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**TRANSFORMING THE AGRICULTURAL MARKETING STRUCTURE  
OF A DEVELOPING COUNTRY**

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## TRANSFORMING THE AGRICULTURAL MARKETING STRUCTURE OF A DEVELOPING COUNTRY

It is common in less-developed countries to attach considerable importance to the development of cooperatives. Cooperatives are viewed by many technicians of different international organizations and governmental employers of less-developed countries as a means of meeting the dual goals: 1) increased efficiency and 2) improved social justice. Cooperatives are seen as the panacea for a variety of problems existing in both the supplying and marketing of farm products. They are seen as the key instrument for improving the competitive structure and efficiency of the supply and/or marketing system.

Much of the pressure for the establishment of cooperatives is based upon the opinion that the existing marketing agencies exploit the farmer. If this exists, cooperatives can thrive because the monopolistic profit will attract farmers and will serve as a margin to cover the losses resulting from high start-up costs and inefficient operation during the formulative stage. If existing marketing agencies are not exploitative, cooperatives generally will not succeed.<sup>1</sup>

A cooperative, like any other institution which is controlled by the people who use it, can only be as good as the intelligence of the membership in control. There are several reasons why a broad educational program is a necessary part of a successful cooperative activity: strong prejudices must be overcome; only a well-informed membership can select capable leaders; religious, ethnic, caste, etc. differences must be traversed; nepotism must be guarded against; active interest must be maintained once a project is established; etc.<sup>2</sup>

## COMPARATIVE ADVANTAGE

The major alternative marketing systems in developing countries include domestic private enterprise, foreign private enterprise, cooperatives, government corporations, or some type of joint venture. Emphasis has frequently been placed on cooperatives as the most viable instrument of market reform. This strategy implies that there is a service which can be provided through cooperatives better than through other types of enterprise.

Marketing economists and cooperative specialists are in agreement that many of the inefficiencies in agricultural marketing can be attributed to an imperfect market structure. Therefore, it seems necessary to raise a question which is central to this paper. Do cooperatives have any comparative advantage over private firms in generating the marketing power needed to improve the competitive structure and efficiency of the marketing system?

Benefit-cost analysis has been ignored when selecting cooperatives as an instrument to transform the marketing structure in developing countries. This paper will attempt to illustrate that cooperatives do not have any comparative advantage over well-managed and regulated private firms. Furthermore, it will be indicated how cooperatives usually have serious limitations from the standpoint of improving the competitive structure and efficiency of the marketing structure. It will also be argued that frequently a foreign private firm or a joint venture may be the only means of obtaining a well-managed and operated private firm.

The marketing system of any country is difficult to generalize because of its variability from community to community, region to region, and country to country. It is generally assumed that marketing margins are wider than necessary. Such may not be the case with some products. If margins are not excessive, it is indeed difficult for cooperatives to compete. This is why we need studies of marketing channels, margins, and structures.

#### COOPERATIVES AND MARKET TRANSFORMATION

Numerous definitions of cooperation have been made. Sir Horace Plunkett said it was, "self-help made effective by organization."<sup>3</sup> and Hubert Calvert defined it as, "a form of organization wherein persons voluntarily associate together as human beings on a basis of equality for the promotion of the economic interests of themselves."<sup>4</sup> Professor Carpenter has said, "Show me a successful agricultural cooperative and I will show you one member who was largely responsible for its success."<sup>5</sup>

Too frequently, in developing countries, a decision is made to organize a cooperative as the instrument of market reform, then afterwards the functions of the cooperative are defined. The first step must be the identification of the major problems in the overall agricultural marketing system. Next the specific problems for particular commodities need to be delineated. Following this, an appraisal, in the form of a feasibility analysis, needs to be conducted to determine whether a cooperative or some other form of enterprise is the most

effective instrument to achieve the objectives. Finally, a leader in the community needs to step forth. This procedure is seldom followed, due to the belief on the part of government agricultural leaders and foreign consultants that cooperatives are the panacea for resolving all problems in existing marketing systems.

Speaking of the progress of cooperatives in India, E. M. Hough says, "The recognition of the need by the prospective beneficiaries of the effort should come first, then the realization that cooperation offers a way to meet it, and finally the taking of the necessary steps .... With the exception of a few genuinely cooperative cases, due to the zeal of a Registrar or of some philanthropic individual ... not so much a movement as a governmental policy."<sup>6</sup>

Why have the majority of the cooperatives failed to transform the marketing system in most developing countries? There exists a series of extrinsic factors which have inhibited or retarded its optimum development. The complexity of the problem is undoubtedly among the chief of these. Poverty and malnutrition, the widespread indebtedness which in many nations tardy steps have been taken to relieve, the high percentage of illiteracy, the lack of business experience, uneconomic holdings and antiquated methods, inadequate transportation and storage facilities, the lack of uniform weights and measures, price fluctuations, dearth of regulated markets are among the many facets of the problem which call for simultaneous attention supplemented by far-seeing economic and social legislation.<sup>7</sup>

Problems more directly related to the involvement of the patron are inadequate credit, and a lack of patron confidence, trust and support. Also, frequently the the directors and management of the cooperative are in conflict as to their responsibility to the membership and their respective families. An example of this point is the extension of excessive cooperative credit to management's family members with little pressure being applied to repay loans or debts. Another form of nepotism is the hiring of relatives for sundry positions within the organization. These are typical of the leadership problems that many of the cooperatives experience which lead to an inefficient operation and impede the development of the type of organization necessary to generate the market power to transform the marketing system.

The United States and the Scandinavian countries are the regions where the cooperatives movement has flourished. These countries had several things in common which are necessary for cooperatives to thrive. Among the most important basic factors were a relatively highly educated and informed rural population, and a history of community togetherness. Despite the presence of these essentials, the cooperative movement has gone through several distinct stages spanning a century. In the U. S. these stages can be identified as:

- I. Conception - 18th Century
- II. Gestation - early 20th Century
- III. Birth - Great Depression years
- IV. Maturation - late 1930's to present

Until the 1930's cooperatives were being formed in the U. S. at an increasing rate. However, during the depression it became evident that forming a new cooperative was not the best way to resolve every new marketing or supply problem which the farmers confronted. It was during the depression when the real idea of cooperatives was born -- they had to be viable marketing firms. Since then there have been more failures among cooperatives than there have been new ones organized.<sup>8</sup>

The problems indicated above have not been unique to cooperatives. Many traditional private firms experience similar difficulties, especially in developing countries. It is for this reason the position is taken that foreign firms or joint ventures may provide the best short-run solution. Ruttan contends that it is difficult to find examples of direct public distribution programs which represent effective marketing channels for farm supplies.<sup>9</sup>

Examination of the progress of cooperatives in developing countries reveals that most of them are still struggling through the conception state of organization. At the end of 1966 there were more than 5,000 cooperatives in Ceylon; however, only 3,000 were actively engaged in agricultural activities. Singh concluded that mergers, mobilization of savings and resources, improvement of management, and a review of the relationship between the government and cooperatives is necessary for the development of a healthy cooperative impact upon the marketing structure of Ceylon.<sup>10</sup> Owing to small membership, limited resources, insufficient business turnover, and inadequacies of management, many of the cooperative societies in India are not faring any better.<sup>11</sup>

Iran provides an example of the results of an over-zealous government in the formation of cooperatives. Owing to the mandatory membership requirement there were 8,236 cooperatives with nearly 1.9 million members in 1968. The organizational structure is weak, there is a shortage of operating funds, and debt repayments are lax. The cooperatives appear to have done little to increase agricultural productivity, improve the marketing structure, or ensure better returns to farmers.<sup>12</sup>

Cooperatives in the Asiatic countries appear to be doing only slightly better. Action needed to improve the position of marketing and supply cooperatives in Japan include strengthening and streamlining the organizational arrangements, expansion of the scale of business, and improvement of management.<sup>13</sup> In the Philippines the cooperative organization is in fact a governmental organization designed to channel loans to farmers (mostly sharecroppers) against the security of crops to be harvested. The failure of borrowers to fulfill marketing contracts, the lack of sound operating policies, and inefficient management are a few of the principle problems which need to be overcome.<sup>14</sup> The development of marketing services by cooperatives in South Korea are inadequate. In particular, the links between credit and marketing need to be strengthened.<sup>15</sup> The successful experience with farm supply cooperatives in Taiwan stand in sharp contrast to the rest of Southeast Asia.<sup>16</sup>

Buse and Helmberger believe that cooperatives constructed as purely economic institutions appear to have serious limitations in fostering economic development.<sup>17</sup> This may not be true if non-economic or

quasi-economic roles have been prescribed. Scott and Fletcher point out that in the context of market imperfection there are various ways a cooperative can serve to improve the marketing sector, but not transform the marketing system.<sup>18</sup> COTIA and Sul Brazil are examples of successful agricultural cooperatives in Brazil and have an important role in the marketing of farm products; however, the majority of the cooperatives are not commercially effective.

Agricultural cooperatives have made contributions to the economies of developing countries, but have in general been unsuccessful in transforming the marketing system.

#### PRIVATE FIRMS AND MARKET TRANSFORMATION

In most developing countries, trade in agricultural commodities is carried on in the private sector. The role of private enterprise in stimulating marketing reforms and the conditions under which it may be an effective change agent need to be studied. The amount of earnings accruing to individuals depends upon the marketing functions which they perform. Organizations or regulations which increase the efficiency of marketing operations can reduce the total cost of marketing and may benefit producers, as well as consumers.

Well-managed private firms are capable of developing the types of organization which can generate the market power to transform the marketing system. An increased emphasis on private firms means, in most instances, that the government will have to provide more capital assistance. Governments in less-developed countries frequently do too.

much in marketing operations, and too little in facilitating the development of marketing systems. Governments should provide the infrastructure including standards and regulations, but leave the market trading activities in private hands -- either as individuals or collectively.

There can be a wide range of trade-offs between government and private enterprise in marketing. Mellor suggests that the basic role for government might be to facilitate the operations of the private sector. He suggests that the government might facilitate the operations of the private sector by making the marketing system more competitive, more efficient, and more technologically dynamic. Three of the major ingredients to this process would be: 1) remove arbitrary and inhibiting public restraints on marketing, 2) facilitate increased competition, and 3) facilitate technological change and investments.<sup>19</sup>

By facilitating the development of marketing systems, the proven and successful operators of private firms, foreign firms, or joint ventures, capital will be more effective and efficient in operating needed enterprises. Under these conditions, the desire for profit and for the firm to succeed should result in superior management, more organizational competence, higher level of technology, greater capital investment, and better facilities. These attributes are lacking in most of the cooperative and government-operated enterprises.

Although cooperatives have often been the focal instrument of market reforms, in most instances, they have not had any comparative advantage over strong private firms and usually have had serious limitations

in their ability to improve the efficiency of the marketing sector. However, many policy makers have also become discouraged by the poor performance of traditional privately owned firms. They blame the organization of the firm rather than looking deeper into the organization of the marketing structure. Failure of the traditional private firms, for the most part, has been due to the lack of financial, technical, and human resources rather than the organization of the firm. Not recognizing that the lack of these resources is the root of the problem, rather than the firm's organizational form, government policy-makers have attempted to establish a network of cooperatives -- which suffer from the same resource limitations, plus the aforementioned problems associated with cooperatives in a developing country. Furthermore, a private firm can become established in the market organization and have an impact much more rapidly than a cooperative. An inherent and serious problem of a cooperative is the rather long gestation period resulting from the mutual effort of a large number of people.

Kriesberg and Steele point out that there are wide differences in marketing systems in different countries. Marketing is an integral part of the larger agricultural sector and the nation's overall economic system. A modern marketing system is neither feasible nor useful where agriculture is largely subsistence and where the overall economy is operating at a low level of technology. Also, a modern farm production system cannot be sustained without an adequate marketing system. Differences which affect the food marketing system include at least the following:

- 1) The level of technology in the agricultural and overall production system.
- 2) Capacity of the country to supply its own food requirements and the extent to which a few crops dominate agricultural output.
- 3) The extent of urbanization -- dependency upon a commercial marketing system.
- 4) Level, distribution, and elasticity of income as related to agricultural products.
- 5) Size of country, total population, population growth, and population distribution within the country.
- 6) The socio-economic-political structure of the country and the prevailing attitude toward private and public enterprise.

Alterations in the marketing system are likely to be an advantage to some and a disadvantage to others. Therefore, it is not enough to know what changes are necessary, but also how the changes are to be brought about and the effect upon existing marketing institutions must be anticipated.

#### TRANSFORMING THE MARKETING SYSTEM OF BRAZIL

The hypothesis set forth in this paper is that private firms, foreign firms, or joint ventures can more efficiently and effectively transform the marketing system than cooperatives. To accomplish the transformation, adequate financial, technical, and human resources need to be provided. Two examples are taken from Brazil, comparison is made of the impact of a more successful private venture with the most successful cooperative venture in the country.

With good organizational and managerial competence, the availability and wise use of capital and a high level of technical know-how and services, one private firm transformed the marketing structure of fertilizer in Brazil within a two-year period. During the same period, cooperatives and governmental organizations were unable to function effectively in generating the market power required to make significant changes in the marketing system.

#### Marketing Environment

Sao Paulo is the most progressive and productive state in Brazil and considerably more developed than any region in most developing countries. The state has a reasonably well-developed social-economic infrastructure. However, the traditional public institutions, cooperatives, and private firms have neither been effective nor efficient distributors of factor inputs or output of the agricultural sector. The marketing structure has many imperfections.

Most of the traditional private firms and cooperatives in Brazil experience serious organizational and managerial problems, lack capital and technical know-how, have a high-cost inefficient operation, and provide customers a minimum amount of services. Some private firms have set excessively high margins for fertilizer and other products due to the lack of a purely competitive market. Transportation and labor costs have been excessive because of the location of plants and the use of low-analysis fertilizer with a large amount of filler. Poor marketing practices have existed among private firms because of the practice of

selling at the maximum price possible and providing only the minimum amount of services. . . This sales policy has grown out of the philosophy of only being concerned for the present year with no attempt to establish long-run relationships with customers. . . In part, this sales approach may be a result of the historic volatile political and economic situation in Brazil.

Most private firms and cooperatives have not been large enough to develop the economies of scale required to improve the efficiency of the marketing system. Furthermore, very little technical service has been provided by either the private firms or cooperatives. For the most part, crops have not been fertilized with the objective of obtaining optimum yields with the result being low crop yields.

#### Private Firms

The fertilizer industry in Brazil is characterized by a large number of small firms who are essentially engaged in dry-blending and bagging of basic fertilizer materials, most of which are imported. The typical company employs 15 to 20 salesmen and/or "agronomists." Sales commissions average about 10 percent and, in addition, the mixers usually realize a 40 percent markup over direct costs.<sup>21</sup>

Within this environment, Ultrafertil, S. A., a private Brazilian company which is 60 percent owned by the Phillips Petroleum Company, formulated plans in 1965 to construct a fertilizer plant near Santos, Brazil, and to set up a network of 14 distributors in South-Central Brazil. Total investment for the project amounted to approximately

\$70 million of which USAID made a \$14.8 million direct loan and provided an extended risk guaranty of \$18 million.<sup>22</sup>

After Ultrafertil entered the market in 1969 the retail price for small quantities of high analysis fertilizer in the state of Sao Paulo decreased about 20 percent, and the price for low analysis fertilizer dropped 10 percent.<sup>23</sup> Fertilizer mixing and distribution has been very profitable for several years; however, beginning with Ultrafertil's production in 1969, many small firms discontinued operating because of low profits and the inability to compete.

Ultrafertil's pricing strategy has been competitive; they have not intended to eliminate competition on the basis of price. However, the firm has been the price leader for the industry. A competitive pricing strategy is followed because the firm is involved in manufacturing, wholesaling, and retailing operations. Many of their competitors are also their customers. To force the competition out of business could have an undesirable impact upon their market in the future. Some of the cooperatives which obtain fertilizer wholesale from Ultrafertil can actually retail the product at a lesser price than Ultrafertil, but the cooperatives do not provide as many services.

Recognizing that most farmers or retail firms need credit before they can purchase significant quantities of fertilizer, Ultrafertil has made a strenuous effort to assist its customers in obtaining credit from private banks, state and federal agencies, and provided some funds itself. In 1968, 23 percent of the credit sales were financed through company sources.

The firm has introduced many new innovations into their marketing structure. Bulk fertilizer is available at the centers or is also applied by the firm with their motorized applicators. Most centers have the facilities to blend any analysis desired by farmers which means that each farmer can purchase a product more suited to his needs. More than 75 "agronomists" are employed to provide technical assistance in the form of soil testing, advising on quantity and analysis of fertilizer requirements, as well as, consultation on tillage techniques, seed variety and pesticide use. As a result of the educational effort and technical services provided by Ultrafertil a higher analysis and a greater quantity of fertilizer is being used by farmers in south-central Brazil. As a result some of the most valuable agricultural extension work in Brazil is being done by the representatives of private firms as they push the sale of their products. In this aspect, cooperatives have had only a minor role, except among the Japanese whose traditional cultural cohesiveness has favored joint action.<sup>24</sup>

Another major change brought about by Ultrafertil's marketing practices, and the resulting strengthening of competition, has been a modification of the marketing concept in the industry. Firms no longer think only in terms of the short run but are more aware of the need for satisfying buyers to encourage their repeated patronage. Also, the role of the salesman has changed substantially. Previously he was only interested in selling his company's product, but the salesman is now providing a variety of services for the customer.

The net result is that overall business philosophy in the industry has changed as many firms: 1) have adopted a marketing philosophy of "we will not gouge our customers this year because we want them back next year;" 2) are selling higher analysis fertilizer which means the farmer pays less transportation and handling costs for the nutrients; 3) are providing technical services; and 4) are installing more modern plants and improving their operations and services.

Traditionally, most of the fertilizer used in Brazil has been imported. The cost of importing fertilizer has traditionally been less than domestic production despite the availability of adequate raw materials within the country. Because of an inadequate industrial and transport base within Brazil, fertilizer manufacturing within the country can not compete with the international market.<sup>25</sup> One of Ultrafertil's primary objectives has been to broaden the use of fertilizer at the farm level. To increase the demand for fertilizer the price had to be decreased, the services of competition had to be strengthened, and a program of technical education had to be implemented. The firm has had a significant effect in all three areas.

Approximately 820,000 metric tons of fertilizer were used in 1970, this was triple the 1966 level. Average application in the state of Sao Paulo, the largest user of fertilizer in the country, was 50 kgs. per hectare. Fertilizer prices in Brazil are primarily a function of transportation costs, world fertilizer prices, and government policies concerning preferred exchange rates for fertilizer imports. Using 1948-52 as a base, the fertilizer price index to product price index in 1970 was only 77.<sup>26</sup>

To stimulate increased fertilizer use and also reduce prices Ultrafertil has had to distribute a substantial proportion of its production through other private firms and cooperatives. Some of these outlets are direct competitors of the firm at the wholesale and/or retail level.

The important point in this case is that Ultrafertil has been able to analyze the market situation and utilize their resources in establishing and operating the required facilities. Brazil has benefited from this public capital investment in a private firm through keener competition, lower prices, and increased technical assistance in the fertilizer industry. Another major benefit is that domestic manufacturing of fertilizer will free foreign exchange to be used for importing other necessary items.

#### Cooperative Groups

It is generally assumed that marketing margins are wider than necessary in many less developed countries. Such may not be the case with some products which makes it very difficult for cooperatives to compete. In fact, under such circumstances it may be difficult to justify the formation of a cooperative.

USAID has also been active in working through the cooperative enterprise system to transform the agricultural marketing structure in Brazil. Their active role has centered on a cooperative association with its core of activity in the state of Sao Paulo.

The effort has gone through more than four years of feasibility studies, loan negotiations, and difficulty in getting participating cooperatives to raise a fair share of the capital. None of the

projected farm service centers with storage facilities for grain, feed mixing facilities, and facilities for handling fertilizer were completed by the end of 1969. However, two were under construction and slated to begin operating in 1970.

Unlike the private firm example, the cooperative venture is pertinent to both the product and factor sectors of the market. The cooperative farm service centers may eventually have a desirable impact on the product market sector if an adequate number of centers are developed. Storage facilities are needed which will reduce grain losses to farmers. Losses now occur due to poor storage facilities and practices as well as the inability of producers to hold their grain to take advantage of the seasonal fluctuation of prices. But due to difficulties in financing and expected operational problems, considerable time will probably elapse before the cooperatives, existing traditional private firms, and the governmental enterprises will be able to develop the needed facilities and implement the necessary forces to transform this sector of the marketing system.

The agricultural cooperatives in Brazil are experiencing a deluge of difficulties which will prevent this form of organization from generating the market power required to bring about a market transformation. Most of these problems are no different than those being encountered in other less developed countries. In essence, the Brazilian cooperatives are not strong because of inherent organizational, managerial, and operational problems; insufficient technical know-how; lack of financial resources; inadequate facilities and a small volume of business; poor technical service and credit for patrons; and members do not strongly support the organization.<sup>27</sup>

## STIMULATION FROM FOREIGN ASSISTANCE

The cooperative movement in the United States was able to overcome the organizational and managerial deficiencies, as well as the lack of adequate financing and facilities which plagued them during competitive battles with private firms to improve market performance. However, the cooperative in the United States began with patrons who were of a different social-education background. Cooperatives in developing countries need more than an injection of investment capital.

### Assisting Cooperatives

The problem concerns what can be done to make cooperatives in the less developed countries a viable organizations. In addition to capital assistance for the development of facilities, the cooperatives need organizational, managerial and technical assistance. The training of management personnel cannot be accomplished by just sending cooperative personnel to short-term training sessions, either within the country or abroad. The managers need qualified advisors to work closely with them for an extended period of time. These advisors need to have sufficient decision making authority to overcome the neopotism, organizational and management problems. Also, the advisor should be given ample financial assistance.

Another approach would be to work with successful cooperatives which have strong operations, such as COTIA in the State of Sao Paulo, Brazil. Cooperatives of this type could effectively and efficiently utilize an injection of capital. However, in most of the less developed countries strong cooperatives which have the potential of transforming the marketing structure but lack capital do not exist.

Still another approach would be to encourage successful cooperatives in developed countries to engage in joint ventures with sister organizations in less developed countries. Hopefully the successful cooperatives would be able to obtain support and capital from their members, national and world lending institutions, and perhaps USAID. To be successful this type of venture may have to be some type of partnership which could prevent a conflict of interest over control. Or, a contractual arrangement with a specified period of duration may be the most beneficial arrangement.

Basically most cooperatives in less developed countries need both financial and managerial assistance with the latter interested in the non-financial as well as the financial aspects of successful cooperative organization. This has a foreign quasi-firm joint venture aspect and is possibly a somewhat bizarre approach. However, for cooperatives to become viable organizations of the market structure in less developed countries, they may need to embark upon untraditional paths.

#### Contributing to Private Firms

Private firms in less developed countries have received assistance from USAID, world lending institutions, etc. to help locate and appraise investment opportunities, loans, risk guarantees, etc. Twenty of the twenty-five extended risk guarantee coverages that USAID wrote between 1962 and 1968 were written during the last two years. In 1969, USAID provided sixteen coverages of \$100 million for a total of approximately \$400 million worth of investments. This was more activity than during the previous seven years. USAID's dollar loan program for private investment projects has been mostly replaced by the extended risk guarantee insurance program.<sup>28</sup>

In recent years USAID has demonstrated a willingness to devote more attention and resources to encourage and assist private companies to become involved in working with counterpart firms in less developed countries. More attention should be in this direction if market structure changes and the resulting development are to be expected. It would appear that the returns from a given set of scarce resources would be greater. Also, governments in developing countries need to be encouraged to shift some emphasis from cooperative formation to developing strong viable firms irregardless whether they are cooperatives, private firms or joint ventures.

There is a possibility of political problems developing with the intervention of numerous foreign firms, but there are ways of alleviating these difficulties. Williams proposes that a private firm in the agricultural sector should withdraw in twenty years and allow the enterprise to become wholly owned by the partners involved in the changed practice. In twenty years the firm should more than recover its original equity capital and earn a substantial return on its investment providing there have not been unusual difficulties.<sup>29</sup> The political problems that may develop could result in expropriation. Hoskins contends that the spectrum of remedies available to a foreign expropriated company appear to be rather broad, but the utility of the remedies is actually quite limited.<sup>30</sup> It appears that the foreign firm joint venture, such as Ultrafertil, reduces considerably the risk of expropriation because domestic capital is involved in the enterprise. Also, the joint venture involves nationals to a greater extent in the development of their economy.

## CONCLUSION

It is recognized that governments in developing countries as well as international assistance agencies need to continue to assist in the development of government and cooperative marketing organizations as these have an important function in the marketing system. However, market policies that focus on problems of equity in income distribution are less appropriate to use in accomplishing needed market reforms than programs which focus directly on problems of logistic and technical efficiency. At the stage of development of many developing countries, the emphasis needs to be placed on the most effective and efficient method of market reform.

In this paper two contrasting examples have been presented, but similar examples for other private firms and cooperatives could be cited for Brazil as well as for other less developed countries. If a sufficient infrastructure exists it seems the experienced, well organized, and properly managed private firm, often a foreign firm or a foreign firm joint venture, has a comparative advantage compared to the cooperative with respect to being able to generate the market power and innovations needed to increase efficiency, improve the competitive structure, and transform the marketing system rapidly. With investments in strong private firms, both foreign and domestic, that are proven successful operators it seems that there is less chance of leakage from the investment than there would be with cooperatives. Therefore, more consideration should be given to utilizing private firms as the organizational instrument to accomplish the

objective of market transformation as the investment will go further in transforming the marketing system.

This does not mean that governments should not continue to assist cooperatives to develop, but a shift in emphasis is needed. After necessary market reforms have occurred there may be a need for renewed emphasis on cooperatives to keep market performance in balance. However, different approaches from those traditionally used for assisting in the development of cooperatives will need to be considered in order to expedite the development of viable organizations.

## FOOTNOTES

<sup>1</sup>John W. Mellor, The Economics of Agricultural Development, (Ithaca, New York: Cornell University Press, 1966) pp. 341-342.

<sup>2</sup>I. Harvey Hull, Built of Men, (New York: Harper and Brothers Publishers, 1952) pp. 111-112.

<sup>3</sup>Sir Horace Plunkett, "Cooperatives as a Factor in the Economic, Social and Political Development of Rural India," Bombay Cooperative Quarterly, September, 1928, p. 7.

<sup>4</sup>Hubert Calvert, The Law and Principles of Cooperation, Calcutta & Simla, 1926, p. 13.

<sup>5</sup>Paul Carpenter, (Oregon State University) A statement made during the decade of the 1950's.

<sup>6</sup>Eleanor M. Hough, The Cooperative Movement in India, (London: Oxford University Press, 1966) p. 314.

<sup>7</sup>Ibid, p. 315.

<sup>8</sup>Adnan Shukay Shuman, A Suggested Plan for the Syrian Agricultural Cooperatives Based Upon a Study of Selected Agricultural Cooperatives in Ohio and in the United States Generally, Unpublished Ph.D. Thesis, Department of Agricultural Economics, Ohio State University, 1957.

<sup>9</sup>Vernon Ruttan, "Agricultural Product and Factor Markets in Southeast Asia" in Agricultural Cooperatives and Markets in Developing Countries, Kurt R. Anschel, Russel H. Brannon, and Eldon D. Smith, Editors. (New York: Frederick A. Praeger, Publishers, 1969) p. 98.

<sup>10</sup>Mohinder Singh, Cooperatives in Asia, (New York: Praeger Publishers, 1970) p. 323.

<sup>11</sup>Ibid, p. 345.

<sup>12</sup>Ibid, p. 357.

<sup>13</sup>Ibid, p. 383.

<sup>14</sup>Ibid, pp. 425-426.

<sup>15</sup>Ibid, p. 441.

<sup>16</sup>Vernon Ruttan, "Agricultural Product and Factor Markets in Southeast Asia," in Agricultural Cooperatives and Markets in Developing Countries, Kurt R. Anshel, et. al., Editors. (New York: Frederick A. Praeger, Publishers 1969) pp. 96-98.

<sup>17</sup>Reuben C. Buse, Peter G. Helmberger, "Potential and Feasibility of Cooperatives as Instruments of Market Reform," in Agricultural Cooperatives and Markets in Developing Countries, Kurt R. Anshel, et. al., Editors. (New York: Frederick A. Praeger, Publishers, 1969) p. 208.

<sup>18</sup>Ibid, p 221.

<sup>19</sup>John Mellor, "Elements of a Food Marketing Policy for Low Income Countries" in The Marketing Challenge: Distributing Increased Production in Developing Nations, FEDR 7, December, 1970, pp. 14-15.

<sup>20</sup>Martin Kreisberg, Howard Steele, Improving Marketing Systems in Developing Countries, USDA, FES Staff Paper 7, February, 1972, p. 5.

<sup>21</sup>Brazil -- Ultrafertil, S.A., "Capital Assistance Paper" by Agency for International Development, Washington: Department of State, August, 1966, pp. 14-15.

<sup>22</sup>Each of the authors spent a two-year period in Brazil between 1967-70 with several months overlap in their assignments. This information was obtained from Ultrafertil records and verified through the U.S. Consulate in Sao Paulo, Brazil.

<sup>23</sup>Personal information from Ultrafertil management. Verified by U.S. economists making a cooperative feasibility study and an area cooperative specialist.

<sup>24</sup>William H. Nicholls, "The Changing Structure of Farm Product and Input Markets in Brazil" in Agricultural Cooperatives and Markets in Developing Countries, Kurt R. Anshel, et. al., Editors, (New York: F. R. Praeger, Publishers, 1969) p. 68.

<sup>25</sup>G. Edward Schuh, The Agricultural Development of Brazil, (New York: Praeger Publishers) p 319.

<sup>26</sup>William C. Nelson, An Economic Analysis of Fertilizer in Brazil, Unpublished Ph.D. dissertation, Ohio State University: Department of Agricultural Economics and Rural Sociology, 1971, Chapter II.

<sup>27</sup>Personal observations of the authors during the period of 1967-70 when they served as a marketing specialist and statistician for an AID contract in Brazil. Stanley Bednarczyk, USAID Agricultural Cooperative Specialist, also supports these views in "Agricultural Cooperatives in Brazil," a paper presented at the INDA Conference for Cooperatives (Campinas, S.P., Brazil, February, 1968).

<sup>28</sup>United States Department of Commerce, "Private Route Gets Boost" International Commerce, February 3, 1969, pp. 8-10.

<sup>29</sup>Simon Williams, "Private Investment in World Agriculture," Harvard Business Review, Vol. 43, No. 6 (November-December, 1965) pp. 95-105.

<sup>30</sup>William R. Hoskins, "How to Counter Expropriation" Harvard Business Review, Vol. 48, No. 5, (September-October, 1970) pp. 112-116.