be taken advantage of, even in the product reception and storage activity. Furthermore, most latecomer warehouses don't have loading docks, which not only further increases labor use in the product reception function, but also exposes wholesalers to the pilferage costs associated with unloading merchandise on the street.

On the other hand, the narrower product lines and lower sales volumes of latecomers causes them to feel less pressure to maximize the use of vertical and horizontal space. Therefore, warehouses are organized with wider aisles and lower stacks of merchandise, practices which reduce labor

requirements. Consequently, on balance the materials handling methods of latecomers may be no more inefficient than those of innovators.

Latecomers are introducing improvements in accounting systems by hiring accountants that provide some financial management services. However, improvements have not reached the computerization stage and latecomers also appear unaware of many of the basic operating parameters they should be concerned with in order to assess and evaluate the profitability and efficiency of their businesses.

Latecomer businesses in 1984 in Mexico City were averaging approximately 150 million pesos in monthly sales.

4.4.4 The Innovators of the 80s

The arrival of the 1980s and the emergence of strong forces for change are stimulating the creation of new innovators, different than those firms introducing innovations during the 1970s. The innovators of the 80s can be expected to lead the continuing transition of the wholesaling industry toward more efficient materials handling methods and full-service wholesalers extending a broad array of services to retailers. These nacient innovators of the 80s will be referred to only briefly here since they are discussed in detail in the section on voluntary chains.

The rapid growth and expanding market share of the supermarket industry is quickly becoming a serious threat to the future livelihood of retailers and hence to the wholesalers that serve them. The declining market share of

the traditional retailing industry is serving as an important force for change in the wholesaling industry that strongly favors voluntary chains. Voluntary food chains decrease distribution costs through closer coordination of the manufacturer-wholesaler and wholesaler-traditional retailer interfaces, thereby increasing the competitive strength of independent retailers and the voluntary wholesalers that supply them. Just as in the United States and Europe, fear of survival is the primary force motivating the creation of voluntary groups in Mexico.

A primary innovator in the Mexico City wholesaling industry, Salvador Castillo, founded the first Mexican franchise of the European voluntary chain, SPAR, in 1982. Currently wholesalers are watching closely while Castillo undertakes the risk of adapting the voluntary chain concept to Mexico. The medium scale wholesalers (latecomers) appear to be the most interested in voluntary chains since they present the opportunity to increase buying power by pooling buying volumes among several wholesalers all operating under the logo of a voluntary group. Several wholesalers are actively exploring this possibility in their quest to gain market share relative to the innovators of the 70s and the successful establishment of SPAR could be expected to yield an important demonstration effect. In contrast, the market power of the innovators of the 70s and their expanding high volume distribution networks to the provincial market, affords them the luxury of waiting till their competitive positions are more greatly threatened before acting.

Castillo was also the first to introduce modern, self-service cash & carry warehouses in Mexico City. While voluntary chains are designed to extend complete delivery and management services to medium-scale retailers, self-service cash & carry (C&C) warehouses are designed to serve very small retailers that often purchase in less than case lots. C&C's utilize racks for product storage and display and employ efficient materials handling methods. The elimination of order pickers allows C&C's to reduce prices relative to traditional personal-service cash and carry warehouses. For high value items cases are split and small quantities are shrink-wrapped in units called "multi-packs."

Small retailers have responded very favorably to the concept of a wide-line of products sold on a self-service basis, and significantly, have tended to broaden the product assortment purchased beyond only low-margin staples since they can: view products directly, make purchase decisions at their leisure, and experiment with new products with a minimal investment by buying multi-packs. Retailer selection of improved product assortments benefits both wholesalers and retailers by increasing average gross margins. Most importantly, consumers are benefited by the expanded product offerings available to them and the reduced incentives to retailers to violate official prices on staples.

4.5 Wholesaler Decentralization

The decentralization of wholesaling was quite gradual initially, increasing rapidly since 1980. After 1980

distribution and operating costs rose sharply in response to the onset of substantially higher inflation rates, and in conjunction with the construction of the new central wholesale market, combined to create a critical mass of incentives to decentralize. The impending opening of the new wholesale market brought home to wholesalers the urgency of defining the most appropriate strategy for replacing their existing warehouse space in La Merced and meeting their plans for expansion.

A major factor affecting the decisions of wholesalers was the higher cost per square meter of purchasing warehouses in the new market relative to the costs of purchasing (or renting) warehouses in other locations. In addition, the terms for purchasing warehouses in the Central de Abasto were also an important concern.

Space in the new market is purchased on a condominium basis with a 99 year license to operate. The government retains control over the market and to a certain extent over the specific activities realized within it. Potentially, the government could change the ground rules for operation or attempt to keep tabs on the inflow and outflow of product on an individual wholesaler basis. This concerns wholesalers given the failure of most to report accurate income to the government for tax purposes.

In order to encourage the transfer to the new wholesale market the government closed La Merced in December of 1982, only permitting outgoing merchandise movement. Essentially all wholesalers operating in La Merced purchased some space

in the Central de Abasto by August of 1983. However, the move to the new wholesale market induced many wholesalers to purchase or rent larger warehouse facilities in other locations, fulfilling their total space requirements at a lower cost. Furthermore, they could simultaneously insure a certain degree of independence from the potential government surveillance of operations in the new wholesale market.

Thus, the opening of the new wholesale market acted as a strong force for change in favor of the decentralization of dry grocery wholesaling, reinforcing the trend already in existence since the 1970s.

In order to determine the extent of wholesaler decentralization data were obtained on the number and location of wholesalers during late 1982 and the first half of 1983 before the transfer to the new wholesale market had been completed. Due to the unavailability of data on wholesaler numbers and location from either census, government ministry or trade association sources the customer list of a major manufacturer delivering to essentially all wholesalers was obtained.[1] This information demonstrates the prevalence of wholesaler decentralization.

One hundred fifteen wholesalers were identified in the metropolitan area operating a total of 156 warehouses, indicating the increasing presence of branches. Two thirds

[1] The names and addresses of the wholesalers comprising the Mexico City wholesaler population are available from the complete report submitted to Fidec entitled: "The Mexican Dry Grocery Subsector and the Identification of Policies Supporting the Establishment of Voluntary Food Chains," 1984.

of the businesses were located outside of La Merced: 48 in the periphery of the metropolitan area, 55 in other locations dispersed throughout the city, and 53 in La Merced. A total of 160 medio-mayoristas operating 190 establishments exhibit the following distribution: 51 in La Merced, 57 in the periphery and 82 in other locations.

Since all of the wholesalers that operated warehouses in La Merced purchased some warehouse space in the Central de Abasto, to determine the current distribution of wholesalers it is merely necessary to count the same number of firms formerly operating in La Merced as businesses in the new wholesale market. Clearly, despite the opening of the Central de Abasto, the decentralized structure of wholesaling presented above remains intact.

4.6 The Role of the Central de Abasto in the Dry Grocery Wholesaling Industry

Although the Central de Abasto has not become the center of dry grocery wholesaling activities as expected by public officials, nevertheless, by inadvertently encouraging wholesalers to open warehouses in modern, independently located facilitites, it has indirectly eliminated the prior obstacle to growth regarding physical expansion which existed for wholesalers operating in the crowded conditions of La Merced.

Wholesalers operating businesses in both the Central de Abasto and other locations were interviewed regarding the expected importance of sales in the wholesale market relative to sales in their other businesses. These wholesalers

expressed mixed views on this topic due to uncertainty regarding the acceptance of the new market among retailers and provincial customers and the oversight role of the government. However, by the fall of 1983 the following consensus appears to have emerged. Most medium and large scale firms will perform the bulk of the product storage function in branch warehouses, utilizing the high cost central market warehouses for sales to the high volume (high turnover) provincial market.

One of the most important functions wholesalers expect the Central de Abasto to perform is to facilitate the price formation process. As wholesalers decentralize to larger warehouses and consequently acquire the potential for widening product lines as a strategy for improving both services to retailers and average gross margins, the need to access timely information on the prices of competitors increases. When wider product lines are sold the number of non-controlled products climbs dramatically, contributing to a higher level of price competition. This is evident currently in businesses offering wide product lines. These firms generally have promotions on 15 to 30 items simultaneously relative to three to five items in specialized firms. As a result, the importance of information on the prices of competitors becomes evident.

The central wholesale market facilitates the price formation process by allowing wholesalers to obtain daily price information at a low cost. While an official price

reporting system does not exist it is an accepted practice for wholesalers to send runners to each others businesses to gather price data. This information may then be used to determine the prices that firms will relay to branch warehouses located throughout the city.

The new wholesale market has supported the growing interest of Mexico City retailers in improved services, most notably delivery, from wholesalers. The location of the wholesale market on one extreme of the metropolitan area has made access costly for many retailers. A sampling of retailers conducted in the summer of 1983 indicated that most retailers were not visiting the Central de Abasto as of yet. Instead retailers appear to be seeking out wholesale suppliers located in their general vicinities. This will be explored in more detail later in the section examining retailer procurement SOPs.

4.7 An Analysis of the Operating Performance of Three Wholesaler Types

A comparison of the marketing margins of traditional wholesalers, latecomers and the innovators of the 70s indicates that significant differences do exist and are correlated with the level of marketing services provided by the wholesaler. The operating results of the innovators of the 80s are not included since their arrival on the scene has been so recent that clear results are not yet available. Average gross margins will be considered and are defined as net sales minus the cost of goods sold, divided by net sales.

Traditional wholesalers not offering delivery services, credit or a wide product line operate with the lowest average gross margin, varying from 4 to 5 percent (see Table 4.1). The average gross margins of latecomers that offer delivery, credit, and a medium product line vary between 6 and 7 percent. The innovators of the 70s generally operate with an 8 percent average gross margin, and as the product offerings are broadened to include many non-grocery lines such as housewares, non-prescription drugs, school supplies, etc.; the average gross margin may be somewhat higher.

Operating costs for traditional firms tend to vary from 3 to 4 percent and average 5 to 6 per cent for latecomers and innovators. The difference is mainly comprised by delivery services which wholesalers assert increase operating costs by approximately 2 percent. It is evident that the innovators of the 70s obtain the highest net margins, usually ranging from 2 to 3 percent vs. 1 to 2 percent before-tax net margins for traditional operators and most frequently 2 percent net margins for latecomers. Clearly, the data do not suggest excess profits in the Mexico City dry grocery wholesaling industry as many policy makers have asserted.

It was not possible to conduct a formal survey of prices in wholesale establishments given the budgetary and time constraints faced by the author. However, informal comparisons of price levels between the three wholesaler types predictably indicate an inverse correlation with operating scale. As the scale of operation increases

TABLE 4.I MARKETING MARGINS AND OPERATING COSTS, BY WHOLESALER TYPE MEXICO CITY, 1982-1983

Wholesaler Type	Gross Margin % of Sales	Operating Costs % of Sales	Net Margin % of Sales
Traditional	4 - 5[a]	3 - 4	1 - 2
Latecomers	6 - 7	5 - 6	1 - 2
Innovators	8	5 - 6	2 - 3

[a] The range of margins and operating costs observed is reported for each wholesaler type.

SOURCE: Author

wholesalers realize buying advantages that allow them to lower prices relative to smaller competitors. Since operating scale tends to be positively correlated with the width of the product line and product line width is positively correlated with the average gross margin, it follows that average gross margins are negatively correlated with the absolute prices charged. In otherwords, those firms with higher average gross margins often exhibit the lowest price levels relative to competitors.

At first glance this assertion may appear misleading since we would expect firms offering lower price levels to have lower gross margins. However, further examination leads us to recall that average gross margins don't provide information on the margins and prices of specific products. Since a major difference exists in the width of the product line offered between traditional and innovator businesses an average gross margin represents a very different product mix in each case. Consequently, the comparison of average gross margins doesn't permit us to make direct comparisons between the prices and margins of the same selection of products.

Nevertheless, observations of wholesaler behavior support the following assertion. When a narrow product line consisting of basic grocery products is compared between traditional and innovator businesses, gross margins and prices on these products are the same or lower in innovator businesses than in traditional businesses. The reason prices may be the same in spite of the discrepancy in buying

volume is because little price competition takes place on basic food products which are subject to price control. For regulated products manufacturer margins as a rule are constrained to low levels not giving them sufficient financial flexibility to offer extensive discounts. Of course, the volume discounts and promotions that are available will be taken advantage of by large scale wholesalers, allowing them to offer lower prices in some instances.

However, the above description is based on the assumption that wholesalers are not violating official prices. When this assumption is removed more significant price differentials may be created between traditional and innovator wholesalers. Although wholesalers of all types may violate official prices this behavior is much more common for traditional wholesalers than for innovators. Because innovators are wide-line operators they have the flexibility to increase their competitive strength by maintaining low margins in basic food products.

Since this option is not available for traditional wholesalers, for products where lower than 2 percent gross margins are permitted, traditional wholesalers frequently react by selling above official prices. This is most common under conditions of product scarcity. Therefore, when the same product mix of basic grocery items is compared we find that the correlation between gross margins and price levels is indeed positive.

Another determinant of price levels is the sales method of the wholesaler. Wholesalers selling primarily on a

medio-mayoreo basis have higher prices, usually offering manufacturer list prices without discounts. In contrast, wholesalers selling wholesale offer lower prices by passing on manufacturer discounts. Wholesalers behave in this manner due to the higher selling costs associated with providing the break-bulk service. Hence, retailers with insufficient sales volume to purchase most of their supplies wholesale rather than on a medio-mayoreo basis experience higher procurement costs.

4.8 The Medio-mayoreo Sales Method and Inter-wholesaler Buying

An issue frequently discussed by policy makers in Mexico is the widely-assumed existence of an excessive number of intermediaries in food distribution channels, commonly thought to lengthen channels unnecessarily and add readily avoidable costs to the marketing system. It is medio-mayoristas in particular that are most generally thought to be parasitic intermediaries that might better be eliminated (Personal interviews, SECOFI officials).

In reality, medio-mayoristas may or may not add a stage to the manufacturer-wholesaler-traditional retailer distribution channel. As is indicated in the flow chart of the dry grocery subsector (Figure 2), medio-mayoristas may purchase directly from manufacturers or from other wholesalers. As a matter of fact, one of the five largest wholesalers in Mexico City with well established direct manufacturer procurement networks does indeed sell an important proportion of total sales on a medio-mayoreo basis while not

adding another stage to the system.

The medio-mayoreo phenomenon is commonly confused with all types of inter-wholesaler buying. One factor causing inter-wholesaler buying is the reduced scale of operation of some wholesalers which doesn't generate sufficient buying volume to obtain all products directly from manufacturers. Hence, for certain products it may be necessary to procure them from larger wholesalers with more developed buying SOP's and larger purchase volumes. This does add another step and cost to the system since if the wholesaler were larger he could achieve economies of scale in buying which would enable him to purchase directly from manufacturers and obtain lower prices. However, the lower scale of operation does not automatically imply that the wholesaler is a medio-mayorista. While operating scale and the prevalence of medio-mayoreo sales are in fact correlated, it is more correct to state that the addition of another step to the system is related to low operating scale rather than to medio-mayoreo sales.

Inter-wholesaler buying is a practice not restricted to small-scale wholesalers. All wholesalers purchase from each other to at least a limited extent. This behavior is related to several factors. For example, one common cause is the ability of some wholesalers to obtain advantageous buying terms on specific products, either on a regular or a one-time basis. This is possible due to two factors, let us recall that the lack of legislation of the Robinson-Patman

variety permits manufacturers to discriminate among customers and offer special deals to some, and secondly that manufacturers have tended to concentrate sales with certain wholesalers rather than trying to cover the entire wholesaling industry. Consequently, at times it is cheaper to procure products from other wholesalers who have obtained special advantages than to buy directly from manufacturers; distribution costs are reduced rather than inflated by this behavior.

Another common type of inter-wholesaler buying essentially consists of merchandise exchanges for the purpose of improving the product assortment offered. This is basically non-price related and has become more prevalent under product scarcity conditions. When a product becomes scarce the transaction costs associated with its procurement increase and fewer wholesalers may be willing to incur them. Hence some wholesalers attempt to minimize transaction costs by obtaining limited quantities of the product from other wholesalers.

It is evident that to understand the medio-mayoreo sales phenomenon it must be separated from the inter-wholesaler buying practice. The existence of medio-mayoreo sales adds a cost to the system because, as was already mentioned, it requires an additional service on the part of wholesalers - to "break bulk." Break-bulk activities increase warehouse operating costs and these costs are shared by wholesalers, retailers and consumers. The reason that medio-mayoreo sales continue to exist for dry groceries

is not due to excessive "intermediarismo" but rather due to retailer demand. Retailer demand is present because of the low operating scale of many traditional retailers, for them purchases on a medio-mayoreo basis are a necessity caused by severe working capital constraints.

In order to eliminate the medio-mayoreo phenomenon retailers must be modernized and upgraded so that their ability to compete improves and they can generate buying volumes large enough to no longer require break-bulk services. In the meantime, improved materials handling methods can be introduced by wholesalers to enable them to perform this activity more efficiently. The self-service cash and carry warehouse offers an effective strategy for achieving this end.

Similarly, inter-wholesaler buying that takes place due to the low operating scale of some wholesalers does add an unnecessary step and cost to the marketing system that could be eliminated via fomenting the modernization of smaller wholesalers.

4.9 New Competitive Pressures as Forces for Change in the Dry Grocery Wholesaling Industry

New competitive pressures can act as important forces for change in a subsector. The introduction of a voluntary chain and self-service cash and carry wholesaling have caused an increase in competitive forces already being recognized by wholesalers. Other competitive pressures have also emerged in the recent past in the form of a retailer buying group and the government voluntary chain IMPECSA.

UCASA, the Union de Credito Abarrotero or Grocery Credit Union, operates as a retailer cooperative. UCASA has existed since the late 1940's and concentrates on serving small personal service independent retail outlets called ultra-marinos that sell wine and liquor, specialty items such as cold meats, cheese, candy, dried fruits, imported canned goods and a reasonably wide line of basic dry grocery products. UCASA has over 1000 retailer affiliates who participate in broad policy decisions through regular membership meetings, however, the management of the firm is carried out by paid, full-time professionals.

UCASA offers improved services to retailers via a well organized telephone order taking system based on the use of a standard order form. The pre-printed order form states retailer cost and the official retail price of each product, an important service to retailers. Retailers have been trained to employ effective inventory control systems utilizing the standard order form, an example of the feasibility of wholesaler promoted improvements in the SOP's of retailers. Retailers also receive credit and frequent and reliable deliveries.

The reason this is viewed as a new competitive pressure is because until recently UCASA has not seriously affected the traditional dry grocery retailer, the majority of which do not handle wines and liquors. However, as of the fall of 1983 UCASA opened a new 10,000 m^2 warehouse in Ixtapalapa on the southern edge of the city, employing partially

mechanized materials handling systems and is actively seeking retailer affiliates. Wholesalers are currently expressing concern over this event given the retailer orientation of this group and the improved services offered.

Another source of competition originates from government intervention in the wholesaling industry via IMPECSA. IMPECSA offers preferable credit terms and basic grocery products often difficult to procure and does have a large number of customers in the metropolitan area. IMPECSA served approximately 2500 affiliates in the federal district in 1981 and over 10,000 customers were served on an unaffiliated and often irregular basis (IMPECSA). The potential threat IMPECSA represents is unclear due to its rather bleak track record and uncertainty over future budgetary support for its operations in the Mexico City area. Nevertheless, it remains an important pressure in the eyes of wholesalers who are well aware that the government may decide to increase its participation in the wholesaling industry.

4.10 Conclusions

The preceeding discussion of the dry grocery wholesaling industry has highlighted its highly dynamic nature as it adjusts to a broad array of forces for change. A key response to many forces for change was the geographic decentralization of dry grocery wholesaling, this in turn has acted as a new and powerful force for change with many performance implications for the dry grocery subsector.

For example, decentralization has: 1) stimulated an increase in the operating scale of wholesalers, lowering per

unit operating costs, 2) improved spatial organization by narrowing the distances between supply and demand points, thereby decreasing distribution costs, and 3) contributed to improved wholesaler services to retailers, particularly wider product lines. The overall implication is that decentralization has been a major factor contributing to the transformation of dry grocery wholesaling from a traditional to a modern industry.

Nevertheless, a low level of vertical coordination still prevails and the transformation process is far from complete. Distribution networks are not well rationalized, volume discounts are not offered to retailers to encourage concentration of purchases and lower warehouse operating costs by increasing average order size, and materials handling systems are inadequate given current operating scales. Although the materials handling methods prevailing in almost all warehouses require an excessive amount of labor, the issue is becoming especially critical for the innovators of the 70s due to their concentrated efforts to utilize vertical space without adequate equipment, and their expected growth. In order for a business to grow profitably it must manage labor efficiently or rising operating costs will reduce the potential benefits of expansion.

The current environment of high nominal interest rates, product scarcity, and increasing operating and distribution costs makes wholesalers more receptive to innovations designed to control costs and increase competitive strength.

On the other hand, those factors and many others can also act as barriers to modernization.

For example, the manufacturer led reduction in inventory credit has constrained the ability of wholesalers to expand product lines. The response of wholesalers to the reduction in manufacturer credit terms has been to reduce credit to retailers and in the fall of 1983 many wholesalers eliminated credit entirely to retailers, thereby reversing the trend in existence since the 1970s. Consequently, traditional retailers also face greater constraints to the expansion of product lines.

The paucity of technical assistance to marketing firms and the low level of specific knowledge on improved marketing practices are other factors limiting the ability of wholesalers and retailers to modernize. The constraints to modernization and policies designed to encourage the adoption of technological and institutional innovations in the dry grocery subsector will be examined in the chapter on voluntary chains.

It appears likely that important structural change will occur in the wholesaling industry in the future as some firms modernize and the more sedentary firms exit or lose market share.

CHAPTER 4

REFERENCES

CODEUR, 1979. "Central de Abasto Para La Ciudad de Mexico." Comision de Desarrollo Urbano.

IMPECSA, 1981. "Programa Operativo 1981." Impulsora del Pequeño Comercio.

CHAPTER 5

THE STRUCTURE OF THE DRY GROCERY RETAILING INDUSTRY IN THE MEXICO CITY METROPOLITAN AREA

5.1 Introduction

The grocery retailing industry has evolved in a dualistic fashion during the past 25 years, exhibiting both modern and traditional retailing practices. The traditional retailing industry is highly atomistic and dominates in terms of absolute numbers, however, the modern retailing industry has steadily replaced the traditional in terms of contribution to total food sales.

A taxonomy of retailing actors is presented in Figure 3. The modern retailing industry consists of both private and public sector participants operating self-service grocery stores. Modern private sector retailing includes corporate chain store supermarkets and single unit or independent supermarket operators. Public sector retailing includes CONASUPO self-service retail outlets, and limited access government employee supermarkets.

Modern retail outlets, whether private or public sector may be of three types: 1) hypermarkets (more than 1500 square meters), 2) supermarkets (400 to 1500 square meters) and 3) convenience stores or superettes (100 to 400 square meters with more than two employees).

Traditional retailing is comprised of four basic retailer types outlined in Figure 3 selling on a personal-service basis and, additionally, small scale self-service independents. Self-service independents are defined as

MODERN RETAILING

PRIVATE SECTOR SELF-SERVICE RETAILING INDUSTRY

Corporate Chains

Single Unit Operators

Hypermarkets
$> 1,500\ m^2$

Supermarkets
$400 - 1,500\ m^2$

PUBLIC SECTOR SELF-SERVICE RETAILING INDUSTRY

CONASUPERS

Government Employee Stores

Convenience Stores
or Superettes
$< 400\ m^2$

TRADITIONAL RETAILING

Tiendas de Barrio (personal-service neighborhood grocery stores)

Miscelaneas (personal-service neighborhood candy, cigarette, and soft drink stores)

Ultramarinos (neighborhood liquor and grocery stores)

Locatarios de mercados publicos (public market retailers)

Self-service Independents (stores in the transformation process)

FIGURE 3. TAXONOMY OF DRY GROCERY RETAILING PARTICIPANTS

former "tiendas de barrio" and "ultramarinos" engaged in the transformation process, approaching the modern by introducing partial self-service sales systems and wider product lines.

In order to view the forthcoming discussion of the modern and traditional retailing industries in the proper context it is beneficial to understand the relative importance of each industry in terms of the volume of product handled. Therefore, to set the stage, the current structure of the Mexico City dry grocery retailing industry will be described, highlighted by some of the structural changes that have taken place to create a dual industry configuration.

5.2 Structure of the Dry Grocery Retailing Industry in the Mexico City Metropolitan Area

Determination of the structure of an industry is a vital part of the process of understanding conduct and performance. The process of identifying the structure of an industry is generally quite complex and can become exceedingly so in countries such as Mexico where no formal reporting series exist for the relevant variables.

5.2.1 Methodology

No publicly available information provides a complete assessment of the structure of the dry grocery retailing industry in Mexico City. Census figures on retailing activities (both sales and retailer numbers) in the Mexico City market area can not be cited since they are not disaggregated by product line. In otherwords, hardware stores,

clothing stores, grocery stores, etc., are all reported in one category.

Given the paucity of data on the structure of the Mexico City dry grocery retailing industry several strategies were pursued and sources utilized to compile information on 1) the total retailer population, both modern and traditional, disaggregated according to retailer type, and 2) sales by retailer type. This enabled the author to make an approximate estimate of the market shares of the major retailer types.

To gather data on the private sector supermarket industry officials representing each chain store organization operating in Mexico City were interviewed regarding annual sales and store numbers. Interviews were carried out during the spring and summer of 1982. Actual 1981 sales were obtained, expected sales for 1982, and in the summer and fall of 1983 firms were phoned to verify actual 1982 sales and store numbers.

Data on the total sales and store numbers of the public sector supermarket industry were obtained as follows. CONASUPO permitted access to internal documents on sales and store address lists for the metropolitan area in 1982. However, serious difficulties arose for government employee stores since they are administered individually by each agency and there is no information reporting system for the group. Consequently, total sales for all limited access government employee stores were estimated based on partial

data obtained from actual unpublished sales for ISSSTE stores. The chain of ISSSTE stores represents approximately one third of all limited access government employee stores. ISSSTE provided total 1982 ISSSTE sales, sales per store and, the sales area in square meters for each store. This permitted grouping stores according to physical size to obtain average sales per store size grouping.

These average sales figures were then used to estimate annual sales for the remaining government employee stores based on a list published in 1983 by the Secretary of Commerce of government employee stores with the corresponding sales area for each store. The total number of stores in each size grouping was multiplied by the average ISSSTE sales figure for that size category. This estimated sales figure was then combined with actual total ISSSTE sales to yield an estimate of total 1982 sales for all government employee stores.

This estimate of total 1982 sales for government employee stores was cross-checked with the following source. In 1979 complete information was published by a market studies group within CONASUPO listing all government employee stores, the sales area and annual sales of each, and total annual sales for all government employee stores. Ater making allowances for the number of stores opened since 1979, annual inflation rates since that time were used to extrapolate total annual sales for 1982 for all government employee stores. This cross-check showed consistent and highly similar results.

Data collection on the total number and sales of traditional retailers proved to be a more awesome task due to the highly atomistic nature of the traditional retailing industry and the lack of published data in this area. Mexico City is organized according to delegaciones or municipal districts and all non-public market retailers are required by law to join the CANACO or chamber of commerce corresponding to the delegacion in which they are located.[1] A general chamber of commerce exists for the city proper which includes several delegaciones, and individual chambers are organized by delegacion for the remaining metropolitan area.

In order to determine the total number of traditional retailers the membership lists of the various CANACO's were solicited during the first half of 1982. This strategy proved to have the following limitation. In each delegacion there is a certain number of unregistered businesses, particularly among very small retailers and in the lowest income and rapidly growing outlying areas such as Cd. Netzahualcoyotl. To determine the magnitude of unregistered retailers discussions were held with the director of each chamber. Directors appeared to have a good understanding of the issue and could readily estimate the number of unregistered retailers in their jurisdictional units. Thus, the estimated number of unregistered retailers for each delegacion was added to the number of registered retailers for the

[1] Figures on the number of dry grocery public market retailers were obtained from a list compiled by the Department of Commerce.

same delegacion.

A cross-comparison for verification purposes was carried out via the customer roster of the Coca-Cola company. Although the roster itself was not made available, in the summer of 1983 Coca-Cola did divulge the total number of traditional retailer customers based on 1982 information. Coca-Cola distributes to almost all retailers in the Mexico City area and thus is believed to furnish a highly accurate count of traditional retailers. A second cross-check was made with published data from A.C. Nielsen Company. All three sources yielded consistent and close results.

The data gathered from the eight separate chambers of commerce is the only one of the three sources to provide information on traditional retailer numbers by type. In otherwords, the percentage of the total traditional dry grocery retailer population corresponding to tiendas de barrio, miscelaneas and ultra-marinos. Chambers of commerce require retailers to register according to type and thus, this information was obtained for the jurisdictional unit corresponding to each chamber. Identification of the distribution of traditional retailers by type is an essential part of the process of determining overall market structure since average sales levels vary markedly by type of retail establishment.

The task of estimating sales in traditional retail outlets is quite difficult given the reluctance of retailers to volunteer accurate sales figures as a result of a widespread failure to report total income to the government for

tax purposes. A survey was carried out in the spring and summer of 1982 of 100 traditional retail establishments and average weekly sales figures were obtained for each traditional retailer outlet type. The survey results were cross-checked with wholesaler information on the average weekly purchase volumes of retailer clients and in-depth interviews with a limited number of retailers. Given the expect-ed underreporting of income witnessed among surveyed retailers the survey sales data were modified and adjusted according to these additional sources of information.

To estimate the market share of each traditional retailer type the total number of retailers by type was multiplied by the estimated average sales volume for the corresponding outlet type. All of the aforementioned sales data were combined to yield total estimated dry grocery sales in the Mexico City metropolitan area for 1982, and of course relative market shares.

5.2.2 Retailer Numbers

Private sector chain stores operate a total of 184 establishments while the public sector operates 313; in all, modern retail outlets total 497 (see Table 5.1 for store numbers per chain and Table 5.2 for store numbers per governmental entity).

Based on the data collected from the various CANACO's, the total estimated number of traditional retailers operating in the Mexico City metropolitan area is 36,349 (see Table 5.3). In addition, 100 traditional retailers who have

TABLE 5.1 PRIVATE SECTOR SELF-SERVICE GROCERY STORES IN THE MEXICO CITY METROPOLITAN AREA, 1983

Retail Firm	Store Numbers	
CHAINS		
Aurrera, S.A.	49	(57)[a]
Blanco Sucesores, S.A.	9	(54)
Comercial Mexicana, S.A.	22	(45)
Sumesa, S. A.	30	
Gigante, S.A.	15	(34)
El Sardinero, S.A.	9	(12)
La Luna, S.A.	3	
Sub-Total	137	
INDEPENDENT SUPERMARKETS		
Unidad Comercial De Todo, S.A.	1	
Astor de Mexico y Cia., S.A.	1	
Sub-Total	2	
CONVENIENCE STORES		
Oxxo	35	
Super 7	5	
Elizondo, S.A.	3	
La Abeja, S.A.	2	
Sub-Total	45	
TOTAL	184	

a = Total number of establishments per chain on a national basis.

SOURCE: Author.

TABLE 5.2 PUBLIC SECTOR GROCERY STORES BY TYPE AND GOVERNMENT ENTITY - MEXICO CITY, 1983

	Number of Stores	Store Type
GOVERNMENT EMPLOYEE STORES		
Aeropuertos y Servicios Auxiliares	1	S[a]
Altos Hornos de Mexico, S.A.	1	H[b]
Central de Abastos del Magisterio (SEP)	1	H
Estado Mayor Presidencial	1	C[c]
Secretaria de Agricultura y Recursos Hidraulicos	1	H
Secretaria de Asentamientos Humanos y Obras Publicas	1	H
Secretaria de Hacienda y Credito Publico	1	H
Secretaria de Pesca	1	NI
Tiendas de Consumo para los Trabajadores del Sector Electrico (TCTSE)	1	H
Tienda para los Empleados de la Camara de Diputados	1	NI
Universidad Autonoma Metropolitana	1	H
Refrigeradora Tepepan, S.A. de C.V.	1	C
Secretaria de Comercio	2	H S
Secretaria de Marina	2	NI
Sistema de Tiendas UNAM.	2	(2)H
Tiendas de Consumo, S.C.L. del STPRM. (PEMEX)	3	NI
Instituto Mexicana del Seguro Social	4	NI
Secretaria de la Defensa Nacional	5	H (2)S (2)C
Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado	26	(4)H (14)S (8)C
Departamento del Distrito Federal	43	(13)H (12)S (16)C
Sub-total	99	(2)NI

TABLE 5.2 (Continued)

PUBLIC SECTOR GROCERY STORES BY TYPE AND GOVERNMENT ENTITY - MEXICO CITY, 1983

	Number of Stores	Store Type
CONASUPO STORES		
Conasuper A	63	S
Conasuper B	143	C
Centros Comerciales	8	H
Sub-total	214	
TOTAL	313	

[a]S = Supermarket

[b]H = Hypermarket

[c]C = Convenience store or superette

SOURCES: Directorio de Tiendas del Sector Publico y Asociados, Secretaria de Comercio, 1982.
Directorio de Tiendas de CONASUPO, June 1982.
Directorio General por Entidades Federativas para Tiendas del ISSSTE, 1983.

introduced self-service and are engaged in the modernization process were identified by noting registration titles on chamber of commerce membership lists to detect evidence of self-service sales (eg. Mini-super, etc.).[1] The customer list of a manufacturer classifying self-service independents was also consulted. While complete detection of self-service independents is difficult since some retailers classified as tiendas de barrio on both lists may in fact have introduced partial self-service, nevertheless, the total number of 36,449 traditional independent operators is unaffected.

The cross-check with Coca-Cola reveals a total of 36,337 independent, dry grocery retailer customers in 1982 (excluding the modern retailing industry). The Coca-Cola figure does not represent a complete customer roster because information was not yet available from one delegacion due to computer difficulties. Consequently, the final figure would be somewhat higher.

Nielsen reports a total of 36,947 traditional retailers in the metropolitan area. The Nielsen figure is higher due to the inclusion of 1) a somewhat broader metropolitan area than that defined in our study, 2) some traditional specialized retailers that do not sell dry groceries (eg. fruit and vegetable outlets), and 3) some border line medio-mayoreo businesses due to their definition of retail establishments as "doing more than 50 percent of their volume in retail

[1] See the complete report to FIDEC for a list of the names and addresses of these self-service independents ("The Mexican Dry Grocery Subsector and the Identification of Policies Supporting the Establishment of Voluntary Food Chains," 1984).

sales."

Hence, the first estimate mentioned of 36,449 retailers obtained via data collected from the registration lists of chambers of commerce is considered the most accurate and the one which will be employed throughout the remainder of the study.

5.2.3 Retailer Sales and Numbers - Market Structure

While traditional retailers comprise over 98 percent of the total number of establishments, they contribute only 52 percent of total grocery sales in the Mexico City area. In contrast, while modern retailers (public and private sector supermarkets) account for less than 1.5 percent of total retail outlets, they account for 47 percent of total sales (see Table 5.3).

Within the modern retailing industry we note that while the public sector dominates in terms of store numbers (313 outlets vs. 184 private chain store outlets) the private sector achieves a greater contribution to total sales (30 percent vs. 17 percent).

Nevertheless, the achievement of a 17 percent market share by the public sector represents major growth over a twelve year period given the prior relative unimportance of public sector grocery retail sales. The importance of the public sector in dry grocery retailing is highlighted further when the modern sector alone is considered (see Table 5.4). The public sector attains a 35 percent market share of modern grocery retailing industry sales.

TABLE 5.3 ANNUAL RETAIL GROCERY SALES AND STORE NUMBERS IN THE MEXICO CITY METROPOLITAN AREA, 1982

Retailer Type	Store Numbers	Percent of Total	Annual Sales	Percent of Total
		MODERN RETAILING		
Private Sector				
Supermarkets	138	.37	75,350,000,000	30.02
Convenience stores	46	.13	925,000,000[e]	.37
Sub-total	184	.50	76,275,000,000	30.39
Public Sector				
Conasupo	214	.58	16,236,000,000	6.47
Government employee stores	99	.26	25,722,820,000	10.25
Sub-total	313	.84	41,958,820,000	16.72
SUB-TOTAL	497	1.34	118,233,820,000	47.11
		TRADITIONAL RETAILING		
Tiendas de barrio	13,701	37.08	67,100,647,500[e]	26.73
Miscelaneas	16,204	43.86	30,585,050,000[e]	12.19
Ultramarinos	2,368	6.41	20,229,350,400[e]	8.06
Public Markets	4,076	11.03	12,965,175,000[e]	5.16
SUB-TOTAL	36,349	98.39	130,880,222,900	52.14
		MODERNIZING RETAILING		
Self-service Independents	100	.27	1,875,5000,000[e]	.75
TOTAL	36,946	100.00%	250,989,042,900	100.00%

[e] Estimated

TABLE 5.3 (continued)

ANNUAL RETAIL GROCERY SALES AND STORE NUMBERS IN THE MEXICO CITY METROPOLITAN AREA, 1982

SOURCES:

1) Traditional retailer sales estimated based on Direct Retailer Survey, 1982.

2) Traditional retailer numbers obtained from the membership lists of the Camaras de Comercio (Chambers of Commerce) in the Mexico City Metropolitan Area, 1982.

3) Supermarket numbers and sales obtained from personal interviews with Chain Store Officials, 1982.

4) Conasupo store numbers obtained from Directorio de Tiendas CONASUPO, June 1983, Diconsa.

5) Conasupo sales obtained from Subgerencia de Estudios Economicos, CONASUPO, 1982.

6) Government employee store numbers from Directorio de Tiendas del Sector Publico y Asociados, 1982, SECOM.

7) Government employee store sales obtained from a personal interview with an ISSSTE Official.

The breakdown of public sector sales shown in Table 5.4 indicates that although CONASUPO operates 214 stores in the metropolitan area it only achieves a 13 percent market share relative to the 21 percent share obtained by the 99 government employee stores.

5.2.4 Composition of the Modern Dry Grocery Retailing Industry by Store Type and Income Level

In order to understand why the private sector has a substantially larger market share than the public sector despite fewer stores and similarly, why CONASUPO has a smaller market share than the government employee stores despite operating a larger number of stores, it is necessary to consider the composition of the modern sector by store type.

In Figure 3 the three types of self-service outlets are defined, hypermarkets, supermarkets, and convenience stores. It is obvious that due to the large variation in size among these retail outlet types there is a corresponding variation in sales (e.g. 1.5 million pesos monthly sales in some convenience stores in 1982 relative to 80 million pesos monthly sales in many hypermarkets). Thus, to make accurate comparisons between the number of stores and total sales the variable of store type must be considered.

For example, of the total number of 478 stores which could be identified according to income level and store type, 117 are hypermarkets, 158 are supermarkets, and 203 are convenience stores. Within the hypermarket category the private sector dominates with 80 of the 117 stores. In the

TABLE 5.4 ANNUAL SALES OF THE MODERN GROCERY RETAILING INDUSTRY AND MARKET SHARES BY PARTICIPANT MEXICO CITY, 1982

Participant	Annual Sales (millions of pesos)	Market Share %	Market Share Private Sector Only %
	PRIVATE	SECTOR[1]	
Aurrera	33,500	28.33	43.92
Comercial Mexicana	15,000	12.68	19.66
Gigante	11,500	9.72	15.07
Sumesa	6,000	5.07	7.86
Blanco	4,500	3.80	5.89
El Sardinero	2,745	2.32	3.59
La Luna	1,500[e]	1.26	1.96
De Todo	875[e]	.74	1.14
Oxxo and Super-7	750[a]	.63	.98
Astor, La Abeja, Elizondo	175[a]	.15	.22
Sub-total	76,275	64.51	100.02%
	PUBLIC	SECTOR[2]	
CONASUPO	16,236	13.73	
Government Employee Stores	25,723	21.75	
Sub-total	41,959	35.49	
TOTAL	118,234	100.00%	

[e]Estimated

[a]Estimated based on 1.5 million pesos monthly sales per store as indicated by convenience store managers.

SOURCES: [1]Personal interviews with chain store representatives.

[2]Unpublished data from: 1) Subgerencia de Estudios Economicos, Sistema de Distribuidores, CONASUPO, 1983.

2) ISSSTE Servicio Tiendas, Directorio General por Entidad Federativa, 1983.

sub-category of public sector hypermarkets only eight of the 37 are Conasupers (see Table 5.5).

In contrast, in the supermarket category it is apparent that the public sector is more important than the private with 99 relative to 59 stores respectively. CONASUPO predominates within the public sector, operating 63 of the 99 public sector supermarkets.

In the convenience store category the overwhelming importance of the public sector is evidenced by the proportion of 39 private sector convenience stores relative to 164 public sector convenience stores. As with supermarkets CONASUPO is dominant within the public sector, operating 140 of the 164 stores.

When the composition of the modern sector is also examined in terms of the income level of the area where a store is located, other marked tendencies are observed. For example, both the public and private sectors operate more hypermarkets in medium and low income areas than in high. However, in the case of supermarkets the number of private sector stores is positively correlated with income levels, whereas the opposite relationship exists for public sector supermarkets. The location of convenience stores by income level parallels the supermarket case, except that the positive relationship between convenience store numbers and income level for the private sector is even more marked; high income levels completely prevail for private sector convenience stores.

Summarizing, we observe the following: 1) the

TABLE 5.5 COMPOSITION BY STORE TYPE AND INCOME LEVEL OF THE MODERN GROCERY RETAILING INDUSTRY -- MEXICO CITY, 1983

Consumer Income Level[g]	HYPERMARKET			SUPERMARKET			CONVENIENCE					
	Total	Public Sector	Private Sector	Total	Public Sector	Private Sector	Total	Public Sector	Private Sector	Total	Public Sector	Private Sector
High	38	7 (2)[a]	31	59	16 (3)	43	53	15 (15)	38	150	38 (20)[b]	112
Middle	43	16 (2)	27	32	22 (9)	10	50	50 (42)	0	125	88 (53)[c]	37
Low	36	14 (4)	22	67	61 (51)	6	100	99 (83)	1	203	174 (128)[d]	29
TOTAL	117	37 (8)	80	158	99 (63)	59	203	164 (140)	30	478	300 (201)[e]	178[f]

[a] The figures in parentheses correspond to CONASUPO stores.

[b] Excludes two stores which could not be identified by outlet type.

[c] Excludes 10 stores which could not be identified by outlet type.

[d] Excludes one store which could not be identified by outlet type.

[e] Exludes 13 stores which could not be identified by outlet type.

[f] Excludes six Oxxo stores whose location wasn't identified.

[g] The consumer income level of the area where a store is located was determined using the Mapa Mercadologico de la Cuidad de Mexico (Income Map by Neighborhood for the Mexico City Metropolitan Area), 1981.

(1) Low = Zona Popular, family income less than the minimum wage.
(2) Middle = Zona Residencial Media and Residencial de Primera, family income from one to three, and from three to seven times the minimum wage, respectively.
(3) High = Zona de Lujo and Alto Lujo, family income from seven to eleven and greater than eleven times the minimum wage, respectively.

SOURCES: Directorio de Tiendas del Sector Publico y Asociados, Secretaria de Comercio, 1982.
Directorio de Tiendas de CONASUPO, June 1982.
Directorio General por Entidades Federativas para Tiendas del ISSSTE, 1983.

predominance of the hypermarket relative to the supermarket in the private sector, 2) the dominance of modern private sector stores in high and medium income levels, yet also the significant number of outlets which are located in low income areas (demonstrating recent private sector expansion into this consumer segment), 3) the overwhelming predominance of supermarkets and convenience stores among CONASUPO outlets, 4) the equal distribution of government employee stores between the three store types, 5) the significant number of public sector outlets which are present in high and middle income areas.

Thus, an analysis of the composition of the modern sector by store type and income level leads to the following conclusions. First, the modern private sector grocery industry achieves a significantly higher market share than the public sector despite a significantly lower number of stores because: the private sector operates more than double the number of hypermarkets than the public sector and has a higher proportion of stores in high and middle income areas.

Secondly, government employee stores achieve a higher market share than CONASUPO with less than half the number of stores because of 1) the much larger number of hypermarkets, 2) the higher average purchasing power of customers which automatically results from being a salaried government employee, and 3) the higher level of subsidies underlying government employee stores which serves to stimulate demand and increase average sales volume per outlet type.

The composition of the modern retailing industry by store type has important implications for consumers. For example, the buying habits of low income consumers are such that they tend to buy daily in small quantities. Consequently, locational convenience is a key factor determining place of purchase. Since the data shows a lack of private sector supermarkets and superettes located in low income areas, modern retailing services are not available in convenient locations for many low income consumers. Therefore, for their day to day shopping, low income consumers continue to frequent traditional neighborhood stores, despite the probability of higher prices. The institutional factors that have contributed to the limited presence of private sector superettes and supermarkets in low income areas are explained in Chapter 6.

5.3 Structural Transformation Trends in Grocery Retailing

The current retail market structure just presented for Mexico City is the product of major structural change since 1960. To ascertain the changing structural configuration of the grocery retailing industry in Mexico City over time an eclectic approach has again been necessary. There is a lack of longitudinal data on market shares by retailer type for either the Mexico City market area or nationally. Census data are not available for Mexico City and national census data are available for 1960 and 1970 but not 1980. Consequently, it was necessary to combine data sets and use the 1960 and 1970 national census data as a proxy for market

shares in Mexico City for these years.[1] In this manner the census data serves as a benchmark for longitudinal comparative purposes, used in conjunction with the 1982 Mexico City data generated by the author. While this approach does not measure the precise magnitude of changes in market shares in Mexico City it does at least highlight general trends.

The dramatic expansion of the modern supermarket industry is evident from Table 5.6: supermarkets contributed 11 per cent of national food sales in 1960 and 20 per cent in 1970, compared to the 47 per cent market share reported in 1982 for Mexico City.

The early growth of supermarket sales came primarily at the expense of locatarios (public market operators) whose market share declined from 20 to 5 per cent between 1960 and 1970 according to the national census figures. In contrast, it appears likely that since the 1970s in the Mexico City market area, it has been the tiendas de barrio and miscelaneas that have lost ground to the growing supermarket industry. Table 5.3 shows a 5 percent market share for public market retailers in 1982 and a 47 percent share for other traditional retailers, down relative to the 55 percent national market share reported by the census in 1970. The falling relative sales of tiendas de barrio and miscelaneas has important policy implications that are discussed later.

[1] National census data includes not only dry grocery sales but also the sales of specialized fruit and vegetable retailers. However, this component is not considered to be large enough to affect the identification of general trends in market shares.

TABLE 5.6 DISTRIBUTION OF NATIONAL RETAIL FOOD SALES BY STORE TYPE, MEXICO

Store Type	1960 %	1970 %
Fruit and Vegetable Stands	7.7	6.8
Meat and Chicken Stores	14.6	13.0
Self-Service Supermarkets	11.0	20.1
Neighborhood grocery, candy and bread stores	56.8	55.0
Others - mainly public market retailers	19.9	5.1

SOURCE: S.I.C., D.G.E. IV Censo Comercial, 1960, Mexico, 1965; VI Censo Comercial, 1970, Mexico, 1975.

A major determinant of the rapid growth in the market share of supermarkets is the growth in public sector sales. Since the 1970s the public sector supermarket industry has grown at a faster rate than the private sector. The government, employee stores expanded by 24 per cent from 1979 to 1982 in Mexico City.[1] The main growth, however, has come from DICONSA, CONASUPO's retailing arm. CONASUPO-owned stores in Mexico City have expanded by 186 per cent since 1979.[2] Furthermore, CONASUPO has established a large number of stores operated by independent retailers on a concessionary basis.[3]

In contrast, new store openings for private supermarket chains in Mexico City totaled 22, representing an increase of only 18 per cent since 1979. The new entrants to the modern private sector retailing industry are two convenience store chains, Oxxo and Super Siete. Due to the small physical size and sales of convenience stores they are a very minor segment of the market, contributing less than .4 per cent of total food sales.

[1] Benchmark data for 1979 for government employee stores from: Mateos, Rosa Luisa, 1979. "La Comercializacion de Abarrotes al Menudeo en Mexico, Una Primera Aproximacion." Tesis, ITAM. 1982 data from internal ISSSTE documents.

[2] Data obtained from CONASUPO officials.

[3] Concessions are superettes and convenience stores operated along principles somewhat similar to U.S. franchise chains. They employ the CONASUPO logo and retail format and CONASUPO subsidizes the capital costs in addition to inventory financing.

5.3.1 Trends in Traditional Retailer Numbers

The preceding discussion demonstrates trends in the relative sales of each retailer type and in the number of retailers in the modern sector. However, no mention is made of trends in the size of the traditional retailer population due to the unavailability of longitudinal data on this question. While it is not possible to draw any conclusions under these circumstances, it is fair to state that the decline in the relative share of total dry grocery retail sales contributed by traditional retailers does not automatically imply a decline in their numbers in absolute terms. Given the rapid growth rate of the Mexico City population traditional retailers could in fact be increasing in number despite the loss in market share to the supermarket industry.

While no information on the net rate of entrance (exit) is available survey data generated by the author does provide an indication of the recent magnitude of new entrants into the traditional retailing industry in the metropolitan area; 16 percent of the operators surveyed in 1982 had been in business for less than two years. Observation of the system indicates that both entry and exit costs are low, hence given the high level of underemployment and unemployment present in the economy it is reasonable to assume a fairly mobile population of dry grocery retailers.

5.4 Economic Concentration in Dry Grocery Retailing

The data presented in Tables 5.3 and 5.4 indicate a low level of economic concentration. Sales of the top four private sector chain stores represent 26 percent of total

industry sales. However, since the chain store industry is competing in part with low volume traditional retailers the market power they wield is greater than this would imply. When the modern private sector alone is considered, the top four firms account for 86.5 percent of sales.

The market power of Aurrera in the Mexico City market is readily apparent from its 44 percent market share in the modern private sector grocery industry. Aurrera is widely recognized as the most modern of the supermarket chains and the industry leader. Jewel Foods Company of Chicago owns a minority interest in Aurrera and it is probable that the ease of technology transfer made possible by this arrangement has contributed to the rapid growth of this chain.

Although the chain store industry has lowered distribution costs and introduced discount pricing and modern retail services to consumers, the government has been concerned about the rapid growth of chain stores, fearing that unlimited growth would lead to an oligopolistic market structure. One response of the public sector has clearly been to compete directly with the private sector, attempting to yield a downward pressure on prices. Public sector participation in retailing is examined in the next chapter, along with other governmental policies affecting the development of the chain store industry.

CHAPTER 5

REFERENCES

A.C. Nielsen Company, 1982. "Mexico: The Economy, The Trade and Nielsen Services."

CONASUPO, June 1982. Directorio de Tiendas de CONASUPO.

CONASUPO, 1981. Informe de Ventas. Gerencia Corporativa de Operaciones. Agosto.

ISSSTE, 1983. Directorio General por Entidades Federativas para Tiendas del ISSSTE.

Mapa Mercadologico de La Ciudad de Mexico, 1981. BIMSA.

Mateos, Rosa Luisa, 1979. La Comercializacion de Abarrotes al Menudeo en Mexico, Una Primera Aproximacion. Tesis, Instituto Tecnologico Autonomo de Mexico. Mexico D.F.

Secretaria de Comercio, 1982. Directorio de Tiendas del Sector Publico y Asociados.

S.I.C., D.G.E. IV Censo Comercial, 1960, Mexico, 1965; VI Censo Comercial, 1970, Mexico, 1975.

Subgerencia de Estudios Economicos, 1983. Sistema de Distribuidoras CONASUPO.

CHAPTER 6

THE MODERN RETAILING INDUSTRY

6.1 The Private Self-service Supermarket Industry

6.1.1 The Emergence of the Supermarket Industry

Supermarket chains were first introduced in Mexico in 1946 with the establishment of Supermercados, S.A. which operated with relatively traditional merchandising methods. A decade was to pass before the self-service chain store became an important component of the food retailing industry. The Arango brothers emerged as the leaders in supermarket retailing with the opening of the first Aurrera store in 1958 as a one-stop shopping, discount center employing U.S. merchandising techniques.

Aurrera, S.A. moved quickly and by 1963 had established nine stores. Gigante followed Aurrera's lead, opening its first store in 1959, then Comercial Mexicana initiated operations in 1962. Throughout this early period these firms grew rapidly, at times opening three stores annually during the first five years of operation. By 1963 the combined sales of Comercial Mexicana, Gigante, Aurrera and the Almacen Nacional de Descuento totaled 54 million dollars (Business Week).

The success of the self-service supermarket industry was in large part due to its timely introduction in response to major changes occurring in the Mexican economy. Specifically, the high sustained economic growth rates experienced since the 1950's produced significant increases in per

capita incomes and consumer purchasing power resulting in the emergence of a middle class. This in turn generated growth in the demand for marketing services, reinforced by burgeoning sales in the television, automobile and refrigerator industries.

Rising consumer income levels created the potential for a significant decline in the average frequency of purchase of food products, thus, new consumer buying habits evolved. In particular, housewives began to: store food under refrigeration; travel further to shop and purchase a large number of items simultaneously due to the mobility provided by the automobile; and purchase more prepared foods, influenced by television advertising and U.S. consumption habits popularized by American television programs and movies. Supermarkets have satisfied these new consumer preferences for one-stop, self-service, discount shopping.

The development of supermarkets in the metropolitan area first occurred in the southern part of the city where middle class suburbia (the initial target market) was rapidly expanding. However, by 1963 Aurrera attempted its first attack on a high income area, locating a supermarket on the edge of Las Lomas, an exclusive residential district. Only in more recent years have supermarkets begun to locate in lower income areas, yet this currently represents a major future growth area for supermarket chains.

While the general development of supermarkets in Mexico followed U.S. merchandising methods a major contrast exists in the emphasis on non-food sales in Mexico. In otherwords,

as was demonstrated earlier in Table 5.5, the principal private sector store type established in Mexico has been the hypermarket rather than the conventional supermarket which has historically been the dominant store type in the United States.

For example, one of the first self-service stores constructed in Mexico (December of 1960) and opened by Aurrera was a 75,000 ft.^{2} store noted for its broad line non-food section on the scale of a general merchandise department store (Supermarket News, Dec.) The clothing department alone contributed 33 percent of total sales. In the first Gigante store 33 percent of total volume was generated by grocery sales and 27.7 percent from clothing (Supermarket News, Dec).

The establishment of large general merchandise departments is in part a reflection of the origins of the Mexican supermarket chain owners since they previously operated clothing or general merchandise businesses. This inclination was reinforced with the development of official government price controls on a broad range of grocery products during the 1970's. The emergence of official price control programs has affected the profitability of supermarkets relative to hypermarkets, directing chain store investment away from the supermarket in favor of the hypermarket. The supermarket licensing policies of the municipal government of Mexico City have also affected the development of supermarket chains, limiting the rate of chain store expansion in

the federal district.

6.1.2 The Institutional Framework Relevant to the Expansion of Supermarket Chains in the Mexico City Metropolitan Area

A. City Licensing Policies

The licensing policies of the Mexico City government regulating the opening of new supermarkets and the sale of liquor have had important impacts on the development of the retail industry in this market area. The granting of retail operating licenses emerged as a problem area to chain stores in 1960 and evolved into a constraint to growth during the 1970's. Specific policies have varied over time as a function of the mayor holding office at any given point, but the different forms taken and their general thrusts will be described below.

The environment within which the city government has formulated licensing policy for supermarket openings has been heavily influenced by organized public market retailers who assert damages from supermarkets and request government protection and compensation. Indeed, as was previously noted, national census figures indicate that the market share of national food sales of public market retailers did decline from 19.9 percent in 1960 to 5.1 percent in 1970, while supermarket sales increased from 11 to 20 percent.

Furthermore, during the 1950's and 1960's the city government was embarked on a major program constructing subsidized public retail markets throughout the city to replace rudimentary and unsanitary street markets. Thus the government had an interest in supporting the public market

concept in order to insure the future development of its own programs.

In fact, as early as 1960 city government officials are on record in newspaper articles asserting the advantages of their public market program relative to supermarkets which were said to interest only the rich. By 1960, 96 public markets had been completed and six more markets were to begin operation that year (Supermarket News, Nov).

Supermarkets began to experience licensing difficulties in 1960 when the practice of illegally "selling" licenses was initiated. At this time licenses were essentially sold on an unlimited basis, the principal constraint being the ability of the interested party to obtain the necessary funds. The price of licenses represented a significant but not unsurmountable cost for supermarket chains.

The sale of licenses on a relatively non-constraining basis prevailed throughout the 1960's, the major expansion period for the supermarket chains. However, the licensing problem became seriously aggravated during the 1970's when both the price of licenses increased significantly and the number granted was restricted.

Gradually the process for granting new supermarket licenses took a different form. Organized public market retail groups (allegedly encouraged by city officials) demanded an established indemnization procedure to be applied to supermarket openings.

This system never functioned effectively both due to the unwillingness of public market operators to adhere to

the recognized scheme and to reach agreement on the division of payments once granted. For example, in 1976 Comercial Mexicana was opening a store by the Mercado de Mixcoac and the market retailers demanded four million pesos (320,000 dollars) instead of the 750,000 pesos accorded to them by the pre-arranged system. Comercial Mexicana eventually agreed to the claim since the store investment had already been incurred, but with the stipulation that the funds be placed in a trust fund to insure their proper administration. Up until 1981 the division of funds had still not taken place due to internal discord among market members over an appropriate disbursement arrangement.

Toward the beginning of ex-president Lopez Portillo's regime in 1977 the new city government recognized the former system as "legalized blackmail" and imposed a new system designed to reduce the corruption associated with both the indemnization scheme and the "sale" of licenses. This modified system proved less corrupt but more constraining because it consisted in restricting each supermarket chain to one new supermarket license per year. This policy was largely adhered to throughout Portillo's presidency.

Under the new city government which took office in 1983 the author is not aware of any supermarket licenses being granted through October of 1983. Therefore, the future policies governing supermarket licenses in the federal district have yet to be determined.

In summary, from 1970 onward the transaction costs

associated with the opening of new stores developed into what appears to have become an important constraint to growth for existing supermarket chains. All major supermarket chains interviewed affirmed that their new store expansion rate would have been approximately two to three times greater (or the same rate prevailing in the 1960's) if these obstacles weren't present. This policy also inadvertently created significant barriers to entry for new firms.

City licensing policies controlling the sale of wine and liquor have also influenced the development of the retail industry. Since the beginning of the 1960s liquor licences have been illegally sold at a price level beyond the reach of most independent retailers. This has important implications since liquor is a profitable product line which can contribute to a larger scale of operation and facilitate modernization. Those tiendas de barrio that do sell liquor tend to offer improved dry grocery marketing services. Consequently, this constraint has discouraged the gradual process of upgrading and expanding traditional retail outlets as a source of competition in grocery retailing.

B. Official Price Controls

The emergence of an extensive price control system for grocery products has had a major impact on the direction of investment in the grocery industry. The impact of price controls on the direction of investment in food retailing is highlighted by the predominance of the hypermarket over the supermarket in the Mexican food system.

Chain store officials unanimously report that the

supermarket is less profitable than the hypermarket due to the low grocery department margins enforced by official price controls. By handling a wide variety of non-controlled, non-food product lines the hypermarket achieves an improved margin mix (see section 6.1.4 for specific information on margins).

While this is true it is worthwhile to clarify that although the grocery area in hypermarkets does not appear to be a highly profitable investment for private sector retailers when viewed independently, it is nevertheless very important because of the symbiotic relationship which exists between food and non-food items. Food buying habits involve frequent store visits relative to buying habits for consumer durables and clothing, thus, the high traffic draw of the grocery department stimulates non-food sales. Consequently, despite official price controls, hypermarkets continue to be designed around grocery departments.

A case in point of the lower profitability of the basic supermarket is the former Sumesa (Supermercados, S.A.) chain, the oldest food chain in Mexico. Sumesa consisted of 30 stores, including only three hypermarkets and the rest supermarkets and superettes. This chain became unprofitable, went out of business in 1981 and was purchased by Comercial Mexicana which previously operated only hypermarkets.

Comercial Mexicana reports purchasing the chain chiefly as an attractive real estate investment due to the location

of Sumesa stores in areas with high commercial value. A secondary motive for Comercial Mexicana was to utilize the new outlets as a strategy for increasing market share. The experience of Comercial Mexicana with this acquisition indicates that the operation of supermarkets in conjunction with high volume generating hypermarkets can be a reasonably profitable venture (.75 to 1 percent net margins) under the following conditions and for the following reasons.

The management of supermarkets in conjunction with hypermarkets (Aurrera is the other chain to function in this manner) permits the supermarkets to benefit from the buying economies and liquidity generated by hypermarkets; in addition, part of the supermarket overhead costs may be charged to the hypermarkets. Furthermore, a necessary condition for generating profit in these stores seems to be an above average consumer demand in the area where the store is located, either due to high income levels or a low level of competition. Table 5.5 demonstrates the prevalence of private sector supermarkets in high income areas. These factors permit supermarkets to 1) operate with a higher gross margin, approximately 2 percent higher than generally prevails in the grocery departments of hypermarkets and 2) achieve high sales/m^2 and inventory turnover rates.

Official price controls appear to have acted as a barrier to entry to smaller firms by decreasing the profitability of superettes and requiring an investment in larger stores in order to realize a profitable rate of return. Secondly, by directing chain store investment toward the

hypermarket, the government has discouraged the construction of conveniently located, neighborhood stores to serve low income consumers. When official price controls are viewed in conjunction with licensing restrictions, the predominance of the hypermarket is even more understandable. Limitations on the number of stores each chain can build creates incentives to build large stores.

The experience of two well-financed entrants into the convenience store industry, given the official price control constraint, will now be examined.

6.1.3 The Convenience Store

A new factor in the development of the supermarket industry has been the emergence of the convenience store. The convenience store in Mexico originated in the north in Monterrey, an area which is heavily influenced by American consumer buying habits. The Seven-11 chain backed by Southland Corporation from the United States was introduced into Mexico by Casa Chapa under the logo Super-7. Casa Chapa is a diversified Mexican investment group also operating large supermarkets and a voluntary food chain in Monterrey. Oxxo, a larger convenience store chain (both in store size and number) is owned by Visa, part of the giant Mexican investment consortium, "El Grupo Monterrey."

Super-7 and Oxxo began to penetrate the Mexico City market in about 1980. Super-7 defined a strategy of limited growth to test the potential for profitable investment. Five stores were opened initially and the performance

results of these stores have caused Super-7 to decide against opening any additional stores. In contrast, although conversations with Oxxo officials in 1981 indicated low levels of profitability, resources flowed freely into the development of this chain throughout 1981 when the economy was still expanding at a rapid rate. It was not until 1982 and the onset of the recession that new store expansion was halted.

Convenience stores face several problems in the Mexico City market, including the following: 1) an insufficient store-wide gross margin (18 percent relative to 25 to 30 percent in the U.S.), 2) the nonavailability of parking for most Oxxo stores, reducing the potential customer radius and the average purchase size per customer, 3) competition originating from neighborhood grocery stores which cater to neighborhood preferences regarding brands, sizes and tend to offer more personalized customer treatment, 4) the illegality of maintaining long store hours in the federal district combined with a low level of consumer interest in 24-hour shopping, and 5) the lack of success of high profit generator product lines such as the microwave oven convenience food concept.

Oxxo officials indicate that they have experienced difficulties in controlling operating costs and assert that in some instances store operating results show negative net margins. Fifty one percent of Oxxo sales are contributed by "productos basicos" or staple grocery products with officially regulated prices, rather than high margin

convenience items. The average gross margin generated by "productos basicos" (staples) is only about 10 percent.

Nevertheless, Oxxo officials still envision a small niche for the convenience store in the future. Working in favor of the convenience store are the following factors: the growing market for food products in general; the rising demand for improved cleanliness standards and self-service shopping; rising income levels and the increasing value of time; and most importantly, the apparent trend since President de la Madrid took office in December of 1982 toward a reduction in the number of products subject to official price control.

6.1.4 A Comparison of Some Mexican and U.S. Grocery Store Operating Results

An examination of Mexican operating results (Table 6.1) is enriched by using U.S. results as a benchmark for judging the performance of chain stores in Mexico City. Unless otherwise indicated U.S. data will be cited from "The 49th Annual Report of the Grocery Industry," April 1982. A comparison of operating parameters reflects that gross margins are very similar in Mexico and the U.S. Store-wide gross margins for hypermarkets average 24 percent in Mexico and range from 23.5 to 24 percent in the U.S. (Competitive Edge). Grocery gross margins in supermarkets in the U.S. range from 20.9 to 22.5 percent. In Mexico grocery gross margins in supermarkets are higher than in hypermarkets as a strategy for improving the profitability of supermarkets. In supermarkets grocery gross margins tend to average about

TABLE 6.1 OPERATING RESULTS FROM FIVE MEXICAN SUPERMARKET CHAINS, 1981-82

Supermarket Chains	Average Grocery Gross Margin %	Average Store-Wide Gross Margin %	Operating Costs %	Grocery Net Margin %	Store-Wide After-tax Net Margin %	Average Annual Grocery Turnover	Weekly Sales per m^2 (Dollars)
Aurrerá	19	25	17	2	4	16	89 (139)*
Comercial Mexicana	19	24	18	1	3	12	56
Gigante	19	26	18	1	4	16	81
Blanco	17	22	17	0	2.5	14	51
El Sardinero	12	18	14	-2	1.5	11	69

* The first figure corresponds to hypermarkets and the second to supermarkets.

Source: Personal interviews with supermarket chain officials regarding operating results in Mexico City.

20.7 percent and in hypermarkets grocery department gross margins average 18.7 percent.[1]

For supermarkets (or the grocery departments of hypermarkets) before-tax net margins in Mexico average 1 percent of sales vs. 1.5 percent in the U.S. However, when Mexican store-wide hypermarket operating results are considered after-tax net margins average 3.4 percent of sales vs. 2 percent before-tax margins for hypermarkets in the U.S.

There are notable differences in labor use between Mexican and U.S. supermarkets. In stores ranging from 1,100 to 1600 square meters the average number of employees is 39.6 in the U.S. compared to between 50 and 80 in Mexico. For Mexican hypermarkets from 5000 to 7000 m^2 the average number of employees ranges from 200 to 300. Published data are not available on employee numbers for this store size in the U.S., hence, comparisons in labor use for Mexican and U.S. hypermarkets were not made.

The higher rate of employment found in Mexican supermarkets is a result of many factors, such as: highly labor-intensive fresh meat departments since the complete meat-cutting function takes place in-store; extensive personal-service delicatessens in all stores which include, cheese, cream and butter sections, cold meat, bacon and sausage sections, fish and seafood sections, and often including up to 40 items; the nonexistence of a part-time labor system

[1] El Sardinero chain is excluded from the averages due to large discrepancies in the observations.

for minimum wage employees since the prepared take-out foods minimum wage is fixed daily rather than hourly, this reduces the benefits obtained from the coordination of labor scheduling with peak and slack demand periods; inefficient materials handling methods (e.g. stocking and receiving); and a higher average number of checkouts per store in many instances, 12.5 vs. 5.5 in the U.S. for 1400 m^2 stores.

There is also a major discrepancy between grocery turnover rates which averaged 14.5 annually in 1982 in Mexico vs. 18 to 24 in the U.S. The lower grocery turnover rates in Mexico are apparently primarily a result of the extended credit terms previously obtained by chains from manufacturers. Until the financial crisis of 1982 supermarkets were frequently granted 45 to 60 day credit terms from food manufacturers which gave them the flexibility to operate with low grocery turnover rates without experiencing high associative costs.

An important efficiency parameter is sales per square meter and this parameter behaves in a different fashion in Mexico and the United States. While in the U.S. a positive relation usually exists between sales/m^2 and store size, in Mexico an inverse relationship appears to exist. Average weekly sales in Mexican stores over 2500 m^2 are equivalent to 69.25 dollars per square meter, a major decline relative to sales of 138.70 dollars for 1300 m^2 stores. In contrast, in the U.S.in 1300 m^2 stores weekly sales per square meter average 78.22 dollars, 2500 m^2 stores average 93 dollars/m^2,

and 4000 m^2 stores are reported to have sales per square meter of 120 dollars.

Although the tendency of sales per square meter to decline as store size increases appears to be real, the magnitude of the decline may be less than our results show. It is possible that the figures reported by some chains reflect an underreporting of sales. Aurrera is the only chain which is traded on the stockmarket and is required to publicly disclose annual income. Although chains are limited in the extent to which they can evade taxes by underreporting income, this type of behavior may take place to some extent and may have influenced the responses given by other chain store representatives on annual sales.

6.1.5 Recent Changes in the Chain Store Industry

The development of the Mexican economy during the 1980s has created great dynamism in the food system. For example, as has already been noted rapidly rising interest rates have had a major impact on the financial liquidity status of subsector actors via a manufacturer-led reduction in credit terms.

Let us recall that not only have average credit terms declined, but in addition credit has been eliminated entirely for several product leaders whose manufacturers are using the increased market power generated by a scarce market to require payment in cash or in advance of delivery.

Consequently, during 1983 chain stores began to pay much greater attention to inventory control systems. One chain executive interviewed in October of 1983 reported

improving grocery inventory turnover rates from 14 annually in 1981 and 1982 to 20 in 1983. Grocery department turnover rates are now asserted to be the key to profit by chain store representatives. This realization is reinforced by another change in the supermarket industry in 1983. The distribution of total sales between the grocery department and general merchandise has been markedly altered by the affect of the recession on consumer demand. During the 1970s the grocery department generally contributed 40 percent of sales in most hypermarkets. This 40-60 relationship has been reversed in 1983, producing serious implications for the profitability of hypermarkets.

The changing composition of sales causes a significant decline in store-wide gross margins which some chain store representatives report is in the magnitude of 3 percent. Under these circumstances the costs associated with the investment in inventory and sales area required to operate large general merchandise departments may no longer be compensated by the contribution to profit they generate. This assertion is supported by the data mentioned earlier of declining sales per square meter. Chain store executives have initiated a major revaluation of store profitabality in order to determine the ideal store size for future construction.

In addition to a change in the distribution of sales, Mexico City chain stores have experienced an across-the-board decline in real sales ranging from 20 to 30 percent in 1983. This was not only caused by the reduction in consumer

demand generated by the recession but also due to lost sales resulting from scarcity in many major products with official price controls such as eggs, fresh milk, evaporated and powdered milk, toothpaste, shortening and instant coffee.

The outcome of lower real sales and lower average gross margins caused by the shifting composition of total sales was a significant decline in profit levels. Most supermarket officials interviewed during July and August of 1983 reported performance expectations of low or zero profit levels for this year.

6.1.6 An Analysis of the Performance of Chain Stores in Mexico City

The chain store industry has created a major competitive force impacting the dry grocery subsector. It has acted as a key coordinating mechanism, helping the system to adjust to rapidly rising per capita income levels throughout the 1960s and 1970s.

Specifically, the supermarket industry has affected exchange efficiency by direct, large volume buying from manufacturers and discount pricing to reflect buying advantages. Performance has been improved, not only in the dry grocery subsector but in the fruit and vegetable and meat subsectors as well. Supermarkets have acted as leaders, improving the backward linkages to producers in several commodities to achieve closer vertical coordination, often through contract arrangements with producers.

State-of-the-art technology is not employed by Mexican chains in data processing, ordering, check-out equipment,

and UPC bar codes have not been introduced. Import restrictions and other policies appear to have constrained the adoption of computerized technology. Nevertheless, analysis of the operating performance of the grocery chain store industry in Mexico City indicates that it has been steadily improving efficiency.

The data do not suggest excess profits in the supermarket industry as many policy makers have suggested. However, a comparison with U.S. operating results indicates that prior to the recession net margins were higher for Mexican hypermarkets. This could partly indicate the unsaturated nature of the Mexico City market, suggesting that the level of competition was not yet sufficient to drive down margins, possibly due to barriers to entry to supermarket retailing. In fact, barriers to entry were identified in the form of city licensing restrictions and official price controls. These barriers limit both new entrants and the expansion of existing chains.

The evidence also suggests that the effect of government policies has been to reduce private sector investment in conveniently located modern stores in low income areas. Supermarket officials assert that while economically marginal areas would not be invested in, stores can be operated profitably in areas with an average family income equal to the minimum wage. Although the purchasing power of low income consumers is obviously lower than the purchasing power of higher income groups, nevertheless, the

size of the market and its expected future growth is thought to compensate for this.

However, chain stores are most interested in constructing hypermarkets in low income areas due to the difficulty of operating profitable supermarkets, or superettes in particular. As a result, the public sector has felt it necessary to intervene in order to improve retail services in these neighborhoods. The data presented in Chapter 5 on the composition of the modern grocery retailing industry by store type, clearly indicate that most of the supermarkets and superettes located in low income areas are operated by CONASUPO.

6.2 The Public Sector Dry Grocery Retailing Industry

6.2.1 CONASUPO

The target population identified by CONASUPO has been consistently broadened as the organization has developed. The current target population which CONASUPO aims to serve is defined as those people receiving a family income of less than two times the minimum wage. This encompasses about 50.5 million people or 70 percent of the population. Within this broad target group CONASUPO intends to give first priority to the very low resource rural population and marginal urban population receiving a family income of less than the minimum wage (Gortari). Currently CONASUPO achieves a much lower market share which they estimate to be 5 percent of national food sales. In the Mexico City area our study estimates a 6.5 percent market share.

The reader will recall from Table 5.5 that CONASUPO

operates many stores in middle and high income neighborhoods which do not meet the target population objective and where modern private sector outlets are present.

An indication of the income levels of the consumers reached by CONASUPO in Mexico City can be obtained from the National Income and Expenditure Survey of 1977 published by Banco de Mexico. This shows the following: 12.5 percent of families in the lowest income bracket, receiving a monthly income of less than 700 pesos, purchased in CONASUPO stores; the percentage of families then declines to 5.9 percent as incomes rise to the 1800 to 2400 pesos income level; the percentage of families purchasing in CONASUPO outlets is highest throughout middle income levels, reaching a peak of 13.7 percent of families at the 7500 to 10,150 pesos income level and declining to 5.8 percent at the highest income level of more than 18,000 pesos monthly family income.

The high number of middle income consumers utilizing CONASUPO relative to low income consumers, can be described as poor performance from the standpoint of CONASUPO objectives. Consequently, recent policy and strategical changes have been and are taking place. For example, in the last five years CONASUPO has apparently made a greater effort to locate stores in lower income areas compared to site location strategies used throughout most of the 1970's.

Currently CONASUPO is attempting to increase its market share by adopting advertising and promotion strategies commonly used in the private sector. The CONASUPO private

label, Alianza, has experienced consumer acceptance difficulties because of a lack of consumer confidence about the quality of government products. Consumer wariness, particulary among low income consumers, exists in spite of the fact that several Alianza products are produced by national brand manufacturers with the same quality specifications. Hence, television advertising has been initiated to improve consumer information and images about CONASUPO stores and products. CONASUPO is also attempting to introduce more national brands with wider consumer acceptance to increase consumer interest in CONASUPO outlets.

An obstacle which CONASUPO faces in attempting to procure a broader product line of national brands is the reticence of many manufacturers to supply them because of the lengthy credit arrangements solicited by the government and a history of retarded payments. In the fall of 1983 CONASUPO representatives report-ed an effort to improve their financial liquidity position in order to reduce this problem.

CONASUPO officials for Mexico City operations indicated in 1983 that for the time being they were focusing on improved sales in existing stores via the above strategies rather than continued rapid growth in store numbers. Most growth in store numbers was expected to come from concessionary outlets in order to control payroll costs.

CONASUPO outlets generally operate with an average store-wide gross margin of 15 percent and aim to offer an approximate 3 to 5 percent savings relative to supermarket

chains on a market basket of staple goods. CONASUPO retail outlets attempt to more or less break even on store operating expenses, yielding a zero percent net margin. The extent of the subsidy which corresponds to DICONSA, (CONASUPO's retailing arm), is unknown when total investment in stores, warehouses, transport, etc. and overhead costs are considered. However, it is clearly of major proportions, particularly when viewed in light of the market penetration which has been achieved in low income areas. Nevertheless, as individual store entities CONASUPO outlets appear to be much more economically viable than the government employee stores.

6.2.2 Government Employee Stores

Government employee stores are very heavily subsidized and some officials privately state that they frequently operate with at least an 8 percent negative net margin. The average store-wide gross margins tend to range between 10 and 12 percent. This would imply that operating costs vary from 18 to 20 percent, however, an ISSSTE official comments that costs are actually higher since many of the costs of operating these stores (e.g. rent, electricity, and water) are not charged to the stores since they are paid by the sponsoring ministries as part of employee fringe benefits. Officials state that it is almost impossible to obtain information on actual operating costs.

The government of Miguel de la Madrid appears to be re-examining the implications of this type of policy since it

offers a benefit to high and middle income consumers (government employees) at a high cost which must be borne by all taxpayers. A short-term strategy aimed at improving the efficiency of government stores is to incorporate many of the stores under one management system operated by ISSSTE. ISSSTE has already taken over two SAHOP stores and is studying the acquisition of others. The intent of this policy is to reduce duplication, overhead costs and product acquisition costs. For example, many stores incur the expenses associated with operating their own buying departments and simultaneously exclude themselves from the advantages of group buying.

Since ISSSTE operates a national chain of stores and has jurisdiction for improving the social well-being of all government employees it became the likely candidate for facilitating the modification of the existing system. ISSSTE officials are currently attempting to introduce financial reporting and control systems (largely non-existent) and reduce corruption in the buying departments in order to increase the likelihood that store acquisitions will yield efficiency gains. For its own stores ISSSTE has established the objective of attaining a 1 to 2 percent negative net margin in 1983.

Needless to say, although the policies regarding the participation of the public sector in grocery retailing may be refined and modified, no major changes in direction are expected and the government will continue to have a significant and direct role in the food retailing industry,

affecting industry structure.

6.3 Conclusions

The government has responded to its concern over the market power of supermarket chains and the limited availability of modern retail outlets in low income areas, by directly intervening in food retailing under subsidized arrangements. Official price controls have also been imposed in an attempt to insure lower prices for low income consumers. Yet price ceilings have treated the symptom not the ill. The factors that limit the ability of traditional retailers to lower prices are low operating scale and limited product assortments, rather than excess profits, as will be shown in the following chapter.

Licensing restrictions and price controls have combined to discourage the modernization of neighborhood stores into superettes and supermarkets capable of competing with the chain store industry. As a result, traditional retailers have remained small and medium-scale independent operators are largely non-existent. The strikingly dual structure of the grocery retailing industry - modern or traditional with little in between - was documented in Chapter 5.

The alternative (and less costly) policy option of supporting the modernization of the traditional retailing industry as a means for lowering prices and generating an effective source of competition relative to supermarkets, was not pursued. Yet the consumer preference for locational convenience creates an opportunity for small neighborhood

stores to compete if improved buying practices and services were introduced. The creation of Fidec offers the potential for exploring this opportunity. The constraints faced by traditional retailers and their current characteristics and SOPs are described in the next chapter, followed by an examination of voluntary chains in Chapter 8 as a strategy for fomenting the modernizination of traditional retailers.

CHAPTER 6

REFERENCES

Banco de Mexico, 1981. Encuesta Nacional de Ingresos y Gastos 1977.

Business Week, July 6, 1983. "Discounting: Mexico's Newest Revolution," p. 53.

Competitive Edge, July 1983. "Insight Report." Vol. III, No. 11.

Progressive Grocer, April 1982. "The 49th Annual Report of the Grocery Industry."

Salinas de Gortari, Raul, June 1983. "La Estrategia de Abasto del Sistema de Distribuidoras CONASUPO." Comercio Exterior, Volume 33 Number 6, Mexico, pp. 561-568.

Supermarket News, December 26, 1960. "Mexico City Supermarket Largest to Date for Area," p. 15.

Supermarket News, November 14, 1960. "Mexican District Denies any Ban on New Supermarkets," p. 24.

CHAPTER 7

THE TRADITIONAL RETAILING INDUSTRY

7.1 Introduction

Over the last ten years the traditional retailing industry has been affected by important changes in the environment in which it operates. Horizontally, traditional retailers face a steady growth in competition from the modern supermarket industry, both public and private. Vertically, on the input side, the decline in direct distribution from manufacturers to retailers has been only partially offset by an increase in wholesaler distribution networks. Furthermore, retailers face declining credit terms and the growing prevalence of product scarcity in the 1980's, along with a rise in the transaction and opportunity costs associated with personal procurement visits to wholesale markets. On the institutional side retailers have faced increasing governmental regulation since the 1970s, especially in terms of price controls. All these factors have combined to create a complex and competitive operating environment for small scale operators.

These forces for change have important implications for the retailing industry, simultaneously creating both unexploited economic opportunities and barriers to improved performance, along with shifting relative competitive positions. Nevertheless, in spite of the resulting incentives for change, these forces have induced the adoption of few internal operational and organizational innovations in most

traditional retail businesses. Chapter 6 outlined some institutional constraints that may have impeded the modernization of traditional retailers. Other constraints are examined in this chapter.

In order to enrich our understanding of retailer conduct both standard operating procedures and coordination mechanisms will be examined. The forthcoming discussion of the traditional retailing industry begins with an explanation of the sources of data which will be cited throughout, followed by a taxonomy of traditional retailers consisting of a description of some basic retailer characteristics. Procurement standard operating procedures are emphasized and an attempt is made to partially explain retailer behavior based on retailer attitudes, given the context of coordination mechanisms which prevail in the subsector. Some conclusions about effects on vertical coordination at the wholesale-traditional retailer interface are presented.

7.2 Retailer Survey Design

Information on dry grocery retailer SOPs and basic operating parameters has been largely unavailable in Mexico. Two sources will be used in this study to provide an indication of retailer behavior. One source is a survey of 100 retailers in the Mexico City metropolitan area carried out in the spring and summer of 1982 as a part of this study with the assistance of Banco de Mexico. Sixty colonias (neighborhoods) and 14 delegaciones were included in the survey.

Retailer businesses were randomly chosen by the price

and survey division of Banco de Mexico that is responsible for the data collection and analysis program used to generate the national price indices. Banco de Mexico enumerators visited stores and assisted retailers in filling out the questionnaires. The number of completed interviews of each outlet type is: 40 tiendas de barrio, 20 public market retailers, 19 ultra-marinos, 13 miscelaneas, and 8 self-service independents.

The survey was designed to shed light on retailer behavior and characteristics in areas relevant to the formation of voluntary chains, specifically, the scale of operation of retailers according to retailer type and retailer procurement practices. This was deemed necessary in order to generate benchmark data which could be used as a base for measuring the costs and benefits of affiliating to a voluntary chain and adopting new procurement practices. The forthcoming analysis of survey results is merely intended to identify tendencies characterizing retailer procurement behavior, not to identify all behavioral modes and possible combinations of procurement SOPs or precisely measure retailer operating parameters.

It must be kept in mind when analyzing any retailer survey data in Mexico that the accuracy of retailer responses is not only subject to the <u>willingness</u> of retailers to offer a truthful answer, but also to their <u>ability</u> to answer correctly. For example, many retailers were found to have a poor understanding of the concept of

percentages. Furthermore, as will be apparent later upon examination of the survey results most retailers do not record sales and purchases, manually or otherwise. Therefore, in many instances they have difficulty responding to a question in either relative or absolute terms. In addition, even if the retailer did maintain accurate sales records he might be afraid to state this information to an enumerator since most retailers underreport income for tax purposes.

Hence collecting primary data in this kind of setting is a difficult undertaking and highly dependent on the skill of the enumerator. The powers of observation of the enumerator are very important in determining characteristics of the retailer that can facilitate a line of questioning which will generate the most accurate response. Via informal, often indirect questioning deviating from the questionnaire where necessary a skillful enumerator can induce the retailer to answer with an approximation of his actual situation even where he is reluctant to do so.

The author met with the enumerators on a regular basis as the survey progressed to obtain feedback on problem areas and insure an understanding of the purpose of each question. Different strategies for approaching and questioning retailers were suggested based on difficulties identified by enumerators and observation of retailer responses.

Nevertheless, due to some variance in the skill and initiative of enumerators it is assumed that not all retailers were appropriately assisted in responding to all the questions.

The questionnaire was designed to yield, in most instances, fixed alternative responses vs. free responses (Lynch). The questions on time spent in the procurement process were designed to be indirect since preliminary questioning of retailers indicated that most retailers simply did not know the total amount of time spent in the procurement process. Consequently, retailers were assisted in estimating this variable by breaking down the procurement process into specific activities (see Appendix 1 where the questionnaire is presented).

The other source is a national survey designed and carried out by CONCANACO, the National Confederation of Chambers of Commerce. CONCANACO is the principal trade association for the commercial sector, theoretically representing all businessmen involved in the wholesaling and retailing activities associated with the sale of consumer goods.

In 1981 CONCANACO first realized a national survey of retail activities on a pilot basis. The data presented here were collected in the latter six months of 1982 with a sample size of 2630 retailers distributed in 14 cities and 10 towns ranging from 15,000 to 50,000 inhabitants. Twenty nine percent of the respondents were located in the Mexico City area. The data are disaggregated by product line such that dry grocery retailers make up a unique category representing 58 percent of the total sample size or 1525 retailers; this permits us to cite the study in reference to

dry grocery retailers only. The purpose of this survey was to serve as the basis of a longitudinal data series on the retailing industry (all consumer products), and to formulate the first profile of retailers and determine the degree of modernization of the retailing industry for policy purposes.

A final comment on the joint use of the two surveys is warranted. Although the scope of the CONCANACO survey is national and our focus is on the Mexico City market area, certain retailer characteristics are felt to be largely independent of geographic location. Hence the CONCANACO survey is only cited in relation to what are believed to be general characteristics and tendencies which accurately represent not only the national retailer population but the Mexico City retailer population as well.

7.3 Taxonomy of Retailers

The taxonomy of retailers presented in Figure 3 disaggregates retailers along broad lines using sales method (personal-service or self-service), ownership (public or private, chain or independent), and product lines handled (grocery, wine and liquor or convenience items) as the principal criteria for classifying retailers. A more detailed description follows which highlights the similarities and differences exhibited among retailers. Except where specified otherwise the data presented is from the survey of traditional retailers carried out by the author with the support of Banco de Mexico.

7.3.1 Tiendas de Barrio

The typical tienda de barrio or personal-service neighborhood grocery store is characterized by an average of 28 m^2 in sales space, 18 m^2 in storage space and an estimated 97,950 pesos in weekly sales (in 1982), yielding weekly sales per square meter of 3498 pesos (see Table 7.1). On the average tiendas de barrio handle 72 products and the following key product lines: dry groceries, contributing 49 percent of total sales; candy and tobacco, contributing 13 percent of total sales; cold meats, contributing 13 percent of total sales; soft drinks, contributing 9 percent of total sales; and dairy products (exluding milk), contributing 7 percent of total sales. (The figures do not add to 100 because only the most important product lines are mentioned.)

7.3.2 Miscelaneas

The typical miscelanea is a personal-service neighborhood candy, cigarette and soft drink store. It is characterized by 19 square meters of sales space, 7 m^2 of storage space, and estimated weekly sales of 37,750 pesos, ($1986/$m^2$). The limited product offerings available in miscelaneas is evident from the following. An average of 45 products are handled, consisting of three key product lines: dry groceries, representing 38 percent of total sales; soft drinks, contributing 29 percent of total sales; and candy and tobacco, contributing 23 percent of total sales.

TABLE 7.1 SOME TRADITIONAL RETAILER OPERATING PARAMETERS, BY RETAILER TYPE. MEXICO CITY. 1982.

Parameter	Tiendas de Barrio	Miscelaneas	Locatarios	Ultramarinos	Self-service Independents
Number of Products Handled	72	45	64	216	250
Average Sales Area (m^2)	27.59	19.07	12.62	33.81	74.22
Average Storage Area (m^2)	17.93	7.42	15.33	32.71	53.12
Average Weekly Sales (pesos)	97,950	37,750	62,250	170,856	250,000
Average Gross Margin (%)	14.83	14.81	15.09	19.89	16.00
Average Weekly Sales/M^2 (pesos)	3,498	1,986	4,819	5,025	3,378

SOURCE: Retailer Survey, Banco de Mexico, 1982.

7.3.3 Locatarios de Mercados Publicos or Public Market Retailers

The typical dry grocery locatario or personal-service public market retailer is the smallest traditional retailer in terms of sales space, averaging 13 m^2 of sales area, 15 m^2 storage area, and 62,250 pesos estimated weekly sales, ($4819/$m^2$). On the average locatarios sell 64 products and the four main product lines offered are: dry groceries, representing 66 percent of total sales; grains and dry beans, contributing 17 percent of total sales; dairy products (excluding milk), contributing 10 percent of total sales; and cold meats, contributing 6 percent of total sales.

7.3.4 Ultramarinos

The typical ultramarino or personal-service neighborhood liquor and grocery store averages 34 m^2 sales area, 33 m^2 of storage space, and estimated weekly sales of 170,856 pesos, ($5025/$m^2$). On the average ultramarinos sell 216 products and offer the following five principal product lines: wine and liquor, contributing 38 percent of total sales; dry groceries, contributing 30 percent; candy and tobacco, contributing 17 percent of total sales; cold meats, contributing 7 percent of total sales; and dairy products, contributing 5 percent of total sales. Some ultramarinos are members of corporate chains of ultramarino outlets, in some cases operated similar to a franchise system.

7.3.5 Self-service Independents

The self-service independent exhibits the widest range

in terms of size of outlet of all the traditional retailer types, from 40 to 180 m^2 sales area for the retailers surveyed, averaging 74 m^2; storage area averages 53 m^2. While significant variety exists in the case of the self-service independent, of those retailers surveyed the average number of products handled is 250. Weekly sales average 250,000 pesos, yielding average weekly sales per square meter of 3378 pesos. Five key product lines are sold: dry groceries, contributing 45 percent of total sales; wine and liquor, contributing 19 percent of total sales; candy and tobacco, contributing 11 percent of total sales; cold meats, representing 9 percent of total sales; and dairy products (excluding milk), contributing 5 percent of total sales.

7.3.6 Degree of Modernization of Independent Retailers

The narrow product lines and low operating scale of traditional retailers is readily apparent from the above. Retailer characteristics and the degree of modernization they exhibit were examined further by questioning retailers about some of the management SOPs employed. Indicators of modernization include: maintenance of a daily sales record, stock lists, realization of periodic inventories, self-service sales method, use of a cash register, promotional offers to consumers, and ownership of a refrigerated display case. Those retailers exhibiting 1 to 3 of the above characteristics were classified as traditional, those with 4 to 5 were judged to be engaged in the modernization or transformation process, and more than five characteristics qualified

a retailer to be considered as exhibiting several operating practices associated with the modern.

Based on the above criteria (see Table 7.2) it is evident that ultramarinos and self-service independents manifest the highest degree of modernization and the largest proportion of retailers engaged in the transformation process. Predictably, the degree of modernization and the scale of operation appear to be positively correlated. The overwhelmingly traditional nature of the other retailer types is evident, with only tiendas de barrio demonstrating a significant number of stores (25 percent) participating in the adoption of improved practices and moving toward the operation of more modern businesses.

The CONCANACO survey confirms the traditional nature of most food retail outlets using similar criteria. CONCANACO reports that only: 15 percent of independent retailers produce a balance statement at least once a year or keep accounting records registering the sales and purchases of the business; 11 percent keep a stock list to maintain inventory records; and 13 percent have a self-service sales system.

7.3.7 Comparison of the Basic Retailer Types

A comparison of the retailer types presented above indicates several important differences. Standing out as one of the key differences is the intensive use of sales space in public market stalls relative to tiendas de barrio and miscelaneas. Public market retailers offer 42 percent more products than miscelaneas in 46 percent less space. A com-

TABLE 7.2 DEGREE OF MODERNIZATION OF DRY GROCERY RETAILERS BY TYPE IN MEXICO CITY, 1982.

Degree of Modernization[a,b]	Total	Tiendas de Barrio	Miscelaneas	Public Market	Ultra-marinos	Self-service Independents
		(Number of Stores)				
Modern	7	0	0	0	5	2
Modernizing	20	10	1	0	5	4
Traditional	71	30	12	20	7	2
No Response	2	0	0	0	2	0
TOTAL	100	40	13	20	19	8

[a] The degree of modernization of retailers was estimated using the following indicators of modernization:
- Use of a stock list to maintain inventory records
- Periodic inventories
- Self-service sales system
- Special offers and promotions to consumers
- Daily registration of sales
- Use of a cash register
- Refrigerated display case

[b] Retailers were classified according to the following criteria:
- Compliance with 1 to 3 indicators, traditional
- Compliance with 4 to 5 indicators, modernizing
- Compliance with 6 to 7 indicators, modern

SOURCE: Retailer Survey, Banco de Mexico.

parison of the sales per square meter for each outlet type highlights this point.

Public market retailers are the most heavily oriented toward basic food products in terms of contribution to total sales. Ultramarinos are the least, nevertheless, they offer a broader line of dry groceries and sell more dry groceries in absolute terms than the other three personal-service retailer types. For example, the average ultramarino sells 51,256 pesos weekly of dry grocery products while the tienda de barrio sells 47,995 pesos. Consequently, although the ultramarino is typically perceived as merely a source of wines and liquors rather than a supplier of basic grocery needs, its importance in this capacity should not be underestimated. This, in conjunction with the higher degree of modernization of ultramarinos, may make many ultramarinos good candidates for affiliation to a voluntary chain.

Self-service independents are the widest line, largest scale traditional retailer type. They exhibit the most potential for expanding sales area due to the relatively large amount of space occupied as storage area in many self-service outlets. Most of this could be converted into sales area if linked to a stable supply network making merchandise storage unnecessary beyond that which occurs on the sales floor. The higher degree of modernization of self-service retailers also contributes to the attractiveness of this retailer type as candidates for affiliation to voluntary chains.

Although the miscelanea is the dominant traditional retailer type in terms of retailer numbers (see Table 5.3), it serves primarily as a supplier of convenience items (such as soft drinks and candy and tobacco), rather than as a supplier of basic food needs. The miscelanea is the smallest scale retailer type in terms of sales volume and along with public market retailers tend to be the most traditional. Both also exhibit a very limited potential for expanding the scale of operation given the physical facilities and level of resources of the businesses in which they operate, consequently they do not represent prime candidates for affiliation to voluntary chains.

The tienda de barrio is the second most important retailer type in terms of retailer numbers (37 percent of the total retail population) and does serve as an important supplier of dry grocery needs for low income consumers. Of the three most traditional and smallest outlet types the tienda de barrio is the largest and does have some potential for conversion to self-service sales systems when both sales and storage area are taken into account since retailers with at least 40 m^2 can adopt partial self-service systems. In fact, many tiendas de barrio have 50 to 60 m^2 of sales area before considering the conversion of storage to sales area. These larger scale retailers also tend to represent the type of tienda de barrio noted earlier as manifesting indications of being engaged in the transformation process, adopting more modern operating techniques. Therefore, larger tiendas de barrio are prime candidates for affiliation to voluntary

MICHIGAN STATE UNIVERSITY LIBRARIES
3 1293 03046 7009

THESIS
pt. 2

LIBRARY
Michigan State
University

chains.

7.4 The Retailer Procurement Process

The procurement process receives attention in this study for many reasons. Coordination between retailers and their suppliers is a crucial element in an efficient distribution system. A necessary condition for retailers to be able to insure that their businesses are operated effectively and that customers are properly serviced, is to be assured of relying on key suppliers to provide the products demanded by consumers at the right price, time, and in the right quantities. In a system where retailer-supplier interfaces are not well coordinated and the retailer must dedicate a major portion of his time and resources to the procurement activity instead of sales, firm performance suffers. In addition, fragmented procurement practices increase merchandise acquisition costs, augmenting distribution costs and raising prices for consumers.

As we examine the existing relationships between retailers and suppliers our understanding of the level of vertical coordination present in the dry grocery subsector will be improved. In order to enrich our understanding of supplier-retailer relationships we will focus on a description of retailer procurement standard operating procedures. SOPs are part of the vertical coordination process, the practices embodied within standard operating procedures influence the flow of economic information and control within the food system as a whole (Hamm). Hence, it becomes

abundantly clear that an understanding of procurement SOPs can be instrumental in diagnosing performance in the dry grocery subsector.

Furthermore, part of the diagnostic process embodied in this study involves determining the viability of voluntary food chains in Mexico as a strategy for decreasing retailer procurement costs and lowering food costs to consumers. By identifying actual procurement practices it becomes possible to determine the problem areas that require attention and the feasibility of voluntary chains as a solution to these problems.

Naturally dry grocery procurement practices may vary depending on the market area in which the retailer operates, thus once again caution should be exercized in making any inferences from this discussion about traditional retailer procurement behavior in other geographic locations or of course, procurement practices for perishables.

7.4.1 Time Devoted by Retailers to Procurement

Survey results indicate that the procurement function exerts a major influence over the management resources of retailers, expressed primarily in terms of time occupied in the procurement function. The average time spent by retailers on the procurement function (excluding public market retailers which will be discussed separately), is 919 minutes per week or approximately 3 hours per day at six days per week (see Table 7.3). This significantly diminishes the time that is spent in the sales activity - the principal concern and purpose of any retail business. Given the

TABLE 7.3 ESTIMATED TIME (MINS./WEEK) SPENT BY RETAILERS IN THE PROCUREMENT PROCESS BY RETAILER TYPE AND ORDER METHOD
MEXICO CITY

Order Placing Method	Average	Tiendas de Barrio	Miscelaneas	Public Market	Ultramarinos	Self-service Independents
Wholesaler Sales Agents	89.1	72.0	45.0	51.0	210.0	67.5
Manufacturer Sales Agents	111.3	76.0	22.0	30.0	368.0	60.5
Distributors	312.0	330.0	420.0	30.0	210.0	570.0
Personal Visits	256.0	295.0	355.0	185.0	165.0	280.0
Telephone	35.0	25.0	0	10.0	22.5	82.5
TOTAL	796.4	798.0	842.0	306.0	975.5	1,060.5

SOURCE: Retailer Survey, Banco de Mexico, 1982.

owner-operated nature of traditional businesses time spent by the owner away from sales, merchandising, stocking, customer relations, accounting and store cleaning activities can generate a negative impact on both profits and sales.

While average time spent in the procurement function offers an indication of the magnitude of human resources engaged in this activity it does not explain how retailers go about the procurement process nor identify the differences in retailer procurement behavior which exist according to retailer type. For example, as an indication of the importance of different procurement SOPs a ranking of procurement methods can be expressed in terms of the quantity of time spent procuring merchandise utilizing each method or SOP. One ranking prevails for tiendas de barrio, miscelaneas, and self-service independents, while ultramarinos and dry grocery public market retailers exhibit different rankings.

7.4.2 Procurement Behavior of Tiendas de Barrio, Miscelaneas and Self-service Independents

The first claim on time spent by the retailer procuring store stocks originates with distributors. Distributors carry out frequent visits to retail outlets to deliver soft drinks, packaged breads and snack foods (eg. potato chips, packaged cookies and sweets, etc.), dairy products and cold meats. Due to the high turnover and/or somewhat perishable nature of these foods retailers often receive deliveries two to three times per week and old supplies are removed from the shelf at this point.

Thus, while this is not a procurement method used to obtain staple grocery supplies it is nevertheless the most time-consuming of all procurement activities for three types of dry grocery retailers. The highly time-consuming nature of the daily transactions with distributors is a serious issue for retailers. Many retailers questioned on their dealings with distributors pointed out the ease with which price and/or quantity errors (usually in favor of the distributor) can occur as the retailer attempts to simultaneously carry on transactions with distributors and attend the public. This is a problem area which warrants special consideration by voluntary food chains as a service to retailers.

The second most time-consuming procurement method is the personal visit of the retailer to a wholesaler to obtain dry grocery supplies. For most retailers while the personal procurement visit is probably not the major supply method in terms of volume purchased it is heavily used as an SOP for handling stock-outs. Only 34 percent of the retailers surveyed indicate that personal procurement visits are the principal supply source. This finding is supported by the retailer response to a question asking them to state the location of their principal wholesaler supplier; only 26 percent indicated La Merced which has been the traditional pole of attraction for personal procurement visits. Nevertheless, due to the time consuming nature of personal procurement visits they become a major part of the

procurement activity.

The procurement method ranked third in terms of time spent is actually the primary procurement method for dry groceries in terms of buying volume..This SOP is to purchase from sales agents, mainly from wholesaler sales agents who visit the store, usually on a weekly or bimonthly basis. Eighty three percent of all retailers surveyed report receiving visits from either manufacturer or wholesaler sales agents. The sales agent greatly outweighs in importance the use of telephone order systems; only 21 percent of the retailers surveyed report placing orders via the telephone on a regular basis. Although telephone order systems can decrease distribution costs for wholesalers and manufacturers by diminishing reliance on sales agents to visit stores, this potential goes largely uncaptured.

The average number of wholesaler, distributor and manufacturer suppliers for each retailer type are presented in Table 7.4. The lack of importance of direct distribution networks from dry grocery manufacturers to traditional retailers discussed in earlier sections is evident from these findings. Considering the relatively narrow product lines offered by most dry grocery manufacturers it is obvious that they represent a relatively minor part of retailer supply systems. The markedly higher number of manufacturers supplying ultramarinos is discussed later and is a result of the direct distribution networks that exist for wine and liquor manufacturers.

In contrast, we observe the large number of wholesaler

TABLE 7.4 AVERAGE NUMBER OF SUPPLIERS BY TYPE PER DRY GROCERY RETAIL OUTLET MEXICO CITY, 1982

Retailer Type	Wholesalers	Manufacturers	Distributors
Tienda be barrio	6	8	11
Miscelanea	5	4	14
Public Market	6	4	1
Ultramarino	8	23	7
Self-service Independent	5	11	19

SOURCE: Retailer Survey, Banco de Mexico.

suppliers patronized by retailers, varying from five to eight per retailer. These findings indicate a widespread lack of concentration of purchases or a dispersed buying pattern by retailers with wholesaler suppliers. However, upon comparison of these findings with the response of retailers to another question the results appeared inconsistent, warranting further investigation.

Specifically, the degree of concentration of purchases was also investigated by asking retailers whether or not they generally purchased supplies with the same wholesalers and why they did or did not (see Table 7.5). Eighty three percent of all retailers said that they did purchase the bulk of dry grocery needs with the same principal supplier. It appears that retailers do tend to identify one or two key suppliers, however, due to inadequate planning of inventory levels retailer orders with a key supplier are often insufficient to meet weekly consumer demand. Thus, a wholesaler sales agent visiting the store on any day after the primary supplier has delivered an order may receive a residual order. The wholesaler which acts as a residual supplier of a retailer tends not to send sales agents on as regular a basis to the retail outlet. Retailers also appear to patronize several wholesalers for residual purchases due to the prevalence of product scarcity or the fact that even under normal conditions a wholesaler may not offer a sufficiently wide line of products and brands to meet the needs of the retailer.

TABLE 7.5 REASONS FOR AND AGAINST REGULAR PATRONAGE OF WHOLESALE SUPPLIERS BY TYPE OF RETAILER MEXICO CITY, 1982

Reasons	Total	Tiendas de barrio	Miscelaneas	Ultramarinos	Public Market	Self-service Independents
FOR	83	32	10	19	16	6
Confidence and Trust	9[a] - 9[b]	5 - 2	1 - 2	2 - 1	0 - 2	1 - 2
Friendship	1 - 0	-	-	-	1 - 0	-
Quality of products	4 - 4	1 - 3	-	1 - 0	1 - 1	1 - 0
Prices	15 - 10	2 - 6	3 - 2	4 - 1	5 - 1	1 - 0
Credit	9 - 11	3 - 2	0 - 2	5 - 6	1 - 0	0 - 1
Discounts	2 - 7	2 - 2	-	0 - 4	0 - 1	-
Wide product line	28 - 17	15 - 4	4 - 1	3 - 5	4 - 6	2 - 2
Others (members of chains, etc.)	15 - 9	4 - 4	2 - 2	4 - 1	4 - 2	1 - 0
AGAINST	17	8	3	-	4	2
Unstable price	2 - 2	1 - 1	-	-	0 - 1	1 - 0
Unstable quality	-	-	-	-	-	-
Limited product assortment	3 - 1	1 - 1	-	-	2 - 0	-
Lack of basic products	2 - 2	1 - 0	0 - 1	-	1 - 0	0 - 1
Unreliability	7 - 2	4 - 1	2 - 0	-	0 - 1	1 - 0
Absence of wholesalers near the retail outlet	3 - 5	1 - 3	1 - 1	-	1 - 1	-

[a]The first column corresponds to the principal factor influencing the choice of supplier.

[b]The second column corresponds to the second most important factor influencing the choice of supplier.

SOURCE: Retailer Survey, Banco de Mexico.

Hence, the lack of retailer knowledge about sales and inventory planning systems, product scarcity, and insufficient width of the product lines of some wholesalers are all important factors working against retailer concentration of purchases with a primary wholesaler supplier. While a principal supplier may indeed be patronized, in reality the percentage of total dry grocery purchases procured through this source is frequently less than half, depending on the characteristics of the wholesaler and retailer in question.

The response of retailers when asked to explain why they did or did not frequent a principal supplier highlight some of the important factors influencing the choice of wholesaler supplier in the eyes of retailers (Table 7.5). For those retailers which report patronizing the same key suppliers there are two principal reasons for doing so which stand out, the wide product line and the competitive prices of the preferred wholesaler. Wide product line is by far the most important consideration, mentioned by 54 percent of the retailers responding affirmatively to the question, as either the principal or second most important factor determining the choice of wholesaler. Credit to retailers is another wholesaler service which acts as the primary incentive to a smaller but significant number of retailers to purchase on a regular basis from the same supplier. Several retailers report other reasons, most importantly membership in a chain or buying association (such as UCASA).

Volume discounts are mentioned by relatively few

retailers (9 percent) as a factor affecting the choice of supplier. This is consistent with data collected at the wholesale level which indicate that only a small minority of wholesalers currently grant volume discounts to retailers. It appears probable that the paucity of buying incentives offered by wholesalers to retailers, such as volume discounts, is a factor contributing to the lack of retailer concentration of purchases observed above. Retailers would be expected to perceive incentives to improve purchase planning on a weekly basis and reduce fill-in orders if volume discounts were available.

It is of interest to observe that only one percent of retailers mention friendship with the wholesaler as a factor which influences procurement decisions. Hence apparently custom or habit in buying from the same wholesaler is largely unimportant relative to more hard-headed business decisions based on product availability and price. However, while this downplays the personal nature of procurement relationships, nevertheless, several retailers mention confidence and trust in the wholesaler as a key factor influencing the choice of supplier. Therefore, it appears that many retailers are inclined to show loyalty toward a wholesaler that has demonstrated reliability and good faith in business transactions with the retailer. All of these findings have implications for the formation of voluntary food chains which will be considered later.

The 17 percent of retailers which report not buying on

a regular basis with the same supplier appear to include a high percentage of retailers which made personal procurement visits to La Merced. These retailers tend to visit a number of wholesale outlets and compare prices and availability of products. These retailers report the unreliability (informalidad) of wholesalers as the principal reason for not dealing with the same supplier. Another important reason is the lack of a wholesale business in the area of the retailer, making it more difficult to visit or receive regular deliveries from the same supplier. Many of these respondents are very small scale retailers located in outlying areas such as Milpa Alta, Contreras, etc. Hence for these retailers the SOP of engaging in personal procurement visits may be more due to necessity than choice.

Examination of the procurement behavior of public market retailers and ultramarinos indicates some differences, relative to the behavior of the other three retailer types, which arise from the type of businesses they operate.

7.4.3 Procurement Behavior of Dry Grocery Public Market Retailers and Ultramarinos

While public market retailers that sell dry groceries exhibit many similarities to other retailers they represent an exception in some aspects of the discussion presented above, such as the ranking of procurement methods in terms of time spent, and the small total amount of time engaged in the procurement function relative to other retailers (306 minutes vs. 800 to 1000 minutes for the other retailer types). One factor influencing the procurement behavior of

dry grocery public market retailers is their concentrated locational nature. In otherwords, since public market retailers are by definition grouped together in one unit a different supply system has emerged to meet their needs.

Generally each public market has a dry grocery retailer that operates on a larger scale than the rest. These retailers often rent additional storage space nearby, frequently in make-shift warehouses and act as medio-mayoristas. Thus, the smaller retailers in the market may purchase a significant portion of supplies from the "resident" medio-mayorista. This explains why public market retailers average only 35 minutes per personal procurement visit relative to 132 to 180 minutes for the other retailer types. It also helps explain the high frequency of purchase per supplier per week which public market retailers exhibit; the close proximity and medio-mayoreo sales method of a fellow public market retailer discourage the planning of purchases on a weekly basis and encourage the retailer to make frequent fill-in purchases. The apparently common practice of purchases on a medio-mayoreo basis by public market retailers, implies higher procurement costs which could be expected to be reflected in consumer prices. Results of a price survey conducted by Banco de Mexico among three retail outlet types indicates that on the average public markets do indeed manifest the highest price levels.

Another procurement SOP peculiar to public market retailers was identified in the investigative process. Although the frequency with which this occurs is not known,

we were able to verify that at least one major wholesaler has established a special delivery system for some public markets; for those retailers utilizing this type of system we would expect this to be a factor diminishing procurement time. The wholesaler delivers on one occasion on a weekly basis all orders for the dry grocery retailers located in the market. A delivery is made in one spot and all retailers are required to come and pick up their orders at that moment and place orders for the following week. This system decreases distribution costs for wholesalers and benefits retailers via a more stable weekly supply system.

In addition to the concentrated location of public market retailers there is another factor implicit in the nature of this retailer type which affects procurement behavior. This is the lack of product lines among dry grocery public market outlets of the kind handled by distributors. As was observed earlier in the description of the composition of retailer sales by product line the public market dry grocery retailer as a rule does not carry packaged bread, snack foods, soft drinks, etc. (Soft drinks in public markets are usually carried by one public market retailer per market that specializes almost exclusively in this product line.) The major distributor type attending public market retailers is the dairy product and/or cold meat distributor, for those retailers carrying these product lines. This kind of distributor apparently visits stores somewhat less frequently than bread distributors due to the

less perishable nature of the product lines they handle. Both of these factors combine to explain the small amount of procurement time (relative to other retailers) spent by public market retailers engaged in transactions with distributors.

Ultramarinos also represent an exception in terms of the ranking by time of procurement methods. The most important procurement method for ultramarinos is via the sales agents of wine and liquor companies which do maintain extensive direct distribution networks to ultramarino outlets, a major market segment for liquor manufacturers. This method is followed by two methods, distributors and wholesaler sales agents who tie for second place in terms of time occupied by the retailer procuring merchandise other than wine and liquor. The higher sales volume of ultramarinos makes them profitable candidates for direct distribution and because they are served by so many sales agents, fewer personal visits to procure merchandise are required.

7.4.4 Concerns About the Effect of Current Procurement SOPs on Retailer Growth

The description of retailer procurement SOPs demonstrates the highly fragmented nature of retailer buying practices. Miscelaneas, the smallest type of retailer, spend more time on a weekly basis in personal procurement visits than any other retailer types. It is important to note that the miscelanea exhibits by far the most inefficient buying behavior in terms of time spent in the procurement process. Miscelaneas spend an average of 842 minutes weekly to pro-

cure a product line averaging only 45 products. Thus, our expectation that the smallest retailers would employ the most inadequate procurement SOP's was correct.

However, increased operating scale does not necessarily lead to significantly improved behavior. Analysis of the buying behavior of the self-service independent yields interesting conclusions. Forty three percent of the retailers surveyed of this type buy an average of three times weekly with the same supplier. This frequent buying behavior on the part of many was unexpected due to the larger sales volume of self-service independents. It appears that this may partially be a result of the wider product lines of self-service independents. A lack of group buying and other well-developed supply arrangements to simplify procurement of a wide product line, coupled with inexperience in inventory and sales planning may cause retailers to experience a high level of stock-outs. Hence, self-service independents may make "fill-in" purchases on a regular basis. This leads us to a concern over the interrelationship between retailer growth and procurement arrangements and associated transaction costs.

Survey results highlight an important problem area. As operating scale increases economies of scale in the procurement function are indeed realized in terms of procurement time spent per product sold. Nevertheless, since the absolute amount of time spent in the procurement function continues to grow as operating scale rises, the procurement activity can become an increasingly unwieldy one (see Table

7.3).

This statement warrants further attention. In order to improve competitive strength and profitability over the long run it is important for retailers to increase the scale of operation. Yet if doing so entails an unmanageable rise in time spent in the procurement function then procurement activities become a constraint to growth. Already ultramarinos and self-service independents procure merchandise on the average from 38 and 35 suppliers respectively on sales of only 216 to 250 products.

These larger scale operators tend to face the following difficulties. As the scale of operation and hence buying volume increases many retailers initiate direct buying from manufacturers in order to achieve more attractive buying terms than those obtainable from wholesalers, implying more suppliers and procurement time since food manufacturers specialize in a few products. More attractive terms can include longer credit periods, volume discounts, and lower base prices as a consequence of direct buying. However, often retailers encounter pitfalls in this procurement method. Minimum order sizes on specific products may force retailers to hold too large of an inventory for any particular product given the corresponding inventory turnover rate.

Consequently, the benefits of direct buying may be offset by the costs of maintaining excessive inventory levels. Furthermore, as was noted earlier, direct manufacturer distribution systems are frequently unreliable and

commonly involve tied sales policies which coerce retailers to accept delivery of slow-moving items in order to obtain necessary products. In otherwords, as traditional retailers grow they tend to experience major difficulties in the transition to larger scale operations. They reach a point where they are marginally capable of direct buying, at this point any contingencies may be sufficient to eliminate the benefits of direct buying. Given the unstable nature of manufacturer supply networks direct buying may frequently prove to be an ineffective procurement method for growing traditional operators.

This finding leads us to formulation of the hypothesis that the paucity of smoothly operating supply networks (of all types) acts as a constraint to retailer growth. In-depth interviews indicate that this may become a binding constraint for some retailers, in otherwords, growth may be constrained not through insufficient demand but through insufficient supply or more precisely, the high transaction costs of procuring appropriate inventory levels.

7.4.5 Retail Buying Associations or Cooperatives

A comment on retailer buying associations is warranted at this point. Except for UCASA the author is aware of only isolated instances of dry grocery buying cooperatives in Mexico City. The success of UCASA has been largely linked to the fact that it is formed by ultramarinos, signifying that the members have greater financial resources and scales of operations than most retailers. In addition, the ultra-marino as a store type dates back to the time of Spanish

rule when they were suppliers of many imported goods and specialty items. Ultramarino operators have frequently inherited their businesses and come from a long line of serious "comerciantes." Their greater knowledge of marketing practices better enabled them to organize in this fashion.

In contrast, the limited financial resources and knowledge of food marketing exhibited by most retailers seriously impedes the development of cooperatives by tiendas de barrio and miscelaneas. Public market retailers tend to be the most politically organized by virtue of their concentrated location and in some instances buying cooperatives of public market retailers have been formed by politically motivated individuals. These cooperatives have generally been short-lived due to lack of leadership once they have served their purpose of furthering the career of the organizer.

Consequently, the obstacles to the formation of cooperatives identified from the U.S. experience - lack of capital, insufficient knowledge of wholesaling practices, and lack of leadership - were also encountered in Mexico. As a result, voluntary chains were focused on in this study due to the advantages obtained from wholesaler-sponsored improved buying arrangements.

7.5 Price Levels and Margins in Traditional Retailer Outlets

Detailed information on the pricing practices of retailers was not sought as part of the retailer survey

because of the expected difficulty of gathering meaningful information from retailers on such a sensitive topic. The main concern of this study was to obtain an indication of the extent to which both traditional retailers and supermarkets do or do not respect official retail prices established by the government on basic grocery items. Unpublished Banco de Mexico data indicates that while supermarkets generally adhere to official price levels a lack of respect for official prices among traditional retailers is common.

This finding is predictable given the low operating scales and narrow product lines handled by most traditional retailers. In marketing firms pricing tends to reflect sales volume and the rate of product turnover. This means that if larger volumes are sold and inventory is turned over at a faster rate, per unit prices can be lowered while still maintaining profit. Simultaneously, higher sales volumes generate buying economies that lower product acquisition costs, also enabling marketing firms to lower prices.

Another factor contributing to both higher sales and low prices on basic grocery products is the product assortment handled. As was mentioned in Chapter 4, wide-line operators can practice margin mix strategies, balancing low margins in basic, high demand products with higher margins in non-staples. Since this option is not available to small operators, incentives may at times be created to sell above official price levels. Officially established retail gross margins for controlled grocery items average between 8 to 10 percent. Furthermore, some of the highest volume products

have still lower margins, for example, cooking oil has a 2 to 3 percent retail gross margin.

Table 7.1 indicates the average gross margins of traditional retailers in 1982, approximately 15 percent of sales for the majority of retailers. Financial analysis of small retail firms, conducted by the author and discussed in Chapter 9, shows low rates of return on investment and low labor and management earnings in most instances. Furthermore, Banco de Mexico data on prices by retail outlet type shows that while prices in traditional retail businesses are higher than in supermarkets, they are generally not substantially above official price levels.

This leads to the hypothesis that in selling above official prices retailers are pursuing the objective of a reasonable return on investment that permits them to remain in business. Hence, failure to adhere to official prices in traditional outlets does not necessarily imply that retailers are receiving excess profits. Contrary to public opinion, the reduced operating scale and narrow product lines of traditional operators appear to explain higher price levels, rather than excess profits.

The extent to which traditional retailers can sell above official prices is limited when a product is not scarce since consumers have lower priced options available. Nevertheless, the convenience factor of purchasing in a small establishment close to the home, in conjunction with the lack of alternative retail options in some areas, often

generates an effective demand for goods sold above official price levels. It can be hypothesized that retailer pricing behavior takes into account price thresholds above which consumers may consider it worthwhile to incur the time and transportation costs of seeking out a lower cost source for the product in question.

The incentives to sell above official prices increase significantly when product scarcity occurs and margins at all levels are further constrained, at times becoming negative. Frequently retailers that don't wish to risk being closed by a government inspector for selling above official prices and that don't have the resources to subsidize sales of the product at the official price, merely temporarily discontinue the product. This further reduces the availability of products to consumers.

On the other hand, some retailers view their situation as yielding a comparative advantage relative to large scale retailers under scarce conditions since large stores are more subject to inspections by government personnel and must respect official prices. Therefore, despite their superior bargaining power and hence greater ability to procure scarce products, supermarkets are not always willing to sell these items given the constraint of adhering to official prices. In contrast, those traditional retailers willing to expend sufficient resources to procure a scarce product and incur the risk of discovery by an inspector, may sell limited amounts of the product at a margin varying from reasonable to exorbitant. The level of profit depends on the integrity

of the retailer, effective consumer demand for the item, and the availability of substitutes.

Needless to say, the potential for opportunistic behavior and short run excess profits for a selected few does arise when a product which enjoys a high level of effective consumer demand with few or no substitutes or strong brand loyalty becomes scarce.

7.6 A Summary of the Key Characteristics of Traditional Retailers

A summary of the findings of the retailer survey can be presented in the form of a list describing the key characteristics of traditional grocery retail businesses in Mexico City.

a) limited merchandise assortments

b) no basic book-keeping systems involving a record of daily sales, daily merchandise deliveries, operating costs, gross and net margins, and rates of return on investment

c) poor sanitation, lighting and merchandise handling, increasing product losses

d) poor inventory control yielding non-optimal inventory turnover rates that either produce frequent stock-outs or excess investment in slow-moving items

e) small scale of operations

f) no use of modern merchandising and promotional methods designed to increase sales through lower prices

g) fragmented and costly product procurement systems

h) no experience with formal lending institutions

7.7 Understanding Some of the Factors Influencing Retailer Behavior

It was noted earlier that the behavioral modes of actors are believed to be a function of their risk

preferences, objective functions and opportunity sets. Based on observation of the subsector it would appear that the current inertia of traditional retailers is most closely related to their limited opportunity sets relative to other subsector participants. It can be hypothesized that the limited opportunity sets of traditional retailers severely constrains not only their bargaining power with wholesalers and manufacturers but their ability to expand as well. Hence, rather than actively exerting some control over the dynamic evolution of the subsector traditional retailers tend to view themselves as passive "victims" of the prevailing exogenous and endogenous forces for change impacting the subsector.

Traditional retailer behavior can be better understood by examining some of the principal attitudes they hold about doing business in the environment in which they operate. For example, what retailers perceive to be the major problems they face, and the alternative solutions they envision. Where retailers do not undertake actions to implement these potential solutions, the question of interest then becomes, why not?

7.7.1 Retailer Attitudes Reported in a CONCANACO Survey

When asked to identify the most serious problems faced by their businesses in the CONCANACO survey, retailers responded by indicating the following problems in declining order of importance: the rise in merchandise acquisition costs in 1982; product scarcity; official price controls;

lower profits than at the beginning of the year; reduced consumer demand; and high commercial interest rates (see Table 7.6).

The response of retailers to questions asking them to articulate some of their principal beliefs about the retail operating environment exhibits the following concerns and attitudes: an expected increase in the intervention of the government in the marketing system; a belief that marketing firms are over-regulated; supermarket chains will gradually replace traditional retail outlets; concessionary credit and technical assistance are needed to foment the development of small and medium scale retailing; and retailers should form buying associations (see Table 7.7).

These viewpoints strongly suggest that retailers perceive that changing supply conditions are having a detrimental effect on the successful operations of their businesses at a time when they are facing rising competition and growing governmental intervention. The effect of these views on the frame of mind of retailers is evident when conversing with them. Retailers express a high level of concern about their ability to survive and compete in what they perceive to be an increasingly hostile environment.

It has been been mentioned that fear of survival was a major factor inducing retailers to band together to form buying cooperatives or voluntary chains in the U.S. and Europe. Without this ingredient the independent nature of traditional retailers causes them to resist any attempt at cooperation with suppliers and fellow retailers. These sur-

TABLE 7.6 PRINCIPAL PROBLEMS FACED BY DRY GROCERY RETAILERS

Problems	% Retailers
Inflating wholesale prices	84
Product scarcity	68
Price controls	65
Declining profits, 2nd half of 1982	64
Low consumer demand	55
High commercial interest rates	48

SOURCE: National Retailer Survey, CONCANACO (National Confederation of Chambers of Commerce), 1982.

TABLE 7.7 FIVE PRINCIPAL VIEWPOINTS HELD BY DRY GROCERY RETAILERS

Viewpoints	% Retailers
Government intervention in the marketing system will continue to grow	90
Supermarkets are replacing small retail outlets	88
Concessionary financing and technical assistance via a marketing trust fund are urgently needed	85
Government intervention in the marketing system is excessive	80
Group buying arrangements should be pursued	71

SOURCE: National Retailer Survey, CONCANACO (National Confederation of Chambers of Commerce), 1982.

vey results indicate that the prevailing operating environment in Mexico, which exhibits threats to retailers on both the demand and supply sides, is very conducive to retailer interest in the formation of voluntary food chains.

However, many retailers operate stores merely as an occupation during retirement or because of a lack of alternative employment for their labor given the high unemployment and underemployment rates prevailing in the economy. This type of retailer views the business as a temporary occupation and the objective function may not be to grow, but to subsist and earn a return sufficient to cover food costs and basic needs for the family. The subsistence-oriented objective functions of some retailers is another variable which must be taken into account in selecting retailer candidates for affiliation to voluntary chains.

On the other hand, many retailers may have expansion-oriented goals but face serious obstacles in finding the means to pursue expansion given their restricted opportunity sets. The forthcoming discussion will examine this question further.

7.7.2 Coordination Mechanisms and their Impact on Retailer Behavior

The broad context within which coordination decisions are made is formed by the basic environment of the opportunity sets of the interacting parties. Marion asserts that not withstanding some factors beyond the control of subsector participants such as weather and foreign supply, the coordination process depends on the decisions of subsector actors.

These decisions are affected by incentives, the flow of information, the adequacy of necessary inputs to be able to respond to incentives, and management alertness and ability (Marion).

It is of key interest to examine the linkage between traditional retailer behavior and vertical coordination via the coordination mechanisms functioning in the subsector. One way to explore this linkage is to identify some of the incentives to traditional retailers to modify standard operating procedures given changing market conditions, and the retailer behavioral response to these incentives in light of existing coordination mechanisms.

For example, many retailers currently perceive an incentive to increase the operating scales of their businesses and broaden product lines in order to obtain greater buying power and competitive strength. Results from the retailer survey carried out in collaberation with Banco de Mexico confirm that most retailers recognize incentives for expansion but also indicate that they are faced by serious barriers which limit expansion.

Eighty three percent of the retailers surveyed reported obstacles to increasing the operating scale of their businesses. The obstacle most frequently mentioned was a lack of capital and credit (including working capital to expand product lines) mentioned by 48 percent of respondents. Secondly, competition itself was seen as a serious enough obstacle to limit any expansionary plans by 31 percent of

respondents. The third reply which stands out as a constraint to retailers is procurement problems, in large part arising from product scarcity, mentioned by 24 percent of retailers. The importance of the lack of credit (a coordinating mechanism) as a constraint to growth is supported by the CONCANACO survey which reports that only 10 percent of retailers have established lines of credit with commercial banks.

The current environment of product scarcity, limited supplier credit and unstable distribution networks should also yield incentives to retailers to develop new procurement SOPs that would enable them to exert more control over the procurement process and obtain closer cooperation with suppliers. However, while incentives may exist weak coordination mechanisms may again restrain their ability to follow through in a meaningful fashion.

For example, the paucity of retailer bargaining or buying associations and voluntary chains makes it more difficult to obtain improved buying conditions and terms. We would also hypothesize that retailers are further influenced by their limited access to information on market supply and demand trends relative to manufacturers, supermarkets and wholesalers. A smoothly flowing information system available for all subsector participants as a coordination mechanism does not exist. Firm size and resources are major determinants of the level and quality of information which can be generated and accessed by the participant. Hence, traditional retailers are at a disadvantage and this

influences their ability to both negotiate with suppliers and identify and respond to opportunities, making informed judgements on the risk levels associated with different decisions.

Furthermore, most retailer actions can not be taken independently, rather they depend on the cooperation of manufacturers and/or wholesalers. The interests and needs of retailers may be supported or impeded by the simultaneous efforts of suppliers to deal with the problems evident at the wholesaler or manufacturer interfaces with retailers.

Marion asserts that "In most subsectors firms at different stages have conflicting goals, don't accurately understand the goals and preferences of firms at the other stages and aren't 'system oriented.' Hence conflict is more prevalent than cooperation". Applying this hypothesis to the Mexican situation yields meaningful results.

For example, generally the greatest incentives to wholesalers to contract with retailers to stabilize demand and increase vertical coordination would exist under conditions of surplus supply. Retailers, on the other hand, would feel the weakest incentives to develop formal supply agreements with wholesalers under these conditions. Using this logic, while the current Mexican market situation of product scarcity creates incentives to retailers to establish closer more coordinated supply linkages with wholesalers, wholesalers may feel few incentives to respond favorably to retailers.

Conversations with wholesalers indicate that the largest firms with the most market power do indeed view the current market as a seller's market, inhibiting their interest in forward contract arrangements. Yet other incentives in favor of forward linkages do exist. Growing competition from the supermarket industry is a major force for change sparking wholesaler interest in more stable linkages with retailers. Also, rapidly increasing operating costs caused by the high rate of inflation have generated concern over delivery and handling costs for small orders. Consequently, interest has grown in the possibilities for encouraging retailer concentration of purchases with the delivering wholesaler, and the concept of channeling sales through a smaller number of larger customers. Forward contracts of the voluntary chain type facilitate the introduction of new SOPs which encourage this kind of behavior. Medium-scale wholesalers (latecomers) have expressed genuine interest in this concept as a strategy for growth.

Therefore, it appears that wholesaler and retailer interests and goals may begin to coincide as wholesalers search for ways to decrease distribution and procurement costs and insure the viability of both industries in an increasingly competitive environment.

7.7.3 Price as a Coordinating Mechanism

In free enterprise economic systems price acts as a principle coordinator of supply and demand by carrying information on preferences, discretionary income and supply relationships. While price alone is often not able to carry

all the information necessary to coordinate supply and demand, nevertheless, in cases where price control programs and policies are instituted by the government, fixing prices at arbitrary levels for arbitrary periods of time, the information carried by these prices may be very ineffectual in reflecting true demand and supply relationships. This can lead to poor coordination of supply and demand.

It has already been mentioned that one of the outcomes of price control policies in Mexico has been a reduction in the supply of many products and regular periods of product scarcity. In some cases a product can become permanently in short supply if the official margins imposed by the government shift investment away from the commodity. Hence, although an effective demand exists for a product at a higher price level than the official price, and the sum of production costs and a reasonable return on investment are also greater than the official price level, this information is not transmitted endogenously in the market system.

When scarce product conditions exist the potential for opportunistic behavior on the part of all subsector participants arises. One phenomenon that affects the coordination of supply and demand is the consumer tendency to purchase excess supplies of products when scarcity is anticipated or in otherwords, to adopt the behavioral mode of hoarding. This represents a collective social trap. Social traps occur because incentives are structured so that people behave in a manner which leads away from their own or the

group interest. Collective traps exist when several individuals behaving symmetrically each influence the welfare of others (Schmid). The more the participants the greater the effect will be, thus externality traps can yield significant results even though the magnitude of the harm that any one person's individual action may impose on someone else is quite trivial. While this type of behavior is a result of rather than a cause of scarcity, and may or may not occur depending on the product and circumstances in question, nevertheless, it does present the potential for exacerbating the supply and demand coordination problem.

Another indicator of the effectiveness of price as a coordination mechanism is the level of price transparency at the wholesale-retail interface. Currently, the poorly developed nature of information networks in Mexico City yields a low degree of price transparency. Price information is not provided over the phone making it necessary for retailers to visit wholesalers to compare prices. The logistics of personal visits in a city the size of the Mexico City metropolitan area adds significant costs to the price comparison process. The limited development of information systems is especially evident when a product becomes scarce, since it is time-consuming and costly to locate sources of supply.

7.7.4 Trade Associations as Coordination Mechanisms

Trade associations can represent another coordinating mechanism, acting as a source of information and an effective means to lobby for governmental policies and sup-

port services to foment the development of an industry. In Mexico City several trade associations do exist, some for specific product lines (such as candy or fruits and vegetables) and some exclusively either for wholesalers (such as ADMA) or retailers. However, interviews with traditional retailers indicate a high level of discontent with their trade associations as a result of the low level of services which they feel they receive. The principal trade associations in Mexico City are the CANACO's or chambers of commerce. Since retailers are required by law to join a chamber of commerce they represent a captive audience and CANACO personnel in Mexico City seem to feel few incentives to improve the effectiveness of the services offered.

The CONCANACO or national association of CANACOS's based in Mexico City is the most visible and professional trade association. Yet the CONCANACO has experienced serious difficulties in its efforts to improve the image of retailers and wholesalers as perceived by government policy makers and the public. Recently, there have been indications that CONCANACO is adopting a more assertive stance. The CONCANACO retailer survey cited earlier represents the first formal attempt of the trade association to gather data for the purpose of educating themselves (the CONCANACO management), constituents and the government on the retailing industry. This survey may indicate the beginning of a growing effort to provide timely and accurate information to policy makers on the marketing system.

CONCANCO has also begun to take on the role of an information source to the trade on improved marketing practices. This effort is strengthened by collaberation with FIDEC in several areas. CONCANACO and FIDEC are often joint sponsors of local meetings with wholesalers, retailers, and bankers around the country to promote awareness of FIDEC, present the benefits of the concessionary credit programs offered by FIDEC, and impart technical information.

Incidentally both wholesaler and retailer awareness of FIDEC is still extremely low. Of the retailers surveyed by CONCANACO only 2 percent report having heard of FIDEC.

CONCANACO officials have also begun attending the annual Food Marketing Industry convention in the U.S. Officials express an interest in being exposed to the types of services offered by trade associations in other countries as a vehicle for improving the services offered in Mexico.

7.7.5 Governmental Programs as Coordination Mechanisms

Governmental programs also may be designed to serve as coordination mechanisms. In Mexico two programs relevant to the dry grocery subsector can be identified in this context, IMPECSA and FIDEC. Both offer the potential to increase coordination in the subsector via the voluntary chain framework, concessionary credit programs and technical assistance to wholesalers and retailers.

IMPECSA supplies retailers under two arrangements. The bulk of sales are on an unaffiliated basis where IMPECSA merely acts as one of many suppliers to independent retailers. It has also undertaken the sponsoring wholesaler

role of a voluntary chain, serving a limited number of retailer affiliates. One of IMPECSA's intended services to retailer affiliates as a voluntary chain is technical assistance to assist in their modernization.

IMPECSA supports conversion to the self-service format where possible and the use of cash registers to facilitate initiation of a sales reporting and accounting system. In reality the technical assistance program of IMPECSA has been limited so far to a monthly magazine called El Afiliado (The Affiliate). El Afiliado uses simple articles and comics written on the level of traditional retailers as a vehicle for explaining how to improve the operation of their businesses. The creation of a team of technical advisors to actively promote and assist in change in retail businesses has not taken place.

A special program for IMPECSA affiliates established by mandate of the federal government and offered by FIDEC, extends credit for working capital or store modernization under more concessionary terms than those available to other retailers. This is another service intended to stimulate both retailer interest in affiliation to IMPECSA and investments to upgrade the physical facilitites in which they operate.

However, this credit program has not been utilized to a significant extent by IMPECSA affiliates, apparently mainly due to the lack of technical advisors to assist in the development of investment plans and the presentation of loan

requests to first-floor banks.

IMPECSA affiliates tend to be affiliates in name only, exhibiting a low degree of concentration of purchases and continuing to use traditional standard operating procedures. IMPECSA affiliates can be distinguished mainly by their store fronts which are painted with the IMPECSA logo. In essence, IMPECSA has been largely unsuccessful in its goal of better coordinating the wholesale-retail interface for basic grocery products, as a means for decreasing food costs to consumers.

Nevertheless, IMPECSA has succeeded in increasing competitive pressures in wholesaling by acting as an additional supplier of basic and often scarce grocery products (via Alianza, the private label produced by CONASUPO) to unaffiliated retailers. The outcome of this increased pressure is unclear, however. IMPECSA is criticized by wholesalers as creating unfair competition. Some wholesalers assert that IMPECSA has had a negative affect on their investment plans because they feel that it is indicative of the high probability of growing governmental intervention in wholesaling and retailing. The risk preferences of wholesalers may be such that lower investment and less competition would result if IMPECSA were to further expand its programs.

FIDEC supports goals similar to IMPECSA but fosters a private sector approach to the creation of voluntary chains and improved wholesale-retail arrangements. FIDEC is in the process of developing technical assistance programs to promote both retailer and wholesaler modernization which will

be offered in conjunction with the concessionary credit schemes already in effect.

The development of effective training and technical assistance programs by FIDEC has been hampered by a lack of qualified personnel. Most FIDEC employees have undergraduate training as economists or accountants with no direct experience in wholesaling and retailing or formal training in marketing. In addition, it has been necessary for staff members to spend most of their time processing loan requests and taking care of administrative tasks. A marketing training program for Fidec employees, taught by a team of international experts, took place in July of 1985. However, it remains to be seen whether FIDEC will follow through with further more intensive marketing training programs for employees. The future impact of FIDEC on vertical coordination is believed to be highly dependent on its capacity to establish effective technical assistance programs promoting investments in improved physical marketing facilities and more efficient standard operating procedures at the wholesale-retail interface.

Another problem faced by FIDEC is the reluctance of the banking system to handle retailer loans even when channeled through FIDEC. Since FIDEC is a "second floor" banking institution it can not loan money directly to wholesalers and retailers. Credit applicants must first obtain approval for loans from "first floor" or commercial banking institutions. Once a loan application has been approved by loan

officers in a commercial bank it is presented to FIDEC for approval. It is then subject to review by FIDEC and if approved is rediscounted. At this point the loan recipient is eligible for concessionary financing according to FIDEC guidelines on the destiny of the credit and the type of business receiving the credit.

Investment plans drawn up by the author for small retailers in 1982 to expand total sales space and introduce self-service averaged 500,000 pesos or about 5,000 dollars. Banks have historically viewed loans of this size as too small to warrant their attention. In 1984, after nationalization of the banks, conversations with high level banking officials still confirmed this view. In addition, bankers have been reluctant to loan to retailers because of concern over their credit worthiness.

FIDEC has been making serious efforts to dispel these concerns and is apparently succeeding in encouraging banking institutions to handle retail accounts. Specifically, FIDEC has launched a loan guarantee program which reduces the risk to banks of lending to traditional retailers. FIDEC has also organized major promotional programs on a national level with the banking sector and has established key liasion people in each bank who are responsible for overseeing loan requests for FIDEC financing.

Despite the problems faced by FIDEC as it establishes its programs, the existence of this type of institution has great significance in that it means that an institutional framework is now in place which creates new coordination

mechanisms in the form of credit, information and technical assistance. This exhibits the potential for effective action in a private sector format via a facilitory rather than a direct interventionary role. Recommendations are made in the final chapter on policies that might increase the effectiveness of FIDEC.

7.8 Conclusions

As it now stands the dry grocery wholesaler-traditional retailer interface does not manifest a high degree of vertical coordination. Retailers exhibit fragmented procurement practices, yielding high procurement costs. Weak coordinating mechanisms decrease distribution efficiency and increase distribution costs and, in effect, the preceding discussion indicates that limited coordination mechanisms act as constraints to the growth of retailers. Furthermore, given the low general level of managerial skills exhibited by traditional retailers it appears highly unlikely that the impetus for the introduction of improved or new coordination mechanisms will come from the traditional retailing industry. Rather, it can be expected to come from wholesalers or the public sector as it has in many other countries. The role of public policy in influencing retailer conduct and performance via the establishment and promotion of new coordination mechanisms, such as credit and technical assistance, should not be underestimated.

Understanding retailer conduct is both useful in itself in order to determine how the system behaves, and also

because in effect, conduct can be thought of conceptually as an "impact" variable. This implies an opportunity to modify performance if policies are designed to input the decision making process of subsector actors, changing their opportunity sets such that new variables are considered or the weights of previously defined variables are altered.

CHAPTER 7

REFERENCES

CONCANACO, 1983. "Perfil del Comerciante."

Hamm, Larry G., April 1982. "Retailer-Manufacturer Relationships in the Food Sector -- Some Observations from the U.S.A." N.C. Project 117 Working Paper No. 64.

Lynch, Frank, "Question Types and Sampling Designs in Survey Research: Rethought Categories and and Rules for Choice." Research Methodology, No. 47, February 1976.

Marion, Bruce W., 1976. "Vertical Coordination and Exchange Arrangements: Concepts and Hypotheses," in Coordination and Exchange in Agricultural Subsectors. NC 117, Monograph 2. Madison: University of Wisconsin, Research Division, College of Agriculture and Life Sciences, pp.179-195.

Schmid, A. Allen, 1978. Property, Power, and Public Choice. Praeger Special Studies. New York.

CHAPTER 8

THE ESTABLISHMENT OF VOLUNTARY FOOD CHAINS IN MEXICO

8.1 Introduction

It has been previously implied that the type of linkages that develop between retailers and their suppliers is partly a function of the structure of the retailing industry and supplier industries. For example, an atomistic retailing industry structure consisting of small scale narrow-line operators both yields low bargaining power to negotiate improved wholesaling services, and discourages the emergence of full-service wholesalers due to the cost functions associated with providing a full line of services to small scale retailers. On the other hand, a specialized and limited service wholesaling industry acts as a barrier to expansion for retailers since in order to incur low procurement costs the retailer must be able to coordinate and concentrate purchases with a wide-line, stable supplier.

In Mexico, while many wholesalers are succeeding in expanding product lines, full-service wholesalers are yet to emerge since the reduced operating scale of the bulk of the retailer pool is viewed as a barrier to the profitable introduction of services. On the other side of the coin, while small retailers now have more potential to expand operating scale as a result of the support base of wider line suppliers, they still generally lack the credit and financial and managerial resources to do so. Ironically, these are the very wholesaler support services which could

enable them to increase operating scale and upgrade operations, developing into larger volume purchasers from wholesaler suppliers.

Consequently, this suggests that the traditional retailing and wholesaling industries are at an impasse and a barrier to improved performance exists. This situation represents a prime candidate for public action to break the impasse because neither party (wholesalers or retailers) may perceive an acceptable risk level for successfully implementing and capturing the benefits of their innovations unless cooperation is assured with the other party or stage of the system. By facilitating the implementation of voluntary chains for example, the government might reduce both the risk and cost of adopting innovations to levels sufficient to modify the incentive structures perceived by firms and impact the firm decision making process.

The effectiveness of the voluntary chain concept is that it assures wholesalers that the benefits of any services extended to retailers can be captured in the form of increased sales. This is because of the affiliation mechanism which incorporates retailers into the voluntary chain as the key source of supply. Likewise, retailers are assured that implementation of an expansionary plan will be supported by the sponsoring wholesaler.

The Mexican experience with the establishment of voluntary chains will be presented in this chapter via a description of two case studies of emerging voluntary chains. Constraints to their formation are identified and

an assessment of their potential is made. The timing of the research was somewhat premature to observe the establishment of the voluntary chain SPAR, and no other voluntary chains were in existence in Mexico City. Therefore, a voluntary chain that had received financing from FIDEC, located in Monterrey, Nuevo Leon, was also selected as a case study in the summer of 1982.

8.2 A Case Study - SPAR, Mexicana, S.A.

A primary innovator in the Mexico City wholesaling industry is Salvador Castillo, a former specialty wholesaler, importer and national distributor, and now the founder of the European voluntary chain, SPAR, in Mexico. Mr. Castillo is in the process of introducing modern wholesaling operations, including self-service cash and carry warehouses, based on the European model.

Castillo gained the knowledge necessary to innovate in this fashion from a visit to Europe to explore and observe European wholesaling. The old adage "seeing is believing" definitely applies to this case and its significance should not be lost as it has proved an important ingredient in stimulating the modernization of other wholesaling systems, such as in Puerto Rico and Costa Rica.

The foundation of a voluntary chain represented a major change in product line and type of business for Castillo. His former business (Casa Castillo) operated primarily as a specialty distributor, acting as a large volume importer and purchaser of select high value commodities such as spices,

dried chiles, dried fruits and dried cod. Casa Castillo was a completely traditional business located in La Merced in a multi-story warehouse utilizing traditional materials handling methods, accounting techniques and not employing outside managers.

Consequently, the formation of a voluntary food chain required the creation of a new business capable of performing as a wide line, full-service dry grocery wholesaler. In order to obtain recognition and acceptance among suppliers and retailers so that a wide product line could in fact be procured and sold, Castillo decided to proceed by first setting up a self-service cash and carry (C&C) operation.

Castillo hoped to accomplish several objectives by establishing a C&C, including: time to carry out the logistical aspects of procuring a wide product line and testing the appropriate inventory levels of each product; introduction and streamlining of a computerized data processing system applied to all aspects of the business such that timely and useful information could be generated and interpreted; acquisition of modern warehouse facilities and equipment and experimentation with and refinement of the materials handling techniques necessary to operate an efficient modern warehouse; sufficient sales volume to cover start-up and overhead costs during the process of affiliating retailers to the voluntary chain; identification of potential retailer candidates for affiliation to the chain among the C&C customers; and widespread recognition as a

leader in the dry grocery wholesaling industry in efficiency and standards.

Thus, the opening of a self-service cash and carry wholesaling warehouse allowed Castillo to enter the dry grocery wholesaling industry and achieve acceptance before establishing the voluntary chain. This strategy has apparently proved successful in meeting its goals and has simultaneously enabled Castillo to introduce two new wholesaling forms into the system. Before examining the establishment of the voluntary chain we will discuss the cash and carry concept and how it fits into the Mexican dry grocery industry.

8.2.1 The Cash and Carry Operation

Operating results achieved to date by both Castillo and other Mexican C&C operators indicate that the modern C&C is a profitable business venture, independent of its validity as a strategy for promoting the establishment of a voluntary chain. Castillo has established C&C's in La Merced, Zaragoza on the southern edge of the city, and Tlanepantla on the northern edge. Plans were being made to open another C&C in Mixcoac under a partnership arrangement in 1984.

A C&C business effectively reaches the following market segments: the smallest scale retailers who are not large enough to warrant regular deliveries from wholesalers and almost always purchase on a medio-mayoreo basis (frequently retailers that sell in mobile street markets); the fill-in purchases of retailers who do receive deliveries but don't

adequately plan purchases and experience frequent stock-outs; the small scale restaurant trade; and larger volume provincial retailer customers who continue to make personal procurement visits to Mexico City.

The financial attractiveness of a C&C is linked to its impact on labor costs. Control of labor costs is a general issue affecting all businesses. However, for those firms meeting certain criteria and considering options for improving the utilization of labor, one major candidate is the cash and carry wholesale operation. The relevant criteria are: small average order size (10,000 to 20,000 pesos or 66 to 134 dollars in 1983), and a large proportion of medio-mayoreo and over-the-counter sales (vs. delivery). Modern C&C's tend to reduce labor use by two-thirds by having the customer perform the order picking function and organizing the warehouse in a similar fashion to a self-service retail outlet, using a "product family" warehouse lay-out system (Author, time and movement study). The imposition of a system which fixes the location of each product decreases labor use in the merchandise reception and storage process and represents an important innovation in the Mexican setting.

The degree of modernization of a C&C can vary substantially while still producing significant benefits. Mr. Castillo introduced the European version of a cash and carry which represents the most modern type in terms of materials handling methods. This involves racks of 5 meters in height

with three levels for merchandise storage and two for order selection by customers. A forklift is used for product movement.

Cash and carry's that make more limited use of vertical space and don't employ forklifts have also appeared as some wholesalers test the advantages of the self-service system itself, separate from both the benefits and costs of a partially mechanized materials handling system. Elimination of the order picking service for retailers and rationalization of the product reception and storage functions generates a substantial reduction in labor use relative to the traditional cash and carry business.

Another factor reducing labor use and also product losses in any modern C&C is the adoption of new break-bulk SOPs. The break-bulk activity is isolated in one section of the warehouse and carried out by specialized, trained personnel, increasing labor productivity. High value items that are sold in less than half-box quantities are packaged using a plastic wrap and sold as multi-packs. These new SOP'S cause a significant decline in product pilferage and breakage losses. Hence, modern cash and carry warehouses facilitate the realization of medio-mayoreo sales on a more efficient basis, controlling costs while still meeting retailer demand for this service.

The self-service sales system of cash and carry warehouses yields benefits not only to wholesalers but to retailers as well. The combination of a wide product line

and a self-service system is beneficial because it makes products highly visible to retailers and allows them to exert control over the product selection process. In this way it creates retailer awareness and interest in new higher margin products, reminds retailers of products which may be in short supply in their stores, and diminishes the time spent in the procurement process since retailers no longer have to wait until warehouse personnel are available to pick their order. The fact that medio-mayoreo sales are permitted encourages retailers to actually try out new products since they need invest only in a half-box or multi-pack until they have tested the rate of product movement of the new item.

Retailer procurement of a wider product mix is a critical factor in improving the financial soundness of both wholesale and retail businesses and decreasing the incentives to sell above official prices on basic food products. Consumers would be the final beneficiaries of wider product lines since they would not only benefit from lower prices on basic foods but could also decrease the time spent in the family procurement function by purchasing a wide selection of products in one location. This is a very important advantage for low income consumers who often don't own cars and live far away from stores offering an attractive product mix.

While the modern cash and carry is proving very adaptable to Mexican conditions and does indeed increase the efficiency of wholesale businesses that primarily attend

customers with small average order sizes, it was not intended for businesses that cater to the market segment of larger volume retailers. Many retailers generate sufficient sales to make it economically feasible to wholesalers (given current cost structures) to pick and deliver their orders. For example, many retailers make average weekly purchases over 50,000 pesos or 334 dollars (in 1983) and exhibit the potential for increasing their orders if the concept of concentration of purchases with a principal supplier were promoted, such as through a volume discount system.

Larger scale retailers present an opportunity for profitable expansion to wholesalers who organize their businesses to offer low cost reliable supplies and services to this market. Voluntary chains were designed to serve this market in an efficient manner.

8.2.2 SPAR - A Voluntary Chain

Let us recall that the C&Cs established by Mr. Castillo were intended to be instrumental in supporting the creation of the voluntary chain SPAR. The C&C businesses are supplied by a rented 3000 m^2 central warehouse located in Tlanepantla. This warehouse has been a proving ground for the introduction of a modern materials handling system capable of efficiently supplying a growing voluntary chain. A first-in first-out inventory control system and a product lay-out system organized according to product families have been implemented for a wide-line inventory of approximately 1500 products. Six meter racks were introduced on a gradual

basis and currently the warehouse is completely equipped. Two forklifts are utilized, primarily for merchandise reception and storage, most order picking is carried out with pallets mobilized by pallet jacks.

Under this system only three warehouse laborers and two supervisory and administrative employees were required to handle the approximately 40 million peso (267,000 dollar) monthly sales volume generated in 1983. The process of introducing and refining this system was observed by the author throughout 1982 and 1983. Several months were required to determine workable methods and train employees but by September of 1983 the system was in place, representing a major innovation in the Mexican dry grocery subsector.

In assessing the difficulties and costs of adopting the above technological innovations it is important to comment that Castillo has hired considerable support staff (working out of central SPAR administrative offices) who are attempting to both identify and assist in the adoption of improved standard operating procedures in all aspects of the business. In Mexico there is a paucity of people with expertise in improved materials handling, accounting and employee training methods adapted to meet the specific needs of grocery wholesalers and retailers. Hence human capital becomes a constraint for all wholesalers attempting to establish voluntary chains. The organizational problems associated with implementing new operating systems, given the available level of relevant knowledge in the system, are not insignificant and must be understood and dealt with.

In the summer of 1983, after developing effective SOPs for the cash and carry businesses and the central warehouse, Castillo began to focus attention on definition of a group plan to be offered by the voluntary chain. A group plan consists of the services to be provided by the wholesaler to affiliates and the responsibilities of retailers affiliated to the chain to support and cooperate with the practices and philosophy of the group. SPAR was initiated with a large number of services due to the extensive personal financial resources of Mr. Castillo which permit him to cover the overhead costs of establishing employee training programs, store engineering and merchandising services, and suggested retail prices on most items sold.

In addition, Castillo plans to phase in accounting services and advertising support as retailer demand permits. All of the aforementioned services are currently unavailable from other wholesalers in Mexico City. Castillo feels this enables SPAR to be selective in the affiliation process and impose entrance conditions which are rather strict given the degree of modernization prevailing in the Mexico City retailer market. The conditions are that retailers must sell on a self-service basis, use cash registers, and meet a minimum size requirement (about 150 m^2). Castillo feels he has the flexibility to institute such high entrance standards since he generates sufficient volume from the C&C sales to cover costs during the affiliation process. Given the low number of retailers meeting these criteria it

remains to be seen whether these standards will prove workable.

As of September 1983 one retailer had been affiliated to the chain and another retailer was seriously considering affiliation. The affiliate is an independent businessman operating a new 420 square meter supermarket. The sales volume of this store should be sufficient to warrant direct deliveries from manufacturers. However, given the curtailment in and unreliability of manufacturer distribution networks to independent retailers the owner was experiencing severe procurement difficulties. During the height of the product scarcity situation in the summer of 1983 he was preparing to go out of business, not due to lack of consumer demand, but due to insufficient supplies.

The experience of the retailer as a SPAR affiliate has brought immediate and dramatic results. The stable supply system provided by SPAR allowed the retailer to increase product offerings from about 500 to 1500 products, double sales from 60,000 pesos daily to 120,000 (800 dollars), and increase the store-wide gross margin from 10 to 17 percent while decreasing operating costs. The increase in product offerings has come not only from products sold by SPAR but also due to Castillo's management and merchandising advice which has facilitated the introduction of new product lines procured from other sources, such as a high quality perishables line. The number of suppliers was reduced by two-thirds, allowing the retailer to dedicate this time to improving store operations and reducing the need for

secretarial help to manage accounts payable.

A return trip by the author to Mexico in the fall of 1984 indicated that Castillo had not been successful in affiliating other retailers, including a candidate that he had been pursuing for some time. Part of the problem faced by Castillo is that since he was not a dry grocery wholesaler prior to the creation of SPAR, he did not have a track record established with retailer customers. The entrance requirements he imposed also appear to be an important factor constraining affiliation. One of the lessons learned from the international experience with voluntary chains is that entrance requirements must fit the characteristics of the market in which the wholesaler is operating.

Castillo became impatient with the process of trying to convince retailers to upgrade their stores and consequently has been attempting a new approach. He purchased a store in severe financial difficulties due to traditional management practices and then introduced operating systems based on SPAR technology and methods. Once the store was operating efficiently he trained a retailer to manage the store effectively and sold it to him. In this manner he created an ideal SPAR affiliate. Castillo was hoping to use this store as a demonstration store to train other retailers and encourage affiliation to the group.

A major factor personifying the difference between Castillo and other wholesalers in Mexico City is the

adoption of the retailer-mindedness philosophy of the voluntary chain. Castillo has completely assimilated the belief that the retailer must come first, his needs must be met via both a broad range of-services and product offerings. By becoming a retailer oriented full-service wholesaler the wholesaler assists the retailer to grow and become a successful competitor in the retailing industry, in turn insuring his own success through a strong and growing retailer clientele.

However, in Mexico City institutional obstacles are constraining the formation of this voluntary chain despite the presence of a genuinely retailer-minded attitude. Barriers to the formation of voluntaries in Mexico and Mexico City, in particular, will be outlined later.

8.3 A Case Study - Avance Comercial de Monterrey, S.A.

The lack of voluntary chains in Mexico City made it necessary to study a voluntary chain in operation in northern Mexico. The author spent one month living in Monterrey during the summer of 1982. The activities of the voluntary chain, Avance, were documented and in conjunction, technical assistance was extended to the group in order to encourage the adoption of improved standard operating procedures. The strategy of combining technical assistance with a case study proved to be a very effective way to gain access to operating data on both wholesalers and retailers.

8.3.1 Background

Avance was founded by 11 dry grocery wholesalers and originated as a buying pool as a strategy for obtaining

improved buying terms through greater negotiating strength. Prior to the formation of Avance the wholesalers had behaved in a completely fragmented manner and were largely unaware and unconcerned about the problems faced by their respective businesses. They were motivated to begin to meet and communicate when the grocery wholesaling industry in Monterrey was faced with a major tax investigation by the federal government. The successful cooperation they achieved in this instance gave them the confidence to form a buying association.

The wholesalers met weekly to determine order quantities, and functioned like a buying committee with each wholesaler responsible for procurement of a specified group of products. Over time the wholesalers' mutual confidence grew and reached the point where they became willing to collaborate to form a voluntary chain. Each wholesaler continues to serve his own retailers and operates out of his own warehouse, but by adopting a group logo the potential for joint advertising became possible and the cost of introducing services to retailers can be shared by the group. In 1982 there were approximately 40 affiliates and wholesalers were continuing to serve their existing customers on an unaffiliated basis.

A comment on the organizational structure of Avance is in order since it is relevant for any voluntary chain formed by more than one wholesaler. By continuing to manage their own warehouses the wholesalers avoided the need to construct

a central warehouse for the voluntary chain. This is in contrast to another voluntary chain, Alimer, that was established in the early 1980s in Mexico City and failed. Alimer was formed by 15 wholesalers with distinct product lines, including perishables. These wholesalers constructed a new warehouse for the chain, while each continued to operate his own business in the traditional fashion. Due to a paucity of trained warehouse managers in Mexico, the wholesalers were not able to obtain satisfactory management for the voluntary warehouse and the wholesalers were occupied with their own businesses. Hence, the the voluntary chain never got off the ground and the warehouse was eventually sold. The proper organizational structure for voluntary chains has been widely misunderstood in Mexico. The purpose of voluntary chains is not to create new businesses, but rather to modernize existing ones.

Wholesalers in Monterrey have historically been among the most modern in the country in terms of the materials handling methods they employ. The central wholesale market has primarily been occupied by fruit and vegetable wholesalers and dry grocery wholesalers have operated in independent warehouses. Consequently, the Monterrey wholesaling industry has been decentralized for many years and most of the Avance wholesalers operate in one-story warehouses ranging from 1000 to 3000 m^2, frequently with loading docks. Two Avance members do operate warehouses in the wholesale market and are constrained to 600 m^2 warehouses, one of which has successfully been converted to a self-service C&C.

The Avance wholesalers are wide-line for Mexican standards, selling from 1000 to 2500 products, including product lines such as health & beauty aids, housewares, cookware, sandals, baby care products, non-prescription pharmaceuticals, and school supplies. These non-controlled, high margin product lines are responsible for high average gross margins, ranging from 8 to 14 percent, with after-tax net margins ranging from 1.3 to 5.5 percent. (These margins have declined substantially since 1982 due to the recession and the increasing percentage of staples in the product mix sold.) Sales volumes are low (an average of 17 million pesos monthly in 1982) relative to wholesalers in the federal district of similar physical size.

Inventory turnover rates are also low, averaging 12 annually, indicating that wholesalers have not acquired inventory control methods to effectively manage a wide line of products. Five of the wholesalers have computers and are attempting to implement computerized inventory control methods. Currently the computers are being used for generating invoices.

Retailers exhibit a much higher level of modernization in Monterrey than in Mexico City. A large percentage have introduced self-service sales on at least a partial basis, many own cash registers, a higher percentage own refrigerated displays, and they are larger and wider line, generally handling perishables including fruits and vegetables and meat and chicken. The higher level of

modernization exhibited by retailers and the wider product lines of both Avance wholesalers and retailers, are facilitating the development of the voluntary chain.

8.3.2 Retailer Meetings as a Strategy for Promoting Voluntary Chains

At the outset of the author's stay an extension type meeting was held with wholesalers and retailers to present general information on new marketing practices. This served several purposes. First, it began to convince members of the voluntary chain that it was possible to improve efficiency if changes were made in their SOPs. Secondly, they realized that in order to actually implement new SOPs they would need assistance in determining the most workable methods to do so. Therefore, both wholesalers and retailers recognized incentives to collaberating with an investigator and providing accurate information about their businesses.

This meeting, along with others conducted by the author, was also important to the wholesalers sponsoring the chain because it allowed them to show retailers that something was being done to help them improve their businesses at a cost borne by the wholesalers. The wholesalers made it clear that my expenses were financed by them and that my assistance had been requested for their own businesses as well. This created good will with retailers and helped convince them that the wholesalers themselves were attempting to improve efficiency in order to act as low cost suppliers.

Joint wholesaler and retailer meetings were also an

important forum for exchanging ideas on the problems faced by wholesalers and retailers at their respective interface. Wholesalers in particular learned about many difficulties faced by retailers that they had been unaware of, and began to understand the types of services that retailers needed in order to grow and become better customers. Consequently, this helped wholesalers to more fully appreciate the significance of the retailer-mindedness concept.

8.3.3 The Introduction of Retailer Services

The introduction of services to retailers carried out by Avance parallels the introduction of services in the United States as voluntary chains were formed. The first service was weekly advertising and promotions. This consists of printed posters for store windows with information on the specials and flyers for delivery by each retailer to the customers in his neighborhood. Suggested retail prices (or official prices where applicable) are given by several of the wholesalers to their customers and one wholesaler was introducing case labels to be applied to each order in the warehouse with price and margin information. By 1983 a private label was being developed and specifications had been negotiated with suppliers for 5 products. Store engineering services were begun with the assistance of the author and wholesaler agreement was obtained to jointly negotiate equipment purchases for retailers in order to obtain buying advantages. The development of other services, such as retailer accounting are proving more difficult, just as they did in the U.S.

8.4 Recommended Standard Operating Procedures

The success of voluntary chains in Mexico as elsewhere, depends on the introduction of standard operating procedures that lead to greater efficiency in the product handling, procurement, delivery, and inventory control activities at the wholesale-retail interface. The wholesaler must lower operating costs and increase operational efficiency in order to become a low cost supplier to retailers. Without stable, low procurement costs the retailer can not compete effectively and grow. Moreover, without higher sales volumes retailers can not lower margins and prices to consumers and still maintain profits. Hence, increased efficiency, in conjunction with modern merchandising methods, is the key to lower prices and profitable growth.

The concept of increasing sales volumes and inventory turnover rates as a means to lower margins and increase competitive strength, is not immediately apparent to many small Mexican retailers. Retailers, almost without exception, were found to have no idea how to measure inventory turnover rates and did not understand how to plan stock levels to control inventory costs given a specified safety stock level. This has led to buying practices that essentially consist of frequent, small volume purchases from several different suppliers.

Small average order sizes contribute to higher operating costs at the wholesale level because the selling costs associated with a large number of small transactions are

much higher than for a small number of large orders. (Selling costs are broadly defined as order picking, accounting, sales personnel, credit and collection and delivery costs.) In addition, a small average order size inhibits the introduction of labor-saving materials handling devices which offer the potential for increasing warehouse operational efficiency in a cost-effective manner given current relative labor and capital costs in Mexico. Thus, the procurement practices of small retailers are one of the key factors impeding a reduction in wholesaler operating costs.

Consequently, one of the priority areas which Mexican voluntaries should concentrate on are strategies to increase the average order size of retailer customers by encouraging retailers to concentrate purchases through the group. A combination of several mutually reinforcing strategies is recommended.

8.4.1 SOPs Designed to Encourage Retailer Concentration of Purchases

These recommendations are as follows: simple volume discount tables could be established immediately and a cost-plus price structure could be introduced gradually; expanded weekly promotions to discourage "comparison shopping"; coordination of products in scarce supply among all the Avance wholesalers in order to ensure that every wholesaler's affiliates are stocked with scarce items; introduction of a pre-printed standard order form organized by product family; training sessions explaining the use of the standard order

form to check inventory levels for weekly ordering; prohibition of visits to the warehouse by affiliates to make fill-in purchases; and segmentation of retailers according to buying volume, serving small volume customers on a self-service cash and carry basis.

The latter could be done by segregating the warehouse in to two operating systems, one operated on a self-service basis, and the other designed to serve large volume, delivery customers in an efficient manner. Or ideally, where the Wholesaler operates more than one warehouse, separate warehouses can be set up. Two Avance wholesalers already operate separate warehouses for self-service and delivery customers, just as Castillo does. Differentiating the warehousing systems serving these two retailer segments is important for several reasons. First, it enables wholesalers to introduce more efficient technology in the warehouses that fill large volume orders and pass along the benefits to customers via lower prices. Hence, this creates incentives to these larger volume retailers to concentrate purchases through the group. Secondly, as affiliates are learning to plan purchases, they can make fill-in purchases at the C&Cs and not disrupt the main warehouse. In this manner, the wholesaler continues to capture the purchases of the retailer even if he prohibits personal visits to the warehouse.

These new standard operating procedures should be complemented with major changes in materials handling methods to increase labor productivity in the warehouse and lower

operating costs.

8.4.2 Materials Handling Methods

Time and movement studies were done in Mexican warehouses with different materials handling systems exhibiting different levels of technology. These studies demonstrate the changes in labor productivity which result from the introduction of new technology. Specifically, the materials handling systems compared were: 1) racks for product storage, forklifts used to place palletized merchandise in racks, palletized product movement with pallet jacks for order picking; 2) palletized product movement with pallet jacks, no racks or forklifts; 3) product movement with dollies ("diablitos") or four-wheel hand carts, no pallet jacks, racks or forklifts.

Time and movement studies to compare these three systems focused on order picking. The productivity gains produced by the first system relative to the second and third, and the second system relative to the third vary depending on the order size, ranging from 33 percent to 401 percent as order size increases (see Table 8.1).

This data should be interpreted as follows. Significant increases in labor productivity are obtained from the introduction of pallets and pallet jacks in the order picking process. In the traditional system dollies are used both for merchandise reception and storage, and order picking. When orders are picked using dollies it means that the picker may have to make several trips into the warehouse to

TABLE 8.1 LABOR PRODUCTIVITY GAINS IN MEXICAN WAREHOUSES, COMPARING THREE ORDER PICKING SYSTEMS

Order Picking System*	Order Size (Standard-ized unit)	Equipment	Productivity Gain** System 1 Rel.to 2 %	Produc.Gain 1&2 Rel.to 3 %
1	1/4	pallet	33.18	130.12
2	1/4	pallet		72.79
3	1/4	dolly		
1	1/2	pallet	125.74	120.09
2	1/2	pallet		0.00
3	1/2	cart		
1	1	pallet	125.00	401.25
2	1	pallet		122.77
3	1	cart		

*The order picking systems examined are:

1) Palletized order picking using pallet jacks in a warehouse with 6 meter racks for merchandise storage, and a warehouse lay-out system according to product families. (Forklifts are used, but for merchandise reception and storage only.)

2) Palletized product movement with pallet jacks, no racks and no organized warehouse lay-out system (i.e. products randomly located).

3) Product movement primarily with dollies, some four wheel hand carts, no racks or pallet jacks and no organized warehouse lay-out system.

**Productivity gains are obtained by comparing the average time (measured in man-minutes) required to pick orders of the same size, i.e. output/min. Order size is presented in standardized units, meaning the same amount of physical product, regardless of whether it is moved on a pallet, a four-wheel hand cart or a dolly.

SOURCE: Time and movement studies carried out by the author in 1982 and 1983.

fill an order. The bigger the order, the more trips must be made. In contrast, when orders are picked on pallets mobilized by pallet jacks as in systems 1 and 2 above, four to eight times the amount of merchandise carried on a dolly can be transported at one time. Thus, most retailer orders can be picked in only one trip through the warehouse.

Economies of scale in order picking are immediately apparent from this table. The larger the order size the greater the gain from introducing pallet jacks. These gains are not only due to the difference in physical product movement just described, but also to other less apparent factors. Larger orders imply more items per order which means that the picker is obliged to locate more products. Where a warehouse is unorganized search time increases. Specifically, since products are stored wherever space is available upon delivery, products are continually changing location, impeding the recall ability of pickers. In addition, as the wholesaler expands the width of his product line and the number of products handled increases, the problem becomes even more apparent.

It is clear from observing operations in a number of warehouses that losses in labor time caused by the need to search for individual products are very significant. Consequently, the large productivity gains shown in Table 8.1 for large order sizes are partially a result of this factor.

Two key innovations differentiate system 1 and are important contributors to the higher level of productivity. Note that in both systems 1 and 2 orders are picked using

pallet jacks. What accounts for the productivity gains observed in system 1 (SPAR warehouse) is the presence of an organized warehouse lay-out system and racks. Racks facilitate the efficient use of vertical space which has the effect of reducing the selection area for order pickers since more products can be placed in a smaller area. This means that the order picker is traversing less physical space to select the same number of products, translating into less time.

The organization of the warehouse according to product families also has a major affect on picking time. This system establishes fixed locations for each product so that there is never any doubt about where to locate a product. Since products are organized according to family groupings like in a supermarket this also improves the recall ability of pickers. When this system is linked to a standard order form, coordinated with the location of products in the warehouse, maximum benefits are realized. The order form, as received from the retailer, automatically directs the order picker to the most efficient route to fill the order.

It is clear from the above results that significant efficiency gains can be attained in warehouse operations from the introduction of new SOPs. These gains can give an important competitive edge to the wholesalers that introduce them and to the retailer affiliates served by them. Financial analysis of the investments required to introduce these innovations, given the reduction in operating costs

they generate, is presented in Chapter 9.

8.4.3 The Use of Credit to Encourage Retailer Modernization

A paucity of credit to finance expansion has always existed in the dry grocery subsector, serving as an obstacle to growth and modernization, particularly for traditional retailers. However, prior to 1982 many wholesalers were passing on manufacturer credit terms to retailers to finance the acquisition of inventories. This short-term inventory financing somewhat eased the credit problems faced by many traditional retailers. The dramatic reversal in this trend since 1982 has again exacerbated the paucity of credit, magnifying its importance as an obstacle to growth. Many retailers currently have chronic stock-out problems due to insufficient capital to acquire adequate inventory levels.

The reduction in credit is another factor which impedes retailer concentration of purchases since it forces retailers to make smaller purchases. Consequently, the growth of voluntaries could be stimulated by short-term credit for inventory financing. However, wholesalers are unable to provide this credit if they are to be assured of the liquidity necessary to obtain advantageous buying terms. An attractive alternative exists for voluntary chains, which are eligible for concessionary financing from FIDEC. Revolving working capital loans can be obtained by retailers for purchases through the chain. This can act as an important incentive to retailers to affiliate to the chain, to expand product lines, increase sales, and to concentrate purchases.

Credit is also available for three to five year periods

to acquire equipment or upgrade or construct physical facilities. This creates an important opportunity to promote expansion and stimulate higher sales levels. (Investment prototypes for retailers, based on the findings of these case studies, are presented in Chapter 9.) However, as was mentioned earlier, while FIDEC credit programs are theoretically available, the banking system has not been receptive to channeling loans to small retailers. The case study research suggests that the role of voluntary wholesalers is critical in order to assist affiliates in preparing loan requests. Bankers have indicated that presentation of a package of retailer loans by wholesalers would increase the incentives to the banking industry to extend retailer loans since the loans could be jointly processed and monitored.

8.4.4 The Development of Retailer Counselors

The conversion of wholesaler sales agents in the U.S. to retailer counselors, was an important factor contributing to the modernization of Mom and Pop stores. The necessity of trained personnel, working with retailers on a regular and individual basis to identify problems and introduce new SOPs, is also readily apparent in Mexico. However, the concept of utilizing former sales agents is received with scepticism in Mexico because of the low educational level of sales agents. This is an area warranting attention by FIDEC, it appears that a vital technical assistance role could be played by establishing training programs for wholesaler

sales agents.

8.4.5 Case Labels and Standard Order Forms

Some Avance wholesalers and Castillo have begun to develop case labels which tell the retailer his cost and a suggested retail price or the official price. This would be an important service to the retailer both to help insure competitive pricing utilizing margin mix strategies, and because retailers may unintentionally sell above the official price for an item simply because they are unaware of the current price. Hence they inadvertently risk being fined or closed.

This information also enables retailers to calculate gross margins and become accustomed to analyzing margins by department. Standard order forms in Mexico will probably not contain price information because prices change so frequently, hence case labels could be an important substitute for price information. Wholesalers have experienced serious difficulties in developing standard order forms because of the individual specifications according to size, flavor, etc. that must be accounted for. This is no small undertaking, but due to its importance in encouraging improved inventory control by retailers, purchase planning on a weekly basis, concentration of purchases, and greater efficiency in the warehouse, it warrants serious attention from FIDEC for technical assistance. Prototype standard order forms could be developed in collaboration with willing wholesalers, and then diffused to the industry where they could be adapted to the product lines and needs of

individual wholesalers.

8.4.6 Store Engineering

Although many Avance affiliates have introduced partial or complete self-service sales systems, stores are still not designed using modern store lay-out and merchandising techniques. For example, products are not organized according to family groupings, fixed locations for each product are not maintained, selection of shelf locations according to product margins is not understood, along with the importance of designing traffic aisles to encourage maximum circulation and flow through the store or the use of end displays to promote new items. In otherwords, retailers in Monterrey have introduced the concept of self-service sales in order to facilitate growth and decrease labor use, but have not acquired knowledge of the basic merchandising principles necessary to stimulate impulse sales, easy selection of products by consumers and in general, to obtain maximum advantage from a self-service system. The introduction of modern merchandising practices is a critical part of the process of expanding product lines in an organized fashion and in a manner that encourages profitable sales.

Investigation of the physical design of the stores of five Avance affiliates (ranging from 60 to 315m^2) and the SOPs utilized in these stores, indicated that improved store lay-outs and reorganization of shelf space could lead to significant increases in sales. The following changes were proposed by the author: organization of products according

to family groupings with similar families placed in adjacent locations; selection of the location of specific family groupings according to strategic factors such as drawing power; similarly, strategic selection of product shelf locations within family groupings, based on margins and drawing power. The basic merchandising principle that sales vary directly with customer exposure to products was adhered to (Leed). For example, higher profit departments were located around the periphery of the store to stimulate impulse sales. Once a new store design had been determined, it was suggested that shelf locations for each product be marked with adhesive labels to indicate the product specifications.

Shelf labels are a critical factor in any store, and their importance should be emphasized in technical assistance efforts with retailers. If shelf labels are not in place, then even after an organized product lay-out system has been introduced the system will soon deteriorate (Leed). This is because when stock-outs occur and a product is temporarily absent from the shelf, another product is generally displayed in its place.

In addition to the merchandising advantages obtained from an organized store lay-out and shelf labels, this is an important part of the process of introducing improved inventory control methods. If complemented by a standard order form, retailers could reorder in an organized fashion by visually inspecting stock levels, easily encountering products on the order form under family classifications matching those in the store, and marking reorder quantities

at their leisure. This would represent a major improvement relative to the current system where products are located in a haphazard manner, and often the same product is scattered in different locations such that the retailer is unsure of actual stock levels. When a sales agent visits the retailer under these circumstances and manually writes up an order, the retailer is interrupted from sales functions and generally does not make an accurate assessment of stock levels. Hence, the advantages of standard order forms mentioned earlier in stimulating concentration of purchases, are readily apparent.

8.5 Constraints to the Formation of Voluntary Chains in Mexico

8.5.1 Some Implications of Product Scarcity for the Formation of Voluntary Chains

Product scarcity is a major concern to wholesalers because it exacerbates the problems they already experience as suppliers of small scale retailers with small average order sizes even under normal circumstances when product scarcity is not a constraint. As retailers are obliged to search for scarce products with several suppliers they naturally reduce their concentration of purchases with the principal supplier. Hence, not only does product scarcity reduce sales for both wholesalers and retailers, it tends to discourage stable supply linkages. This is the reason for the earlier recommendation that the Avance wholesalers or any other wholesalers forming voluntary chains, should insure that their affiliates get preferential treatment

relative to unaffiliated customers such that they are supplied with at least limited quantities of scarce products. This creates incentives to retailers to affiliate to the group and develop closer supply relationships.

Product scarcity is also an obstacle to the formation of voluntary chains because it requires that wholesalers spend inordinate amounts of time in the procurement process. For example, many Avance wholesalers were obliged to make frequent trips to the federal district and other areas of the country to negotiate supply arrangements on scarce products. Wholesalers estimated that approximately seventy percent of their time was spent on procurement. This severely limited their ability to work with affiliates to improve performance.

The significance of this problem must be fully appreciated since it takes a major commitment in time and resources on the part of wholesalers to form voluntary chains. Both in the U.S. and Europe wholesalers were obliged to make regular visits to retail outlets in order to convince retailers of the advantages of affiliation and dispel their concerns about changing their procurement practices to rely on one wholesaler, rather than comparing prices among several. Wholesalers began to introduce services to retailers before affiliation in order to create good will and give the retailer the confidence to affiliate. Both Avance wholesalers and Castillo have recognized the need to do the same. However, the efforts of Avance in particular have been limited by the product scarcity

constraint. Avance wholesalers have been especially concerned about their inability to devote more time to encouraging retailer loan applications to FIDEC.

8.5.2 Lack of Credit

While Avance wholesalers have received financing from FIDEC, through 1984 retailers still had not. Efforts to obtain credit to finance the investments in equipment recommended by the author to upgrade retail outlets had failed. Local banks were uncooperative in handling individual loan applications and the wholesalers had not made the effort to develop a package of loans for Avance retailers. The position of Avance was that technical assistance to support retailer loan applications should be the responsibility of FIDEC. Nacient voluntary chains in other areas of the country were experiencing similar problems.

Consequently, the development by FIDEC of detailed information to guide small retailers in the preparation of loan requests could reap important rewards. Certainly it appears that a demonstration case is necessary where a concerted effort is made by FIDEC to work with a group and follow through until loan applications are actually processed. Currently, due to this obstacle most FIDEC financing has gone to wholesalers or the construction of shopping centers since these are large volume credit recipients capable of supporting loan applications with the necessary financial and legal documentation.

8.5.3 Licensing and Permits

In order for wholesalers to open new businesses and introduce new forms of wholesaling they must be able to count on the necessary permits from the relevant regulatory agencies. Transaction' costs are increased through corruption, placing smaller firms at a disadvantage relative to large firms. Castillo has reported this to be an important obstacle to the expeditious opening of warehouses and the sale of wine and liquor by these businesses in Mexico City.

The licensing and permit problem is much greater in Mexico City than in the rest of the country. There is also a higher ratio of price inspectors to marketing firms in the federal district than in other areas and both wholesalers and retailers report frequent harassment from inspectors. The practices of SECOFI price inspectors act as a disincentive to the growth of modern firms. For example, despite Castillo's efforts to introduce major innovations into the Mexican marketing system, his businesses have been closed several times by federal inspectors for minor or invented infractions. Castillo has refused to contribute to corruption by paying the "fines" necessary to reopen a business. As a result, some of his businesses have been closed for over two months at a time while he has pursued official channels to solicit reviews and demonstrate that he was in compliance with the law. By 1984 this problem had become so demoralizing to Castillo that he has been considering selling SPAR.

This case dramatizes the endemic obstacles in the

Mexican system that impede innovation and modernization. Modernization of the system could be significantly encouraged and strengthened through increased governmental attention to this issue.

8.5.4 Wholesaler Relationships with Suppliers

Another obstacle faced by voluntary chains in Mexico is the difficulty in achieving advantageous buying terms from manufacturers. Wholesalers experience problems when attempting to negotiate special promotional offers from suppliers, since as was mentioned earlier, manufacturers feel that promotions will not be passed on to consumers. Both Avance and Castillo have made major efforts to convince suppliers that they are introducing more efficient operating systems, in conjunction with affiliates, that place a major emphasis on regular promotions as a strategy for increasing sales. Castillo in particular has devoted significant resources to organizing tours for manufacturers to visit his warehouses and observe the modern systems which have been implemented. These efforts appear to have been contributing to an increased manufacturer awareness of the voluntary chain concept and the advantages it could represent for them. However, this is still an on-going process and the success of voluntaries in large part depends on their ability to negotiate promotions similar to those received by supermarket chains in order to compete effectively.

Technical assistance from FIDEC could be helpful in supporting the development of an educational program for

manufacturers to explain the advantages of the voluntary chain concept. FIDEC could also facilitate the consideration of legislation of the Robinson-Patman variety that would limit price discrimination.

In addition, Avance wholesalers have experienced difficulties in negotiating buying arrangements with manufacturers of the type obtained by supermarket chains with respect to product delivery. Recall that chains receive one invoice although products are delivered to individual stores. Avance eventually succeeded in negotiating this type of arrangement to facilitate joint buying by the wholesalers, but again this points to the need for greater understanding on the part of manufacturers of voluntary chains and their needs. Greater coordination between manufacturers and voluntary chains could promote retailer growth, also benefiting manufacturers.

8.5.5 Retailer Tax Constraint

In Mexico businesses can be classified as "causantes menores" or "causantes mayores." If businesses fall within a specified sales limit they are causantes menores and pay a fixed quota of taxes based on their estimated income, rather than being required to show sales and expenses and paying a graduated rate based on profits. When most retailers register as businesses with the Department of Treasury they state a very low estimated sales figure and continue to pay a fixed quota for many years without review. Hence, retailers fear that if they utilize cash registers inspectors will have a means of verifying sales and

requiring them to become registered as causantes mayores. This obstacle must be overcome in order to introduce retailer accounting systems since retailers must have accurate sales data by department.

Many retailers consider the "threat" of being certified as a causante mayor to be an obstacle to the introduction of improvements in general and expanding the scale of operation. In the retailer meetings held with Avance affiliates, a larger retailer that had made the transition to causante mayor was helpful in explaining to retailers that this was not a reason to limit growth. While higher taxes are paid as a causante mayor, growth also signifies higher sales and profits. Attention must be placed on educating retailers on this issue since it affects retailers on a national level.

8.6 Conclusions

The adoption of the retailer-mindedness philosophy calls for a dramatic change in the belief system of wholesalers. Yet it represents a critical ingredient in the modernization of the wholesaler-traditional retailer interface. Given the limited opportunity sets of traditional retailers they are generally unable to identify and introduce important innovations on their own. By providing a wide range of support services wholesalers can stimulate the modernization of the traditional retailing industry.

However, the successful formation of voluntaries is impeded by a lack of technical knowledge on the part of wholesalers as well. SPAR is an exception since technical

support has been provided by the central European organization. For Avance and other wholesalers in Mexico City considering the formation of voluntary chains, technical assistance could significantly reduce the barrier created by limited technical knowledge.

Specifically, assistance to wholesalers on the knowledge necessary to: provide store engineering and merchandising services, train retailer counselors, prepare retailer loan packages, and develop retailer accounting services could be expected to significantly increase the growth of voluntary chains. For example, growth is facilitated by the introduction of self-service and an expansion in product lines. However, this must be supported by modern merchandising methods to display products in an organized fashion, and inventory control in order to be managed profitably.

Several barriers to the formation of voluntary chains were identified. Continued public sector support for the creation of voluntary chains is expected to be a vital ingredient to their success. Strategies to foment the growth of voluntary chains are presented in Chapter 10.

Data collected through these case studies on the affect of innovations on firm performance, will be incorporated into the assumptions used to measure the costs and benefits of voluntary chains in Chapter 9.

CHAPTER 8

SOURCES

Leed, Theodore W. and German, Gene, 1979. Food Merchandising Principles and Practices. Chain Store Publishing Corp. New York.

CHAPTER 9

FINANCIAL SIMULATION ANALYSIS OF MARKETING FIRMS

9.1 Introduction

A financial simulation model of marketing firms was developed on a microcomputer. The model was designed to conduct longitudinal investment analysis by allowing for phased investments of machinery and equipment, buildings, and land over a five year period. The simulation model was also designed to reflect the impact of inflation on firm operations by including inflation accounting techniques.

The model is organized around an income statement and balance sheet. These financial statements are generated from an opening balance sheet and opening sales showing the initial position of the firm, in conjunction with assumptions regarding future operating parameters, inflation rates, interest rates, real sales growth rates, tax and depreciation rates, etc. Based on the projected financial statements, rates of return on investment and net present values were calculated.

The model was developed for FIDEC with three purposes in mind:

1) to measure the effect of technological and institutional innovations on firm performance

2) to recommend specific investment prototypes designed to promote the establishment of voluntary food chains

3) to conduct loan analysis.

The model facilitates a speedy assessment of both the efficiency of a firm's current operations and the possible

financial effects of any capital investments or organizational changes. Hence, it increases the information available to private sector businesses, banks and the government trust fund (FIDEC) in the investment and loan analysis process.

9.2 Methodology

A brief explanation of the analytical framework used and the methodology underlying the development of the model is provided below. The balance sheets and income statements are calculated based on a comprehensive set of assumptions. Because of the complexity of the model the mathematical underpinnings will not be discussed. However, a much more detailed description of the model (and individual simulations) is available in Volume 2 of the report submitted by the researcher to FIDEC entitled, "The Mexican Dry Grocery Subsector and the Identification of Policies Supporting the Establishment of Voluntary of Food Chains" (1984).

9.2.1 The With and Without Analytical Framework

The model is utilized in the context of "with and without" project analysis. The with and without technique is designed to compare the net benefits realized with a proposed project to the net benefits that would be realized if the firm were to continue operations without the proposed investment. This amounts to the incremental net benefit arising from the project investment and indicates whether the firm would be better off from the introduction of improved operating methods and capital equipment. To insure the same standard for comparison the with and without

cases start with an identical opening balance sheet.

The with situations or cases represent wholesalers and retailers operating as part of voluntary food chains, adopting the innovations necessary to do so. By comparing the with and without situations we are able to analyze the costs and benefits of establishing voluntary chains. Measurement of the costs and benefits of voluntary chains was approached from a financial rather than an economic project analysis perspective. Hence, the costs and benefits which are reported represent actual market prices in all instances.

9.2.2 Inflation Accounting

Inflation, defined as an increase in the general price level of an economy, has numerous effects on the financial position and capital budgeting decisions of any business. Attempts to identify and study these effects are fairly recent in the United States because until the 1970s firms operated in a relatively inflation-free environment.

Most firms have trouble coping with inflation as part of the decision-making environment, particularly when making capital budgeting decisions. Businessmen may attempt to account for inflation by making a simple adjustment of the required rate of return or by adopting a conservative payback period (Bartley). These measures are clearly inadequate.

A body of literature on the impact of inflation on investment decisions has now emerged. It examines the

effect of inflation on investment criteria such as net present value and the internal rate of return with the purpose of determining whether the investment decision will be affected by inflation.

The first efforts to deal with this issue indicated that capital investment projects were not affected by an inflationary environment. It was asserted by Freidenfelds and Kennedy, and others, that simultaneous changes in price levels and the discount rate would effectively cancel out, leaving the investment decision unchanged. Further research has indicated biases in the net present value model under inflationary conditions (Raiborn and Ratcliffe).

LeRoy and Fowler identify three important secondary effects of price inflation in the U.S. These effects are related to 1) the tax deductibility of interest payments, 2) the lack of indexation of the tax shield from depreciation, and 3) higher working capital requirements for the same unit sales. These factors have the following implications.

Since tax provisions permit full deduction of interest payments, a simultaneous increase in inflation and the discount rate is shown by LeRoy and Fowler to make any given capital investment more attractive. This is because the full nominal amount of interest payments is deductible, rather than just the real portion. Therefore, the after-tax cost of debt is lowered and as long as the cash flows of a business keep pace with inflation, the present value of a project will be improved.

On the other hand, the opposite effect takes place with

regard to depreciation. In the United States depreciation is calculated on historical costs which means that assets are not revalued for tax depreciation purposes to reflect inflation. This decreases the tax shelter provided by depreciation and Nelson suggests that the result is lower capital/labor ratios under inflation, or in other words, lower capital investment.

The effect of inflation on working capital is also an important issue, particularly relevant for marketing firms. With higher general price levels more working capital is required to finance inventories. The increased investment in working capital for the same real sales reduces the net present value of a project. Higher levels of working capital also affect cash flows. In Mexico, where inflation has taken place in conjunction with a decline in supplier credit terms and restricted access to credit, cash flow positions have been seriously affected.

The above discussion indicates that inflation may affect both the capital budgeting decisions and the cash flow positions of businesses. Yet traditional international project analysis as conducted by World Bank and other international development agencies typically conducts the economic and financial analysis of development projects in real terms, using constant prices and excluding inflation from the analysis. This is done to simplify the analytical procedures and involves the convention of assuming that benefits and costs maintain constant relative prices

(Gittinger).

The model developed by the author represents an attempt to incorporate inflation into the financial analysis of investment projects for marketing firms in Mexico. This is done in an effort to improve the quality of both investment and loan analysis in the context of the prevailing environment of high inflation rates. It should not be inferred that this is the only manner to incorporate inflation into an accounting system.

Inflation enters the model in several ways, affecting both the balance sheet and income statement (Appendix B). Its effect on the balance sheet will be explained first.

A. Revaluation of Assets

With inflation, the market value of assets increases and assets are worth more than the book value which reports historical asset costs minus depreciation. This implies that the balance sheet does not present an accurate picture of the value of the business and that owner's equity is actually higher than it appears. This model allows for the revaluation of assets at any rate equal to or less than the inflation rate. Asset appreciation or revaluation probably varies not only according to the inflation rate but also depending on the type of asset in question and the growth rate of the economy. Sensitivity analysis of the investments in this analysis considered several possible revaluation rates.

The manner in which inflation enters the balance sheet is via asset values and equity. Fixed assets are reported

according to historical costs under the category "Original PP&E." PP&E is the price of property and equipment. Any purchases of M&E, buildings or land made during years 1983 to 1987 are merely added to the value of assets existing when the analysis began in 1982. (All the cases analyzed start with an opening balance sheet in 1982 and performance is simulated from 1983 to 1987.) The accumulated revaluation of these assets is reported separately and is added to their historical cost.

Accumulated depreciation is also reported and subtracted from the gross value of property and equipment to yield the net price of property and equipment. Assets are always assumed to be purchased at the beginning of the year, hence they are depreciated and revalued starting from the year of purchase. Total accumulated revaluation is simultaneously reported under equity. (The manner in which depreciation and revaluation are calculated is shown in Appendix B.)

Revaluation enters the income statement through depreciation. In contrast to the United States, inflation does affect depreciation in Mexico because the tax code permits the revaluation of assets. Thus, depreciation is calculated on historical costs <u>plus</u> a revaluation component. As assets revalue depreciation charges increase, keeping intact the tax shield provided by depreciation observed in the income statement.

Although revaluation does not represent actual

operating income, annual revaluation is reported for each asset category for conceptual purposes. The accumulated revaluation shown in the balance sheet references the income statement to determine the amount of new revaluation occurring in a given year. Of course, analysis of the operating performance of a firm is based on net income rather than net income plus revaluation.

B. Methodology for Calculating Sales

Inflation also enters the income statement via sales. Separate inflation rates and real sales growth rates were built into the model to calculate sales such that the effect of inflation would not be overstated. The methodology for calculating sales is presented in Appendix B.

9.2.3 Investment Assumptions

The model was designed to facilitate investment analysis over time by building in separate annual investment tables for M&E, buildings and land. Each annual investment for each asset category has a corresponding depreciation table and loan amortization table which feed back into the income statement and balance sheet (see Appendix B).

9.2.4 Key Assumptions

The model includes certain key assumptions regarding the operating parameters of the business, the rate of inflation and the interest rates paid on loans and received on savings accounts. Several of the basic operating parameters are expressed as a percentage of sales. These include the cost of goods sold (COGS) and operating costs which are classified as labor costs and administrative costs. The

gross margin is obtained from the COGS and is equal to 1-COGS. Days of inventory is based on the COGS and determines the inventory turnover rate.

The model uses data from Banco de Mexico and Banco Nacional de Mexico (BANAMEX) on inflation rates, economic growth rates, and interest rates for 1982, 1983, and 1984. The configuration of opening balance sheets regarding accounts payable and receivable, cash, inventory levels, accrued expenses, etc. is based on data collected from wholesale and retail firms in the case studies previously described. Similarly, sales figures, operating costs and margins are determined from primary data which also includes survey data from Mexico City. The data are condensed into key wholesaler and retailer cases representing specific types of marketing firms. The cases could be said to reflect typical businesses for the type of marketing firm being examined in each instance (eg. a 40m^2 personal service retailer or a wholesaler operating a 2000m^2 warehouse with an average product line).

The costs of making the investments which are recommended in order to form or become an affiliate of a voluntary chain were determined in the following manner. Machinery and equipment costs were obtained both from the suppliers of these products, and from wholesalers and retailers who had recently purchased the items. Renovation and construction costs, and land costs in commercial, residential and industrial zones of Mexico City were obtained

from Banco de Mexico. These costs were also cross-checked with wholesalers and retailers.

9.2.5 Rates of Return on Investment

Due to the inflationary environment prevailing in Mexico an additional provision was built into the model in order to make the rates of return on investment (including assets and equity) more meaningful. This provision is the indexing of both returns and investment, thus, the rates of return generated by the model are expressed in real terms.

Another consideration peculiar to this model is the effect of revaluation on rates of return. Revaluation is not included in the net income component of the numerators, but it is included in the denominators by way of its impact on asset values. Of course, the revaluation rate may be entered as zero, in which case no revaluation is included in the denominator. The other extreme is where the revaluation rate is equal to the inflation rate. It is evident that the higher the revaluation rate the lower the rate of return on investment because the size of the denominator is greater. Implicitly, in an inflationary environment, if revaluation was assumed to be equal to zero, rates of return would be overstated. This is because the market value of the assets of a firm is in reality higher than that shown in the balance sheet. Consequently, the investment producing the income stream measured in the numerator is actually larger.

Where an appropriate (i.e. reflective of the market value of assets) revaluation rate is entered into the model, the rates of return on investment will produce a realistic

picture of the earning power of the firm.

9.2.6 Discounted Cash Flow and Investment Streams

The rates of return on investment referred to above are common measures of the profitability a business exhibits in any given year. Historical data on the rates of return of a business provide a good indication of its profitability over time. However, when projecting returns into the future the process becomes somewhat more complex. The investment analyst must frequently choose among different investment projects with different durations and differently shaped future cost and benefit streams. This brings us to the problem of the time value of money. Throughout the ages, people have recognized that present values are better than the same values in the future, and earlier returns are better than later (Gittinger). The colloquial expression for this in Spanish is "mas vale un pajaro en mano que cien volando."

The manner in which this problem is dealt with is through discounting. Discounting is a technique for "reducing" future cost and benefit streams to their "present worth" or value today. Several approaches for obtaining and comparing discounted cost and benefit streams exist. The net present value approach, the internal rate of return and the benefit-cost ratio are the most common. Each approach has advantages and disadvantages and the method selected depends on the particular task at hand and the purposes of the analyst.

The purposes of our analysis and the type of comparison we are interested in has led to the selection of a technique which is somewhat less well known. This is the net benefit/investment ratio (see Appendix B). This ratio is defined as the present value of the net benefit stream (benefits minus costs) divided by the present value of the investment stream (Gittinger). This method facilitates comparison of projects of different size or scale because it yields the value of benefits per unit of capital investment. Consequently, when comparing with and without wholesale or retail investment cases with different levels of investment, if the ratio is greater in the with case than the without, it is apparent that there is an incremental net benefit arising from the project investment.

Explicitly, benefits are measured in terms of a cash flow in the financial sense. Therefore, net income is after tax and interest expense but before depreciation. Initial investment is defined as total assets minus current liabilities, plus current long term debt. Any new capital investments made after the analysis begins are also included in the year they are made. Because the project continues to produce an earnings stream after our analysis ends in 1987, at this point the salvage value of investment is added to the benefit stream. This is equal to total assets in 1987 minus current liabilities, plus current long term debt.

It should also be clarified that the analysis is assumed to take place in an environment without capital rationing. This is because the lending budget of FIDEC

relative to borrower demand yields an excess supply of funds available to finance projects. Hence, the mutually exclusivity and ranking of projects are not relevant to the discussion. FIDEC would theoretically accept all projects with a N/K ratio equal to or greater than one, given the discount rate they deem appropriate.

9.2.7 Alternative Discount Rates

The selection of a discount rate is the next step once the measure of project worth to be used has been determined. This is always a thorny issue but it becomes increasingly so where real interest rates are negative, as they have been in Mexico, and the with cases are subject to concessionary interest rates while the without cases are not. Some of the relevant issues will now be discussed.

The discount rate is assumed to reflect the rate of time preference for money, i. Where inflation exists the inflation rate, r, should be added to i since the real value of future returns will be reduced by an amount equal to the inflation rate. When the discount rate is equal to the market interest rate and this is equal to i+r, then it can be assumed that future returns are being discounted according to the real rate of time preference required by an individual (society) to postpone current consumption. However, the situation is complicated when real interest rates are negative. Here, equating the discount rate to market interest rates may not reflect the opportunity cost of capital relevant to a firm. Where this is the case

inappropriate investment decisions may be made.

This leads to the issue of what the relevant opportunity cost of capital is under these circumstances. The opportunity cost of capital can be expressed in several ways. One definition is the opportunity cost of using investment resources in a project rather than in their next best alternative use (Gittinger). Gittinger also offers the definition of the reduction in nonproject benefits in relation to project objectives that is a result of using capital in the project. In financial analysis the opportunity cost of capital may often be viewed as the weighted average cost of capital to the firm of equity capital and of borrowed capital from likely sources.

Based on these definitions alternative discount rates have been chosen. This enables us to avoid inconclusive discussions on the validity of selecting one discount rate relative to another. Each discount rate indicates something different and is significant for reasons that will be identified.

The first discount rate is simply equal to the "CPP." The CPP represents the cost to the central bank of acquiring funds and is adjusted monthly. The interest rates of trust funds like FIDEC are pegged to the CPP. By representing the cost to the central bank of acquiring funds the CPP serves as an indicator of interest rates paid on savings accounts. Although the CPP has been negative in real terms in recent years, it does not appear to be uncommon for people to perceive short-term savings as an alternative to

investing in a business opportunity. This is probably partially influenced by the high nominal rate of interest and the level of uncertainty prevailing in the economy. While not yielding a positive real rate of return, savings accounts do yield a risk-free return. Furthermore, when interest and principal are continually reinvested in short-term savings accounts the average annual return is closer to a positive real rate of return.

The use of the CPP as a discount rate is significant for the following reason. Where the corresponding net benefit/investment ratio (N/K) is less than one, it is evident that the firm would be better off liquidating the business and placing the proceeds in a savings account. This will be relevant for some of the cases presented later.

The second discount rate is the inflation rate plus the real economic growth rate of the economy. The rationale behind this rate is that it serves as a proxy for the next best investment alternative. Where the real growth rate is negative then the discount rate is lower than the inflation rate. This indicates that when a firm considers an investment opportunity relative to realistic investment alternatives during a recession, it may not be able to expect a real rate of return, hence it may accept a discount rate that is negative in real terms.

The third discount rate and the one most commonly used for financial analysis is the rate of interest paid on loans. Where the corresponding N/K ratio is equal to or

greater than one, this indicates that the net income stream generated by an investment receiving outside financing is sufficient to cover the borrowing costs. This is true whether the borrowing rate is negative in real terms or not. Furthermore, from the viewpoint of the firm, the more negative the real interest rate the better since this results in lower real borrowing costs. Nevertheless, in the context of our analysis there are several reasons why a discount rate equal to the borrowing rate might not lead to optimal investment decisions. The two most apparent reasons will be mentioned first.

In our analysis the interest rate relevant to the borrower is not some average market rate, rather it varies significantly by type of borrower. When comparing the with and without cases an interest rate differential of as much as 20 points may exist due to the concessionary financing received by FIDEC borrowers. Since when the discount rate is defined as the borrowing rate, it is different for with and without cases, it may be argued that it is not the most desireable for purposes of comparison. That is because a comparison of this nature would not differentiate between the incremental net benefit realized by the with case relative to the without directly as a result of the changes introduced by the investment itself, and the benefit merely resulting from the concessionary financing.

Another factor making this discount rate less meaningful in our situation is that some of the without cases function almost entirely without outside financing.

The more difficult conceptual issue has to do with the relevant opportunity cost of capital mentioned earlier. If the only concern of the investor is generating a high enough return to compensate for the costs of borrowing the funds necessary to make an investment, then a N/K ratio of one (calculated at the borrowing rate) is sufficient to indicate that the investment should take place.

However, the investor may be considering alternative investment opportunities. When viewed within the broader context of realistic investment alternatives available to the firm, the borrowing rate may be an inappropriate discount rate. This is particularly true where concessionary financing exists. For example, where the borrowing rate is lower than the CPP (true for FIDEC customers), a N/K ratio equal to one would be an inferior alternative compared to liquidating the resources of the firm and placing them in a savings account earning the CPP.

All the above factors lead to the suggestion that the N/K ratios generated where the discount rate is equal to the interest rate on borrowed funds, might best be viewed independently, and merely to indicate whether a loan can be repaid.

The fourth discount rate is equal to the inflation rate plus a rate of time preference. This is what the discount rate is generally assumed to be equal to when real interest rates are positive (i.e. i+r as was indicated above). World Bank indicates that in most countries the real rate of time

preference is assumed to range from eight to fifteen percent. The real rate of time preference is assumed to equal eight percent in this analysis.

The fifth discount rate is the same as the fourth, but the definition of net benefits is altered. Here we are concerned not just with the cash flow to the firm, but with the total returns generated by the investment, regardless of the source of financing. Thus, in this case tax-adjusted interest is added to the net income stream to yield the return to both the firm and the lender.

9.2.8 Uncertainty and Sensitivity Analysis

While data is available on current inflation rates, interest rates, firm operating parameters, etc., uncertainty exists with regard to the future. This model simulates future firm performance based on assumptions derived from a variety of sources. For example, the operating costs and margins (as a percentage of sales), inventory turnover rates and real growth rates of participants of voluntary chains are estimated based on the performance of actual firms which are currently introducing similar innovations and operating similar business types.

Since uncertainty exists, sensitivity analysis was carried out on the cases being presented. Sensitivity analysis is an analytical technique used to systematically test what happens to the earning capacity of a project if actual events differ from the assumptions underlying the analysis (Gittinger).

9.3 Presentation and Analysis of Wholesale and Retail Cases

The subsequent discussion will describe cases representative of wholesale and retail businesses in Mexico and present investment prototypes for voluntary chains.

9.3.1 Financial Simulation of Wholesale Businesses

We will begin with the presentation of a series of wholesale cases organized around the opening balance sheet presented in Table 9.1. (The data are entered as millions of pesos.) This business represents a medium scale wholesale enterprise given the structure of the Mexico City market. The firm operates in a 2000m^2 one-story warehouse with a loading dock and handles approximately 500 products. Monthly sales were 48 million pesos in 1982. The principal customer type is retailers and delivery services are provided with three ten ton trucks and a 3-1/2 ton truck.

A. Without Wholesale Cases

The operating parameters for the without business are shown in Table 9.2. (A complete presentation of each case is provided in Volume II of the report submitted to FIDEC, cited on page 287.) The business operates with a 6.5 percent gross margin, labor costs of .5 percent and administrative costs of 3.2 percent, excluding interest costs. No real growth is assumed during 1983 and 1984 due to the state of the economy. Real growth after that time is assumed to be equal to 2 percent, indicating that the firm will be able to keep up with the expansion of the economy but will not experience further gains. This is assumed because it

TABLE 9.1 OPENING BALANCE SHEET FOR WHOLESALE CASES (WITH AND WITHOUT)

OPENING BAL SHEET	1982	Accounts Payable	22.00
Cash*	15.00	Trade Notes Pay.	2.00
Accts. Receivable	12.50	Bank: Short-term	4.00
Inventory	47.00	Current LTD	1.00
Prepaid Expenses	0.20	Accrued Expenses	1.50
TOTAL CURRENT ASSETS	74.70	Taxes Payable	0.00
		Other Curr. Liabs	3.70
Machinery & Equip.	2.25	TOTAL CURR. LIABS	34.20
Buildings	4.00		
Land	3.00	Bank: Term Debt	2.00
ORIGINAL PP&E	9.25	Subordinated Debt	0.00
M & E Accum. Reval.	1.62	Deferred Taxes	0.00
Buildings Acc. Reval.	8.14	Other LT Liabs	1.00
Land Accum. Reval.	7.32	TOTAL LIABILITIES	37.20
M & E Accum. Deprec.	1.08	Revaluation	17.08
Buildings Acc. Deprec.	1.08	Common Stock	5.00
NET PP&E	24.17	Paid-in Capital	0.00
		Retained Earnings	39.59
Other Assets	0.00	TOTAL EQUITY	61.67
TOTAL ASSETS	98.87	TOTAL LIAB & EQUITY	98.87
M&E Depreciation Rate	0.33	Total Yrs.Term Debt**	2
Building Deprec. Rate	0.833	BASE YEAR SALES	605.49

*Currency Units: Pesos Millions

**Both current long term debt (LTD) & remaining years.

TABLE 9.2 WITHOUT WHOLESALE CASE ASSUMPTIONS

KEY ASSUMPTIONS	1983	1984	1985	1986	1987
Infl.Sales Growth Rate	0.80	0.65	0.40	0.40	0.40
Real Sales Growth Rate	0.00	0.00	0.02	0.02	0.02
COGS/Sales	.935	.935	.935	.935	.935
Labor Expense/Sales	.005	.005	.005	.005	.005
Admin Expense/Sales	.032	.032	.032	.032	.032
Tax Rate	0.38	0.38	0.38	0.38	0.38
M&E Revaluation Rate	0.24	0.20	0.12	0.12	0.12
Build & Land Revl Rate	0.40	0.49	0.40	0.40	0.40
Short-term Interest R.	0.68	0.63	0.40	0.40	0.40
Term-Debt Interest R.	0.70	0.65	0.42	0.42	0.42
Accts. Rec. (days)	0	0	0	0	0
Inventory Turns	12.4	13.3	14.4	15.0	15.7
Accts. Payable (days)	10	10	10	9	7

INVESTMENT ASSUMPTIONS	1983	1984	1985	1986	1987
MACHINERY & EQUIPMENT	*A	*B	*C	*D	*E
Cash	0.00	0.68	0.00	0.00	0.00
New Term Debt	0.00	2.75	0.00	0.00	0.00
Annual M&E Investment	0.00	3.43	0.00	0.00	0.00
Term of Loan	0	2	0	0	0
Annual Deprec. Rate	0.00	0.20	0.00	0.00	0.00

M & E Investment Notes:*B-1 TRUCK @$3.43 Million pesos.

continues to operate in a traditional fashion and can therefore be expected to become less competitive as the wholesale industry modernizes.

The above information indicates one possible scenario for how the firm might continue to operate and grow without the introduction of improved methods. It would require no additional investments except for the purchase of a truck on a two year loan at market interest rates. Note that any short term debt is also acquired at market interest rates. Revaluation of assets takes place, after 1984 at the same rate as the inflation rate for buildings and land, and at a third of the inflation rate for machinery and equipment.

The annual inventory turnover rate would increase from 12.4 in 1983 to 15.7 in 1987. This increase is expected due to the decline in credit terms granted by suppliers which induces all marketing firms to place more emphasis on inventory management.

Given the assumptions made in this case (without wholesale case 1), it can be seen from Table 9.3 that the firm would have reasonable liquidity ratios throughout the five years being projected and exhibit after-tax net margins ranging from 1.4 to 1.7 percent. All the net benefit to investment ratios (N/K) calculated, based on the discount rates previously described, are greater than one (see Table 9.4).

Now observe what happens if the gross margin is reduced to 6 percent (without wholesale case 2). A decline in the

TABLE 9.3 COMPARISON OF LIQUIDITY RATIOS AND AFTER-TAX NET MARGINS FOR WHOLESALE INVESTMENT CASES

CASE	1983	1984	1985	1986	1987
			Current Ratios		
WO 1[a]	2.49	2.04	2.19	2.45	2.74
WO 2	2.25	1.75	1.76	1.82	1.92
WO 3	2.25	1.75	1.69	1.66	1.66
WO 4	2.49	2.03	2.16	2.40	2.66
WO 5	2.49	2.05	2.22	2.40	2.63
INT 1[b]	1.90	1.74	1.95	2.28	2.55
INT 2	1.90	1.74	1.82	1.96	2.03
WITH 1[c]	1.67	1.63	1.92	2.22	2.20
WITH 2	1.67	1.53	1.59	1.59	1.52
			AFTER-TAX NET INCOME		
			(Percent)		
WO 1	1.4	1.4	1.5	1.6	1.7
WO 2	1.0	0.8	1.0	1.1	1.2
WO 3	1.0	0.8	0.9	1.0	1.0
WO 4	1.4	1.4	1.5	1.7	1.7
WO 5	1.4	1.3	1.4	1.5	1.6
INT 1	1.2	1.1	1.6	1.6	1.6
INT 2	1.2	1.1	1.4	1.4	1.4
WITH 1	1.0	1.4	1.7	1.6	1.3
WITH 2	1.0	1.3	1.5	1.2	0.9

[a] WO = Without wholesale case

[b] INT = Intermediate wholesale case

[c] WITH = With wholesale case

gross margin of .5 percent results in a decline in the rates of return on equity and total assets and reduces the N/K ratios (see Table 9.4). The second, fourth and fifth discount rates yield N/K ratios less than one. Thus, if any of these were selected as the appropriate discount rate, the results would show that given this level of performance the firm would not want to remain in operation. This indicates that wholesale firms are quite sensitive to small changes in margins and points to the importance of two issues.

These issues are the width of the product line or the product mix handled by the wholesaler and price controls. Narrow line wholesalers selling basic food products with officially enforced narrow margins, may experience serious difficulties maintaining long run profitability, particularly in an uncertain environment.

For example, if in addition to a decline in the gross margin to 6 percent, the inflation rate were to increase to 50 percent from 1985 to 1987 (without wholesale case 3), the problems of the business would be further exacerbated. The higher inflation rate would cause an increase in working capital requirements, necessitating more short term debt to finance inventories (see Table 9.5). This would yield a significant rise in interest expense, lowering net income. The outcome is a further decline in the N/K ratios. This time even the third discount rate which is equal to the interest rate on loans is less than one.

It appears that since traditional wholesale firms

TABLE 9.4 COMPARISON OF NET BENEFIT TO INVESTMENT RATIOS (N/K) AND REAL RATES OF RETURN ON EQUITY AND TOTAL ASSETS FOR WHOLESALE INVESTMENT CASES

CASE	1983	1984	1985	1986	1987
	Rate of Return on Equity %		Rate of Return on Total Assets %		
WO 1	12.0	15.6	5.6	12.4	14.0
WO 2	8.7	10.5	4.5	9.9	11.2
WO 3	8.7	10.5	4.5	9.9	11.1
WO 4	12.6	18.6	5.8	13.9	16.5
WO 5	11.5	13.4	5.4	11.0	12.1
INT 1	10.5	14.2	5.9	12.8	15.6
INT 2	10.5	14.2	5.9	12.8	15.4
WITH 1	9.5	17.5	6.2	14.2	15.9
WITH 2	9.5	16.0	6.2	13.8	14.4

N/K Ratios

	Alternative Discount Rates*				
	1	2	3	4	5
WO 1	1.83	1.27	1.33	1.04	1.08
WO 2	1.42	.97	1.03	.80	.90
WO 3	1.24	.87	.92	.72	.84
WO 4	1.58	1.10	1.16	.91	.96
WO 5	1.96	1.35	1.42	1.10	1.15
INT 1	1.85	1.28	1.92	1.05	1.17
INT 2	1.39	1.14	1.43	.94	1.10
WITH 1	1.82	1.28	1.94	1.06	1.20
WITH 2	1.57	1.11	1.67	.93	1.14

TABLE 9.4 (cont'd.)

*Discount rate 1 = CPP
Discount rate 2 = Inflation rate + economic growth rate
Discount rate 3 = Loan rate
Discount rate 4 = Inflation rate + time preference rate of 8 percent
Discount rate 5 = Discount rate 4, however, benefits also include tax-adjusted interest, i.e. the return to the lender.

TABLE 9.5 COMPARISON OF SHORT-TERM DEBT FOR WHOLESALE INVESTMENT CASES

CASE	1983	1984	1985	1986	1987
			(Millions of pesos)		
WO 1	0.01	10.68	7.05	1.15	3.67
WO 2	3.67	21.78	29.22	31.58	28.21
WO 3	3.67	21.78	35.30	51.64	70.20
WO 4	0.01	10.90	7.99	3.19	7.69
WO 5	0.05	10.33	5.53	6.75	13.93
INT 1	17.68	36.37	34.19	13.83	9.13
INT 2	17.68	36.37	43.86	39.33	59.98
WITH 1	18.10	33.78	32.56	29.61	46.90
WITH 2	18.10	48.35	86.65	150.04	240.76

operate on narrow margins they often don't have a large cushion to absorb shocks with and are very sensitive to changes in the general price level. Reductions in supplier credit terms and increases in inventory levels produce similar results. The financial simulations being presented help to create a more vivid picture for the reader of why businesses were so adversely affected by the simultaneous jump in inflation and the drop in manufacturer credit terms which took place from 1982 to 1984.

Now lets examine the performance of the firm where revaluation of assets is not taken into account, i.e. the revaluation rate is equal to zero in this case (without wholesale case 4). We will return to without wholesale case 1 for this simulation so that inflation is equal to 40 percent again; all assumptions are the same as in without case 1 except for the difference in the revaluation rate.

This comparison demonstrates the importance of the tax shield provided by depreciation discussed earlier. The N/K ratios are lower in without case 4 than in without case 1. Depreciation expense is lower in without case 4 and net income is higher. However, recall that the present value calculations are made by excluding depreciation (i.e. net after-tax income plus depreciation). Therefore, because more taxes are paid in without case 4 on the same gross income, net income plus depreciation is lower than in without case 1.

It becomes evident that where depreciation is

calculated based on historical costs, net present values are lower, and consequently, investment decisions may be altered. Table 9.4 shows that for without case 4, if the third or fourth discount rates were selected as the relevant discount rates from the perspective of the decision-maker, then the investment would not take place. This contrasts with without case 1 where revaluation of assets occurs and all N/K ratios are greater than one.

Note that the rates of return on total assets and equity are higher in without case 4 than in without case 1. This is merely due to the fact that the numerator (net income plus interest) is expressed in current pesos and in this case the denominator is expressed in 1982 dollars (no revaluation of assets since that time). As a result, these rates of return are overstated and the decision-maker should consider them in this light.

On the other hand, without wholesale case 5 shows the financial position of the business where the revaluation rate is equal to the inflation rate. Since both the numerators and denominators are expressed in current pesos, this case of course has the lowest rates of return on assets and equity (relative to without cases 1 and 4). It implies that all assets appreciate at a rate equal to the inflation rate and that the tax code permits depreciation to be calculated on these values. The maximum tax shield is provided by depreciation and the reader will observe upon examination of without case 5 that it has the highest N/K ratios. More conservative revaluation rates are assumed throughout the

remainder of the analysis; they are assumed to be equal to those already described in without wholesale case 1.

B. Intermediate Wholesale Investment Cases

The on-site research conducted in wholesale and retail establishments in Mexico has led to recommendations on the types of wholesaler and retailer investments which should be supported in order to modernize the food marketing system. These investments are designed to foment the establishment of voluntary food chains. Recognizing that some wholesalers might be inclined to introduce the investments necessary to the formation of a voluntary chain on a gradual or incremental basis, an intermediate investment has been designed. This investment would permit the wholesaler described in the without case to take the first step toward modernizing operations and begin promoting a voluntary chain among existing retailer customers (intermediate case 1).

The wholesaler would widen the product line handled to 1000 products. The following materials handling methods would be introduced: organization of the warehouse according to product families; a first-in first-out inventory control system; all merchandise stored on individual pallets (i.e. no stationary pallets); merchandise stacks interspersed with pallets; merchandise reception and order picking done with pallets mobilized by pallet jacks. A computerized system would be introduced for inventory management, to generate a standard order form and order picking lists, and for accounting and financial management purposes.

The key operating and investment assumptions are shown in Table 9.6. The wholesaler introduces the above innovations at the beginning of 1983 and benefits with an increase in the gross margin to 7 percent. It should be clarified that since the width of the product line handled by this wholesaler is double that of the without case, a different product mix is being compared. If the same product mix were compared the intermediate wholesaler would have the same or a lower margin. The higher margin is merely the result of the addition of products without price controls as part of an overall strategy to improve the return on investment and financial strength of the business. As efficiency gains also take place to contribute to this process, the wholesaler is in a position to reduce gross margins without sacrificing profits.

The wholesaler would qualify to receive financing from FIDEC starting in the first year because of the introduction of improved methods. If the wholesaler formed a voluntary chain and began to affiliate retailers in 1984 he would benefit from even more concessionary interest rates. The rates established by FIDEC for non-voluntary wholesalers are equal to the CPP for short-term credit and the CPP+2 for long-term credit. The interest rates for voluntary chain wholesalers are the same for both short-term and long-term credit and begin at the CPP-1 and decline to the CPP-3 as the wholesaler verifies the introduction of improved services to retailers.

TABLE 9.6 INTERMEDIATE WHOLESALE CASE ASSUMPTIONS

KEY ASSUMPTIONS	1983	1984	1985	1986	1987
	%	%	%	%	%
Infla. Sales Growth Rate	80	65	40	40	40
Real Sales Growth Rate	3	4	3.5	3.5	3.5
COGS/Sales	93	93	93	93.3	93.5
Labor Expense/Sales	3	3	3	3	3
Administrative Exp/Sales	34	34	33	32	32
Tax Rate	42	42	42	42	42
M&E Revaluation Rate	24	20	12	12	12
Build & Land Reval. Rate	40	49	40	40	40
Short-term Interest Rate	56.6	52	28	27	27
Long-term Interest Rate	58.6	52	28	27	27
Accts. Rec. (days)	4	2	2	2	2
Inventory Turns	11.6	13.3	15.0	17.1	18.0
Accounts Payable (days)	10	8	8	8	7

INVESTMENT ASSUMPTIONS	1983	1984	1985	1986	1987
MACHINERY & EQUIPMENT	*A	*B	*C	*D	*E
Cash	0.62	0.68	0.00	1.35	0.00
New Term Debt	2.50	2.75	0.00	5.38	0.00
Annual M&E Investment	3.12	3.43	0.00	6.73	0.00
Term of Loan	3	3	0.00	3	0.00
Annual Deprec. Rate	0.20	0.20	0.00	0.20	0.00

M & E Investment Notes:*A-1200 PALLETS @$700;4 PALLET JACKS @$70,000; COMPUTER @$2 Million.

*B-1 TRUCK @$3.43 Million. *D-1 TRUCK @$6.73 Million.

The savings in interest expense would enable the voluntary wholesaler to finance important services to retailers unavailable from traditional wholesalers (e.g. retailer accounting, merchandising and advertising programs, store engineering, inventory control, manager and employee training, etc.).

On-site research indicates that the new materials handling methods could be expected to reduce labor costs from .5 to .3 percent of sales as a result of the increase in labor productivity (see Appendix B). Administrative costs as a percentage of sales are higher initially than the without case (3.4% vs. 3.2 %) despite the higher sales volume. This reflects the initial costs associated with introducing and refining a new system and promoting a voluntary chain. Once the system is operating smoothly economies of scale are witnessed and administrative costs decline to 3.2 percent in 1987. (Keep in mind that these costs include a higher level of services than the without situation.)

An important efficiency gain in the intermediate case is an increase in the inventory turnover rate resulting from the improved inventory control system mentioned. It is assumed that the increase will take place gradually, based on implementation of the new system in stages, with the firm reaching 18 inventory turns annually in 1987. This is one of the major factors responsible for the improved profitability of the business.

Accounts receivable and accounts payable are two other areas where improvements occur. Accounts receivable indicates whether credit is being offered to retailers. Both accounts receivable and accounts payable are entered in days. The number of days does not refer to the repayment period, rather it is used to determine the percentage of sales that accounts receivable or payable represent.

Whereas the wholesaler described in the without case was not able to extend credit to customers due to the high cost of financing accounts receivable with short-term debt, the intermediate wholesaler is able to offer some credit. The without case is representative of what took place in 1983. The increase in inflation and reduction in supplier credit forced many wholesalers to abruptly eliminate credit to retailers, in spite of the negative effect they knew this could have on sales. The financial reasons for this will become clearer as the discussion proceeds.

The days of accounts payable declines to 8 in 1984 compared to 10 in the without situation, despite the wider product line and longer payment periods that are frequently available from suppliers on non-basic products. This demonstrates that the firm is paying suppliers more promptly and therefore will achieve lower prices, a benefit to customers that in a voluntary chain format will be shared with consumers as well.

The short-term debt requirements are significantly higher for the intermediate wholesaler relative to without wholesale case 1 (see Table 9.5). The short-term debt

figures are a key item to observe in all the cases since this serves as an indicator of the "creditos refaccionarios" that marketing firms might solicit from FIDEC. In the intermediate case the increase in accounts receivable and decline in accounts payable have an important effect on short-term debt. In the case of accounts payable, short-term debt is relied on to a greater degree to finance inventories, replacing accounts payable (for a given inventory turnover rate). Financing from FIDEC enables the voluntary wholesaler to do so and obtain the maximum price advantages from suppliers.

Similarly, financing from FIDEC permits the wholesaler to offer credit to affiliates. This is considered important as a competitive tool for wholesalers to attract retailer affiliates with, since credit is looked on by retailers as an important benefit. Therefore, it should be worth the financing costs and influence the sales growth rate. Furthermore, wholesalers receiving FIDEC financing for voluntary chains also have the option of encouraging retail affiliates to obtain working capital loans from FIDEC. This permits retailers to finance larger purchases from the voluntary wholesaler and reduces the credit burden for wholesalers.

The wider product line, credit and lower prices of the intermediate wholesaler relative to the without case enable the intermediate wholesaler to grow at a faster rate. Conservative growth rates ranging from 3 to 4 percent were

chosen to determine whether the investment would be profitable without markedly higher growth. The rates of return on equity and assets and the net benefit to investment ratios are shown in Table 9.4. All of the N/K ratios are greater than one at the respective discount rates being used. Of course, if the wholesaler experienced higher growth the rates of return and present values would be greater and gross margins could be further reduced without infringing on profits.

The forces or relationships underlying this case and influencing the outcome can be summarized as follows. The slightly higher margin at the outset helps to cover the increase in interest costs resulting from the higher level of investment in capital goods and inventories. Short-term credit from FIDEC permits the wholesaler to "buy right" from suppliers, in otherwords, to pay promptly and obtain cash and volume discounts. This makes him more competitive and increases the volume of business. The introduction of the first-in first-out inventory control system in the warehouse, coupled with the computerized system for inventory management, causes a marked improvement in the rate of inventory turnover. This combined with the higher volume enables the wholesaler to decrease the gross margin and still retain the same net margin. This is coupled with a decline in operating costs, reflecting economies of scale and more efficient management. The net result is that the gross margin could be reduced from 7 percent in 1983 to 6.5 percent in 1987, while still improving the net margin from

1.2 percent in 1983 to 1.6 percent in 1987.

The preceding description represents a typical scenario which could be observed in any business as it modernizes operations and adopts improved management policies in order to maintain control over all aspects of the business.

Simulation analysis was done to examine the effect of an increase in the inflation rate to 50 percent in 1985 through 1987 (intermediate wholesale case 2). In addition, a change in monetary policies was assumed such that the CPP is equal to the inflation rate during these years. This implies positive real market interest rates. The substantial rise in short-term debt requirements, decline in net margins and the N/K ratios can be observed in the preceding tables. The fourth discount rate, equal to the inflation rate plus a time preference rate of 8 percent, yields a N/K ratio of less than one. All other N/K ratios are still greater than one. Because of the greater financial strength of the wholesale business which results from this intermediate investment (relative to the without situation), it can more easily absorb shocks and still remain lucrative.

C. With Wholesale Investment Cases

The investment which will be outlined below represents a prototype investment package for wholesalers interested in making major efficiency gains to aid in the formation of voluntary chains. For a wholesaler already operating in the intermediate phase just described, this would represent the next stage of the modernization process. However, the with

cases were designed assuming that the wholesaler is modernizing from the without situation, hence the without situation is the primary basis for comparison. The operating parameters and investment assumptions are shown in Table 9.7.

In addition to the innovations described in the intermediate case, further improvements in materials handling methods are introduced in this case (with wholesale case 1), along with an expansion in the product line to include 1500 products. The materials handling system adopted involves some mechanization of the product movement functions in the warehouse. The warehouse is equipped with racks to yield 6 meters in vertical product storage. Merchandise is stored in the racks on pallets moved into place by a forklift. Racks both increase the capacity of the warehouse as measured in useable storage space (cubic storage) and permit access to products in a safe and efficient manner with lower product losses.

These points are not trivial. In the traditional system merchandise is frequently stacked up to 5 meters high without racks or without periodic placement of pallets to help distribute the weight. A walk through any warehouse will reveal losses (mermas) in the form of broken cases of merchandise damaged by the excessive weight of cartons stacked in high pyramids. Furthermore, two to three workers are required to work together to crawl up the stacks to raise and lower the merchandise. This is both an unsafe practice, decreases labor productivity and also increases

TABLE 9.7 WITH WHOLESALE CASE ASSUMPTIONS (VOLUNTARY CHAIN)

KEY ASSUMPTIONS	1983	1984	1985	1986	1987
Infl.Sales Growth Rate	0.80	0.65	0.40	0.40	0.40
Real Sales Growth Rate	0.04	0.07	0.07	0.06	0.06
COGS/Sales	.925	.925	.930	.935	.940
Labor Expense/Sales	.0025	.0019	.0019	.0019	.0019
Adminis. Expense/Sales	.034	.033	.032	.031	.031
Tax Rate	0.42	0.42	0.42	0.42	0.42
M&E Revaluation Rate	0.24	0.20	0.12	0.12	0.12
Build & Land Revl Rate	0.40	0.49	0.40	0.40	0.40
Short-term Interest R.	.556	0.51	0.27	0.27	0.27
Long-term Interest R.	.556	0.51	0.27	0.27	0.27
Accts. Rec. (days)	3	3	3	3	3
Inventory Turns	10.6	13.3	15.7	18.0	18.0
Accts. Payable (days)	13	10	9	7	7

INVESTMENT ASSUMPTIONS	1983	1984	1985	1986	1987
MACHINERY & EQUIPMENT	*A	*B	*C	*D	*E
Cash	2.82	0.68	0.00	1.35	0.00
New Term Debt	11.30	2.75	0.00	5.38	0.00
Annual M&E Investment	14.12	3.43	0.00	6.73	0.00
Term of Loan	3	3	0	3	0
Annual Deprec. Rate	0.20	0.20	0.00	0.20	0.00

M & E Investment Notes:
*A-5000 PALLETS @$700; 6 PALLET JACKS @$70,000; RACKS-$4M; 2 FORKLIFTS @$2M; COMPUTER @$2M; OFFICE EQUIPMENT-$200,000.

*B-1 TRUCK @$3.43 Million. *D-1 TRUCK @$6.73 Million.

losses since frequently bags or boxes are split or broken as they are tossed down.

The introduction of racks and a forklift (i.e. some mechanization) is recommended for large volume wholesalers in the Mexico City market area despite low labor costs due to the following. High property values and construction costs signify that expansion can be achieved with lower capital costs by maximizing existing vertical space, rather than constructing additional (horizontal) warehouse space.

Order picking is still done manually with pallets mobilized by pallet jacks due to two factors, the small average order size being picked and relative capital and labor costs. The warehouse is arranged such that the ground level and first level of the racks are ready for order picking and the upper levels are used for product storage. In this manner the picker does not need a forklift to reach most products.

The increase in labor productivity brought about by the materials handling innovations can be expected to generate a decline in labor costs to .19 percent of sales. Experience shows that the materials handling changes in this case may take longer to implement than in the intermediate case, thus, the full extent of the benefits will be realized gradually, showing up in 1984.

In contrast, the improved gross margin of 7.5 percent should be realized in the first year. As operating performance improves the gross margin can decline, reaching 6

percent in 1987. This would represent a significant benefit to retailers and consumers given the wide product line being handled.

The reader will observe the low inventory turnover rate (10.6 annually) at the outset of the analysis in 1983. At first glance this may appear to reflect poor performance relative to the without and intermediate cases. In reality, this reflects the substantial increase in the width of the product line handled. When the wholesaler first begins to procure a wider product line he lacks information on the demand for each product. Consequently, some goods may be overstocked at the outset until the wholesaler has a few months time to test sales and promotional techniques. Secondly, manufacturers generally offer longer payment periods on non-basic products and products not experiencing scarcity. This enables the wholesaler to hold higher stock levels and to finance the acquisition of the expanded inventory with lower carrying costs. The high initial levels of accounts payable, 13 and 10 days in 1983 and 1984 respectively, are a result of the longer payment periods for many of the new products. As the wholesaler implements the computerized inventory control system and accurately estimates demand, the annual inventory turnover rate gradually increases to 18 in 1986. This is coupled with a decline in accounts payable as the firm attempts to attain the best buying terms possible in order to be able to offer the lowest prices and encourage greater competitive strength.

This wholesaler experiences higher growth than the without and intermediate cases due to the larger number of products sold and the lower prices and increased services offered. However, the growth rates, ranging from 4 to 7 percent, were determined conservatively for several reasons. First of all, observation of incipient voluntary chains in Mexico City and Monterrey, indicates that the retailer affiliation process is lengthy and that growth is slow in the first year, despite the major expansion in product lines. The firm must continue selling to existing customers and devote significant time to the process of identifying candidates for affiliation to the chain and persuading them to become members. We must recall that simultaneously the wholesaler is carrying out a complete reorganization of both warehouse operations and the accounting methods used.

Consequently, dramatic results should not be expected in the first year, voluntary chains represent a long-term strategy for growth. As a result, growth is sustained at 6 to 7 percent levels from 1984 on. This type of an adoption or growth curve was also observed in the United States when voluntary chains were being formed in the 1920s and 1930s. The benefits of the voluntary chain concept gradually become evident to retailers and retailer affiliation continues to occur over a period of several years.

Observation of the net benefit to investment ratios for with wholesale case 1 reveals favorable ratios for all discount rates (see Table 9.4). Except for 1983 when the

investment is made, the rates of return on equity and assets are higher for with case 1 than without case 1. This shows that despite lower net margins as a percentage of sales, absolute returns are higher. A marketing firm can lower prices and margins and maintain profitability given the appropriate investments and improved management.

Now, let us examine what happens if the wholesaler does not manage inventory levels appropriately (with wholesale case 2). Here the annual inventory turnover rate would also be 10.6 in 1983 and then remain at 12 through 1987. This would cause a significant rise in short-term debt and interest expense, reducing net income (see Tables 9.5 and 9.3). The N/K ratios decline significantly (see Table 9.4). However, only in the case of of the fourth discount rate does the N/K ratio become less than one.

This simulation demonstrates two things. One is the detrimental impact of low inventory turnover rates on firm performance, an effect generalizeable to all marketing firms. Secondly, that the with wholesale case exhibits a sufficiently strong performance such that even with low inventory turnover rates, the investment could be expected to remain viable under several discount rates.

9.3.2 Financial Simulation of Retail Businesses

Retailer cases are organized around two different scales of operation; a small scale traditional retailer and a superette operator. In both instances the without cases operate as unaffiliated independents and the with cases join voluntary chains. These are two types of customers that

would be served by the voluntary wholesalers just described and this analysis enables us to examine the impact of membership in a voluntary chain on retailer performance.

A. Small Scale Retailer Cases

These cases describe a traditional operator of the type discussed in Chapter 7. The retailer operates a 40 m^2 personal-service tienda de barrio with 50 m^2 of storage. A narrow product line of dry groceries and no perishables is handled and annual sales in 1982 were 5 million pesos. The retailer receives deliveries and credit (but no other services) from a principal wholesale supplier, purchases a small number of products directly from manufacturers, and also procures on a traditional (personal-service) cash and carry basis from various wholesalers depending on price and product availability.

The small-scale retailer cases are organized around the balance sheet shown in Table 9.8. Like most traditional retailers the businessman does not have any bank debt. He has been in operation since the beginning of 1980.

Without Small Retailer Cases.

The basic operating parameters of the without case retailer and other assumptions are shown in Table 9.9 (without small retailer case 1). No capital investments are assumed to be made by the retailer throughout the analysis. The retailer operates with a 12 percent gross margin and does not experience real sales growth. Operating costs are 8.1 percent excluding interest costs. The inventory

TABLE 9.8 OPENING BALANCE SHEET FOR SMALL SCALE RETAILER (WITH AND WITHOUT CASES)

OPENING BAL SHEET	1982	Accounts Payable	0.15
Cash	0.20	Trade Notes Pay.	0.04
Accts. Receivable	0.01	Bank: Short-term	0.00
Inventory	0.25	Current LTD	0.00
Prepaid Expenses	0.01	Accrued Expenses	0.03
TOTAL CURRENT ASSETS	0.47	Taxes Payable	0.00
		Other Curr. Liabs	0.05
Machinery & Equip.	0.14	TOTAL CURR. LIABS	0.27
Buildings	0.16		
Land	0.13	Bank: Term Debt	0.00
ORIGINAL PP&E	0.43	Subordinated Debt	0.00
M & E Accum. Reval.	0.17	Deferred Taxes	0.00
Buildings Acc. Reval.	0.33	Other LT Liabs	0.20
Land Accum. Reval.	0.19	TOTAL LIABILITIES	0.47
M & E Accum. Deprec.	0.06	Revaluation	0.69
Buildings Acc. Deprec.	0.04	Common Stock	0.00
NET PP&E	1.02	Paid-in Capital	0.00
		Retained Earnings	0.33
Other Assets	0.00	TOTAL EQUITY	1.02
TOTAL ASSETS	1.49	TOTAL LIAB & EQUITY	1.49
M & E Deprec. Rate	0.14	Total Yrs. Term Debt	0
Building Deprec. Rate	.0833	BASE YEAR SALES	5.00

TABLE 9.9 WITHOUT SMALL RETAILER ASSUMPTIONS

KEY ASSUMPTIONS	1983	1984	1985	1986	1987
Infl.Sales Growth Rate	0.80	0.65	0.40	0.40	0.40
Real Sales Growth Rate	0.00	0.00	0.00	0.00	0.00
COGS/Sales	.88	.88	.88	.88	.88
Labor Expense/Sales	.045	.045	.045	.045	.045
Admin Expense/Sales	.036	.036	.036	.036	.036
Tax Rate	0.10	0.10	0.12	0.15	0.20
M&E Revaluation Rate	0.24	0.20	0.12	0.12	0.12
Build & Land Revl Rate	0.40	0.49	0.40	0.40	0.40
Short-term Interest R.	0.68	0.63	0.40	0.40	0.40
Long-term Interest R.	0.70	0.65	0.42	0.42	0.42
Accts. Rec. (days)	0	0	0	0	0
Inventory Turns	18	15.7	15.0	15.0	15.0
Accts. Payable (days)	10	6	3	2	1

turnover rate is the highest in 1983 (18) not due to proper inventory control but because most retailers were understocked during this period as a result of the prevalence of product scarcity. Accounts payable declines dramatically from 10 days in 1983 to 1 day in 1987 because it is assumed that supplier credit will continue to be restricted. The retailer is not elegible for concessionary credit from FIDEC because he is not modernizing operations. Consequently, any short-term debt is acquired at market interest rates.

The rates of return on equity and assets and N/K ratios can be observed in Table 9.10. Under this set of assumptions the firm functions profitably. However, sensitivity analysis reveals that less than major changes can eliminate the profitability of this size and type of business, and this is what in fact happened in many instances in 1982 and 1983.

If the gross margin is reduced to 11.5 percent and the wholesaler eliminates credit such that days of accounts payable declines to 4 in 1983 and 1984 (without small retailer case 2), serious ramifications are readily apparent. Short-term debt increases significantly in order to finance inventories, hence interest expense increases and net income is substantially reduced (see Tables 9.11 and 9.12). Liquidity is reduced to dangerous levels in 1983 and 1984 (Table 9.12). The rates of return on assets and equity decline relative to without small retailer case 1. In 1983 and 1984 the rate of return on equity is only 4.3 percent

TABLE 9.10 COMPARISON OF NET BENEFIT TO INVESTMENT RATIOS (N/K) AND REAL RATES OF RETURN ON EQUITY AND TOTAL ASSETS FOR RETAIL INVESTMENT CASES

CASE	1983	1984	1985	1986	1987
	RATE OF RETURN ON EQUITY %		RATE OF RETURN ON TOTAL ASSETS %		
			Small Retailer Cases		
WITHOUT 1	9.6	12.0	12.4	14.1	15.4
WITHOUT 2	4.3	3.5	10.5	10.7	10.8
WITH 1	0.4	13.2	16.6	17.0	17.1
			Supermarket Retailer Cases		
WITHOUT 1	-14.2	4.4	16.0	17.3	19.7
WITH 1	3.5	15.7	18.8	21.6	23.9
WITH 2	2.0	14.0	17.8	16.7	15.8
			N/K RATIOS		
			Alternative Discount Rates*		
	1	2	3	4	5
			Small Retailer Cases		
WITHOUT 1	1.94	1.33	1.44	1.08	1.10
WITHOUT 2	1.34	0.91	0.99	0.73	0.89
WITH 1	2.09	1.45	2.34	1.18	1.46
			Supermarket Retailer Cases		
WITHOUT 1	1.27	0.84	0.91	0.67	0.93
WITH 1	1.80	1.24	1.33	1.01	1.19
WITH 2	1.47	1.02	1.09	0.83	1.02

TABLE 9.10 (cont'd.)

*Discount rate 1 = CPP
Discount rate 2 = Inflation rate + economic growth rate
Discount rate 3 = Loan rate
Discount rate 4 = Inflation rate + time preference rate of 8 percent
Discount rate 5 = Discount rate 4, however, benefits also include tax-adjusted interest, i.e. the return to the lender.

TABLE 9.11 COMPARISON OF SHORT-TERM DEBT FOR RETAIL INVESTMENT CASES

CASE	1983	1984	1985	1986	1987
		Small Retailer Cases			
		(Millions of pesos)			
WITHOUT 1	0.06	.09	.00	.00	.00
WITHOUT 2	.26	.45	.54	.53	.50
WITH 1	.64	.92	.86	.15	.00
		Superette Retailer Cases			
WITHOUT 1	1.25	3.98	1.51	.34	.00
WITH 1	.89	3.40	.48	.00	.00
WITH 2	.90	3.53	1.40	.00	.00

TABLE 9.12 COMPARISON OF LIQUIDITY RATIOS AND AFTER-TAX NET MARGINS FOR RETAIL INVESTMENT CASES

CASE	1983	1984	1985	1986	1987
			CURRENT RATIOS		
			Small Retailer Cases		
WITHOUT 1	1.58	2.13	3.22	2.89	3.15
WITHOUT 2	1.28	1.37	1.62	2.00	2.46
WITH 1	.83	1.03	1.59	2.80	3.53
			Supermarket Retailer Cases		
WITHOUT 1	0.62	0.87	1.42	2.83	3.32
WITH 1	0.81	1.19	2.47	2.96	3.28
WITH 2	0.78	1.13	2.11	3.08	3.00
			AFTER-TAX NET INCOME (%)		
			Small Retailer Cases		
WITHOUT 1	2.3	2.4	2.7	3.2	3.5
WITHOUT 2	1.0	0.7	1.4	1.6	1.7
WITH 1	0.1	1.6	2.6	2.8	2.8
			Supermarket Retailer Cases		
WITHOUT 1	-3.2	0.7	3.1	3.8	4.3
WITH 1	0.8	2.9	4.0	4.7	5.5
WITH 2	0.5	2.6	3.9	3.7	3.4

and 3.5 percent respectively (see Table 9.10). The N/K ratios are less than one for all discount rates except the first. This scenario vividly displays what has happened to many small scale retailing firms during and since the recent recession.

With Small Scale Retailer Cases.

This case portrays the performance that would result for a personal-service retail business that expanded operations, introduced a partial self-service sales system and widened product lines, all through the support received by joining a voluntary chain. This business converted storage area to sales area, and under most circumstances represents the minimum size firm that can be successfully affiliated to a voluntary. Smaller firms can be sold to as regular customers (non-affiliates), but it is generally thought that the costs of providing full support services to customers less than 80 m^2 are too high given their purchasing volumes. Where smaller businesses are affiliated the wholesaler should be prepared to devote substantial time to upgrading the retailer.

The operating parameters, investments and other assumptions of with small retailer case 1 are shown in Table 9.13. The retailer is eligible for financing by FIDEC at the rate established for retailer members of voluntary chains. This rate begins at the CPP-2 and declines to the CPP-5 as the retailer verifies the modernization of operations. The firm exhibits high real sales growth initially, 40 percent in

TABLE 9.13 WITH SMALL RETAILER CASE ASSUMPTIONS (VOLUNTARY CHAIN)

KEY ASSUMPTIONS	1983	1984	1985	1986	1987
Infl.Sales Growth Rate	0.80	0.65	0.40	0.40	0.40
Real Sales Growth Rate	0.40	0.25	0.04	0.03	0.02
COGS/Sales	.865	0.865	0.870	0.874	0.880
Labor Expense/Sales	.045	0.045	0.045	0.045	0.045
Admin Expense/Sales	.036	0.036	0.036	0.035	0.035
Tax Rate	0.20	0.20	0.25	0.25	0.25
M&E Revaluation Rate	0.24	0.20	0.12	0.12	0.12
Build & Land Revl Rate	0.40	0.49	0.40	0.40	0.40
Short-term Interest R.	.546	0.50	0.26	0.25	0.25
Long-term Interest R.	.546	0.50	0.26	0.25	0.25
Accts. Rec. (days)	0	0	0	0	0
Inventory Turns	13.8	15.7	17.1	18.0	18.0
Accts. Payable (days)	9	6	3	2	1

INVESTMENT ASSUMPTIONS	1983	1984	1985	1986	1987
MACHINERY & EQUIPMENT	*A	*B	*C	*D	*E
Cash	0.0605	0.00	0.00	0.00	0.00
New Term Debt	0.2419	0.00	0.00	0.00	0.00
Annual M&E Investment	0.3024	0.00	0.00	0.00	0.00
Term of Loan	3	0	0	0	0
Annual Deprec. Rate	0.10	0.00	0.00	0.00	0.00

M & E Investment Notes:*A-CASH REGISTER @$40,000; VERTICAL REFRIGERATED DISPLAY CASE @$80,000; MERCHANDISE DISPLAYS - $120,000; FRUIT & VEGETABLE DISPLAY SHELVES - $6,400; LIGHT FIXTURES - $16,000; MEAT SLICER @$40,000. (20% DISCOUNT NEGOTIATED BY THE VOLUNTARY CHAIN FOR GROUP PURCHASES)

BUILDINGS	*F	*G	*H	*I	*J
Cash	0.051	0.00	0.00	0.00	0.00
New Term Debt	0.204	0.00	0.00	0.00	0.00
Annual Bldg.Investment	0.255	0.00	0.00	0.00	0.00
Term of Loan	3	0	0	0	0
Annual Deprec. Rate	0.07	0.00	0.00	0.00	0.00

Building Investment Notes:A*-EXPAND STORE FROM 40 SQ. METERS TO 80 SQUARE METERS @$6000/SQ.METER RENOVATION COSTS * 40 SQ. METERS; $15,000 TO PAINT & UPGRADE ORIGINAL 40 SQ. METERS.

1983 and 25 percent in 1984 since the sales area is doubled. The gross margin improves as a result of the wider product line handled to 13.5 percent.

However, even with this increase in the gross margin the with small retailer case experiences critical liquidity problems in 1983 due to the interest payments on the long-term loans (see Table 9.12). Interest is also higher because of the increase in short-term debt which is required to finance the higher inventory level. This points to the need for a grace period on interest payments for the first year until the firm begins to benefit from improved inventory turnover rates.

The inventory turnover rate increases from 13.8 in 1983 to 18 in 1986. Note that the inventory turnover rate is lower in the first year for the with small retailer case than the without. This is due to the fact that the with case is expanding product lines and testing stock levels for new products. It also benefits from a more stable supply source via the voluntary chain and thus does not exhibit the high level of stock-outs of the without case. The wholesaler assists the retailer to introduce an effective inventory control system, generating the improvement in turnover rates noted. This is the most important ingredient to improved efficiency in this case and would enable the retailer to decrease the gross margin to 12 percent in 1987.

In all the retailer voluntary chain cases the days of accounts payable declines in a similar fashion to the

without cases. This occurs for different reasons though. For without retailers it merely reflects the gradual elimination of credit from wholesalers, their principal supply source, and is therefore detrimental to operations. For members of voluntary chains it reflects the use of credit from FIDEC to make prompt or cash payments to the voluntary wholesaler. As the wholesaler expands services and product lines to the retailer, the retailer will concentrate purchases to a greater degree through the voluntary chain, minimizing purchases from other suppliers.

Observation of the rates of return on equity and assets and N/K ratios in Table 9.10 demonstrates that after 1983 the with small retail case 1 exhibits greater profitability than the without situation. This is true despite the lower net margins (see Table 9.12) because the scale of operation is larger. Higher sales volumes enable marketing firms to lower margins without diminishing profitability.

B. Superette Retailer Cases

The ideal type of customer for any wholesaler would be an independent self-service supermarket operator due to the higher buying volume of larger scale businesses. Unfortunately, very few retailing firms of this type exist. Nevertheless, it is important for voluntary wholesalers to affiliate at least one or two businesses of this type at the outset since higher average order sizes lower wholesaler operating costs. (Due to economies of scale in order picking, order processing, delivery services and the provision of management and merchandising services.) This is why the

wholesaler benefits from collaborating with retailers to upgrade their operations. The existence of a larger scale affiliate also serves as an example to other retailers of the benefits of improved operations.

The superette owner presented here opened for business in the beginning of 1982 and operates a 250 m^2 store. The investment was partially financed through a bank loan as can be seen in Table 9.14. Annual sales in 1982 were 26 million pesos. The firm procured merchandise from a wide range of suppliers because it did not have access to a wide-line supplier capable of supplying most of its needs; approximately 800 items.

Without Superette Retailer Cases.

The assumptions of without superette retailer case 1 are shown in Table 9.15. The without superette retailer has a gross margin of 14 percent and experiences modest real sales growth of 1 to 2 percent throughout the analysis. We will assume that this business is financed at market interest rates.

An important aspect of this case is the effect of high nominal interest rates on incipient retailer operators. The retailer obtained a variable interest rate loan to finance the construction of the retail establishment when interest rates were around 40 percent. The increase in term-debt interest rates to 70 percent in 1983 and 65 percent in 1984 has a dramatic effect on the viability of the business. Interest expense is so high relative to sales that negative

TABLE 9.14 OPENING BALANCE SHEET FOR SUPERETTE RETAILERS (WITH AND WITHOUT CASES)

OPENING BAL SHEET	1982		
Cash	1.20	Accounts Payable	0.60
Accts. Receivable	0.02	Trade Notes Pay.	0.20
Inventory	2.50	Bank: Short-term	0.00
Prepaid Expenses	0.00	Current LTD	1.30
TOTAL CURRENT ASSETS	3.72	Accrued Expenses	0.09
		Taxes Payable	0.00
Machinery & Equip.	3.00	Other Curr. Liabs	0.37
Buildings	1.80	TOTAL CURR. LIABS	2.56
Land	1.20		
ORIGINAL PP&E	6.00	Bank: Term Debt	2.70
M & E Accum. Reval.	0.79	Subordinated Debt	0.00
Buildings Acc.Reval.	0.50	Deferred Taxes	0.20
Land Accum. Reval.	0.36	Other LT Liabs	0.00
M & E Accum. Deprec.	0.38	TOTAL LIABILITIES	5.46
Buildings Acc. Deprec.	0.12	Revaluation	1.65
NET PP&E	7.15	Common Stock	0.00
		Paid-in Capital	0.00
		Retained Earnings	3.76
Other Assets	0.00	TOTAL EQUITY	5.41
TOTAL ASSETS	10.87	TOTAL LIAB & EQUITY	10.87
M&E Depreciation Rate	.14	Total Yrs. Term Debt	2
Building Deprec. Rate	.0714	BASE YEAR SALES	26.00

TABLE 9.15 WITHOUT SUPERETTE RETAILER ASSUMPTIONS

KEY ASSUMPTIONS	1983	1984	1985	1986	1987
Infl.Sales Growth Rate	0.80	0.65	0.40	0.40	0.40
Real Sales Growth Rate	0.00	0.01	0.02	0.02	0.02
COGS/Sales	0.86	0.86	0.86	0.865	0.87
Labor Expense/Sales	0.045	0.045	0.045	0.045	0.045
Admin Expense/Sales	0.031	0.031	0.031	0.031	0.031
Tax Rate	0.00	0.15	0.25	0.28	0.30
M&E Revaluation Rate	0.24	0.20	0.12	0.12	0.12
Build & Land Revl Rate	0.40	0.49	0.40	0.40	0.40
Short-term Interest R.	0.68	0.63	0.40	0.40	0.40
Long-Term Interest R.	0.70	0.65	0.42	0.42	0.42
Accts. Rec. (days)	0	0	0	0	0
Inventory Turns	15.0	14.4	14.4	14.4	14.4
Accts. Payable (days)	14	14	14	4	4

net margins of 3.2 percent are witnessed in 1983 (see Table 9.12). This phenomenon was not uncommmon in the recent recession, contributing to the bankruptcy of retail firms. Despite an increase in net margins after the term-debt is repaid, reaching 4.3 percent in 1987, all of the N/K ratios were less than one except for the first discount rate, equal to the CPP.

Another important point is evident from this case. Retailers require substantially higher net margins than wholesalers in order to generate a reasonable return on investment and produce N/K ratios greater than one. This reflects the influence of volume of sales on profits.

With Superette Retailer Cases.

If this firm were to join a voluntary chain it could receive FIDEC financing, in addition to the important benefits realized from the services offered by the wholesaler and the stability of product availability and deliveries. The assumptions for with superette case 1 are shown in Table 9.16. The wider product line of the voluntary wholesaler and the stable supply linkages resulting from retailer affiliation permit the retailer to broaden the product lines carried to 1500 items and increase the gross margin to 16 percent. The retailer experiences significatly higher real sales growth than the without superette case, 9 percent in 1983 and 7 percent in 1984 due to the increase in products handled. The purchase of a computer in 1984 to handle inventory control enables the wholesaler to manage

TABLE 9.16 WITH SUPERETTE CASE ASSUMPTIONS
(VOLUNTARY CHAIN)

KEY ASSUMPTIONS	1983	1984	1985	1986	1987
Infl.Sales Growth Rate	0.80	0.65	0.40	0.40	0.40
Real Sales Growth Rate	0.09	0.07	0.05	0.04	0.02
Sales Growth Rate	0.53	0.82	0.57	0.46	0.43
COGS/Sales	0.84	0.84	0.85	0.85	0.85
Labor Expense/Sales	0.045	0.045	0.045	0.045	0.045
Admin Expense/Sales	0.032	0.032	0.031	0.030	0.030
Tax Rate	0.15	0.25	0.30	0.35	0.35
M & E Revaluation Rate	0.24	0.20	0.12	0.12	0.12
Build & Land Revl Rate	0.40	0.49	0.40	0.40	0.40
Short-term Interest R.	0.546	0.50	0.26	0.25	0.25
Long-term Interest R.	0.546	0.50	0.26	0.25	0.25
Accts. Rec. (days)	0	0	0	4	5
Inventory Turns	13.8	14.4	16.4	18.0	18.0
Accts. Payable (days)	8	4	3	2	1

INVESTMENT ASSUMPTIONS	1983	1984	1985	1986	1987
MACHINERY & EQUIPMENT	*A	*B	*C	*D	*E
Cash	0.08	0.20	0.00	0.00	0.00
New Term Debt	0.32	0.80	0.00	0.00	0.00
Annual M&E Investment	0.40	1.00	0.00	0.00	0.00
Term of Loan	3	3	0	0	0
Annual Deprec. Rate	0.10	0.10	0.00	0.00	0.00

M & E Investment Notes:*A-STORE DECORATION, INSIDE AND OUTSIDE, INCLUDING SIGNS AND DEVELOPMENT OF LOGO

*B-COMPUTER @$1 Million.

inventories efficiently and increase the inventory turnover rate from 13.8 in 1983 to 18 in 1986. This is a critical ingredient contributing to the improved performance of the firm.

Another crucial ingredient is the decline in interest costs which results from FIDEC financing. The combination of higher growth and lower interest expense yields a positive net income of .8 percent in 1983 (see Table 9.12). Nevertheless, liquidity is still a severe problem in 1983 and 1984, as evidenced by the current ratios. Again, this points to the importance of a grace period on loans to this type of retailer to ameliorate the cash flow situation.

While this business does experience initial cash flow difficulties caused by the debt burden, the improved operational efficiency it achieves indicates that it should be able to perform profitably over the long run. The gross margin could be reduced to 15 percent after 1984 and profitability is still maintained. All of the N/K ratios are greater than one for this case (see Table 9.10). Note that the after-tax net margins are quite high in 1986 and 1987, 4.7 and 5.5 percent respectively and that an excess of liquidity exists. This is necessary in order for all N/K ratios to remain positive.

With superette case two demonstrates what would happen if the gross margin was reduced to 14 percent in 1986 and 12.8 percent in 1987. This could conceivably take place in a recession with a decline in consumer demand as it did in

1983. N/K ratios are diminished substantially but remain greater than one except for the fourth discount rate.

9.4 Conclusions

The financial simulations just presented enable us to more fully appreciate both how marketing firms perform in Mexico and the financial relationships underlying this performance. This analysis has served as a tool for understanding historical performance and to project future performance given assumptions developed from the findings of on-site research. Based on the model it is possible to form some conclusions on the costs and benefits of establishing voluntary chains. The principal categories of costs and benefits measured are outlined below.

Costs include: the capital investment costs of expanding or upgrading wholesale and retail facilities, technical assistance and training costs, the costs of providing wholesaler services to retailers, the costs of developing and using standard order forms, merchandising and advertising costs, and credit costs to finance capital goods and inventories. All of these costs are incorporated into the assumptions underlying the financial simulations. Several of these costs are taken into account through administrative costs which is expressed as a percentage of sales. The reader may recall that the with cases have higher administrative costs than the without in the first years despite their higher sales volume, reflecting the start-up costs associated with voluntaries.

Some examples of benefits include: an increase in the inventory turnover rate, lower gross margins for a given product mix, greater supply stability for retailers and demand stability for wholesalers, higher average order size, lower product losses, higher labor productivity, lower financing costs due to eligibility for concessionary interest rates from Fidec, an increase in wholesaler credit to retailers, lower procurement costs for retailers by decreasing time spent in the procurement process, and declining administrative costs as a percentage of sales. The increased operational efficiency these changes imply permit both wholesalers and retailers to offer lower prices on a wider product line, benefiting consumers.

The specific events taking place at the wholesale and retail levels are as follows. The wholesaler and retailer strive to more closely coordinate their transactions and relationship, thereby increasing vertical coordination at the wholesale-retail interface. Distribution costs are reduced and marketing firms increase their competitive strength and financial viability. Greater coordination takes place in these areas: delivery schedules; inventory control; and support services to retailers in the form of store accounting, store engineering, suggested retail price structures, advertising and merchandising, efficient order taking via standard order forms, and probably most importantly, wider product lines.

This involves the creation of full-service wholesalers that have the resources to foment the development of larger

scale more efficient retailers. In return for providing retailer services the wholesaler benefits from retailer concentration of purchases and a growing, stable retail demand. This translates into higher volume and lower operating costs per order.

The provision of support services to retailers enables them to introduce self-service store lay-outs and modern merchandising techniques that stimulate higher sales volumes. Accounting formats adapted to the needs of small retailers would permit them to maintain control over gross margins per department and inventory levels. The improved inventory control and higher volume would combine to lower the gross margin without jeapordizing profitability, just as at the wholesale level. The security associated with a stable, principal source of supply delivering to the store on a regular schedule, allows the retailer to focus on sales rather than procurement. This represents a major benefit relative to the way the system has operated historically in Mexico. The retailer survey data presented in Chapter 7 on procurement practices documented the high transaction costs associated with the procurement activity.

The model does a good job of including the costs and benefits just identified via the assumptions that the analyst enters. For example, when making an assumption on administrative costs for voluntary retail businesses several factors are considered. The additional costs of improving store cleanliness and services to the public, and learning

new standard operating procedures are taken into account. This is balanced with the savings realized from less time and transportion expenses in the procurement function.

Based on extensive sensitivity analysis, it appears that under a wide variety of possible scenarios the net benefit to investment (or cost-benefit) ratios of voluntary chains improve performance relative to the without situation (see Table 9.17).

Some interesting lessons were learned from this analysis on the effect of inflation on performance and investment decisions. The short-run cash flow effect of unanticipated inflation on an indebted firm may be severe enough to cause bankruptcy. The effect of inflation is not just a cash flow issue, however, it does indeed reduce present values. The tax code in Mexico ameliorates the loss of the tax shield from depreciation in inflationary conditions, nevertheless, unless revaluation of assets is equal to the inflation rate, net present values will be reduced by inflation. Consequently, inflation can potentially change the investment decision.

Another important conclusion from this analysis is related to the performance of traditional wholesalers and retailers. Information on gross and net margins is not sufficient for forming an accurate assessment of the financial position of marketing firms. It is essential to consider current rates of return on investment or discounted future cash flows. The simulations of traditional businesses generated by this model would indicate that as a

TABLE 9.17 TWO PROFIT MEASURES FOR WITH AND WITHOUT WHOLESALE AND RETAIL INVESTMENT ANALYSIS

	Net Benefits / Investment *	Rate of Return on Equity ** %
Without Wholesale	.80	10.5
Intermediate Wholesale	1.05	14.2
With Wholesale	1.06	17.5
Without Small Retailer	1.08	12.0
With Small Retailer	1.18	13.2
Without Superette	.67	4.4
With Superette	1.01	15.7

* Discount rate = Inflation Rate + a Time Preference rate of 8%

**1984

rule excess profits are not being earned, particularly not on a consistent basis. Minor changes in assumptions regarding accounts payable, inventory levels, accounts receivable, gross margins, etc. can severely reduce profitability. Marketing firms are especially sensitive to changes in the general price level, and given the level of uncertainty in the environment in which they operate the risk that they assume does not appear to be unduely rewarded.

The analysis points to the importance of improved management on the part of all marketing firms. The reduction in supplier credit terms adversely affected wholesalers and in turn retailers. Reduced credit in conjunction with high inflation, puts lower volume operators in a particularly precarious position. Wholesalers and retailers must make concerted efforts to reduce costs and control inventories in the current economic environment. An issue that should be of serious concern to policy makers is that many traditional operators simply do not have the tools and knowledge to understand how to go about this in an effective manner. Performance is therefore worsened, harming both the retailers and the public.

A paucity of credit in the marketing system was identified earlier as a barrier to growth and improved performance. This is highlighted by the small without retailer cases examined earlier. If the retailer operated with a gross margin of 11.5 percent, perfectly plausible if he respected official prices under the current conditions of

low consumer demand, then the retailer would require short-term credit. However, since the banking industry has never served the small scale marketing sector, firms are forced to seek financing through informal channels at higher interest rates or to reduce stocks and hence the supply of products offered to consumers. The latter occurred quite frequently in the recent recession, adversely affecting low income consumers that commonly purchase from small scale retailers.

This all points to the potential gains which could be expected from the formation of voluntary chains. However, while the preceding analysis suggests that voluntary chains are financially viable, the constraints to the formation of voluntaries identified in Chapter 8 must be dealt with. Institutional barriers such as official price controls, licensing and permit restrictions, product scarcity, and a lack of information on improved marketing practices, are significant obstacles. The final section sets forth a strategy and plan for promoting the establishment of voluntary food chains via the development of technical assistance and training programs and increased access to credit.

CHAPTER 9

REFERENCES

BANAMEX. "Review of the Economic Situation of Mexico." Various issues.

Banco de Mexico. "Reporte de Precios." Subdireccion de Investigacion Economica. Various monthly issues.

Banco de Mexico. "Indices de Precios." Subdireccion de Investigacion Economica. Various monthly issues (cuadernos mensuales.)

Bartley, Jon W., December 1980. "A NPV Model Modified for Inflation." Management Accounting, pp. 49-52.

Freidenfelds, J. and Kennedy, M. 1979. "Price Inflation and Long-Term Present Worth Studies." The Engineering Economist, Vol. 24, No. 3.

Gittinger, J. Price, 1982. Economic Analysis of Agricultural Projects. EDI Series in Economic Development. The Johns Hopkins University Press, Second Edition. Baltimore and London.

LeRoy, Rodney and Fowler, David J., 1982. "Present Value Analysis, Inflation, and Capital Recovery Factors." The Engineering Economist, Volume 28, Number 1, pp. 31-52.

Nelson, Charles R., June 1976. "Inflation and Capital Budgeting." The Journal of Finance, Vol. XXXI, No. 3, pp. 923-931.

Raiborn, D.D. and Ratcliffe, Thomas A., September 1979. "Are You Accounting for Inflation In Your Capital Budgeting Process?" Management Accounting, pp. 19-22.

Spiller, Earl, 1977. Financial Accounting: Basic Concepts. Richard D. Irwin, Inc., Third Edition. Homewood, Illinois.

CHAPTER 10

A STRATEGY AND PLAN FOR PROMOTING THE ADOPTION OF VOLUNTARY CHAINS IN MEXICO

10.1 Introduction

The evolution of the Mexican dry grocery subsector in the post-World War II period should be viewed within the context of a rapidly developing economy, implying an initiation of the trend towards scientific industrialization of the food system witnessed in developed economies. Scientific industrialization signifies the development of new knowledge, technology, and specialization of labor, all yielding the potential for increased productivity in the food system. Changes of this nature modify incentive structures and hence the organization of production and marketing systems by creating unexploited opportunities, altering economies of scale and establishing new distributions of costs and benefits (Shaffer).

An increasingly industrialized system generates a demand for mechanisms for coordination and organization of the multitude of activities which must take place to transform food commodities and achieve time, place and form utilities. Coordination mechanisms can be viewed as institutional arrangements which are established to facilitate the realization of specific coordination tasks. In the presence of technological change former institutions often become obsolete and institutional innovation becomes a critical element in shaping the performance of the system (Shaffer). Where institutional innovations do not take place rigidities

may appear, acting as barriers to improved performance of the food system.

Two of the key forces for change that have driven the food marketing system in Mexico have been rising distribution costs and changing consumer demographics and preferences. Rising distribution costs have induced a decline in manufacturer distribution channels and the growth of the wholesaling industry. In addition, higher distribution costs have encouraged the decentralization of the wholesaling industry in Mexico City, improving spatial organization and contributing to an increase in the scale of operation exhibited by many wholesalers.

In the 1980s the combination of circumstances created by the Mexican economic crisis and official price controls has had a further powerful impact on incentive structures. By impairing the financial solvency of wholesale and retail businesses, the crisis has generated an interest in strategies to improve performance and financial viability, implying a receptiveness to innovations.

Reinforcing the economic recession as another important force for change, is the dramatic decline in market share of all types of traditional retailers relative to the supermarket industry. In particular, the loss in market share of tiendas de barrio and miscelaneas during the 1970s has caused both wholesalers and retailers to express growing alarm. The rapid growth of the economy in the latter half of the 1970s masked the decline in relative sales of the

neighborhood store. In addition, wholesalers were still gaining from the decline in manufacturer distribution networks. It is only now becoming apparent to food industry participants that traditional retailers represent a shrinking market.

While the above conditions in one sense represent barriers to growth for traditional firms, in another sense, if properly handled they can be turned into opportunities. The common denominator which underlies the forces for change propelling the Mexico City food marketing system, is their adverse effect on the competitive strength of traditional retailers. Observation of food marketing systems in other countries indicates that a "fear of elimination" is an ingredient necessary to the modernization of traditional grocers. Wholesalers and retailers are very independent-minded and generally do not cooperate and join together to improve performance until they feel forced to do so in order to insure survival.

The future evolution of the dry grocery subsector or in other words, the rate and direction of change, is highly dependent on the thrust of government marketing policies and the state of the economy (regarding inflation and interest rates in particular), which combine to influence the relative risks and returns associated with investment in subsector activities as perceived by subsector actors. The potential role of the government in fomenting improved institutional arrangements for coordinating the production-distribution system should not be underestimated since in

many instances the private sector may not have the information or resources to determine and implement necessary institutional innovations without the technical assistance and support of the public sector.

Diagnosis of the Mexican dry grocery subsector indicates a lack of coordination at the vertical interfaces which has become exacerbated in the 1980s as credit has been restricted and product scarcity has increased. The decline in an already low level of vertical coordination is apparently causing many firms to begin to express an interest in the adoption of new coordinating mechanisms such as voluntary chains and retailer buying pools. Government policies may encourage the adoption of these institutional innovations via credit programs and assistance in the technical aspects critical to the successful operation of these businesses. Hence, important opportunities are available for the public sector to induce an increase in the rate of modernization manifested in the private sector.

Significant opportunities for reducing marketing costs are found in improved efficiency in the performance of the various marketing services associated with the distribution of dry grocery products. Specifically, some of the major areas where performance could be improved in Mexico are: firm operating scales or volume of business; product spoilage and loss rates; materials handling methods and equipment; the organization and lay-out of stores and warehouses; management practices; and the spatial distribution

of modern grocery retailing services in low income areas.

10.2 A Strategy and Plan for Modernizing the Wholesaler-Retailer Distribution Channel

There is significant justification for promoting the modernization of traditional retailers and wholesalers as a means for achieving an improved competitive mix in the grocery retailing industry. The modernization of traditional retailers would enable them to provide readily available, low cost marketing services to low income consumers in their own neighborhoods. The advantage of locational convenience gives independent retailers the edge that could enable them to become an effective competitive force relative to supermarket chains. Furthermore, since traditional businesses rely on family labor they have a potential advantage in terms of operating costs. Policies fomenting this kind of a facilitory approach, rather than direct intervention from the public sector under subsidized arrangements, would both reduce the cost to the public treasury of generating increased competitive pressures in grocery retailing and improve services to lower income households.

There is much evidence around the world demonstrating that both traditional wholesalers and retailers can be modernized and upgraded to become efficient operators. This is supported in Mexico by the recent introduction of more modern wholesale-retail arrangements in Monterrey, Hermosillo and Mexico City in the form of voluntary chains and self-service cash and carry warehouses.

However, the importance of information must be

emphasized as a key ingredient of the modernization process. Extensive conversations with many wholesalers and retailers indicate a keen interest in improving their businesses, nevertheless, a lack of information on how they should go about it becomes a critical barrier. A strategy and plan for generating and diffusing information on improved marketing practices, physical facilities and equipment is presented below.

10.2.1 Key Elements of the Plan to Promote the Establishment of Voluntary Chains and Other Improved Wholesale-Retail Arrangements

The key elements of the plan are as follows:

1) Development of a combined applied research and technical assistance program aimed at the introduction of technological and institutional innovations in wholesale and retail firms.

2) Development of training programs at the wholesale and retail levels to teach specific marketing practices and methods.

3) Development of training programs for banking participants to increase their knowledge of FIDEC programs and enable them to serve an information and promotional role with marketing firms.

4) Increased awareness of the benefits of the voluntary chain concept at the manufacturer level in order to develop closer supply linkages and gain access to special promotional offers.

10.2.2 Technical Assistance and On-Site Research

To successfully foment change it is not sufficient to merely inform businessmen of technological and institutional innovations that could improve performance. The low educational level and limited familiarity with modern practices of traditional operators, means that they may fail at independent attempts to implement improvements. To raise the

probability of success it is vital to offer technical assistance to marketing firms. The most effective results are generally obtained when technical assistance is linked to credit programs which provide the needed capital to adopt the innovations deemed desireable for each business. The existence of FIDEC, the Fondo para El Desarrollo Comercial, Banco de Mexico, represents an institutional arrangement well suited to carrying out this kind of program.

It should be emphasized that a dispersed or superficial promotional program with little depth is not expected to have much success in stimulating the formation of voluntary chains or other improved marketing arrangements. For example, a brief exposure to the voluntary chain concept provided by FIDEC personnel, often generates substantial wholesaler and retailer interest. Nevertheless, since detailed follow-through generally does not take place in the technical aspects of how to actually form a chain and modernize physical facilities, usually relatively few applications for credit are forthcoming.

In order for technical assistance programs to be effective they must extend technology and operating practices with proven results. This requires the development of an on-site research program carried out in warehouses and stores to both adapt modern practices to Mexican conditions and measure the benefits of these innovations. For example, time and movement studies conducted by the author in Mexican warehouses using traditional, intermediate, and modern materials handling techniques, measured

the increased labor productivity and lower product losses of the improved methods. This information will be used by FIDEC to demonstrate to wholesalers the advantages of investing in more advanced materials handling equipment. Work done in retail outlets assisted retailers in reorganizing their store lay-outs and yielded information on the efficacy of partial self-service as a means for increasing sales and efficiency.

On-site, problem-solving research is an important part of a technical assistance program not only due to its knowledge generation role but also because it facilitates the dissemination of information via the "demonstration store" approach. Warehouses and stores that have been selected for research can be set up as demonstration stores where other wholesalers and retailers can come to observe new marketing practices and witness their benefits. This is a critical component of the innovation adoption process because of a common reluctancy to make significant changes until people have seen for themselves the rewards. It is important that demonstration stores be set up as reorganized existing businesses rather than newly formed "artificial" businesses. This way grocers can witness what can be achieved in conditions similar to their own.

10.2.3 Training Programs for Wholesale and Retail Firms

Wholesaler and retailer training programs are an organized way to diffuse information on new practices and to stimulate improved performance. This is closely

interlinked with research because in order to train wholesalers and retailers in a meaningful fashion, reliable information on improved standard operating policies must be available. Therefore, the success of any training program will depend in large part on the validity of the concepts being diffused. This depends in turn on the existence of applied research conducted in wholesale and retail enterprises.

The key substantive areas that should comprise the research, technical assistance and training programs are:

- materials handling methods and equipment in the warehouse
- computerized accounting systems for wholesalers
- daily sales and delivery recording systems for retailers
- simplified retailer accounting systems to monitor operating results
- inventory control and merchandising methods for improved product assortments
- modernization of physical facilities
- store lay-out and design including self-service arrangements
- streamlined wholesaler order-taking procedures via the pre-printed order form
- rationalized delivery and collection systems
- regular promotional and advertising programs
- private labels
- basic management principles
- volume discounts and other incentives to promote retailer concentration of purchases

All of these areas contribute to increased coordination and greater efficiency at the wholesale-retail interface, thereby creating the potential for lowering marketing costs and grocery prices.

10.2.4 Targets of Technical Assistance

The pool of wholesale and retail businesses requiring modernization is clearly overwhelming. In order to be successful in stimulating and fostering the modernization process, it is essential to establish well defined targets where technical assistance and research efforts will produce the maximum demonstration effect. In addition, investment prototypes can be developed for each target business group. This enables technical assistance teams to offer businessmen ready investment packages.

The three basic types of wholesale businesses around which technical assistance should be centered are: voluntary chains, self-service cash and carry warehouses, and modernized narrow-line, high volume distributors focusing on the provincial market. This would yield a complementary mix of wholesaling services aimed at distinct market segments.

A. Voluntary Chains

In Mexico City the most likely candidates for acting as new channel captains and forming voluntary chains are the expanding medium scale, medium-line wholesalers mentioned earlier. The largest wholesalers have weathered the economic crisis the best due to their superior financial reserves and large market shares. Furthermore, they have increasingly been diversifying away from retail customers

toward larger volume wholesale customers in order to control operating costs. Consequently, they feel less threatened and perceive fewer incentives to innovate in this fashion.

In contrast, since medium scale wholesalers are struggling to achieve larger market shares in a depressed market with restricted manufacturer credit, they are very interested in strategies to facilitate more rapid and profitable growth.

Successful implementation of voluntary chains requires a clear understanding of the voluntary concept. Voluntary chains were established as a vehicle for the modernization of existing wholesale and retail businesses, rather than the creation of new businesses. Moreover, one wholesaler is sufficient for the formation of a voluntary chain, as long as the sales volume of the firm can support the cost of introducing retailer services. Medium scale wholesalers that do not have the resources or buying volume to foment a voluntary chain independently can band together in several fashions. One way is to form a voluntary with a group logo and unite the buying function on at least a core group of products. This generates volume discounts that couldn't be attained individually and increases the competitive strength of the wholesalers as a strategy for increasing the rate of retailer affiliation. However, it is emphasized that under this arrangement each wholesaler continues to operate his own business, modernizing operations and serving his own retailers; rather than constructing a separate warehouse

for the voluntary chain. To receive maximum advantage from this institutional innovation the wholesalers can pool their resources to develop retailer services.

In Mexico City several medium scale dry grocery wholesalers were identified that were already introducing a wider product line, serving significant numbers of retailers (rather than medio-mayoristas), and operating in 1500 to 2000 m^2 one-story warehouses. These firms represent excellent candidates for conversion to full-service voluntary wholesalers because they have initiated the modernization process and because they are experiencing difficulties obtaining the buying volumes needed to expand product lines competitively. Consequently, they have significant incentives for forming a joint buying arrangement. They tend to have more liquidity problems in general than larger scale wholesalers and perceive important advantages from concessionary financing, both for themselves and for retailer affiliates. FIDEC credit to their retailer customers would be an effective means or strategy for increasing the buying volume per order. Also these medium scale wholesalers are newer and younger, with a more receptive attitude toward change than older wholesalers. This is the type of wholesaler examined in the financial simulations as the intermediate wholesaler case.

Incidentally, where medium scale wholesalers do not want to join together under a group logo they may still form a buying pool and design a system for the joint provision of retailer services. Under this arrangement each wholesaler

would foment a voluntary chain with a separate logo and identity.

B. Self-Service Cash and Carry Wholesalers

Candidates for the establishment of self-service cash and carry wholesalers are those wholesalers currently selling a large portion of total volume on a personal-service basis without product delivery, in addition to selling on a medio-mayoreo basis. The conversion of these limited-line wholesalers to wider line wholesalers with lower labor and handling costs, aids in the reduction of procurement costs and the introduction of wider product lines to the smallest scale retailers.

C. Narrow-line, High Volume Distributors

Narrow-line, high volume distributors serving the provincial market are a growing wholesaler segment and perform an increasingly vital service. They sell primarily to provincial wholesalers and medio-mayoristas which means they benefit from a large average order size, and should be attaining greater levels of efficiency in the warehouse. In fact, these wholesalers have grown in a haphazard manner and have not adopted materials handling, inventory control, accounting and other operating methods commensurate with their size. As a result, there are serious inefficiencies in all aspects of their operations.

This type of business represents a prime candidate for the establishment of an on-site research effort. Relatively simple and significant changes could be introduced in all of

the above areas. Modernization of this type of wholesaler could be expected to serve an important and visible demonstration effect encouraging others to follow suit. Already wholesalers of this type have been identified that would be receptive to participation in a program of this nature.

10.2.5 Strategies for Implementation of the Plan

A key aspect of the successful implementation of a plan of this sort would certainly be the presence of a leader to stimulate interest in marketing issues and problems and provide direction and stimulus to a serious marketing research program. It is also crucial that research and technical assistance efforts be closely linked. FIDEC could serve as the coordinator and facilitator of a program of this nature. The participation of universities, private trade associations (e.g.CONCANACO) and marketing firms should be solicited. FIDEC has funds available to support research under contract arrangements with consulting firms and university professionals.

A. Applied Marketing Research

Applied marketing research is a new field in Mexico. Possibly one of the reasons that more research has not been done is the lack of a recognized center providing the impetus and support necessary to create interest in and incentives for pursuing programs and careers in this field. Conversations with marketing and business professors at universities in Mexico City indicate an interest in conducting applied research in conjunction with marketing firms if financial support were available.

The organization of research projects in wholesale and retail firms can be facilitated by FIDEC by linking up FIDEC credit recipients with potential researchers. This gives researchers access to businesses that they might not have independently. This can also be organized in conjunction with local CANACOs around the country and with state economic development commissions where they exist. For example, in Sonora an economic development commission is cooperating with the local CANACO and FIDEC in an effort to improve marketing in this area.

B. Collaboration with the Banking Industry

The creation of training programs in the banking sector to increase awareness of FIDEC is also important. Since credit applications to FIDEC are directed through commercial banks and must receive approval at this level before reaching FIDEC, the willingness of banks to process FIDEC loans is crucial. Currently, knowledge of FIDEC and its programs is often lacking, discouraging both wholesalers and retailers from obtaining credit from FIDEC. A better informed banking sector with a greater understanding of marketing firms could facilitate the use of credit by traditional businesses. In addition, the commercial banking system could provide technical assistance in some areas. For example, encouraging the appropriate kinds of investments for different types of firms, and assisting in the preparation and packaging of loan requests. The banking industry has been trained to offer similar technical

assistance for other trust funds and recieves a commission for this service.

A national promotional program to increase awareness of FIDEC in the marketing system is currently being coordinated by FIDEC and carried out in conjunction with trade associations and the banking system.

C. Educational Programs for Grocery Manufacturers

The role of manufacturers in encouraging or hindering voluntary chains should not be overlooked. Voluntary chains can yield significant advantages to manufacturers since they decrease the amount of time stock spends in the distribution "pipeline" and improve promotional and merchandising support in the retail outlet. Yet current manufacturer policies discourage the formation of voluntaries by not offering promotional programs similar to those offered to supermarkets. By supporting the development of voluntary chains, manufacturers can slow the trend toward increased concentration in the retailing industry and lessen their dependence on the large supermarket chains. Closer coordination between voluntary wholesalers and manufacturers could be stimulated by FIDEC in its role as a source of information on the food industry.

D. Collaboration with Trade Associations

To ensure a strong and central trade association, the creation of a food industry institute is recommended which would incorporate grocery wholesalers, retailers, supermarkets, and manufacturers. This institute could provide a vital information role, contributing to research and

education programs for the food industry. Regular national meetings to present and disseminate the results of on-site research would create a concentrated forum for exchanging information and improving understanding of the food system. This type of institution can be a valuable coordination mechanism and has proved effective in promoting modernization in the U.S. and Europe.

10.2.6 Strategies for the Formation of Successful Voluntary Chains

A. Retail Candidates for Affiliation to Voluntaries

The success of voluntary chains depends in part on the ability of the sponsoring wholesaler to identify appropriate candidates for affiliation to the chain.

The selection of retailer candidates for affiliation to voluntary chains must take into account certain limitations on the potential for growth of small scale retailers. A critical component of any program to decrease food prices is an emphasis on expanding the volume of operations. Increased volume lowers product acquisition costs and enables marketing firms to reduce margins. Therefore, in order to achieve greater results retailers should be selected that exhibit some growth potential. Personal-service operators do not have potential for expansion so retailers should be chosen that can at least introduce a partial self-service system. This implies a minimum size for retail establishments under most circumstances of 60 to 80m^2. This refers to total sales area after the conversion of storage area to sales space, i.e. firms can be smaller

initially if they are willing to expand by converting storage area.

One implication of this criteria is that tiendas de barrio rather than miscelaneas should be focused on. This is also due to the fact that miscelaneas offer few basic food products. On the other hand, many ultramarinos may represent good candidates for affiliation because they frequently handle a large volume of dry groceries and have greater financial resources. Although ultramarinos are almost always personal-service they generally have the most storage space, which could be used to introduce self-service. Public market retailers (locatarios) do not represent good candidates despite their emphasis on basic foods, because their operating scale is necessarily limited and the physical facilities can not be upgraded. Furthermore, a competitive problem could arise by affiliating more than one retailer in each market. The advantages of a group logo and special promotional programs might be reduced. Retailer buying groups that concentrate on lower procurement costs would be a more viable alternative for locatarios, if supported by appropriate technical assistance to train retailers in wholesale buying practices.

Of course, the most attractive voluntary chain candidate would be an independent self-service retailer that has a wider product line and has already completed part of the modernization process. The higher the sales volume the lower the cost to the wholesaler of servicing the retailer.

Voluntary wholesalers can only hope to affiliate a limited number of this retail type because there simply are not many in existence. Yet it is critical for any wholesaler to have some larger volume customers in order to help carry the smaller retailers. The hope of the wholesaler would be to affiliate at least one or two self-service retailers along with some larger volume ultramarinos as core elements of the group. This enables the wholesaler to invest more resources in upgrading the smaller retailers.

In northern Mexico where there are more self-service independents, voluntary wholesalers have greater opportunities to attract this kind of affiliate. Although some larger volume retailers may be purchasing directly from manufacturers, affiliation to a voluntary should be advantageous to the retailer because of the services offered by voluntary wholesalers.

Another criteria for affiliation is an assessment of the attitude of the retailer, his commitment to modernization and growth and willingness to respect official prices and exhibit professional behavior (seriedad). This is because all members of voluntaries are identified with the group and therefore the practices of one affect the image of the chain as a whole. It is also important because although a retailer might not meet the minimum size criteria, if he demonstrates an interest in modernization the wholesaler could promote his expansion in another locale and support the development of a financial package with FIDEC to do so. This type of support represents a key strategy for promoting

voluntaries because it recognizes that small retailers are generally not capable of pursuing this type of arrangement on their own. Furthermore, it differentiates the voluntary wholesaler from the rest of the wholesaling industry in terms of the services offered to retailers. Both FIDEC and wholesalers should find that the establishment of voluntaries is greatly facilitated by active policies of this nature.

B. Wholesaler Strategies to Encourage the Growth of Voluntaries

Wholesalers that take on the sponsoring role of forming a voluntary chain must be prepared to persevere while the rate of affiliation is still low and adopt strategies and incentives to encourage affiliation. For example, the wholesaler must be willing to make numerous return visits to the outlets of retail customers to explain the advantages of affiliation. The wholesaler should begin to extend services to retailers considering affiliation in order to demonstrate the potential benefits and increase retailer confidence in the wholesaler. Volume discounts should be offered and candidates for affiliation should be given preferential treatment with respect to scarce products.

The wholesaler should initially focus on a small group of the most receptive retailers, concentrating on producing concrete, visible benefits to their businesses. Once progress has been observed in the modernization of one or more retailers, the wholesaler should sponsor a series of well planned meetings with all retailer customers, using the

core group of retailers as a vehicle for explaining and demonstrating the benefits of the voluntary chain concept. Emphasis should also be placed on developing private labels where possible as a strategy for increasing retailer loyalty to the group.

C. **Modifications in FIDEC Policies to Encourage Voluntaries**

Certain FIDEC lending policies and conditions may limit the formation of voluntary chains or access to credit by individual marketing firms.

For example, currently short-term inventory financing can only be obtained for "productos basicos" or staples that are identified by the Department of Commerce. This seriously constrains the ability of FIDEC to finance the expansion of product lines, a major strategy for insuring that staples are sold within officially established price ceilings. Non-basicos that would contribute to wider product lines and improved product assortments for consumers include: health and beauty aids, household cleaning products, paper products, school supplies, infant care products, and housewares.

In addition, FIDEC policies are such that wholesalers with sales volumes above a certain level receive financing at higher interest rates. Since larger wholesalers have ready access to commercial credit with simplified loan evaluation procedures, this reduces the incentives to request FIDEC financing. This is one of the factors responsible for the failure of FIDEC to loan to wholesalers

in the Mexico City market area. Mexico City wholesalers tend to have substantially larger sales volumes than provincial wholesalers given the same physical size. The failure to lend to wholesalers in Mexico City has precluded FIDEC from having an impact on the modernization of the most important market in the country.

Recently, a small wholesaler trade association was formed by wholesalers in Mexico City interested in modernization. FIDEC should view this group as a key target for the establishment of on-site research and demonstration stores in some of their businesses. The group has expressed a definite desire to modernize but has a lack of information on the appropriate means. These wholesalers indicate that the greatest incentive to collaborate with FIDEC is access to technical assistance, rather than credit.

While a voluntary chain evolves the wholesaler will continue to serve former customers, not affiliated to the voluntary, in order to maintain an adequate sales volume. At the outset the wholesaler is likely to encounter as few as one or two retailers willing to join a voluntary and these may not be willing to affiliate formally with a written contract. This should not be viewed as an impediment or affect the ability of the group to receive concessionary financing from FIDEC. Currently, the Department of Commerce requires that groups have a formal organizational charter. This creates a barrier which can reduce access to credit because it does not reflect an understanding of the nature of voluntary chains. Voluntary

chains are merely wholesalers serving a group of independent retailers according to a common plan. This does not imply that the retailers need be formally associated in any legal sense.

Another barrier to the formation of voluntary chains is the information requirements for obtaining loans from FIDEC. Traditional retailers have difficulties meeting these requirements due to the rudimentary accounting systems they employ. It is recommended that a target voluntary chain be identified and that the wholesalers sponsoring the chain, in conjunction with local banks and FIDEC, should establish a collaborative effort to determine the specific obstacles and potential solutions. This experience could then be used to modify information requirements and establish a technical assistance program to wholesaler sponsors and retailers on the development of retailer loan packages.

10.2.7 The Feasibility of Voluntary Chains

Detailed financial analysis of the feasibility of voluntary chains was conducted using a financial simulation model of Mexican marketing firms. Investment prototypes were developed for both wholesale and retail businesses. Performance was compared with and without the investments necessary to form a voluntary chain. The results of extensive financial simulations indicate that under a variety of scenarios the cost-benefit ratios of voluntary chains are favorable, and improve performance relative to the without situation. It is of interest to note that

relatively small investments can produce a significant improvement in performance.

While financial analysis showed the potential feasibility of voluntary chains, the effect of important constraints to their formation are indeed formidable. Several institutional constraints exist as a result of governmental policies, notably licensing restrictions for the sale of wine and liquor at both the retail and cash and carry levels, the time and transaction costs required to obtain various operating permits to open new businesses, product scarcity caused by official price controls, and harassment by federal inspectors of wholesaling firms.

These obstacles could seriously constrain the formation of voluntary chains by hindering the efforts of wholesalers and retailers attempting to modernize and improve the system. The difficulties with government regulators experienced by the innovative founder of SPAR, described in Chapter 8, dramatize the indiscriminate nature of harassment by regulatory personnel.

FIDEC could promote greater public sector awareness of the negative ramifications of many governmental policies on the modernization of the marketing system. It could also serve a general informational role, improving the knowledge of government officials of marketing firms and combating unfounded assumptions.

10.3 Conclusions

To summarize the diagnosis of the grocery marketing system is to state that there are numerous barriers to

improved performance which cause traditional retailers to be inefficient operators offering poor quality retailing services to consumers. For example, a lack of credit to finance inventories and expansion and a lack of full-service wholesalers, which increases the transaction costs of acquiring wider product lines, combine to limit the scale of operation of traditional retailers, precluding the realization of buying advantages. A lack of information on improved marketing practices is another major obstacle to improved performance.

Furthermore, the establishment of modern retailing services located on a convenient basis in low income areas has been impeded by institutional constraints such as licensing restrictions and official price controls. Consequently, since traditional retailers continue to supply the majority of low income consumers with their basic grocery needs, their poor performance becomes a question with implications for equity and requires attention.

Incipient change among wholesalers and retailers strongly indicates that new wholesale-retail arrangements can be successful in improving performance. Many businesses have begun the transition to more efficient operations and are demonstrating the adaptability of technology and management practices to the Mexican setting.

Several forces for change (e.g. the economic recession and the growth of the supermarket industry) suggest that this is a very timely moment to stimulate change in the

traditional wholesaling-retailing distribution channel. These forces have generated significant wholesaler and retailer interest in strategies to improve performance and competitive strength. A facilitory program linking on-site research, technical assistance and concessionary credit, would attack the cause, not the symptoms of marketing inefficiencies and would do so without the costs associated with direct public sector market intervention. Public sector support for the modernization of traditional wholesalers and retailers is vital given the barriers to modernization which exist. For example, lack of information on improved marketing practices is a critical barrier. Hence, in order to successfully foment the formation of voluntary chains and other improved wholesale-retail arrangements, FIDEC must place major attention on the development of effective technical assistance programs. FIDEC could acquire the role of a key information source on the marketing system and a coordinator of marketing research and technical assistance, acting as a leader in promoting change and improved performance.

However, in order for FIDEC to perform this role effectively a major training program must be developed for FIDEC staff members. The lack of qualified staff that have both the practical experience and more fundamental knowledge base to motivate and educate bankers, wholesalers and retailers is an important bottleneck. In order to build the human resource base it is recommended that a "train the trainers" program be developed for FIDEC personnel.

This type of program could be developed as part of the World Bank marketing loan that FIDEC has received to improve perishables marketing in Mexico. Substantial funds are available in this loan for institution building. Assistance could be sought from U.S. or European marketing training institutes and consultants to help improve the knowledge base on marketing practices among FIDEC staff members.

FIDEC might act as a facilitator of the creation of a marketing training institute in Mexico, with both private and public sector support. Institutes of this sort exist elsewhere (e.g. The Creative Management Institute in St. Louis) whose expertise could be sought to establish the Mexican training institute. If this type of autonomous institute were created it could develop training programs for wholesalers and retailers and reduce the responsibility of FIDEC to offer direct technical assistance.

While a variety of institutional arrangements are potentially available to develop technical assistance programs for marketing firms, the key factor of importance is that technical assistance be launched as rapidly as possible. The findings of the research indicate that the success of voluntary chains and other improved marketing arrangements are highly dependent on training and technical assistance to help firms adopt improved marketing practices and technology.

CHAPTER 10

REFERENCES

Shaffer, James D., et al, 1983. "Influencing the Design of Marketing Systems to Promote Development in Third World Countries." Paper presented at the International Workshop on Agricultural Markets in the Semi-Arid Tropics, India.

APPENDICES

APPENDIX A

CUESTIONARIO PARA MINORISTAS

Fecha: Día _____ Mes _____

Nombre del propietario: _____

Razón Social: _____

Dirección: Calle _____

Delegación _____

Colonia _____

Nivel de ingreso de la colonia (clasifique según el mapa mercadológico del D. F.) _____

¿Hasta qué año cursó en la escuela?

Primaria _____ años, Secundaria _____ años, Bachillerato _____ años, Licenciatura _____ años.

A. Información Sobre el Negocio

(OB) 1. Tipo de detallista:

Locatario _____ Tienda de Barrio _____

Ultramarinos _____ Auto-servicio Independiente _____ Depósito _____

Miscelánea _____

2. ¿Está usted afiliado a alguna asociación de comerciantes?

Si _____ No _____ ¿Cuál? _____

_____

_____

3. ¿Cuál de los siguientes giros maneja y cuáles son los que más se venden?

a) Abarrotes _____ % _____

b) Vinos y licores _____ % _____

c) Productos lácteos _____ % _____

d) Carnes frías _____ % _____

e) Frutas y verduras _____ % _____

f) Granos y semillas _____ % _____

g) Dulces y tabaco _____ % _____

h) Artículos de tocador _____ % _____

i) Artículos escolares _____ % _____

j) Medicinas populares _____ % _____

k) Mercería _____ % _____

l) Artículos o utensilios del hogar _____ % _____

m) Ferretería _____ % _____

n) Zapatos o ropa _____ % _____

o) Otros _____ % _____

4. ¿Aproximadamente cuál es el número de artículos que vende?

_____

5. ¿Qué tipo de sociedad es ésta? _____

a. Negocio individual _____

b. Negocio familiar _____

c. Sociedad anónima _____

d. Sociedad civil _____

e. Sociedad cooperativa _____

6. ¿Cuándo empezó su negocio?

_____, _____, _____

años meses semanas

7. Tamaño del establecimiento:

a) Area de ventas _____ X _____ = _____ m^2

b) Area de bodega _____ X _____ = _____ m^2

8. ¿Cuál es dueño de su local o paga renta? _____

9. ¿Tiene su propio vehículo para transportar mercancía?

Si _____ No _____

10. ¿Tiene teléfono? Si _____ No _____

11. ¿Qué limitaciones tiene su negocio para poder crecer?

Dinero _____ Competencia _____ Abastecimiento

_____ Transporte _____ Otro _____

Explique: _____

_____

_____

_____

12. ¿Cuáles son sus posibilidades de aumentar su área de ventas? _____

_____

_____

B. Información Sobre Compras y Ventas

13. Más o menos ¿Cuánto vende a la semana?

Menos de $ 70,000 _____ Entre $ 70,000 y $ 120,000 _____ Entre $ 120,000 y $ 200,000 _____ Más de $ 200,000 _____

¿Cuánto? _____

(opcional) 14. ¿Cuál es el valor de la mercancía que:

Compró la semana pasada $ _____

¿En cuánto estima el valor de las mercancías que tiene en la bodega? $ _____

15. ¿Usualmente compra usted a los mismos proveedores?

a. No _____

b. Sí _____

¿Por qué razón? (Marcar sólo dos respuestas por prioridad 1 y 2)

_____ Primera

_____ Segunda

1. Confianza
2. Amistad
3. Calidad
4. Precios
5. Créditos
6. Descuentos
7. Siempre le abastece lo que pide
8. Otros (Especifique)

NO

¿Qué razón? (Marque dos respuestas)

_____ Primera

_____ Segunda

1. Precios inestables
2. Calidad inestable (Especifique marcas _____ ó giros _____)
3. Poco surtido (Marca _____ _____ o giro _____)
4. No hay productos de primera necesidad
5. Informalidad
6. Otros

16. ¿Cuántos proveedores tiene regularmente?

Mayoristas o Medio-Mayoristas y/o depósitos _____

Fabricantes y/o distribuidores _____

¿Cuáles? _____

Total _____

17. ¿Aproximadamente cuánto tiempo destina usted a hacer compras cada semana?

	Mayoristas			Fabricantes y/o Distribuidores		
	veces/s	tiempo/v.	tiempo total	veces/s	tiempo/v	tiempo total
Agente de venta						
Visita personal						
Teléfono						

18. ¿En qué áreas de la ciudad se localizan la mayor parte de sus mayoristas? _____

_____

_____

19. ¿Qué cambios ha sufrido su forma de surtido?

Surten más o menos mayoristas y/o fabricantes _____

_____

_____

¿Realiza visita personal, antes y ahora? _____

_____

_____

20. ¿A veces alquila transporte para llevar mercancía a su tienda? No _____ Si _____ ¿Qué tipo y cuánto le cuesta?

_____

_____

C. Información Sobre Financiamiento

21. ¿Qué porcentaje de sus compras las hace a base de crédito?

0 - 25% _____ 25% - 50% _____

_____ _____

50% - 75% _____ 75% - 100% _____

22. ¿Generalmente a quién le pide crédito?

Al mayorista _____

Al fabricante _____

Bancos comerciales _____

BANPECO _____

Amigos o familiares _____

Prestamistas _____

¿Aproximadamente por cuánto tiempo le dan crédito?

_____

23. ¿Si no paga a tiempo su crédito le cobran algún interés y - cuánto? No _____ Si _____ Explique _____

_____

24 ¿Por lo general si paga usted al contado obtiene descuento de su proveedor?

Si _____

¿Cuánto? _____

25. ¿Algunas veces fía a sus clientes regulares? Explique _____

_____

_____

26. ¿Usted es causante menor o causante mayor? _____

En caso de ser causante menor, ¿Cuál es su cuota mensual de impuestos? _____

D. Prácticas de Operación

26. ¿Lleva una lista de sus existencias? Si _____ No _____

27. ¿Alguna vez revisa toda su mercancía para saber la que tiene? (inventario) Si _____ No _____ ¿Cuántas veces por año?

_____

(OB) 28. ¿Lleva un registro de ventas diarias? Si _____

No _____

(OB) 29. ¿Utiliza una caja registradora? Si _____ No _____

_____

30. ¿Ofrece promociones al consumidor? Si _____ No ____

Explique _____

COMERCIALIZACION DE LOS SIGUIENTES PRODUCTOS

¿Vende los siguientes productos y qué problemas tiene para su abastecimiento?

Frijol _____

_____

Manteca _____

_____

Aceite _____

_____

Azúcar _____

_____

Detergente _____

_____

APPENDIX B

METHODOLOGY FOR FINANCIAL SIMULATION MODEL

Revaluation and Depreciation

One way revaluation enters the income statement in this model is through depreciation. According to the Mexican tax code an asset may be reassessed to determine its market value at the end of a tax year. The value assessed by the Secretaria de Hacienda (Department of Treasury) is determined by established guidelines. Depreciation in the following year is calculated based on the revalued worth of the asset, at the same annual depreciation rate for the remaining useful life of the asset. Thus, the asset is fully depreciated over the time period originally established, in spite of revaluation. The higher the rate of revaluation the greater the tax shield generated by depreciation.

Separate depreciation tables were built into the model for machinery and equipment (M&E) and buildings (land is assumed not to depreciate). Different depreciation rates can be calculated for each category. A depreciation table exists for each asset category (M&E or buildings), starting from the base year, and for any new purchases thereafter. For example, the M&E depreciation table corresponding to equipment purchased by a wholesale firm in 1983 and depreciated over five years is shown in Table A.1.

TABLE A.1. DEPRECIATION CALCULATION FOR A MACHINERY AND EQUIPMENT INVESTMENT MADE IN 1983

	1983	1984	1985	1986	1987
Revalued Asset	14.12[a]	17.51	21.01	23.53	26.36
Depreciation	2.82	3.50	4.20	4.71	5.27
Revaluation	2.71	2.10	1.01	0.56	.00
Net Asset	14.01	12.61	9.41	5.27	.00

[a] The value shown in 1983 is the initial purchase price.

The equations for calculating the depreciation tables are shown below:

$$1)\ RA_i = RA_{i-1} * (1+RR_{i-1})$$

$$2)\ DEP_i = RA_i * DR$$

$$3)\ REV_i = (NA_{i-1} - DEP_i) * RR_i$$

$$4)\ NA_i = NA_{i-1} - DEP_i + REV_i$$

The above equations are for years 2...i. Equations 3) and 4) are different for year 1 and are as follows:

$$5)\ REV_1 = (RA_1 - DEP_1) * RR_1$$

$$6)\ NA_1 = RA_1 - DEP_1 + REV_1$$

Where:

i = current year
RR = Annual revaluation rate in any year
DR = Annual depreciation rate, fixed
RA = Revalued asset in any year
DEP = Depreciation charge in any year
REV = Revaluation in any year
NA = Net asset value in any year
Purchases are assumed to be made at the beginning of the year.

Notice that the revalued asset has no meaning in and of itself. It is merely used for purposes of calculating depreciation. The value of importance is the net asset value which includes both depreciation and revaluation, this is akin to the market value of an asset.

Methodology for Calculating Sales

It is important to note the manner in which inflation affects sales in the model. Separate inflation rates and real sales growth rates were built into the model. The estimated real sales growth rate varies depending on the case at hand, and is strongly influenced by the competitive position of the firm within its market area, for a given growth rate of the economy as a whole. The inflation rate will of course be the same for all firms. The formula for calculating sales is as follows:

$$SALES_i = BS*(1+G_1)*\ldots(1+G_i)*(1+I_1)*\ldots(1+I_{i-1})*((I_i/2)+1)$$

Where:

i = current year
BS = Base year sales (i.e. sales at end of year 0)
G = Annual real sales growth rate of the firm
I = Annual inflation rate

The equation is defined this way in order to reflect the different manners in which inflation and real sales growth rates affect sales. It would be inappropriate for sales in year 1, for example, to be equal to base year sales*(1+I_1). That would imply that the full effect of the

annual inflation rate was felt during year 1, when in fact inflation took place incrementally throughout the year. Hence, sales in any period occurred at an average of the prior year's price level and the current year's price level. The total effect of inflation in one period shows up in the next period, as the equation indicates. If the equation were not calculated in the manner shown the effect of inflation on sales would be overstated.

This problem does not exist for the real sales growth rate, since this implicitly represents a change in the current period's real sales relative to the prior year's sales.

To clarify, the equation for sales in year two is given:

$$SALES_2 = BS * (1+G_1) * (1+G_2) * (1+I_1) * ((I_2/2)+1).$$

Investment Assumptions

The model was designed to facilitate investment analysis over time by building in investment tables for machinery and equipment, buildings and land. A business may make new investments in any of five years with varying financial arrangements. For M&E or buildings a business may acquire an asset(s) in cash, with 100 percent financing, or with a cash down payment and a loan for the remainder. Where bank financing takes place, the term of the loan may vary for each investment. For investments in land the model accepts only cash arrangements because FIDEC does not finance the acquisition of land.

The model allows for a different annual depreciation rate corresponding to the investments made in each year (except for land which does not depreciate). Each annual investment for each asset category has a corresponding depreciation table and loan amortization table which feed back into the income statement and balance sheet.

Amortization of Loans

As indicated above loan amortization tables are built into the model for M&E and buildings, starting from the base year. An example of an amortization table is shown in Table A.2 for a three year loan made in 1983. Interest is calculated based on monthly payments of principal and interest. The loans are variable interest rate loans. In the cases which will be presented the interest rate varies annually based on the average annual CPP.

Each of the loan amortization tables automatically feeds information into the interest costs shown in the income statement, and the current long term debt and remaining long term debt shown in the balance sheet.

TABLE A.2. LOAN AMORTIZATION TABLE FOR MACHINERY AND EQUIPMENT INVESTMENTS MADE IN 1983

	1983	1984	1985	1986	1987
PAYMENT	0.65	0.63	0.58	0.00	0.00
BEGINNING BALANCE	11.30	9.31	5.79	0.00	0.00
ENDING BALANCE	9.31	5.79	0.00	0.00	0.00
TOTAL PAID	7.81	7.52	7.02	0.00	0.00
INTEREST PAID	5.82	4.00	1.23	0.00	0.00
PRINCIPAL PAID	1.99	3.52	5.79	0.00	0.00

The Opening Balance Sheet

The model begins with an opening balance sheet which describes the financial position of the firm at the point where the analysis initiates. The firm may have been in business any length of time prior to this point. To avoid any confusion throughout the analysis note that the balance sheet always represents the position of the business at the end of the year, thus becoming the opening balance sheet at the start of the next year.

An example of an opening balance sheet can be seen at the end of this appendix where a complete simulation case is presented. The opening balance sheet is a standard balance sheet except with regard to the revaluation of fixed assets, which was already explained as an inflation accounting technique. The value of the firm's assets when they were originally acquired is reported in the opening balance sheet under the category "price of property and equipment" (PP&E). The revaluation and depreciation taking place since then is also reported and results in a net price of property and equipment. The total amount corresponding to the revaluation of assets is reflected under equity.

The future depreciation rates of the M&E and buildings reported as the firm's initial fixed assets are also given. For example, if the machinery and equipment were originally placed on a five year depreciation schedule and had been depreciating for two years to date, then the depreciation rate for the remaining three years would be 33 percent.

Several factors concerning current and long term liabilities should also be noted. Implicitly, current liabilities are any liabilities which will be repaid within the current period, in our case within the year. Long term liabilities are any debts owed over more than a period of a year. Recall that since the balance sheet is an ending year balance sheet (eg. end of 1982) and states our position at the beginning of the next year, the reported debt is owed in the following period(s) (eg. 1983).

Bank debt is shown as both short term debt and long term debt. Current LTD is defined as the principal owed on a long term loan in the current period, in our case during the following year. Bank term debt refers to the remaining debt which is owed in future periods after the payment made in the current period. Note that the total years of bank long term debt are included in the opening balance sheet, such that the amortization of any term debt which may exist when the analysis begins will be incorporated into the model. It should also be mentioned that interest is not reported in the balance sheet but rather the income statement, thus both bank short term debt and long term debt refer to principal only.

Net Benefit to Investment Ratio (N/K) Calculations

The formulas for calculating the present value of the net benefit and investment streams are given below.

$$\text{PV of net benefits} = \sum_{j=1}^{5} \left[\frac{N_j}{\prod_{i=1}^{j} (1+d_i)} \right]$$

$$\text{PV of investment} = \sum_{j=1}^{5} \left[\frac{I_j}{\prod_{i=1}^{j} (1+d_i)} \right] + K$$

Where:

N_j = net benefits in year j

I_j = new investment in year j

K = initial capital investment at beginning of year 1

d_i = the discount rate in year i

j = 1...5

i = 1...j

Methodology for Calculating Labor Costs

The labor productivity gains shown in Table 8.1 were used to determine labor costs as a percentage of sales in the upcoming cases. An average increase in labor productivity of 50 percent was assumed for wholesalers changing from system 3 to system 2 [traditional (without) and intermediate systems, respectively], and an increase of 150 percent was assumed for wholesalers modernizing from system 3 to system 1 (without and with wholesale cases). Average figures on sales per employee in traditional businesses were used to convert the labor productivity level in system 3 into

monetary terms. Using this as a base, sales per employee were calculated for systems 1 and 2 given the respective increases in labor productivity. These figures were used in conjunction with the 1983 sales figures for each of the cases to determine the numbers of employees required in each case. The number of employees was then multiplied by labor costs per employee to obtain total labor costs.

Example of a Financial Simulation Case

Selected results were presented in Chapter 9 from the financial simulation cases. A complete example of a simulation case will be presented beginning on the next page.

WITHOUT WHOLESALE CASE 2

OPENING BAL SHEET	1982
Cash*	15.00
Accts. Receivable	12.50
Inventory	47.00
Prepaid Expenses	0.20
TOTAL CURRENT ASSETS	74.70
Machinery & Equip.	2.25
Buildings	4.00
Land	3.00
ORIGINAL PP&E	9.25
M & E Accum. Reval.	1.62
Buildings Acc.Reval.	8.14
Land Accum. Reval.	7.32
M & E Accum. Deprec.	1.08
Buildings Acc.Deprec	1.08
NET PP&E	24.17
Other Assets	0.00
TOTAL ASSETS	98.87
M & E Deprec.Rate	0.33
Building Deprec.Rate	0.0833
*Currency	Pesos
Units	Millions

Accounts Payable	22.00
Trade Notes Pay.	2.00
Bank: Short-term	4.00
Current LTD	1.00
Accrued Expenses	1.50
Taxes Payable	0.00
Other Curr. Liabs	3.70
TOTAL CURR. LIABS	34.20
Bank: Term Debt	2.00
Subordinated Debt	0.00
Deferred Taxes	0.00
Other LT Liabs	1.00
TOTAL LIABILITIES	37.20
Revaluation	17.08
Common Stock	5.00
Paid-in Capital	0.00
Retained Earnings	39.59
TOTAL EQUITY	61.67
TOT LIAB & EQUITY	98.87
Tot.Yrs.TermDebt**	2.0
BASE YEAR SALES	605.49

**Both current LTD & remaining years.

KEY ASSUMPTIONS	1983	1984	1985	1986	1987
	(e.g. 12% annual growth rate is entered as .12)				
Infl.Sales Grth Rate	0.800	0.65	0.40	0.40	0.40
Real Sales Grth Rate	0.00	0.00	0.02	0.02	0.02
Sales Growth Rate	0.40	0.70	0.52	0.43	0.43
COGS/Sales	0.940	0.940	0.940	0.940	0.940
Labor Exp/Sales	0.005	0.005	0.005	0.005	0.005
Admin Exp/Sales	0.032	0.032	0.032	0.032	0.032
Tax Rate	0.38	0.38	0.38	0.38	0.38
M&E Revaluation Rate	0.24	0.20	0.12	0.12	0.12
Build&Land Revl Rate	0.40	0.49	0.40	0.40	0.40
Accts. Rec. (days)	0.0	0.0	0.0	0.0	0.0
Days of Inv. (cogs)	29	27	25	24	23
Accts. Pay. (days)	10	10	10	10	10
INTEREST RATES:	(e.g. 14% annual rate is entered as .14)				
Bank: Short-term	0.68	0.63	0.40	0.40	0.40
Bank: Term Debt	0.70	0.65	0.42	0.42	0.42
Sub. Debt	0.00	0.00	0.00	0.00	0.00
Dividend Payout Rate	0.00	0.00	0.00	0.00	0.00
INVESTMENT ASSUMPTNS	1983	1984	1985	1986	1987
MACHINERY & EQUIP.	*A	*B	*C	*D	*E
Cash	0.00	0.68	0.00	0.00	0.00
New Term Debt	0.00	2.75	0.00	0.00	0.00
Annual M&E Investmnt	0.00	3.43	0.00	0.00	0.00
Term of Loan	0	2	0	0	0
Annual Deprec. Rate	0.00	0.20	0.00	0.00	0.00
M & E Invest. Notes:	*B-1 TRUCK @$3.43M.				
BUILDINGS	*F	*G	*H	*I	*J
Cash	0.00	0.00	0.00	0.00	0.00
New Term Debt	0.00	0.00	0.00	0.00	0.00
Annual Bld.Investmnt	0.00	0.00	0.00	0.00	0.00
Term of Loan	0	0	0	0	0
Annual Deprec. Rate	0.00	0.00	0.00	0.00	0.00
Building Invst.Notes					
LAND	*K	*L	*M	*N	*O
Cash	0.00	0.00	0.00	0.00	0.00
Land Invest. Notes:					
OTHER ASSUMPTIONS	1983	1984	1985	1986	1987
Cash	0.00	0.00	0.00	0.00	0.00
Prepaid Expenses	0.00	0.00	0.00	0.00	0.00
Mach. & Equip. Sales	0.00	0.00	0.00	0.00	0.00
Other Assets	0.00	0.00	0.00	0.00	0.00
Notes Payable	0.00	0.00	0.00	0.00	0.00
Curr. L T Debt	1.99	1.80	0.00	0.00	0.00
Accrued Expenses	0.00	0.00	0.00	0.00	0.00
Taxes Payable	0.00	0.00	0.00	0.00	0.00
Other Curr. Liabs.	0.00	0.00	0.00	0.00	0.00
LT Debt Repayment	1.01	1.99	1.80	0.00	0.00
Sub Debt Repayment	0.00	0.00	0.00	0.00	0.00
Deferred Taxes	0.00	0.00	0.00	0.00	0.00
Other Liabilities	0.00	0.00	0.00	0.00	0.00
Rate on Interest Inc	0.57	0.53	0.30	0.30	0.30

INCOME STATEMENT	1983	1984	1985	1986	1987
Net Sales	847.69	1444.09	2201.13	3143.21	4488.50
TOTAL REVENUE	847.69	1444.09	2201.13	3143.21	4488.50
Cost of Goods Sold	796.82	1357.45	2069.06	2954.62	4219.19
GROSS PROFIT	50.86	86.65	132.07	188.59	269.31
Labor Expense	4.24	7.22	11.01	15.72	22.44
Admin. Expense	27.13	46.21	70.44	100.58	143.63
Interest Expense.	4.42	10.32	10.63	12.16	11.96
M & E Deprec. Exp.	0.93	1.84	2.21	0.92	1.03
Building Deprec.Exp.	0.92	1.29	1.92	2.69	3.77
TOTAL OPER. EXP.	37.64	66.88	96.20	132.07	182.83
Interest Income	0.00	0.00	0.00	0.00	0.00
PRE-TAX INCOME	13.22	19.77	35.86	56.52	86.48
Income Taxes	5.02	7.51	13.63	21.48	32.86
NET INCOME	8.20	12.25	22.24	35.04	53.62
M & E Revaluation	0.45	0.78	0.30	0.22	0.12
Building Revaluation	4.06	6.32	6.92	8.61	10.55
Land Revaluation	4.13	7.08	8.61	12.06	16.88
NET INCOME & REVAL.	16.83	26.44	38.07	55.93	81.17

BALANCE SHEET ASSETS	1983	1984	1985	1986	1987
Cash	21.00	35.78	54.53	77.87	111.20
Accts. Receivable	0.00	0.00	0.00	0.00	0.00
Inventory	64.19	101.81	143.68	196.97	269.56
Prepaid Expenses	0.24	0.37	0.52	0.71	0.97
TOTAL CURRENT ASSETS	85.42	137.95	198.73	275.55	381.72
Machin. & Equipment	2.25	5.68	5.68	5.68	5.68
Buildings	4.00	4.00	4.00	4.00	4.00
Land	3.00	3.00	3.00	3.00	3.00
ORIGINAL PP&E	9.25	12.68	12.68	12.68	12.68
M & E Accum. Reval.	2.07	2.85	3.14	3.36	3.49
Buildings Acc.Reval.	12.20	18.52	25.44	34.06	44.61
Land Accum.Reval.	11.45	18.53	27.14	39.19	56.07
M & E Accum. Deprec.	2.01	3.85	6.05	6.97	8.01
Buildings Acc.Deprec	2.00	3.29	5.21	7.90	11.67
NET PP&E	30.95	45.43	57.14	74.42	97.17
Other Assets	0.00	0.00	0.00	0.00	0.00
TOTAL ASSETS	116.37	183.39	255.87	349.97	478.90

BALANCE SHEET LIABILITIES & NW	1983	1984	1985	1986	1987
Accounts Payable	22.13	37.71	57.47	82.07	117.20
Trade Notes Payable	2.80	4.77	7.27	10.38	14.83
BANK: SHORT-TERM *	3.67	21.78	29.22	31.58	28.21
Current LTD	1.99	1.80	0.00	0.00	0.00
Accrued Expenses	2.10	3.58	5.45	7.79	11.12
Taxes Payable	0.00	0.00	0.00	0.00	0.00
Other Curr. Liabs.	5.18	8.82	13.45	19.21	27.43
TOTAL CURRENT LIABS.	37.88	78.45	112.87	151.03	198.79
* Balancing item.					
Bank: Term Debt	0.00	0.00	0.00	0.00	0.00
Subordinated Debt	0.00	0.00	0.00	0.00	0.00
Deferred Taxes	0.00	0.00	0.00	0.00	0.00
Other LT Liabs.	0.00	0.00	0.00	0.00	0.00
TOTAL LIABILITIES	37.88	78.45	112.87	151.03	198.79

BAL. SHEET EQUITIES	1983	1984	1985	1986	1987
Common Stock	5.00	5.00	5.00	5.00	5.00
Paid-in-Capital	0.00	0.00	0.00	0.00	0.00
Retained Earnings	47.79	60.04	82.28	117.32	170.94
Revaluation	25.71	39.89	55.72	76.61	104.17
TOTAL EQUITY	78.50	104.94	143.00	198.94	280.11
TOTAL LIAB. & EQUITY	116.37	183.39	255.87	349.97	478.90

LIQUIDITY RATIOS	1983	1984	1985	1986	1987
Current Ratio	2.2554	1.7584	1.7608	1.8245	1.9203
Quick Ratio	0.5544	0.4560	0.4831	0.5156	0.5594

OPER.& EFFIC. RATIOS	1983	1984	1985	1986	1987
Sales Growth Rate	40.0%	70.4%	52.4%	42.8%	42.8%
Gross Profit/Sales	6.0%	6.0%	6.0%	6.0%	6.0%
Pre-Tax Inc/Sales	1.6%	1.4%	1.6%	1.8%	1.9%
After-Tax Inc/Sales	1.0%	0.8%	1.0%	1.1%	1.2%
Net Inc.&Reval/Sales	2.0%	1.8%	1.7%	1.8%	1.8%
Sales/Assets	7.3	7.9	8.6	9.0	9:4
Sales/Wrkng Capital	17.8	24.3	25.6	25.2	24.5
Sales/Fixed Assets	27.4	31.8	38.5	42.2	46.2
Accts Rec: (days)	0.0	0.0	0.0	0.0	0.0
Inventory Turns	12.4	13.3	14.4	15.0	15.7
Accts Pyble: (days)	10.0	10.0	10.0	10.0	10.0

LEVERAGE RATIOS	1983	1984	1985	1986	1987
Total Liab/Equity	0.483	0.748	0.789	0.759	0.710
LTD/Capital	0.000	0.000	0.000	0.000	0.000
Funded Debt/Equity	0.072	0.225	0.204	0.159	0.101
Sr Dt/Sub Dt+Equity	0.072	0.225	0.204	0.159	0.101

PROFITABILITY					
Real Rate of Return on Total Assets (Net Income + Tax Adjusted Interest / Average Total Assets)	4.5%	9.9%	11.2%	12.0%	12.6%
Real Rate of Return on Investment (Net Income + Tax Adjusted Interest / Average Capitalization)	11.0%	15.6%	19.7%	21.3%	21.9%
Real Rate of Return on Equity (Net Income / Average Equity)	8.7%	10.5%	15.3%	17.6%	19.2%

PRICE INDEX	1.80	2.97	4.16	5.82	8.15

PRESENT VALUE-AT BEGINNING OF YEAR			1983		
			CASE 1		
DISCOUNT RATE CASE1*	0.57	0.53	0.30	0.30	0.30
BENEFITS	10.05	15.38	26.36	38.66	338.52
INITIAL CAPITAL	65.67				
NEW INVESTMENTS	0.00	3.43	0.00	0.00	0.00
PV OF NET BENEFITS	95.16				
PV OF INVESTMENTS	67.10				
NET BENEFITS/INVEST.	1.42				
			CASE 2		
DISCOUNT RATE CASE2*	0.753	0.645	0.42	0.42	0.42
BENEFITS	10.05	15.38	26.36	38.66	338.52
INITIAL CAPITAL	65.67				
NEW INVESTMENTS	0.00	3.43	0.00	0.00	0.00
PV OF NET BENEFITS	65.15				
PV OF INVESTMENTS	66.86				
NET BENEFITS/INVEST.	0.97				

*Discount Rate=CPP

*Discount Rate=Inflation Rate+ Economic Growth Rate

			CASE 3		
DISCOUNT RATE CASE3*	0.70	0.65	0.41	0.40	0.40
BENEFITS	10.05	15.38	26.36	38.66	338.52
INITIAL CAPITAL	65.67				
NEW INVESTMENTS	0.00	3.43	0.00	0.00	0.00
PV OF NET BENEFITS	68.71				
PV OF INVESTMENTS	66.89				
NET BENEFITS/INVEST.	1.03				
			CASE 4		
DISCOUNT RATE CASE4*	0.88	0.73	0.48	0.48	0.48
BENEFITS	10.05	15.38	26.36	38.66	338.52
INITIAL CAPITAL	65.67				
NEW INVESTMENTS	0.00	3.43	0.00	0.00	0.00
PV OF NET BENEFITS	53.08				
PV OF INVESTMENTS	66.72				
NET BENEFITS/INVEST.	0.80				
			CASE 5		
DISCOUNT RATE CASE5*	0.88	0.73	0.48	0.48	0.48
BENEFITS**	12.79	21.78	32.96	46.19	345.94
INITIAL CAPITAL	65.67				
NEW INVESTMENTS	0.00	3.43	0.00	0.00	0.00
PV OF NET BENEFITS	59.80				
PV OF INVESTMENTS	66.73				
NET BENEFITS/INVEST.	0.90				

*Discount Rate=Loan Rate

*Discount Rate=Inflation Rate+ Time Preference Rate of 8%

*Discount Rate=Dis. Rate Case 4

**Benefits in this case only incl. tax-adjusted interest, ie. the return to the lender.

BIBLIOGRAPHY

BIBLIOGRAPHY

A.C. Nielsen Company, 1982. "Mexico: The Economy, The Trade and Nielsen Services."

Adams, Kendall, 1962. "The Acceptance and Use of Special Services by Selected Supermarket Owner-Managers in Michigan." Ph.D. Dissertation, Michigan State University.

Agricultural Marketing Service, 1953. "Views of Independent Grocers on Wholesaler-Retailer Relations." Washington, D.C.: USDA, MRR No.2, p.14.

Anderson, Dale L., Jan. 1977. "White (or Slightly Gray Paper) in Defense of Agricultural Marketing Research." Internal USDA Document.

Bain, J., 1968. Industrial Organization. John Wiley, 2nd Ed.

BANAMEX, 1981. "Mexico Statistical Data 1970-1980."

BANAMEX. "Review of the Economic Situation of Mexico." Various issues.

Banco de Mexico. "Reporte de Precios." Subdireccion de Investigacion Economica. Various monthly issues.

Banco de Mexico. "Indices de Precios." Subdireccion de Investigacion Economica. Various monthly issues (cuadernos mensuales.)

Banco de Mexico, 1981. "Encuesta Nacional de Ingresos y Gastos 1977."

Banco de Mexico, 1984. "Informe de Actividades en 1983 y Programa Financiero para 1984: FIDEC." Annual Report, Mexico, D.F.

Bartley, Jon W., December 1980. "A NPV Model Modified for Inflation." Management Accounting, pp.49-52.

Bouma, John C., 1979. "Operation of Individual Wholesale Facilities." Internal USDA document.

Business Week. "Discounting: Mexico's Newest Revolution." July 6, 1963, p. 53.

Business Week. October 1, 1984. "Will Mexico Make It?" pp. 74-88.

Cañedo, Juan Diaz and Vera, Gabriel, 1981. "Distribucion del Ingreso en Mexico 1977." Serie de Analisis Estructural, Cuaderno Numero 1. Banco de Mexico, S.A.

Chain Store Age, Dec. 1966. "Certified: Growth to Greatness," pp.42-65.

CODEUR, 1979. "Central de Abasto Para La Ciudad de Mexico." Comision de Desarrollo Urbano.

Competitive Edge, July 1983. "Insight Report." Vol. III, No. 11.

CONASUPO, June 1982. Directorio de Tiendas de CONASUPO.

CONASUPO, 1981. "Mensaje del Director General y Estados Financieros a diciembre de 1980."

CONASUPO, 1981. Informe de Ventas. Gerencia Corporativa de Operaciones. Agosto.

CONCANACO, 1983. "Perfil del Comerciante."

Cook, Roberta, 1981. "The International Experience with Voluntary and Cooperative Food Chains." Prepared for FIDEC.

Cook, Roberta, 1984. "The Mexican Dry Grocery Subsector and the Identification of Policies Supporting the Establishment of Voluntary Food Chains." Report submitted to FIDEC.

Cyert, Richard M. and March, James G., 1963. A Behavioral Theory of The Firm. Prentice-Hall, Englewood Cliffs, New Jersey.

Douglas, Arthur B., 1966. "Reducing Food Prices Through Training and Formation of Food Buying Chains (Cadenas)." Internal A.I.D. Document.

El Afiliado, January 1982. "Hablando en Numeros: Perspectivas 1982, IMPECSA." Año 2/Vol.2/Numero 7, IMPECSA, S.A. de C.V., p. 3.

Euromonitor Public's Ltd., 1983. "Hypermarkets and Superstores: A World Survey." London.

FAO, 1983. "Experiencia Latinoamericana en Cadenas Voluntarias y Cadenas Cooperativas de Comerciantes Minoristas de Alimentos." Servicio de Informacion Tecnica en Mercadeo Agropecuario y Abastecimiento de Alimentos. Documento de Trabajo, MERC-5. Santiago.

FAO, 1984. "El Programa 'Red Somar,' Una Experiencia de Desarrollo de una Cadena Voluntaria en Brasil." MERC-7. Santiago.

FAO, 1984. "Aspectos Criticos para Definir una Politica de Credito par la Modernizacion del Sistema de Distribucion de Alimentos en Condiciones de Altas Tasas de Inflacion." Servicio de Informacion Tecnica en Mercadeo Agropecuario y Abastecimiento de Alimentos. MERC-8. Santiago.

Federal Trade Commission, 1932. Report Relative to Cooperative Grocery Chains. Washington: United States Government Printing Office.

Foy, Joseph, May 1965. "Lets Free Man for Greater Challenges." Grocers' Spotlight, pp. 9-1 and 22-27.

Frazier, Steve, August 31, 1984. "De la Madrid Must Face Political Fallout of Mexico's Scattered and Feeble Recovery." Wall Street Journal. p.12.

Freidenfelds, J. and Kennedy, M., 1979. "Price Inflation and Long-Term Present Worth Studies." The Engineering Economist, Vol. 24, No. 3.

French, B.C., December 1974. "The Subsector as a Conceptual Framework for Guiding and Conducting Research." AJAE, Vol. 56, No. 5, pp. 1014-22.

Fulop, Cristina, 1962. Buying by Voluntary Chains. London: George Allen & Unwin Ltd.

German, Gene, 1978. "The Dynamics of Food Retailing 1900-1975." Ph.D. Dissertation, Cornell University.

Gibbs, Robert, September 1981. "CONASUPO Sells Basic Foods Cheaply." R&D Mexico, CONACYT, pp. 16-20.

Gittinger, J. Price, 1982. Economic Analysis of Agricultural Projects. EDI Series in Economic Development. The Johns Hopkins University Press, Second Edition. Baltimore and London.

Grocers Journal, Feb. 1972. "Fifty Years of Progress Through Cooperation." pp.18-95.

Guthrie, Colin, Jan. 1974. "Voluntary Chains of Retail Food Stores in Latin America." Paper presented at International Conference on Marketing Systems in Developing Countries, Tel Aviv.

Hamm, Larry G., 1982. "Retailer-Manufacturer Relationships in the Food Sector -- Some Observations From the U.S.A." Paper presented at an OECD conference, Paris, France.

Hamm, Larry G., 1981. "Food Distributor Procurement Practices: Their Implications for Food System Structure and Coordination." Volumes I and II, Ph.D. Thesis.

Harrison, Kelly, et al, 1974. "Improving Food Marketing Systems in Developing Countries: Experiences from Latin America." Research Report No. 6, Latin American Studies Center, Michigan State University.

ICA, 1980. "A Way to the Swedish Consumer."

Impulsora del Pequeno Comercio (IMPECSA), September 1983. "El Afiliado." Año 1/Volumen 1/Numero 1, Junio 1981 through Año 3/Volumen 2/Numero 14.

Impulsora del Pequeno Comercio, 1981. Plan General de Capacitacion y Desarrollo del Personal. Programa Operativa.

Instituto Nacional del Consumidor, 1982. "Encuestas Sobre Habitos de Consumo." Mexico, D.F.

ISSSTE, 1983. Directorio General por Entidades Federativas para Tiendas del ISSSTE.

Jesse, Edward V., 1978. "Measuring Market Performance: Quantifying the Non-Quantifiable." NC 117, WP-15.

Kochersperger, R.H., 1978. Food Warehousing and Transportation. Lebhar - Friedman Books, Chain Store Publishing Corp., New York.

La Nacion, Jan. 1976. "La Cadena de Comerciantes Detallistas San Jose, S.A."

LeRoy, Rodney and Fowler, David J., 1982. "Present Value Analysis, Inflation, and Capital Recovery Factors." The Engineering Economist, Volume 28, Number 1, Fall 1982, pp. 31-52.

Leed, Theodore and German, Gene, 1979. Food Merchandising: Principles and Practices. Lebhar-Friedman Books, Chain Store Publishing Corporation, New York.

Lewis, Edwin, 1968. Marketing Channels: Structure and Strategy. New York: McGraw Hill.

Lynch, Frank, February 1976. "Question Types and Sampling Designs in Survey Research: Rethought Categories and Rules for Choice." Teaching Forum, No. 47.

Mapa Mercadologico de La Ciudad de Mexico, 1981. BIMSA.

Marion, Bruce W., 1976. "Application of the Structure, Conduct, Performance Paradigm to Subsector Analysis." WP-7, NC Project 117.

Marion, Bruce W., 1976. "Vertical Coordination and Exchange Arrangements: Concepts and Hypotheses," in Coordination and Exchange in Agricultural Subsectors. NC 117, Monograph 2. Madison: University of Wisconsin, Research Division, College of Agriculture and Life Sciences.

Marion, B.W. and Mueller, W.F., 1983. "Industrial Organization, Economic Power and the Food System." Chapter 2 in Future Frontiers in Agricultural Marketing Research, edited by Paul Farris, Iowa State University Press, pp.16-37.

Martinez, Nestor Benigno, 1980. "El Comercio Detallista en Puebla, Un Intento de Analisis Empirico." Tesis, Instituto Tecnologico Autonomo de Mexico. Mexico, D.F., julio.

Mateos, Rosa Luisa, 1979. "La Comercializacion de Abarrotes al Menudeo en Mexico, Una Primera Aproximacion." Tesis, Instituto Tecnologico Autonomo de Mexico. Mexico D.F.

Mateos, Rosa Luisa, Rodriquez, Alicia, et al, 1978. "Estudio Sobre El Comportamiento del Comercio Detallista de Abarrotes." julio.

McFayden, Edward, 1971. Voluntary Group Trading, 6 Case Studies. London: Her Majesty's Stationary Office.

McKinney, Chloe, January 1984. "Urban Food Systems, Mexico City, Feeding the City." IDRC Reports. Vol. 12, No. 4.

McLaughlin, Edward W. and Pierson, Thomas., August 1983. "The Fresh Fruit and Vegetable Marketing System: A Research Summary." Presented at the 1983 Annual Produce Conference, Fresno, California.

McLaughlin, Edward W., 1983. "Buying and Selling Practices in the Fresh Fruit and Vegetable Industry: Implications for Vertical Coordination." Ph.D. Dissertation, Michigan State University.

Mohn, Paul, Nov. 1959. Extension Service Review, pp. 229 and 246.

NAFINSA, 1980. La Economia Mexicana en Cifras. Mexico, D.F.

NAWGA, 1977. "Cash and Carry Survey." National American Wholesale Grocers' Association. New York.

NAWGA, 1978. "Expanded Survey of Cash and Carry Operations." New York.

Nelson, Charles R., June 1976. "Inflation and Capital Budgeting." The Journal of Finance, Vol. XXXI, No. 3, pp. 923-931.

Nicol, David J., May 1979. "The Impact of Inflation on Present Value Analysis." Business Economics, pp. 33-38.

Niswonger, Rollin and Fess, Philip, 1973. Accounting Principles. Eleventh Edition, South-Western Publishing Co., Cincinnati, Ohio.

Olson, Mancur, 1982. The Rise and Decline of Nations - Economic Growth, Stagflation, and Social Rigidities. Yale University Press.

Piedad, Yolanda, 1982. "El Estado en la Distribucion de Alimentos Basicos A Traves del Sistema Distribuidores CONASUPO 1970-1980." Tesis, UNAM.

Pliego, Luisa Fernanda. Agosto 1981. "Instrumentos de Apoyo Para el Pequeno y Mediano Comerciante, Otra Opcion: Las Cadenas Voluntarias." Revista Comercio, No. 249.

Progressive Grocer, April 1960. "27th Annual Report of the Grocery Industry."

Progressive Grocer, April 1964. "31st Annual Report of the Grocery Industry."

Progressive Grocer, April 1970. "37th Annual Report of the Grocery Industry."

Progressive Grocer, April 1980. "47th Annual Report of the Grocery Industry."

Progressive Grocer, April 1982. "49th Annual Report of the Grocery Industry."

Purcell, W.D., February 1973. "An Approach to Research on Vertical Coordination: The Beef System in Oklahoma." American Journal of Agricultural Economics.

Raiborn, D.D. and Ratcliffe, Thomas A., September 1979. "Are You Accounting for Inflation in Your Capital Budgeting Process?" Management Accounting, pp. 19-22.

Riley, Harold, et al, 1970. "Market Coordination in the Development of the Cauca Valley Region - Colombia." Research Report No. 5, Latin American Studies Center, Michigan State University.

Robison, Lindon J. and Brake, John, December 1980. "Inflation, Cash Flows, and Growth: Some Implications for the Farm Firm." Southern Journal of Agricultural Economics.

Salinas de Gortari, Raul, 1983. "La Estrategia de Abasto del Sistema de Distribuidoras CONASUPO." Comercio Exterior, Vol. 33, Num. 6, junio, pp.561-568.

Schelling, Thomas C., 1978. Micromotives and Macro-behavior. W.W. Norton.

Scherer, F.M., 1980. Industrial Market Structure and Economic Performance. Rand McNally College Publishing Co., 2nd Ed. Chicago, Il.

Schmid, A. Allen, 1978. Property, Power, and Public Choice. Praeger Special Studies. New York.

Schmid, A. Allen, 1984. "The Political Economy of Public Investment." Michigan State University.

Secretaria de Comercio y Fomento Industrial (SECOFI), 1982. Directorio de Tiendas del Sector Publico y Asociados.

Secretaria de Comercio y Fomento Industrial, 1984. "Sistema Nacional para El Abasto."

Shaffer, James D., July 1980. "Pricing Mechanisms - Some Questions of Policy: An Overview From an Institutional Perspective." Paper presented at the OECD Seminar on Price Formation, Paris.

Shaffer, James D., et al., October 1983. "Influencing the Design of Marketing Systems to Promote Development in Third World Countries." Paper presented at the International Workshop on Agricultural Markets in the Semi-Arid Tropics, India.

Shaffer, James D., May 1980. "Food System Organization and Performance: Toward a Conceptual Framework." American Journal of Agricultural Economics, Vol. 62, No. 2, pp. 310-318.

Sheppard, James D., 1967. "Wholesale Cooperative (Retailer-Owned) Grocers: Their Operating Methods and Financing." Unpublished thesis, Rutgers State University.

S.I.C., D.G.E. IV Censo Comercial, 1960, Mexico, 1965; VI Censo Comercial, 1970, Mexico, 1975.

Silva, Alvaro y Juana Guerra, 1981. "Estructura Actual del Sistema de Distribucion de Alimentos en Mexico." Programa de las Naciones Unidas para el Desarrollo, FAO, Project MEX/77/006.

Sosnick, Stephen H. "Toward a Concrete Concept of Effective Competition." Giannini Foundation Paper 283.

Sosnick, Stephen H., 1964. "Operational Criteria for Evaluating Market Performance." Chapter 6 in Market Structure Research, edited by Paul Ferris. Iowa State University Press.

Spiller, Earl, 1977. Financial Accounting: Basic Concepts. Richard D. Irwin, Inc., Third Edition. Homewood, Illinois.

Supermarket News, December 26, 1960. "Mexico City Supermarket Largest to Date for Area." p. 15.

Supermarket News. November 14, 1960. "Mexican District Denies any Ban on New Supermarkets." p. 24.

Timmer, C. Peter, et al, 1983. Food Policy Analysis. A World Bank Publication, The Johns Hopkins University Press.

Villarreal, Roberta, 1981. "Las Cadenas Voluntarias: Su Papel en el Desarrollo del Comercio." Comercio y Desarrollo, Ano IV, Vol. II, Numero 20.

Voluntary and Cooperative Groups Magazine, August 1971. "Retail Operations Progress Report," pp. 14-16.

Voluntary and Cooperative Groups Magazine, Nov. 1971. "The Nations First Retail Voluntary Chain Organization Celebrates its 50th Anniversary." pp. 25-36.

Wall Street Journal, September 10, 1984. "Mexico's President Answers Critics."

Weston, Fred and Brigham, Eugene, 1981. Managerial Finance. Dryden Press, Hinsdale, Illinois, 7th Edition.

Williamson, O.E., December 1981. "The Modern Corporation: Origins, Evaluation, Attributes." Journal of Economic Literature, pp.1537-1568.

World Bank, 1983. "World Development Report 1983." Oxford University Press.