EVALUATION OF MARKETING SYSTEMS IN LATIN AMERICA*

by

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Introduction

During the past two and one-half years a Michigan State University research team has been conducting studies of marketing systems in three Latin American communities. There were two primary purposes for these studies. First, we hoped to provide information directly useful in economic development planning in the countries where we conducted the studies. Second, we wanted to contribute to improved conceptualizations concerning the role of marketing in the development process.

The research program has been carried out under two interrelated contracts financed by the U.S. Agency for International Development. Additional funds, personnel and logistical support have been provided by host country agencies.

The interdisciplinary research team has been composed of MSU faculty and graduate students from four subject matter departments--Marketing (in the College of Business), Agricultural Economics, Communication, and Systems Science. Dr. Charles Slater has been director of one AID contract--the Latin American Market Planning Center. He and I have shared the direction of the other contract--the Latin American Food Marketing Study.

Field research operations were carried out in Puerto Rico during 1965-66 and in Bolivia and Northeast Brazil during 1966-67. Preliminary research reports were prepared in the

field, Final reports are now being written and will be completed by mid-1968. During the course of this work several graduate students developed their theses from these projects. Plans are now under way for another field study to be conducted in Colombia beginning around mid-1968.

In each of the overseas field operations, we formed joint task forces involving MSU personnel, host government employees, and faculty and students from local universities. The program has, therefore, included a significant training activity as well as advisory services to the host government agencies.

In this paper I will present a brief statement of the problem studied, a description of our research approach, some of the principal findings and conclusions derived from the Puerto Rican and Brazilian studies, and finally some concluding observations on evaluation of marketing systems.

The Problem

Since World War II there has been a surge of interest in the acceleration of development of the poorer countries. During this period there has been a continual evolution in the conventional wisdom about the development process and means of inducing more rapid growth. Several partial and somewhat simplistic development strategies have been advanced, some placing emphasis on industrialization, others on agriculture, education, or infrastructure buildup. Recently there seems to be greater acceptance of more comprehensive approaches to development which recognize the interrelatedness of the various sectors, such as agriculture and industry, and the complexities of the development process.1 Within

this context, the market system which links and coordinates rural and urban areas takes on enhanced importance in economic development planning.

In defining the problem for our research, we found Walter Rostow's statement on national integration a useful frame of reference. In this statement he observes the growing economic and social disparities between rural and urban areas of developing countries. He argues that in most Latin American countries migrants flock to the city seeking better living conditions but employment opportunities are limited. This is related to the lack of an effective market system to distribute urban industrial goods to the rural areas and lags in the development of food marketing systems to serve expanding urban populations. Rostow's prescription is a four-pronged program: (1) a buildup of agricultural productivity, (2) a revolution in the marketing of agricultural products, (3) a shift in industrial output toward agricultural inputs and cheap consumer goods for the mass market in both rural and urban areas, and (4) a revolution in the marketing of these manufactured goods, especially in the rural areas. Rostow expressed the opinion that these changes should be accomplished through a combination of public and private efforts, but he does not specify exactly how it can be done. This has become a principal task of our research, although we are also concerned with verification of Rostow's general diagnosis of the internal national market processes. Our research program has been substantially focused on the pragmatic interests of USAID and the governments of cooperating countries to identify critical marketing problems and recommend reforms that would contribute to overall development


goals. However, we have also pursued the more fundamental interest of improving our understanding of the role of marketing in the development process.

The Research Approach

The different disciplinary backgrounds of our research team were reflected in the approach to the problem. Those of us with economics as a background brought in concepts of the exchange system as a coordinator of economic activity. Price theory, the principles of production economics and market organization were familiar tools, although most of us shared some deep-seated views about the inadequacies of traditional economic theories in dealing with the complex process of economic development.3 We recognized that exchange activities are deeply embedded in social and cultural patterns of behavior. We believed that socio-economic changes were greatly influenced by the attitudes and viewpoints of market participants. We also saw the exchange system as being linked together by an information network which served as the source of data for decision-making. These considerations lead us to conceptualize the market system as an interactive system constantly undergoing change. To assist in the research task, we sought the help of researchers from the related subject matter areas of communications and systems analysis.

Puerto Rico was chosen as the site for our initial field research. The reasons for beginning in Puerto Rico were as follows: (1) There has been a rapid rate of change with real per capita incomes increasing nearly threefold in a period of 25 years; (2) Before these rapid changes began, the socio-economic and cultural conditions were in many ways similar to those now existing in several other Latin American countries;

3For a critical review of economic concepts relevant to this study, see Chapters 2 and 3 of a Ph.D. thesis by Kelly Harrison, Agricultural Market Coordination in the Economic Development of Puerto Rico, Michigan State University, 1966.
There had been a systematic effort to foment change which included activities to modernize the food marketing system; Published reports from food marketing studies made around 1950 provided excellent benchmark observations which were supplemented by a substantial amount of other information and data.

There were four objectives for the Puerto Rican study.

1. To measure and analyze the changes that have taken place in the food marketing system over the 15-year period, 1950-1965.

2. To develop research methodologies useful in appraising marketing problems in Latin American countries.

3. To draw inferences and to formulate hypotheses concerning the role of food marketing in countries in the early stages of economic development.

4. To make recommendations for further improvements in the Puerto Rican food marketing system.

The research task force was composed of four MSU faculty (part-time), two post-prelim doctoral candidates, two Department of Commerce staff members, and three University of Puerto Rico graduate students. Additional personnel were used for field surveys. The project was sponsored and financially supported locally by the Department of Commerce, the Social Science Research Center, and the Agricultural Experiment Station of the University of Puerto Rico. The Departments of Labor, Agriculture, and Economic Planning also cooperated in the study.

We began the Puerto Rican study with a review of previous investigations, a careful inventory of available secondary data on food marketing, and a series of personal interviews with key people in government, industry, and the University. This provided us with an overview of the pattern of economic development and the efforts that had been made to foster changes in food marketing. Later, we followed up with more detailed case studies of selected market development activities.
The second phase of the Puerto Rican study was a series of field surveys of food marketing participants in the San Juan and Mayaguez areas. Approximately 850 personal interviews averaging 1 to 1-1/2 hours in duration were administered to samples of consumers, retailers, wholesalers, processors, truckers, and farmers. The questionnaires included four related sets of questions: (1) economic information about their business and their marketing activities, (2) personal data about the respondent, (3) the respondent's communication behavior, and (4) respondent attitudes toward modernity and their economic environment.

The structured surveys served several purposes. First, they provided descriptive measurements of the existing food marketing system which we used in gauging the changes since benchmark studies were made in the early 1950's. Second, they were useful in making diagnoses of the current food marketing problems. Third, the survey data enabled us to test hypotheses about the dynamic aspects of market processes and economic growth, e.g., innovative behavior and attitudinal barriers to modernization. Fourth, we were trying to develop field survey instruments which would facilitate meaningful cross-country comparisons of market processes.

Some Findings and Conclusions from the Puerto Rican Study

Puerto Rico has several unique characteristics which we should bear in mind as we describe and evaluate what has happened there. It is a small island about 35 miles wide and 100 miles long. For many years, sugar, coffee, tobacco, fruits and vegetables were the principal cultivated crops, with milk and poultry increasing rapidly in recent years. The island is heavily involved in external trade, nearly all of which is with the U.S. mainland. More than one-half of the food supply is imported. Sugar, textiles and tourism are major sources of export earnings. The population of the island is about 2.6 million, nearly one-half being urban residents.
Since 1898, when the United States took over Puerto Rico from Spain, the island has had free trade relationships with the U.S. Puerto Ricans were made citizens of the U.S. in 1917, thus removing political barriers to travel to and from the mainland. Between 1940 and 1952 the island shifted to a self-governing, freely associated state of the United States which we know as the Commonwealth of Puerto Rico (in Spanish, this is Estado Libre Asociado). One of the unique features which distinguishes Puerto Rico from the other 50 states is that their elected representatives to the U.S. Congress do not have voting privileges. Consequently, Puerto Rican residents are not required to pay federal income taxes, although they receive substantial benefits from federal programs in the areas of health, education, housing, etc. This results in a significant transfer of funds from the mainland United States to Puerto Rico.

The close association of Puerto Rico with the U.S. mainland has had a strong influence on the development of the island. The commercial ties, fiscal and political stability have provided a favorable environment for growth. The effects of education and cultural interchange with the mainland have surely had significant influences on the attitudes and aspirations of Puerto Ricans regarding social and economic change.

The socio-economic transformation of Puerto Rico began in the late 1930s with the rise of the Popular Democratic Party under the leadership of Luis Muñoz-Marín. This is an interesting and relevant story in itself, which I shall pass over in this seminar.4

Under Muñoz's leadership a number of reforms and development activities were undertaken. This was popularly labelled as "Operation Bootstrap," a directed effort to increase

Industrial employment and expand tourism. Concurrent with these programs, Governor Muñóz initiated activities to reduce food costs. This got under way with a series of comprehensive studies of the food production and marketing systems. These included a U.S. Department of Agriculture study of market facilities, the Galbraith-Holton study of food distribution, and the broader study of Puerto Rican agriculture by Nathan Koenig. The Governor then appointed a Food Commission that examined the various reports and in 1954 recommended a food marketing reform program which included the following:

1. The establishment of large-scale retail food stores in urban areas.
2. The formation of cooperative retail food stores in outlying villages to be served by a wholesale warehouse in San Juan.
3. Government assistance to local businessmen for the establishment of new food stores.
4. The extension of the tax incentive program to food processors.
5. A training program for food store employees.
6. A consumer information program on food buying.

The various departments of government followed up by taking action on all of the Food Commission's recommendations. It is interesting to note, however, that the most

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successful introduction of modern supermarkets was undertaken by Harold Toppel, a businessman from the U.S. mainland. The local food merchants did not respond initially to the government's incentive program for the establishment of large self-service stores. The Toppel operation began as a small operation but has expanded rapidly. By 1966 they were handling 30 to 40 percent of the San Juan food store sales and were opening new outlets in other cities on the island. From the beginning, the Toppel stores were identified as a Puerto Rican business carrying the name 'Pueblo,' with a related program to create an image of a local rather than a foreign operation. A mainland-based operation, Grand Union, has had much less success in penetrating the Puerto Rican market.

During the late 1950s and early 1960s, several of the market facility recommendations of earlier studies were carried out. New grain handling facilities were constructed at the San Juan port. A new public market site was acquired and developed to facilitate the relocation of the food importing firms from the crowded area in old San Juan to a new, more modern facility with large warehouses and docks for handling truck-sized containers brought in by ship from the mainland. However, in 1966, much of the relocation was still to be carried out.

With a few exceptions, the establishment of modern, larger-scale retail units has not as yet had a substantial impact in bringing about improved vertical coordination of the local food production-marketing system. This is due to the fact that supermarket operators have had easy access to mainland sources of supply for both fresh and processed foods. Nevertheless, there have been some important improvements in the vertical coordination of milk and egg marketing as a result of both private and public action. Harrison has carefully documented these developments in his Ph.D. thesis.\(^8\)

where he indicates that a rather chaotic milk market was stabilized with a government milk regulation which regulates prices at all levels of distribution and supervises farmer-processor relationships. This improved institutional arrangement in milk marketing had been an important factor stimulating the rapid increase in milk output and the adoption of modern dairy technology in response to a sharp rise in consumer demand for fresh milk.

Egg marketing has been revolutionized by the establishment of a grading system and the introduction of vertical coordination arrangements which link producer associations with large retailing firms such as Pueblo. The Department of Agriculture and the Agricultural Extension Service have assisted producer groups in forming closed membership cooperative associations for the selling of products and the purchase of supplies along with the adoption of modern production technology. Concurrently with the development of producer associations, some large-scale commercial egg and broiler producing operations have been established by feed companies.

Not all of the Puerto Rican efforts to modernize their food marketing system have been outstanding successes. The modern slaughter plant built at Caguas has never been able to attract the slaughter volume away from the small municipal facilities. The fruit and vegetable washing and grading stations promoted by the Department of Agriculture have never functioned successfully. The construction of new central retail-wholesale markets (plaza mercados) in urban areas seems to be inadequately coordinated with the basic trend toward larger-scale wholesale-retail food marketing units.

The cooperative movement itself, which has received much support and attention in Puerto Rico, has had rather uneven and in some instances disappointing results. Recent efforts are to revitalize cooperative enterprise through an educational program that emphasizes modern business management techniques rather than the more traditional cooperative philosophies and practices.
Thus far, I have sketched out some of the major institutional developments in the transformation of the Puerto Rican food marketing system. I will now turn to some evidence on the economic effects of these changes.

The structure of food retailing has shifted from atomistic, noncompetitive firms who were highly dependent on wholesaler credit toward larger-scale units that compete through price and promotional efforts and who are less dependent on wholesaler credit.

In our 1965 consumer survey of San Juan and Mayaguez, we found that 59 percent of the food purchases were made in supermarkets. Consumers using supermarkets as their primary food source had higher incomes and higher levels of education than other shoppers, although people from all income levels patronized the supermarkets. Among all consumers surveyed, one-half had automobiles and more than 90 percent had refrigerators. This pattern of durable goods ownership had changed rapidly over the 1950-65 period.

In spite of the shift toward larger-scale retail outlets, the total number of retail food establishments and the number of persons employed in food retailing has not declined. Many of the smaller neighborhood stores have shifted toward beverages, with a declining percentage of food sales. Also, the total volume of food sales has expanded with growing population and rising incomes. Nevertheless, in an economy that still has about 10 percent unemployed, there are many individuals who try to gain part of their livelihood in the food business.

Retail gross margins in San Juan declined from the 23 percent reported by Galbraith and Holton for 1950 to about 16 percent in 1964 for non-supermarket outlets. 9

9Department of Labor, Commonwealth of Puerto Rico, special studies of operating costs of selected businesses.
margins for a somewhat different mix of products was estimated to be about 18 percent in 1964. Pueblo supermarkets reported margins of 19 percent in 1964 and 22 percent in 1966, with net profits after taxes of 4.2 percent in both years. Pueblo's net profits have been relatively high, as compared with mainland retail food chains. These profits have been largely reinvested in expansion of the Puerto Rican retail operations.

Price comparisons in San Juan for 9 food items purchased frequently by low income families showed that supermarkets had lower prices than small stores on 5 items with about equal prices on the other 4.

Food wholesaling remains a relatively high-cost operation in Puerto Rico, especially on imported foods handled through traditional limited-line, small-scale wholesalers. For many years it was customary for mainland food processors to market their products through broker-wholesalers located in the San Juan area under exclusive handling agreements or franchises. Subsequently, the Puerto Rican legislature passed a law which specified that if such an agreement were discontinued, the broker-wholesaler should receive a payment from the mainland firm to compensate for the loss of this income-producing asset. This rule undoubtedly serves as a barrier to the modernization of food wholesaling. The large supermarket firms have bypassed this traditional system by ordering directly from mainland wholesale sources with shipments being made in truck-sized containers hauled on special ships (Sea Land and Sea Train). These containers are unloaded on trucks and hauled directly to the supermarkets, making possible savings in physical handling, reducing losses due to pilferage, and reducing the inventory requirements of the supply system.

I mentioned earlier that we were attempting to gain a better understanding of the process of change through innovative behavior. In several of our surveys, we attempted to measure the degree of innovation of the respondent. This was a fairly straightforward attempt to identify what proportion
of the applicable innovations had been adopted. We found that among farmers the most innovative individuals tended to be younger, better-educated, and had greater exposure to market information and mass communications. Similar relationships were found among retailers, but the degree of association was not as strong as we had expected. This suggests that we cannot predict with a high degree of accuracy who will be innovators in the food production-distribution system.

We hypothesized that attitudes of respondents toward modernization would be an indicator of their willingness to innovate or accept change. Using a series of attitudinal questions, we computed an index of modernity which we found to be significantly correlated with innovative behavior. This suggests some possibilities for gauging a community's readiness for new practices or institutions.

We supplemented the modernity measurements with a series of attitudinal statements about specific market institutions or conditions. This provided an indication of the degree of approval or disapproval of existing conditions or proposed changes. We found, for example, strong support for the egg grading program and the milk regulation and general agreement that new regulations were needed to improve the processing and distribution of meat. On the other hand, most consumers disagreed that retail food stores rigged their scales to cheat shoppers on product weight.

Underlying the attitudinal measurements are some implicit hypotheses as follows:

1. Traditional attitudes and value orientations of market participants limit the possibilities for institutional reforms and technological innovations.

2. Institutional reforms are more likely to be successful if they are reasonably consistent with attitudes and value orientations of market participants.

3. Development programs can be devised to modify attitudes and value orientations with the objective of facilitating institutional reforms.
I will conclude my comments on the Puerto Rican study with a few summary observations. First, we believe that in spite of the unique characteristics of Puerto Rico, there is much to be learned from their pragmatic approach to fomenting economic development. In dealing with marketing problems, as well as other development issues, they usually began with background studies followed by formulation of action programs which provide incentives for private investment. Where deemed socially desirable, they have adopted rules and regulations to reduce market risks. Second, we feel we were able, with the help of several Puerto Rican agencies and individuals, to identify more adequately some possibilities for further improving their marketing system. Before we left Puerto Rico, we held seminars and rendered special consultations on further market improvements. Finally, the pilot study in Puerto Rico was very helpful in preparing for the larger-scale efforts in Brazil and Bolivia.

The Northeast Brazil Study

The largest and in many ways the most interesting of our three field operations was carried out in Northeast Brazil. This was organized as a joint task force with SUDENE, the Northeast Brazil planning and development agency. Several things made this a challenging opportunity. First, poverty among the 25 million people living in the Northeast demands urgent attention. Second, the neglect of marketing as an integral part of their development program was apparent and had been explicitly recognized in the SUDENE third master plan. Third, the lack of information and reliable data about the food and agricultural industry made it a difficult task.

The scope of work was broadened to include not only food marketing, but also the urban-rural flow of both agricultural inputs and consumer goods. The industrial sector was also studied as a part of the rural-urban system. The
geographic focus was narrowed to the city of Recife and its foodshed, which for some products extended out for 200 miles or more. Five commodities were agreed upon for detailed rural surveys. These were rice, beans, manioc, milk and cotton.

The operational objectives of the program were as follows:
1. To conduct a diagnostic study of the existing marketing system for food, selected agricultural products, farm inputs and selected locally produced consumer goods.
2. To formulate recommendations for improvements in the marketing system based upon diagnostic studies.
3. To develop systematic procedures for evaluating selected potential marketing reforms and arriving at policy decisions.
4. To evaluate hypotheses and draw conclusions about the role of marketing in economic development.
5. To provide research training for the Brazilian and Michigan State University project staff.

The survey research program was influenced by our belief that a successful marketing reform program requires harmonious coordination of all stages of the production-marketing process. This line of reasoning suggests that efforts to diagnose and correct perceived difficulties at one stage of the system may fail if inadequate attention is given to interrelationships with other stages in the market process. Our view was reinforced by examples of unsuccessful marketing projects that had been undertaken in the communities we have studied or have heard about. A particular case was the construction of a new wholesale market facility in Recife which has not as yet been successfully integrated into the food marketing system.

In addition to obtaining an over-all description of the existing marketing system, we sought answers to four basic questions as follows:
1. What are the barriers to increased productivity and reduced costs in the marketing process for food and selected non-food items?

2. What are the conditions in agricultural product and input markets which retard the adoption of new technology and the expansion of agricultural output?

3. What are the attitudes, personal characteristics, and communication-behavioral characteristics of market participants that will limit or condition the kinds of changes that can be successfully introduced into the production-marketing system?

4. What are the marketing reforms that would stimulate growth and resource use efficiency in the production-marketing system and which would ultimately contribute to rising levels of income and improved living conditions for the people of Northeast Brazil?

The urban surveys revealed that the average per capita income of Recife residents was about $300 per year, but the pattern of distribution was highly skewed. One-half of this average income goes for food, with a large portion of the low income families spending more than two-thirds of their earnings for food.

The urban food marketing system is composed of neighborhood street markets, municipal marketplaces, small neighborhood stores, a few large self-service supermarkets, and street vendors. Among small-scale traditional operators, credit costs and product spoilage rates were surprisingly high. The recent entry of a large self-service store with aggressive price policies has caused a significant ripple in the retail price structure. However, the surveys indicate that the many small retailers lack both the ability and the willingness to change their methods of operation.

In the industrial sector there are many managers who follow traditional business organization procedures which give little emphasis to new product development and aggressive
distribution strategies. A government program to expand industrial activity is currently creating substantial increases in physical plant capacity without concurrent emphasis on expanding market outlets and increasing effective demand, especially in rural areas, where two-thirds of the people live.

In the rural areas we find a traditional agriculture poorly integrated with urban centers. Low levels of agricultural productivity are associated with a general lack of modern farm inputs such as improved seeds, fertilizer, and machinery. Most farmers are small but surprisingly specialized in production. Three-fourths sold less than $700 worth of products in 1966. One-half of this income was spent for food for the family and, in some of the poorer areas, more than two-thirds was spent for purchased foods. Only one-third of the farmers were functionally literate, although more than 50 percent had attended school. Fifty-eight percent had radios. Eighty percent make weekly trips to the local village market day, although most had to travel by foot, horseback, or by oxcart. Only 56 percent of the farmers were familiar with commercial fertilizer, and only 14 percent had ever attended agricultural extension meetings. Hence, knowledge about modern technology was very low.

In the rural assembly markets for staple foods, we found many small-scale operators hampered by a poor information and transportation system and conditioned by a market-sharing ethic among traders. The lack of credit to traders and the high interest rates are also significant barriers to increasing the scale and efficiency of assembly market activities. In spite of these barriers, there are some successful efforts to develop lower cost market channels linking rural and urban areas.

We have made our preliminary diagnosis and have offered an integrated series of recommendations to SUDENE and USAID. Time does not permit further elaboration this afternoon. We
are now soliciting Brazilian reaction and suggestions which will be incorporated into our final report to be completed by next June.

Systems Simulation Models

From the beginning of our research and advisory program, we have recognized the need for analytical techniques to evaluate the economic consequences of alternative marketing reforms. The income and employment effects become important criteria for development planners considering recommendations coming from diagnostic studies such as ours. Although traditional cost-benefit analyses continue to be widely used, there is increasing interest in the application of systems simulation models to the analysis of dynamic processes such as economic growth.

Two doctoral candidates trained in systems science have undertaken the development of first generation systems models, one focused on Puerto Rico and the other on a model of Recife, Brazil, and its foodshed. Substantial progress has been made on conceptual and mathematical problems of building systems simulation models which include explicit marketing components. Due to the tremendous data deficiencies, especially in Brazil, only crude estimates can now be made. However, the conceptualization procedures have contributed to our understanding of the marketing process and have served as a useful framework for discussions with development planners faced with decisions on alternative market reforms. Looking to the future, systems simulation techniques promise to be even more useful when the methodology is further developed and more adequate data can be generated.

Some Concluding Observations

The results of our studies have reinforced our initial view that marketing reforms can be an active force in bringing about modernization of traditional systems of production
and distribution. We believe we have developed an improved approach to development planning which places emphasis on the role of the market system as a coordinator and stimulator of sustained growth.

In the Latin American communities we have studied, it appears that a general strategy can be followed in evaluating marketing systems within the context of comprehensive economic development. However, due to differences in economic and social conditions, the specifics of marketing reforms should be tailor-made to a particular market area. The suggested strategy is to begin with diagnostic studies to describe and analyze the existing system giving emphasis to the identification of economic and socio-cultural barriers to change.

On the basis of these diagnostic studies, a set of inter-related market reforms can be devised which are reasonably consistent with over-all development goals and which seem to be feasible within the constraints of the existing economic, social and political systems. Choices between alternative market reforms can be facilitated by cost-benefit analyses with some prospects that systems simulation models will be a useful tool for development planning.

Finally, all we are suggesting is that we have a differentiated approach to development planning which gives increased emphasis to the market system as a means of stimulating economic growth. There is evidence to suggest that many economic planners have regarded marketing as a passive element in the development process. On the basis of our studies in three Latin American communities, we see much to confirm Walter Rostow's diagnosis that poor market coordination between rural and urban areas is a major deterrent to economic growth.