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ABSTRACT

URBAN MARKET PROCESSES
IN RECIFE, BRAZIL

By

Robert W. Nason

Though there have been many approaches to economic development, the urban rural relationships between agriculture, industry, and consumers through the marketing system have often been ignored. Thus, the marketing linkages within the economy of selected Latin American countries has become the topic of a large-scale research project sponsored by the United States Agency for International Development. This thesis, as part of the above total project, reports on the research carried out on consumers and in the urban marketing system for foods in Recife, Brazil.

The purpose in studying these populations was to understand the functions, institutions, and environment of the system members. This documentation then formed the basis for the analysis of the important question of how to induce changes in the system so that it transmits demand to the producers and stimulates efficient flows of goods to consumers in response to their demands.

Thus, by nature, this work took the form of a diagnostic study.

The data used in this study were obtained from exploratory interviews, surveys of consumers, retailers, and wholesalers and special studies.

The major findings of this research deal with the adequacy of the present distribution system, the possibility of change within the system, and the strategy that is implied to bring about that change. It was found that the few large-scale, self-service retailers had consistently different characteristics and market behavioral patterns than the bulk of the traditional participants. The evidence collected indicates that the traditional urban distribution system which is largely made up of many very small units cannot spontaneously amass capital to change its technology of operation and does not generate competitive behavior. On the other hand, the few large self-service retail units do amass capital, do use it to change the technology of their operations, and do act as if they are in a competitive environment.

The large self-service retailers had lower selling prices for higher quality products than the rest of the retailers. For example, the large self-service retailers sold higher quality manioc flour for 8.3 per cent less than the total retail average price.

The first effects of vertical integration and coordination stimulated by these large retailers was

visible in price reductions at retail. One self-service store was integrated through the milling process in rice and priced higher quality rice 15.4 per cent below the other non-integrated, large self-service retailers.

Further, many of the very small retailers used credit weekly at annualized rates of interest up to 774 per cent. The large retailers used very low-cost credit.

The spoilage caused by the present marketing system imposes a tremendous cost on the economic system. For example, 25 per cent of the fruits and vegetables that were handled by the traditional retailers spoiled such that they could only be sold for cost or less. In addition, 12 per cent could not be sold at any price.

The consumer research indicated that the median per capita income was $160, and 53 per cent of this was spent for food. Prime reasons given by consumers for use or non-use of specific retailer types were locational convenience and level of price. There is every indication that consumers will shift to the retailers that serve their needs with the higher income, more educated consumer tending to change more readily.

Finally, this work presents a recommended strategy for inducing change in the urban distribution system by fostering increases in the scale of retailing at all levels, by promoting competitive retail behavior, and by encouraging vertical integration and coordination.

URBAN MARKET PROCESSES

IN RECIFE, BRAZIL

By

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PREFACE

This thesis is part of two research projects on the role of marketing in economic development. The first is the Latin American Food Marketing Study under the guidance of Dr. Charles C. Slater, Professor of Marketing; Dr. Harold M. Riley, Professor of Agricultural Economics; and Dr. R. Vincent Farace, Assistant Professor of Communications. The first phase of this research project, sponsored by the United States Agency for International Development and contracted by Michigan State University, was carried forward in Puerto Rico during the period of June, 1965, to June, 1966. The second phase of this contract, of which this thesis is a part, was built on the work done in Puerto Rico and was conducted in Recife, Brazil, during the period of September, 1966, to December, 1967.

The second project, the Latin American Market Planning Center, was likewise contracted by Michigan State University from the United States Agency for International Development and fielded in Recife, Brazil, and La Paz, Bolivia, during the period from September, 1966, to December, 1967. Dr. Charles C. Slater was the director of this research as well.

In all three countries, both of these projects received substantial local financial and personnel support which added immeasurably to the interdisciplinary team of researchers from Michigan State University. This team consisted of faculty and graduate students from the Departments of Agricultural Economics, Communications, Engineering, Management, and Marketing.

This thesis is part of the work that was completed in Recife, Brazil. For research purposes, the economy was divided into the following sectors:

Industry, food and non-food;

Rural production of foods;

Rural assembly of foods;

Urban distribution.

This work deals with the urban distribution system for foods and the consumer buying process which logically fits as the end part of the distribution system of foods.

ACKNOWLEDGMENTS

From the inception of this work, the author was priviledged to have the total support of and guidance of his Doctoral Committee, Dr. Charles C. Slater, chairman; Dr. Harold M. Riley; and Dr. R. Vincent Farace. Each of these committee members contributed greatly to the final manuscript, both through prompt and constructive criticism and through the different interdisciplinary vantage points from which they viewed the thesis. Further guidance was given by Dr. Donald A. Taylor, Professor of Marketing, in the early stages of the research formulation.

Invaluable support was given this research effort by Dr. Ferdinando de Oliveira Santos Neves and Dr. Kelly M. Harrison, who together were the joint Chiefs of Party in Recife for the project. Further assistance was given by Dr. Leonardo Valadares De Sá B. Sampaio and Dr. Cleto Veras, SUDENE economists, who shouldered much of the responsibility for coordinating the field research operations.

The broad scope of this research could not have been achieved without the dedicated help of three Brazilians. These three young people not only carried

forward the research in all aspects, but did so in a spirit of mutual dedication. My heart and thanks go out to Lúcia Maria Pessoa Santos, André Pereira da Silva, and Alan Edward Fiore.

This author is also indebted to the many interviewers who, in trying conditions, carried forward the data gathering phase of this research. Special thanks also go to the Instituto de Pesquisas Econômica for making such high-caliber interviewers available to the project.

Sincere thanks are due Mr. Gordon Noel Paterson who, as administrator, spent long hours keeping the office support functions at maximum efficiency as well as the right funds in the right place when needed. Without his help, the first questionnaire could not have entered the field.

Finally, a debt of gratitude is due the author's wife, Leslee, who not only directly contributed to the research process by editing and proof-reading, but contributed understanding and support which are so vital to completion of the work.

Any errors of fact or logic are the sole responsibility of the author.

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CHAPTER I

THE MARKETING PROCESS IN DEVELOPING SOCIETIES

Introduction

There are at least four major viewpoints on the process of economic development and development strategy.[1] The first viewpoint places emphasis on investment in infrastructure as a necessary condition for sustained development. This investment involves such areas as lines of communications, transportation, power, etc. Much of this kind of infrastructure is necessary; however, much also gets channeled into what John Kenneth Galbraith calls "Symbolic Modernization," where impressive infrastructure (capitals, airports, etc.) partially supplant the necessary infrastructure.[2] The second viewpoint emphasizes the imposing of industrial investment in conjunction with infrastructure build-up. As Heilbronner notes, the goal of development is ". . . the deepening flow of incomes

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[1]For an historical development of thought on economic development and growth, see: Latin American Studies Center, Food Marketing in the Economic Development of Puerto Rico (East Lansing, Mich.: Latin American Studies Center, Michigan State University), in press. Chapter I.

[2]John Kenneth Galbraith, Economic Development (Cambridge, Mass.: Harvard University Press, 1964), p. 4.

and the widening flow of production . . .,"[3] which is to say the goal is the increasing of per capita income and production. As industrialization gains momentum, four factors become clear. These are noted by Rostow in his book, View from the Seventh Floor.

> First, there is some industrial capacity, usually developed to substitute for the import of certain kinds of consumers' goods . . . This both saves foreign exchange and permits industrialization to begin, and it is no great trick to market for a rich urban middle class.
> . . . . . .
>
> The second characteristic of these countries is that, leaving the textiles aside, the market for these manufactured goods is small; and there is a tendency for industrialization to slow down, once the substitution for imports has mainly taken place.
> . . . . . .
>
> A third characteristic of such countries is that, although some agricultural development is taking place, the gap between rural and urban life is widening.
> . . . . . .
>
> Finally, as a result of this imbalance, men and women move from the countryside to the cities, where often they remain unemployed and impose a burden on government budgets for housing, education, and so on, even though they live in urban slums.[4]

Galbraith echoes these first two points by noting that:

> . . . to the extent that the high incomes of the minority draw development resources into privileged consumption, social differences are widened, and to the strains

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[3]Robert L. Heilbroner, The Great Ascent (New York: Harper & Row, Publishers, 1963), p. 53.

[4]W. W. Rostow, View from the Seventh Floor (New York: Harper & Row, Publishers, 1964), pp. 133-135.

associated with poverty may be added those associated with obvious differences in well-being.[5]

The second two points made by Rostow lead to the third viewpoint in the thought and practice in economic development. If urban centers grow, as they are in Latin America and other developing areas, and the rural producer of food remains unchanged, how can the growing non-rural population be fed? Thus, the notion evolved that an emphasis on agriculture must be added to industrialization for development to take place.

> Agricultural progress is equated with the expanding capacity of farm people to play an increasingly effective part in accelerating the national output through supplying their total economy with foods and fibers appreciably faster than population growth adds new mouths to feed. Only as agricultures meet this test of proficient performance do they become capable of enabling an ever larger proportion of the total population to help expand the national output through engaging in non-farm employments, including those which generate the increasingly productive farm technologies and related skills and knowledge, which in turn enable farmers to make steady increases in their productivity.[6]

Although all of these approaches singly or in combination have had important effects on the developing areas, it is evident that few have measured up to the expectations of their founders and implementers.

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[5]Galbraith, op. cit., p. 7.

[6]John M. Brewster, "Traditional Social Structures as Barriers to Change," Agricultural Development and Economic Growth, ed. Herman M. Southworth and Bruce F. Johnston (Ithaca, N. Y.: Cornell University Press, 1967), p. 66.

Why have these programs not fostered more rapid development? There are many possible answers to this question which involve non-economic aspects of the farmer's environment, such as the political, cultural, and social environments; however, a growing group of scholars suggest that the role of the marketing system has not adequately been examined relative to the development process. The marketing system is used here to include the exchange system of transfering property rights, the physical distribution system, and the information system on supply and demand throughout the channel of distribution. No one denies that in the developing economy the agricultural production of foods and the urban consumers are interdependent, as are the urban industrial producers of non-foods and the rural consumer. The links or interfaces between these sectors is the marketing system. However, the generally held view to date is that the marketing system, by definition, must follow the development of the industrial and agricultural sectors and automatically distributes this production if an when it becomes available.[7] On the other hand, the scholars who have studied the marketing system hold that the kind of links in the system, the kind of marketing mechanism, does not evolve in a way that allows

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[7]N. R. Collins and R. H. Holton, "Programming Changes in Marketing in Planned Economic Development," Agriculture in Economic Development, ed. Carl Eicher and Lawrence Witt (New York: McGraw-Hill Book Company, 1964), p. 359.

the distribution of goods to be efficient nor in a way which encourages the growth of the producing sectors. As Collins and Holton note: "rarely . . . is it recognized that industrial and agricultural sectors in turn are dependent on the development of a distributive sector to bridge the gap between producer and ultimate consumer."[8] It seems unfounded to assume that the commercial sector will develop in an optimal fashion spontaneously when these expectations are not held for the industrial or agricultural sectors. Hence, the fourth viewpoint in the evolution of thought on development problems concerns the role of marketing on economic development. It is to this fourth viewpoint that this work addresses itself.

The Role of Marketing in Economic Development

The first person to point out specifically that distribution was of greater importance in the economic development of backward areas than its neglect in the literature would suggest was Holton, following his work with Galbraith in Puerto Rico.[9] This research, which was fielded in 1949 and 1950, tried to assess the distribution system for both foods and non-foods

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[8] Ibid., p. 359.

[9] J. C. Abbott, "The Development of Marketing Institutions," Agricultural Development and Economic Growth, ed. Herman M. Southworth and Bruce F. Johnston (Ithaca, N. Y.: Cornell University Press, 1967), p. 364.

in terms of its present costs and efficiency and in terms of what improvements could be made.[10] Hence, the idea was introduced that the consumers could be better off and the development of the country aided if the marketing system operated more efficiently. This new-found link in development thought was given emphasis by the Report of the Panel on the World Food Supply, formulated by the President's Science Advisory Committee.

> The improvement of food storage, processing and distribution systems in the developing nations is as important as increasing production. The encouragement of private investment to develop facilities for storing, processing and distributing goods deserves a high priority. Governments of developing countries must provide a climate hospitable to the kinds of private enterprises that can stimulate change from a subsistence-oriented farming economy to a market-oriented one.[11]

Thus, the first possible role of marketing in the economic development concerns the improving of the marketing system such that the consumer is better off than before. This is to say that the products that are produced in the rural area move to the urban consumer with one or more of the following benefits to the consumer: with decreased loss and spoilage, in increased more stable volume, and at

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[10]John Kenneth Galbraith and Richard H. Holton, Marketing Efficiency in Puerto Rico (Cambridge, Mass.: Harvard University Press, 1955), pp. 1-4.

[11]President's Science Advisory Committee, "Report of the Panel on the World Food Supply," Vol. II, The World Food Problem (Washington, D. C.: U. S. Government Printing Office, 1967), p. 539.

lower more stable prices.

There has been a good deal of debate since the Galbraith and Holton study on the role of marketing. Most of this debate has revolved around the agriculture sector, although by no means all of it. John C. Abbott sums up the concensus of recent thought on the importance of marketing in development projects by making the following observations:

> (1) Cash returns to producers depend on their goods reaching a consumer. So the success of a project to change a physical production pattern depends on an effective organization to bridge the gap between the producers and the consumers. This gap may be of varying width and complexity.
>
> (2) Detailed market knowledge and research is essential in determining which products to grow and which varieties of these products. Other marketing factors--ease of handling, durability in transport, suitability for processing--also have to be taken into account.
>
> (3) The cost of marketing can cancel out efficiency in production. No matter how suitable an area may be for production and how acceptable the product in consumer markets, if the cost of getting it to those markets takes too high a share of the final price, then production may be uneconomic except on a subsistence basis. Excessive losses in transport to the market, heavy investment and operating costs of equipment and organization to reduce such losses, and high margins and risk allowances due to an inefficient marketing structure are some of the more obvious cost obstacles.
>
> (4) Greatly improved marketing organization may be essential to take full advantage of favorable production opportunities. In many situations there is a need not so much to reduce the cost of marketing as performed at present, but to develop much more elaborate and comprehensively organized marketing systems. For fresh fruit and vegetables, for example, these must often include uniform and precise grading, packing, temperature control in transit, timing and adjustment of total quantities delivered to particular markets, and consistent and thorough sales promotion.

> (5) Distributive organization to furnish production supplies and consumption requirements is also needed. If fertilizer, insecticides, farm machinery and tools are not readily available at low cost, the agricultural production targets on which a project is based may never be attained. If a suitable range of consumer goods is not obtainable conveniently and inexpensively, then settlers accustomed to a fairly high level of living are likely to be dissatisfied and to come under family pressure to leave the project area. Where settlers come from near-subsistence environments, maintenance of an attractive and varied display of consumer goods at a range of prices can be a major stimulus to productive effort. There may be little incentive to obtain income beyond subsistence needs where the prices of the next rank of consumption items seem very high or the goods which normally occupy the next rank--textiles, domestic hardware, cheap jewelry and ornaments--are unknown and unavailable.[12]

The above list which applies equally to development of areas where specific area development projects have not been instituted, placed forward the second important concept beyond that of simple marketing efficiency, namely that the marketing system may be able to positively influence the producers to provide increased flows of products, at lower costs for better quality, and in better alignment with the market needs. There are two aspects of this influence on producers which need to be noted: The first is that the marketing system influences the production of goods, kind, and amount. The second notion is that the marketing system can supply production inputs and incentives in such a way as to facilitate production expansion and improvement. Hence, the marketing

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[12]John C. Abbott, "Marketing and Area Development Studies," Toward Scientific Marketing, ed. Stephen A. Greyser (Chicago, Ill.: American Marketing Association, 1964), pp. 425-426.

system on either side of production can influence the kind and amount of goods produced.

Rostow, in his book View from the Seventh Floor, places these roles of marketing in perspective in what he calls a "national market" by developing a four-point national strategy.[13] "The four elements are these: a build-up of agricultural productivity; a revolution in the marketing of agricultural products in the cities; a shift of industry to the production of simple agricultural equipment and consumers' goods for the mass market; and a revolution in marketing methods for such cheap manufactured goods, especially in rural areas."[14] He further emphasizes that these four elements must be carried forward simultaneously.[15] Thus, the national market concept indicates that economic development involves the flows of goods between urban and rural areas in an internal interlocking marketing system that allows the urban and rural areas to be interdependent and mutually reinforcing in their areas of comparative advantage. Rostow's notion of production for mass consumption is paralleled closely by what Galbraith calls the "Popular Consumption Criterion" for development, where development is organized around the present and prospective consumption require-

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[13]Rostow, op. cit., p. 136.

[14]Ibid.

[15]Ibid.

ments of the typical or model consumer.[16]

The potential role of marketing in economic development can be summarized simply by noting that producers must sell their products through a marketing system to the ultimate consumer, and they must procure their inputs to their production from some factor marketing system. Changes in the factor market which make it easier and cheaper to acquire factors of production may induce a production response. It should be noted that incentive goods are included in this flow of products to the producers. On the other side of the producer, changes in the marketing system may provide production incentives and/or consumer benefits. Usually both effects go together.

With this general background in mind, it is useful to narrow the scope of the problem and move ahead with more detailed evidence that the critical relationships stated above have some merit. The first limit, which has already been implied, is one of extent. Under no circumstance is marketing viewed as a whole solution to the development process; merely what is suggested is that marketing has a role to play along with the other approaches to development. A balanced growth strategy is thus implied. Second, because the supply of food has

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[16]Galbraith, op. cit., pp. 10-11.

such an impact on the economy, over half of the urban consumers' income is spent on food and almost all of the rural population produce food, this study will be limited to food distribution. Third, though the factor market of the agricultural producer is important and there are several possible ways that marketing can help him improve his production and quality, the results of the past efforts on improving the farm technology, trying to help the farmer use better inputs and methods of farming, have in many cases been disappointing.

Thus, it seems germane to look elsewhere for additional reasons for the agricultural non-response. This is not to say that the input side of the agricultural producer is not important, but to say that by itself it cannot solve the non-response problem.[17] Thus, the system of food distribution that lays between urban demand and farmer production will be discussed below.

The Distribution System for Foods from Farm to Consumer

What is the role of the distribution system for foods in encouraging farm production and innovation?

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[17]For an analysis of the input marketing variables to the farmer, see: Donald Walter Larson, "A Diagnosis of Product and Factor Market Performance in the Bean Industry of Northeast Brazil" (unpublished Ph.D. dissertation, Michigan State University, 1968), Chapters 4 and 5; and Latin American Studies Center, The Market Processes of Recife, Brazil, and Its Food Shed (East Lansing, Mich.: Latin American Studies Center, Michigan State University), in press.

There are two degrees of answers to this question. First, the implication of Rostow's framework is that if the distortions in the system were removed and the products could flow more smoothly to the ultimate consumer, then the producers would respond with increased production; i.e., the marketing channel is in itself a barrier to production.[18] Abbott carries this logic a step further by outlining two basic requirements of the marketing structure so that market demand provides production incentives at the farm.

> (1) Reasonably stable prices, i.e. without discontinuous intra- or inter-seasonal changes, at a remunerative level. Unless farmers have confidence that prices will bear some minimum relationship to costs, they will hesitate before incurring additional work or expense to increase their output or raise its quality.
>
> (2) Adequate marketing channels and facilities. The marketing system should ensure that growing urban demand, stabilized prices, and differentials for quality at the processing or consuming level are actually reflected in profit incentives to the producer and not lost en route.[19]

In reference to marketing facilities and organization, Abbott spells out the kind of blocks to production, "Owing

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[18]Walt W. Rostow, "The Concept of a National Market and Its Economic Growth Implications," Marketing and Economic Development, ed. Peter D. Bennett (Chicago, Ill.: American Marketing Association, 1965), p. 15.

[19]J. C. Abbott, "The Development of Marketing Institutions," Agricultural Development and Economic Growth, ed. Herman M. Southworth and Bruce F. Johnston (Ithaca, N. Y.: Cornell University Press, 1967), p. 365.

to poor transport facilities, high margins and risk allowances due to an inefficient marketing structure, or other cost factors, production for market may be uneconomic; marketing costs take too high a share of the final price."[20]

The second level of answer to the question of the role of the distribution system in encouraging farm production is that, beyond simply not being a barrier to production, it is an incentive in its own right. This view has been taken by Collins and Holton after their studies in southern Italy in 1962-63 where "it became apparent that changes in the organization of marketing might be necessary if changes in production were to be realized in an underdeveloped area and that marketing might be the leading factor in encouraging changes in the production sector."[21] They further state "that building the distributive capacity stimulates the productive sector to supply the desired product mix."[22] Although the Sears development in Latin America is not agricultural, its effect on the economy and production is worth noting. The producers of consumer goods can be visualized as farmers and the inception of a Sears store searching for supply is not unlike the innovation of large low-margin retailers in an urban area. The stabilization of the market

[20] Ibid., pp. 365-366.

[21] Ibid., p. 365.

[22] Collins and Holton, op. cit., p. 366.

for producers, the installation of standards of products, and the managerial talent that moved back in the channel to the producers had a profound effect on them. "In Peru, Brazil, Colombia, Mexico, Venezuela, and to a lesser degree Panama, Costa Rica, and El Salvador, the establishment of a mass distributor has made possible more efficient production, improved product development, lower selling prices, expanded markets, and enhancement of the local economy."[23]

The difference between these two degrees of marketing participation in economic development is summarized by Collins and Holton.

> The discussions of distribution in development plans generally focus on removing the obstacles in the marketing process. This implies, however, that the distributive sector plays only a passive role in development, whereas it can under certain circumstances play a very active role by changing demand and cost functions in agriculture and manufacturing in such a way as to encourage their expansion.[24]

Production Response

The above concept is based on the assumption that producers as well as channel members do respond to the changes that occur in the distribution system that reaches

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[23]John F. Gallagher, "Markets as a Basis for Industrial Development," The Challenge of Development, ed. Richard J. Ward (Chicago, Ill: Aldine Publishing Co., 1967), p. 318.

[24]Collins and Holton, op. cit., p. 360.

toward the market; i.e., if the risks and uncertainties of such eventualities as spoilage, low price, cheating, fluctuating prices, fluctuating volumes, etc., are reduced, then the farmer or channel member would adjust his use of inputs to produce or handle more products more efficiently. There are many scholars who believe that this modernization response is blocked by factors other than a rational consideration of inputs versus the market.[25] Some of these scholars feel that those in the traditional economy have a distaste for work and a liking for leisure, others believe the master servant relationship has eliminated any technological creativity, and still others see low-level achievement motivation as the cause. Further, other scholars feel that the lack of an independent-experimental frame of mind is responsible, while others suggest that the social structure and rules limit the interpersonal bonds to family and kinship groups, and, finally, some have pointed to the idea that social striving is not connected to technological progress.[26]

It is not the purpose of this work to refute the above positions, but to suggest, along with some scholars, that maximization behavior, the seeking of increased

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[25] A summary of current theories and notions on the process of modernization and innovation can be found in: Latin American Studies Center, Food Marketing in the Economic Development of Puerto Rico, Chapter I.

[26] Brewster, op. cit., pp. 67-68.

well-being, which results in responses to the market factors, is also an important force in blocking the modernization responses of traditional system operators. W. H. Wiser and C. V. Wiser, in their book Behind Mud Walls, 1930-1960, point out that the major barrier to the use of new practices is the perceived risk and uncertainty of failure which combines the cost of the new practice, as well as the possible loss of production.[27] Brewster explains the above risk as follows:

> So close is life to the bone that their impulse to take a chance on gaining a whole loaf from new and untried techniques is inhibited by anxiety over losing the crumb they feel sure of getting from their old practices. And this progress-blocking anxiety stems from sound economic sense. For innovations carry an immense risk for the uninitiated, and the risk is magnified by the very poverty they might escape by taking it. Operating at a bare subsistence level, a crop failure or a failure to cover the borrowed money by added harvests would be calamitous.[28]

Maximization, the Profit Motive, and Equilibrium

It is necessary to examine further the concept of maximization. Brewster points out that in all cultures, people seek increasing physical comfort and freedom from anxiety, increasing respect and esteem from others, as well as from within, and ways of relating to one another

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[27] W. H. Wiser and Charlott V. Wiser, Behind Mud Walls, 1930-1960 (Berkeley: University of California Press, 1963), pp. 117-118.

[28] Brewster, op. cit., pp. 67-68.

so that these goals can be accomplished.[29] The question then is, what are the relevant ways of relating the people in the system so that their goals can be moved ahead? Obviously, the market system evolves so that this specialization can take place. Belshaw, in his work Traditional Exchange and Modern Markets, emphasizes that "maximization is a primary and valid psychological assumption," and that in the peasant or traditional marketplace "this takes the explicit form of maximization of returns, expressed in monetary terms."[30] It should be noted that Belshaw indicates that short-term profit is not the only motivation.[31] Belshaw summarizes his analysis in the following way:

> The characterization of primitive and peasant societies as being uninterested in maximization is demonstrably false.
> . . . . . .
> Achievement orientation, maximization, enterprise, and capital investment are not, therefore, characteristics which have to be created de novo, although many theories of economic growth in underdeveloped countries naïvely assume the contrary, and base their arguments upon it. The task of modernization is rather to harness these principles to a new institutional complex, and to put them to work in an altered context.[32]

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[29] Brewster, op. cit., p. 73.

[30] Cyril S. Belshaw, Traditional Exchange and Modern Markets (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1965), p. 77.

[31] Ibid.

[32] Ibid., pp. 96, 109-110.

The next question which must be looked at is what are the implications of maximization at the farm production end of the market system? Theodore Schultz, in his book Economic Crises in World Agriculture, devotes considerable effort to documenting the notion that the traditional farm system is in a state of equilibrium given its environment, sources of inputs, and knowledge. His conclusions are as follows:

> First, farmers in poor countries are in general not inefficient in using (allocating) the agricultural factors of production that they have at their disposal. Their preferences for acquiring and holding wealth, which appear to be essentially the same as those of modern farmers, and the state of the arts to which they are bound, have remained virtually constant for generations. As a consequence, they have long since attained a type of economic equilibrium . . .
>
> Second, when it comes to investment to increase agricultural production, farmers who are bound by traditional agriculture have in general exhausted all profitable opportunities to invest in the agricultural factors at their disposal. This means that the marginal rate of return to investment in agricultural factors of the type which farmers have long been using is low, so low that there is little or no incentive to save and invest. Therefore, economic growth from traditional agriculture is very expensive.[33]

In conclusion, it is hypothesized that the traditional system members have an underlying propensity to react to changes in the economic environment as well as the non-economic environment in a way which optimizes their well-being. It must be remembered that this

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[33]Theodore W. Schultz, Economic Crises in World Agriculture. (Ann Arbor, Mich.: University of Michigan Press, 1966), pp. 43-44.

reaction is also influenced by the ability, resources, and technology at their disposal. The marketing system is, hence, only one part of the influence on the system member, the degree of which has yet to be determined.

Summary

In summary, there are two hypothesized roles that the marketing of agricultural production performs: first, the role of efficient distribution of foods to consumers which may lead to lower prices of foods in relation to quality, and, second, the role of marketing in stimulating better and more plentiful production, thus possibly reducing the production costs per unit of output in relation to quality and improving the product mix that reaches the market. These are laudable objectives in themselves, but the question of how they are operationally achieved needs to be asked.

A Strategy for Marketing Rationalization

It is one thing to state that marketing has relevance to the development process, but it is quite another thing to indicate how the ideal structure and functioning can be achieved. It is easy to expound that marketing has a role to play, yet the question of how a country or region moves toward a modern market from a traditional system is awesome. It is to this awesome question that this analysis must turn, and it is to this question that

a realistic answer must be devised. This question has two parts: first, what changes can be made to reduce the market risks and uncertainties relative to opportunities in the channel of distribution which block the desired behaviors of the market participants; and, second, how can these changes be brought about in the northeast of Brazil?

The Traditional Marketing System

As will be documented in Chapter III, the traditional urban distribution system is made up of small operators. These operators buy from small operators who usually in turn buy from small operators, and so goes the channel until the producer is reached. Some channels are short, small producer to small retailer to consumer, while others are very long and involving six or eight steps. The evolution of this system follows a simple path. At first, the subsistence farmers sell in town only their occasional surpluses when they harvest their crops and in times of non-harvest buy from other farmers who are in a harvest period.[34] As urban areas grow, traders form who buy and sell the farm surpluses and in many cases move the goods to other market locations.[35] The surplus of the subsistence farmers moves

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[34]Belshaw, op. cit., pp. 56 and 57.

[35]Ibid., pp. 55, 56, 81.

toward the urban areas in this way and, as the demand in the urban areas increases, more and more small traders enter the distribution process.

Channels become more complex but their basic nature does not change as the complexity is due to the addition of more small operators. Because the technology of distribution remains relatively constant due to the small nature of the traders, the volume soon outstrips the technology and the distribution system does not have the capability to accumulate capital.[36] Zimmerman furthers this analysis to include the system in ability to change its technology.

> We have already seen that under pure competition the sum of the marginal product of labor times the number of labor units, plus the marginal product of capital, multiplied by the number of capital units equals total production and that therefore the sum of the two elasticities must be equal to 1. Hence only one conclusion is possible: pure competition is incompatible with technical progress.[37]

The small producer and channel member faces the risks and uncertainties in his environment which include the distortions (fluctuations of price and volume, spoilage, etc.) in the market in front of him and the distortions of supply behind him, as has been noted. The risks caused by these distortions are so large relative

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[36] Ibid., p. 83.

[37] L. J. Zimmerman, Poor Lands, Rich Lands: The Widening Gap (New York: Random House, 1965), p. 145.

to the resources of the operator that they seem overwhelming and insurmountable, which in fact they are. If the small operator mustered up all his resources, he could not influence these distortions and would then face the alternative of starvation for his family and himself. Unless he begs for mercy from his relatives and friends, he cannot survive in the face of failure, as there is no welfare system.

Hence, given the traditional structure of distribution and production, there is no point where the system spontaneously seeks improved technology as the possible costs dwarf the possible returns leading to reinforcement of the traditional system and its proliferation at constant technology. Even where improved technology has been provided by development agencies, the small operators have refused to accept it, and for good reason.[38] Abbott reinforces this conclusion by noting that "the large number of small, independent enterprises involved in the production and marketing process in many developing areas makes difficult the achievement of rapid, simultaneous improvements in output and quality of farm products and in the prices obtained for them . . . At the other end of the chain, the small scale of operations and diffuse organization of retail enterprises is a

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[38]Schultz, op. cit., p. 39.

comparable obstacle."[39] What can be done to break this stalemate in technological progress?

Forces for Change

A number of authors have placed forward various solutions that range from simply ignoring the problem to the developing of cheap quality agricultural inputs which make it worthwhile for the farmer to learn to use them. Schultz takes this latter view and adds the need to have extension agents perform the training and education necessary for use of these new inputs.[40] After so ably defining the nature of the production equilibrium that was presented above, it is disappointing that Schultz seemingly falls into the fallacy that he condemns others of, that is, not seeing all the forces that make the traditional system operate in equilibrium and that hold the technological process at a standstill. Certainly the high profit inputs are important and the educational function is essential to their adoption, but neither can be effective if the market risks and uncertainties between the operator and demand are not dealt with at the same time. Risk, as is used in this work, is defined as any possible occurrence or set of occurrences which have an adverse effect on the decision maker and, from the

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[39] Abbott, op. cit., pp. 381-382.

[40] Schultz, op. cit., p. 47.

decision maker's vantage point, has a known probability of occurrence; i.e., it is possible to insure against the adverse outcome. Uncertainty is the situation where the decision maker cannot describe the outcome with known probabilities. It is because these market forces form a prior condition to change in technology and have been largely ignored in the development process that the emphasis of this study will be concerning this aspect of the environment of the operator.

Barrier Removal

What then is the answer to these risk and uncertainty barriers? There are two approaches which are both necessary. First, it is necessary to study the perceived barriers of all of the system members in an attempt to understand what it is that they feel creates the high risks and uncertainties that block their expansion to use of more efficient technology. This study will attempt to perform analysis on the above question for the urban distribution system.[41] From this analysis

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[41]The same analysis is presented for the rural assembler and producer in Donald Walter Larson's "A Diagnosis of Product and Factor Market Performance in the Bean Industry of Northeast Brazil," (an unpublished Ph.D. dissertation, Michigan State University, 1968); and the Latin American Studies Center report, The Market Processes of Recife Brazil, and Its Food Shed (East Lansing, Mich.: Latin American Studies Center, Michigan State University), in press.

will come an understanding of what changes in the distribution system would be desirable from the point of view of inducing expansion of volume and use of more efficent technology by the operators in the system.

Aggregation

The second approach concerns the ability of the operators in the system to cope with and contribute to the change in the system. It has been previously suggested that the scale of the operators in the traditional system precludes them from participating in the changes spontaneously. Thus, if volume were aggregated, the new organization could use its volume to both combat the distortions in the system and to streamline its own operation. Aggregation is used here to mean horizontal integration, coordination, and growth. The barriers that were restrictive to the smaller operators would be less restrictive to the aggregated unit because of its buying power and ability to pool and accumulate resources. The power thus aggregated is relatively greater than that held by the small traditional operator and is greater relative to the barriers in the system and, hence, can be used to rationalize the channel of distribution. The potential power of the unit is a function of the size of its volume. The use of this power to rationalize the system is what is known as vertical integration and coordination.

Vertical Integration and Coordination

It is useful to dwell a moment on this concept of vertical integration and coordination. It is worthwhile to digress a moment to define vertical integration and coordination. Vertical integration is the term applied to the vertical structure associated with internal coordination whereby two or more stages of the system are joined together in one firm.[42] Vertical coordination is the linking of stages in the system between two or more firms through information exchange, informal agreements, or contracts.[43] Vertical integration and coordination are the result of a powerful channel member who feels that he can gain competitively by using his resources and power to obtain better, more reliable, lower cost sources of supply, and better distribution of his products to the ultimate consumer. There are two key notions in the above statement. First, the channel unit must want to improve his operation. This means that he feels a competitive force in the system and wants to survive and prosper in this competitive atmosphere. If he did not feel the force of competition, there would be

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[42]Ronald L. Mighell and Lawrence A. Jones, Vertical Coordination in Agriculture (Washington, D. C.: U. S. Dept. of Agriculture Economic Report No. 19, U. S. Govt. Printing Office, February, 1963), p. 10.

[43]Ibid.

little incentive to change and vertically integrate or coordinate. Thus, competition is the driving force which causes the desire to improve.

The second factor is the ability to cause vertical integration and coordination. As was noted, volume is one key to gaining vertical integration and capital resources is the other. Capital accumulation is also a function of size. Thus, the greater the size within the limits of maintaining aggressive competition, the greater the ability of the unit to bring about vertical integration and coordination.

Scale Economies

The other side of the aggregation argument needs to be briefly presented. One of the striking diseconomies of the traditional marketing system is the poor condition that the product reaches the market (see Chapter III). This fact is especially true for the highly perishable foods which are almost exclusively handled by the traditional marketing system of small operators. If steps are to be taken to preserve quality, i.e., if truck transportation, refrigeration, protective packaging, and adequate storage are to be used, the whole scale of operation must be shifted upward for economical operation.[44] In terms of the efficiencies of modern practices such as

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[44]President's Science Advisory Committee, op. cit., p. 540.

truck load transportation, bulk handling, grading, etc., large-scale units are necessary as well. Hence, increased scale operations not only allow vertical integration and coordination, but internal efficiency of the channel members. As the internal efficiencies are fostered by vertical coordination and vice versa, the performance of the total channel is accelerated.

There is one caution that must be sounded. Aggregation and the use of modern technology not only afford the opportunity for better distribution, but cost a great deal of capital in terms of buildings, trucks, equipment, etc. These costs must be weighed against the benefits to the system.

Location of Aggregation in Channel of Distribution

The next question that must be asked is where in the channel of distribution should this aggregation process be fostered? Though there is no certain answer to this question, there are some factors to consider which, when applied to a given situation, indicate the location of best advantage. First, channel members including producers tend to look toward their markets as a critical barrier to expand,increasing their volume and efficiency. Pointed out earlier was the prohibitive effect of the unstable demand and the kind of risk that the small traditional operator feels in the face of this unstable

market. Thus, it stands to reason that it is safer to invest in better methods if a stable demand is clearly visible, than it is to try to develop a better, more stable source of supply in the hope that it can be sold on the market for a profit. This is not to say that both forces are not important, but to say that the demand side possibly has a prior veto power on the channel member. The conclusion that can be drawn from this situation is that the closer that aggregation is to demand, the easier it will be accepted because the consumer demand is imminent and visible. Aggregation at the closest point to demand then might provide a stable market one step removed from the demand and, hence, may induce aggregation two steps removed from demand and so on back up the channel to the producer.

This process can be likened to a river with a series of dams along it. The consumer is represented by the ocean and the dams represent the inefficient channel members and barriers. The producer whose objective is to get the water to the ocean sees this series of blocks and distortions. If he produces more water, it likely gets blocked by the dams in front of him and he likely becomes discouraged. The same is true for the channel members near the producer. If they improve their operations, it just likely gets backed up at subsequent dams. However, if the dam nearest the ocean is removed, then

the second dam has a clear channel to the demand and may be induced to work to take advantage of that demand, which reduced that barrier, and so forth. This analogy illustrates the possible effect on vertical coordination of aggregation at the retail level. Further, not only are the barriers to channel members possibly reduced, but the now larger retailers might use their increased volume to force a response from their suppliers or to vertically integrate the suppliers' functions into their own organization. These influences of the initial retail aggregation then can work sequentially back toward production.

It has been noted earlier that competition is the driving force which compels the retailers to use their power to rationalize the channel. Competition can be lessened in terms of technical innovation in two directions. First, as stated previously, if the unit is too small, it cannot innovate. Secondly, if the units grow too large and thus too few in number, they may find it easier to collude or price fix than to lock horns in competition. Thus, some degree of monopoly behavior may occur. The channel level closest to final demand has the greatest opportunity to aggregate without this danger of monopoly behavior because of the concentrated demand of the urban setting. This is to say that there is room for many large retailers in the urban centers because of the close proximity of the consumers to one another and the

sheer size of the damand. Hence, the second factor to consider is the possibility of over-aggregation and monopoly. The conclusion is that the further back in the channel the aggregation occurs, the more likely monopoly power could exist because the suppliers and customers are separated by physical distance and specialization in products. In the assembly process, for example, one assembler could aggregate to the point that he could control a geographical area of production for one commodity and thus have a partial monopoly.

A third consideration which is important is to take advantage of the units in the system where aggregation has already taken place to some degree and where aggregation might be easier to foster. Aggregation typically takes place in the urban area which, in general, is more modern than the rural areas. This means that some retailers and wholesalers already have greater size than most traditional channel members, and that they, as a group, would be more willing to modernize due to the influence of the urban area and of urban living. However, food processors may or may not be centered in the urban area. Almost by definition, food processors have to obtain some aggregation before they can use the equipment for processing efficiently. Thus, processors are prime points for encouraging vertical integration and coordination as well.[45]

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[45]Abbott, op. cit., p. 381.

In conclusion, the retail level has the best advantage for aggregation; but depending on the level of development of the system of distribution and the kinds of institutions, wholesalers and processors may have advantage as well. Also, depending on the local conditions, one or more of these institutions might be appropriately developed as the focal point of the channel rationalization.

Summary of Marketing in Economic Development

In summary, this chapter has presented the notion that the marketing must play an important role in linking the system of rural production to urban markets and urban production to rural markets in a mutually reinforcing interdependent system of flows of goods and demand information. Further, the role of the marketing system was to remove the blocks to efficient flows on the demand side as a precondition to production responses by channel members and producers of foods. It is not held here that production responses would necessarily occur automatically, but that the operators in the system would be more susceptible to using the changes in technology that they have refused to use in the past. These changes would be brought about by the forces in the factor market, education programs, and forces in the demand side channel.

The result of these changes, however, are not only a production response from producer forward, but a

decrease in the price level for foods which results from the change process. This change in prices benefits the consumer in terms of an increase in real income which allows him to purchase more food and non-food goods, thus increasing the demand for both. This demand increase gives further impetus to the development of the food sector and provides a wider market for non-food goods.

The mechanism for instituting the reforms in the marketing system is the aggregation of volume and capital to create a competitive jockeying for success which would lead to vertical integration and efficient operation in the total channel. Though the aggregation might be fostered at any point in the channel, for many situations the retail level holds promise because it is adjacent to ultimate demand. It is in the urban centers where aggregation and modern ways are more prevalent, and it is the level where the most constructive competition can evolve. The essence of this argument is summarized by John Mellor when he noted that "an obvious precondition to increase in agricultural production is development of an environment in which enough of the proceeds of increased production go to the farmer decision maker to provide incentive to him."[46]

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[46]John W. Mellor, "Toward a Theory of Agricultural Development," Agricultural Development and Economic Growth, ed. Herman M. Southworth and Bruce F. Johnston (Ithaca, N. Y.: Cornell University Press, 1967),p. 48.

Further, Rostow states that he is "confident that the modernization of marketing arrangements from the farm to the city is a crusade we can enter with a conviction that the benefits will far outweigh the costs in readjustment."[47] Finally, it is important to reiterate that marketing alone is not a total solution but part of the strategy to development. Hoselitz points out "that increasing numbers of market-oriented individuals in a society may provide a strong stimulus to economic growth, but whether strong enough to overcome the impeding factors in the social structure and perhaps in the ecology of a society is difficult to say. . ."[48]

Role of Marketing in Perspective

This chapter so far has been concerned with the description of the development process and one kind of prescription which is hypothesized to aid the development process. It is useful at this point to attempt to bring these notions together to show the expected results from the prescription. Figure 1.1, which is based on the combined thinking of this research team, but especially that of Dr. Charles C. Slater, presents this hypothesized

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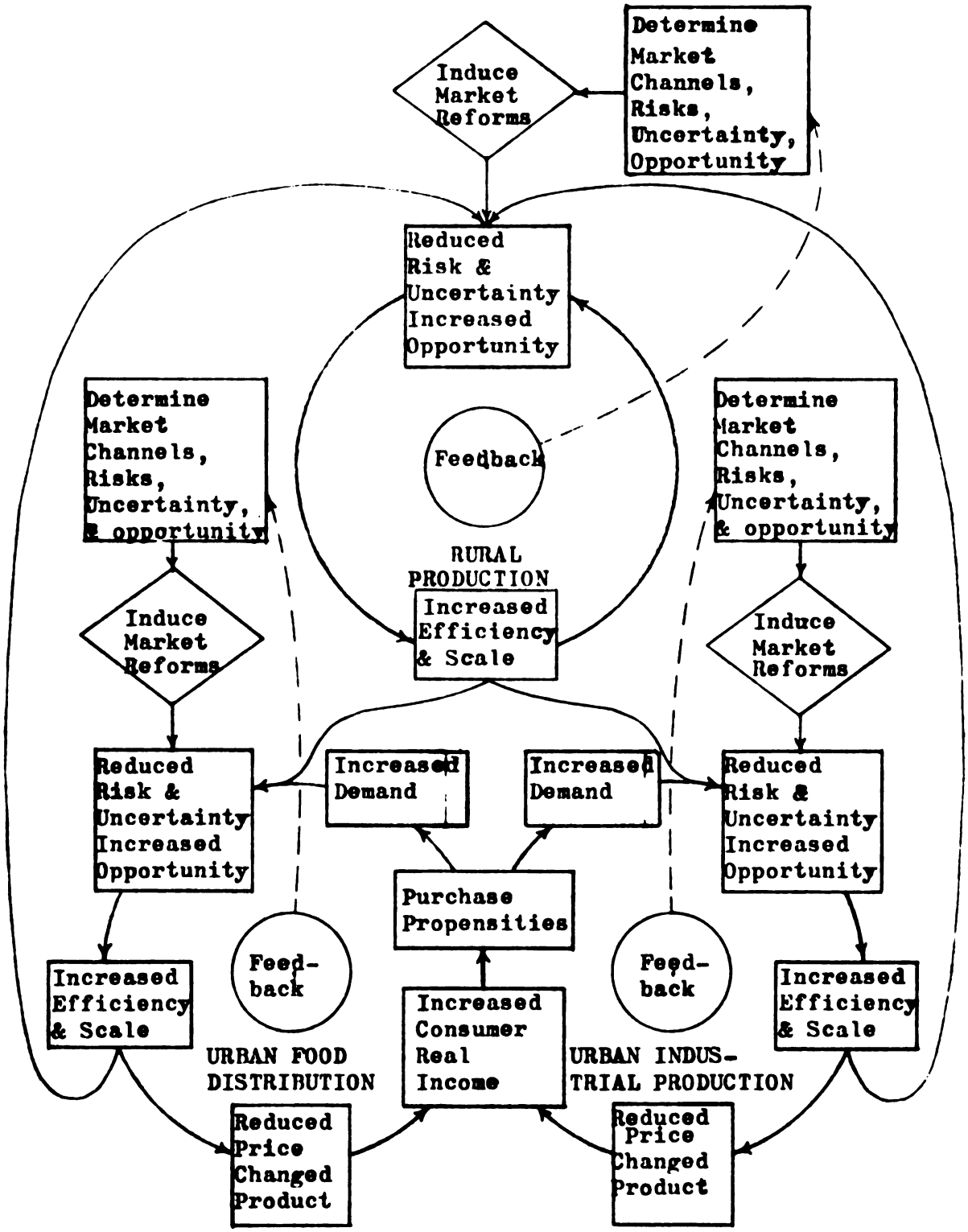
[47]Rostow, "The Concept of a National Market and Its Economic Growth Implications," p. 16.

[48]Bert F. Hoselitz, "The Market Matrix," Labor Commitment and Social Change in Developing Areas, ed. Wilbert E. Moore and Arnold S. Feldman (New York: Social Science Research Council, 1960), pp. 235-236.

FIGURE 1.1

INDUCING INTERNAL NATIONAL

(REGIONAL) MARKET DEVELOPMENT



flow of change stemming from an emphasis on the distribution sector of the economy.[49]

The first step in this description of change is to understand the marketing system. This is a research step. It is necessary to know the flows of goods and services and information through the various channels of distribution, the characteristics and behaviors of the various channel members, and the technical practices in use, such as grading, method of handling goods, processing, etc. Once the description of the marketing system is understood, then the research can turn to the analysis of the reasons why the system does not perform more efficiently. This analysis tries to understand the perception of the channel members as to the opportunities that exist and the barriers that keep them from taking advantage of the opportunities. These barriers are perceived risks and uncertainties which make the expected cost of change to take advantage of the opportunities greater than the expected benefit of that change.[50]

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[49]Charles C. Slater, "Marketing Processes in Developing Latin American Societies," to be published in Journal of Marketing, XXXI, No. 3 (July, 1968).

[50]Vincent R. Farace and Thomas R. Webb, "Communication and Marketing in Latin America: A Preliminary Conceptualization," paper presented to the International Communication Division, Association for Education in Journalism, Iowa City, Iowa, August 28-September 1, 1966, page 12.

With this knowledge, the second step can be considered. It is hypothesized that if the perceived opportunities relative to risks and uncertainties are increased, or perceived risks or uncertainties are reduced relative to opportunities, then at some point the channel member would perceive a net benefit in change and would then take advantage of the opportunities, i.e., he would change. There are several ways of changing the channel member's perception of this risk-uncertainty opportunity relationship. First, this perception is based on the member's ability. This is to say that managerial talent, financial resources, environmental control, internal efficiency, etc., all play a role in the channel member's perceptions as to what he can do and not do. Hence, training and financing programs increase the member's ability to act and thus change his perception of the risks and uncertainties that face him relative to his opportunities. This point has been noted as key earlier in this chapter.

The second way of changing the risk-uncertainty-opportunity relationship is to change the environment of the channel member such that he perceives a lowering of risk and uncertainty and/or an increase in opportunities. Changes in the kinds of marketing distortions mentioned in this chapter provide an example of this kind of barrier; examples are uncertain transportation, uncertain spoilage, uncertain prices, etc.

In summary, the marketing reforms deal with the laying of adequate infrastructure so that improved marketing technology can be injected into the system to adequately capitalized recipients. Market reforms thus must insure that the marketing system members have the foundation to take advantage of the reduced perceived risks. I.e., risks and uncertainties are relative to opportunities and capabilities of the system member affect both.

There are a number of places in the system where risks and uncertainties and opportunities could be attacked by reforms in the system. These are noted in Figure 1.1 at the top of each circle. However, this chapter has built a rationale for inducing market reforms in the urban distribution system, and thus the effects of this approach will be examined. Again, it must be stressed that this is not the only good approach to the problem, but is one which seems to have merit beyond the emphasis given it to date. A development program should be a balance of reforms in all three sectors. In conclusion, step two is a program move by a developmental agency to change the risks and uncertainties of the urban distribution channel members in relation to their perceived opportunities.

The remainder of the diagram outlines the postulated results of these reforms instituted in step two. The kind of reforms obviously dictate the kind of response

but if the logic of this chapter is traced into reforms (see Chapter VI for detailed reforms), the diagram represents the expected outcome.

1. The reforms reduce the barriers to scale and efficiency increases at retail and increase the ability of the retailers to make scale and efficiency changes. The reforms reduce uncertainty and risk in the market system and provide capital, technology, and infrastructure to aid the scale and efficiency responses.
2. These changes at retail have two effects:
   A. The scale and efficiency changes lead to lower costs and lower procurement prices which, when passed on to the consumer, result in lower consumer prices. It should be noted again that the quality, the quantity, and the mix of products might also change. The change in price relative to quality in effect increases the real income of the consumers. This real income increase is then spent on food, non-foods, and is saved and hoarded to some degree. These usages of income vary depending on the income level of the consumers as is reflected in their average propensity to consume food. For poor areas, typically at least half or more of income is spent for food. At any rate, both food and non-food demand is increased, which reduces the risks and uncertainties relative to opportunities that face these two sectors.

B. The second effect of the scale and efficiency increase is to increase the ability and desire for the retailer to vertically integrate and coordinate his channel of supply so that he can obtain lower prices, better quality, and more stable supply. This effort, which is spurred on by the competitive environment in which the retailer operates, reduces the risks and uncertainties relative to opportunities of the producers because there now is a clearer channel to market, less fluctuation of demand, a visable need for more volume, etc. The producer of food is now ready to take advantage of the reform programs that he has been reluctant to use previously. Hence, rural production increases in scale and efficiency stimulate urban distribution further to utilize the new flow of goods. The industrial sector is also influenced because as the production of foods increases in scale and uses new technology, it demands more industrial inputs into the agricultural sector.

3. Finally, two influences on industrial production have been noted. First was the increased demand for consumer goods, which stemmed from the increased disposable income, which resulted from reduced food prices. Second was the increased demand for farm

inputs from the increased scale of the agricultural producers. Both of these demand increases combined to stimulate the industrial production of these goods through the changes in the risks, uncertainties, and opportunities that the manufacturer faces. These manufacturers are thus more willing to use the programs that have been set up to aid the industrial sector and expand scale, efficiency, and employment. Two effects result.

A. The increased efficiency and scale allows the reduction of prices of consumer goods and increases the number employed in industry. Thus, price and income affects the real income of consumers, which then gets split between food and non-food consumption as before. Thus, the reinforcement of the food and non-food sector continues.

B. The increased scale and efficiency of the industrial producers allows them to market consumer goods and farm inputs more aggressively to the expanding rural demand which reinforces the change of the rural producers toward further scale and efficiency gains.

This diagram points out the interrelationship between the reform programs of the three sectors. What is suggested here is that reform in any one sector can have

some effect on development though dampened by the barriers in the other sectors. Further, reform programs in two sectors still get thwarted by the third. Thus, the implication is that all three sector programs must be coordinated into a balanced growth strategy for development.

It is necessary to point out one final aspect of the diagram. As the effects of the various sectors influence the actions of the other sectors, the nature of the risks, uncertainties, and opportunities in all the sectors will change as will some of the institutions. As this happens, it will be necessary to modify the reforms made and institute new reforms not needed previously. This argues for an on-going research feedback system which provides the designers of the programs with information on the success or failure of their actions and on the changes in the system.

Areas of Research on Production Response to Marketing Changes

This conceptual framework raises some interesting questions about the nature of the distribution system and its effects on consumers and producers. The first group of questions deals with the notion that the channel of distribution impedes the response of production to demand for foods.

1. What is the nature of the risks, uncertainties, and opportunities that face the channel members from

producers through retailers?

What is the relationship and proportion between economic-marketing and non-economic risks, uncertainties, and opportunities?

To what extent do adjacent channel members create risks, uncertainties, and opportunities?

To what extent does the structure of the system create risks, uncertainties, and opportunities for the channel members?

Finally, what are the differences in perception of risks, uncertainties, and opportunities of the various channel members at different levels in the system and for different types within levels?

2. How do these perceptions of risks, uncertainties, and opportunities affect the production and distribution of goods to the consumer?

What is the relationship of ability of the channel member to his perception of barriers and his consequent willingness to change his behavior when conditions change around him?

How realistic and sensitive are the perceptions of the various levels of channel members? I.e., if his environment changes, does the perception of the environment of the channel member change in a corresponding fashion?

3. If a production response can be stimulated, to what

extent will it increase the efficiency of the channel members, to what extent will it foster vertical integration and coordination, to what extent will it cause a volume change in the flows of product, to what extent will it cause the mix of products to change, to what extent will it cause the quality of product to change, and to what extent will the benefits of these changes be passed on to the ultimate consumer?

Areas of Research on Consumer Response to Marketing Change

The second group of questions concerns the consumer reaction to the increased flow and the decreased price of foods.

1. To what extent do consumers use the kinds of retail outlets that will pass the price changes on to the consumers? To what extent do consumers buy on a price basis? What are the buying habits of the consumers? What are their needs and desires which the channel of distribution must serve? How do these shopping propensities and behaviors differ for different income levels of consumers?
2. To what extent will consumers adapt to change in the retail structure? To what extent do consumers restrict the market system by their buying behavior so that the market risk remains high? Which consumers

will adapt more readily and which portions of consumers will lag in adaption? Finally, how can consumers be reached to influence their adaption rate of retail changes?

3. To what extent will the changes in real income due to changes in price result in increased spending? What proportions of that increased spending will be on food products and non-food products? What additional savings will occur, and what will be the use of those savings? How do these propensities to spend and save differ for different income levels of consumers?

The above list of questions covers a broad area of analysis which goes beyond the scope of this research on urban food distribution. However, most of the questions have some relevance to the urban distribution system and consumer purchase process and will be dealt with at least in part in the chapters to come.

The Urban Distribution System, Part of the Total Research

Thus far, this chapter has attempted to move from the general role of marketing in economic development through a series of successive limitations to the role of the urban distribution system for foods. This research area and its role was then placed in perspective by looking at the total system a second time. It has been emphasized that this work on the urban distribution system

is only part of that which ought to take place on the total marketing system and the marketing system is only one part of the development picture. It is useful, consequently, to review briefly the history of the total research project and to describe the other segments of on-going research.

In 1965, Michigan State University signed a contract with the United States Agency for International Development to perform a 2-1/2-year research study on the role of marketing in the economic development of selected Latin American countries. This research, under the direction of Dr. Harold Riley and Dr. Charles C. Slater, was first located in Puerto Rico, where the rapid development of the past 15 years was analyzed. After a year had elapsed, the interdisciplinary team of researchers moved to two new research sites in Recife, Brazil, and La Paz, Bolivia, where a second contract with the United States Agency for International Development extended and expanded the research effort.

In Brazil, the research effort started in the fall of 1966, with a team of researchers specializing in agricultural economics, industrial analysis, systems analysis and marketing systems. The research effort was an attempt to study all parts of diagram 1.1, i.e., agricultural production, industrial production, and urban distribution and consumption, and particularly the linkages or interfaces in the system which make it a whole

operating unit. The end objective was to fit all these sectors into a systems model which could then be used to measure the consequences of alternative reform packages. The research presented in this volume, in addition to the major purpose of analyzing the urban distribution system, represents one of the inputs to the total systems analysis.

The Setting: Recife, Brazil

Recife is the largest urban concentration in the northeast of Brazil, with a population of over 1 million people. The Northeast is a nine-state area of presently 25 million people, which during the 17th century prospered as the leading area of Brazil on a slave, sugar plantation economy, and which is formed along the coastal "Zona de Mata" humid area of the Northeast. With the decline of sugar prices, the expanding Northeast population was forced to migrate to the semi-arid interior of Brazil where subsistence and cattle farming became the main economic activity. In the interior of the Northeast where periodic droughts occurred, the population found mostly starvation and misery.

In 1877, the government of Brazil recognized the plight of the Northeasterners and instituted a program of building reservoirs to hedge against the drought. Progress fluctuated over the years until 1951, when President Getulio Vargas revised the program which led

to the formation of the Bank of the Northeast (BNB) as the development agency. With the occurrence of a particularly devastating drought in 1958, an increased emphasis was placed on development with the creation in 1960 of the Superintendency for Development of the Northeast (SUDENE) which supplanted the development planning role of the Bank of the Northeast. Finally, in 1962, the United States started to commit substantial resources ($65 million annually) to the area in response to what it considered a Communist threat.[51]

In Recife, which is the capital of Pernambuco, there is a concentration of the industry of the Northeast. Though this concentration is small, it is diverse and includes such food processing industries as the beverage industry (beer, soft drinks, and milk), vegetable oils industry, meat, fruit, and wheat processing, etc.; such agricultural input industries as fertilizer, farm implement, and irrigation industries; and such consumer goods industries as textiles, furniture, appliances, soap, etc. These industries are small, and Recife, as is the whole Northeast, is dependent on the south for most manufactured goods. Even large quantities of food are transported north to Recife though most comes from the surrounding area.

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[51]This summary of the Northeast of Brazil is based largely on "History of the Northeast," presented in Stefan H. Robock's book on the Northeast, Brazil's Developing Northeast: A Study of Regional Planning and Foreign Aid (Washington, D. C.: Brookings Institute, 1963), pp. 2-4.

The Problem

The central problem is the question of how to induce change in the marketing system so that it transmits demand to the producers and stimulates efficient flows of goods to consumers in response to their demands. Thus, by nature, this study takes the form of a diagnostic study. It does not cover the whole marketing process of the distribution of foods, but is limited to the urban distribution of foods which includes the role of the consumer as well.

As well as looking diagnostically at the urban distribution system, this study will attempt to shed light on some of the questions raised about the market process as was outlined previously. These questions can be restated as hypotheses as follows:

1. The present structure and behavior of the traditional urban distribution system retards the flows of market information from consumers to producers and the flows of products forward from producers to consumers. Market information includes price, quantity, quality, and product mix that are desired and that exist in various market locations. The efficient flows of products can be measured in terms of costs of distribution (margins) and product deterioration and loss.

2. The present traditional urban distribution system cannot improve its performance rate spontaneously.
   A. There are economic barriers that restrict these traditional channel members from increasing volume, quality, and product mix, and lowering prices to the consumers and restrict the flow of market information to their suppliers. These barriers are perceived risks and uncertainties which stem from demand and supply price and volume fluctuations, credit costs, spoilage, lack of information, etc.
   B. The lack of ability and resources restrict the traditional urban channel member from increasing the flows of products and the flows of market information. This is to say that the urban distribution system members do not have the technical and managerial skills necessary nor the financial resources to change their operations. Put another way, these channel members are so small that they cannot amass capital to allow the search for better ways or to allow the use of improved technology if they could find it. Finally, this hypothesis implies that each traditional urban distribution member is so small relative to the barriers that he perceives in the system that it would be economic foolishness

to attempt to change individually with the alternative of loss in the face of no wealth to absorb the loss.

C. There are also non-economic barriers which restrict the traditional system members from increasing their flows of product and market information. These non-economic barriers take the form of internal predispositions which affect the decision process. For example, the traditional urban channel member may believe that his success is controlled by fate or luck, and, thus, there is no advantage in trying to change, as what will happen will happen anyway. Another example is the traditional member may not trust others, and, thus, any change which involves cooperation with others would be shunned.

D. Consumers restrict the spontaneous change of the traditional urban distribution system by their wants, needs, and habits. This is to say that because many consumers are poor and need credit, are without transportation, are uneducated, buy in small lots, and are tied to their usual purchasing patterns, the retail outlets that serve these needs and habits are maintained.

3. Change can occur in the urban distribution system which increases the flows of products to the market

and the dissemination of information on market characteristics.

A. The reducing of market risks and uncertainties and/or the increasing of opportunities that face the urban distribution channel members precipitate a response by the members in terms of increased scale of operation and efficiency.

B. Change can occur spontaneously, which increases the flows of products and information in the urban distribution system, but the change agents and the initial capital comes from outside the urban distribution system.

   1. These larger urban distribution system units perceive fewer barriers in the market system and thus view their environment as being more controllable than do the traditional system members.

   2. These larger units have greater ability than the traditional members, in terms of managerial talent, technological knowledge, and financial resources with which to cope with their environment.

   3. These larger units are less affected than the traditional units by the non-economic barriers mentioned above.

   4. These large units serve the needs and desires

of at least a portion of the consumers better than do the traditional units and, consequently, are able to attract customers away from the traditional system. This is to say that consumers will change where their interests are served. The principal benefit to consumers is that the scale of the larger units allows them to sell at lower prices. Thus, it is implied that some consumers are price conscious.

4. Consumers will spend increases in real income on food and non-food goods in some proportion, depending on their level of income; little would be saved or hoarded.

The purpose of this study is to analyze the urban distribution system and the consumer purchasing process in an effort to bring together an understanding of the interactions and reactions in the system so that meaningful recommendations can be made as to the steps needed to bring about larger scale, more efficient distribution. The purpose of this goal is to aid the economic development of the region. In doing so, it is essential to present evidence on the above hypotheses upon which the contribution of the marketing system is to be measured. This is to say that the above hypotheses need to be demonstrated before the conceptual framework presented

earlier in this chapter can be accepted as valid. Hence, it is upon these two lines of inquiry that this study must embark.

The Methodology, a Summary

Before moving on to the analysis of these inquiries, it is necessary to digress a moment to give an overview of the kind of data which were used and the procedure used in its collection. The data collection can be divided into three phases: depth interview phase, survey phase, and special studies phase.

Phase I, the depth interview phase, consisted of a series of exploratory interviews that were conducted by the Michigan State University research team members. Interviewed were the principal institutions related to the marketing process. This list included government agencies, from the local government to the federal level; private institutions which facilitated or served the market process in some way, such as banks; consumers; and the actual marketers themselves. Over 100 such interviews were taken, with 60 being with the operators in the urban distribution system.

Though no questionnaire was developed for this phase of the research, interview guides were used for channel members to insure that the same areas and relevant areas of information were covered during the inter-

view. Detailed information was gained about eight areas of inquiry.

1. Observational Information.--This area included observations concerning physical characteristics of the business, locational characteristics, functional characteristics, etc.
2. General Operation.--This section included such topics as organizational structure and ownership, history of the business, and operating characteristics.
3. Products Handled.--For each product handled, supply volumes, prices, and conditions were obtained; functions performed on the products were recorded; and selling prices and practices were asked about.
4. Outputs of the Business and Customers.--The characteristics of the customers as perceived by the channel member were obtained as well as the selling practices and behaviors. Communications and advertising practices were acquired. Finally, competition and competitive behaviors were obtained.
5. Inputs into the Business.--Labor characteristics, investment levels and practices, and supplier characteristics and relationships were areas of interest.
6. Change and Attitudes.--This area inquired into the change process within the business and the attitudes and aspirations of the decision makers.
7. Government Influence.--The importance of government influence or lack of influence was asked for.

8. Internal Characteristics.--This area included sales and costs of business, record-keeping methods, family characteristics of the decision maker, etc.

The purpose of this phase was to build a background of knowledge about the system so that the second phase could be developed around the relevant issues and in a manner acceptable to the respondents. The sample for the depth interviews was selected by judgment and the results were not tabulated and reported as being representative of the system. However, the results are used to add insight to the survey data where appropriate.

Phase II, the survey research, was built upon the base developed by phase I. Surveys of three major populations were made: consumers, retailers, and wholesalers. The retailers population was broken down into the following sub-populations: (see Chapter III for definitions of these sub-populations)

1. Street Fairs
2. Public Markets
3. Fixed Fairs
4. Neighborhood Retailers
5. Self-Service Retailers
6. Retail Cooperatives
7. Large Meat Dealers.

Because of the economic and educational differences between these sub-populations, it was necessary to

develop three different questionnaires, though most of the question content was identical between the three. Much of the questionnaire development reflected the work that had been previously carried on in Puerto Rico.[52] The small retailers could not understand percentages, so fractions or proportions had to be used. Street fair operators were given the lowest level questionnaire, which was tailored to the market fair kind of retailing. Fixed fair, public market, and neighborhood retailers were given the middle level questionnaire, which was also adjusted to the fixed location retailing. Finally, the rest of the sub-populations were given the high level questionnaire, which was suited for a more sophisticated respondent. All of the questionnaires were pre-tested at least twice, with the lowest level questionnaire being revised and pre-tested the most because of the difficulty in reaching these respondents with meaningful questions.

The sample design varied for each of the sub-populations depending on the population characteristics, but in all cases met the test of being statistically representative of the sub-population in such a way that the sub-population samples could be combined to form a

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[52]Examples of the retailer questionnaires used in Puerto Rico can be found in John R. Wish's "Food Retailing in Economic Development: Puerto Rico, 1950-1965" (unpublished Ph.D. Dissertation, Michigan State University, 1967), page 227.

representative of the total population of retailers. Because there were no lists of retailers available to use as a sample frame, it was necessary to design the sample so that it was self-generating in the field and by definition included an accurate representation of the populations. This was achieved in two ways. First, the city was divided into 26 subdivisions, of which 10 were selected by a procedure of using weighted probabilities to insure that the 10 areas were distributed by income level, geographic location, and size of the street fair within. (See Appendix I for the detail of this sample methodology.) The street fair within each of the 10 areas selected was then sampled by a procedure of passing through the total fair interviewing the operators according to a predetermined skip interval given a random start.

Neighborhood retailers were interviewed in the same manner with the interviewer, in a prescribed manner, passing by every neighborhood store, taking interviews according to a predetermined skip interval given a random start. Hence, whatever existed in the population was systematically sampled. All public markets and fixed fairs in the 26 areas were sampled in the same way by the use of the skip interval of eight and given a random start in each market. This design for these subpopulations was dependent on the interviewer or team of interviewers passing by each retailer and selection

according to a predetermined interval of the appropriate interviews to be made.

The second research design applies to the self-service, cooperatives, and large meat dealers, and was a simple census of all in these populations. This census was necessary because of the small numbers in these populations.

The wholesalers were divided into two sub-populations, market wholesalers or stall operators in markets, and established wholesalers or individually located businessmen. (See Chapter IV for definitions of these types of wholesalers.) The middle level retailers' questionnaire was revised for the market wholesalers, while the high level retailers' questionnaire was revised for the established wholesalers. Each was pre-tested, revised, and repre-tested. The sample design for the wholesalers was like that for the fixed fair and public market retailers, except the skip interval was determined to give a 75 per cent sample; i.e., the interviewer made three interviews in a row, then skipped one, then made three more, etc. For the established wholesalers, the skip interval was used on a list of wholesalers which was compiled by the research team rather than in the field.

The research design for the consumers followed the same procedure as that of the retailers. The questionnaire was pre-tested and revised, and pre-tested two

times before it was considered ready for use. The sample design used the same 10 city subdivisions selected earlier for street fair sampling. All of the family units in these areas were listed by use of the Instituto Brasileiro do Geografia y Estatistica (IBGE) school census in 1964, and then a predetermined skip interval was used to select the family units for the survey. In all cases, female head of household was interviewed.

In conclusion, the sample designs for phase II were built on the criteria of representativeness, even though an unequal probability design was largely used. Appendix I presents the sampling design in detail and outlines how the 10 areas were chosen and how the skip intervals were calculated. It should be noted that three call backs were used throughout for unavailable respondents, and there was no replacement for non-respondents except in the case of the market wholesalers where sample size was critical.

Phase III of the research was a post-survey analysis of the distribution system in which a number of special interest studies were made. These included a market basket price study, a retail dairy study, and further depth interviews. The purpose of these studies was to obtain information that the survey phase was unable to do. Such information included the actual prices paid by consumers after bargaining and retailer cheating, the

social function of the various retail institutions, and the dynamics of the change process in which Recife finds itself. Appendix I presents the methodology used in each of these endeavors.

Thesis Organization

This chapter has presented the background for this study in terms of a conceptual framework which outlines the relevance of the marketing system in economic development, a method of approach to change in the marketing system, the setting in which this research will attempt to analyze some of these considerations, the specific problem and guiding purposes and hypotheses of this research, and, finally, the methodology used to analyze these hypotheses. Chapter II will present the consumer of Recife and his links with the distribution system. Chapter III will present the retailer findings and analyze the differences in the retail structure. Chapter IV will look at the beginnings of change in the retail structure and present a case analysis of one of the change agents. Chapter V will develop the role of the wholesaler and how he operates in the channel of distribution. Finally, Chapter VI will present the recommendations which follow from the analysis of the urban distribution system.

CHAPTER II

THE CONSUMERS OF RECIFE

This chapter presents some of the findings of a survey of 354 housewives located within the city limits of Recife, Brazil.[1] The purpose of presenting these findings is to develop a foundation of understanding on which the analysis of the distribution system can be built, as well as to examine the hypotheses concerning consumer behavior. The previous chapter has outlined the hypotheses upon which this research was based, two groups of which are relevant to the present chapter and are as follows:

1. Given that consumer real income increases from changes in the food distribution channel, what effect does this increase have on expenditures for food and non-food items and savings? Further, what differences are there in consumer reactions to real income changes by different income levels of consumers; i.e., high- versus low-income consumers?

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[1] All data in this chapter stem directly from this survey, except where footnoted. Particulars of the survey design can be found in Appendix I.

2. What constraints do consumers place on the marketing system by their shopping habits, needs, and desires? In what manner do consumers react to retail and institutional changes? What factors are important in understanding consumer acceptance or rejection of change? How can consumers be influenced to accept change more easily?

To answer the above questions, the nature of the consuming units first will be analyzed and second the purchasing patterns, the consumer-retailer interaction, will be viewed.

Demographic Characteristics of Consumers

Background

Recife, the capital of Pernambuco, is the largest city in the Northeast of Brazil and the main trading center for both the temperate coastal zone, where sugar cane is the main crop, and for the drought-ridden interior Agreste area. The city has approximately a 1,000,000 population, with a growth rate estimated to be 4 per cent a year.[2] This growth rate of the population must be at least matched by an increase in output if the

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[2]Brazil, Instituto Brasileiro de Geografia e Estatística, Anuário Estatístico do Brasil - 1965, Vol. 26 (Rio de Janeiro, Instituto Brasileiro de Geografia e Estatística, 1965), p. 32.

present urban level of income, rate of unemployment, and well-being are to remain about the same.

The principal industry of Recife has been sugar, but in the past few years an intensive investment program has started industrial diversification. Migrants make up a large share of the population. Only 64 per cent of the respondents claim to be "from" Recife, 12 per cent were from coastal areas in the Northeast, 21 per cent had migrated from the non-coastal interior of the Northeast, and only 3 per cent had come up from the more prosperous South. Thus, like many Latin American cities, a large portion of the population pressure comes from the rural-urban migration which characterizes the development process.

Age

The age distribution of the population of the city tells a stark story of inadequate diet and disease. In 1960, 28 per cent of the population were under 10 years of age, 50 per cent were under 20, 21 per cent were over 40 (see Table 2.1). The mean age was 24.5 years, and the median was 22.4 years.[3] For comparison, in 1960 the

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[3]Brazil, Banco do Nordeste do Brasil S.A., Abastecimento de Gêneros Alimentícios da Cidade do Recife (Fortaleza, Ceará, ETENE, Banco do Nordeste do Brasil S.A., 1962), p. 23.

TABLE 2.1

DISTRIBUTION OF THE POPULATION OF RECIFE ACCORDING TO AGE GROUPS IN 1960

Ages	Per Cent	Cumulative Per Cent
0 - 9	27.7	27.7
10 - 19	22.4	50.1
20 - 29	16.6	66.7
30 - 39	13.2	79.9
40 - 49	8.9	88.8
50 - 59	5.7	94.5
60 - 69	3.6	98.1
70 - 79	1.5	99.6
80 and Over	0.4	100.0
Total	100.0	

Source: Brazil, Banco do Nordeste do Brasil S.A., Abastecimento de Gêneros Alimentícios da Cidade do Recife (Fortaleza, Ceará, ETENE, Banco do Nordeste do Brasil S.A., 1962), R. 23, p. 23.

median age in the United States was 29.5 years.[4] Thus, the working population is small. Although life expectancy is short, family sizes are large, with an average family size of six being reported by the respondents. A

[4]U. S. Bureau of the Census, Statistical Abstract of the United States: 1967 (88th edition, Washington, D. C.: U. S. Government Printing Office, 1967), p. 24.

family unit is defined as those people who eat and live together. Thus, the term is broader than just the immediate family and includes, in some cases, more than one breadwinner as well as dependents.

It is interesting to note that the median age of the housewives interviewed was 39 years. In comparison, the median age of housewives in the United States in 1966 was 45 years.[5]

Education

To assess the level of education of the housewives, they were first asked if they could read; 72 per cent of the respondents said that they could. Those who claimed literacy were then asked to read a sentence and graded for ability to read out loud and for comprehension. Of those who claimed literacy, 70 per cent read easily, 25 per cent read with difficulty, and 5 per cent could not read at all. Further, only 83 per cent of those who claimed reading ability understood what they read when tested for comprehension. Thus, of all housewives interviewed, only 58 per cent were functionally literate.

After literacy is determined, the level of schooling becomes relevant. Given the above level of literacy, it is not surprising that 21 per cent had never attended

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[5] Ibid., p. 38.

school and 25 per cent had only one to three years of school. Thus, though the mean level of schooling for respondents was 5.6 years, the median was 3 years.

In conclusion, most housewives have little education on which to base their purchasing decisions. (The housewife reported that she decides what to buy in 80 per cent of the households.) Further, it should be kept in mind that the use of the printed media (newspapers, magazines, and handbills) to foster changes in behavior can only be as effective as the literacy rate allows.

Employment and Income

Of the respondents, 5 per cent replied that the head of the household held down two or more jobs. It seems that "moonlighting" must be restricted to a highly visible minority. Thirty-two per cent of the respondents reported that someone other than the head of the house had a job; and, in 7 per cent of the families, at least two other persons worked besides the head. Thus, the head of the household provides the major support for the family.

A total of 93 per cent of the heads of households were reported to be working. The distribution of occupations among household heads, as reported by the housewife respondents, were as follows: 7 per cent worked in food

distribution, 6 per cent in non-food distribution, 2 per cent in food industry, 10 per cent in non-food industry, and 27 per cent in government. The remainder worked in services, construction, or are "desemprego desfarcado," i.e., underemployed in non-permanent marginal jobs such as guarding cars on the streets, scavenging crabs from the river, collecting paper, etc.

With respect to the others who worked in the family, 1 per cent worked in food distribution, 12 per cent worked in non-food distribution, none worked in food industry, 12 per cent worked in non-food industry, and 32 per cent worked for the government. The remaining worked in various sectors other than the above.

The mean family income was reported by the respondents to be NCr$133 (U.S.$42) per week, or NCr$5.870 (U.S.$2,174) per year. On a per capita basis, this income amounts to NCr$967 (U.S.$358) per year. The median per capita income was NCr$433 (U.S.$160) per year. The skewness of this distribution will be returned to shortly. This income does not include goods produced and consumed at home. However, for the urban consumer, little is grown at home. A greater bias is caused by the non-wage or non-monetary income which is not reported. Examples of these wages are interest, capital gains, meals given employees, gifts given maids, etc.

A note of caution should be sounded with respect to the income figures cited above. As with all income determination questions, especially when applied in areas where little record-keeping occurs, the responses are subject to respondent bias. In the income question on this survey, a bias was introduced by making the time period short--one week. This was done in an effort to keep within the respondents' time perspective. What may have happened is that the time period was so short that the respondent was embarrassed to state the true but small income, and thus tended to exaggerate. A second factor is that the housewife may not know the income on a weekly basis if it does not correspond to a weekly paid salary. Most were biweekly or monthly. Finally, the housewife may not know the income that her husband makes at all. In any case, the housewife would tend to overstate or refuse to answer to avoid interviewer disapproval.

A second kind of bias occurred to some non-measurable degree as a result of the sample design. The sample was drawn, as is noted in Appendix I, from a census of dwellings in Recife. Because of the difficulty in counting in the disorganized slums, there may have been some undercounting of the poorest homes. Further, the homeless were excluded entirely. These two factors would tend to underreport the low-income families, making our income calculations higher than actual.

It would be reassuring if the income figures could be compared with secondary data, but none exist for a comparable population or time in Recife. There are other indications, however, that the results are biased somewhat upward: first, the professional judgment of local economists of SUDENE, and, second, the fact that the retail surveys do not show sales enough to satisfy the purported income. These sales figures have a bias in the opposite direction due to the fear of tax evasion exposure. However, the sales figures are more reliable because they are built up from cost and margin data as well as being obtained directly from the respondents. With these warnings in mind, the income analysis can be continued.

The survey on "Problems of Food Supply in Recife" (published in 1962) reported that more than 30 per cent of the wage earners did not receive the minimum wage.[6]

The distribution of wage income indicates that 48 per cent of the households received only 13 per cent of the income. The top 14 per cent received 51 per cent of the income. It is important to note that other income, particularly rents and profits from investments, add income to the upper strata, while scavenging and

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[6]Brazil, Instituto Joaquim Nabuco de Pesquisas Sociais, Problemas do Abastecimento Alimentar no Recife (Recife, P.E., Instituto Joaquim Nabuco de Pesquisas Sociais, Ministerio da Educação e Cultura, 1962), p. 133.

irregular jobs add income to the lower levels. Table 2.2 presents a distribution of wage incomes reported in the consumers survey. A tremendous disparity among the level of incomes is evident.

Visually, this disparity can be presented in a "Lorenz curve," (see Figure 2.1). Note for comparison the curves of San Juan, Puerto Rico, La Paz, Bolivia, and the United States. Clearly, Recife has greater disparity of incomes than these other locations.

The implication of this discrepancy in incomes needs to be spelled out. When considering the kinds of goods that could be consumed, it is necessary to think in terms of a mass market for basic low-cost necessities, both food and non-food, and a restricted market for luxuries. The emphasis of any program to generate scale economies must thereby deal with those goods which have mass potential; i.e., low-cost basic food and certain low-cost consumer goods.

Food Shopping Preferences and Behavior in Recife

The Relationship between Independent Variables

Before the relevant questions of who spends what where for what reasons can be answered, it is necessary to compare the demographic variables which will be used as independent variables with each other. This analysis shows the relationships between independent variables

TABLE 2.2

THE DISTRIBUTION OF FAMILY INCOME AND AVERAGE PROPENSITY TO CONSUME

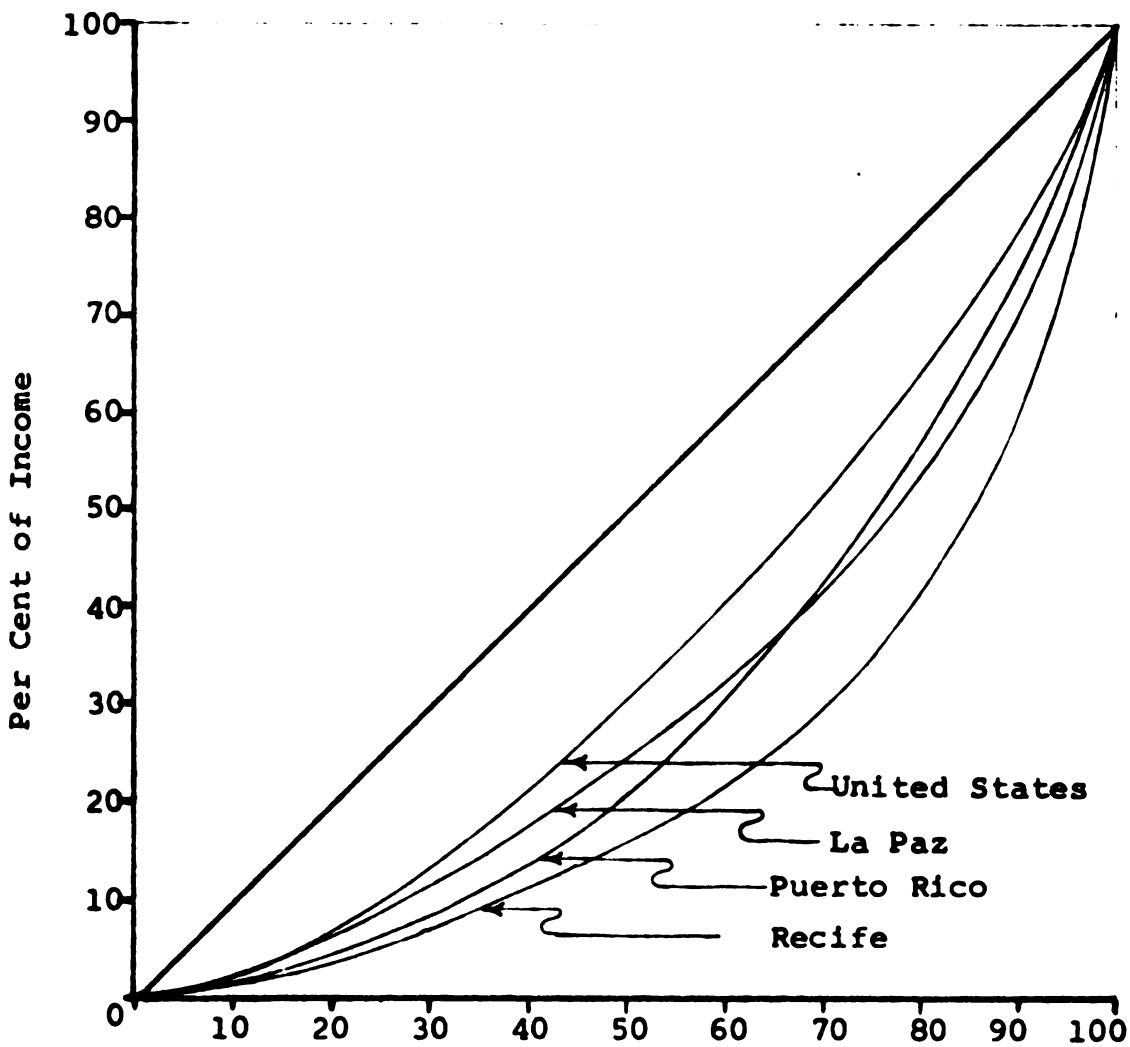
Income Level° NCr$ Per Week	% Families in Group	% Income in Group	Cumulative % Families	Cumulative % Income	Average Propensity to Consume Food
0 - 10	3.69	0.17	3.69	0.17	100
11 - 20	9.09	1.48	12.78	1.65	96
21 - 30	12.22	2.99	25.00	4.64	74
31 - 40	10.23	3.49	35.23	8.13	61
41 - 50	12.50	5.36	47.73	13.49	52
51 - 60	9.37	4.90	57.10	18.39	50
61 - 80	8.81	5.85	65.91	24.24	50
81 - 110	6.25	5.31	72.16	29.55	44
111 - 150	8.24	9.78	80.40	39.33	36
151 - 200	5.96	9.99	86.36	49.32	27
201 - 300	5.69	13.65	92.05	62.97	21
301 - 400	4.54	14.91	96.59	77.88	16
401 - 600	2.27	10.62	98.86	88.50	10
600 - Over	1.14	11.50	100.0	100.0	6

°Income categories were arbitrarily selected to present the income shares of meaningful percentages of families.

Source: SUDENE/MSU Consumer Survey, 1967.

FIGURE 2.1

DISTRIBUTION OF FAMILY INCOME
(LORENZ CURVE)
1966-1967



Source: SUDENE/MSU Consumer Survey, 1967.

such that when each is used with dependent variables, the analysis of that table is not clouded with uncertainty as to the effect of other independent variables. Thus, the relationship between independent variables is stated specifically at the onset. Table 2.3 presents the Pearson Product Moment correlation coefficients along with indications of significant linearity and significant chi-square relationships.

The most pervasive predictor of the other independent variables is the literacy-education index. This index is, in essence, the literacy score of the respondent (as tested) if the respondent is not completely functionally literate. This is to say that a respondent that is partially literate or is illiterate could not have had a meaningful educational experience, and thus only the literacy score should be counted. On the other hand, if the respondent is literate, then years of education are added to the literacy score to get a composite of cumulative score of literacy and education. This index significantly relates with each independent variable. The higher the literacy and education of the housewife, the greater was her weekly food expenditure, mass media exposure, and modernity. The index was split into terciles with groups representing functional illiteracy, literacy but little formal education, and literacy with some formal education.

TABLE 2.3

RELATIONSHIP BETWEEN INDEPENDENT VARIABLES, PEARSON PRODUCT MOMENT CORRELATION COEFFICIENTS

	Weekly Food Expenditure	Mass Media Exposure	Literacy-Education
Weekly Food Expenditure	. . .		
Mass Media Exposure	.47••	. . .	
Literacy-Education	.48••	.54••	. . .
Modernity	.07	.18••	.19••

Source: SUDENE/MSU Consumer Survey, 1967. Correlation is not significant at the .05 confidence level, but chi-square is significant at the .05 confidence level.

••Both the correlation and chi-square are significant at the .05 confidence level.

It should be noted that Appendix II presents the inter-item correlations of the variables used to construct the indexes reported in this chapter.

The mass media exposure of the housewives interviewed was measured by combining responses to questions measuring newspaper and magazine readership, radio use, and television use. The housewife's mass media exposure was also related to each of the other independent variables used. Mass media exposure, as indicated by a high score on the index, is positively and strongly related both to literacy-education, as noted above, and to weekly

food expenditure. Mass media exposure was significantly but not strongly related to modernity. The mass media exposure index scores were split into tercile groups for contingency analysis. The correlation of Rho +.54 between mass media exposure and the literacy-education indicates that there is much in common between these variables. When the contingency tables of each are compared, they both indicate the same relationships in near identical ways. The mass media index consistently showed slightly stronger relationships than did the literacy-education index. Thus, rather than report both sets of tables throughout this chapter, only the tables for the literacy-education index will be shown, except where mass media usage has special significance. The conclusions from these tables will thus be a somewhat conservative estimate of those resulting from the mass media exposure index.

Housewives were asked to report the amount of money that they spent for food in the last week. The weekly food expenditures thus obtained were related to two other independent variables used. As has been noted above, the greater the food expenditure, the higher the housewife's literacy, education level, and the media exposure score tended to be. This independent variable was split into tercile groups for the analysis. The values for the food expenditure groups are as follows:

NCr$	US$		NCr$	US$
1	(1.00)	to	24	(9.07)
25	(9.08)	to	40	(15.00)
41	(15.01)	to	Over	(Over)

The modernity index is made up of 12 questions which relate to the respondents' attitudes and beliefs about the way in which the world operates. Such notions as trust of others, belief in fate, family ties, felt social sanctions, etc., are included in this index to separate the traditional thinkers from the more modern. As has been noted, modernity was positively (though not strongly) related to mass media exposure and level of literacy-education.

It should be noted that the independent variables used were selected from a larger list based on three criteria. First, they did predict differences among consumers, i.e., they did divide consumers into separate groups. Second, they divided the consumers differently into groups. Third, the independent variables are such that they can be adjusted by development (are manipulatable) programs and thus have relevant implications for the system. Mass media exposure, literacy-education indexes are of this type along with weekly food expenditure. The second criteria is the least well satisfied, as was indicated in Table 2.3.

There were many possible independent variables that were not used. It is useful to briefly explain why several of the more important and common of these were not included in this analysis. The first to mention is total family income.

The weakness of the income data has already been noted, and hence the reliability of this control variable is subject to question. The weekly food purchase data does not have the same vagueness to the housewife and tends to be more reliable. The correlation of Rho +.64 between family weekly income and weekly food expenditures indicates that these two variables are closely related. Further, when cross tabulations with the dependent variables for each of the two independent variables are compared, there was little difference in the relationships. This is to say that the same relationships were indicated by each of the two control variables. Hence, there is little to be gained from reporting both sets of relationships and, logically, the variable with greater reliability should be used. Thus, weekly food expenditure will be used as an indication of income as well as food expenditure.

As well as not being a good predictor of the other independent variables, age was not a good predictor of the dependent variables. Thus, contrary to popular belief, the young are not significantly different from

the older on most counts. The distribution of ages closely approximates a normal curve. Thus, the argument that housewives were homogeneous in terms of age and hence did not differ, is without statistical foundation.

Another possible independent variable was geographic location in the city. Like age, this variable did not indicate that there were significant differences between consumers in various locations of the city when they were compared on the relevant dependent variables.

For the remainder of this chapter, only relationships between the independent variables and dependent variables will be presented where the chi-square is significant at the .05 level. Although most of the relationships were significant at greater levels of confidence, the .05 level was the one predetermined for the acceptance or rejection of hypotheses.

General Usage of Income

Of the NCr$113 (U.S. $42) weekly mean family income, NCr$60 (U.S.$22) was required per week for food. Thus, Recife had an average propensity to purchase food of about 53 per cent (see Table 2.2). In 1962, the Instituto Joaquim Nabuco de Pesquisas Sociais reported an average propensity to consume food of 49.4 per cent.[7]

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[7] Ibid., p. 133.

However, the Banco do Nordeste do Brasil S/A collected consumer consumption data which indicated an average propensity to consume food of 54 per cent.[8] (See Table 2.4.)

TABLE 2.4

PER CENT OF INCOME SPENT ON FOOD

Income Level (Cr$)	% of Families	% of Family Income
0 - 3.000	58	70
3.000 - 6.000	24	57
6.000 - 9.000	9	56
9.000 - Over	9	37
Mean of All Groups	100	54

Source: Brazil, Banco do Nordeste do Brasil S.A., Abastecimento de Gêneros Alimentícios da Cidade do Recife (Fortaleza, Ceará, ETENE, Banco do Nordeste do Brasil S.A., 1962), p. 32.

Some answers to the question raised in the introduction on how increased income might be spent are clear. There are marked differences between the average propensity to consume food for the rich and the poor. This information coupled with the data on the distribution on income leads to the conclusion that if the price of low-cost basic food is lowered to the mass poor market, most of the resultant increased expenditure would probably be for food. On the other hand, if the price changes favor

[8]Brazil, Banco de Nordeste do Brasil S.A., op. cit., p. 32.

the upper income consumers, then most of the increased expenditures would be for non-food goods. These remarks deal with the extremes, and it would be more accurate to think of price changes which affect all groups of consumers to some degree combining these effects.

However, it is important to understand the fact that the reaction to price change is not a homogeneous phenomenon which applies to all consumers. Distinct groups of consumers will act in different but predictable ways. A further conclusion can be made from comparison of the average propensities to consume of various income groups. If income increases over all consumers, less as a percentage of income would be spent on food. On the other hand, though a smaller percentage of income is spent on food the income is greater and thus more money in an absolute sense would be spent on food; i.e., Engels' Law seems to hold.

Of the respondents, 55 per cent reported owning their own home and the mean rent for the remainder was NCr$61 (U.S.$23) per month. It is interesting to note that the median rent was NCr$39 (U.S.$14). Typically, the very poor do not rent, but live in self-built shacks. Of the respondents' homes, 72 per cent were judged to be kept in clean condition although no judgment was made as to whether the dwelling was substandard for human habitation. About a fourth (23 per cent) of the families were

paying at least NCr$10 (U.S.$3.70 per month on a time purchase (not land or housing) with the mean size of payment being NCr$49 (U.S.$18.15). Over all respondents, the average payment was NCr$11.00 (U.S.$4.07) per family per month. Savings over NCr$10 (U.S.$3.70) were reported by only 8 per cent; and including all respondents, the mean saved per family was NCr$4.50 (U.S.$1.67) per month.

The above figures on savings must be clarified so that there is not a misunderstanding. Savings in an area where inflation is rampant is hard to document because money is typically not held. Because investment opportunities carry large risks and are not open to most investors through an orderly investment market, most savings find their way into durable purchases which hold their value.

Consumers interviewed were asked what they would do with a sum of money equal to their annual income if they had saved it. Two responses were allowed. Almost half (49 per cent) of the housewives said that they would buy a house, 18 per cent would invest the money in business, 12 per cent would buy land, 12 per cent would buy consumer goods and food, and 4 per cent would save the money. Twelve per cent said other uses for the money.

Durable goods are popular and some are widely owned. Of the respondents, 77 per cent indicated that

there was a working radio in their home, and 35 per cent claimed to own a television. These figures have implications for the use of mass media in reaching consumers. However, further discussion will be deferred until the later section on mass media usage. Seventy-four per cent of the respondents reported owning sewing machines. Brazilian women consider sewing machines a top priority durable. Only 13 per cent of the housewives indicated that the family owned a car or truck. Hence, public transportation must be used if purchases are to be made at distant stores. The result is that the locational convenience of retail outlets is of utmost importance. This fact will be underscored when reasons for store use and non-use are analyzed in a later section. Finally, 44 per cent of the respondents claimed that their households had refrigerators.

Because refrigerators are so important to family health as well as the shopping behavior of housewives, a digression will be made at this point to present a more detailed analysis of refrigerator ownership. Table 2.5 presents the basic relationship between refrigerator ownership and user characteristics.

Refrigerator ownership is strongly related to weekly food purchases, with only 15 per cent of the low food purchase category owning refrigerators, while 82 per cent of the high purchase category owned them.

TABLE 2.5

INDEPENDENT CHARACTERISTICS OF HOUSEWIVES RELATED TO REFRIGERATOR OWNERSHIP (PER CENT)

	Value of Food Purchases Last Week		
	NCr$0-24 (US$0-9.07)	NCr$25-40 (US$9.08-15.00)	NCr$40-Over (US$15.01-Over)
Refrigerator Ownership	15	38	82
	Level of Literacy-Education		
	Illiterate	Some Literacy-Little Education	Literate, Some Education
Refrigerator Ownership	24	39	85

Source: SUDENE/MSU Consumer Survey, 1967.

Similarly, there were strong positive relationships between refrigerator ownership and both mass media exposure and level of literacy-education.

Thus, as is to be expected, the poor and uneducated housewives are forced to shop more often than other housewives, tolerate more spoilage, and do without certain kinds of foods. The shopping behavior of these groups will be discussed in detail later in this chapter.

Shopping Practices

Who Shops

Before embarking on an analysis of shopping behavior, it is necessary to isolate the family shopper and decision maker. The housewife decides what to buy in 80 per cent of the households responding, with the male head of family making the decisions in 18 per cent of the families. The housewife also said she does 69 per cent of the shopping, while the male household head does the shopping in 25 per cent of the households. Relatives make the decisions in 2 per cent and shop in 4 per cent of the households, while maids make decisions in almost none and shop for about 1 per cent of the families. Clearly, the housewife is the important homemaker which is one reason the housewives were interviewed.

Place of Purchase

The next question that arises is where do the shoppers shop. One approach to the question is to look at simple percentages of shoppers using various types of retail outlets. In the week before the interview, 33 per cent of the shoppers frequented a self-service store, 54 per cent went to a neighborhood store, 25 per cent purchased from a permanent market, and 82 per cent bought from a street fair.

The need to define these terms is evident. A self-service store is simply as its name implies, self-service, and ranges in size from small (40 square meters) to large (1,200 square meters). There are 42 such stores in Recife. A neighborhood store is a stationary, single retail unit which is not self-service and not removable daily. Thirty-nine per cent of these are corner grocery type stores, 51 per cent are wood huts, 4 per cent are specialty stores, and 6 per cent are other types. Permanent markets are groups of atomistic retailers who are located together in close proximity. Finally, street fairs are groups of atomistic retailers who operate in one location for one or two days per week.

It is interesting to note in comparison that in a 1960 ETENE (BNB) consumer survey, 80 per cent of the families interviewed preferred to buy in street fairs; 66 per cent bought in neighborhood stores (less specialty stores); 34 per cent purchased in public markets (most of the permanent market category); 24 per cent shopped in cooperatives, government stores, and some markets in the permanent market category; and 5 per cent in other stores of which over 3 per cent were specialty stores and less than 2 per cent were vendors who sold for home consumption in the streets.[9]

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[9] Ibid., pp. 40-41.

Although the definitions of categories are different, as noted, the kind of change over the 7-year period can be observed. Neighborhood stores and permanent markets have decreased in importance in the past seven years, while the influx of self-service stores has largely taken the place of the waning cooperatives and government stores. Since 1960, the number and impact of the street vendor has decreased further due to competition, political action, and changing consumer buying habits. Street vendors are licensed to sell door-to-door, but many have set up semi-stationary locations on the streets and sidewalks. The city government tends not to renew the licenses of the semi-stationary vendors, thus reducing the total.

Further insight into where shopping occurs can be gained by understanding the differences between shoppers and non-shoppers of the above types of retail outlets. Table 2.6 presents this difference as it relates to weekly food expenditure.

The percentage of the high food expenditure group interviewed who shop at self-service stores was 55 per cent, while that of the low expenditure group was only 14 per cent; and, hence, a strong positive relationship exists. On the other hand, a strong negative relationship occurs with neighborhood stores where the high food spenders tend to not shop at these stores.

TABLE 2.6

TOTAL WEEKLY FOOD PURCHASES RELATED TO TYPE OF RETAIL OUTLET USED (PER CENT)

Shopped During Past Week at:	Value of Food Purchases Last Week		
	NCr$0-24 (US$0-9.07)	NCr$25-40 (US$9.08-15.00)	NCr$41-Over (US$15.01-Over)
Self-Service Stores	14	27	55
Neighbor-hood Stores	72	53	34
Permanent Markets	15	26	36
Street Fairs	Relationship not statistically significant		

Source: SUDENE/MSU Consumer Survey, 1967.

Permanent markets seem to attract a higher percentage of higher spenders on food and the street fairs attract all customers of all levels of spending.

Finally, it is of interest to view place of food purchase from the vantage point of education (see Table 2.7). Of those with some education, 63 per cent shopped in the self-service store, while 18 per cent of the illiterate shopped in self-service stores. The reverse was true where neighborhood stores were concerned. Sixty-eight per cent of the illiterate group shopped in these stores, whereas 25 per cent of the literate and

educated group did. Permanent market shopping was positively related to level of education, and street-fair shopping was not significantly related to level of education. These relationships hold for mass media exposure as well.

TABLE 2.7

LEVEL OF LITERACY AND EDUCATION RELATED TO TYPE OF RETAIL OUTLET (PER CENT)

Shopped During the Past Week at:	Level of Literacy and Education		
	Illiterate	Some Literate Little Education	Literate Some Education
Self-service stores	18	26	63
Neighborhood stores	68	60	25
Permanent market	15	25	38
Street fair	Relationship not statistically Significant		

Source: SUDENE/MSU Consumer Survey, 1967.

In conclusion, self-service stores attract higher income, more educated, and more mass-media-exposed customers than do the other retail types, though permanent markets attract more of these customers than neighborhood stores. Street fairs sell to all levels of customers.

Reasons for Shopper Use and Non-Use of Retail Types

The reasons given for use or non-use of the various types of retail outlets reveal insights into the nature of store use and also the conditions upon which changes in the retail structure could occur. Table 2.8 compares these reasons of users and non-users of store types so that they can be easily contrasted.

The profile of self-service stores emerges clearly from Table 2.8. Low price was cited by 63 per cent of the users, convenient location by 36 per cent, variety by 31 per cent, and quality by 24 per cent as the major reasons for self-service store use. Of non-users, 78 per cent reported locational inconvenience as the major factor for non-use. There were few other objections to self-service store use.

As is to be expected, convenient location was seen by most of the neighborhood store users as the major reason for use, while 23 per cent were tied to this type of store by credit. In contrast to the self-service stores, price was viewed (48 per cent of the neighborhood store non-users) as the major reason for non-use of this type of store. Poor service, inconvenience, and poor quality were also seen as reasons for non-use.

Shoppers of permanent markets felt that these markets combined quality (36 per cent of users), low prices (36 per cent of users), wide variety (35 per cent

TABLE 2.8

REASONS FOR USE OR NON-USE OF STORE TYPES GIVEN BY STORE-TYPE USERS AND NON-USERS

Reasons for Use or Non-Use by Respondents Who Are Users or Non-Users	Self-Service° Stores		Neighborhood° Stores		Permanent° Markets		Street° Fairs	
	% of Users	% of Non-Users	% of Users	% of Non-Users	% of Users	% of Non-Users	% of Users	% of Non-Users
Convenient Location	36	78	81	23	28	58	30	52
Quality	24	4	3	18	36	4	37	11
Cleanliness	13	0	1	10	2	7	1	11
Credit	0	8	23	2	2	9	0	11
Delivery	3	0	0	0	0	0	0	0
Variety	31	1	5	15	35	7	42	5
Price	63	11	14	48	36	18	43	19
Service	12	12	9	26	6	24	4	15
Other	1	5	0	7	2	4	2	19

°All housewives were divided into a users group and a non-users group for each of the retail types. These sub-groups form the population for each column.

Source: SUDENE/MSU Consumer Survey, 1967.

of users), and for some (28 per cent of users) locational convenience. The non-users saw that locational inconvenience (58 per cent of non-users), poor service (24 per cent of non-users), and high prices (18 per cent of non-users) as reasons for shopping elsewhere.

Finally, street fair users viewed price considerations as most important (43 per cent of users), with variety as very important (42 per cent of users), quality as important (37 per cent of users), and locational convenience as significant (30 per cent of users). On the other hand, 52 per cent of the non-users found the street fair locationally inconvenient, 19 per cent felt that the prices were high, and 15 per cent reported poor service.

Two factors stand out as to their relative importance. First, locational convenience is of utmost importance to the consumer and, thusly, to retail type used. Second, price plays an important role in determining where consumers shop, given locational access to various alternatives. The reasons given above for the use and non-use of various retail outlets are the consumers' perceptions of those outlet types. Consequently, they are essential for the understanding of the shopping process and the changes which would occur if the retail structure were to change.

Before passing from consumers' perceptions of the retail types, it is of interest to note that, except

for the self-service category, many housewives felt that retailers cheated them on weights. Of those who used street fairs, 24 per cent thought that these retailers cheated them. Of those who used neighborhood stores, 23 per cent thought there was cheating, 17 per cent of permanent market customers agreed, and only 4 per cent of self-service customers perceived that there was cheating.

In conclusion, analysis of consumer use of self-service stores, reasons for use, reasons for non-use, and perceptions of cheating have brought to light the surprising realization that this radical change which has occurred over the past seven years has wide consumer support rather than the traditional resistance which might have been expected. This is not to say that self-service stores have or will jump to a commanding share of the food market, but a significant change has occurred and the consumers seem to accept it. On the other hand, street fairs remain a widely used form of retail outlet with appeal for consumers in the fruit and vegetable lines.

Expenditure Patterns for Food

Important to understanding consumer buying behavior is a knowledge of amounts spent at various retail outlets and the frequency of purchase at these retailers. Table 2.9 presents these expenditure pattern statistics.

Those interviewed who use self-service stores spend on the average over US$12 per week in those stores

TABLE 2.9

WEEKLY FOOD EXPENDITURES, FREQUENCY OF PURCHASE, AND PER-TRIP EXPENDITURES BY TYPE OF RETAIL OUTLET FOR USERS OF EACH RETAIL TYPE

Type of Retail Outlet	Mean Total Food Purchase Per Week		Mean Trips Per Week	Mean Purchase Per Trip	
	NCr$	US$	Number	NCr$	US$
Self-service store	33.45	12.39	1.2	27.87	10.32
Neighborhood store	18.83	6.97	3.9	4.83	1.79
Permanent market	18.71	6.93	1.5	12.47	3.62
Street fair	21.55	7.98	1.1	19.59	7.26

Source: SUDENE/MSU Consumer Survey, 1967.

on food, while street fair shoppers spend US$8 per week in fairs, and neighborhood store and permanent market shoppers spend about US$7 per week in each type of outlet.

The number of trips that consumers make to various types of retailers reveals much about the functions of these outlets (see Table 2.9). Those respondents that shop at self-service stores, street fairs, and permanent markets for the most part shop once per week. On the other hand, neighborhood store shoppers shop almost four times per week on the average. It is interesting to note that 25 per cent of these neighborhood store shoppers shop once per day or more frequently.

The mean purchase per trip shows the kind of scale that a retail outlet can acquire per customer and

thus relates to the transaction efficiency which is attainable. Table 2.9 shows clearly that self-service stores have the largest mean per-trip purchase size. It should be remembered that the permanent market and street fairs are made up of many atomistic retailers, and thus the individual transaction size may be significantly smaller than the table suggests.

In summary, when the frequency of purchase information is coupled with the reasons given for store type use, the conclusion stands out that the major function of the neighborhood store is locational convenience for frequent small purchases. On the other hand, the other types of retailers provide a source of supply for larger weekly purchases. Although there is no data available on the following remark, it seems worthwhile to place it before the reader.

The traditional street fair may be responsible to some degree for the ease of acceptance of the self-service stores. Because the street fairs are typically two days in length and recur weekly, they have trained the consumer to buy at least a good portion of her purchases on a weekly basis. Thus, when the self-service store developed, the shopper could easily fit her buying to the scale that was required for success of the new retail method.

Products Purchased

The functions performed by the several types of retailers become clearer when the consumers' product purchases are analyzed (see Table 2.10). The customers were asked what products they purchased most at each type of outlet, with three responses being recorded. Customers of self-service stores use those outlets for staple purchases. Of these consumers, 91 per cent bought cereals (rice, beans, manioc flour), 66 per cent purchased canned foods, and 59 per cent bought dairy products. Neighborhood store customers purchased cereals (62 per cent of customers), dairy products (41 per cent of customers), and canned foods (22 per cent of customers). Fruits, vegetables, and fresh meat were bought by about half of the permanent market shoppers, while about three-fourths of the street fair shoppers bought fruits and vegetables, and over four-tenths purchased fresh meat and cereals.

In conclusion, it can be said that most consumers buy perishable foods from the retailers in the permanent market and street fair groups, while they purchase their non-perishable staples from the individually located neighborhood and self-service stores. Thus, it is left to the small market retailers to take the risk associated with the highly perishable foods, while the larger individual proprietors deal with low-spoilage risk items.

TABLE 2.10

PRODUCTS PURCHASED BY CUSTOMERS OF VARIOUS RETAIL TYPES FOR HOME CONSUMPTION (FIRST THREE MENTIONED)

Product Type	Self-Service Stores, % of Customers	Neighborhood Stores, % of Customers	Permanent Markets, % of Customers	Street Fairs % of Customers
Rice, beans, manioc flour	91	62	23	43
Fresh meat	2	2	52	44
Fruits	2	12	57	80
Vegetables	5	9	44	74
Dairy products	59	41	10	5
Canned foods	66	22	6	2
Non-food products	27	16	3	2
Other	16	54	22	13

Source: SUDENE/MSU Consumer Survey, 1967.

Use of Retail Services

Table 2.11 presents the per cent of consumers who use delivery and credit services from the basic retail types. Clearly, consumers carry home most of their own purchases, although self-service and neighborhood stores do deliver for 10 per cent and 9 per cent of the customers, respectively. Only neighborhood stores extend credit to a significant portion of their customers (25 per cent). This function is important in helping to explain the hold that these stores have on the consumer. Thus, a second dimension is added to the locational advantage of the neighborhood store.

TABLE 2.11
PER CENT OF CUSTOMERS THAT USE DELIVERY AND CREDIT BY RETAIL TYPE

Service	Self-Service Store	Neighborhood Store	Permanent Market	Street Fair
Delivery	10	9	5	4
Credit	6	25	1	1

Source: SUDENE/MSU Consumer Survey, 1967.

Self-Service Store Location

Before moving away from the analysis of shopping behavior by store type, it is useful to digress for a moment on how consumers get to and return from the self-service store that they use. In terms of distance, 11 per cent of the customers of self-service stores estimate

that there was a store within one-half kilometer but more than one block away, 20 per cent said there was a store between one-half and one kilometer away, 11 per cent reported a store located between one and two kilometers away, and 38 per cent estimated that the nearest self-service store was over two kilometers away. To travel to and from self-service stores, 41 per cent of the housewives interviewed walked, 27 per cent drove in a private car, 22 per cent rode the bus, 6 per cent took taxis, and 4 per cent traveled to the store by one means and returned by another. It was noted earlier that 13 per cent of the respondents claimed car ownership. Evidently, many ride with their friends to the store. Again, the importance of locational convenience is pointed up by this data.

Consumption of Selected Commodities

Though this research effort did not include the mapping of consumer consumption, it is of interest to look at the consumption of selected commodities to see what differences exist between income levels. The data for this analysis were collected in 1960 by the Banco do Nordeste do Brasil S.A.[10] Table 2.12 presents the consumption differences for selected commodities.

Because the BNB study made their first income split at 58 per cent of the population, it was not possible to report a finer breakdown by income. Even so,

[10] Ibid., p. 37.

TABLE 2.12

CONSUMPTION OF SELECTED COMMODITIES
BY INCOME LEVEL OF CONSUMERS

Commodity	Units	Lower Income 58% of Families Consumption Per Year	Upper Income 42% of Families Consumption Per Year	Difference	% Greater Consumption by Upper Income
Manioc flour	Kg.	30.6	20.9	- 9.7	- 32
Beans	Kg.	17.2	18.4	+ 1.2	+ 7
Tomatoes	Kg.	10.3	13.7	+ 3.4	+ 33
Bananas	Units	295.4	453.7	+158.3	+ 54
Rice	Kg.	13.3	20.6	+ 7.3	+ 55
Fresh beef	Kg.	19.4	39.2	+ 19.8	+102
Fresh milk	Kg.	12.0	27.3	+ 15.3	+128
Eggs	Units	44.9	110.4	+ 65.5	+146
Poultry	Kg.	2.1	5.6	+ 3.5	+167

Source: Brazil, Banco do Nordeste do Brasil S.A., Abastecimento de Gêneros Alimentícios da Cidade do Recife (Fortaleza, Ceará, ETENE, Banco do Nordeste do Brasil S.A., 1962), p. 37.

the differences between the consumptions of the two income groups is marked. Clearly, the lower income consumers consume more manioc flour and beans than the higher income group relative to their incomes, while such high protein foods as fresh beef, fresh milk, eggs, and poultry make up far greater proportions of the consumption of the higher income consumers than the lower income consumers. Not only do the poorer consumers eat less, except for manioc flour, but they eat much higher proportions of low-nutrition foods than the better-off consumers.

The Search Process

Where consumers buy, what they buy, how much they spend, and why they use the retail types that they do have been considered to this point. It is of interest to try to gain further insight into the buying process through looking at the search considerations which the consumer consciously or unconsciously follows when deciding where to buy.

First, how many consumers actively search for outlets versus those who always use the same outlets. Of the housewives interviewed, 70 per cent reported that they always purchased from the same group of stores or the same geographic location. This does not imply that a search process does not occur as conditions change and within the group of stores used (operators within a

street fair), but indicates that there is not a major search week to week for new locations based on low price or quality in foods or other conditions.

Price and Quality Considerations

Before looking at the search process itself, it is worthwhile to build a foundation of what the consumer looks for and what knowledge the consumer feels that she is working from.

Quality is seen by the consumer as important along with price, and consumers seem to think that they can judge quality. When asked if they bought for low prices regardless of quality, only 30 per cent said yes. When asked if their neighbors thought quality more important than price, 55 per cent thought yes, 17 per cent said no, and 27 per cent did not speculate. Of the respondents, 58 per cent claimed to know the general price levels of food in stores where they did not shop and 73 per cent bargained on price. It should be noted that bargaining does not take place in most self-service stores since prices are posted. In terms of quality, 84 per cent of the consumers tried to buy the same quality each week, 65 per cent felt that their neighbors knew how to evaluate quality, and 58 per cent speculated that their neighbors knew the quality offered by various retailers.

Table 2.13 presents the relationships between the value of weekly family food purchases and several price and quality considerations. The greater the family food purchases, the smaller is the per cent of consumers that buy for low price only; while the larger the weekly food purchases, the more the consumers knew the prices of food in other stores. However, the smaller the weekly food purchase, the greater was the tendency to bargain

TABLE 2.13

WEEKLY FOOD PURCHASES RELATED TO PRICE AND QUALITY CONSIDERATIONS (PER CENT)

Housewives Who	Value of Food Purchases Last Week		
	NCr$ 0-24 (US$0-9.07)	NCr$ 25-40 (US$9.08-15.00)	NCr$41-Over (US$15.01-Over)
Buy low price, not quality	49	37	13
Believe neighbor thinks quality more important than price	48	52	71
Know prices in other stores	47	58	70
Bargain for lower prices	82	75	64
Always buy same quality	Relationship not statistically significant		
Believe neighbor can evaluate quality	Relationship not statistically significant		
Believe neighbor knows quality sold by retailers	Relationship not statistically significant		

Source: SUDENE/MSU Consumer Survey, 1967.

with the retailer over price (this relationship is not significant where income is the control variable). Finally, there was no significant difference between small and large volume purchasers in terms of quality.

One kind of search made by consumers is through the mass media in terms of newspaper, radio, and TV advertising. Thus, it is of interest to relate mass media exposure to the several price and quality considerations instead of the literacy-education index (see Table 2.14). High exposure customers tend to feel that quality is more important than price. High exposure customers tended to bargain less than those with low exposure. However, statistically significant relationships were not found for quality considerations.

How consumers feel about the price-quality decision is reflected by their time of shopping in the street fairs. At the beginning of a street fair, the quality is at its best and the merchants are optimistic that they can sell a lot at high prices, both causing the prices to be high. After one or two days, the quality drops due to consumer selection and spoilage, and the merchants try to recover as much of their costs as they can by selling at reduced prices. Of the housewives who shopped in the street fairs, 56 per cent shopped early in the fair, reflecting a concern for quality, 27 per cent shopped at no special time, and 17 per cent shopped at the end of the fair, which indicates a price orientation.

TABLE 2.14

MASS MEDIA EXPOSURE RELATED TO PRICE AND QUALITY CONSIDERATIONS (PER CENT)

Housewives Who	Score on Mass Media Exposure Index		
	Low	Medium	High
Buy low price, not quality	51	35	14
Believe neighbor thinks quality is more important than price	49	53	63
Know prices in other stores	Relationship not statistically significant		
Bargain for lower prices	76	79	65
Always buy same quality	Relationship not statistically significant		
Believe neighbor can evaluate quality	66	67	61
Believe neighbor knows quality sold by retailers	Relationship not statistically significant		

Source: SUDENE/MSU Consumer Survey, 1967.

Table 2.15 shows that the higher the weekly food expenditure, the greater is the likelihood that the purchaser will shop early in the fair. The lower the weekly food expenditure, the greater is the chance that the consumer will purchase at no special time. The low and middle food expenditure groups tended to buy more often at the end of the fair than did the high expenditure group. Table 2.16 demonstrates the same relationships relative

the level of literacy-education and mass media exposure of the respondents.

TABLE 2.15

WEEKLY FOOD EXPENDITURE RELATED TO TIME OF PURCHASE IN STREET FAIR (PER CENT)

Housewives Who Shop at the:	Value of Food Purchases Last Week		
	NCr$ 0-24 (US$0-9.07)	NCr$25-40 (US$9.08-15.00)	NCr$41-Over (US$15.01-Over)
Beginning of fair	45	49	77
No special time	38	27	14
End of fair	17	24	9

Source: SUDENE/MSU Consumer Survey, 1967.

TABLE 2.16

LEVEL OF LITERACY AND EDUCATION RELATED TO TIME OF PURCHASE IN THE STREET FAIR (PER CENT)

Housewives Who Shop at the:	Level of Literacy-Education		
	Low	Medium	High
Beginning of fair	46	58	67
No special time	37	23	18
End of fair	17	19	15

Source: SUDENE/MSU Consumer Survey, 1967.

In summary, it is generally agreed by the various consumers that quality judgments can be made by most shoppers; however, those with large weekly purchases and

high mass media exposure placed more emphasis on high quality relative to price considerations and knew alternative prices when shopping. The low value purchasers did bargain more often. Hence, with the exception of bargaining, the upper income and more affluent mass media users claim better price knowledge and strive for a good quality and good price when they buy.

Consumer Information Usage

It was pointed out above that 57 per cent of the housewives said that they knew the price levels of foods at other stores. Fifty-eight per cent claimed that they tried to get information from more than one businessman before they bought. When asked if they thought that their neighbors needed more information on prices and quality, 49 per cent responded yes, 25 per cent said no, and 26 per cent said that they did not know. Of the respondents, 37 per cent claimed that they read food advertisements in the newspaper and 40 per cent felt that advertisements (any media) influenced their choice of place of purchase. On the surface, the information in this section seems to contradict the data presented earlier on the steady use of retailers. What is important is that the responses in this section are not oriented to a time period. A respondent can periodically change her regular place of purchase and, while purchasing

at a regular place, she can still be cognizant and search for new or better places to purchase; or she can search within what she considers her regular group of retail outlets. Further, these questions lend themselves to a positive response as the housewife does not want to feel or admit that she is not a good homemaker. Hence, the percentage above must be viewed as housewife recognition of appropriate behavior as well as actual behavior.

There is an important link between mass media exposure and information use by consumers. Table 2.17 shows that those with more mass media exposure read more ads in the newspapers and are influenced more by advertising of food retailers. Thus, there is an indication that consumer behavior can be influenced through advertising. There are implications for change here which are of interest to both public and private sectors.

TABLE 2.17

THE RELATIONSHIP OF MASS MEDIA EXPOSURE TO ADVERTISING INFLUENCE (PER CENT)

Housewives Who Reported:	Score on Mass Media Exposure		
	Low	Medium	High
Reading food ads in newspaper	17	37	64
Ads of all media influence their location of purchase	31	38	51

Source: SUDENE/MSU Consumer Survey, 1967.

Finally, where consumers say that they get price information indicates the relative importance of the sources. Given two responses, 71 per cent of the consumers obtained price information from retail stores, 19 per cent from friends and neighbors, 22 per cent from the broadcast media, and 12 per cent from newspapers. The role of the mass media, though yet small, does show consumer awareness of advertising. Some consumers reported they were influenced by advertising. This data reinforces the conclusions above.

Mass Media Usage

The above notion of the importance of mass media exposure and influence suggests that further analysis of mass media usage should be made. An understanding of which consumers can be reached through various media would allow the more efficient use of mass media for stimulation change or gaining acceptance of change at the retail level.

Of the housewives who responded, 44 per cent reported that they received magazines and/or newspapers regularly, and 58 per cent claimed that someone in the household had read a magazine or newspaper lately. On the other hand, 16 per cent of the housewives reported listening to the radio rarely, 41 per cent said they listened some times, and 43 per cent reported listening

at least one hour per day. Of the respondents, 34 per cent never watch television, 32 per cent reported sometimes watching television, and 34 per cent indicated that they watch it regularly in their homes. Although radio has the highest usage, the printed media and television certainly have wide exposure as well.

The next important question to ask is who uses each kind of media? The answer to this question has clear implications for which media can be used to reach different kinds of consumers. Tables 2.18 and 2.19 show that high value food purchase-literate respondents tend to read the printed media substantially more than do low value food purchase-illiterate purchasers. Concerning radio, there is no indication that high value food purchase-literate purchasers have appreciably higher listenership than do the others. Finally, the high value food purchase-literate purchasers have heavy television usage, while the other groups do not on a regular basis. It is interesting to note that the high value food purchase-literate purchase group watches television at home, while the lower value food purchase-less illiterate purchasers typically watch television outside the home.

The conclusion that can be drawn is that upper income educated consumers are more effectively reached through the printed media and television than lower income uneducated consumers, while all levels of consumers are exposed to radio.

TABLE 2.18

WEEKLY FOOD PURCHASES RELATED TO
MASS MEDIA USAGE
(PER CENT)

Housewives Who:	Value of Food Purchases Last Week		
	NCr$ 0-24 (US$0-9.07)	NCr$25-40 (US$9.08-15.00)	NCr$41-Over (US$15.01-Over)
Read magazines or newspapers lately	41	55	81
Do not listen to radio	27	6	19
Listen some to radio	36	42	48
Listen regularly to radio	37	52	33
Do not watch TV	48	39	16
Watch TV some	45	36	11
Watch TV regularly	7	25	73

Source: SUDENE/MSU Consumer Survey, 1967

TABLE 2.19

LEVEL OF LITERACY AND EDUCATION RELATED
TO MASS MEDIA USAGE
(PER CENT)

Housewives Who:	Score on Literacy-Education Index		
	Illiterate	Some Literacy Little Education	Literate Some Education
Read magazines or newspapers lately	31	64	88
Do not listen to radio	23	10	19
Listen some to radio	38	43	49
Listen regularly to radio	39	47	32
Do not watch TV	50	36	7
Watch TV some	39	32	21
Watch TV regularly	11	32	72

Source: SUDENE/MSU Consumer Survey, 1967.

Conclusions

The housewives reported that they made most of the shopping decisions and did most of the shopping as well. Of the respondents, 82 per cent frequented street fairs, 54 per cent went to neighborhood stores, 33 per cent used self-service stores, and 25 per cent purchased from permanent markets in the week before the interview. Higher income and more educated consumers tended to frequent the self-service stores more than the lower income, less educated consumers. Consumers reported that the locational convenience was the most important reason for store use or non-use, but low prices were emphasized by the self-service shoppers, while low price, quality, and variety were seen by street fair users as important. The market retailers typically carry fruits and vegetables, but the neighborhood and self-service stores do not. Self-service stores have the greatest transaction size, while the neighborhood stores had the smallest transaction size with frequent purchasing. Of the neighborhood store users, 25 per cent claimed that they bought on credit. Few respondents used credit at the other types of retailers.

Generally, the higher income and more educated consumers reported that they had more price information, claimed that they searched more before they bought, and said they wanted higher quality than did the lower income,

less educated consumers. The higher income, more educated respondents had greater general mass media exposure, particularly to printed media and television, and felt more advertising influence than did the lower income, less educated consumers.

Attitudes toward Modernization

To this point, buying patterns and the reasons for certain of these behaviors have been presented. The willingness of certain consumers to adjust to the changing retail structure is evidenced by the use of the self-service stores. However, the lack of many large, high volume, low margin self-service stores in this group leaves the issue still in question. Thus, it is useful to present some other indicators of consumer changeability to shed more light on the subject. To accomplish this goal, the innovativeness of consumers will first be analyzed, and then some of the belief and attitudinal predispositions of consumer behavior will be reviewed.

Consumer Innovativeness

Four questions were asked of the housewives which indicate how innovative they were. Almost half (49 per cent) of the housewives said that they preferred goods already packaged, while 42 per cent claimed to try new products that appeared in the markets. On the one hand, 72 per cent of the housewives said that self-

service was better than being waited on, while only 26 per cent felt that their friends thought of them as innovators. Hence, a fourth of the housewives saw themselves as innovators and considerably more were willing to try new products and practices. Again, the support for the self-service idea is demonstrated, and also almost half of the housewives had accepted the idea of pre-packaged goods which is a necessary part of scale increases at retail.

The responses to the questions on product testing, self-service desirability, and innovativeness were grouped together into an index of consumer innovativeness to give a more general indication of consumer willingness to change. Table 2.20 shows that the large weekly food purchasers tend to be more innovative than do small weekly food purchasers.

TABLE 2.20

WEEKLY FOOD PURCHASE RELATED TO CONSUMER INNOVATIVENESS (PER CENT)

Housewives Who:	Value of Food Purchases Last Week		
	NCr$0-24 (US$0-9.07)	NCr$25-40 (US$9.08-15.00)	NCr$41-Over (US$15.01-Over)
Have low innovative index scores	29	15	5
Have medium innovative index scores	46	44	34
Have high innovative index scores	25	41	61

Source: SUDENE/MSU Consumer Survey, 1967.

Finally, Table 2.21 indicates that the literate-educated housewives are more innovative than the illiterate ones. Housewives with high mass media exposure were also more innovative than low mass media exposure housewives.

TABLE 2.21

LEVEL OF LITERACY-EDUCATION RELATED TO CONSUMER INNOVATIVENESS (PER CENT)

Housewives Who:	Score on Literacy-Education Index		
	Illiterate	Some Literacy Little Education	Literate Some Education
Have low innovative index scores	26	16	6
Have medium innovative index scores	49	42	29
Have high innovative index scores	25	42	65

Source: SUDENE/MSU Consumer Survey, 1967.

The conclusion that can be drawn from the foregoing analysis is that a substantial portion of consumers can and will change their buying habits to new retail outlets; however, the higher income, more educated consumers will adjust more readily than the poor and uneducated.

Attitudinal Predispositions of Consumer Behavior

The second indicator of consumer willingness to change lies in their basic beliefs and attitudes on such factors as interpersonal trust, fate and luck, family ties, etc. For example, do they believe that they can control their future or is it controlled by fate, and can they trust others or not? These kinds of questions get at basic predispositions to accept change or to resist.

Interpersonal Trust

Three questions of differing intensity give some clue as to the interpersonal trust that consumers have of others. Of the housewife respondents, 68 per cent felt that one could lose lots of money by trusting others, 65 per cent thought that one could not have the same amount of trust in one's friends as one's family, and only 22 per cent felt that one should not join in partnerships with non-family members. Clearly, there is a suspicion of non-family members, but it does not seem so strong as to prevent all cooperation with others.

It is useful to note that, when these three questions are combined into an interpersonal trust index, it does not relate significantly to the value of food purchases per week, but is positively related to

mass media exposure (see Tables 2.22 and 2.23). Mass media exposure is presented because the relationships with consumer attitudes differ from those of the literacy-education index.

TABLE 2.22

WEEKLY FOOD EXPENDITURE RELATED TO CONSUMER ATTITUDES (PER CENT)

Housewives Who Hold Various Attitudes		Weekly Food Expenditures		
		NCr$0-24 (US$0-9.07)	NCr$25-40 (US$9.08-15.00)	NCr$41-Over (US$15.01-Over)
Interpersonal trust of others		Relationship not statistically significant		
Belief in fatalism:	(High	34	37	26
	(Medium	32	19	15
	(Low	34	44	59
Risk (% who played game)		Relationship not statistically significant		
Felt social sanction of innovation		Relationship not statistically significant		

Source: SUDENE/MSU Consumer Survey, 1967.

The relationship between trust and level of literacy-education is not linear, with the somewhat literate middle group of housewives being the most trusting of others (see Table 2.24). Thus, the degree of trust in others was about the same for all income levels, but there were slight differences in the trust of others based on mass media exposure and education.

TABLE 2.23

MASS MEDIA EXPOSURE RELATED TO CONSUMER ATTITUDES (PER CENT)

Housewives Who Hold Various Attitudes:	Score on Mass Media Exposure Index		
	Low	Medium	High
Interpersonal trust of others:			
Low trust	30	16	15
Medium trust	44	48	45
High trust	26	36	40
Belief in fatalism:			
High belief	42	34	27
Medium belief	26	25	17
Low belief	32	41	56
Risk (% who played game)	23	26	45
Felt social sanction of innovation	Relationship not statistically significant		

Source: SUDENE/MSU Consumer Survey, 1967.

TABLE 2.24

LEVEL OF LITERACY-EDUCATION RELATED TO CONSUMER ATTITUDES (PER CENT)

Housewives Who Hold Various Attitudes:	Level of Literacy-Education		
	Illiterate	Some Literacy Little Education	Literate Some Education
Interpersonal trust of others:			
Low trust	27	11	20
Medium trust	43	49	45
High trust	30	40	35
Belief in fatalism:			
High belief	37	36	21
Medium belief	28	24	13
Low belief	35	40	66
Risk (% who played game)	24	32	41
Felt social sanction of innovation	Relationship not statistically significant		

Source: SUDENE/MSU Consumer Survey, 1967.

Familism

The importance of the family is demonstrated by the fact that 72 per cent of the housewives said that it was better to have a job near the family which pays less than to take a distant job which pays more than the close one. A note of caution on interpretation should be made at this point. The intent of this question was to see to what extent the immediate family was mobile relative to the traditional family and social structure. However, there may have been some housewives who understood the question as asking if they approved of their husbands leaving to take a job away from them and their children. Of the respondents, 80 per cent felt that it was better to have a small family than a large one. Thus, housewives in general seem to feel a tie to their family structure even though they feel the pressure for smaller families.

Fatalism

The degree to which consumers believe that they are controlled by fate and are not the masters of their future has important implications for their willingness to change from the traditional buying habits and patterns as the retail structure changes. Table 2.25 presents four indications of fatalism.

Clearly there is a large portion of the housewives who feel that fate is important; however, there is

TABLE 2.25

FATALISM OF CONSUMERS
(PER CENT)

Housewives Who Feel:	Agree (Fatalistic)	Don't Know	Disagree (Non-Fatalistic)
It is better to live for today because tomorrow will take care of itself.	59	8	33
Nowadays people alone can't do much to improve living conditions.	42	10	48
It is better to leave things as they are to see how they turn out.	35	9	56
We would be in a better situation if technicians left things as they are.	17	19	64

Source: SUDENE/MSU Consumer Survey, 1967.

a surprisingly large group of housewives who seem to believe that they have some control of their future. Logically, those who believe they are not restricted by fate would be expected to exert more effort in a search for better ways to satisfy their needs, i.e., they would be expected to change buying habits sooner than the more fatalistic consumers.

Unlike familism, fatalistic views differ somewhat between consumer sub-groups (see Tables 2.22 - 2.24). The greater the food purchase per week by consumers, the more mass media exposure that consumers have, and the

more literate and educated the consumers are, the greater is the per cent that do not believe in fate. Thus, there is a large group of consumers who do not have a fatalistic predisposition; however, the higher socio-economic level of consumers feel freer from fate than the lower socio-economic levels. Thus, though the foregoing relationship is not strong, there is an indication that the higher income, more educated consumers would adjust to changes of retail structure and practices more readily than the less well-off consumers, and they already have shifted to some extent.

Risk

Consumers were asked to play a hypothetical game which involved an outlay of NCr$5 (US$1.85), for which there was a chance to win substantial sums. If they chose to play the game, they could then choose a 75 per cent chance to win NCr$50 (US$18.50), or a 50 per cent chance to win NCr$200 (US$74.07), or a 25 per cent chance to win NCr$500 (US$185.00). It is interesting to note that only 31 per cent of the respondents chose to play the game at all. It must be realized that to many low-income respondents NCr$5 is a relatively large sum. On the other hand, the low weekly food expenditure group did not significantly differ from the other groups in percentage who would play the game. This is to say that income was not as much a factor as might be expected.

However, the high mass media usage and high literacy-education level groups did have significantly higher percentages of game players. (See Tables 2.23 and 2.24.) It should be noted that some of the less educated may not have understood the game clearly. Thus, the tendency to take risks is not spread evenly over all consumers. Again, the indication is that consumers with higher education and mass media exposure would tend to adjust their buying habits to new retail methods more readily.

Social Sanction of Innovation

Finally, when asked if they felt that their neighbors would not like seeing them get ahead in life, 34 per cent of the housewives said yes, 49 per cent said they did not know, and only 17 per cent said that their neighbors would approve. Thus, there is some evidence of social pressure to maintain the status quo. Housewives of all income, education, and media exposure levels were relatively homogeneous in their feelings of social pressure. No groups stood out from the rest with significantly higher or lower percentages of respondents who felt social sanctions.

Conclusions

In terms of the attitudes of the housewives, there is evidence that there are some differences between income and education groups, particularly concerning belief in fate. The important conclusion is that

all consumers do not feel bound by traditional attitudes as might have been expected. Certainly, there is a large group which could form the lead edge allowing the change, whatever it might be, to be tested by consumers. If the change fits the needs and desires, it will gain wider acceptance.

Traditional and Modern Behavior

The modernity index is a measure of predisposition which incorporates most of the above measures. The possible scores range from traditional (12) to modern (36). The distribution of scores is almost perfectly normal and centered in the middle of the range. The mean is 23.9, 70 per cent of the respondents fall within plus or minus one standard deviation, and 96 per cent of the respondents are within plus or minus two standard deviations.

There are some conclusions that can be drawn about the more modern group of housewives (see Table 2.26). The more modern housewives tend to own refrigerators, always shop in the same group of stores, know prices in other stores, and prefer pre-packaged goods. They shop in greater percentages in permanent markets and in smaller percentages in neighborhood stores than other groups. Again, all of the modernity groups of housewives shopped in about the same proportions in self-service and street

fairs. A greater per cent of the modern group get information before buying, watch television regularly, read food advertisements, take advantage of specials in stores, and are influenced by advertising.

TABLE 2.26

A PROFILE OF MODERN AND TRADITIONAL HOUSEWIVES (PER CENT)

Housewives Who:	Score on Modernity Index		
	Low	Medium	High
Own refrigerators	41	39	56
Buy in the same stores	60	74	77
Claim to know prices in other stores	50	56	69
Prefer pre-packaged goods	40	58	51
Purchase in self-service stores	Relationship not statistically significant		
Purchase in neighborhood stores	65	53	44
Purchase in permanent markets	19	23	34
Purchase in street fairs	Relationship not statistically significant		
Watch television regularly	31	28	46
Acquire information before purchasing	45	58	69
Read food ads	33	43	58
Take advantage of specials	46	58	65
Influenced by advertising:			
a little	31	25	17
some	37	33	27
a lot	32	42	56

Source: SUDENE/MSU Consumer Survey, 1967.

Summary

The results of the consumer study confirm that incomes are low, median per capita income US$160 per year, and that there is a large discrepancy between the

few rich and the many poor, 14 per cent earn over half of the income. Further, many of the consumers are illiterate, with only a small percentage being educated. The median years of education was three. On the average, consumers interviewed spent 53 per cent of their incomes on food, yet many owned their homes and durable goods. Few, however, owned cars.

The shopping preferences of consumers suggest that they are acutely aware of the differences in the various types of outlets and that, given greater availability, large self-service stores could gain customers. The popular use of the street fair implies that customers would not easily be switched from that pattern of shopping, however. Besides the location of an outlet, which is very important to the consumer, quality and price are important as well as the products handled. Street fairs specialize in the fresh perishable products.

The mass media reach most consumers, though not consistently, and were reported by the respondents to have some influence on purchase behavior. This fact indicates potential for the use of mass media for increasing consumer awareness of and changing attitudes toward products and outlets. This information can be an important force for the good of consumers by informing them of nutritional qualities of products they buy and the savings available from more selective shopping.

To summarize, it is useful to return to the initial two questions that were raised at the opening of the chapter. The first concerned the use of increased income. The average propensity to consume food was presented for a wide range of income levels and the distribution of income was emphasized to show the relative size of various market segments. Combining these factors gives a picture of the kind of purchasing response that would result from changes in income at the various income levels.

On the other hand, savings was not adequately identified. Only the grossest order of magnitude estimates are warranted from the data obtained, and certainly further research is needed to make good estimates of savings at the various income levels. The inflation rate makes the holding of cash within the country a poor method of savings, and thus often excess cash is used to buy durable consumer goods which hold their value as well as give service.

The second major area of question concerned the adaptability of the consumer to changing food market structure and practices. Both the changes in the past seven years and the basic outlook of the consumer toward change indicate that there is a significant portion of the population of consumers who will accept new ideas and adapt to the changing food retail conditions. Those

consumers willing to change tended to have higher incomes and more education but many low-income, uneducated consumers also were willing to change. Again, it must be emphasized that many consumers remain suspicious of change; but, in the balance, the consumer predisposition does not seem negative. Of course, the consumer reaction to change depends on the nature of the changes and how well they fit the consumers' needs and desires. Thus, any change must be evaluated for consumer approval before a real assessment as to success can be made. Hence, it is necessary to defer, until after the analysis of the retail structure for foods, the analysis of the consumer reaction to changes in retail structure and practices.

Though it seems that many consumers would change their buying habits to increase their satisfaction levels, given that a way to increase satisfaction exists, there are many who do not exhibit this willingness to change. Further, evidence has been presented that indicates the poorer, less educated consumers have higher representation in this group that resists change. Thus, there is an indication that there are many consumers who could be helped through an inciteful consumer education program. This program could help the poorer consumer use her limited income to feed her family better, and thus raise the real income of those helped in terms of volume of food and in terms of nutritional value.

CHAPTER III

RETAIL DISTRIBUTION OF FOODS

Introduction

This chapter presents some of the findings of surveys of 891 food retailers located in Recife, and the findings of several related non-survey studies. (See Appendix I for sample design.) The purpose in presenting these findings is to describe the urban food distribution system, to analyze some of the factors which inhibit the various types of businesses from making a larger contribution to the development of the region, and to examine parts of the strategy for inducing market development presented in Chapter I. Thus, it is intended that this chapter form a base from which possible changes in the system can be analyzed.

Before moving into the data, it is useful to review the kinds of questions which are relevant to the internal market integration thesis, upon which this chapter might shed some light. The first group of questions deals with the idea that market risks and uncertainties impede production responses such that efficient scale of operation and factor use are not reached. This idea

applies not only to farm production, but to each channel member as well. The fact that the channel member deals with other small inefficient channel members both prior and subsequent adds one kind of marketing risk and uncertainty. For example, the trucker may arrive late due to the poor equipment used, causing spoilage and uncertain supply for a wholesaler. How important are these questions of supply and demand? What other risks and uncertainties are inherent in the marketing systems that the channel members exist in? This chapter will deal with these questions at the retail level.

The second question logically follows the first. If marketing variables do, in fact, impede more efficient distribution, then what are the factors which maintain the system? This is to ask, what is the mechanism which prevents the marketing system from weeding out the distortions and preventing change? Again, this question will be attacked from the point of view of the retailer.

Finally, the question that directly flows from the above question is, how can the factors that cause market risk be reduced? What reforms are needed, and how should they be implemented? The answer to this question is open to a certain amount of speculation. One possible set of recommendations forms the final chapter of this work and is, in the author's opinion, the set that flows most readily from the analysis presented in

these several chapters. This question is raised in this chapter to point out the need to develop a sound basis for understanding the distribution system.

With these questions in mind as guides, the description of the retail structure of Recife can take on meaning. Because of the wide variety of retail outlet types, it is necessary to first make some brief comments about each type and then continue on a comparative basis to present their physical characteristics, their decision rules and practices, their performance differences, their perceptions of the factors limiting their market participation, and their personal internal constraints and predispositions. This progression of analysis will lead to an understanding of what the retail system is, what limitations affect various retail types, and which retail types are amenable to change or encouragement.

Types of Retail Outlets in Recife

Developing cities within developing regions often have retailing systems which are dominated by small retailers who perform a locational function, allowing consumers to purchase small quantities near their homes frequently, and often on credit. The consumer analysis of the last chapter shows that for Recife this concept of a traditional retailing system is only partially accurate. In fact, the retail structure of Recife is a mixture of the new and the old, the new struggling to

overcome the old and the old continuing in the ways it always has. This chapter presents the state of the struggle and the potential implications. However, before this analysis can be made, it is necessary to introduce the market actors--the various kinds of retail outlets--and a little about the surveys that were used to monitor these various types of retailers.

The following is a list of the major types of retailers in Recife as of the date of this survey:

1. Street fairs,
2. Fixed fairs or continuous fair operations,
3. Public markets,
4. Neighborhood stores,
5. Self-service stores,
6. Six largest retailers,
7. Others.

Street Fairs

There are 26 street fairs serving Recife, which are defined as open-air, non-continuous (non-daily) markets made up of small private businesses which sell usually only one class of product during the days of street fair operation. Usually, the street fair operates two days per week, but some operate only one day per week. Feirantes are defined as the owners or managers of these units. According to a census of street fairs taken by the SUDENE/MSU research team, in April, 1967, in preparation for the survey of feirantes, the number of feirantes in each street fair varied from 22 in the smallest

to 1,070 feirantes in the largest. The average size was 202 feirantes and the total was 5,275. These figures are for separate locations. On the average, each feirante operated in 2.1 fairs per week though 42 per cent operated in only one fair per week. Some of these additional fairs were outside of Recife. Of all feirantes, 74.3 per cent sold food for home consumption and the remaining 25.7 per cent sold household goods, food for immediate consumption, trinkets, plastic goods, clothes, furniture, cosmetics, soaps, etc. It should be noted that the street fair size and composition varied from week to week depending on the weather, the crop season, the holiday season, etc. Just prior to street fair days, private businessmen (table suppliers) arrange tables and booths on the fair grounds. These fixtures are then rented to the fair merchants for use during the fair.

Most of the findings concerning street fairs are based on a survey of 210 feirantes in Recife made in May and June of 1967. Two hundred six of the respondents, or 98 per cent, were actually the owners of the business, while four (2 per cent) were employees. The population for this survey was limited to feirantes selling food for home consumption.

Fixed Fairs

There are a number of groupings of small retailers into markets which are not street fairs because they operate every day, and they are not public markets because they do not reside in one single market structure. These groupings will be referred to as fixed fairs. With the exception of one fixed fair, the Afogados Fixed Fair, these operators are not considered legal by the city government. Again, with the exception of the Afogados Fixed Fair, these markets are spontaneous unplanned groups of wooden booths and tables with no central organization or control. Afogados is different because the city government built the market facilities; yet, these operators, like other fixed fairs, are not under one roof.

There are nine of these fixed fairs in operation. They range in size from 20 food operators to 192 food operators. The total number of food operations at the time of this survey was 640. In addition, there were 64 non-food fixed feirantes. Thus, 91 per cent of fixed feirantes sold food for home consumption.

The findings concerning fixed fairs which follow are based on a survey of 75 fixed feirantes in Recife made in May and June of 1967. Seventy-three of the respondents, or 97 per cent, were actually the owners of the business, while two (3 per cent) were managers. The

population for this survey was limited to fixed *feirantes* selling food for home consumption.

Public Market Retailers

Public market operators are those businessmen who sell goods within or along the outside walls of fixed large market buildings. The overall characteristic of this kind of market is that there is one structure which houses many compartments where the individual businessmen operate. The name "public market" comes from the fact that all but one of these structures are owned and operated by the city government. The individual retailers rent the compartments. There are 10 of these markets in operation and more than three other private markets which are not in operation. The largest market in terms of food sellers is Santa Rita, which has 216 food compartment retailers. The smallest is Santa Amaro, with 24 food retailers. The total number of compartment retailers was 920. In addition, there are 208 non-food retailers. Thus, 82 per cent of public market operators sell food for home consumption.

The findings for public market retailers are based on a survey of 100 compartment retailers in Recife made in May and June of 1967. Of the respondents, 93 per cent were actually the owners of the business, while 7 per cent were employees. The population for this survey

was limited to compartment retailers selling food for home consumption.

Neighborhood Retailers

Neighborhood stores are defined as those stores that exist as single units throughout Recife yet are not self-service. There are four general types of stores included in this category: barracas (51 per cent), vendas (39 per cent), specialty stores (8 per cent), and street vendors (2 per cent).

A barraca is defined as a shabby wood single unit, usually of one room, which is not entered by the customers. Barracas usually carry some cereals, some canned goods, occasionally some bananas, and usually soft drinks. A venda is typically a larger unit within a permanent building, where the customer enters the store. Vendas have clerk service and handle cereals, canned goods, and household items. Specialty stores are single-product stores which handle for the most part fresh and/or processed meats. Bakeries are not included in this research as they are covered in the industrial analysis as food processors. Street vendors have non-permanent facilities which are usually removed daily. It should be noted that only neighborhood stores which sold food for home consumption were included in the survey. Thus, restaurants, bars, and barracas which sold

only beverages and prepared food were excluded. In all, there were 2,285 neighborhood retailers in this population.

The findings related to neighborhood retailers are based on a survey of 444 neighborhood stores in Recife made in May and June of 1967. Most of the respondents, 396 (or 89 per cent) were actually the owners of the business, while 48 (11 per cent) were employees.

Self-Service Retailers

Self-service retailers are defined as those who do the majority of their business through letting the customer select and carry products to a central location for tabulation of the bill and payment. Self-service retailers are typically larger than neighborhood stores although there is some overlap between the very largest neighborhood stores and the smallest self-service stores. Many of the self-service group changed in recent years from the neighborhood store category by remodeling and expanding their facilities to accommodate self-service shopping. Most of the self-service stores are relatively small by supermarket standards and are typically named mercadinhos. There were at the time of this survey 42 self-service stores operating in Recife. Fifty-five per cent of these had sales of less than NCr$10,000 (US$3,704) per week, 24 per cent had sales of NCr$10,000

or more per week but less than NCr$50,000 (US$18,517) per week, and 7 per cent had sales of greater than NCr$50,000 per week. For 14 per cent no sales figures were given by the respondents. Most were small. Most of the self-service stores are independent of each other. The notable exceptions are the Comprebem stores, of which there were at the time of the survey eight in operation in the Recife area. Further, there were four organizations with two stores in operation.

The findings on self-service stores are based on a census of all self-service retailers in Recife made in May and June of 1967. It has been noted that one retail organization has eight stores. The decision process for these stores is centralized in a single management team. Consequently, when behavioral characteristics of self-service retailers are considered, it is necessary to think in terms of managerial units, or 35 retail organizations. Because decision units are of prime interest, almost all analysis is based on this population. When descriptive data about the stores themselves are considered, it is necessary to use the number of stores (42) as a base. Thus, two populations are used in this section, depending on the analysis required. Of the management groups interviewed, 28 or 80 per cent were actually owners of the businesses, while 7 or 20 per cent were managers. Of the stores interviewed, 28 or

67 per cent were owners, while 14 or 33 per cent were managers.

Six Largest Retailers

It has been noted that the self-service retail category is made up of predominantly small operations. Thus, it is useful for comparison to present selected characteristics of the largest six self-service retail organizations. The criterion used for separating these retailers for special analysis was sales volume of NCr$10,000 (US$3,704) per week or more per store. These six retail organizations have a total of 13 stores each with sales of at least NCr$10,000 per week. As in the self-service group, only stores number will be used where stores characteristics are presented.

Other Retailers

There are several other types of retailers in Recife which need to be mentioned for completeness. These retailers are not included in the main analysis because of their small numbers; however, this is not to say that some of these groups are not important in the changing retail structure and should not be noted as special cases. The major retailer types in this other category are street vendors, consumer cooperatives, large freezer meat dealers, and government food stores. These types will be briefly described in order.

Street vendors, as was noted in the last chapter, are a small and decreasing segment of the food retail structure. Because of competition from other retail types, combined with changing consumer buying habits, the street vendor--who legally is any mobile selling unit--has been forced out of business or forced to set up a semi-fixed location in the street, in fairs, in public markets, and in fixed fairs. Those who set up their businesses in the streets were included in the neighborhood store category and survey, while those who gravitated toward one of the kinds of markets were included in those samples as part of the street fair, fixed fair, or public market. The residual left crying their wares through the streets are inconsequential in number and sales volume and serve as a present-day reminder of a bygone institution now part of the folklore of the northeast of Brazil. The costs of isolating and surveying this group of retailers is disproportionately high relative to the possible gains of understanding statistically the extinction process of this group. This is not to say that important insights would not be gained on the competitive process of change, but that the difficulties outweighed these possible results.

A census was made of consumer cooperatives in Recife, of which there were eleven. These cooperatives were split between private company and government spon-

sorship, and in all cases were for the benefit of the employees of the sponsoring organization. All of the cooperatives were non-profit organizations who sold mostly cereals and canned foods as near to cost as possible. None of the cooperatives were very large relative to the self-service group of retailers. The average sales volume of the eleven cooperatives was less than half of that of the self-service stores.

The second type of retailer to be considered here is the large meat dealer who has extensive freezer storage capacity. These operations stand out because of their vastly greater volume than the other meat dealers and their investment in equipment and plant. Also, these operators are differentiated by their ability to buy outside the Recife wholesale market for meat. There are five of these large specialized meat dealers and each was included in the survey.

Finally, the government maintains twelve retail outlets (SAPS stores) which were originally designed to distribute key products at retail to help keep retail prices in line. Until mid-1967, these stores did not have to pay taxes, which allowed them to sell at somewhat lower prices. By the time of this research, these stores resembled the small self-service stores in terms of product lines, and their costs were such that they did not differ significantly in price. The already weak

position of these outlets was dealt another blow when a law was passed in mid-1967 which stripped them of their tax advantage. Hence, during the period of this research, few consumers used these outlets and their significance was small. The SAPS stores were not included in the survey.

One approach to the presentation of the retail distribution system would be to analyze each of the above retail types and, by doing, so provide a benchmark description of the system. However, this method of presentation would be lengthy and not focused centrally on the issues to which this work is addressed. The differences between the various types of retailers can best be illustrated by the use of a comparative mode of presentation where each of the retail institutions is compared with the others as to physical characteristics, decision rules, practices, performance, etc. Even so, the comparison of the ten institutions described above would be a laborious task which would tend to by-pass the relevant questions.

Thus, to show the major trends and differences in the system, two simplifications can be made. First, those retail types which play peripheral roles in the system can be sidelined for the bulk of the analysis. These include street vendors, consumer cooperatives, large meat specialty dealers, and government-owned

stores. Second, retailers with similar characteristics can be combined into single weighted groups and thereby focus attention on the real differences in the system. The criteria for forming the groups is as follows for each group.

From the above descriptions of street fairs, fixed fairs, and public markets, it is evident that these three types of retailers have much in common. They are all very small operators with little capital, who work alongside many other retailers like themselves in group marketplaces. Their characteristics, behavior, and performance show little difference. Thus, these three types of retailers will be grouped together for further analysis except where their characteristics differ enough to warrant separate treatment. It should be noted that the influence of various retailers in this group on the group statistics are weighted by the relative number of that kind of retailer in the actual population of retailers. For example, because there are about 6.5 times as many street fair operators as fixed fair operators, the resultant statistics for street fair operators are weighted 6.5 times that of the fixed fair operators. Because of the very small size of these operators, this group of retailers will be referred to as atomistic retailers from this point on.

The neighborhood retail category already forms a unique grouping of retailers that are spatially located

throughout Recife, and thus will be used as is. Finally, the self-service category will include both the small and large self-service stores. Only where the very large self-service stores differ from the rest of the group will these retailers be presented for comparison. With these groupings in mind, the comparative analysis can be started. First, types of retailers will be compared on personal demographic characteristics, followed by comparisons on physical characteristics, practices and decisions, performance, perceptions of their environment, and internal decisional predispositions.

Demographic Characteristics

A good place to start the analysis is to present some background information on the characteristics of the respondents themselves who were largely the owners of the various retail outlets. This data gives the background of the decision maker. There was little difference between the mean ages of the three groups. The mean for the atomistic retailers was 37 years and for the self-service was 39 years, while the neighborhood retailers were somewhat older with a 41-year-old mean.

Table 3.1 presents the results of the literacy-education index and shows that the differences between the three groups are very significant. This index, it can be recalled from Chapter II, measures functional literacy; if the respondent meets the minimum for

literacy, then his years of education are added as well. It is interesting to note that the average years of education for the three groups varies markedly, with the atomistic retailer's mean being 1.6 years, the neighborhood retailer's being 3.2 years, and the self-service

TABLE 3.1

DEMOGRAPHIC CHARACTERISTICS OF FOOD RETAIL RESPONDENTS BY RETAIL TYPE

Characteristics	Table Significant	Atomistic Retailers	Neighbor. Retailers	Self-Serv. Retailers
Per cent literate, as defined by the literacy-education index	x	44	67	100
Per cent with second jobs		21	18	38
Number of dependents:				
0 - 4		30	37	45
5 - 7		40	33	33
8 - Over		30	30	22
Years in present type of business:				
0 - 4		27	42	50
5 -12		40	30	28
13 - Over		33	28	22

Source: SUDENE/MSU Retail Survey, 1967.

retailer's being 7.7 years. It is also interesting to note that 41 per cent of the atomistic retailers had never attended school, while for neighborhood and self-service retailers the averages were 21 per cent and 2

per cent, respectively. The conclusion from these educational and literacy levels is that the majority of the atomistic retailers do not have the basic literacy skills nor the formal education to help them in their decision-making tasks as businessmen. More of the neighborhood retailers have these basic skills, while almost all of the self-service retailers possess this foundation. For those retailers without this education, the use of the printed word to gain information, accounting systems, and the like are precluded. The simple problem of getting a license to operate in their fair becomes a fearful and costly process. (They are afraid of the government and the procedure they do not understand.) A further implication which results from the lack of literacy is simply that the illiterate cannot be reached through the printed mass media.

Retailers have more second jobs than the mean for the consumer head of households reported in Chapter II (see Table 3.1). On the average, those atomistic retailers with second jobs spend 20 hours per week on those jobs, while neighborhood retailers spend an average of 10 hours per week and self-service retailers an average of 19 hours per week.

Table 3.1 shows that self-service retailers have been in the retail business significantly fewer years than the other two types of retailers. In fact, 50 per cent have been in the retail business less than five

years. The self-service retailers tended to have smaller families, with an average of 5.5 members (see Table 3.1). Neighborhood and atomistic retailers had average family sizes of 6.0 and 6.3, respectively.

Physical Characteristics of the Retail Outlets

Before presenting the physical characteristics of the various types of retail outlets, it is useful to remember that there are many atomistic and neighborhood retailers, while there are few self-service stores (see Table 3.2). The usefulness of these numbers is that they give a sense of perspective to the analysis that follows; i.e., what is the magnitude of expansion from the average to the system.

Most of the atomistic and neighborhood retail units were owned by one person, while the self-service stores were more often owned by more than one owner (see Table 3.2). Of the three categories of retailers, neighborhood store owners tended to own a higher percentage of the buildings in which they operated; however, of the stores of the six largest self-service groups, 69 per cent were owned by the parent organization.

The average size of each type of retailer is presented in Table 3.2. It is interesting to note that the self-service stores were 11 times larger than the neighborhood stores, on the average, and the neighborhood

TABLE 3.2

PHYSICAL CHARACTERISTICS OF FOOD RETAIL UNITS BY RETAIL TYPE

Characteristics	Atomistic Retailers	Neighbor. Retailers	S.S. Retailers	Large Six. Retailers
No. of stores	5,560	2,285	42*	6
Ownership of business:				
Individual proprietorship	92%	87%	34%	...
Family business	5%	12%	9%	...
Partnerships	2%	2%	37%	...
Corporations	0%	0%	17%	...
Own store location and building	4%	58%	40%	69%
Mean size (M^2)	3	22	243	465
Mean sales volume	NCr$532** (US$197)	701 (260)	19,510 (7,226)	81,333 (30,123)
Mean asset value of building regardless of ownership:				
NCr$	very small	1,060	24,300***	46,500
(US$)		393	9,000	17,200
Mean value of fixtures and equipment:				
NCr$	N/A	N/A	41,106	162,000
(US$)			(17,076)	(59,999)
Mean inventory on hand:				
NCr$	117	1,152	71,694	295,000
(US$)	(43)	(427)	(26,553)	(109,262)

*Includes the six in the largest six category.
**Includes all fairs attended in one week.
***This figure is overstated due to the fact that some of the self-service stores were valued above actual, due to their being really converted neighborhood stores.
Source: SUDENE/MSU Retail Survey, 1967.

stores were seven times larger than the atomistic retailers, on the average. The value of the structures which surround the various retailers is not easily determinable due to accounting complications of inflation, depreciation practices, and the like. Thus, estimates of current replacement costs give as good an idea of the asset value of retail structures as is available (see Table 3.2). The construction costs were obtained from retailers who were in the process of new construction and from several contractors. For modern construction such as a large self-service store, the cost per square meter was estimated at NCr$100. Traditional construction for the larger neighborhood stores was estimated at NCr$50 per square meter (43 per cent of the neighborhood category), and for the wooden booths was estimated at NCr$18 per square meter (51 per cent of the neighborhood category). Hence, the mean construction cost for the larger neighborhood stores was about NCr$2,400 (US$880), and for the booths about NCr$54 (US$20). (See Table 3.2.)

The atomistic retailers had few assets in terms of equipment. Of this group, 63 per cent used a scale, but most of these were rented. On the average, each atomistic retailer owned 1.4 hand tools such as knives, saws, etc. Neighborhood retailers, on the other hand, owned some fixtures, 83 per cent owned at least one scale, and on the average each owned 2 hand tools.

Importantly, 61 per cent of this group said that they owned a refrigerator, though these were used primarily for the storage of beverages. The self-service retailers had vastly greater amounts of equipment assets (see Table 3.2).

Finally, to complete the picture of the assets owned by retailers, current stocks of salable products should be viewed. The differences in total value of the different types of retailers is tremendous, as is pointed out by Table 3.2. Generally, atomistic retailers only stock products for immediate sale and do not carry stocks from one week to the next. The composition of these products will be dealt with later in this section. The distribution of total owned assets by retail type is presented in Table 3.3.

The employment characteristics of various retailers are of utmost importance because of the labor intensity of traditional marketing systems. (See Table 3.4.) Together, atomistic and neighborhood retailers account for over 13,000 separate location jobs. However, it must be remembered that many of the atomistic retailers have several locations in which they operate, most of which are outside the city. Thus, the real number of people is somewhat lower than 13,000. The composition of the retail work force is given in Table 3.4. As is to be expected, the self-service stores have more

TABLE 3.3

LEVELS OF ASSET VALUE OF FOOD RETAIL UNITS BY RETAIL TYPE (PER CENT)

Asset Value	Atomistic Retailers	Neighbor. Retailers	Self-Serv. Retailers
NCr$0-NCr$200 (US$74.25)	70	28	0
NCr$201 (US$74.26) to NCr$500 (US$185.37)	17	15	0
NCr$501 (US$185.38) - Over	13	57	100

Source: SUDENE/MSU Retail Survey, 1967.

owners and more professional managers than the other groups. They also hire more employees per retail unit and pay much higher average salaries. It is interesting to note that of the employees (other than managers) of the atomistic and neighborhood retailers, 47 per cent and 61 per cent, respectively, were relatives without pay; 45 per cent and 23 per cent, respectively, were employees with non-fixed payments; and 8 per cent and 16 per cent, respectively, were employees with fixed salaries. In contrast, only 2 per cent of the self-service employees were relatives with no pay, 4 per cent were employees with non-fixed payments, and 94 per cent were regular salaried employees. The six largest self-service retailers on the average employ twice the self-service group average.

The average number of years in the same location

TABLE 3.4

LABOR CHARACTERISTICS OF FOOD RETAILERS BY RETAIL TYPE
(BY INDIVIDUAL LOCATION OF RETAILERS)

Characteristics	Atomistic Retailers	Neighborhood Retailers	Self-Service Retailers	Large 6 Retailers
Total persons in business	8,840•	4,319	387	...
Average persons per business	1.59	1.89	9.22	...
Average owners per business	1.05	1.02	1.29	...
Average work week (hours)	34••	83	57	...
Average salary (NCr$) (weekly)	45.74	70.15	84.10	...
(US$)	(16.94)	(25.98)	(31.15)	...
Average managers per store	.01	.05	.44	.77
Average work week (hours)	37	78	52	55
Average weekly salary (NCr$)	20.38	36.62	60.70	101.20
(US$)	(7.55)	(13.56)	(22.48)	(37.48)
Average other employees per store	.51	.82	7.49	15.20
Average work week (hours)	29••	58	51	48
Average weekly salary (NCr$)	6.26	7.95•••	34.51	35.04
(US$)	(2.32)	(2.94)	(12.78)	(12.98)

•Based on locations.

••Feirante data reduces the averages because only one feira per week was included.

•••Relatives with no pay are averaged into this figure.

Source: SUDENE/MSU Retail Survey, 1967.

was seven for all retail types. However, 27 per cent of the atomistic retailers had been in their present location a year or less, while 30 per cent of the neighborhood retailers and 34 per cent of the self-service retailers had been in their present location a year or less. The entry rate in all groups is high, indicating a high failure rate as well. Although there is no data in the past years on number of retailers in each type, the changes found in the consumer purchasing patterns indicate that part of the self-service locational change can be explained by growth, while this is not the case for the atomistic and neighborhood retailers (see Chapter II).

Atomistic retailers by definition were in commercial areas of the city, while 71 per cent of the neighborhood retailers and 57 per cent of the self-service were located in primarily residential areas of the city. A commercial area was defined as one where at least 25 per cent of the buildingsin the block are used for commercial purposes. Further, street fairs and public markets pose somewhat of a focal point for retailing, as 46 per cent of the neighborhood stores and 43 per cent of the self-service retailers were located within three blocks of one of these markets. The location of neighborhood retailers in residential areas supports the notion presented in the last chapter that these stores perform an important locational function.

The products that the various types of retailers handle tell much about the nature of their operations. Table 3.5 presents the per cent of various retailers by type that handle specific commodities or commodity groups. The atomistic retailers have been split into their components because of the differences in products handled, though relative to the other groups the atomistic retailers remain fairly homogeneous. The atomistic retailers handle primarily perishables, fruits and vegetables, and fresh beef (excepting street fair operators, who handle more volume in other fresh meats than do the other types of retailers). On the other hand, neighborhood stores and self-service retailers handle cereals, dairy products (excluding fresh milk), dried meat, and canned goods. Many of these two groups also handle eggs and some self-service stores handle poultry. These configurations of product lines mesh with the shopping behavior data presented in the consumer chapter (Chapter II). A further implication can be seen in Table 3.5 in that the sizes of the percentages indicate the degree of specialization of the retail types. Most atomistic retailers are specialized and thus many are represented next to only one or two products, whereas most self-service retailers carry many types of products, mostly non-perishables.

This section has tried to develop a picture of the major components of the retail system in Recife. It

TABLE 3.5

PER CENT OF RETAILERS BY TYPE CARRYING VARIOUS COMMODITIES

Commodity	Street Fair	Fixed Fair	Public Market	Neighbor-hood Retailers	Self-Service Retailers
Rice	10			50	98
Beans	11	13	16	51	95
Manioc flour	15			52	95
Liquid milk	...	...	...	5	7
Dairy products (excluding liquid milk)	...	3	...	34	81
Fresh beef	6	13	27	6	7
Other meat	15	11	10	37	81
Poultry	4	5	4	3	40
Eggs	...	NA	NA	47	50
Bananas	11			32	12
Other fruits	34	54	39	32	12
Tomatoes	11			16	12
Other vegetables	38			22	12
Canned foods	5	...	...	39	100
Other	12	1	4	34	...

Source: SUDENE/MSU Retailer Survey, 1967.

was seen that the vast group of atomistic retailers were individual proprietors who sold primarily perishables from generally rented retail facilities. These operators

owned little equipment and held small stocks for short periods of time. Neighborhood retailers, on the other hand, were individual proprietors who sold mostly low-perishable foods from individual retail locations spread through the residential areas of Recife. More than half of these retailers owned their physical facilities. Inventory and equipment assets were vastly greater than that of the atomistic retailer. Finally, the self-service retailer had assets many times that of the neighborhood retailer in terms of buildings, equipment, and inventory. Further, though self-service retailers tended to sell low-perishable foods, they carried wider product lines than the other types of retailers.

Retail Practices and Decision Rules

Given the above background on the decision maker and his business, the next question is how does he run his business? What is the behavior of the various types of businesses and what decision rules lie behind those behaviors? These two areas of inquiry will be presented together as often the decision rules must be inferred from the business behavior. In other words, the object is not to study the decision process, but to understand what decisions are made as evidenced by action of the business. The presentation of these behaviors will not include a value judgment as to the correctness of each behavior because there is no basis as yet for making

these judgments. The next section on the performance of the various types of retailers will tackle this problem to demonstrate the effects of the behaviors exhibited by the retail types. It should be noted that the consumer reaction to the retail institutions presented in the last chapter already places some perspective on the question of value of function performed.

Consumer Related Practices and Decision Rules

For most food retailers in Recife, the only manipulatable variable concerning selling is price. Most of the mix of factors to gain customers are fixed by prior decisions on location, fixtures, and mode of service. Only in recent years has advertising been used, and only by a few of the largest retailers. Hence, price stands out as the variable which has as yet been neglected by our analysis. There is a second and more important reason for looking at price carefully, however. One of the key notions presented in Chapter I was that marketing improvements would be transferred to the consumer through decreased prices.

Table 3.6 presents some clear indications of the answer to this question, as well as related pricing behavior of the retail types. First of all, 28 per cent of retailers of any type priced their products to match a real or imaginary market price. Further, there was

TABLE 3.6

CUSTOMER-RELATED PRACTICES AND DECISIONAL CHARACTERISTICS OF FOOD RETAILERS, BY RETAIL TYPE (PER CENT)

Characteristics	Table Significant	Atomistic Retailers	Neighborhood Retailers	Self-Serv. Retailers	Six Large Retailers*
Price					
Sell same price as competition		28	29	17	0/6
If buy for less than competition, sell for less	x	85	92	98	6/6
Generally sell for lower price than competition	x	22	32	53	4/6
Use price for customer attraction	+	21	24	63	5/6
Sometimes reduce price to avoid spoilage	+	96	82	81	5/6
Sometimes sell for less than cost	x	87	63	33	...
Sort products on quality and differentiate price	+	83	67	24	0/6
Cheating					
Think other retailers like themselves cheat their customers	x	25	24	15	...

*This column is presented for comparison, but is not part of the significance test because of the small numbers in this group.

+Significance of this relationship not tested.

Source: SUDENE/MSU Retail Survey, 1967.

not a significant difference between retail types on this score. Secondly, there was strong agreement among all the retailers that if they bought for less than their competition, they would sell for less than their competition. There was a statistically significant difference between the types of retailers, however, with 98 per cent, 92 per cent, and 85 per cent of the self-service, neighborhood, and atomistic retailers being willing to pass on purchase price gains to the consumer. Finally, there was a large difference between types of retailers as to general price level. Of the self-service retailers, 53 per cent reported that they generally sold for lower prices than their competitors while 32 per cent of the neighborhood retailers and 21 per cent of the atomistic retailers reported doing so. Further, 63 per cent of self-service retailers claimed that they used price to attract customers, while 24 per cent of the neighborhood retailers and 21 per cent of the atomistic retailers claimed doing so.

These four sets of pricing practices tell an important story about the retail structure of Recife. First, the atomistic retailers do not feel the pressure to price at the market price; they price on a fixed margin, yet they do not try to sell below competition. This indicates that they are not conscious of competition, and certainly do not act as if they felt that they were

in competition with other retailers. The fact that they readily reduce price to avoid spoilage (see next section) shows that they will reduce price but not for competitive reasons. On the other hand, the many self-service operators do not price to match competition but they do price under competition and use price to attract customers. They are also willing more often to pass on buying price advantage to the consumer through price. Thus, the self-service group clearly feels that they are competing with other retailers and are willing to compete on a price basis.

The largest six retailers give emphasis to this point in that none price to meet competition; all pass on buying price advantage to the consumer. Four out of six compete on a price basis, and five out of six use price to attract customers. Neighborhood stores fall between the atomistic and self-service retailers with respect to their sensitivity to competition. All retailers tend to translate purchase price into selling price on a fixed margin, but the competitive behavior of the self-service and very large retailers is significantly stronger than that of the other retail types. This is to say that those retailers who act competitively would tend to do more to make lower purchase prices a reality and to streamline operations to gain competitive advantage. Those who do not feel that they are in a competi-

tive situation would not be motivated to search for competitive advantage. This topic is vital and will be returned to as more data unfolds.

There are no standardized sets of grades or grading procedures for foods in the Northeast of Brazil which are followed by retailers, and thus it is of interest to see what quality differentiation takes place. Of all retailers, 92 per cent indicated that they reduced the price of foods in order to avoid spoilage. Further, 87 per cent of the atomistic retailers said that they sometimes reduced prices below cost, while 63 per cent of the neighborhood retailers did so and 33 per cent of the self-service retailers did so. Of the atomistic retailers, 83 per cent said they sorted products on quality and charged higher prices for the better products, while 67 per cent of the neighborhood retailers claimed that they sorted their products and 24 per cent of the self-service retailers reported doing so.

In interpreting these data, it should be remembered that the atomistic retailers handle primarily highly perishable products that come to market in heterogeneous lots. On the other hand, self-service retailers handle primarily non-perishable products and primarily goods of homogeneous quality. As a result, the practices correspond to the supply situation in which the retailer finds himself. Finally, it should be mentioned

that the nature of the street fair, which makes up the bulk of the atomistic retail group, is a natural sorting process due to the fact that it lasts not more than two days. The good-quality products are selected out by the retailers and the customers at the beginning of the fair and high prices prevail. But as the fair nears its end, the necessity of selling all the stock as well as the lower quality products that remain forces the price level down in proportion to the time remaining in the fair. Thus, the system encourages these price differentials through time constraints and lack of means of maintaining quality.

Finally, 24 per cent of the neighborhood and 25 per cent of the atomistic retailers felt that retailers like themselves cheated their customers on weights. Of the self-service retailers, 15 per cent had the same feeling. This data corresponds roughly to the perceptions of the consumers presented in the last chapter though consumers felt that neighborhood stores cheated somewhat less than those retailers did and that the self-service stores cheated a lot less than these retailers reported.

Supply-Related Practices and Decision Rules

The first question concerning supply decision rules is where do the various retailers acquire their

supply? Table 3.7 presents sources of supply for various commodities by type of retailer. Most of the retailers of all types purchase their rice and beans from established wholesalers in Recife. Manioc flour was also purchased to some degree from established wholesalers, but was also purchased from market wholesalers and from the interior. Fresh beef was purchased largely from Recife government slaughter facilities although some was purchased in the interior. Poultry and eggs were supplied to the majority of retailers handling them by the poultry cooperative in Recife (Cogranja). Finally, fruits and vegetables were bought largely from market wholesalers with some being purchased in the interior. Thus, the general trends are that the low-perishable foods are purchased from the established wholesalers in Recife, while the high perishables are bought from the market wholesalers.

Not only is the source of supply important, but the conditions of the transaction are of interest. The average number of suppliers used by the types of retailers indicates that generally retailers use more than one supplier. However, these averages indicate that, except in the case of fruits and vegetables, most retailers buy from a definite few suppliers (see Table 3.8). The use of a few usual suppliers is supported by the fact that most retailers reported always using the same set of suppliers (see Table 3.9).

TABLE 3.7

SOURCES OF SUPPLY OF SELECTED COMMODITIES BY RETAIL TYPE (IN PER CENTS OF RETAILERS HANDLING EACH PRODUCT)

Commodity Retail Type	Estab. Wholesaler	Central Pub.Mk. Wholesaler	Other Market Wholesaler	Interior	At the Door	Other
Rice:						
Atomistic	72	3	24	0	0	1
Neighborhood	67	2	21	0	3	7
Self-service	76	0	0	3	0	21[a]
Beans:						
Atomistic	62	5	26	3	0	4
Neighborhood	58	0	27	1	8	6
Self-service	79	0	7	0	3	11
Manioc flour:						
Atomistic	23	4	11	54	0	8
Neighborhood	22	1	34	7	29	7
Self-service	43	0	0	43	6	8
Fresh beef:						
Atomistic	0	0	12	16	...	72[b]
Neighborhood	4	0	0	12	...	84[c]
Poultry:						
Atomistic	0	8	10	74	0	8
Neighborhood	7	0	0	14	14	65[d]
Self-service	0	0	0	22	0	78[d]
Eggs:						
Atomistic	0	20	10	50	0	20
Neighborhood	6	2	9	4	54	25[d]
Self-service	8	0	0	42	0	50[d]
Bananas:						
Atomistic	5	18	32	35	0	10
Neighborhood	5	23	50	1	8	13
Tomatoes:						
Atomistic	8	66	14	6	0	6
Neighborhood	1	53	39	0	3	4
Other fruit & Vegetables:						
Atomistic	0	42	24	18	0	16
Neighborhood	0	33	42	2	0	23

[a]18 per cent was purchased in the south of Brazil.

[b]67 per cent was purchased at the Peixinhos slaughter facility.

[c]This 28 per cent was purchased at Frigorifico do Nordeste and 56 per cent at the Peixinhos slaughter facility.

[d]Most of this percentage was purchased from the Cogranja poultry cooperative.

Source: SUDENE/MSU Retail Survey, 1967.

TABLE 3.8

SOURCES OF SUPPLY OF SELECTED COMMODITIES BY RETAIL TYPE
(IN PER CENTS OF RETAILERS HANDLING EACH PRODUCT)

Commodity Retail Type	Mean No. of Suppliers	% of Trans. In Arranged by Retailer			% Last Purchased on Credit	Pay Back Period (Days)	% Annual Cost of Credit
		None	Some	All			
Rice:							
Atomistic	1.8	48	8	46	61	9.2	409
Neighborh.	1.5	27	5	68	21	21.5	113
Self-serv.	1.9	42	3	55	35	34.5	11
Beans:							
Atomistic	1.8	48	7	45	59	7.7	485
Neighborh.	1.5	33	4	63	13	15.9	153
Self-serv.	2.0	32	7	61	11	22.5	0
Manioc flour:							
Atomistic	3.7	47	5	47	37	5.0	774
Neighborh.	1.4	51	1	48	10	11.1	175
Self-serv.	1.4	71	7	22	7	NA	NA
Fresh beef:							
Atomistic	1.4	72	0	28	81	5.7	489
Neighborh.	2.2	53	2	45	28	5.9	99
Poultry:							
Atomistic	3.5	45	0	55	45	5.3	117
Neighborh.	1.4	46	2	52	7	NA	NA
Self-serv.	1.0	44	0	56	22	NA	NA
Eggs:							
Atomistic	1.8	60	0	40	50	6.2	190
Neighborh.	1.3	63	2	35	7	9.2	NA
Self-serv.	1.0	75	0	25	17	NA	NA
Bananas:							
Atomistic	2.4	40	6	54	23	3.1	281
Neighborh.	2.7	14	4	82	9	5.1	NA
Tomatoes:							
Atomistic	2.7	20	4	76	34	3.8	726
Neighborh.	3.8	5	1	94	1	3.5	NA

Source: SUDENE/MSU Retail Survey, 1967.

TABLE 3.9

SUPPLY-RELATED PRACTICES AND DECISIONAL CHARACTERISTICS OF FOOD RETAILERS BY RETAIL TYPE (PER CENT)

Characteristics	Table Signif-icant	Atomistic Retailers	Neigh-borhood Retailers	Self-Service Retailers
Supplier Used				
Always use the same set of suppliers	x	77	67	82
Price more than one supplier before buying	x	68	82	94
Use the suppliers they do because of: (allowed 2 responses)	•			
Price		18	39	45
Quality		10	10	21
Price and quality		14	16	5
Delivery service		3	8	5
Punctuality, good service		18	9	5
Credit		26	16	5
Trust, friendship		26	22	17
Other		27	10	14
Supply Price				
Buy for lowest price, disregarding quality		17	13	7
Feel suppliers sell for highest price possible		69	65	57
Feel suppliers give discounts to reg. customers		71	57	71
Know how to evaluate quality		87	69	86
Buy uniform quality regularly		91	89	78
By expenditure index used:	x			
All resources for stock		53	36	17
Most resources for stock		12	30	13
Part resources for stock		35	34	70
Tendency to buy enough:	x			
For all customers		27	38	78
To insure all is sold		73	62	22

•Significance of this relationship was not tested.

Source: SUDENE/MSU Retail Survey, 1967.

On the whole, the transportation function from the supplier to the retailer is divided up about evenly between the two parties (see Table 3.8). Neighborhood retailers tend to take more responsibility than the other groups for transportation, while the self-service stores tend to do the least in terms of transportation. These observations indicate that the self-service retailer uses his buying power to shift the transportation function on the wholesaler. Further, it is important to note that the self-service retailers typically use truck transportation because of their volume purchases, while atomistic and neighborhood retailers use hand cart almost exclusively for local transportation. When these smaller retailers buy from the interior, they usually share a truck with many other small-volume purchasers.

One of the links which binds the channel of distribution together and make it resistant to change is the credit relationship of buyer and seller. The atomistic retailers use the most credit of the retail types in all product categories listed in Table 3.8. Vastly fewer neighborhood stores and self-service retailers use credit. The nature of the credit practices are revealed when the pay-back period and cost of the credit are viewed. Typically, the normal pay-back period for self-service retailers is about one month, and the cost of that credit as measured by the interest charge and the

differential in price if the product had been purchased for cash, was negligible relative to the inflation rate of 27 per cent per year during that time period. On the other hand, the atomistic retailers had to pay back their credit in less than a week on the average. This reflects the nature of the street fair again as a weekly repeating occurrence, where the operator buys his stock each week anew and the supplier requires the repayment of the previous week's debt before he advances a new stock on credit. Many suppliers and money lenders require their repayment at the end of the fair, which means that for many fair operators the repayment period is three days. This very short-term credit costs the atomistic retailer from over 100 per cent to over 700 per cent (see Table 3.8). The atomistic retailer pays these high credit costs for three reasons. First, because the repayment period is so short the cost does not look prohibitive. Second, these charges are buried in the product price that he pays and are thus not visible directly. Third, the small retailer has no choice, no alternative sources of money, and, if he cannot get a stock to sell, he and his family go hungry. Thus, this high cost of operation is foisted upon the atomistic retailer by both his lack of ability and the environmental circumstances. The small retailer lives on a hand-to-mouth basis.

Neighborhood retailers have longer pay-back periods than the atomistic retailers in most cases, and certainly pay lower credit costs--99 per cent to 175 per cent per year. Even these costs, however, are high for those who use credit; but few use credit, as was noted earlier.

It has been pointed out that most retailers bought from a small number of regularly used suppliers. This practice was truer for the self-service retailers than the others. Conversely, the 94 per cent of the self-service retailers priced more than one supplier before buying. Other retailers did so to lesser degrees, 82 per cent and 68 per cent for neighborhood and atomistic retailers, respectively.

The wholesalers and sources of supply that retailers use have been presented and the nature of the relationship has been examined between the retailer and the supplier. It is now appropriate to turn to the question of why retailers use the particular sources of supply that they do. Table 3.9 shows that self-service retailers buy because of price more often than the other types of retailers, and buy because of quality more often than other retailers. Atomistic and neighborhood retailers gave the reasons of price and quality together more often than self-service retailers.

On the other hand, greater percentages of the atomistic retailers than the other types saw punctuality-

good service, credit, and trust-friendship as major reasons of supplier use. The self-service retailers saw these latter reasons as least important of the retail types. The differences in reasons for supplier use are apparent between the atomistic and self-service retailers with the neighborhood retailers in between. At the atomistic end, trust-friendship and credit are important; while at the self-service end, price and quality considerations are the most relevant factors in the decision.

Table 3.9 contains several other indications of retailers' feelings about supply prices which clarify the above price-quality relationship. When asked specifically about the price-quality relationship, few retailers of any type said that they bought for lowest price only, disregarding quality; 17 per cent, 13 per cent, and 7 per cent of atomistic, neighborhood, and self-service retailers, respectively, bought for price only. Of the atomistic retailers and neighborhood retailers, 69 per cent and 65 per cent, respectively, felt that their suppliers charged the highest prices possible, while 57 per cent of the self-service retailers felt this. On the other hand, 71 per cent, 57 per cent, and 71 per cent of the atomistic, neighborhood, and self-service retailers, respectively, felt that suppliers gave discounts to regular customers.

Of all retailers, 82 per cent felt that their colleagues knew how to evaluate quality, and most tried to buy uniform quality from week to week. The differences between types were not statistically significant.

Finally, the question of quantity of stock purchased should be viewed. When asked if they bought all the product that they could pay for and secondly if they could sell all that they could afford to buy, the atomistic retailers tended to indicate that they used all their resources for stock, while most of the self-service retailers did not (see Table 3.9). Neighborhood retailers fell in between as usual. Further, when respondents were asked if they tried to buy enough to satisfy all demand or if they bought enough so that they would be assured of selling it all, most self-service retailers chose the former, while the atomistic retailers chose the latter. Neighborhood retailers were in the middle again. These results are perfectly logical, as the atomistic retailer does not have conditions for storage and has a low resource level from which to purchase.

This data then lends support to the notion that the atomistic retailer does not have the conditions to control the environment in which he operates, while the self-service retailers do to a greater extent. These conditions relate to financial resources and buying volume which allow the retailer to have a choice of alternatives in the supplier retailer inner face.

Communications-Related Practices and Decision Rules

Of the atomistic, neighborhood, and self-service retailers, 63 per cent, 52 per cent, and 49 per cent, respectively, thought that most retailers like themselves told their suppliers what products their customers wanted. Of the atomistic, neighborhood, and self-service retailers, 68 per cent, 74 per cent, and 95 per cent, respectively, felt that their suppliers tried to offer the products that the retailers wanted. Hence, it is evident that some communication takes place in the channel of distribution between the retailer and his supplier.

Table 3.10 presents an index of mass media exposure and the exposure to the individual media of retailers by type. Clearly, the self-service retailers have more over-all exposure to the mass media than the other retail types. The atomistic retailers have the least exposure. However, when the individual media are considered, the self-service retailers had the highest exposure to the printed media and television but the lowest exposure to radio. The use of mass media is one way to reach retailers with information and other persuasive messages about change; however, the data indicate that many retailers could not be effectively and consistently reached by any single mass medium. Self-service retailers, who seem to watch television regularly, are the exception to this conclusion.

TABLE 3.10
COMMUNICATIONS-RELATED PRACTICES OF FOOD RETAILERS BY RETAIL TYPE (PER CENT)

Practice	Table Significant	Atomistic Retailers	Neighborhood Retailers	Self-Service Retailers
Vertical Communications				
Think most colleagues tell suppliers what products their customers want		63	52	49
Felt that most suppliers tried to offer the products that they want		68	74	95
Mass Media Usage				
Are exposed to mass media:	x			
A little		41	24	0
Some		37	42	30
A lot		22	34	70
Read magazine or newspaper lately	x	46	56	85
Listen to radio at least 1 hour per day		30	37	10
Watch television regularly	x	12	33	95

Source: SUDENE/MSU Retail Survey, 1967.

Practices and Decision Rules Related to Operation of the Business

The discussion of pricing practices pointed out the nature of the competitive practices of the retail

types. Further evidence on the competitive practices of the retailers is provided in Table 3.11 under "Cooperation." Of the atomistic retailers, 46 per cent entered into cooperative agreements on business practices with other retailers, while 34 per cent of the neighborhood retailers did so, and 7 per cent of the self-service retailers made cooperative agreements. Notably for the atomistic and neighborhood retailers who made agreements, 65 per cent and 62 per cent of the agreements were on price, while none of the self-service retailers made agreements on price. The conclusion here supports that arrived at earlier that the atomistic retailers do not perceive that they are in competition with other retailers, while the self-service retailers seem to feel competitive forces.

Of the atomistic retailers, 51 per cent belong to an association (Feirantes Union of Pernambuco), while of the neighborhood and self-service retailers 24 per cent and 30 per cent, respectively, belonged to professional associations. However, three of the six largest retailers were association members. The fact that so many of the atomistic retailers belong to a union is important in terms of the possible method of reaching these retailers with new ideas or organized change.

All retailer groups felt that location was important; however, surprisingly enough, the atomistic

TABLE 3.11

PRACTICES AND DECISION RULES RELATED TO THE BUSINESS OPERATIONS OF FOOD RETAILERS BY RETAIL TYPE (PER CENT)

Characteristics	Table Significant	Atomistic Retailers	Neighborhood Retailers	Self-Serv. Retailers	Six Large Retailers*
Cooperation					
Enter into the following business agreements with other similar businessmen:	x				
Enter into no agreements		54	66	93	5/6
Enter into price agreements		30	21	0	0/6
Enter into other agreements		16	13	7	1/6
Association Membership					
Belong to a professional association or union	x	51	24	30	3/6
Location					
Feel good location is most important factor in helping sales	x	95	80	70	...
Reinvestment					
Would reinvest in own business if given sum equal to their yearly income	x	37	62	71**	4/5**
Innovation					
Use innovative practices:	x				
A lot		13	23	68	6/6
Some		29	32	30	0/6
A little		58	45	2	0/6

*This column is presented for comparison but is not part of the significance test.

**This figure is based on the owners that were interviewed excluding managers.

Source: SUDENE/MSU Retail Survey, 1967.

retailers most often agreed with locational importance. Location is a variable of business operation that atomistic retailers can control, within limits of the markets, more readily than the larger, fixed-location retailers. Thus, for street fair operators, good location is in the front of their minds because they have to deal with obtaining a location each week.

The retailers were asked what they would do with a sum of money equal to a year's income if it were given to them. Table 3.11 shows that the 71 per cent of the self-service retailers, four out of five very large retailers, 62 per cent of the neighborhood retailers, and 37 per cent of the atomistic retailers would be willing to invest the money in their own businesses. The response of the atomistic retailers is significant in that it indicates once again that these retailers do not think in terms of competing with other retailers or in terms of getting ahead. It should be noted that because these retailers cannot accumulate capital, they have a great pressure to use windfall gains for home consumption.

Finally, the readiness of retailers to use new practices is indicated in Table 3.11. Retailers were asked if they marked prices, sold new products that were new on the market, or protected their products from spoilage by shading from the sun (street fair operators only), or by fighting rats and insects (other retailers).

Clearly, the self-service retailers are far more willing and able to adjust and change to the changing Recife market.

Conclusions

The purpose of this section was to try to understand the behavior of the various types of retailers. The analysis of price practices indicates that the self-service retailers were more likely to pass on price advantages to their customers, and they were more willing to compete aggressively on a price basis--i.e., look for ways to reduce price. The analysis of the supply practices point up the fact that the self-service retailers have more choice and more alternatives in gaining supply and price advantages. Finally, the self-service retailers seem more willing to innovate and reinvest in their businesses. These implications will be amplified as the perceived and internal limitations are discussed. However, before turning to that section, it is necessary to gain some notion of the performance of the various types of retailers.

Performance Characteristics of Food Retailers

To this point, a picture of the Recife retailer has been drawn in an attempt to understand what retailers exist and how they behave. This leaves two major questions yet unanswered: first, what do the retailers

do--i.e., what functions and services do they perform for whom--and, second, how well do they do it?

Functions and Services Performed by Retailers

Before outlining the functions and services of the Recife retailers, it is of interest to know for whom the services are intended. The answer seems obvious: consumers. However, some retailers do sell to other businessmen as well. Table 3.12 shows that 10 per cent of the atomistic retailers and 3 per cent of the neighborhood retailers sell at least one-quarter of their volume to other businessmen. The remainder goes to final consumers, as does all of the sales of the self-service stores. It is interesting to note that the smaller the retailer, the more often they feel that consumers are powerful. This conclusion is based on an index of perceived customer power and is presented in Table 3.12.

The next task is to understand the functions that each retailer performs. It goes without saying that all retailers perform a transactional function and a bulk-breaking function. The latter is a direct function of purchase size of the retailer, and thus the magnitude of the bulk-breaking function is much greater for the self-service retailers than it is for the atomistic retailer. Further, it has already been documented that

TABLE 3.12

FUNCTIONAL CHARACTERISTICS OF FOOD RETAILERS BY RETAIL TYPE
(PER CENT)

Characteristics	Atomistic Retailers	Neighborhood Retailers	Self-Serv. Retailers	Six Large Retailers
Make some wholesale sales	10	3	0	0/6
Feel that customers have a great deal of buying and product knowledge power, as defined by items below:	73	55	20	...
Feel that customers want quality, not price	72	65	67	...
Feel customers know prices in competing stores	94	94	98	...
Feel customers shop around for best quality	84	68	29	...
Feel customers usually bargain on price	90	86	57	...
Give some retail credit	26	61	20	0/6
Deliver some retail sales	8	12	63	4/6
Average hours open (per store)	34*	86	58	52

*This figure is less because only one feira was included per week (21 hours). The average of fixed feiras and public market retailers was 72 hours.

Source: SUDENE/MSU Retail Survey, 1967.

many retailers take the responsibility for transporting the products from supplier to their own place of business. Finally, every retailer has a locational function. Those types of retailing which aggregate volume by definition force the consumer to go greater distances than the retailer type that spreads many small units out into the residential areas. Hence, the neighborhood retailers play a more important locational function as a group than do either the self-service or atomistic retailers who in the first instance aggregate sales and in the second aggregate selling units. Other services that retailers perform for the consumer were presented in the consumer chapter as reasons why shoppers use various outlets. These include cleanliness, quality products, variety, service, etc. However, it is better to let the consumer judge these than to ask the retailer to do so. There are several considerations which the retailer's perceptions are clearer than the consumers. These involve the actual practices of giving consumers credit, delivering their purchases and staying open for their convenience.

As is to be expected, 61 per cent of the neighborhood store retailers gave credit to some of their customers, while 20 per cent and 26 per cent of the atomistic and self-service retailers, respectively, did so. None of the six largest retailers gave credit. To show

the intensity of the credit services of the neighborhood retailer, the following breakdown is cited: Of those giving credit, 68 per cent gave about a fourth of their customers credit, 19 per cent gave half of their customers credit, and 13 per cent gave three-fourths of their customers credit.

Though neighborhood retailers tended to give credit, 63 per cent of the self-service retailers delivered goods for their customers, while 12 per cent and 8 per cent of the neighborhood and atomistic retailers, respectively, did so. Four out of the six largest retailers delivered purchases as well.

The other functions which help explain the existence of the vast number of neighborhood stores are as follows: First, these retailers provide a relatively wide assortment of products, as compared with the atomistic retailers. Second, they provide these products within easy walking distance of most consumers. As most consumers, especially the poor, do not have access to convenient transportation, this spatial function tends to give the neighborhood retailer partial monopoly power which allows him to price relatively independently of other retailers. Thirdly, the neighborhood retailer keeps his business open long hours (mean of 86 hours per week) to further obtain customers for whom it is convenient to shop at odd hours. Self-service stores

were open 58 hours per week. The largest six retailers remained open 52 hours per week. Finally, the neighborhood store allows frequent small purchases, whereas the atomistic retailer and the self-service retailer both require larger volume purchasing due to the inconvenience of location and hours open.

Measures of Retail Performance

It is now relevant to turn to the question of how well the various retailers serve the community and development process. It should be noted that none of the measures used are absolute because the various retailers perform different functions, as was noted above. However, a general comparison can be made on economic variables which will be presented below.

Prices to Consumers

If there is any one measure which is pervasive in the system as a measure of value, it is the price of goods charged to the consumer. But, even these prices fail to indicate what effect the institutions have on supply. Thus, only consumer benefit is measured. Of course, along with price, quality must be measured to give the prices meaning. Further, to measure price differences, it is necessary to measure the real prices paid after bargaining and cheating. Thus, a special market basket price study was made to get at these real

price and quality differences. Two sets of market baskets were purchased by shoppers of varying backgrounds at a two-week interval. The real product weights as determined by reweighing were divided into the real costs as determined by expenditures, to give a real price for each commodity in the market basket.

The only retail type which differed from the system-wide means were the self-service stores (see Table 3.13). It should be noted that the system-wide means include the self-service responses as well. Not all of these self-service retailers carried the full basket of commodities, so that it is necessary to indicate the number of samples of each commodity taken. Further, the four self-service stores were among the larger half of all self-service stores. These four stores were selected because of geographical dispersion through the city.

The quality of the commodities was judged on a three-point scale which was arbitrarily set up for each commodity. No usable standardized grades exist in the system. On this scale, 1 represented poor quality, 2 represented mediocre quality, and 3 equalled good quality. The standards for judging quality were relative in nature, so it was necessary to insure that all commodities of one type were judged by the same inspector. To further strengthen the judging process, an expert

TABLE 3.13

PRICE AND QUALITY LEVELS FOR ALL RETAILERS,
FOUR SELF-SERVICE STORES AND ONE LARGE SUPERMARKET
(Each retailer was interviewed both in August and September)

Product		All Recife, Average		4 Self-Service Stores				Bom Preço			
		Price NCr$	Quality Index*	Price NCr$	N	Quality Index*	% Price Difference	Price NCr$	N	Quality Index*	% Price Difference
Beans	Kg.	.470	1.7	.430	8	2.0	- 8.5	.430	2	2.0	- 8.5
Rice	Kg.	.780	1.7	.800	8	1.8	+ 2.6	.680	2	2.0	-12.8
Manioc	Kg.	.480	2.3	.440	8	2.7	- 8.3	.450	2	3.0	- 6.3
Bananas	Unit	.025	1.9	.023	3	2.0	- 6.9	.025	2	2.0	0.0
Tomato	Kg.	.590	...	.500	4	1.5	-15.2	.530	2	2.0	-10.2
Pumpkin	Kg.	.370	1.7	.250	3	2.3	-32.4	.280	2	3.0	-24.3
Onion	Kg.	.850	1.6	.750	3	2.3	-11.8	.750	1	3.0	-11.8
Lettuce	Unit	.127	1.4	.110	4	1.0	-13.4	.100	2	1.0	-21.3
Xuxu	Unit	.078	1.8	.050	3	2.0	-35.9	.050	2	2.0	-35.9
Eggs	Unit	.109	2.0	.098	6	2.0	-10.1	.090	2	2.0	-17.4
Meat	Kg.	2.680	1.7	...	0	...	...	...	0	...	...
Chicken	Kg.	2.610**	1.5	2.980**	4	2.0	+13.3	3.050**	2	2.0	+16.9
Fish	Kg.	1.510	1.7	...	0	...	...	...	0	...	...
Cheese	Kg.	3.520	2.0	3.820	6	3.0	+ 5.2	3.450	2	3.0	- 2.0

*1=Poor quality, and 3=good quality.

**Self-service stores sold the chickens cleaned and plucked, whereas the rest of the retailers sold their chickens alive.

Source: SUDENE/MSU Retail Market Basket Price Study, 1967.

trained in food handling and processing was placed in charge of the setting of standards and inspecting. As well, this expert inspected the difficult-to-judge food categories, such as the meats where a knowledge of beef fiber structure was needed. Most of the fruits and vegetables were judged on the basis of freshness or, conversely, the degree of spoilage. Finally, the cereals were judged on type, impurities, and spoilage.

Before specific conclusions can be made concerning the levels of prices between the system and the self-service retailers, it is necessary to determine if there are quality differences between the two. It is first of interest to know if the quality of the four self-service stores sampled was different from that of the total retail system. This was accomplished through the use of the Wilcoxen Signed Rank Test, where the product means of each group were compared. With a .05 chance of error, it can be said that the qualities of the two groups of means were from different populations, with the mean quality of the four self-service stores being higher. Likewise, the hypothesis that the Bom Preço product quality is better than the retail system mean can be accepted at the .05 level of significance.

Clearly, the four self-service stores usually sold at lower prices and for better quality, the exceptions being: rice, which was sold for 2.6 per cent more

by the four self-service stores for the same mean quality; chickens, which were 13.3 per cent higher for better quality, plucked and cleaned chickens (as against live chickens); and cheese, which was 5.2 per cent higher in price but of considerably higher quality. It is interesting to note that the largest self-service retailer, Bom Preço, sold at prices that were lower than the system means in all cases except for chickens, where additional quality and services were added. On the critical staple items, the self-service retailers generally underpriced the system, with the exception of rice where they were slightly over the system average. It is interesting to note that those self-service stores that did handle fruits and vegetables consistently underpriced the system, and, with the exception of lettuce, gave as good or better quality. Thus, the conclusion is inescapable that the self-service retailers can and do bring to the consumer better quality and lower prices on the whole on selected staple and perishable goods. It should be remembered that manioc flour and beans made up the largest part of the consumption of the lower income consumers. Thus, price decreases in these items has the greatest effect on the income of the lower income consumers.

Spoilage

One of the telling measures of the various types of retailers is the degree to which spoilage occurs. Spoilage in any form is a symptom of inefficient operation and is a loss to the economic system directly. This is to say that an inventory of products represents value that has been created by the economic system, and spoilage reduces that value by some amount which is a complete economic loss. The consumer pays more for poorer quality and the retailer has his profit squeezed. There are two degrees of spoilage which should be noted. First, goods may spoil but remain sellable at reduced prices. The criteria used for this kind of spoilage is the reduction of price to cost or below because of spoilage. Second, goods may spoil to the extent that they are unsalable at any price. The amount of spoilage for the several retail types is presented in Table 3.14.

The method of obtaining these two spoilage rates was to ask the respondents to estimate for every hundred (units of volume) the number of units that he sold at his purchase price or less because of spoilage, rodents, or shrinkage. The same question was then repeated for the number of units that he lost or could not sell at any price.

Table 3.14 shows the different spoilage rates for selected commodities. Rice typifies the kind of

TABLE 3.14

SPOILATE RATES OF SELECTED COMMODITIES BY RETAIL TYPE
(PER CENT)

Product	Atomistic Retailers		Neighborhood Retailers		Self-Service Retailers	
	Salable	Unsalable	Salable	Unsalable	Salable	Unsalable
Rice	7.4	2.5	1.2	0.8	0.5	0.5
Beans	9.2	2.8	0.9	0.8	0.3	0.3
Manioc flour	8.4	3.2	1.3	1.0	0.6	0.5
Liquid milk	...	...	0.0	0.6	...	...
Fresh meat	22.6	6.3	12.8	4.0	...	...
Poultry	18.9	9.2	0.4	0.9	0.0	0.4
Eggs	11.5	6.9	1.6	4.0	0.6	1.1
Bananas	26.4	12.1	11.7	9.7	...	...
Tomatoes	24.9	11.0	4.7	5.3	...	...

Source: SUDENE/MSU Retail Survey, 1967.

spoilage figures for the cereals group of commodities. For spoiled but salable rice, the atomistic, neighborhood, and self-service retailers reported 7.4 per cent, 1.2 per cent, and 0.5 per cent spoilage rates, respectively. Unsalable spoilage rates were reported to be 2.5 per cent, 0.8 per cent, and 0.5 per cent, respectively. The spoilage rates for perishables as demonstrated by bananas was much greater. Salable but spoiled bananas made up 26.4 per cent and 11.7 per cent of the volume of atomistic and neighborhood retailers, respectively, and the unsalable spoilage rates for these two types of retailers were 12.1 per cent and 9.7 per cent, respectively.

It is useful to combine the spoilage rates for rice, beans, and manioc flour into one spoilage rate for comparison of the types of retailers. It is assumed that spoiled but salable goods are reduced in price on the average of 20 per cent. Thus, the loss to the system from spoiled but salable goods is 20 per cent times the percentage of spoilage. This figure is then added to the unsalable spoilage to give an overall loss figure. This overall loss figure then can be combined across product type by weighting them by volume of consumption. The combined mean spoilage which is lost to the system for rice, beans, and manioc flour is for atomistic, neighborhood, and self-service retailers 4.6 per cent, 1.1 per cent, and 0.5 per cent, respectively.

Thus, the atomistic retailers had remarkably high spoilage rates, while the neighborhood stores tended to have higher spoilage rates than that of the self-service retailers. It is interesting that the largest six retailers had virtually no spoilage for rice, beans, and manioc flour. Thus, one of the real weaknesses of the atomistic retailers is exposed in terms of the loss to the economic system which they cause, and is foisted upon them by the prior channel members. This is to say that the retailer cannot be totally blamed for the spoilage, as the poor practices back in the channel may shorten the life of the product significantly.

Margins

Though margins are often used as measures of efficiency, they have some inherent problems of concept and collection which often invalidate the findings. Such is the case here. The method used to collect margins in this study was to observe and/or ask what the actual selling price was of selected commodities that the retailer had in stock. The prices were obtained for each quality of each commodity studied. Further, the amount that the retailer paid for each quality was obtained, along with the amount the retailer bought in his last purchase and how often he purchased that type of commodity. Each purchase price was subtracted from each selling price by quality level within each commodity

type, and then made a percentage of selling price. These margins by quality level were then weighted by volume per day of that quality level, obtaining a mean margin by commodity. These margins were then combined across the retailers within types of retailers to get the mean margins by commodity and by retail type. Hence, any spoiled but salable goods in the system reduces the prices at retail, which brings them closer to the retailers' purchase price, thus reducing the margin calculated. Negative margins were thus averaged into the overall margin figures as well as reduced margins, all due to spoilage.

Though the larger self-service stores have lower prices, they do not have lower margins as calculated above (see Table 3.15). However, interpretation of these margins must take account of several factors. First, it must be remembered that most of the self-service stores are converted neighborhood stores with higher fixed costs in terms of fixtures and equipment, yet most still lack the high-volume, low-margin concept which permits increased revenues to cover their cost increases. Thus, higher margins are necessary.

Second, only one of the self-service retailers was observed to have grasped the concept of mixed margins which allows the decrease of margins of the high-volume goods to draw increased volume, while making up

TABLE 3.15

MEAN PRICE MARGINS FOR SELECTED COMMODITIES BY RETAIL TYPE (PER CENT)

Product	Atomistic Retailers	Neighborhood Retailers	Self-Service Retailers
Rice	11.8	10.5	15.2
Beans	13.0	12.2	16.5
Manioc	16.7	13.8	16.6
Liquid milk	...	7.4	...
Fresh meat	13.7	20.0	...
Poultry	13.5	17.9	9.3
Eggs	9.8	11.4	12.6
Bananas	19.4	23.4	...
Tomatoes	22.4	18.8	...

Source: SUDENE/MSU Retail Survey, 1967.

the difference on such high-margin goods as cosmetics and other non-foods. Thus, one of the assets of the multi-product retailer has not been observed to be utilized.

Third, and most importantly, the margins were based on the prices that were found at the time of the interview and the retailers' most recent supply prices as noted above. Thus, a systematic bias was introduced because of spoilage. For the self-service retailers who experienced little spoilage (as seen above), the margin reflected a full margin for unspoiled goods. On the

other hand, the atomistic retailers and the neighborhood retailers had higher rates of spoilage and thus the margins calculated on actual present price were considerably lower due to the influence of the reduced price of the spoiled commodities.

Thus, it is impossible to draw any clear conclusion based on comparable margins between the retail types. Clearly, if simple margins are compared, the self-service stores have higher margins. But, if the quality of the products that the consumer receives is considered, these margins become questionable as measures of value to the society. This is to say that the spoilage which is a loss to the system caused by poor practices and inefficiency of the retailers and the channel of distribution makes these same retailers look spuriously efficient by causing them to reduce their prices to sell the spoiled goods. The extent that this happens has been noted in the section on spoilage above.

Growth

Retailers were asked if in the past year their sales in terms of physical volume had increased or decreased and by how much. Their responses were combined into an index of growth which ranged from 1 (decreased a lot) to 5 (increased a lot). No change was represented by 3. Table 3.16 shows that the atomistic and neighborhood retailers felt that their volumes had declined

TABLE 3.16

PHYSICAL PAST AND EXPECTED VOLUME CHANGE BY TYPE OF RETAILER

Characteristics	Atomistic Retailers	Neighbor. Retailers	Self-Ser. Retailers	Large Six Retailers
Index of sales change last year (1=decreased a lot, 3=same 5=increased a lot)	2.8	2.8	3.2	4.3
Index of expected sales change next year	3.2	3.5	3.8	4.6

Source: SUDENE/MSU Retail Survey, 1967.

slightly, while the self-service group felt some growth and the six largest felt rapid growth. Table 3.16 also shows that though the atomistic, neighborhood, and self-service stores plan some physical volume growth, the largest six retailers plan substantial growth. It is interesting that all retail types felt optimistic for the future versus the feeling for the past. Again, the largest self-service retailers seem to be making inroads into the retail structure at a rapid pace.

Productivity Measures

There are two productivity measures which are noteworthy (see Table 3.17). In terms of labor use as a resource, the self-service retailers had greater sales per man hour than the other types with the neighborhood

TABLE 3.17

PRODUCTIVITY MEASURES BY TYPE OF RETAILER
(PER CENT)

Productivity Measures	Atomistic Retailers	Neighbor. Retailers	Self-Serv. Retailers
Weekly sales per man hour:			
0 - 2 NCr$ per hour	48	75	0
3 - 7 NCr$ per hour	31	19	20
8 - Over	21	6	80
Weekly sales per NCr$ of asset value:			
0 - 369	17	71	100
370 - 1,059	41	19	0
1,060 - Over	42	10	0

Source: SUDENE/MSU Retail Survey, 1967.

stores being the least efficient in terms of labor use. On the other hand, the atomistic retailers sold more per asset value than did the other retailers, with the self-service retailers being least efficient in this regard. Asset value was considered to be owned assets when sales per asset value was calculated and was considered as all ssets used in the business when the value added index was computed. The results are as to be expected with the capital intensive methods of retailing showing better use of labor resources and the labor intensive retailers showing more efficient use of capital, in this case due to its lack of use.

Summary

It seems clear that the self-service retailers are making demonstrable inroads into the system in terms of spoilage, volume, and prices. However, it remains unclear whether these are more efficient internally or not in terms of margins. The fact remains, though, that a sample of the larger retailers did indicate that they sold better quality for lower prices than the average for the system. Thus, the potential of these larger retailers has been demonstrated and the benefits to the consumer, and thus the system indicated. If these retailers are not more efficient internally, then they must be able to obtain lower prices from suppliers for large volume. More likely, they receive lower prices from suppliers and pass them on to the consumer at lower cost.

Limitations on Retail Food Marketing in Recife

Introduction

Thus far, this chapter has built a background picture of food retailers that operate in Recife. The present section will attempt to expand this picture to include some notions of how the food retailer is constrained by his view of the economic and social system and by some of his internal predispositions.

It is important to distinguish at the onset between the retailer's view or perception of his world and the actual limitations which lie in that environment. What the retailer perceives and believes forms the basis for his behavioral decisions regardless of the accuracy of the perception or belief. Thus, to understand why retailers do not participate in the distribution system as they might, with increasing volume and efficiency, it is necessary to study their perceptions and beliefs as to what constrains them. Further analysis of possible reforms designed to increase retailer market expansion and use of more efficient methods must be based on these same perceptions and beliefs.

For convenience, perceived barriers are defined as those perceptions or beliefs which limit the decisions of retailers to increase volume and attempt to gain greater profits.

For organizational purposes, barriers have been broken down into two sub-groups, as follows:

1. Barriers which are perceptions of external conditions to the decision maker, which make the risk of increased market participation seem greater than the expected value of the increased participation or ability of the firm to proceed with increased market participation.
2. Barriers which are internal beliefs or values of

the decision maker, which influence his capacity to make and implement market participation decisions. It is important to note that the internal barriers are more basic than and often color the perceptions of external barriers.

Some notes on methodology need to be made before the various barriers are analyzed. Perceived external barriers were obtained in two ways in an attempt to develop a realistic list. First, the respondents were asked a series of questions (response: yes, don't know, or no) about the limitations imposed on their expansion by various potential barriers. Further, a similar series of questions were asked concerning the limitations on their profits. Finally, a series of questions were asked about the practices of their suppliers, customers, and colleagues. All of these questions were designed to allow the respondent to judge barriers as they apply to his situation.

Second, the respondents were asked to cite the most important limitations on their expansion in an open-end question. This question was designed to allow the respondent to place emphasis on those barriers which were foremost in his mind.

The two sets of questions were not independent. However, the first type of questioning forms a set of references for the second type, which aids the respondent

by getting his mind on the subject of limitations yet possibly causes bias in the results by closing the respondent's mind to unmentioned alternatives. This eventuality was guarded against by careful pretesting to obtain all alternatives in advance as well as by careful ordering of the questions.

Internal barriers were largely obtained through the use of questions aimed at various attitudes and beliefs held by the respondent. Each question was in the form of a statement with which the respondent was asked to agree or disagree. The "don't know" responses formed the middle category. Groups of these questions together indicate various internal barriers. The method of grouping questions is to form an index. Each response is assigned a number 1, 2, or 3, depending on agreement or disagreement with the statement. The index is the sum of the responses for a group of questions divided by the number of questions in the group. The resultant is a number between 1 and 3, with 1 showing that the internal barrier exists and 3 showing that it does not.

The remainder of this part of the chapter will be devoted to describing the two levels of barriers for the retailer types described in the previous section. Thus, the analysis is shifted from looking at the retailer from the outside in, to looking at the retailer's world from the retailer out.

External Barriers

The object of this section is to try to isolate those things which retailers perceive as limiting their success and growth in their businesses. However, some retailers do not want to expand their businesses because they are satisfied with what they have, because they do not think it possible, or because the thought has not occurred to them. It is interesting that among the least well-off group of retailers, the greatest per cent did not desire to expand their businesses. Of the atomistic retailers, 25 per cent held this position, while 17 per cent of the neighborhood retailers, 9 per cent of the self-service retailers, and none of the largest retailers held this lack of desire to expand. The questions that pertain to expansion in this sections were asked of those who indicated an interest in expansion.

Before the specific external barriers are presented, it is useful to make one more observation about barriers in general. On the average, the atomistic retailers were not clear as to the adverse factors which faced them in their environment, and agreed more readily that all the barriers were important than other retailers. This lack of ability to distinguish barriers can be demonstrated in two ways. First, if all of the external barrier questions are made into an index as has just been described, atomistic retailers clearly have a

higher agreement rate with barriers than the other retail groups. A further measure of lack of specificity of barriers is the per cent of barrier questions that more retailers agreed with than disagreed with. These two measures are presented in Table 3.18. Clearly, as the type of retailer changes from atomistic to neighborhood to self-service to very large, the barriers become fewer

TABLE 3.18

CLARITY OF BARRIER PERCEPTION BY RETAIL TYPE

Measure	Atomistic Retailers	Neighbor. Retailers	Self-Serv. Retailers	Six Large Retailers
Response tendency index (1=agree with all barriers 3=disagree with all)	1.68	1.81	1.98	2.37
Per cent of external barrier questions with more barrier than non-barrier responses	91	77	50	23

Source: SUDENE/MSU Retail Survey, 1967.

and clearer in the minds of the retailers. There are two reasons for this trend. First, the small retailer may not have the ability to sort out those factors which restrict him, and thus all things seem oppressive. Second, in fact many more barriers exist for the small retailer because he does not have the ability or resources to alter his environment as much as the large retailer.

The internal barriers presented later in this chapter will complete the idea of this difference in control by documenting the retailer's own perceptions of his control.

The relative importance of various barriers to expansion is presented in Table 3.19. Clearly, most retailers viewed the lack of money as paramount, with the very large and small stores agreeing in greater proportions than the average self-service retailer. This phenomenon can be explained by the fact pointed out earlier that the small retailers are restricted by lack of money to buy stock, while the very large retailers want to expand operations. The lack of demand was seen as somewhat important, and competition was seen as important by the self-service retailers.

The view of competition by the various retailers is important as it shows again the differences between the mode of operation of these retailers. The atomistic and neighborhood retailers do not see that they are in a competitive race for survival. The changes in the retail structure in the recent years has not yet reduced their sales enough to bring on a realization that a change has occurred. This change, the advent of the large self-service retailer, has affected the retail structure markedly, as was pointed out in the consumer chapter, and the change agents themselves see the implications of their actions. This conclusion will be amplified shortly.

TABLE 3.19

PERCEIVED RELATIVE IMPORTANCE OF BARRIERS TO EXPANSION BY RETAIL TYPE (PER CENT)

The Most Important Problems Preventing More Expansion (First & Total of 3 Responses)	Atomistic Retailers		Neighborhood Retailers		Self-Service Retailers		Six Large Retailers	
	First	Total	First	Total	First	Total	First	Total
Lack of money	71	79	89	94	53	66	4/6	5/6
Lack of sales	15	26	3	13	3	19	...	...
Poor location	3	9	2	13	6	9	...	...
High product prices	2	6	0	7	0	0	...	...
Lack of supplies	3	5	1	2	3	3	...	...
Too much competition	2	5	1	5	16	19	...	...
Government laws	1	2	1	1	0	6	...	...
Other	3	9	3	10	19	31	...	...
	100		100		100			

Source: SUDENE/MSU Retail Survey, 1967.

Table 3.20 shows much the same results when respondents were asked what the important limitations on profits were. The lack of money was seen as less important relatively, while the lack of demand was seen as more important. Again, the self-service retailers showed a respect for competitive forces that the other types did not feel.

Having seen the relative importance of barriers to the retail types, the individual barriers can now be analyzed. Table 3.21 presents the findings of the series of questions pertaining to the problems of expansion. The percentages also indicate relative importance of various limitations, but not as clearly as the preceding analysis where the orders of magnitude between barriers were shown. The larger the retailer, the greater was the percentage who felt they could obtain loans at reasonable costs and the lesser was the percentage who felt that the lack of regular customers, irregular supply of presently carried products, general competition, and the danger of floods were important reasons for not expanding. Again, the self-service retailers saw competition from supermarkets as important as any of these barriers, while competition from supermarkets was viewed by the smaller retailers as less important relative to the other barriers. None of the very large retailers saw the threat of supermarkets as important, however,

TABLE 3.20

PERCEIVED RELATIVE IMPORTANCE OF LIMITATIONS ON PROFITS BY RETAIL TYPE (PER CENT)

The Most Important Problems Preventing Higher Profit (First Responses and Total of 3 Responses)	Atomistic Retailers		Neighborhood Retailers		Self-Service Retailers	
	First	Total	First	Total	First	Total
Lack of money	31	37	67	76	33	33
Lack of sales	32	42	14	24	18	24
Poor location	2	4	3	9	0	6
High product prices	8	13	4	12	3	3
Lack of supply	10	11	3	4	12	12
Too much competition	6	10	4	13	21	24
Government laws	0	1	0	1	3	8
Other	11	15	5	10	10	21
	100		100		100	

Source: SUDENE/MSU Retail Survey, 1967.

TABLE 3.21

PERCEPTION OF EXTERNAL BARRIERS TO EXPANSION HELD BY RETAILERS WHO DESIRE TO EXPAND, BY RETAIL TYPE (PER CENT)

Most Important Reasons Preventing More Expansion	Atomistic Retailers	Neighborhood Retailers	Self-Service Retailers	Six Large Retailers
Lack of ability to obtain loan	78	74	41	1/6
High cost of borrowing money	73	73	56	2/6
Lack of regular customers	90	73	59	0/6
Difficulty of finding good location	79	56	56	2/6
Irregular supply of presently carried products	74	60	31	1/6
Competition from supermarkets	60	51	59	0/6
General increase in competition	65	57	41	0/6
Danger of floods	56	34	16	0/6
Risk of changes in current policy and laws	37	30	44	0/6
Do not desire to improve	25	17	9	

Source: SUDENE/MSU Retail Survey, 1967.

demonstrating that they feel that they can control their success in a competitive environment. The fact that the other self-service retailers see supermarket competition as relatively important is because they feel the competitive environment but do not have the resources of a supermarket to compete with. Though many of the smaller retailers sense this competition, they do not feel that it is as important as many other barriers. Thus, competition is not seen as a major factor determining behavior of these retailers.

The perceived limitations on profits are presented in Table 3.22. These findings, when combined with that on the barriers to expansion, lead to some interesting conclusions. First, it should be noted that demand variation was seen as important by the atomistic and neighborhood retailers relative to both expansion and profits and was seen by self-service retailers as unimportant relative to both expansion and profit. On the other hand, irregular supply of product was seen as important to expansion and profits by 74 per cent of the atomistic retailers, and by 51 per cent and 56 per cent of the neighborhood retailers, respectively. In comparison, 31 per cent of the self-service and one out of the six largest retailers saw lack of regular supply as an important limit on expansion, while 57 per cent and four out of six, respectively, saw irregular supply as an important limitation on profits. This fact indicates that

TABLE 3.22

PERCEPTION OF EXTERNAL BARRIERS TO PROFITS, BY RETAIL TYPE
(PER CENT)

Most Important Reasons Limiting Profits	Atomistic Retailers	Neighborhood Retailers	Self-Service Retailers	Six Large Retailers
Varying quantities customers purchase weekly	74	68	43	1/6
Varying prices	85	76	83	6/6
Product spoilage	86	61	49	2/6
Irregular supply of product	74	56	57	4/6
Competition	76	69	69	3/6
Lack of information about price	62	45	43	2/6
Lack of information on quantity of products available	57	43	43	1/6

Source: SUDENE/MSU Retail Survey, 1967.

the small retailer feels that he can do little to alter the adverse environment surrounding him, while the self-service and large retailers recognize that there are problems to profitability but that they can bring about solutions themselves and thus they do not feel that these same problems block their expansion. Though there are no other direct comparisons between perceived limitations to expansion and profit, the response on the effect of price variation as a limitation to profits supports the notion that the self-service stores recognize that uncertainties limit their profits.

It is interesting to digress a minute on the perceived need for information on price and market volumes. All retailers placed these needs as relatively low on their lists of limitations. However, highly placed were problems of price and supply fluctuations, especially for the smaller retailers. This shows a lack of realization that information is a tool for combating those fluctuations which they complained about.

To summarize, as the type of retailers are viewed along the spectrum from atomistic retailers to very large self-service stores, the perceived barriers become clearer in the minds of the respondents and become fewer in number. All retailers felt that lack of money was an important limitation, but progressing from small to large along this continuum the nature of the

limitation changed. For the small retailer, the lack of ability to obtain a loan was important; while at the large end the cost of a loan was seen as a limitation. Chapter VI will return to the problem of financing and present in more detail the nature of this problem. The small retailer saw lack of demand as more important than large retailers, while larger retailers saw competition as more important; and the very large, though conscious of the effect of competition on their profits, saw competition as less of a barrier to expansion. Thus, as retailers became larger on the spectrum, their view of competition moves from a position of less concern about competition to competition as a limitation to expansion to competition as a controllable force to be dealt with. The last group is most beneficially affected by competition. This point shows again the passive nature of the small retailer and the competitive nature of the larger retailers. All retailers saw variable prices as a major problem, yet the small retailers placed more emphasis on the uncertainties of market supply and demand than did the larger retailers where expansion was involved. Finally, the small retailer considered spoilage as an important factor, whereas the larger retailers did not. Spoilage too becomes a controllable variable for the larger retailers.

Internal Barriers

The most instructive way to summarize the internal barriers which color the actions and perceptions of various retailers is to compare the questions and indices representing various aspects of their beliefs and values. A low score which approaches 1 means basic agreement, while a high score approaching 3 means basic disagreement with the statement or barrier.

Because these questions were discussed in detail in the consumer chapter (Chapter II), they will not be repeated here. Only the trends and implications will be briefly noted.

The larger and more active the firm, the less its decision maker is affected by social sanctions of his peer group (Item 1, Table 3.23), the less he is locationally affected by his family (Item 2), the more he believes in small families (Item 3), the less he believes in fate (Item 4), the more he is willing to build toward the future (Item 9), and the more he believes in managerially manipulating his controllable variables (Item 10). Interpersonal trust does not follow the same pattern. The atomistic retailers have a higher level of interpersonal trust than the neighborhood stores and the self-service stores. The six largest stores have the highest interpersonal trust of all retail types (Item 13).

TABLE 3.23

INTERNAL BARRIERS, BY RETAIL TYPE
(1=TRADITIONAL RESPONSE, 3=MODERN RESPONSE)

Item No.	Item	Atomistic Retailers	Neighbor. Retailers	Self-Serv. Retailers	Six Large Retailers
1	Neighbors do not want you to prosper	1.59	1.50	1.83	2.17
2	Better to live near family & earn less	1.32	1.38	2.29	3.00
3	Large family better than small family	2.60	2.74	2.89	3.00
4	Index to fatalism	1.73	1.84	2.26	2.75
5	Businessmen cannot do much to improve	1.83	1.73	2.11	2.67
6	It is better to leave things alone and wait	1.69	1.83	2.26	2.67
7	It is better to live for today because tomorrow is uncertain	1.33	1.65	1.91	2.67
8	It would be better if technicians left things alone	2.07	2.15	2.77	3.00
9	Does not desire to improve his business	2.50	2.66	2.83	3.00
10	Index of managerial talent	2.30	2.50	2.79	3.00
11	Does not like to receive technical assistance	2.62	2.70	2.89	3.00
12	To earn more, it is better to be lucky than to understand business	1.97	2.30	2.69	3.00

(Continued)

TABLE 3.23--Continued

Item No.	Item	Atomistic Retailers	Neighbor. Retailers	Self-Serv. Retailers	Six Large Retailers
13	Index of interpersonal trust	1.84	1.63	1.77	2.11
14	It is not possible to have same trust in family and friends	1.57	1.36	1.63	2.33
15	We should not be partners with non-family	2.46	2.26	2.54	2.67
16	One can lose lots of money trusting others	1.49	1.26	1.14	1.33
17	Index of Modernity (Items 1, 2, 3, 5, 6, 7, 8, 9, 11, 12, 14, 15, and 16)	1.85	1.96	2.29	2.65

Source: SUDENE/MSU Retail Survey, 1967.

Finally, on a combined scale of modernity, the decision makers of the large active retailers are clearly more modern (Item 17). Thus, in terms of active, thoughtful, ability to change, the larger firms' end of the continuum stands out well beyond the atomistic end. The smaller retailers are simply less able to break away from the traditional system of distribution which has as its basis an inherent inability to adapt to modern needs of a changing and developing area.

Summary and Conclusions

The purpose of this chapter has been to present analysis of the retail structure of Recife in such a way as to highlight the basic differences in the system, as well as to present the data base which provides the answers to the questions outlined at the onset of the chapter. These questions were essentially as follows: Do marketing barriers impede production responses of retailers such that efficient scales of operation cannot be reached? If these barriers exist, what factors are responsible for maintaining the status quo? And, finally, how can these factors be changed to allow for more efficient distribution? The answers to these three questions have been developed by attacking the meaningful differences in the characteristics of the retail structure, the differences in the managers, physical characteristics, practices, functions, performance, perceived limitations, and internal predispositions. A brief summary statement of the conclusions derived from this analysis follows.

Retailers can be thought of being on a size and behavior continuum. This spectrum begins with the small atomistic retailer who is more passive in the face of his changing environment than the other retail groups. At the other extreme, in the large supermarket which through management skill not only actively adapts to

its environment but through its decisions changes its environment to achieve increased market participation. There are few of these latter extremes and many at the atomistic end.

It is not hard to understand why the large retailer can be more adaptive when the credentials of their decision makers and the scope of their assets are considered. Generally, the larger the retailer on the continuum, the more literate and educated he was, the greater his salary was, and the greater his assets were in terms of selling space, equipment and fixtures, and inventory. Hence, the larger retailers simply have more opportunity, more alternatives to influence their direction. They also are more willing to use their resources to better their businesses. Again, the poor may not have this opportunity, as their families need basic food and shelter. Further, the larger the retailers, the greater are the number of professional managers and the higher their pay scale is for both managerial and employee talent. The scale of operation clearly allows superior management and employees.

Large retailers perceive a competitive environment which leads to pricing below market price and trying to sell for less than others of the same type. It is important to understand the role of competition as it is the key to moving the system forward. The differ-

ences between the extremes of the spectrum are not clear at first glance because most retailers do not price at the same price as competition; and, if they buy for less, they sell for less. On the other hand, it has been pointed out that the larger the retailer, the more he uses price to attract customers and the more he attempts to price lower than others. Thus, the conclusion is correct that the atomistic retail end of the spectrum is less affected by competition than the large retailers who are very conscious of competition and compete on a price basis. Thus, one end of the spectrum is passive, while the other is dynamic through competitive forces. This is to say that the retailers at the large end of the spectrum are change agents through competitive reaction.

The large end of the retail spectrum also tended to buy more often on a price and quality basis than the small end. Thus, again the larger retailers seem to have more competitive practices than the smaller retailers.

Finally, the preceding analysis leads to the conclusion that the larger retailers are more innovative in their practices. The index of innovation demonstrated this to be so.

The actual value of a type of retail institution to a society is not entirely measurable due to the differences in functions that the retail institutions

perform. The major specialized functions of the retail institutional types were as follows: The major function of the street fair is to provide a mix of perishable products. The neighborhood stores furnish time, place, and credit convenience. Finally, the self-service stores supply a wide product mix at low prices.

On the other hand, if simple economic criteria are used, some value judgments can be made. The evidence that the size leads to a more rational system of distribution lies in the retail prices, growth rates, spoilage, and innovative aspects of these large retailers versus the rest. Although supermarket operations do not yet carry a full line of perishables and dry products in Recife, some retailers are approaching this breadth of line. What presently exists is large store size, self-service selling, better handling of goods, and some volume buying. What lacks in Recife from the supermarket concept is efficient stocking and inventory control, vertical integration, full product lines including meat and produce, full commitment to the high-volume, low-margin philosophy of selling, and a full commitment to proper margin mixing. Even recognizing that the present self-service retailers are far from the ideal, the larger have made significant strides as is evidenced by lower prices.

The analysis of the perceived barriers further

supports the notion that the small retailers have less control of their environment and thus see more barriers as being important limits on their operations. Further, the small retailer saw competition as relatively less important than other barriers in comparison to the larger retailers, which supports the conclusion that they react less to the forces of competition than do the larger retailers.

In terms of internal attitudes about the system in which they operate, the smaller the retailer was on the continuum, the more they were bound by their family size and location, belief in fate, social control, and lack of aspiration. These factors lead to the conclusion that the larger retailers have the ability to change through the use of talent and resources, the motive to change in terms of a sense of competition, the perception that they can change relative to their environmental limitations, and the internal predisposition to change.

The answers to the questions posed in this chapter are clear. The smaller the retailer on the spectrum of retailers, the more his production responses are blocked by both the system which he is in and his own inability and constraints--the one feeding the other and the combination causing marketing constraints on other channel members. It is evident that these

operators would tend to resist change and not react to change by themselves. To emphasize this point, the street fair retailers were asked what they would do if a supermarket opened near them and attracted one half of their customers. Over half (60 per cent) said that they would do nothing, 3 per cent would look for another job, 3 per cent would move location, 13 per cent would go out of business, 1 per cent would complain and protest, and 3 per cent would attempt to compete and win back their customers. Non-meaningful or irrelevant answers were given by 17 per cent. Though the results of this question are speculative, they give an indication of the plight and reaction of the small retailer. In essence, 93 per cent of the street fair operators would do practically nothing competitive as a reaction to a phenomenon which has already started to occur in Recife.

Thus, the atomistic retailer is a relatively inert market operator who is a decision taker from his environment and does little reacting or decision making which influences his economic environment. The atomistic retailers do not seem to realize that their traditional system is in jeopardy from competitive changes. This lack of realism reinforces the notion of these retailers as dependent decision takers.

This phenomenon, as was noted in the consumer chapter, is the advent of the self-service retailer.

The self-service retailer has been contrasted with the other retailers in this chapter to demonstrate the basic differences in the retail structure that exist. It is also evident that the major portion of the self-service stores do not constitute an overwhelming revolution in retailing; yet, they are one step removed from the traditional system of retailing in Recife. However, a few retailers were forces of change who were willing to exert their influence on their environment. In short, these firms were decision makers who were large enough to influence market conditions and who had the inclination and talent to do so. Thus, before analyzing the changes that are needed to achieve a more efficient distribution system, it is of interest to view the lead edge of the self-service change, the retail change that does constitute a revolution, the inception of a true supermarket in Recife.

Because the changeability of the self-service retailer has been presented relative to the other types of retailers does not mean that the others should not play a part in the changing retail structure. As the major retail structures, the atomistic and neighborhood retailers cannot be written off so easily, nor should they be. What is important is that intervention from the outside of these structures is necessary if change is to be constructive within these retail types. The force for change will not likely come from within these systems.

CHAPTER IV

URBAN WHOLESALE SUPPORT SYSTEM FOR FOODS

Introduction

This chapter presents the findings of surveys of 136 wholesalers located in Recife (see Appendix I for the sample design). Because the wholesaler is a distribution channel member, some of the same kinds of questions that were presented in the retail chapter apply equally to the wholesaler. These questions were outlined in Chapters I and III, but will be summarized here in terms of wholesalers. To what extent are wholesalers discouraged from increasing volume and efficiency through the use of new technology, by perceptions of barriers in the marketing system? These barriers include their perceptions of customers and suppliers as well as such factors as spoilage, etc. Further, to what extent do perceptions of non-economic barriers influence the wholesalers' production decisions as to the use of new methods and equipment to expand volume and increase efficiency? This above question deals with cultural and political barriers--i.e., perceptions of tax laws, uncertainty of government actions, role of fate, etc. Finally, what

change is taking place in the wholesale structure, and what are the possibilities for constructive change of wholesalers which would aid the development process of Recife and its food shed?

Besides answering the above questions, it is useful to present data on the wholesaler which sheds light on the retailer and his position. As it was necessary to understand the consumer in order to understand the consumer retailer interface, it is also necessary to study the wholesaler in order to understand the full environment in which the retailer operates.

The structure of the wholesale support system for food is dictated by the places where retailers buy their products. As has been presented, retailers have four major sources of supply for foods. First, they buy from the interior at some point in the assembly system. These suppliers are not urban wholesalers and thus will not be dealt with in this work.[1] Second, retailers buy from compartment or stall-located wholesalers, the majority of which reside in the Santa Rita public market and the Afogados fixed feira. Third, retailers buy from independent wholesale establishments spotted throughout Recife. Finally, retailers buy direct from producers,

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[1]The analysis of assemblers in the rural food shed for Recife can be found in the report by the Latin American Studies Center, The Market Processes of Recife, Brazil and Its Food Shed (East Lansing, Michigan: Latin American Studies Center, Michigan State University), in press.

processors, or manufacturers. This market channel bypasses the wholesaler entirely. The remainder of this chapter will present a descriptive analysis of compartment wholesalers and established wholesalers.

Compartment Food Wholesalers

Urban compartment wholesalers are defined as urban channel members who sell at least one-quarter of their volume to other businessmen and who are located in a group market with many other retailers and wholesalers. Although there are some compartment wholesalers scattered throughout the various public markets and fixed feiras presented in the retailer chapter, 71 per cent of all compartment wholesalers are located in either Santa Rita Public Market or in Afogados Fixed Feira. About three-fourths (76 per cent) of these remaining wholesalers are located in Santa Rita Public Market. Because of this concentration in two markets, a special survey was made of these wholesalers. In preparation for drawing a sample of these wholesalers, a census was made which revealed that there were 76 wholesalers in Santa Rita and 23 in Afogados Fixed Feira.

The findings presented in this section are based on a survey of 66 compartment food wholesalers in these two markets. The survey was made in July, 1967. Sixty-two of the respondents, or 94 per cent, were actually the owners of the businesses interviewed, while 4 (6 per cent) were managers.

Established Wholesalers

Established wholesalers are defined to include those businessmen who sell at wholesale from locations which are permanent places of business within a building which is not part of a street fair, public market, or fixed fair. Only those established wholesalers who handle food are included in this population. There exists no complete listing of this population, and a census was out of the question due to the difficulty of locating these wholesalers. Thus, an approximate population list was built, using lists from the Wholesalers' Union, the tax authorities, the banks, and Dunn and Bradstreet. The result was a preliminary list of 157 established food wholesalers. When this list was for a three-fourths sample, it was found that 35 per cent of these businesses were closed, were not food wholesalers, or never existed. Thus, the size of the population used was 102. No claim is made that this is an accurate listing of the population. However, the list is reasonably complete. Generally, because wholesalers are going out of business rather rapidly, there is little danger of not including a large segment of new entrants. There is some danger, however, of not including some smaller wholesalers.

The findings presented in this section are based on a survey of 70 established wholesalers in Recife made in May and June of 1967. Sixty-four of the respondents,

or 91 per cent, were actually the owners of the business, while 6 (9 per cent) were employees.

Demographic Characteristics

A brief summary of the characteristics of the decision makers sets the stage for the analysis of these wholesalers as well as indicating their trained capability. The mean age of compartment wholesalers was 38 years, while the mean established wholesaler was 39 years old. Of the compartment wholesalers, 45 per cent said they could read, but only 47 per cent of these could read easily and 13 per cent could not read at all when tested. On the other hand, 83 per cent of the established wholesalers claimed literacy and 92 per cent of those could read easily when tested. On the average, compartment wholesalers had completed 1.6 years of school, with 49 per cent having had no schooling at all and only 11 per cent having reached beyond the fourth year (primary school). On the average, established wholesalers had completed 6.9 years of school, with 81 per cent having had more than 4 years of school (primary) and 33 per cent having completed more than 9 years (junior high school). Ten per cent had attended a university. Of all compartment and established wholesalers, 83 per cent and 89 per cent, respectively, did not have other jobs. On the average, those with second jobs spent 6 and 14 hours on these jobs per week, respectively. The mean

number of dependents supported by each compartment wholesaler was 6.6, and was 7.2 for the established wholesalers. The average number of years as a wholesaler for compartment wholesalers was over 10, and the average was 13 years for established wholesalers. The established wholesalers were thus more literate and educated than the compartment wholesalers.

Structural Characteristics of the Recife Wholesaler

Before moving into an analysis of the behavior of the various wholesalers, it is useful to understand the structural, technical, and physical characteristics of their businesses.

Table 4.1 presents a description of the structural characteristics of the wholesalers in Recife. Like the atomistic retailers, the compartment wholesalers were mostly individual proprietors, while the larger (established) wholesalers were divided between individual proprietorships and partnerships. By definition, none of the compartment wholesalers owned their locations of business, yet surprisingly few (29 per cent) of the established wholesalers owned their places of business. Like the atomistic retailer, the facilities of the compartment wholesaler were small, though the facilities of the established wholesaler approached the size of the mean self-service store. The established wholesaler was

TABLE 4.1

PHYSICAL CHARACTERISTICS OF FOOD WHOLESALE UNITS BY WHOLESALE TYPE

Characteristics	Compartment Wholesalers	Established Wholesalers
Number of wholesalers	139	102
Ownership of business:		
Individual proprietorship	80%	46%
Family business	6%	3%
Partnerships	12%	37%
Corporations	2%	9%
Other	0	5%
Location ownership (by store)	0	29%
Mean size (M^2)	4	214
Mean asset value of building regardless of ownership:		
NCr$	200	10,700
(US$)	(74)	(3,960)
Mean value of fixtures and equipment:		
NCr$	N/A	39,088
(US$)		(14,477)
Mean inventory on hand:		
NCr$	413	91,000
(US$)	(153)	(33,700)

Source: SUDENE/MSU Wholesale Survey, 1967.

vastly bigger than the compartment wholesaler in terms of assets and again resembled the mean self-service store. Most of the compartment wholesalers (86 per cent) operated from one compartment, only 44 per cent had scales, and only 48 per cent had any hand tools.

Table 4.2 shows the labor characteristics of the Recife wholesalers. It is interesting to note that the compartment wholesalers are much like the atomistic retailers in their labor use except that they pay higher salaries in all the categories. Likewise, the established wholesalers are somewhat like the self-service retailers though they use less labor and pay higher salaries. Clearly, the owners and managers of the established wholesalers as a group make by far the best living of any of the urban distribution system members.

The mean number of years that the compartment wholesaler had been in his present location was five, while the established retailer had an average of nine. Typically, the wholesalers operated only one location, with 89 per cent of the compartment wholesalers doing so and 84 per cent of the established wholesalers being in this category.

Table 4.3 demonstrates that, like the retailers, the small compartment wholesalers handle primarily the highly perishable fruits and begetables, while the established larger wholesalers handle the cereals, the processed foods, and the canned goods.

TABLE 4.2

LABOR CHARACTERISTICS OF FOOD WHOLESALERS
BY WHOLESALE TYPE

Characteristics	Compartment Wholesalers	Established Wholesalers
Total persons in business type	256	634
Mean persons per business	1.84	6.22
Mean owners per business	1.14	1.46
Mean work week (hours)	79	54
Mean weekly salary:		
NCr$	71.34	211.36
(US$)	(26.42)	(78.28)
Mean managers per store	.06	.24
Mean work week (hours)	76	53
Mean weekly salary:		
NCr$	26.25	179.25
(US$)	(9.72)	(66.39)
Mean other employees per store	.64	4.52
Mean work week (hours)	73	50
Mean weekly salary:		
NCr$	17.55	36.22
(US$)	(6.50)	(13.41)

Source: SUDENE/MSU Wholesale Survey, 1967.

TABLE 4.3

PER CENT OF WHOLESALERS BY TYPE CARRYING VARIOUS COMMODITIES

Commodity	Compartment Wholesalers	Established Wholesalers
Rice	2	59
Beans	0	31
Manioc flour	0	17
Dairy products (excluding liquid milk)	0	63
Meat, other than fresh meat	...	53
Bananas	24	0
Other fruits	48	3
Tomatoes	8	0
Onions and potatoes	...	33
Other vegetables	44	...
Canned foods	0	46
Other	6	13

Source: SUDENE/MSU Wholesale Survey, 1967.

Thus, the wholesale structure is very much like the retail structure, with the small, poorly financed wholesalers employing few beyond themselves and their families, paying low wages, and handling the perishable products. The one striking feature of the established wholesalers is the relatively high owner and manager

salaries in comparison to the rest of the urban distribution system.

Wholesale Practices and Decision Rules

Consumer-Related Practices and Decision Rules

One important area of practices which relates to the thesis developed in Chapter I is pricing. The question that is relevant is, if input prices to the wholesaler are lowered either by prior channel members or through the wholesaler's effort, will he pass them on to his customers?

Sixty-four per cent and 70 per cent, respectively, reported that they did not try to sell for the same price as their competitors, but only 17 and 30 per cent, respectively, reported that they sold generally at lower prices. Only 36 and 37 per cent, respectively, used price to attract customers. Further, of compartment and established wholesalers, 88 per cent and 89 per cent, respectively, responded that if they bought products at lower prices than their competition, they sold them for less. Clearly, these wholesalers priced on a fixed margin and, thus, supply price dictates market prices.

It is of interest to note the differences between wholesale and retail prices of compartment units as most sell both at retail and wholesale. Tomato and

banana wholesalers serve as an example. Thirty-five per-cent of these wholesalers did not have different prices, 25 per cent had differences of 1 to 3 per cent, 15 per cent had differences of 10 per cent, 15 per cent had differences of 20 per cent, and 10 per cent had greater differences between wholesale and retail prices than 20 per cent. The average difference was 9 per cent.

All of the wholesalers said that they sometimes lowered prices to sell products before they spoiled.

Like the atomistic retailers, 86 per cent of the compartment wholesalers sorted their products by quality, but, surprisingly, 70 per cent of the established wholesalers did so also. Finally, few of the compartment and established wholesalers thought others like them cheated; 20 per cent and 16 per cent, respectively, held that others cheated.

Supply-Related Practices and Decision Rules

Another important area concerns where wholesalers obtain their supply. The answer to this question sheds light on the kind of channel which reaches back to the rural area and the importance of the supply from the south of the country. Tables 4.4 and 4.5 present the sources of supply where compartment and established wholesalers buy their stocks of products.

TABLE 4.4

SOURCES OF SUPPLY OF SELECTED COMMODITIES FOR COMPARTMENT WHOLESALERS (PER CENT)

Commodity	Wholesaler Santa Rita	Wholesaler Afogados	Interior Other	Other	Total
Bananas	19	6	56	19	100
Tomatoes	20	40	40	0	100
Other fruits, vegetables	31	10	31	28	100

Source: SUDENE/MSU Wholesaler Survey, 1967.

TABLE 4.5

SOURCES OF SUPPLY OF SELECTED COMMODITIES FOR ESTABLISHED WHOLESALERS (PER CENT)

Commodity	Wholesaler Center City	Rio Grande do Sul	Feira & Public Market	Interior Other	Other	Total
Rice	16	74	0	10	0	100
Beans	14	23	4	45	14	100
Manioc flour	0	17	8	75	0	100

Source: SUDENE/MSU Wholesaler Survey, 1967.

The kind of channel proliferation that was mentioned in Chapter I is demonstrated by the compartment wholesalers who buy much of their supply from other compartment wholesalers in Recife. The balance comes from

the interior. In the case of the established wholesaler, the south of Brazil and the interior form the major sources of supply. Little comes from other wholesalers.

The conditions of the transaction for these wholesalers are presented in Table 4.6. The compartment wholesalers were again much like the atomistic retailers in that they used significant amounts of credit for short periods of time at high costs. On the other hand, these wholesalers arranged over half of their incoming bananas, though they did no transportation for tomatoes. Greater

TABLE 4.6

NUMBER OF SUPPLIERS AND CREDIT GIVEN TO COMPARTMENT WHOLESALERS FOR SELECTED COMMODITIES

Commodity	Mean Number of Suppliers	% Who Trans. In by Volume			% Who Made Last Purchase on Credit	Pay-Back Period (Days)	Annual Cost of Using Credit
		None	Some	All			
Compartment Wholesalers							
Bananas	1.4	35	8	57	31	6.2	290
Tomatoes	2.6	100	0	0	40	8.0	562
Established Wholesalers							
Rice	2.6	31	13	56	56	50	24
Beans	2.4	52	5	43	14	38	59
Manioc flour	2.0	33	8	59	25	26	42

Source: SUDENE/MSU Wholesale Survey, 1967.

numbers of established wholesalers used credit than self-service retailers, though they paid more for it and took longer in repayment. On the average, over half of these wholesalers arranged for incoming transportation. Finally, wholesalers tended to use more suppliers than retailers, yet 65 per cent of the compartment wholesalers and 84 per cent of the established wholesalers used the same group of suppliers. Two-thirds of the compartment wholesalers (67 per cent), like the atomistic retailer, priced more than one supplier before buying, while 81 per cent of the established wholesalers did so. Of these wholesalers, 85 per cent and 81 per cent, respectively, always tried to buy the same quality, and 91 per cent and 81 per cent, respectively, felt that their colleagues could evaluate quality.

The most important reasons why compartment and established wholesalers preferred the suppliers that they used were trust and friendship (27 and 31 per cent, respectively), quality-price relationship (26 and 21 per cent, respectively), quality only (14 and 17 per cent, respectively), credit (18 and 16 per cent, respectively), price only (14 and 14 per cent, respectively), and punctual good service (9 and 11 per cent, respectively). Personal trust and friendship seemed important, while good service was not important. Price and quality considerations were not of the first level of importance. Few

wholesalers (20 and 10 per cent, respectively) purchased on price only, disregarding quality. Punctual good service was considered by wholesalers as unimportant, while the retailers considered this important.

Most of the wholesalers (62 and 66 per cent, respectively) reported that their suppliers gave discounts to regular customers. On the other hand, of the compartment and established wholesalers, 80 per cent and 71 per cent, respectively, felt that their suppliers made a big profit when supply was short. Further, 73 and 64 per cent, respectively, felt that their suppliers always sold products for the highest possible prices. Hence, somewhat fewer established wholesalers than compartment wholesalers seemed to feel that their suppliers are able to take advantage of them.

When asked if they could sell all that they could afford to buy, 65 per cent of the compartment wholesalers indicated that they used their resources for stock, while 39 per cent of the established wholesalers did. Further, these wholesalers were asked if they tried to buy enough to satisfy all demand. Most (88 per cent) of the compartment wholesalers and 94 per cent of the established compartment wholesalers indicated that they did.

Communications-Related Practices and Usage

Though no wholesalers advertised to their customers through the mass media, it is of interest to examine

the ways that communication in the channel does take place. Of the compartment and established wholesalers, 65 per cent and 74 per cent, respectively, said they told their suppliers what products their customers wanted. Likewise, 70 per cent and 77 per cent, respectively, responded that most of their suppliers tried to offer the products that they wanted. When asked where they got their price information, 8 per cent of the compartment wholesalers said from their suppliers, while a greater percentage (31 per cent) of the established wholesalers responded from their suppliers.

The compartment wholesaler, like the atomistic retailer, did not have broad mass media exposure, while the established wholesaler had exposure to all the media in significant proportions. Fifty-nine per cent of the compartment wholesalers did not receive newspapers or magazines regularly, and 49 per cent had not read a newspaper or magazine lately. On the other hand, 90 per cent of the established wholesalers did receive newspapers and magazines regularly and read them. Of the compartment and established wholesalers, 83 per cent and 97 per cent, respectively, reported owning a working radio, but 77 and 66 per cent, respectively, reported listening to a radio infrequently or never. Almost half of the compartment wholesalers (49 per cent) never watched television, while 21 per cent watched television occasionally out of the home

and 30 per cent watched television at home. On the other hand, 87 per cent of the established wholesalers watched television regularly at home.

Practices and Decision Rules Related to Operation of the Business

There are large differences between the two types of wholesalers in their efforts to cooperate with wholesalers like themselves. Of the compartment wholesalers, 27 per cent did belong to a union or association, while 54 per cent of the established wholesalers did. Further, 49 per cent of the compartment wholesalers, as against 73 per cent of the established wholesalers, made no arrangements with other wholesalers; while 35 per cent and 11 per cent, respectively, made agreements on prices and 5 per cent and 7 per cent, respectively, made agreements on business practices.

The respondents were asked what they would do with a sum of money equal to one year's earnings if they had saved it during the past few years. Fifty-eight per cent and 69 per cent, respectively, said that they would invest all or part in their present business and improvements.

Finally, questions on three practices were asked the wholesalers to determine their adoption of new practices. Of compartment and established wholesalers, 12 per cent and 79 per cent, respectively, responded that

they marked prices on their commodities, 42 per cent and 47 per cent, respectively, said they tried to sell products that were new on the market, and 61 per cent and 84 per cent, respectively, reported protecting their products from natural elements or rats and insects to avoid spoilage. When these items were grouped into an index with 1 equalling "no adoption" and 3 equalling "complete adoption," the average adoption was 1.8 and 2.4, respectively. The established wholesalers are more willing to change than are the compartment wholesalers, but were not as willing to change as the self-service retailers.

Conclusions

This section has presented the behavior and practices of the compartment and established wholesalers. Both compartment and established wholesalers tended to price on a fixed margin. Further, few of these wholesalers used price to attract customers or maintained generally lower prices than other wholesalers. On the other hand, most of the wholesalers did price according to the quality of their stock and did sort their stocks by level of quality. It is evident that these wholesalers did not feel that they could gain by pricing at lower prices than competition to the extent that the self-service retailers did. As with the atomistic retailers, the compartment wholesalers tended to use short-term, high-cost credit, while the established wholesalers used much

lower cost credit. The compartment wholesaler typically was not exposed to the mass media, while the established wholesaler was exposed to all the media in significant proportions. Finally, more compartment wholesalers were willing to reinvest in their businesses than were the atomistic retailers, but established wholesalers were willing to reinvest in about the same proportions as the self-service retailers.

Performance Characteristics of Food Wholesalers

Before turning to the measures of performance, it is necessary to understand who the wholesalers serve and what functions they perform.

Functions and Services Performed by Wholesalers

Chapter III indicated that retailers bought in substantial numbers at compartment and established wholesalers. However, these are not the only customers that wholesalers have (see Table 4.7). Compartment and established wholesalers serve the same kinds of customers with the exception that the established wholesalers had more self-service retailers and wholesaler customers.

Most compartment and established wholesalers felt that their customers were price-quality knowledgeable. Ninety-one per cent and 93 per cent, respectively, felt that their customers knew the prices of the same products

TABLE 4.7

PER CENT OF SALES OF COMPARTMENT AND ESTABLISHED WHOLESALERS BY CUSTOMER TYPE (PER CENT GIVEN SIX RESPONSES)

Customer Type	Compartment Wholesalers	Established Wholesalers
Self-service retailer	32	61
Feirantes	99	90
Other retailers	83	88
Wholesalers	28	53
Restaurants, bars, and hotels	41	48
Others	26	31

Source: SUDENE/MSU Wholesale Survey, 1967.

in other places; 91 per cent and 84 per cent, respectively, thought that their customers shopped around for best quality; 97 per cent of both groups responded that their customers bargained; and 96 and 100 per cent, respectively, said that their customers knew the qualities that they sold. Further, 94 per cent and 80 per cent, respectively, felt that their customers wanted to buy the same quality each time of purchase. Finally, 74 per cent and 76 per cent, respectively, felt that customers thought quality was more important than price.

Some of the functions that the wholesalers perform have been indicated previously. These functions

are the transactional, bulk breaking, and transportation functions. The other functions that the wholesalers perform are presented below.

Forty-eight per cent of the compartment wholesalers gave no credit, while 24 per cent did one-fourth of their wholesale volume on credit, 17 per cent did one-half, and 11 per cent did three-fourths of their volume on credit. Eleven per cent reported that they delivered some sales to their customers' places of business. On the other hand, fewer established wholesalers gave typically more. Fifty-three per cent of the established wholesalers gave no credit, while 5 per cent gave between 1 per cent and 30 per cent of their customers credit, 14 per cent gave 40 per cent to 60 per cent of their customers credit, 19 per cent gave 70 per cent to 90 per cent of their customers credit. Nine per cent gave all their customers credit. Twenty-six per cent reported that they delivered some sales to their customers' places of business.

Wholesalers performed few other functions. Of these wholesalers, 12 per cent and 14 per cent, respectively, reported that they did some processing such as cutting, trimming, etc.; 8 per cent and 7 per cent, respectively, said they also produced some products; 9 per cent and 14 per cent said they were brokers; 3 per cent and 16 per cent, respectively, said they were warehousers;

and 0 per cent and 47 per cent, respectively, reported making imports from outside the country.

Finally, 61 per cent and 17 per cent, respectively, of these wholesalers were judged to be in poor and dirty condition.

Measures of Wholesale Performance

Spoilage

As with retailers, spoilage is a very important indication of the performance of wholesalers. In comparison with the atomistic retailers, the compartment wholesalers have about the same spoilage rates, but the established wholesalers have much greater spoilage rates than do the self-service retailers (see Table 4.8). (See Chapter III on retailers for method of determining spoilage.)

TABLE 4.8

SPOILAGE OF SELECTED PRODUCTS CARRIED BY WHOLESALERS (PER CENT)

Commodities	Spoilage Sellable	Spoilage Unsellable
Compartment wholesalers:		
Bananas	19.56	11.19
Tomatoes	13.00	11.00
Established wholesalers:		
Rice	6.24	2.49
Beans	13.71	2.77
Manioc flour	10.25	3.67

Source: SUDENE/MSU Wholesale Survey, 1967.

Margins

As was noted in the retailer chapter (Chapter III), the spoilage rates for the spoiled but sold commodities reduce the margins between the actual selling price at any given time and the cost of those goods. Thus, spoilage reduces the margins reported. The greater the spoilage, consequently, the smaller the margin reported. Thus, the margins of the wholesalers are difficult to compare, but give some order of magnitude as to the costs of the wholesale operations (see Table 4.9).

TABLE 4.9

PRICE MARGINS BY SELECTED COMMODITIES FOR WHOLESALERS

Commodity	Margin as a Per Cent of Selling Price
Compartment Wholesalers:	
Bananas	20%
Tomatoes	18
Established Wholesalers:	
Rice	9
Beans	13
Manioc flour	17

Source: SUDENE/MSU Wholesale Survey, 1967.

Growth

When asked to compare last year's volume to this year's volume in physical terms, wholesalers on the average felt that it had declined. Their responses to the past year's growth question were combined into an index of growth in which 1 equals decrease a lot in volume, and 5 equals increase a lot in volume. Both types of retailers registered an average of 2.5, or slight decline in volume. On the same scale, compartment wholesalers indicated that their volume would increase next year by a score of 3.7, while the established wholesalers scored 3.4 and thus saw some future growth as well. It should be noted that the realism of these wholesalers is suspect due to the fact that they indicated they declined more in the past year than any other urban institution, yet they feel that moderate growth next year is realistic. The gap between these perceptions of their position is greater than that of any of the retail types.

Summary

Though the established wholesalers have less spoilage and lower margins than do the compartment wholesalers for different products, they have greater spoilage than the self-service retailers for the same products. The operation of the compartment wholesalers was very much like that of the atomistic retailer.

Limitations of Wholesale Food Marketing in Recife

The next step in this analysis is to see how the wholesalers are constrained by their perceptions of their environment and their internal predispositions or notions of how the world operates. These two kinds of barriers have been called external and internal barriers in the retail chapter (Chapter III), and these notions will be carried forward here for wholesalers.

External Barriers

Both the compartment and established wholesalers tended to agree with most of the barriers and thus not discriminate between the barriers clearly. On the overall index of barrier agreement, with 1 equalling complete agreement and 3 being complete disagreement that the barriers were important, both types of wholesalers registered 1.7 averages. Further, out of 21 barrier questions the compartment wholesalers saw four (19 per cent) as being on the whole less important than more important, while the established wholesalers saw only two (10 per cent) in this category. Thus, these wholesalers react to their environment very much like the atomistic retailers do. It is interesting to note before continuing that 15 per cent of the compartment wholesalers and 21 per cent of the established wholesalers did not desire to expand their businesses. Again, some of these whole-

salers do not show a competitive spirit or a feeling that they can control their success. The following analysis of barriers reinforces this conclusion.

Table 4.10 presents the relative importance of the various barriers as they relate to expansion by the respondents. The lack of financial resources is clearly

TABLE 4.10

PERCEIVED RELATIVE IMPORTANCE OF BARRIERS TO EXPANSION BY WHOLESALE TYPE (PER CENT)

The Most Important Problems Preventing Expansion (First and Total of Three Responses)	Compartment Wholesalers		Established Wholesalers	
	First	Total	First	Total
Lack of money	76	84	53	57
Lack of sales	16	25	21	36
Poor location	0	2	0	8
High product prices	2	2	2	11
Lack of supplies	0	5	2	2
Too much competition	0	0	2	8
Government laws	2	2	8	9
Other	4	18	12	19

Source: SUDENE/MSU Wholesale Survey, 1967.

the major problem for both types of wholesalers, with the lack of demand being second. It is interesting to note that the larger established wholesalers saw that the lack

of demand was important in greater proportion than did the compartment wholesalers. Finances were seen by fewer established wholesalers as being important. Neither type viewed competition as having any relative importance.

Table 4.11 shows the same two problems as important when related to profits, but less so than before. For the compartment wholesalers, the cost of products, the lack of supply, and competition increased in importance slightly, while for the established wholesalers, the cost of products seemed to gain a lot of importance.

TABLE 4.11

PERCEIVED RELATIVE IMPORTANCE OF LIMITATIONS ON PROFITS BY WHOLESALE TYPE (PER CENT)

The Most Important Problems Preventing Higher Profits (First and Total of Three Responses)	Compartment Wholesalers		Established Wholesalers	
	First	Total	First	Total
Lack of money	33	38	30	34
Lack of sales	32	48	20	31
Poor location	0	3	0	1
High product prices	8	14	21	31
Lack of supply	8	11	6	11
Too much competition	6	12	1	4
Government laws	0	3	9	10
Other	13	21	13	17
	100		100	

Source: SUDENE/MSU Wholesale Survey, 1967.

Table 4.12 presents the individual reactions to the barriers to expansion. Here, each barrier was asked about individually and the respondent indicated if it was a very important barrier or not. The lack of regular customers was seen as important by most of the wholesalers, especially the established wholesalers. Though the lack of ability to get a loan and the cost of loans were seen as important by both types of retailers, compartment wholesalers saw the lack of ability as

TABLE 4.12

PERCEPTION OF EXTERNAL BARRIERS TO EXPANSION HELD BY WHOLESALERS WHO DESIRE TO EXPAND, BY WHOLESALE TYPE (PER CENT)

Of Those Who Desire to Improve, the Per Cent Who Feel One of the Most Important Reasons Preventing Their Expansion is:	Compartment Wholesalers	Established Wholesalers
Lack of ability to obtain loan	80	62
Lack of regular customers	87	94
High cost of borrowing money	71	75
Difficulty of finding good location	75	62
Irregular supply of products	67	77
Danger of floods	58	57
General increase in competition	49	58
Risk of changes in current policy and laws	25	62
Do not desire to improve	15	21

Source: SUDENE/MSU Wholesale Survey, 1967.

being more important, and the established wholesalers saw the cost as being more important. Further, it is noteworthy that greater proportions of the established wholesalers (62 per cent) than other wholesalers (25 per cent) or retailers saw the threat of government change as being important. This reflects the fact that the established wholesaler is being by-passed due to changes in the laws which govern the channel activities. Because of these changes, more and more manufacturers are selling direct to retailers, causing this form of wholesaling to decrease. Thus, the importance placed on demand as a barrier is consistent though these operators are large. The major function of the established wholesaler is being performed elsewhere in the system, and the established wholesalers feel it. Finally, though these established wholesalers are feeling a lack of customers, they do not feel that competition is relatively important. The compartment wholesalers do not feel this either.

Table 4.13 presents the proportions of respondents who felt that various barriers to profits were important. Various operating problems became important when profits were considered. It is interesting that the established wholesalers feel that competition limits their profits along with demand conditions.

TABLE 4.13

PERCEPTION OF EXTERNAL BARRIERS TO PROFITS BY WHOLESALE TYPE (PER CENT)

The Most Important Reasons Limiting Profit	Compartment Wholesalers	Established Wholesalers
Varying prices	89	71
Product spoilage	92	89
Varying quantities of customer purchase weekly	80	70
Competition	67	81
Irregular supply of product	67	74
Lack of information about price	53	56
Lack of information on quantity of products available	46	53

Source: SUDENE/MSU Wholesale Survey, 1967.

In summary, the compartment wholesaler perceived his environment much as did the atomistic retailer. On the other hand, the established wholesaler perceived his barriers as being greater in number and more severe than the self-service retailers did, with a greater emphasis on demand problems. Both types of retailers tended to give considerably more weight to demand problems than supply problems when given the opportunity to freely choose the most important barriers.

Internal Barriers

As was done in the retail chapter, some of the beliefs and attitudes of the respondents were summed into indices, with 1 representing agreement with a traditional value and 3 representing agreement with a modern value. Table 4.14 presents the averages of these indices and attitudes by wholesale type. In comparison with compartment wholesalers, established wholesalers were less affected by social sanction on success, less locationally affected by family, and less influenced by a belief in fate. These large wholesalers were only slightly more trustful and were only a little more managerially oriented than the compartment wholesalers. Though the established wholesalers wanted to improve their businesses in somewhat smaller proportions than the compartment wholesalers, they tended to be more modern than the compartment wholesalers.

The compartment retailers are about as modern as the atomistic and neighborhood retailers, while the established wholesalers are more modern than these retailers, yet less modern than the self-service retailers. The wholesale system which largely services the traditional retail system logically is also largely traditional in its viewpoint.

TABLE 4.14

INTERNAL BARRIERS BY WHOLESALER TYPE

Item	Indices and Attitudes	Compartment Wholesalers	Established Wholesalers
1	Neighbors do not want you to prosper	1.65	1.86
2	Desire to live near family	1.35	1.93
3	Index of fatalism	1.77	2.11
4	Index of interpersonal trust	1.77	1.83
5	Index of managerial talent	2.32	2.42
6	Desires not to improve his business	2.70	2.56
7	Index of modernity	1.77	2.02

Source: SUDENE/MSU Wholesale Survey, 1967.

Summary and Conclusions

The purpose of this chapter has been to present the nature of the urban wholesaler in an attempt to define his role in the distribution system for food as well as to study the questions that were presented in the beginning of the chapter. Clearly, the compartment wholesalers are much like the atomistic retailers in almost every detail, and thus the conclusions that were made for the atomistic retailers are fitting here as well. In essence then, the compartment wholesaler does

not have the scale of operation nor the resources to change his environment, and thus continues to operate in the traditional distribution system causing distortions which force the consumer to pay more for lower quality products and force prior channel members to operate with greater risks in terms of price fluctuations, spoilage loss, etc.

Unlike the large retailers, the established wholesalers do not seem to have the same competitive practices and thus are not using their size and financial resources to gain competitive advantage. Rather, these large wholesalers are facing a decrease in demand for their services with little positive reaction. Though the wholesalers that had already gone out of business were not included in the sample. by definition, several were encountered in the self-service retail business. This shift indicates a possible means of employing the established wholesalers to gain the use of their resource and sale volume power as well as their managerial talent. The shifting of the more adaptable of these businesses into the retail self-service business would place these units in a more competitive atmosphere where the use of their ability would be encouraged and their knowledge as wholesalers could aid in bringing about vertical integration.

CHAPTER V

THE BEGINNINGS OF CHANGE

Chapters III and IV have presented a picture of a largely traditional urban distribution system for foods. However, change has started to occur, and it is thus necessary to look at its implications. These changes are of two kinds. The first kind is the change that has started at the retail level with the introduction of self-service stores and has evolved into large-scale food retailing. The second kind of change is the change of the wholesale structure which has been introduced by SUDENE through reforms of the urban wholesale market system. This chapter will first deal with the retail change and then the wholesale reform.

The Spontaneous Evolution of Large-Scale Retailing

Though a comparison of self-service retailers and the rest of the retailers has been made at this point, it is useful to summarize the differences emphasizing the largest retailers as an example of the lead edge of this change.

The evidence presented in Chapter III indicates that there is a substantial distance between the mass

of traditional system operators (7,800) and the few (6) largest retail operations, which will be referred to here as supermarkets. Whereas the traditional operators are stagnant or decreasing in volume, the supermarkets are expanding rapidly; also their per unit size (mean 465 square meters) is 22 times that of neighborhood stores and 155 times that of atomistic retailers. In terms of sales, the supermarket (sales of NCr$81,333 per week mean) is 116 times that of neighborhood store average and 153 times that of the atomistic retailers' average sales. The relative per unit impact of supermarkets versus traditional units is great.

A second variable where supermarkets are leagues apart from traditional retailers is ability to change. Evidence of this fact not only is definitional--supermarkets are a change--but also is shown by the indices measuring change. Supermarket practices are innovative; traditional retailers are not. These six largest retailers also feel that they have the resources to change within their environment, whereas the traditional retailer feelsoppressed by his environment and powerless to take the initiative to change. As was pointed out in Chapter I, these may be very rational reactions given the size and the technology which the traditional retailer has at his disposal. Further, the traditional retailers are more susceptible to non-economic forces in

the system. These small retailers feel more restricted by the location of their family, by their peers, by fate, and by lack of trust in others than do the larger retailers.

Thus, clearly, these large retailers are not bound by the constraints that tie the traditional operator and his traditional system. Supermarkets are freer to change and do change. That is to say, supermarkets are free to act in relation to competitive forces, whereas environmental, financial, non-economic variable preclude the small unit from responding to competition.

Finally, the large self-service operators will reinvest in their business, while the atomistic retailer will generally not reinvest--and only three out of five neighborhood retailers would.

Along with the willingness to change, supermarket operators have the ability to manage the change as well. They are literate, educated, and possess managerial skills, whereas traditional operators are largely illiterate, uneducated, and lacking in managerial skill. Further, supermarkets are able to hire professional managerial talent, where the smaller stores are not.

The payoff of the supermarket change can already be seen. The retail prices of these retailers are generally lower for better quality than that of the rest of the system. The supermarkets have lower spoilage and credit costs than the traditional operators.

Supermarkets buy directly and in larger volumes, thus obtaining a lower cost of goods. Because supermarkets are sensitive to competition, they tend to pass the benefits of their competitive advantage on to the consumer in an attempt to grow and increase their share of the market. Their pricing policies reflect this fact. Most supermarkets reported that they tried to price below others in the same business, whereas traditional operators did not. Most supermarkets reported that they used low price as a competitive tool to attract customers; traditional operators generally did not.

Many economists argue that increasing scale away from that which pure competition theory would indicate as optimal, leads to increasing monopoly power on the part of the channel members, which causes volume restrictions and raised prices. Though the atomistic channel members here do not meet all of the requirements of pure competitors, the increase in scale of the self-service stores has lead to lower prices, greater volume, and increased competition.

The following brief history of the self-service store in Recife stems from a special depth study which was made as part of Phase III of the research. Unstructured interviews were made of most of the self-service stores and a sample of the non-self-service stores. The

object of the study was to trace the competitive effects of the self-service innovation as it progressed from inception to the present time. Thus, it was necessary to isolate the change agents and then sample various types of retailers at various distances from the change agents to determine the spatial competitive effects of these change agents.

In the past 10 years, self-service retailing has grown from nothing to its present size and importance in the Recife market. Approximately 11 per cent of all food expenditures are now made in self-service stores. This rapid growth can be attributed to the needs of the yet small but growing middle class in Recife. The self-service stores for the first eight years of operation were not characterized by a high volume, low price concept. Gross margins ran from 15 to 30 per cent, with the mean around 23 per cent. These operations were small and did no significant advertising or promotion. The years 1964 and 1965 brought the main expansion of Comprebem into self-service retailing with the construction of three supermarkets and the conversion of five smaller stores to self-service, as well as many independent operators converted to self-service operations. On June 12, 1966, Bom Preço opened one large supermarket.

Until Bom Preço, all of the self-service operators including Comprebem seemed content with the high

margin, no promotion philosophy. Thus, Bom Preço was the first to bring low margin, high volume practices into the Recife market. The repercussions of this innovation were felt in all corners of Recife. Volumes of other self- and non-self-service retailers fell at the impact of the low prices and promotion of Bom Preço. More importantly, the high margins of the other self-service retailers rapidly decreased in the face of the lower margin competition. The mean decrease in margin was 32 per cent. These margins and volumes were obtained through a special study of the self-service stores.

It is important to note how the changes in margins were affected. Bom Preço entered the market with one large store. This was enough to cause Comprebem, a chain of eight stores in Recife, to lower its prices, causing a head-on price competition battle. The fact that Comprebem lowered their prices forced the smaller, independent self-service operators to follow suit. Table 5.1 shows the combined effect of Bom Preço and Comprebem on seven other self-service retailers. The owners and managers of the smaller supermarkets and mercadinhos almost unanimously stated that they had never felt the competition of Comprebem until Bom Preco opened. The effect of Bom Preço does not stop with self-service outlets. Around each self-service outlet, neighborhood stores were affected, the degree depending on their

TABLE 5.1

EFFECT OF BOM PREÇO ON MARGINS AND VOLUMES

Stores in Order of Size	Location Near Bom Preço/ Comprebem	Gross Margin Before BP (%)	Current S.M. %	Fall in Margin %	Immediate Fall in Sales %	Current Sales Level
1	Comprebem	25	12	52	20	Above former
2	Comprebem	20	13	35	40	Above former
3	Comprebem	15	15	0	0	Above former
4	Comprebem	20	13	35	5	Above former
5	Comprebem	30	25	17	15	Not recovered
6	Bom Preço	25	18	28	30	Not recovered

Source: SUDENE/MSU Retail Special Study, 1967.

distance from the self-service outlet. Finally, some atomistic retailers in public markets and feiras were affected slightly, depending on their closeness to an important supermarket. Thus, a simple one-store innovation with a corresponding idea of high-volume, low-price selling has forced the revolution of selling practices on competing food retailers. The effect of this change is to increase the real income of consumers through generally lower prices for food.

A second benefit resulted from the advent of Bom Preço. Almost no promotion had been used until Bom Preço started a sustained advertising program using the mass media. Comprebem then reacted, causing the smaller self-service organizations to react as well. The result was to draw even more people to the now relatively lower priced form of retailing, thus accelerating the benefits of lower prices in the Recife market.

One supermarket owner summed up the feelings of the majority of self-service operators when he confided that the opening of Bom Preço showed that their previous high-margin, no advertising policy was not a viable and efficient way to run a supermarket.

Although the supermarkets of Recife cater directly to the upper and middle classes, the traditional outlets are affected by supermarket competition in varying degrees and hence the lower classes receive some indirect benefit.

As more retail units like the above-mentioned are introduced, the distances between these units will be reduced and the changes in the traditional units will be more pervasive. This pressure of supermarket operation sets the stage for a more rational system of distribution for all income levels.

Since the inception of Bom Preço, there have been two prominent demonstrations of the use of retail power to rationalize the system of distribution. First, though it was mentioned earlier that vertical integration had not yet taken place for agricultural non-processed foods, one striking exception exists. Bom Preco vertically integrated its supply system for rice. This integration included the channel to and ownership of the rice milling operation in the production area. The evidence that integration resulted in lower prices for the consumer was presented in Chapter III, Table 3.13. While other self-service stores were priced slightly above the system overall mean price for comparable quality rice, Bom Preço was priced 12.8 per cent below this mean for better quality rice. This is to say that Bom Preço was priced 15.4 per cent below the other self-service stores sampled and sold better quality rice. These kinds of differences between Bom Preço and the self-service retailers did not show up for the other commodities to this extent. Thus, it can be concluded that the vertical

integration enables Bom Preço to reduce the price of rice substantially and thus benefit the consumer.

The second demonstration of the use of aggregated retail power is quite different from the above vertical integration. In 1966, Comprebem found itself facing an intolerable supply situation for eggs. The only volume supplier of eggs for Recife was the poultry cooperative, which had gained a monopoly position in the distribution channel. The only other distributors of eggs were the very small traditional operators. The poultry cooperative started to use its power to extract relatively high prices from the larger retailers who clearly could not generate the necessary volume from the traditional system in the short run. Comprebem met the threat head-on by organizing its purchases through one of the large cooperatives in the south of Brazil, more than 1,500 miles away. Comprebem claimed that they could buy the eggs, truck them north over the poor roads which were often dirt, throw out the broken eggs that resulted, and still have a lower cost than if they bought them from the local cooperative. The loss of the Comprebem business to the cooperative caused a condition of over-supply which eventually in 1967 forced the cooperative to reduce its prices to a reasonable amount. When this happened, Comprebem shifted its buying back to the local cooperative. The closeness of Comprebem to the market as a retailer and the competition between it and

other retailers forced it to look for ways to bring the customer low prices. Thus, rather than accepting high supply prices from a supply system that did not feel the need to service the demand at low cost and did not have an environment of competition to force it to do so, Comprebem chose to fight the distortion in supply and had the scale to do so.

Thus, Recife is experiencing the beginning of change, the move from a traditional distribution system to one which brings food to consumers at lower prices. Clearly, this benefit is not only desirable in terms of increasing the real income of the consumer, but also this increase has implications for development of the area through increasing food and non-food purchases which foster increased production--i.e., demand has been expanded. Though change has just started, its power must not be underestimated. Zimmerman notes the following:

> In all we would find that man at a certain moment became aware of the necessity and the possibility of altering his environment; man became convinced that he could adapt society to fundamentally new conditions. It is this process of adaption that we call economic development.[1]

Though this statement has been placed outside the context that Zimmerman had intended, it sums up clearly the step that has been taken at the retail level in Recife.

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[1]L. J. Zimmerman, Poor Lands, Rich Lands: The Widening Gap (New York: Random House, 1965), p. 131.

There is indisputable evidence that a lead edge is causing change in the distribution system of foods in Recife. Further, these change agents are clearly different than the rest of the operators in the economic system. Their limitations are clearly different as well. Whereas the traditional distribution units have a myriad of internal and preceived external barriers to change, the supermarkets agree that the lack of financial resources and potentially available technical assistance are their major limitations on expanded market participation. A program of capital availability through development banking consequently allows these change agents to extend their beneficial influence more rapidly as well as encourage entry to potential change agents who are limited by their financial resource base. A training program would further increase the efficiency of the funds created by helping those interested to compete more effectively.

The question now arises, what happens to the traditional marketing units as the supermarkets gain market share? Clearly, if left alone, they will be forced further and further into desperation and poverty. The social cost of this result is high. Therefore, a counter program to make these units competitive is needed. If these types of units are improved, the benefits accrue directly to the lower income consumers.

Thus, reforms in the traditional sector are desirable but the evidence presented in Chapter III indicates that these units are not easily changed. Hence, reforms can only be implemented as the change agents (supermarkets) force the traditional units toward extinction or the realization that the alternatives are change or die. At that point, a reform program could be implemented. As was mentioned earlier, this is the point where the stage is set for change.

Many of the less traditional small self-service and larger neighborhood stores already feel the competitive bite of the supermarket and see the above-implied decision. They are ready to embark on a program of pooled market power. However, the conditions have to deteriorate further for the very small neighborhood stores and the atomistic retailers before they recognize their plight. At that time, a program of pooled power could be beneficially implemented, but must be anticipated and ready when that time arrives.

The nature of these reform programs for large, medium and atomistic retailers is presented in Chapter VI.

The Wholesale Market Changes

The changes of wholesale can now be viewed. Though the plans to foster production of food and non-food goods in the Northeast are many and varied, few

programs have been developed for the urban distribution system beyond government controls such as taxes, margin control, buying and selling of stocks, etc. There is notably one exception to this lack of emphasis on the distribution channel which it is useful to report on before the recommendations of this research are presented.

During the year of April, 1960, to April, 1961, a French research team studied the distribution of foods, and, in 1962, presented their report to SUDENE. On November 22, 1962, based on the findings of this research, SUDENE created the Centrais de Abastecimento do Pernambuco, S/A (CAPESA), the Center of Supply for the State of Pernambuco. On November 16, 1963, CAPESA was broadened to include the whole northeast of Brazil and was renamed Centrais de Abastecimento do Nordeste, S/A (CANESA). The objectives of CANESA were to rationalize the supply of foods through the construction of three urban wholesale facilities which would be interlinked by radio with each other and with the various producing areas. These centers were to be in Salvador, Fortaleza, and Recife. Ideally, the producers could find out daily the urban marketing conditions at the three urban centers, and contract the same of their products via the CANESA communication system with the urban area. At the urban side of this network, CANESA would build facilities for the transacting of business either directly, buyer and

seller face to face, or indirectly through the communication system with the rural area. Hence, a producer could bring his products directly to one of these markets and find a place to sell them directly to the urban buyers; or he could, through the rural communications network, put his products up for sale, given certified standards, and sell to the highest bidder in one of the urban markets. Buyers are either wholesalers who reside in the market and sell from their permanent stalls, or are retailers who frequent the market or who have permanent buying stalls. CANESA also would facilitate the transportation of the goods to the urban market by operation of a freight exchange which would be informed as to where there were products to be picked up in the rural area and as to what shipments in the urban area were ready to be hauled to those rural destinations. Thus, efficient two-way hauling would be fostered, reducing the costs of waiting and one-way hauling that is now prevalent.

Each urban marketing center would include the following kinds of facilities:

1. Open buildings where producers of fruits and vegetables could rent space by the day to use for the sale of their products.
2. Buildings divided into compartments in which larger producers, producer cooperatives, wholesalers, and large buyers could rent space by the year for the buying and selling of fruits

and vegetables continuously.

3. Buildings for the sale and storage of grains and cereals.
4. Silos for the storage in bulk of grains and cereals.
5. Larger freezer and refrigeration storage areas for rental to the market users.
6. Facilities for various support functions, such as a truck exchange, communication center, auction rooms, laboratory for research and testing for grading, bank, insurance agency, post office, sanitary and health services, hotel, administration offices, etc.
7. Supermarket for retail selling to the public as no ultimate consumers would be allowed in the rest of the facilities.

The goal of rationalizing the system of distribution then has four major components. First, it is intended that this system bring together the producer and the retailer directly or through a wholesaler, eliminating the many channel members which now exist in between these components. Second, it is intended that this system spread price and quantity knowledge to both ends of the channel of distribution so that the producer can sell his crops where the prices are highest and the buyer can buy where prices are lowest. Third, it is intended

the transporting of these commodities be streamlined by a central dispatching procedure which would lower the cost of transportation and increase its speed, thus reducing spoilage and handling costs. Finally, it is intended that the system instill a system of grades and standards which allows the efficient allocation of product to its uses as well as making the whole communication and buying system meaningful and realistic.

At the time of this research, one of the urban centers (Recife) was under construction and was named Centrais de Abastecimento do Recife (CARE). Since that time, the partially completed facility was opened for use (on February 15, 1968). At the time of opening, five silos and sacking facilities, five of eight open buildings for producers of fruits and vegetables, and three of five buildings of stalls were completed. Further, the entrance data collection point and a building for classification were completed. As inducement for use of the facilities, there were no charges made for facility use and all incoming trucks were required to stop and register in the market. They were then free to go on into Recife, but many chose to deal with the newly established merchants in CARE. Further, to build demand, consumers were allowed to buy anywhere in the market and many did so because of the low prices. Both large producer cooperatives and large retailers set up selling and buying compartments which further stimulated the use

of the facilities. Within several months almost all the wholesaling of the compartment wholesalers, noted earlier was transferred to CARE and the Santa Rita and Afogados wholesale markets dwindled to a very low volume. Thus, a start has been made, but it is evident that a very long road lies between the start and the full operation of the system of CANESA.

The principal constraint since the French study on completion of CANESA has been the unwillingness of SUDENE to allocate sufficient funds for construction of the physical facilities. Only as the critical support functions of communication, standard grading, transportation coordination, and commodity brokerage are added can this concept of CANESA become a reality as a central wholesale system which allocates demand and supply of commodities and provides the kind of marketing system that facilitates the flows of goods and services and demand in the system. Otherwise, the facility is just a wholesale market similar to what it replaced, and may even add an extra step in the channel of distribution. Finally, it should be noted that the way that the facilities are now constructed, they cater to small volume transactions. If CANESA is to aid in the development of the area to its fullest extent, it must remain flexible to handle increasing volume transactions and even encourage increased volume transactions as the retailers

and producers become able to increase their scale of operation. It would be a mistake to view CANESA only as a service organization to the traditional marketing system of small operators. Rather, it must be viewed as an institution to stimulate and serve those who are willing to struggle for a better way of food distribution.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This work has attempted to present a conceptual framework from which the analysis of the urban distribution of foods can take meaning, to present the data which supports parts of this conceptual framework, and to present the analysis of the urban distribution system which provides an understanding of the differences in the institutional structure.

The key elements in the conceptual framework were noted as three:

1. Increased scale of operation,
2. Vertical integration and coordination,
3. Retail aggregation.

Increased scale of operation has two possible positive effects. First, the increased scale of operation allows economies of scale to occur in the buying and selling process. The comparison of the retail types in terms of performance indicates that this conclusion has support. Second, the aggregation of buying power inherent in the increase in scale provides the potential for vertical

integration and coordination. Certainly it cannot be said that the present channels for the self-service retailers are always shorter and more efficient than that of the more traditional retailers, but in many cases it is, especially for the very large retailers. However, instances where the farmer brings his crop directly into the urban market to be sold in the street fair or market exist also. But, as has been pointed out, as the urban market grows, the traditional marketing system proliferates, causing long channels of atomistically small members each of whom repeat the diseconomies of small-lot handling, storage, transportation, delays, etc. Either this proliferation occurs or some forms of aggregation evolve. It is with this process of aggregation that the recommendations must deal.

How can aggregation be achieved so that vertical integration and coordination occur? Where should aggregation be encouraged? These are the key questions which remain and the ones which development planners must grapple with. Chapter I shed some light on the question of where aggregation should occur by presenting three lines of argument. First, channel members, including producers, tend to look toward their market as a critical barrier to expanded output. If there is uncertainty of being able to sell the products at all or for a reasonable price, the operators would resist increasing

their costs to improve their flows of goods. The data in Chapters III and V substantiate this reasoning for retailers and wholesalers. Clearly, retailers and wholesalers in the more traditional system of distribution saw the uncertainties of demand as a far more important limitation on their expansion and profitability than they did the conditions of supply. It simply stands to logic that it is safer to obtain a supply and improve the quality of the flow of goods if the demand is assured at stable price than it is to try to increase supply in the hope that increased supply will generate a favorable demand condition. These conclusions suggest one possible strategy for fostering vertical integration and coordination. The suggestion is that aggregation can have effect in breaking down the barriers of the channel through a close linkage with mass demand in the urban areas which allows the aggregation of power in the retail structure, which, in turn, through a search for supply sufficient for the urban demand, provides sure markets for, as well as forcing change on, preceding channel members. It is in this way that vertical integration, coordination, and modern distribution could be fostered.

The second line of argument presented in Chapter I was that there was less danger in aggregation at the retail level than elsewhere in the channel because of the possible competitive structure that could exist

at the retail level but that might not exist as easily prior to the retailer. This is to say that the urban consumer demand is great enough to allow many aggregated retailer institutions to exist and compete, while a large assembler might be able to dominate a producing region with monopoly powers. The forces of competition could not then bring about the desired effects of efficiency and price reduction in the channel. Again, the data in Chapter III substantiate the fact that even in its fledgling form, the self-service retailers feel more competitive pressure and compete more aggressively than the other retailers. The largest retailers compete even more aggressively, as was indicated in Chapters III and V. The depth interviews with wholesalers and government officials indicated that the strength and influence of the wholesaler had at one time been very strong to the point where the wholesalers had extracted monopoly profits from the system. As has been noted, changes in the selling practices of producers and changes in tax laws have largely reduced this power. The important point to be made here is that the wholesalers did not use their position of power to improve the efficiency of the channel. In the rural areas, no conclusion from the research data can be made as no large assemblers or buyers were found. However, it is interesting to note that the small buyers and assemblers did act as if they

were in a non-competitive environment.[1]

Finally, the third argument presented in Chapter I on the use of the retail structure for the foundation of aggregation was that practically the retail level provides one place to achieve scale increases. The comparisons of the retail types in Chapters III and V demonstrate that already there are innovative retailers attempting to achieve the aggregation desired. The change is but a start, but the fact that it is occurring spontaneously is encouraging. Thus the retail structure, already in the change process, is ready for further modernization. At no other point in the channel from producer to retailers is there an institutional arrangement as ready to move ahead as the retail structure. Certainly the wholesale structure is not, as presented in Chapter IV, nor are the rural institutions, which lag further into the traditional mode of operation.[2] It is logical to expect the urban sector of the economy to modernize more rapidly than the rural sector, and it is important to take advantage of that change in process to influence the rural sector to modernize as well. This

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[1]See: Donald Walter Larson, "A Diagnosis of Product and Factor Market Performance in the Bean Industry of Northeast Brazil" (unpublished Ph.D. dissertation, Michigan State University, 1968); and Latin American Studies Center, The Market Processes of Recife, Brazil, and Its Food Shed (East Lansing, Mich.: Latin American Studies Center, Michigan State University), in press.

[2]Ibid.

is the nature of the internal national (regional in this case) market thesis that was presented in the first chapter.

Before moving on to the specific recommendations that stem from this research and conceptual framework, it is necessary to make clear two kinds of limitations. First, by nature, recommendations are to some degree speculative as to their real value to the system and as to their costs. It is not the purpose of this chapter to present a detailed cost benefit analysis of the reforms suggested. Rather, the areas of costs and benefits will be presented and, if estimates of the effects of change in the economic system are desired in mathematical terms, the reader can find this analysis in the work on systems modeling performed by Thomas R. Webb.[3] This systems model, it might be added, is a specific attempt to measure the first and second order changes in the economic system under study in this work and in related works on the rural sector and industrial sector, that stem from the reforms that are implied in these studies.[4]

Second, it is not the belief of this author that recommendations can or should be made without full

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[3]Thomas R. Webb, "A Systems Model for Market Development Planning: Northeast Brazil" (unpublished Ph.D. dissertation, Michigan State University, 1968).

[4]Latin American Studies Center, The Market Processes of Recife, Brazil, and Its Food Shed.

consideration of the environment in which the recommendations are to be implemented. The practicality of each recommendation must be tested by the reality of actual situations and institutions. Thus, much of this work has been dedicated to the presentation of those realities in the urban marketing system. It is further the belief of this author that reforms must be based on existing ways of behavior and institutions, and move forward from those starting points. Hence, the recommendations presented hereafter are designed to institute change as an evolutionary process of the present system rather than suggesting that sweeping changes in institutions and attitudes ought to be made.

Large-Scale Retail Store Encouragement

Background Information

It has been pointed out that self-service retailers have been growing in Recife and are expected to continue to grow in the future. It also has been pointed out that self-service stores have not as yet brought the full advantage of supermarket operation to Recife and the economic system of the Northeast of Brazil. Some of these shortcomings need further examination.

Although significant price gains have been made through large-scale self-service retailing, there is much that remains. First, additional efficient large-

scale retail units and modernized existing units would further reduce the retail price level of food through the same mechanism as was detailed in Chapter IV. By no means has the majority of the food retail system been affected to the extent that it might be. Further, additional large-scale units would extend the price effect directly as well as indirectly.

Second, the full force of the price effects have not been brought to bear in largely poor areas of the city. The present large-scale units were built in the relatively higher income areas and were built to serve higher income customers. When asked why promotion of his store was not made to the lower classes, one supermarket operator of a very large store replied that he did not think that his store could handle the traffic. Hence, the lower class market remains open for development. It is through large-scale efficient retailing that a real impact could be made in this sector. Typically, the lower income consumers pay higher prices than do higher income consumers, and thus a larger income effect could be expected in the lower income areas where the most help is needed. It should be noted that though the same concept of high-volume, low-margin selling could be used, the physical facilities and promotion will have to be tuned to the lower income market, as would the product mix, product quality, package size, etc.

Third, the appearance of the supermarket has not affected significantly the prices of meats, vegetables, and fruits. The large-scale retailers have not typically handled these goods because of the uncertainties of supply of the present distribution system or the high cost of special fixtures. Few large-scale operators have yet made the effort to vertically integrate or coordinate their supply systems for fresh agricultural products, and thus have ignored an area which has both profit potential and price reduction potential for the benefit of the consumers. It should be noted that vertical integration and coordination of fruits and vegetables is not likely to be achieved easily because of the perishability of these goods as well as the nature of production by many small producers. However, this is not to say that gains cannot be made.

Finally, though some vertical integration and coordination of cereals has taken place, the major gains from this activity have not as yet been achieved. Because the cereals are not highly perishable and can be stored, vertical integration and coordination could be more easily brought about than for the high perishables mentioned above.

Thus, though the initial step has been taken to bring the benefit of large-scale retailing to Recife, many areas of potential benefit still remain open for

development. Although it has been documented that the self-service retailers plan to grow, it is useful to specify current expansion plans. At the present time, there are four new supermarkets in construction in Recife. Many of the smaller mercadinhos have immediate expansion plans. Of a sample of nine medium-sized self-service retailers, four had definite plans to expand, two of them in new larger stores. Those operators who planned expansion felt an urgency to move rapidly as they said that the market is right for expansion now. This feeling seems borne out by the larger supermarket operators who are moving ahead with expansion.

Seven out of the nine above-mentioned, medium-sized, self-service operators voiced interest in introducing fruits, vegetables, and fresh meats. The larger supermarket operators have already started limited fruit and vegetable sections in their stores and talk about the possibility of introducing meat, though no immediate plans have been made.

Thus, expansion of the self-service sector of food retailing is assured through natural market forces. Hence, the question arises, why not let this development run its own course? The answer is two-fold: mainly, the present expansion thrust does not include adequate considerations of product line expansion, and, more importantly, the economies of vertical integration and

coordination which make the fresh, agricultural product expansion profitable and of real value to the consumer are not being considered. Vertical integration and coordination of present non-processed food product lines has not extensively taken place. Finally, store construction in the low-income areas is insignificant. This is not to say that benefit will not result from natural expansion, but only to say that the benefits could be amplified.

Though many self-service retailers desire and plan expansion, the resources available to the self-service operators limit the ultimate benefit which will result. The next step is to summarize these limitations which hold the large-scale operators at less than maximum efficiency, and then to present the steps necessary to remove these barriers while insuring that the resultant growth promotes the benefits discussed above.

Chapter III has shown that the lack of financial resources was seen as the most important barrier to expansion by the self-service retailers. By sales value and size, the largest ten retail organizations strongly felt that lack of financing was the major problem. This was further amplified in depth interviews of most of these firms. Although the largest organizations do have financial strength, they emphasized the lack of financing available in Recife for commercial firms. If long-term

financing were available, they felt they could expand much more rapidly than their present rate. The rest of the large retailers have considerably less financial resources and considered long-term financing as very important. Although many of these retailers are presently expanding, they cannot finance the full extent of their ideas, and thus they remain considerably smaller and less efficient than would be desirable.

Because the lack of available financing was seen as so important, it is worthwhile to digress at this point to describe the present financing of the commercial sector.

Bank credit is available to "strong" firms, which typically means that the firm is one of a group and the assets and deposits of the others stand behind the loan. The legal limit in Brazil for bank loans is 180 days, but in practice banks rarely loan for more than 120 days. Very strong firms can renew their bank loans, and thus use short-term revolving credit for expansion of facilities at some risk. Few commercial firms are strong enough to have this source of credit. Public banks Banco do Brazil and Banco do Nordeste do Brazil (BNB) both offer a maximum of 120-day credit at 22 per cent annual interest, in addition to the inflation rate, to strong firms with liquid assets, with good credit standing, and in many cases with outside assets available as collateral.

Public bank Banco do Desenvolvimento de Pernambuco (BANDEPE) offers 90-day credit and, in rare exceptions, 120-day credit at an annual interest rate of 24 per cent, in addition to the inflation rate. It is of interest to note that one of the strongest supermarkets financially complained about the difficulty of getting government financing. Private banks offer 120-day credit at around 36 per cent annual interest under the same general criteria as the public banks.

Credit agencies, of which there are three of consequence in Recife, will give 6- to 24-month credit for working capital to firms which can secure in a warehouse durable goods of the same value as the loan. The commercial sector lacks this collateral though other firms of the same group as the commercial enterprise could put up the goods. The cost of this kind of credit is very high, running up to 5 per cent a month when all charges are included (60 per cent simple annual interest).

Finally, the government has innumerable special programs and legislation on financing of various kinds of private enterprise, but there are none in the commercial sector. (Article 34/18 does not apply to the commercial sector.) The fact that supermarkets sell without legal invoices (cash register receipts are not adequate) and are thus illegal also discourages both private and public financing.

It is of interest to view the financial structure of one supermarket organization as an illustration of the sources of funds available to large firms in the commercial sector (see Table 6.1). Note that over half of all liabilities (51 per cent) are accounts payable and 16 per cent are in short-term bank financing. Capital and surplus only account for 31 per cent of all asset value, and there is no long-term debt.

TABLE 6.1

FINANCIAL STATEMENT
(PER CENT OF CURRENT ASSETS)

Current assets	100%	
Current liabilities	110%	
Working capital	(-10%)	
		100%
Assets:		
Cash	11%	
Inventory	52%	
Net fixed assets	35%	
Other, miscellaneous	2%	
		100%
Liabilities:		
Notes payable to banks	16%	
Accounts payable	51%	
Dividends payable	2%	
Long-term debt	0%	
Common stock and surplus	31%	
TOTAL		100%

The short-term bank financing would not be present in most large-scale retailers' financial sheets.

Depth interviews also revealed barriers which direct questioning failed to uncover. Most important of these was the lack of trained managerial talent for expanded supermarket operation. All large-scale retailers relied on on-the-job training for their employees and most were having trouble with the training of managers for new store openings. Some self-service retailers viewed this as a really critical problem.

Another barrier to expansion which had weak general support in the survey data (irregular supply) showed up in depth interviewing as a very important reason why large-scale retailers were not moving into the fruit, vegetable, and fresh meat areas. All of the larger retailers were interested in entering the fresh meat business, but many felt that they could not rely on the present meat supply system. The others could not finance the display and packaging equipment necessary. For fruits and vegetables, the story was much the same. Large-scale retailers did not feel that they could develop reliable sources of supply. It is interesting to note that most of these retailers had not spent resources to try to develop reliable sources of supply in these areas.

In conclusion, the major barrier to increased scale and efficiencies for large-scale retailers is clearly the lack of financing. However, the lack of real effort spent on vertical integration and coordination by large-scale operators results in a second

limitation on their degree of scale and efficiencies increases. Finally, the lack of trained managerial personnel forms a third limitation on expansion. If left alone, the lack of both financial and technical resources would cause the present expansion thrust to solidify without full advantage being taken of the opportunity which exists. Thus, the innovation of large-scale self-service retailing would be less efficient than it could be with financial support and guidance.

Description of Reform Program

Thus, from both the development planner's point of view and from the large scale and potential large-scale retailer's point of view, a facilatory program of long-term credit and training would fill the needs to accelerate the growth and impact of this sector of retailing.

As has been pointed out above, the major barrier to self-implementation of desirable reforms by large-scale retailers is the lack of financial resources. Further, because long-term financing is not available to the commercial sector in Recife, a program of financing at reasonable rates of interest is necessary. This program would have the objective of financing expansion of efficient food retailing operations. This includes expansion of large-scale efficient retail units and expansion of projects to develop vertical integration and coordination. Applications for funds would be judged

primarily on their prospective contribution to the efficiency of the retail sector and on the applicant's ability to achieve the operational efficiency claimed.

Simply providing funds is not enough to insure the efficient expansion of the system of food retailing. A program of training is needed as well. This training would have two levels. First, present and prospective managers and owners of retail firms would be invited to attend a series of seminars where such topics as product mix, margin mix, vertical integration and coordination, layout, product, handling, accounting, and inventory control would be explained and discussed. Included would be a presentation of the above-mentioned financial program, its objectives and requirements, and an employee training program. Thus, the ideas of large-volume, low-margin retailing with supporting supply systems would be presented along with the possible means of achieving these goals.

In addition to the above management training program, a second level of training is necessary to provide the present retail structure and its expansion with capable knowledgeable middle-level management and employees. The various present or prospective firms could send employees for training or individuals could enroll in the hope of obtaining employment in the field.

In summary, what is needed is a program which supports the present entrepreneurial talent which already

is moving toward expanded scale and efficiency of large-scale retailing. The program thus becomes a service to facilitate those kinds of institutional arrangements which lead to ultimate consumer and producer benefit, thus fostering development.

Expected Benefits

The extent to which businessmen use the above programs determines the relative benefit of them. Thus, it is impossible to place an exact monetary outcome on the program. Further, expansion of large-scale retailing is an ongoing process which the above programs are designed to aid. Thus, the spontaneous benefits cannot be easily separated from those facilitated by the program. Finally, some benefits are not quantifiable, even if the nature of the expansion were known. It is useful, however, to list verbally the expected benefits and, where possible, examine their order of magnitude.

First-Round Scale Economies

It has been pointed out that there were only a few really large-scale operators in Recife. Those who aspire to size, yet cannot finance these plans, still buy in very small lots. Thus, if financing and technical aid were to allow larger scale purchasing, savings to the system could be made. Although many processed goods are already bought directly from the manufacturers,

volume purchasing has an important effect on price.

As has been mentioned above, many of the processed products are bought directly, even by relatively small operators. However, in the areas of cereals, fruits, vegetables, and meats, few large- or small-scale retailers buy directly from producers. It is in these areas of complex and costly channels of distribution that large-scale retail units could have a strong effect in the reorganization of the system. The vertical integration and coordination could facilitate additional economies of scale at production as well.

For fruits and vegetables, particularly the latter, vertical integration would have far greater effect but would be vastly more costly to develop initially. The scale of the whole system would have to be reoriented, but once done benefits in terms of low spoilage, high quality, efficient handling, and efficient transportation would allow vastly lower prices to the consumer for better quality produce.

Vertical integration in fresh meat holds potential benefit as well, although the capital needed for fixtures and equipment at the store level and transportation and feeder lot development at the supply level would be high.

The expansion of the number of truly low-price, high-volume retail outlets and the introduction of

vertical integration should not only extend the benefits of low-margin retailing to a broader sector of the population, including more low-income areas, but reduce the input price base and thus the selling price to consumers.

Second-Order Benefits

The lower prices of the first-order effects are a direct benefit to the system. However, more importantly, these lower prices act as a stimulus which lowers the general price level of the system. This phenomenon was seen in the introduction of Bom Preço and could be expected to apply again, given the above changes. The average margin of medium-sized, self-service retailers fell about 32 per cent with the entry of Bom Preço, but the average margin still rests at about 33 per cent above that of Bom Preco. With the increase of large-scale, low-price units, this difference could be expected to fall significantly. Further, vertical integration and coordination of some large-volume, low-price units could shift down the price base upon which the margins are calculated, further precipitating a general price decline.

As has been pointed out, the vertical integration and coordination would force the modernization of the supply system. Managerial talent would diffuse back in the channel as large-scale retailers attempted to rationalize the supply for their firms.

Finally, vertical integration and coordination can be thought of as a "market looking for supply." Because the market exists, risks of incurred production are reduced and producers are willing to take advantage of larger scale production methods. Thus, vertical integration by large-scale retailers stabilizes the market for the prior channel members that survive and producers.

All of the benefits tend to affect price through a lower base price with which retailers buy or a lower operating margin based on this lower base. Thus, the consumer buys for lower prices, which is the same as increasing his real income. He now has more to spend on food and non-food goods, which reinforces the scale economies of the food retail sector and provides larger markets for the non-food sector. This latter effect makes institutional development of consumer goods more attractive, and thus is an impetus to the individual sector development. The institutional development provides employment income which further increases food and non-food consumption, thus allowing for further economies to accrue.

Costs of the Program

The costs of this program would involve the initial funds and the cost of technical assistance. The costs of servicing the loan money would be covered by the interest charged to the retailers for the use of the funds.

Summary and Conclusions

Analysis of the retail sector has shown that significant gains have been made through the introduction of large-scale, low-margin retailing, although as yet their number is very small. Further, a number of medium and large self-service retailers plan to expand in the near future, yet financial and technical barriers stand in the way of their achieving the full benefits of large volume and low margin. Thus, a program of service to the private sector has been formulated to help those who want to achieve high-volume, low-margin selling, and to help those who want to develop integrated or coordinated channels of supply.

The question of how many large-scale retail food stores should be encouraged and at what rate per year they should be introduced is relevant at this point. Though no definite answer will be given, it is possible to lay down some guidelines. If the rate of entry is too slow, a danger exists that a loss of competitive behavior on the part of the existing large retailers could occur--i.e., they would behave as the large wholesalers did. On the other hand, if the rate of entry and growth is forced beyond the managerial talent that exists in the system, then the loss of efficiency becomes a danger which points to the costly failure of some of the retailers. The optimum rate of growth is somewhere in the middle. The best guide to this middle road is the natural

flow of interest by the system members. This is to suggest that help and training should be given those who take an active interest in improving their businesses along the lines that are suggested in this chapter.

Coordination of Fairs and Markets

The major reasons for initiating help for the self-service retailers is that of all the retailers, they were the most willing and able to change, they already were in the process of change, and they were moving in a direction beneficial to the development of the region. These same reasons cannot be cited for the atomistic retailers. Three facts stand out. First, the atomistic retailer was found to be desirable by the consumer, as evidenced by continued loyalty. This fact was brought out in the consumer chapter. Second, the difference in efficiency and price at this juncture are not that great between the average self-service and atomistic retailers. Certainly, the fair style of retailing does not incur certain kinds of costs that the capital intensive self-service retailers do. Finally, tremendous volumes of goods pass through the fairs and markets. The question is how can the street fairs, fixed fairs, and public market meet the new and increasing competition of the self-service retailer and contribute to the development of the region rather than slowly and bitterly going out

of existence? This is to ask how can the fair and market be turned into an asset to development rather than a drag on it? Before answering this question, it might help to review the position of the atomistic retailers.

Background Information

In Chapter III, the nature of the Recife atomistic retailer was presented. The picture was of a fairly rigid, poor member of a traditional marketing system. The evidence is clear. A plurality (42 per cent) of the atomistic retailers reported that in the past year their volume had declined, while only 30 per cent said it had increased, and 28 per cent reported the same volume. At the same time, the number of atomistic retailers selling food had increased about 24 per cent (between 1966 and April, 1967). Thus, many of these retailers have already felt the bite of competition from the growing number of large-scale retail units (supermarkets, mercadinhos, and large refrigerated meat dealers).

Further, the changing composition in the street fair shows where the self-service movement is taking its toll. It would be expected that those feirantes with lines of products in direct competition with large-scale retailers would decrease in number, while those who do not compete with large-scale retailers should increase in number. This hypothesis is born out by the census

data of April, 1967, as compared with 1966.[5] For cereals and canned goods, where supermarkets and mercadinhos are strong, the number of feirantes decreased by 13 per cent of all cereals and canned goods dealers. For meat products, where large refrigerated meat stores compete with the feirantes, they decreased in number by 21 per cent of all fair meat dealers. Finally, for fruits and vegetables where supermarkets have not competed, the number of feirantes increased by 16 per cent of all fruit and vegetable feirantes.

If left alone, there seems to be little indication that the atomistic retailer could or would compete aggressively. First, the accumulation of financial resources in the fair or market is unlikely, as has been pointed out in Chapter III. Second, the atomistic retailer to date has not pooled his strength and financial resources. Third, the atomistic retailer himself seems to have no inclination to step out of his traditional role to attempt combative changes. Recall that 94 per cent of all atomistic retailers would not take any positive action other than simply exist or go out of business if a supermarket took one-half of their business. Perhaps they feel too small to compete, perhaps they cannot shake their traditional shackles, perhaps their resource base is too low. Whatever the reason, and it is probably all of these, the fact remains that a gradual

[5]The census data collected in 1967 was by the SUDENE/MSU research team, while the census in 1966 was made by the city government of Recife (PMR).

extinction faces the atomistic retailer. Maybe from an economic standpoint it could be argued that progress and development must take its course and the atomistic retailer should be forced out of business. This solution certainly is not socially sound in an area of chronic underemployment. It is not politically feasible and may not be economically sound. Surely, if untouched, the fair and market institutions will hang on for many years, serving customers who are tradition bound, especially if the self-service retailers do not move ahead in introducing perishables.

Hence, two alternative approaches could be taken. First, the atomistic retailer could be forcefully put out of business or bought out of business, but this solution does not solve the social problem and would be politically non-feasible as well as costly. Second, the market structure of atomistic retailers could be reformed into a viable economic competitive unit. This solution has severe problems as the operator himself does not indicate a willingness to help. Notwithstanding this fact, the possibility of this solution will be explored in detail below to see what could be done and if the traditional blocks of the atomistic retailer could, in fact, be circumvented.

Before setting forth on a description of the possible reform, a summary of the reasons for the lack

of fair competition advantages might be useful. The reasons are three-fold:

1. The physical conditions of the fair and market are repulsive to many shoppers. The fairs and markets are unsanitary, dirty, with spoiled food and wrapping materials littering the ground. Even the operators have poor appearance, with tattered clothes, etc.
2. The prices in the markets are generally equal or higher than in the competitive large-scale units for the same or poorer quality of product. This conclusion was verified by the price study reported in Chapter III. Further, large-scale units maintain better quality control, thus giving the customer a more constant reliable source of food products. The price and quality differential are largely caused by the supply system of intermediaries, poor handling, inefficient transportation methods, long duration of time from harvest to market, although the atomistic retailers themselves add tremendous labor, credit, and spoilage increments to the price.
3. Finally, the existence of unemployment aggravates the situation because these unemployed persons have no alternative but to enter the market system for survival, thus causing an oversupply of

operators. This oversupply drives down the amount that each atomistic retailer can sell to the point where he can barely live, let alone accumulate resources to invest in his improvement.

Description of the Reform Program

Two types of reforms are implied by the above analysis to help the atomistic retailers contribute to the development of the region. One is to attack the physical appearance and convenience of fairs and markets, and the other is to confront the internal disorganization within each fair and market.

The first set of reforms deals with the physical appearance of the market facility. The layout or organization of the fair would be changed to accommodate customer flows. This means wider aisles but, more importantly, the grouping of the operators by commodity to facilitate the traffic pattern. The principles of supermarket traffic flow would be useful in developing new layouts.

The fixtures used in the new organizational pattern of these markets must be attractive. This means that they facilitate the neat display of goods, while in themselves being clean and attractive. The use of many bright colors would add immeasurably. Importantly, they must be of a design and material that retains its

attractiveness over many years of use. Finally, for the street fair, these fixtures must be easily movable and storable for efficient setup and take down of the fairs.

Third, fairs and markets must be kept clean during operation. This would require investment in rubbish containers (painted oil drums would do nicely) and would require janitorial service during operation.

The second area for reform deals with the organization of the operators themselves to achieve more efficiency of distribution through this institution and in the supply channel to it. This improvement would allow lower consumer prices yet provide reasonable standards of living for the atomistic retailers as well as accumulate enough capital to keep the structure adaptive. There are three basic areas in which this organization would operate.

1. On the supply side, the organization of atomistic retailers would consolidate the buying power of the operators so that volume purchases would be made at relatively low prices. Thus, each operator would buy from the organization at the fair or market site. With this pooled volume purchasing, vertical coordination would be fostered by the organization which would allow direct purchasing from producers, millers, etc., for their mutual benefit. Thus, the price paid by the atomistic retailer would be further reduced through ration-

alization of the supply channel. Finally, the organization of atomistic retailers would arrange or provide for the transportation and storage where necessary of the commodities. Again, savings would be made through reduction of the time that commodities wait to be sold, through improved handling, packing, and storage practices, through efficient but large lot transportation by truckload rather than basket, etc. It is important to note that the organization could institute a program of grading and standards which would further allow the segmentation of markets and the more efficient use of product. Further, important services could be rendered by the organization, such as reasonably priced credit, etc. A note of caution needs to be sounded again with respect to the expected gains from more central handling and vertical coordination of highly perishable foods. Though large gains can be made, in the short run, their costs will be high. Most of the above activities could be coordinated through the CARE wholesale facility that was presented in the last chapter. This would take much of the risk and uncertainty out of the reform and reduce the short-run costs of implementing the program.

2. On the consumer side of the atomistic retailer, the organization of atomistic retailers could promote shopping in the participating street fairs and markets. Mass media advertising could be used along with

within-fair promotions, such as music, loudspeaker advertising, raffles of merchandise, and other programs favoring member-cooperative retailers. Further, the organization could organize the services of the feira, such as the boys who carry packages through for customers. Finally, the organization would enforce ceiling prices on those retailers who purchased from the organization, and thus insure a low price-volume orientation which is the basic foundation for the success of the endeavor.

3. Finally, the organization of atomistic retailers would have to control the size of the feira so that it corresponded with demand. This control would be both of products and of numbers of operators. It is important that this correspondence of supply and demand be maintained as the efficiency of the fair and its ability to compete are tied to the proper balance of retailers.

Thus, each fair and market would be welded into a unit exerting its combined influence to increase its competitive position within the retail system of Recife. It should be stressed that the organizational and physical appearance reforms must go hand-in-hand or the gains to be made on the one hand will be taken away by the other. Neither reform alone will have a lasting effect.

Implementation of the Program

Before moving on to the benefits and costs of this reform program, it is necessary to determine if the program is feasible. Given the profile of the atomistic retailer already painted, it would seem that this kind of a program would be doomed to failure. Yet, even if the operator was not willing to initiate cooperation by himself, he might cooperate with a central organization if the economic incentives were made compelling enough.

Of the two types of reforms, the physical renovation of the fair and market does not rest in the operator's control--i.e., the atomistic retailer is simply a taker of his place of business. The present facilities of the street fairs are supplied by several individual businessmen and the organization of the street fairs and markets is controlled by the city government of Recife (PMR).

It should be noted that the development of these layout and facility reform ideas presented above were made by the city government of Recife. The city government suggested that a private company be formed of the present "table suppliers" to form the basic organization to handle the distribution of the new facilities. The "table suppliers" had been contacted by the city government and had agreed to form such a company. However, the financing of the new facilities remained a problem.

The city government had moved ahead with the design of new facilities for the street fair which met the requirements for modernization. Finally, the city government started on the reorganization of the street fair. Thus, the machinery for renovating the street appearance exists only, being held back by a lack of financing for the new fixtures. Technical assistance is badly needed as well.

Clearly, the atomistic retailers could veto his own organization by non-cooperation. However, two strategies could be employed to overcome this resistance. First, the organizing force could be his own union. When asked if they belonged to a union, 51 per cent of the feirantes responded that they were members of the Fair Operators' Union of Pernambuco (Sindicato do Comercio Varejista e Feirantes de Pernambuco) and 3 per cent belonged to other unions. When asked if they thought that their colleagues felt that the fair retailers' union could be more help, 69 per cent said yes, 15 per cent did not know, and 16 per cent said no. Thus, the door is open for this union to step in. The president of the fair retailers' union, along with the city government and this author, discussed the role of the union as the organizing force and concluded that the organizational program as developed during these discussions and presented above, was indeed realistic. In fact, the union had already organized the central purchasing of some

cereals and felt it could organize the more pervasive system proposed, given that financial resources could be made available. Again, technical assistance would be necessary if the program is to succeed.

The second strategy for gaining atomistic retailers' support is purely economic. As the union publicizes its lower prices and those retailers who are willing to cooperate initially take advantage of these prices, the non-cooperative operators would be placed at a price disadvantage. As they see that they cannot compete, through the help of the union organizers, they will change in lieu of going out of business. This change will not be a simple or smooth process, but with the union pricing initially at a loss and with support from a number of sympathetic retailers, it is possible to swing the balance if resistance occurs. This program should be instituted in one fairly large street fair first. After successful operation of several months or more, the other atomistic retailers should be eager for the same advantages and be considerably more cooperative.

In conclusion, the machinery for implementation of these reforms already exists in part. More importantly, the city government, the operators' union, and table owners have pooled their ideas to support this reform package. This participation and cooperation more than anything else insures the feasibility of the reform package.

Expected Benefits

First-Round Scale Economies

There are three types of benefits related to scale which would tend to lower the price of food to the consumer. First, the price at which the atomistic retailer would purchase their stocks would be decreased by centralized buying for many products.

Second, the proposed reforms should reduce the spoilage rates of these operators. Chapter III showed that the atomistic retailers had the highest spoilage rates of any retailer types. It should be noted that spoilage which forces reduced prices and spoilage that cannot be sold are included in the prices that the consumer pays. The consumer who buys spoiling goods at reduced prices really pays in relative quality. Obviously, the products that are unsellable form a direct cost that the retailer must pass on to the consumer.

Third, the centralization of buying power would allow vertical coordination as well as simple price reductions. Product handling, transportation, and storage would also be streamlined to achieve a more efficient system. The results of these reforms might not show up in terms of price, but certainly they are necessary to achieve the reduction in spoilage and improvements in product quality. It should be noted that, of course, not all of this gets passed on to the consumer. Both the retailer and

his organization will need financial support if the plan is to be operative.

There are several other benefits of the reform program which should be mentioned. First, one of the major expenses of the atomistic retailer is credit (see Chapter III). The organization could take over this function when necessary and give credit at reasonable rates in place of the present supplier and loan shark credit.

Second, labor is an important variable to consider. It was strongly stressed that the number of atomistic retailers would have to be controlled. This control could be maintained through restriction of entry into the organization. The benefit involved here is relative to what would happen if the atomistic retailers were left alone. Instead of decreasing incomes and increasing hardships which would drive the already underemployed into the unemployed category, the system would support most of the present labor and give increasing conditions for full employment and a decent standard of living. Certainly not all atomistic retailers could become better off, but many more would be better off with the reform than without it.

Third, the organization would have the pooled resources of the atomistic retailers to embark on a program of shifting demand back to the fair and market.

The promotion of the fair and market, its revitalization in looks, convenience, and prices would reinforce each other to bring the institution back as a competitively viable institution. This would strengthen the economies further through increased volume.

Second-Round Benefits

The reform of the fair and market institutions has certain direct benefits to the consumer and the operators. However, the fact that the organized groups of atomistic retailers have a new power position causes further effects in the system.

First, competition certainly would feel the bite of the new price levels. Although many types of retailers do not have complete overlap of product lines, the atomistic retailers could have a similar effect on the prices of other institutions as did the opening of the Bom Preco on June 12, 1966 (see Chapter IV). This effect would be especially strong in fruits and vegetables which were largely unaffected by the supermarket innovation.

A second very important effect of the reform would be the changes brought about in the supply system of the fairs and markets. With the power of the atomistic retailers centralized in a professional management whose major job would be procurement, it would be expected that technical assistance would diffuse back in the

channel. The professionally trained management would constantly be searching for quality products, reliable sources of supply, and volume sources of supply. To achieve these objectives, training and help would have to be offered from the outside at first. Thus, the atomistic retailers' organization would act to modernize the production and distribution through its own self-interest.

Third, related to the above point is the market risk factor as perceived by producer or intermediaries. The volume buying of the fair organization would provide a large stable market for those producers who were willing to take advantage of the opportunity. This stability of market is a necessary condition to the adoption of new technologies by the producer. Thus, the buying power of the organization and the managerial flow from the organization would combine to place the traditional supply and production system under stress to change.

Finally, the most important effect, the effect of lower prices on income, consumption, and thus development has been dealt with already.

Hence, in summary there are many benefits of the atomistic retailer reforms which must be balanced off against the cost of the program. Though light can be shed on the magnitude of the first-order effects, the second-order effects, which are far broader in scope and

impact on development of the region, are not quantifiable given the technology of this research. The next step is to assess the areas of costs of the program.

Costs of the Program

There are two types of costs which must be considered, start-up costs and operating costs. Start-up costs can be broken down into three categories: fixture company financing, street fair and market organization financing, and training and technical aid. The cost of renovating the street fair largely boils down to the financing of the fixture supply company. The street fair and market organization would also need a long-term loan. This would cover the cost of initial set-up, organization, equipment and facilities, and losses during the first year of operation. Training and technical aid would be provided by a public agency and would involve the salary of the technicians involved.

There are three areas of operating costs which must be considered, those of the fixture supply company, those of the street fair and market organization, and those of the operator. The basic charge for the tables and booths supplied by the company would have to cover the servicing of the initial loan for the fixtures, the setting up and removing of the fixtures weekly, and the administrative overhead of the company.

The street fair and market organization would have a considerably more complex cost structure. Included would be the cost of product transportation, product buyers, storage, administration, promotion, insurance, etc. These costs would have to be covered by the margin of the organization.

Summary and Conclusions

Through the city government of Recife, the fair operators' union, and the street fair table suppliers, a reform program has been developed which involves the renovation of the fair appeal and the institutionalization of the operators themselves. The possible benefits of this reform suggest that it is very worthwhile from the standpoint of lowering the prices of food to the consumer and, thus, in effect, increasing his income.

Voluntary Full-Line Wholesaling

Background Summary

In previous sections of this chapter, programs have been presented which were designed to foster economies at the extreme of the retail spectrum, at the atomistic level and at the large-scale level. The desired results would be significant reduction in the price level for foods. The neighborhood stores and small self-service operators could be a counter force to this trend as

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they would not have the conditions for lowering their prices. Thus, they would hold prices up to many customers and would slowly be driven out of business. It is desirable to develop a means by which these small- and medium-size operators who do not have the resources to participate in the large-scale retail financing program can effectively compete in the retail market system.

Description of the Reform Program

The program would have the same conceptual foundation as the other two programs already detailed in this chapter. The goals would be to induce economies of scale through concentration of buying power and vertical integration and coordination. The mechanism for realizing these goals would be a voluntary full-line wholesaling organization. This organization would be made up of and controlled by member retailers who purchased from the organization. The organization would then have the combined buying power of the members to exert in the supply system to achieve competitively low prices. Further, the volume orientation of the organization would allow the same effort at vertical integration and coordination. Finally, the buying organization could provide various services designed to reduce costs of members and promote them. Thus, smaller sized retailers than the very large would have the opportunity to compete, profit, and contribute to the development of the area.

Implementation of the Program

There is no present organization of these retailers which would be used as a base for such a reform program. The formation of the organization could be largely the responsibility of the individual store owners who felt that the organization could benefit them. These store owners and managers would be asked by the sponsoring public agency to attend the same training and information sessions as the larger store operators and the program would be spearheaded through these meetings.

The feasibility of the program, then, rests on the number of store operators who would care to join such an organization. All of the medium-sized retailers (10) who were asked if they would join and participate in such an organization enthusiastically responded in the affirmative. Several brought up the topic on their own during interviewing. They also, however, showed concern over the initial financing of the operation. Although all were willing to contribute capital to the organization in proportion to their size, none felt that the total needed could be completely raised in this manner. Thus, as with large-scale retailers, a loan program is needed to facilitate the efficient operation of the organization.

The loan could be administered through the same agency as the funding of the larger scale retailers.

Further, the training and technical aid program would be part of the already mentioned program for large-scale retailers.

Thus, the idea of a cooperative venture to achieve economies of scale already has the approval of many small- and medium-sized retailers. With technical guidance and financing, the retailers themselves could put into operation the organization and administration of the program.

Expected Benefits

The expected benefits of the above program are much the same in nature as those of the other programs suggested in this chapter. These will be recounted briefly as they apply to the cooperative buying organization of small store operators.

First-Round Scale Economies

The prices at which the small retailer would purchase would be approximately equal to his larger competitors and thus allow the small retailer to compete and contribute to the general price decline to consumers.

Secondly, the volume purchasing would allow a sustained effort to be made to vertically integrate and coordinate some product lines, thus reducing the prices of these goods still further.

Other first-round benefits are as follows:

Although it is common practice to use supplier credit as a form of financing, it sometimes is a very high-cost source of funds. The organization would reduce the cost of this credit by purchasing for cash in volume and then supply the member retailers at reasonable credit rates.

The effect of this program would be positive on the labor force. Instead of shrinking in number, small member retailers would be able to maintain their competitive position, keeping themselves and their employees employed.

The organization could promote the sales of its members through the development of brands of goods and membership symbols which could be used in advertising programs.

Second-Round Benefits

The above-listed benefits would occur in a relatively short time after the program was instituted. The following benefits take a longer time to appear and usually result from the more immediate benefits. Rather than holding up the general price level of food to many consumers, the member small- and medium-sized retailers would aid in the general price decline.

As with the other programs presented in this chapter, this buying organization would affect the supply

system for food through vertical integration and coordination and the resultant flow of managerial talent back into the channel of distribution.

It has also been mentioned previously that the vertical integration also produces a more stable market which induces a production response because of the reduced risks in volume production.

Cost of the Program

The major cost of the program would be the financing of the buying organization. This cost would be divided between the participating members and the loaning agency. The cost of the technical aid to training program would be included as part of the program of training large retailers.

Summary and Conclusions

As the large-scale retailers and atomistic retailers become more efficient, the medium and small retailers would become relatively costlier to society. Thus, the buying organization would bridge this program and allow the smaller retailers to contribute to the general price reduction. The cost is low for this program, while the potential benefits are great.

Consumer Education

Chapter II pointed out that there was a significant proportion of the consumers who were willing to adapt to the changing retail structure. However, those willing to change tended to have higher income, education, and mass media exposure. The implication of this fact is that as the system changes to lower price forms of retailing, the poor will tend to benefit less rapidly in monetary gain but more rapidly in terms of the share of income effect. Further, even if direct efforts are made to bring large-scale retailing to the lower income areas of the city, the poorer consumer may resist changing her buying habits.

Thus, significant benefits could be gained from a program of consumer education which points directly to helping the low-income consumer use what income she has effectively to buy foods which are both low in cost and high in nutritional value. This program would have three aspects. First, it would teach housewives to understand the concept of nutrition and the nutritional differences between various foods. Second, it would instruct housewives on how to conserve the quality of foods through buying and handling practices. Finally, it would provide housewives with information on where to obtain the greatest value of food and nutrition for their expenditure of income.

The value of this kind of program is twofold. First, improved consumer shopping ability and information raises the real income of the consumer through greater quantity, quality, and nutrition for the same monetary expenditure. Secondly, these benefits would accrue to the lower income consumers who desperately need help.

It should be noted, however, that low-income consumers may be resistant to change and limited in their access to media used to foster the changes in their conduct. Thus, change may come slowly from rational and well-intended efforts to reform the poor.

Conclusions

The basic strategy behind each recommendation is to build competitive retail units which then attempt to gain a share of the market. The process of competition forces each retail unit to improve its operation and improve its sources of supply such that the end result is better quality products, more convenience for the consumer, and lower retail prices. It is not the purpose of these reforms to force the extinction of any group of retailers, but to give all retailers a chance to participate in the development of the region with those who do so being rewarded with increased personal gains at the expense of the others.

It is important to note that no basic value has been put on any retail type, no attempt has been made to

say one type is intrinsically good and should be encouraged. What has been implied is that the developing of the marketing system is an evolutionary process where those forms of retailing which find success through improved efficiency and services should prevail. Further, as the region develops, the desires, habits, and needs of the consumers change, necessitating the change in the retail structure as well; and thus the evolution. What adjusts the retail structure to match the consumer changes is the force of competition between units to satisfy the consumer. Thus, it has been the purpose here to suggest ways in which the present retail institutions could be molded into competitive units.

It further should be recognized that though there will be competition between types of retailers, this is not the prime objective. The prime objective is to make each retail unit, be it a street fair or a supermarket, competitive with all other units. This is to say that a street fair must compete favorably against other fairs as well as supermarkets. Some street fairs are going to fail to keep pace, some supermarkets will fail also, as will those neighborhood retailers who do not pool their effort. Some who try to modernize will fail because they were not good enough at it. This is the evolutionary process. But none of this can happen if the basic level of competition is not stimulated and competitive

technology and practices are not instituted. The ability to compete is foremost the ability to change and react, which is linked to the ability to institute change to improve the distribution system. The ability to institute change is linked to size and power as well as know-how. Thus, these recommendations have emphasized the need to increase the power of those retailers who had little to begin with, through structural changes in their links to each other and to the outer world, and further to strengthen the self-service movement. The talents of the retailers, combined with the choice of the consumers, must determine the direction of the evolution in the system of distribution.

APPENDIX I

METHODOLOGY

APPENDIX I

METHODOLOGY

Urban Distribution

The Purpose of the Urban Retailer-Wholesaler Research

As part of the overall goal of understanding the distribution system and its role in economic development, it was necessary to undertake a study of the urban retail and wholesale distribution system. The purpose of this research was threefold:

1. To describe and understand the system of food distribution within the city of Recife.
2. To isolate the barriers which limit the system's contribution to the development of Recife and its food shed.
3. To provide data which allow the evaluation of various possible reforms. This includes sociological as well as economic data.

In summary, the overall purpose is to research the basic question of how to induce change in the marketing system so that it transmits demand to producers and stimulates efficient flow of goods to consumers in response to their demands.

Methods of Approach

Type of Research

It follows from the purpose stated above that the data collected must be representative of Recife as the overall population. At the same time, it is evident that considerable depth of understanding is needed to deal with difficult issues which underpin sound reform analysis. Therefore, it was decided that a broad survey approach would be used to build a statistical foundation which then would be augmented by depth interviewing on the more sensitive and critical issues. The survey research methodology will be explained first and then the depth interviewing procedure will follow.

Survey Research Methodology for Wholesalers and Retailers

Populations

Because the urban distribution system is a composite of many different types of units, it was necessary to separate these units into populations as follows:

a. Feirante retailers (street fair operators)

b. Fixed fair retailers (one type of permanent market operator)

c. Public market retailers (one type of permanent market operator)

d. Neighborhood store retailers

e. Self-service retailers

f. Consumer cooperatives

g. Public market and fixed fair wholesalers (permanent market wholesalers)

h. Other wholesalers (not connected with a market).

Questionnaires

Each population represents a unique group of units with differing characteristics. Hence, the language used in the questionnaire and information sought varied by population, though extreme care was used to guard the common theme across all questionnaires. The code books for retailers and wholesalers consequently do not present the questions as used, but the essence of each question (see Appendix II for Retailer and Wholesaler Codebooks). Code books rather than questionnaires have been included because there was no English translation of the questionnaires.

Criteria for Sample Design

1. The sample must adhere to the accepted statistical norms of randomness so that the sample is representative of the population within known statistical limits.

2. The sample must present a cross section of the urban distribution system which allows comparison and contrasting of units of different populations on a common basis.

3. The sample size drawn from each population must be large enough to allow statistical analysis yet not so large as to be prohibitively costly.

4. Finally, some areas of the city have cross sections of units which would allow analysis of inter-relationships of these units and are consequently of more interest than other areas. The sample should include these areas.

The Overall Sample Design

To satisfy the above requirements, three styles of sampling were used. First, a two-stage design was used for populations where the number of units was large or unknown. Here the city was subdivided into areas and then units were sampled within each area. Second, a single stage design was used where populations were smaller and definable. Here a direct sample was taken. Finally, where populations were very small, a census was taken of all units within that population. In the remainder of this section, each of the above designs will be expanded for each relevant population.

Sample Design for Feirantes (Street Fair Operators)

The population of <u>feirantes</u> was defined as all businessmen who own and sell food products for home consumption in one of the 26 <u>feiras</u> in Recife. A street fair was defined as an open-air non-continuous (non-daily)

market which is recognized by the city government of Recife as a street fair.

The specific requirements of the feirantes' sample were as follows:

1. To collect data which would allow analysis of street fairs as a whole,
2. To obtain a statistical sample in the absence of accurate lists of the feirante population,
3. To include sufficient number of large street fairs for comparative analysis,
4. To allow efficient use of interviewers.

To satisfy these requirements, a sample design was developed which subdivided the city into 26 areas, each corresponding to a street fair. The areas were arbitrarily defined on a map in two steps.

1. Each fair was located and used as the center of the area. Boundaries were drawn equidistant to the neighboring feiras.
2. The boundaries as located above were adjusted to take advantage of natural characteristics of the city, such as canals, rivers, and non-populated areas, as well as streets and roads.

Ten of the 26 areas were then sampled in the following manner:[1]

1. The 26 areas were listed in order of street fair size. The size was determined through a census of

[1]The sample design was developed by J. Roe Goodman, consulting statistician of the United Nations assigned to Latin America.

all street fairs conducted by the researchers just prior to the drawing of the sample (see Table A1.1). Street fair size was defined as the number of food-owning feirantes. Non-food feirantes were excluded, as the main study concerned food.

2. Each area was then assigned a number between 2 and 9, depending on its importance for inclusion in the sample. To meet the specified requirements, the numbers were assigned in descending order from largest to smallest feira size. (The size of each number has significance only relative to the others.) An area given the number 4 had one-half the probability of inclusion as did an area given the number 8 (see Table A1.1).

3. The probability of inclusion of each area was then calculated by multiplying each area's assigned number times the number of areas in the sample (10) and dividing by the sum of the assigned numbers (100) (see Table A1.1).

4. Each area was then judged by level of income and assigned a number between I, high-income level, and IV, very low-income level. These numbers were subsequently used to control the sample for income distribution (see Table A1.1).

5. Each area was then given a number for its geographic location as follows: 1=center of city; 2= near the center to the north; 3=near the center to the

TABLE A1.1

AREA CHARACTERISTICS

Street Fairs	No. Food Feirantes	No.	Pr.	Income	Geog.
1. Casa Amarela	823	9	.90	III	2
2. Cordeiro	556	8	.80	II	3
3. Arruda	358	7	.70	III	2
4. Santo Amaro	329	7	.70	IV	1
5. Beberibe	286	6	.60	III	4
6. Afogados	189	5	.50	III	1
7. Encruzilhada	155	5	.50	I	1
8. Hipodromo	147	4	.40	I	1
9. Bomba Grande	137	4	.40	III	5
10. Derby	129	4	.40	I	1
11. Mustardinha	108	4	.40	III	3
12. Areias	101	3	.30	III	5
13. Alto do Deodato	84	3	.30	III	4
14. Várzea	81	3	.30	I	5
15. Pina	75	3	.30	IV	1
16. Boa Viagem	64	3	.30	I	3
17. Engenho Domeio	49	3	.30	I	5
18. Fundão	49	3	.30	III	4
19. Vila dos Comerciários	38	2	.20	II	2
20. Coelhos	38	2	.20	IV	1
21. Corrego da Areia	35	2	.20	IV	4
22. Torre	29	2	.20	II	2
23. Nova Descoberta	28	2	.20	IV	4
24. San Martim	21	2	.20	III	5
25. Jardim São Paulo	20	2	.20	II	5
26. Vila do Ipsep	19	2	.20	II	5
		100	10.00		

south; 4=peripheral northern area; 5=peripheral southern area. Again, these numbers were used to control the sample for geographic dispersion (see Table A1.1).

6. The next step was to build a table with the income numbers across the top and the geographic numbers along the left margin. The cells so formed were filled with the sum of the probabilities of those areas which belong in each cell. Each cell's cumulative probability represented the minimum number of areas per cell and the probability of including one more area. For example, if a cell has a cumulative probability of 1.3, then the sample must have at least one area with those cell characteristics and has a 0.3 probability of including two areas with those cell characteristics. Note that the row and column totals equalled the sample size desired (10) (see Table A1.2).

7. The next procedure was to construct the possible different samples which stem from the master table. This was done through the building of a number of sub-tables with the same cell design as the master table. Each sub-table was to represent a unique possible sample. Sub-tables were constructed until all possible unique sample combinations were exhausted (see Table A1.3).

To build these sub-tables, each blank sub-table was assigned a probability. This was done by looking at the master table cell probabilities and distributing them

TABLE A1.2

MASTER TABLE OF PROBABILITY

Geographic Area of Recife	Income of Area I	II	III	IV	Total
1	1.3		.5	1.2	3.0
2		.4	1.6		2.0
3	.3	.8	.4		1.5
4			1.2	.4	1.6
5	.6	.4	.9		1.9
Total	2.2	1.6	4.6	1.6	10.00

TABLE A1.3

SUB-TABLES OF POSSIBLE SAMPLES
(TABLE FORMAT SAME AS FOR TABLE A1.2)

Drawn

A
Probability 0.2

2	0	0	1
0	0	2	0
0	1	0	0
0	0	2	0
1	0	1	0

B
Probability 0.2

1	0	0	2
0	0	2	0
0	1	1	0
0	0	1	0
1	0	1	0

C
Probability 0.2

1	0	1	1
0	1	1	0
0	1	0	0
0	0	1	1
1	0	1	0

D
Probability 0.1

1	0	1	1
0	0	2	0
1	1	0	0
0	0	1	0
0	1	1	0

E
Probability 0.1

2	0	0	1
0	0	2	0
0	1	1	0
0	0	1	0
0	1	1	0

F
Probability 0.1

1	0	1	1
0	1	1	0
1	0	0	0
0	0	1	1
0	1	1	0

G
Probability 0.1

1	0	1	1
0	1	1	0
1	0	1	0
0	0	1	1
0	1	0	0

among the various sub-tables. It should be noted that the sum of the sub-table probabilities had to equal 1. Further, the cells within each sub-table represented the number of areas in the actual sample (10 in total) rather than probabilities. An example will clarify this procedure. The master table cell 1-I equaled 1.3 (see Table A1.2). This meant that all sub-tables had to have at least one area in their cell location because of the 1. There remained a 0.3 probability of two areas being included. Therefore, sub-tables A and E were assigned two areas to this cell location to absorb this 0.3 probability (see Table A1.3). This procedure was followed in completing the rest of the cells of the sub-tables. It should be noted that each sub-table had to have exactly ten areas represented and, where more than the minimum area requirement existed for any cell location, the sum of those sub-table probabilities had to equal the decimal fraction in that same cell location in the master table.

8. With the sub-table samples completed, the next step was to choose one sample sub-table which would define the sample characteristics. In the order written, the probabilities of each sub-table were accumulated--i.e., the top left sub-table (A) represented probabilities .1 and .2, the next table to the right (B) equalled probability .3 and .4, etc. Using standard procedures,

a number between 0 and 9 (0 = 10) was selected in a random number table and the sub-table with the same number was taken. Number 1 was drawn, so the top left sub-table (A) specified the characteristics of the sample.

9. The actual areas were then drawn for each cell in the sub-table with a number of 1 or more. The areas corresponding to the cell characteristics were listed in the order given in Table A1.1. Their probabilities were also listed and the cumulative probabilities calculated (see Table A1.4). Cell I-1 had a cumulative probability of 1.3 and the sample sub-table called for two areas. Thus, a random number was selected between 01 and 65 for the first area designation, and increased by 65 for the second area designation. Twenty-six was drawn, specifying area 7 and 26 plus 65 = 91 was calculated specifying area 10. This procedure was repeated for each filled cell in the sample sub-table (see Table A1.4).

Where one area had a probability of more than half of the cumulative probability, there was a chance that the same area could be chosen twice if two areas were needed in the sample. This occurrence would invalidate the sample, and thus a special procedure had to be followed. This situation is illustrated in Cell IV-1, though only one selection was to be made.

Because the adjustment increased the probability of the first area (No. 4), it still remained in the

TABLE A1.4

SELECTED AREAS

Cell	No. of Area	Probability	Cumulative Probability	Random No. Draw
I-1	7	0.5	0.5	0.26
	8	0.4	0.9	
	10	0.4	1.3	0.91
IV-1	4	0.7	0.7	0.53
	15	0.3	1.0	
	21	0.2	1.2	
III-2	1	0.9	0.9	...
	3	0.7	1.6	...
II-3	2	0.8	0.8	...
III-4	5	0.6	0.6	0.6
	13	0.3	0.9	
	18	0.3	1.2	1.2
I-5	14	0.3	0.3	0.2
	17	0.3	0.6	
III-5	9	0.4	0.4	
	12	0.3	0.7	
	24	0.2	0.9	0.8

sample. Cell III-2 had a similar occurrence. However, as both areas were to be taken, no problem arose.

Having drawn the sample of 10 specific areas including feiras, the next stage was to specify the sampling procedure within each chosen feira. Each feira was assigned a skip interval which corresponded to the probability of its inclusion in the first stage of the sampling. Thus, if an area had a high probability of

entering the first stage sample, it was given a skip interval large enough to exactly compensate for that high probability. It was desired that every 20th feirante in Recife be represented, i.e., expansion factor=20. This expansion factor was based on the requirements for analysis. Hence, the skip interval can be calculated using the following formula:

$$\text{Probability of inclusion } \frac{(1)}{(X)} = \frac{1}{\text{expansion factor}}$$

X = skip interval

The skip intervals used for the selected areas are presented in Table A1.5.

TABLE A1.5

SKIP INTERVALS FOR FEIRANTES

Area No.	Skip Interval	Area No.	Skip Interval
1	18	7	10
2	16	10	8
3	14	14	6
4	14	18	6
5	12	24	4

A random start was used in each street fair to locate the first interview and then the skip interval was used thereafter until every feirante had been counted and/or interviewed according to the sample design. The interviewer passed through each street fair in an orderly pattern so each feirante had an equal chance for inclusion in the sample.

The sample size as drawn was 235. There were 25 refusals (11 per cent), which left an actual sample of 210 *feirantes*. Three call-backs were made but because of the fluidity of the *feirantes* in the street fair, some *feirantes* could not be relocated for interviewing.

Sample Design for Neighborhood Stores

The population of neighborhood stores was defined as all stores which sell food for home consumption in Recife with the exception of street fairs, public markets and fixed *feiras* (permanent markets), supermarkets (self-service stores), and bakeries. Street fairs, public markets, fixed fairs, self-service stores were studied as separate populations, and bakeries were included in the industrial sector as food processors.

The specific criteria for the sample design of the neighborhood study were as follows:

1. The data had to correspond in area to the *feirantes* study.
2. The sample design had to allow expansion to the Recife population.
3. The design had to allow sampling with no prior documented knowledge of the population size of distribution.
4. The number of interviews and locations had to be such as to allow efficient use of interviewers within reasonable limits of cost.

The sample design which fulfilled these requirements for neighborhood stores was of the same general method as used for the feirantes. The 10 areas sampled for the feirantes study remained the same for the neighborhood sample.

The second stage expansion factor was set at 5 and the skip interval calculated for each area using the same formula as presented for the feirantes. This expansion factor was based on the requirements for analysis. The skip interval exactly compensated for the unequal probabilities used in selection of the areas (see Table A1.6).

TABLE A1.6

SKIP INTERVALS FOR NEIGHBORHOOD STORES

Area No.	Start	Skip Interval	Area No.	Start	Skip Interval
1	2	4-5-4-5	7	2	2-3-2-3
2	3	4-4-4-4	10	2	2-2-2-2
3	2	4-3-4-3	14	1	1-2-1-2
4	3	3-4-3-4	18	1	1-2-1-2
5	2	3-3-3-3	24	1	1-1-1-1

The procedure used for isolating interviews was also similar to the feirante procedure.

1. Each area was outlined on a map of Recife.
2. Every block and section within each area was numbered consecutively so that each had an identifying number.

3. An interviewer was assigned to each area to start with block 1 and circle on foot each block in the numerical order given until all stores on every block had been passed by and recorded on the interviewer log. All blocks were started in the southeast most corner and were circled counterclockwise. Where sections without defined blocks were encountered, the interviewer was instructed to pass through the vacant area in such a manner as to pass by every store once.
4. The interviewer interviewed the stores specified by the skip interval for the area after an initial random start to establish the store to be interviewed first.

The sample size as drawn was 459. There were 12 (3 per cent) refusals which left an actual sample of 447.

Sample Design for Public Markets and Fixed Fairs (Permanent Markets)

The population of public market operators was defined as all businessmen who own or sell food for home consumption within or along the outer walls of a public or private market in Recife. A public market was defined as a market sheltered by a single building which has continuous daily operation and is recognized by the city government of Recife as a public market. There were 10 such markets.

The population of fixed fair operators was defined as all businessmen who own and sell food for home consumption in a fixed fair in Recife. A fixed fair was defined as a group of tables, barracas, ground locations, etc., in close proximity which are used by not less than 20 of the above-mentioned businessmen. The fixed fair must have continuous daily operation and does not have a single building or roof. There were nine such fixed fairs.

The sample design for public markets and fixed fairs was a single stage sample of operators within all of these institutions. The criteria for this sample design were as follows:

1. To obtain a representative sample,
2. To obtain data compatible with the street fair and neighborhood store data.

Because of the diversity of some units, such as the public markets São José and Santa Rita and fixed fairs such as Afogados, it was necessary to draw a sample from each market. This procedure was possible because of the small number of such markets as well as the small number of operators in each, relative to street fairs.

To achieve representativeness of all fixed fairs and public markets, a skip interval of eight was chosen to be used within each of these markets. This skip interval was chosen so that the number of interviews would be sufficient for analysis.

In each location, a random start was made and then in orderly fashion the whole market or fair was covered so that each operator was counted once and only once for inclusion in the sample according to the skip interval.

The sample size for public markets as drawn was 115. There were 15 refusals (13 per cent) which left an actual sample of 100. The sample size for fixed fairs as drawn was 80. There were five refusals (6 per cent) which left an actual sample of 75.

Sample Design for Supermarkets, Small Self-Service Stores, Consumer Cooperatives, and Large Meat Dealers

The population for supermarkets and small self-service stores was defined as all stores which sell food for home consumption on a self-service basis in Recife. The population of consumer cooperatives was defined as all retail food outlets in Recife which are operated for the benefit of a specific group of consumers and are non-profit organizations. The population of large meat dealers was defined as all meat dealers in Recife who have commercial refrigeration and freezer systems.

The research design for these large food retailers was a simple census. The criteria for the use of this methodology was solely based on the small number of these units in the population.

In order to have enough interviews for sound statistical analysis, it was necessary to interview all units in this category.

The list of self-service stores, consumer co-ops, and large meat operators was compiled from the following sources:

1. União de Bebidas Industria e Comércio list of customers (soft drink and beer manufacturers' customer lists);
2. Dunn & Bradstreet Ltda. Sinopsis, Dunn Sôbre o Comércio e Industria do Brasil July 1966 Volum XV (statistical and credit listings);
3. The Recife telephone book;
4. By observation in the field.

The sample size for mercadinhos and supermarkets as drawn was 44. There was one refusal (2 per cent), which left an actual sample of 43. The sample size for consumer cooperatives was 11, with no refusals. The sample size for large meat dealers was 5, with no refusals.

Sample Design for Public Market and Fixed Fair Food Wholesalers

The population here was defined as all businessmen who sell at least one-fourth of their food value at wholesale and operate in either the Santa Rita public market or the Afogados fixed fair (the two wholesale markets in Recife).

Although a representative sample of small wholesalers was obtained through the retailer surveys, as most small wholesalers also sell at retail, it was deemed advisable to sample Santa Rita and Afogados markets a second time because of their importance as wholesale markets. In order to meet the criteria of sufficient sample size, a three-fourths sample was made of all operators in these markets who sold at least one-fourth of their value wholesale. After a random start, three interviews were made in succession, one skipped, then three more interviews. The original sample drawn for public market and fixed fair wholesalers was 74, which represented a three-fourths sample of a census of these markets. There were 13 refusals (18 per cent), which left a sample size of 61. Five interviews were added which were not in the 75 per cent sample, to bring the sample size up to 66. These did not differ in characteristics from the rest of the population.

Sample Design for Large Food Wholesalers

The population of large food wholesalers was defined as all businesses which sell the majority of their food to other businessmen rather than to consumers and which are located in individual permanent places of business within the city limits of Recife.

Because it was operationally impossible to locate large wholesalers in the field, it was necessary to

compound from the following sources a list of the population:

1. Dunn & Bradstreet Ltda, Sinopsis Dunn Sôbre o Comércio e Industria do Brasil, July 1966 & Jan. 1967, Volume XV (statistical and credit listings);
2. Relação dos Firmas Que Enuiam Mapas de Estoques Mensal Estabelecidas na Capital, Suprintendência Nacional do Abastecimento (SUNAB) (federal government taxation records);
3. Lists from the prefeitura municipal do Recife (city government), Secretarium de Financas, Divisão de Mecanização (city government records);
4. Federação do Comércio Atacadista de Pernambuco, membership list (associated wholesalers);
5. Telephone list of Recife;
6. Banco do Brasil (list of food importers).

No claim is made that this list is exhaustive, as there was too much disparity among the source material to warrant this conclusion. However, the list is deemed complete enough to use as the population without materially damaging the survey.

The list was put in alphabetical order and with a random start a three-fourths sample was chosen. The criteria for this sample design was again to obtain a large enough sample for statistically sound analysis.

The original sample drawn for large wholesalers was 118 names and addresses. This was 75 per cent of the total list. Of these 5 were duplications in the list (different names but the same firm), 8 did not exist at the address given, 9 did not handle food products, 12 were closed, and 7 were retailers. This left 77, of which 7 refused (9 per cent) to respond, leaving an actual sample of 70.

Research Methodology for Phase III

Sample Design and Methodology for the Retailer Diary

The retailer diary study was undertaken to gain some insight into the social function of the various types of retailers. Further, information of a more sensitive nature was needed as well as an inventory of products offered.

This study was conducted by day-long interviews in various types of retail outlets. The interviewer recorded all movement in the retail outlet and what customers said and bought. When the store owner was free, the interviewer chatted with him, guiding him to specific topics of interest. Finally, the interviewer took a complete inventory of the products for sale.

The sample was drawn from the retailer samples already completed, and this was a sub-sample of retailers.

Table A1.7 shows the sub-samples used for the various populations.

TABLE A1.7

SUB-SAMPLE FOR RETAILER DIARY

Population	Sample Drawn	Refusals	Actual Sample
Feirantes	16	0	16
Fixed feiras	6	1	5
Public markets	6	0	6
Neighborhood stores	28	2	26
Supermarkets & mercadinhos	6	0	6
Consumer cooperatives	2	0	2
Large meat dealers	1	0	1
Total	65	3	62

Sample Design and Methodology for Retailer Depth Interviews

This research was performed to answer specific questions which, by their nature, could not be asked by interviews. There was no formal questionnaire and topics of interest had to be approached through the skillful use of follow-up questioning. The purpose of this research was to understand the subtle competitive effects of various changes in the Recife food distribution system, the effect of entering and exit of firms, and the changes in buying practices as well as the future changes

envisioned. Though all levels of retailers and wholesalers were interviewed, the larger were emphasized in numbers.

The sample was purposive in type and thus interviews were taken where it was thought the information was most readily available.

Sample Design and Methodology for the Market Basket Price Study

The market basket price study was undertaken to gain insights into the real price that consumers paid for various food goods unclouded by bargaining and cheating aspects of the buying process, to understand the real price differences between the various types of retailers, and to show the price fluctuations in the short run. Interviewers of all backgrounds were sent into the various retail outlets to buy a standard basket of foods. These purchases were then reweighed and the actual price determined. These prices were recorded, along with the asking prices and bargained prices, asked-for weight and the actual weight, and the quality of the purchase. The battery of purchases in all types of retailers was repeated four times over a two-month time period. In all, 124 market baskets were taken. The sample drawn was a sub-sample of the larger retail survey.

Consumers

The Purpose of the Consumer Research

As part of the overall goal of understanding the food distribution system and its role in economic development, it was necessary to undertake the study of urban consumers, those for whom the system exists. The specific purposes of the research are as follows:

1. To describe the buying behavior of consumers in terms of location of stores, types of stores, and habits;
2. To understand why these buying behaviors exist;
3. To understand the changeability of these buying behaviors;
4. To describe the labor inputs into the economic system.

Thus, the main thrust of this research is to analyze consumers as they relate to retail institutions.

Method of Approach

The population of housing units was defined as all housing units which were counted in the school census of Recife in 1964, conducted by the Instituto Brasileiro de Geografia & Estatística (IBGE).

The criteria for the sample design of consumers were as follows:

1. The sample must be representative of the population of consumers here defined in terms of housing units within the city of Recife.
2. The data must correspond with the retailer data already obtained.
3. The sample must be such as to allow efficient use of interviewers.

To meet with the above criteria, a two-stage sample design was made similar to the feirantes sample design. The same 10 areas were used in the first stage as the basis for the sample (see feirantes sample design).

The second-stage samples within each of these 10 areas was accomplished in the following manner:

1. It was decided that a sample size of about 400 would give a representative sample.
2. For interviewer efficiency, the sample was divided into clusters of three housing units.
3. The skip interval was calculated as that for feirantes. The expansion factor was calculated at 800, which was the population of housing units divided by $\frac{\text{desired sample size}}{\text{cluster number}}$ (see Table A1.8).

To prepare the list of housing units on which the skip interval could be used, it was necessary to perform the following steps:

1. Each sector of the city was defined by IBGE was located on a master map.

TABLE A1.8

CONSUMER SAMPLE

Area	Skip Interval	Sample Draw	Not Located, Home Refusals	Actual Sample
1	720	96	6	90
2	640	36	2	34
3	560	27	3	24
4	560	42	7	33
5	480	21	1	20
7	400	30	1	29
10	320	27	0	27
14	240	12	1	11
18	240	66	8	58
24	160	33	5	28
		390	36	354

2. Each area, as defined by the research sample design, was also located on the master map.
3. The number of each sector which fell within a specific area was recorded.
4. For each area, the corresponding IBGE sectors were arranged in numerical order, thus forming the list of housing units for each area.

A random number was selected to pick the first housing unit cluster in each area. The skip interval was used thereafter to designate the rest of the housing

unit clusters. The housing unit so chosen formed the center of each cluster of three adjacent housing units. Three call-backs were used to try to reach not-at-home housewives.

Table A1.8 presents the actual sample drawn and the non-responses. There were 36 non-responses (9 per cent) and 354 completed interviews.

APPENDIX II

INDEX ITEM PRODUCT MOMENT CORRELATIONS

APPENDIX II

INDEX ITEM PRODUCT MOMENT CORRELATIONS

In building meaningful indices, it is useful to know the correlations between the various individual items that make up each index. Though the basic determinant of the indices used was the content of the individual items, their interrelationships were important as well. It should be noted that these correlations only measure linearity and thus may not show a relationship where it is curvilinear.

Consumers

Table A2.1 presents the product moment correlations of the index items in the consumers' surveys. The specific items that go together in each index are listed below. Note that the items which have been reflected in construction of the indices have an "r" after them.

Index	Items
Consumer Innovativeness	13, 29, 155
Interpersonal Trust	122r, 128r, 130
Fatalism	123, 124, 127, 129
Modernity	122r, 123, 124, 125r, 127, 128r, 129, 130, 131, 132r, 133
Advertising Influence	152, 153, 154
Mass Media Exposure	139r, 140r, 141r, 142r, 143, 144
Literacy-Education	148, 149r, 150, 151, 157r

Retailers and Wholesalers

Table A2.2 presents the product moment correlations of the index items for the neighborhood retailers' survey. This population serves as an example for the other groups of retailers and wholesalers. Again, the specific items that go together in each index are listed below with an "r" placed after each item number where that variable was reflected in the index construction.

Index	Items
Innovation	64, 65, 66, 67
Uses all resources to buy products	71, 111
Buys enough to satisfy all demand	108r, 113
Customer ability	102, 103, 104, 105
Interpersonal trust	397r, 403r, 405
Fatalism	398, 399, 402, 404
Managerial talent	77r, 401r
Modernity	397r, 398, 399, 400r, 401r, 402, 403r, 404, 405, 406, 407r, 408
Mass media exposure	417r, 418r, 419r, 420r, 421,
Literacy-education	429, 430r, 431, 432, 460r.

TABLE A2.1

CONSUMER INDEX ITEM

P R O D U C T M O M E N T C O R R E L A T I O N S

* INDICATES SIGNIFICANCE AT 0.050 LEVEL.

	13	29	122	123	124	125	126	127	128	129	130	131	132	133	139
13	1.000														
29	0.131*	1.000													
122	-0.054	-0.034	1.000												
123	-0.037	-0.046	-0.021	1.000											
124	0.055	-0.141*	-0.013	0.184*	1.000										
125	-0.021	-0.067	0.012	0.111*	0.095	1.000									
126	-0.077	0.042	0.111*	-0.122*	-0.149*	-0.048	1.000								
127	0.014	-0.064	0.044	0.023	0.269*	-0.070	-0.042	1.000							
128	0.067	0.087	0.159*	-0.145*	0.064	-0.020	0.152*	0.097	1.000						
129	0.022	-0.160*	0.019	0.157*	0.372*	0.038	-0.091	0.231*	-0.029	1.000					
130	-0.089	-0.021	0.042	0.004	-0.067	-0.058	0.097	-0.026	0.003	0.030	1.000				
131	-0.003	-0.028	-0.099	0.144*	0.173*	0.054	-0.170*	0.063	-0.055	0.190*	-0.014	1.000			
132	0.067	-0.047	-0.068	0.054	-0.007	-0.111*	-0.212*	0.067	-0.146*	0.114*	-0.004	0.196*	1.000		
133	0.001	-0.062	-0.124*	0.058	0.040	0.122*	-0.033	0.050	-0.066	0.107*	-0.027	0.035	0.071	1.000	
139	0.020	0.244*	-0.059	-0.042	-0.006	0.010	0.061	-0.153*	0.135*	-0.121*	-0.054	-0.047	-0.036	-0.041	1.000
148	0.188*	0.185*	0.089	-0.059	-0.013	-0.076	0.034	-0.198*	0.067	-0.068	0.070	0.006	0.098	0.014	0.265*
141	0.289*	0.164*	0.003	-0.078	-0.002	-0.082	-0.105*	-0.156*	0.088	-0.062	0.073	-0.024	0.086	0.021	0.188*
142	0.084	0.182	0.084	-0.099	-0.057	-0.044	0.040	-0.101	0.147*	-0.008	0.015	-0.083	0.034	0.091	0.226*
143	-0.084	0.123*	-0.010	0.058	-0.010	-0.029	0.128*	-0.067	-0.159*	0.082	0.056	0.022	-0.043	-0.058	-0.138*
144	-0.244*	-0.114*	-0.080	0.047	-0.082	-0.038	0.010	0.108*	-0.173*	0.121*	-0.151*	0.091	-0.003	0.004	-0.176*
148	0.125*	0.211*	0.030	-0.066	-0.019	-0.049	0.029	-0.157*	0.170*	-0.144*	0.017	-0.057	-0.000	-0.014	0.360*
149	-0.219*	-0.048	-0.099	0.126*	0.023	0.039	-0.007	-0.032	-0.069	0.013	-0.094	0.046	-0.072	0.006	0.000
150	0.056	0.108	0.013	-0.019	0.065	-0.010	-0.029	-0.077	0.115	0.110	0.153*	-0.072	-0.001	-0.129*	0.000
151	0.168*	-0.040	0.059	0.033	-0.068	-0.019	0.164*	0.038	0.045	-0.044	0.055	-0.037	-0.076	-0.004	0.000
152	0.272*	0.178*	0.187*	-0.125*	-0.029	-0.000	0.057	0.003	0.124*	-0.099	0.069	-0.014	-0.074	-0.117*	0.128*

- Insufficient Sample Size

Source: SUDDER/MSU Consumer Survey, 1967

TABLE A2.1 Continued

CONSUMER INDEX ITEM

P R O D U C T M O M E N T C O R R E L A T I O N S

* INDICATES SIGNIFICANCE AT 0.050 LEVEL.

	13	29	122	123	124	125	126	127	128	129	130	131	132	133	139
133	0,173*	0,083	-0,113*	-0,044	0,002	0,100	0,028	0,015	0,066	-0,012	0,01*	0,092	0,094	0,010	0,054
134	0,213*	0,177	0,022	-0,159*	-0,052	-0,020	0,042	0,034	0,156*	-0,089	-0,013	-0,105*	0,035	-0,03*	0,067
135	0,312*	0,164*	-0,111	-0,118*	0,087	0,045	-0,077	0,111	0,107	0,018	-0,07*	0,082	0,075	-0,02*	0,078
137	-0,201*	-0,171*	0,009	0,132*	0,093	0,104*	-0,070	0,187*	-0,052	0,152*	-0,100	0,120*	0,049	0,04*	-0,169*

	140	141	142	143	144	148	149	150	151	152	153	154	155	157	0
140	1,000														
141	0,532*	1,000													
142	0,240*	0,189*	1,000												
143	0,045	0,060	-0,502*	1,000											
144	-0,305*	-0,427*	-0,253*	0,028	1,000										
148	0,429*	0,351*	0,295*	-0,132*	-0,319*	1,000									
149	-0,226*	-0,270*	-0,102	0,057	0,269*	-0,340*	1,000								
150	0,214*	0,228*	-0,00*	-0,056	-0,301*	0,141*	-0,615*	1,000							
151	0,213*	0,158*	0,082	0,10*	-0,23*-	0,02*	-0,434*	0,308*	1,000						
152	0,390*	0,258*	0,174*	0,009	-0,258*	0,285*	-0,209*	0,040	0,233*	1,000					
153	0,173*	0,142*	0,069	-0,033	-0,072	0,152*	-0,111	-0,040	0,136*	0,247*	1,000				
154	0,059	0,047	0,11*-	-0,158*	-0,016	0,053	-0,042	-0,158*	-0,009	0,154*	0,302*	1,000			
155	0,082	0,102	0,109	-0,134*	-0,193*	0,121*	-0,153*	-0,005	0,142*	0,23*-	0,243*	0,27*-	1,000		
157	-0,314*	-0,263*	-0,185*	-0,045	0,362*	-0,330*	-0,012	-0,128*	-0,181*	-0,231*	-0,10*-	0,006	-0,107	1,000	

Source: SUDENE/MSU Consumer Survey, 1967

TABLE A2.2

NEIGHBORHOOD STORE INDEX ITEM

PRODUCT-MOMENT CORRELATIONS

* INDICATES SIGNIFICANCE AT 0.050 LEVEL.

	64	65	66	67	71	77	102	103	104	105	108	111	113	397	398
64	1.000														
65	0.257*	1.000													
66	0.123*	0.222*	1.000												
67	0.000#	0.000#	0.000#	1.000											
71	0.042	-0.035	0.123*	0.000#	1.000										
77	-0.010	-0.073	0.038	0.000#	0.056	1.000									
102	0.061	0.041	0.095*	0.000#	-0.047	0.013	1.000								
103	0.035	-0.040	0.029	0.000#	0.009	0.010	0.035	1.000							
104	-0.131*	-0.093	0.026	0.000#	-0.025	0.131*	0.041	0.064	1.000						
105	0.097*	0.069	-0.044	0.000#	-0.072	0.015	-0.016	0.001	-0.060	1.000					
108	0.038	0.091	0.049	0.000#	0.023	-0.042	0.041	-0.009	-0.030	-0.053	1.000				
111	-0.099*	-0.028	0.098*	0.000#	0.108*	0.035	-0.033	-0.012	0.051	-0.016	0.045	1.000			
113	0.047	0.039	0.047	0.000#	0.110*	0.075	-0.019	0.081	-0.137*	0.026	0.136*	-0.118*	1.000		
397	0.071	0.003	0.055	0.000#	0.074	0.039	0.029	-0.019	-0.102*	0.011	-0.036	-0.052	0.051	1.000	
398	0.020	-0.143*	-0.058	0.000#	0.033	0.093	0.055	0.055	0.054	0.064	0.026	-0.043	0.085	-0.071	1.000
399	0.034	-0.097*	-0.084	0.000#	-0.048	-0.061	-0.053	0.145*	-0.003	0.028	-0.012	-0.157*	-0.090	-0.095*	0.198*
400	0.091	-0.105*	-0.109*	0.000#	-0.022	0.061	0.049	0.021	0.007	-0.052	0.011	-0.148*	0.094*	0.134*	0.062
401	0.053	-0.004	0.049	0.000#	0.012	0.035	0.042	-0.003	0.007	0.017	-0.075	-0.022	-0.008	0.062	-0.021
402	0.001	0.001	-0.045	0.000#	-0.092	-0.043	-0.023	0.033	-0.041	0.012	0.044	0.069	-0.103*	0.047	0.013
403	0.027	0.074	0.007	0.000#	-0.071	0.073	0.067	-0.013	-0.042	0.068	-0.069	-0.055	0.050	0.176*	-0.146*
404	-0.038	-0.133*	-0.101*	0.000#	0.003	-0.100*	-0.020	0.176*	0.014	0.016	-0.033	-0.095*	-0.064	-0.020	0.182*
405	0.055	-0.007	0.063	0.000#	-0.035	0.108*	0.031	-0.033	0.087	0.036	-0.018	-0.000	-0.035	-0.040	0.102*
406	-0.045	-0.093*	-0.094*	0.000#	0.047	0.022	-0.040	0.086	0.024	-0.048	0.017	-0.049	0.009	0.012	0.120*
407	-0.022	0.063	0.003	0.000#	0.006	0.085	-0.051	-0.078	0.050	0.058	-0.039	0.096*	0.029	-0.044	0.063
408	-0.037	-0.099*	0.058	0.000#	0.039	0.122*	0.060	-0.059	0.097*	0.013	-0.019	0.020	0.046	-0.022	0.074

- Insufficient Sample Size

Source: SUDENE/MSU Retail Survey, 1967

TABLE A2.2--Continued

NEIGHBORHOOD STORE INDEX ITEMS

PRODUCT MOMENT CORRELATIONS

* INDICATES SIGNIFICANCE AT 0.050 LEVEL.

	64	65	66	67	71	77	102	103	104	105	108	111	113	397	398
417	0.108*	0.048	0.143*	0.000#	0.051	0.043	-0.014	0.000	-0.073	0.005	0.125*	-0.043	0.079	0.094*	-0.040
418	0.029	0.174*	0.233*	0.000#	-0.025	0.001	0.075	-0.035	0.018	0.031	-0.002	0.019	0.151*	0.021	-0.059
419	0.082	0.268*	0.230*	0.000#	-0.045	0.007	0.083	-0.045	-0.014	0.038	0.095	-0.011	0.122*	0.016	-0.128*
420	0.144*	0.233*	0.149*	0.000#	-0.028	0.098*	0.038	-0.034	-0.101*	0.013	0.002	-0.052	0.088	-0.015	-0.104*
421	0.010	-0.040	-0.153*	0.000#	0.033	-0.064	-0.082	0.035	-0.073	0.037	0.042	-0.052	-0.004	0.041	-0.008
422	-0.140*	-0.323*	-0.244*	0.000#	0.041	-0.042	-0.078	0.020	-0.047	-0.073	-0.041	0.030	-0.087	-0.035	0.177*
429	0.147*	0.194*	0.207*	0.000#	-0.060	0.085	0.092	-0.065	0.057	0.049	-0.008	0.084	0.033	0.011	-0.085
430	-0.003	-0.162*	-0.083	0.000#	0.086	-0.031	-0.033	0.084	0.039	-0.187*	0.063	0.095	-0.080	0.110*	0.062
431	0.047	0.145*	0.145*	0.000#	-0.086	0.015	0.071	-0.096	0.019	0.002	-0.052	0.016	0.052	0.049	-0.136*
432	0.129*	0.229*	0.102	0.000#	-0.038	0.047	0.090	0.044	-0.122*	0.072	-0.022	-0.023	0.138*	-0.030	-0.095
468	-0.092	-0.285*	-0.228*	0.000#	0.087	-0.039	-0.126*	0.072	0.018	-0.068	-0.032	-0.084	-0.045	0.027	0.125*

- Insufficient Sample Size

	422	429	430	431	432	468	0	0	0	0	0	0	0	0	0
422	1.000														
429	-0.282*	1.000													
430	0.210*	0.000	1.000												
431	-0.220*	0.000	-0.508*	1.000											
432	-0.218*	0.000	-0.343*	0.404*	1.000										
468	0.390*	-0.246*	0.383*	-0.291*	-0.321*	1.000									

Source: SUDERE/MSU Retail Survey, 1967

TABLE A2.2--Continued

NEIGHBORHOOD STORE INDEX ITEM

PRODUCT MOMENT CORRELATIONS

* INDICATES SIGNIFICANCE AT 0.050 LEVEL.

	399	400	401	402	403	404	405	406	407	408	417	418	419	420	421
399	1.000														
400	-0.001	1.000													
401	-0.004	0.027	1.000												
402	0.273*	-0.054	0.031	1.000											
403	-0.062	0.042	0.059	0.010	1.000										
404	0.541*	-0.021	0.048	0.207*	-0.061	1.000									
405	-0.027	0.034	-0.025	-0.024	-0.037	-0.085	1.000								
406	0.177*	-0.038	-0.025	-0.026	-0.002	0.183*	-0.108*	1.000							
407	0.068	-0.089	0.058	0.120*	-0.005	0.050	-0.008	-0.037	1.000						
408	-0.020	0.034	0.009	-0.034	-0.019	-0.012	0.069	0.020	0.024	1.000					
417	-0.005	-0.003	0.041	-0.030	-0.001	-0.090	0.016	-0.073	0.032	-0.027	1.000				
418	-0.133*	-0.057	0.074	-0.092	0.186*	-0.188*	0.026	-0.186*	0.037	0.064	0.167*	1.000			
419	-0.129*	-0.004	0.065	-0.050	0.190*	-0.188*	0.065	-0.159*	0.009	-0.032	0.149*	0.642*	1.000		
420	-0.022	0.033	-0.050	0.072	0.049	-0.120*	0.032	-0.114*	0.069	0.056	0.069	0.154*	0.212*	1.000	
421	0.187*	-0.008	0.008	0.047	-0.063	0.165*	-0.039	0.059	-0.025	-0.095*	-0.109*	-0.229*	-0.175*	-0.397*	1.000
422	0.144*	0.085	-0.041	0.049	-0.074	0.169*	-0.092	0.164*	-0.089	-0.092	-0.158*	-0.283*	-0.325*	-0.263*	0.146*
429	-0.049	-0.074	0.097*	0.069	0.125*	-0.079	0.064	-0.172*	0.147*	-0.011	0.214*	0.352*	0.369*	0.198*	-0.146*
430	0.033	0.043	-0.078	0.059	-0.031	0.016	-0.060	0.170*	-0.044	0.024	-0.058	-0.201*	-0.278*	-0.110*	0.083
431	-0.051	0.028	-0.039	-0.059	0.013	-0.098	0.078	-0.072	-0.015	-0.002	0.094	0.161*	0.258*	0.112	-0.029
432	-0.027	0.057	0.057	0.002	0.056	-0.018	-0.058	-0.058	-0.011	-0.006	0.003	0.133*	0.185*	0.172*	-0.011
460	0.162*	0.093*	-0.094*	0.039	-0.119*	0.147*	-0.113*	0.230*	-0.124*	0.042	-0.171*	-0.332*	-0.439*	-0.187*	0.098*

- Insufficient Sample Size

Source: SUDEMK/MSU Retail Survey, 1967

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