

The Role of Agribusiness in Development: Replacing the Diminished Role of the Government in Raising Rural Incomes

Julie V. Stanton

With increasing efforts to promote free markets, one must ask whether the impact on some agricultural producers may be less than desirable. Small producers with limited access to capital, technical assistance, and competitive buyers may be unable to participate in new marketing opportunities. Without recommending a return to heavy government, this article suggests development policy be enlarged to encompass agribusiness enterprises. Localized agribusiness can help rural populations capture value added that is otherwise lost to external agents. This may require, however, a different governmental role, primarily in the provision of basic infrastructure, transparent policies, and the continued emphasis on availability of capital and technology.

Key Words: agribusiness, agroindustry, development strategies, economic reform, nonfarm income, public policy, rural income, smallholder agriculture

A significant worldwide trend in public policy in recent years has been to disengage decades of direct government involvement in the agricultural sector. Price supports, input subsidies, and publicly owned agriculture-related institutions have been increasingly dismantled in favor of private market determination of prices and other incentives. Generally speaking, the arguments in favor of this approach center on the anticipated gains in production efficiency that would arise from free movement of resources.

Contributing to this trend toward free market economies are the growing global efforts to liberalize trade by lowering tariffs, harmonizing other standards, and facilitating foreign direct investment. While the short-term adjustments to increased competition are recognized as potentially painful, it is generally agreed that medium- to long-term gains more than compensate.

Nevertheless, in a very real sense, the adjustment to removal of both domestic support structures and barriers to external competition may be especially painful for

smaller producers, a group which is often the target of poverty alleviation measures. When public support has been extensive and in place for long periods of time, private market offerings have typically been stifled if not forbidden. This implies that there may be some delay between public sector withdrawal of services and their replacement by private enterprises. Moreover, even with such emergence of private offerings of agricultural support services, there are aspects of smallholder agriculture which make access to those services tenable.

Thus, an effective adjustment strategy in the post-reform era must include components that boost the ability of smaller producers to respond effectively to market incentives. In this article, we argue that development efforts must begin to strengthen the price side of producer income in ways that do not undermine efforts to reduce government involvement. More emphasis must be placed on facilitating the marketing aspects of agriculture, i.e., agribusiness, for producers with limited resources. Key is assisting producers to overcome problems of imperfect markets and empowering them to be competitive participants in the market system.

In the next section, we briefly review the breadth of the reforms that have been implemented in various countries, using Mexico to show how well those reforms achieved their goals. It is precisely where such goals have not been fully realized that agribusiness enterprises have strong development potential. We then discuss why smallholder agriculture is particularly unlikely to achieve full market integration under reform conditions unless other aspects of the economy are simultaneously addressed. Then, the traditional approach to development policy is contrasted with one that includes focus on market prices, and the opportunities inherent in agribusiness are discussed. Finally, we consider mechanisms by which such opportunities can be facilitated, keeping in mind the implications for public policy in promoting these alternatives.

The Reform Experience

Mexico offers a good example of the market reforms undertaken by many countries in recent years.¹ The central focus of reforms has been to remove the pervasive influence of the government in the pricing, manufacture, distribution, and control of agricultural inputs and outputs. Much of the prior system relied on government parastatals which have now been privatized, and on support/subsidy programs which have been largely eliminated. Specifically, the reforms have sought:

- international pricing and potentially greater quality and availability of most agricultural inputs;
- less support for and greater international competition in basic grains;
- lowered barriers to exports to other countries, most importantly for crops in which domestic producers have a comparative advantage;

¹ See Bonilla and Viatte (1995) for additional description of the reform experience in Mexico.

- the potential for greater participation by foreign companies in domestic production, and therefore additional opportunities for contract farming, brokerage, and foreign direct investment (FDI);
- unsubsidized irrigation costs but greater local control over management of districts; and
- the relative freedom to use land as desired, e.g., whether to sow crops or rent out.

Such a wide range of reforms, if completely implemented, should be expected to significantly alter the economic environment for producers, and any anticipated difficulties in the adjustment process are usually dealt with by phasing in the more sensitive reforms. Proponents argue that the reforms will appropriately shift incentives toward crops with greater trade potential; increase demand for productivity gains, and hence modernization of production methods; facilitate foreign investment; and increase participation in domestic input and output markets. Since implementation of policy reforms is often fraught with obstacles (McKay, Morrissey, and Vaillant, 1997; Quiroz and Valdés, 1995; Sinha, 1995), the first question one asks about these reform efforts is whether their goals have been achieved.

Mexico's reforms began in the mid-1980s when the country negotiated its entry into the General Agreement on Tariffs and Trade (GATT), but the bulk of the reforms were implemented in the early 1990s. By most indicators, the Mexican agricultural sector's performance in the last several years has not met expectations. On the whole, the sector grew at an average annual rate of 0.67% between 1990 and 1996 (Rosenzweig, 1996). While sectoral growth rates often are poor indicators of the kinds of changes occurring within the sector, this is nonetheless very slow growth. Further, production did not appear to shift significantly to the advantageous export crops (fruits and vegetables). The share of fruits and vegetables in the value of total agricultural output rose only slightly (e.g., for fruits, from 17% in 1990 to 18% in 1994). Growth in exports of fruits and vegetables appears to have come more at the expense of domestic sales than from an increase in land area planted in such crops. In fact, for winter export crops such as tomatoes, green chilies, and strawberries, planted acreage actually decreased between the 1994/95 and 1997/98 winter seasons. Winter tomato production was lower in the 1997/98 season than in 1989/90 (SAGAR, 1998). None of these results were consistent with the expectations for reforms.

Foreign direct investment appears to have similarly fallen short of expectations. For example, rather than increasing, FDI in agriculture decreased by 18.6% between 1994 and 1995, and overall FDI by 42%, offering little support for the expected growth in employment and output.

These indications of a sluggish production response to price and other market changes are in sharp contrast to some phenomenal growth rates for exports, particularly post-NAFTA. While overall growth in U.S. imports from Mexico changed little during the six-year period straddling NAFTA's implementation (averaging 13% per

year from 1991–1993, and 14.3% from 1994–1996), post-NAFTA trade for key horticultural commodities did expand rapidly. Marsh and Runsten (1996) report a 30.5% increase in the quantity of fresh or frozen vegetables shipped from Mexico to the U.S. from 1994 to 1995, a 19.6% increase in value. Growth in Mexican tomato exports was 54% in volume and 67% in value from 1995 to 1996.² From 1990 to 1995, the value of Mexican exports to the U.S. increased 32% for cherry tomatoes, 85% for cucumbers, 523% for fresh grapes, 144% for watermelon, 650% for peppers, 229% for lemons, and 352% for carrots and turnips (Rosenzweig, 1996).

Thus, considerable movement was apparent in the export sector, despite a relative inertia in production. However, since much of this growth in exports originated from the wealthy, high technology areas of the northwestern states of Sinaloa and Sonora, it seems that little real change occurred in the rest of the sector, which is comprised largely of smallholders. Indeed, we will see that a limited response by the sector often reflects a basic dichotomy between low-input smallholders and mechanized large producers—a distinction found in most countries (Pichón and Uquillas, 1997). One may then question the efficacy of the approach to reforms, particularly as they seek to improve conditions for smallholder agriculture.

The Challenges to Successful Reforms

Agribusiness-oriented alternatives to public sector support of agricultural incomes become all the more attractive when one understands the reasons for the reforms' limited success in achieving their goals. By and large, the issues are independent of the reforms themselves, which just emphasizes that sectoral reforms undertaken in relative isolation may be less than effective unless such issues are addressed. In this section, we discuss three principal factors that threaten the efficacy of reforms: (a) external shocks, (b) general infrastructure and institutional factors, and (c) the nature of smallholder agriculture. The alternative development strategy proposed in this study has the potential to help smallholders overcome these factors, and thus participate more successfully in markets.

External Shocks

Events occurring outside the agricultural sector can have considerable impact on the sector's performance. Wage hikes, rising interest rates, shortages in manufacturing sectors, etc. all influence agriculture through general equilibrium effects. Some events have stronger, more sudden impacts. In the Mexican case, during the planning of the domestic agricultural reforms and the opening of trade via NAFTA, one

² De Janvry (1996) argues that growth in tomato production reflects greater use of technology, the adoption of extended shelf-life varieties, and participation in producer organizations with significant market power, rather than an increase in the number of producers.

element not anticipated in most analyses was the devaluation of the Mexican peso. Dropping more than 50% against the U.S. dollar between December 1994 and March 1995, and continuing the trend thereafter,³ the peso's devaluation caused an immediate change in relative prices: U.S. goods were suddenly twice as expensive to Mexican consumers, and Mexican goods half the price to U.S. consumers. Among other impacts, this implied that Mexican producers dependent on U.S. agricultural inputs could no longer afford the same purchases.

Indeed, the devaluation has considerable explanatory power in the trends we noted earlier regarding export performance. Several studies have demonstrated that increased Mexican exports to the U.S. can be largely attributed to the devaluation, not NAFTA's removal of trade restrictions (see, e.g., de Janvry, 1996; Malaga, Williams, and Fuller, 1996; and National Food and Agricultural Policy Project, 1996). This is an important issue because some have pointed to that export performance as evidence that reforms in fact have been fruitful. On the contrary, in essence, NAFTA and the domestic reforms attempted to level a tilted playing field, while the devaluation managed to (more than) undo that effort in some areas. For agriculture, the devaluation resulted in a sector with less cash flow and higher priced inputs—one reason why production levels did not increase as expected.

For smallholder agriculture, the effects of these shocks may be mixed. For those who do not participate in the output market, the direct effects may be virtually nil. However, the secondary effects, through a tightened domestic economy and increased unemployment, can devastate those who rely on off-farm wages to supplement farm income. While by their nature such shocks may be hard to predict, and thus difficult to account for in the design of policy reforms, it would seem prudent to accompany sectoral reforms with some safety mechanisms for responding to crises.

General Infrastructure and Institutional Factors

The second factor influencing the ability of the sector to respond to changing incentives is the availability of suitable tools of production. Seeds, chemical inputs, irrigation, and labor are the principal sources of production expense, and often must be financed through credit. Domestic reforms generally result in more expensive inputs as subsidies are removed. In the Mexican case, not only did the prices of most basic inputs rise, but both district irrigation and well use also became more expensive sources of water. Compounding price issues is that public investment in irrigation delivery systems fell, and some 20% of land that was previously irrigated has been affected by poor maintenance practices (Calva, 1996). Public investment in rural development in general (including irrigation) has steadily declined since the early 1980s, falling by over 88% between 1981 and 1995 (Calva, 1996; Shafer, 1991). Thus, some of the tools with which the fruit and vegetable sector could expand were both increasingly expensive and declining in availability.

³ Throughout most of 1998, the exchange rate hovered around 9 to 10 Mexican pesos per U.S. dollar. Prior to the devaluation, the exchange rate was about 3.5 pesos per dollar.

As a result, it is not surprising that there were some constraints to sectoral growth. Indeed, one could liken the circumstances to any number of opportunities lost due to missing tools, e.g., a job but no transportation to get there. For smallholder agriculture, the consequences may be particularly dire. As direct public support dwindles, the generation of income depends on the ability to create value on one's own, a difficult prospect for those with limited tools.

In addition to the factors that directly affect production, the availability and suitability of supporting services is an increasing problem. As the government retreats from the provision of agricultural research, storage facilities, and rural finance, the private sector is expected to fill the gap. In many cases, large-scale producers with sufficient resources have been able to privately secure these services. However, due to their more limited resources, smaller producers do not have the same access to modern technologies and credit that are so important to their success in production, particularly for costly horticultural crops (Valdes, 1994).

Indeed, along with the reforms that directly affect agricultural production and sales, governments often attempt to enforce sustainability and efficiency of publicly financed credit programs. On the one hand, there is an effort to better target credit to those producers who can pay back the loan so that the lender needs less subsidy from the government. This typically leaves out the smallest producers. In addition, the total public funds allocated to such subsidies may be reduced, reflecting the overall goal of a less intrusive public sector. Combined, these two trends are making it increasingly difficult for any agricultural producer to obtain access to borrowed funds. In the Mexican case, the *ejido* (community-based) sector, which accounts for about 50% of agricultural land, faced a 19% decrease in total availability of credit in real terms between 1990 and 1994 (de Janvry, 1996). Only 33% of those households had access to credit in 1994, and 61% of those relied on a federal program whose loans were too small to support much diversification. Because modernization of grain production and diversification into high-value crops both require additional investment, this contraction of available funds works against the goals of reforms as well.

The Nature of Smallholder Agriculture

The third principal factor hindering success of reforms is the composition of the agricultural sector. Through successive family generations and the resulting fragmentation of land parcels, the agricultural sector in most developing countries consists largely of small producers. For example, about 60% of all Mexican producers have farms of less than five hectares (Heath, 1992; de Janvry, Sadoulet, and Gordillo de Anda, 1995). Because of their size, smallholders face additional barriers to modernization and diversification beyond those of larger producers, even when the tools of production are otherwise abundant and there are no external shocks. By asking small producers to change production practices in the face of risks associated with market fluctuations, policy reforms are perhaps asking too much. While the sector as a whole may benefit from clearer, uncontrolled incentives, the vast number of smallholders will still face, as individuals, largely the same imperfect markets that existed prior to government intervention.

Much has been written of the special circumstances of smallholder agriculture which can inhibit its access to privately provided support services and successful market participation. One of the common denominators is the relatively high transaction costs associated with doing business with small farming operations.

For example, conducting credit transactions with many individual smallholders can be a much costlier undertaking for a private lending institution than dealing only with large producers. For each potential borrower, a review of creditworthiness, verification of collateral, monitoring of repayments, etc. must be conducted, each implying some costs that are unrelated to the loan size. Further, since smallholders often suffer from ill-defined or incomplete property rights, they may in fact be unable to offer appropriate collateral to appeal to the lender. Yet, access to capital is essential for producers to undertake investments in new crops or techniques.

Technical assistance is likewise a difficult commodity for smallholders to obtain through private sources. Most private suppliers of technical know-how, by passing time explaining new methods, are investing in sales of their product (e.g., hybrid seeds). The volume of such products that can be purchased by smallholder agriculture is limited, and hence not seen as an attractive investment by the supplier. To the extent that policy reforms aim to shift production patterns into new, internationally competitive crops (as in Mexico's case with fruits and vegetables), this lack of technical assistance to smallholders effectively traps them in what may be increasingly unprofitable commodities.

Further, even when some irrigation facility is available to smallholder agriculture, the associated increase in yields may not bring sufficient extra revenue to cover what may be large fixed expenses. Profit margins for poorer producers are already small and destined for household consumption, leaving little extra to invest in high fixed costs.

In addition to these and other production-related issues, smallholder agriculture faces challenges in participating in output markets. Remote locations, poor roads, small volumes of output of varied quality, and little knowledge of market fluctuations tend to localize the effective market (unless government buyers are present). While this may insulate them from external competition, it also effectively limits the demand for their output, and hence prices received. Consequently, only where costs can be passed on to the producer via a lower paid price will it be economically rational for a private buyer to invest in long-distance purchasing transactions.

Together, these issues imply that smallholder agriculture has its own special hurdles to overcome in achieving the production and income goals set by reforms. When those hurdles are not addressed within the reform package, the response will likely be inhibited.

Contrasting Development Strategies

It is thus imperative that both the productivity and market difficulties experienced by smallholder agriculture be considered in an overall strategy for increasing rural incomes. Historically, much of the effort to increase standards of living in rural areas has focused on improved health care and education, and on raising farm incomes

through higher production levels. The “green revolution” made considerable strides in distributing improved production technologies and inputs to traditional farming areas, increasing yields, and expanding crop production. Indeed, the more recent trend toward relying on market forces is also largely targeted to increasing efficiency in production.

A point missed by this strategy, however, is that farm incomes are defined in monetary terms, not physical output. The ability of producers to obtain reasonable prices for their output, whatever its size, is also crucial in addressing farm incomes. Put another way, profits are simply defined as $\pi = p'q - w'x$ (using standard notation for profits, output prices, output quantities, input prices, and input quantities, respectively). Each variable in that equation is as important as the other in determining overall agricultural profits, and yet the historical approach to fostering farm-level determination of income has been to focus on output (q) and input use (x). The prices (p and w) have been largely addressed by the intrusive public policies that are now being dismantled. Removal of that support does not address the ability of producers to obtain fair and sufficient prices.

Focusing for now on output prices, the suggestion made here is that there is a continuing role for the public sector to help support prices, but not in a deterministic way. In fact, the recommendation is that higher prices be captured by farmers themselves through locally based efforts that go beyond crop production and harvest (i.e., via agribusiness activities), and that the public sector’s role is one of facilitation and general assistance. We deal with the role of the public sector in a later section.

What Is Locally Based Agribusiness?

Locally based agribusiness enterprises in developing countries are typically small-to medium-scale operations in rural areas that either process raw agricultural materials or provide marketing, transport, and other services (Kinsey, 1987). While not limited to this definition, such enterprises tend to be constrained by available labor and capital, and thus serve particular niches. In more general terms, agribusiness has been described as all activities “from ditch bank to dinner plate,” although we omit the production elements of agriculture in our use of the term. Here, we are explicitly focusing on the activities that occur after harvest and prior to final sale to consumers.

The range of services provided by these enterprises is wide. Sorting, grading, and packing facilities take raw output and consolidate it into useful categories for shipment to wholesalers and distributors. Transport companies may specialize in agricultural commodities and establish strong market links. Juicing facilities, freezing plants, and other processing functions can turn raw product into a value-added good prior to it leaving the rural area. Wholesalers and marketing services can arrange sales transactions between entities which otherwise are strangers to each other.⁴

⁴ See Abbott (1987) for an interesting set of case studies on agribusiness enterprises in developing countries.

Further, the size of such enterprises varies considerably. From individual households to small groups of neighbors, to larger “cooperative” efforts and even village-wide efforts, the key element is that there is an effort to (locally) capture value added after harvest. Which of several variations is most appropriate depends on local circumstances.

Consider an example. Suppose the farmer sells his output to the intermediary who comes to the farm to collect the produce. The price offered by the intermediary is \$1 per bushel. With production costs of 60¢ per bushel, the farmer nets 40¢ per bushel, and so makes \$40 on his 100 bushels. Meanwhile, the intermediary collects 100 bushels each from another four farmers and then drives the product to the nearest market. Transport costs 20¢ per bushel, but the intermediary receives \$2 per bushel in the market. Hence, he nets \$2–\$1.20 for each bushel, or \$400 on 500 bushels.

There is nothing inherently wrong with this arrangement. The intermediary actually provides a valuable service to the farmers who may have no other means to transport their output to the market. Also, to the extent that the intermediary needs additional help loading the bushels, he may even be providing employment to local labor. In fact, the intermediary is a good example of a local agribusiness enterprise, provided that the gains from these transactions are spent in the local economy. Without the intermediary’s services, these five farmers may only be able to sell 50 bushels each, strictly within their local communities, and realize a much lower income. However, if the intermediary has any market power (e.g., he is the only one willing to travel into that rural area), the price paid to farmers could be exploitative. Their foray into extended markets, as anticipated by reforms, would thus perhaps not be as beneficial as hoped.

In an alternative scenario, suppose the same farmers were able to transport the product themselves. Their net gain could be positive. Suppose they face greater transportation costs due to diseconomies of scale, at 40¢ per bushel compared to the intermediary’s 20¢. Now, at the same \$2 sale price, costs are \$1 per bushel (60¢ + 40¢), and the farmer nets \$100 on his 100 bushels, more than doubling his profits in this example. To the extent that this extra profit helps alleviate consumption constraints, the capture of this value added by the household is an improvement over the previous scenario.⁵

Based purely on efficiency criteria, a national or regional economy may be best served by enterprises that can take advantage of economies of scale, i.e., not the small rural enterprises. Indeed, specialization is often associated with improvements in development since resources tend to be used more efficiently (von Braun, 1994; Stevens and Jabara, 1988). However, once one recognizes that the *distribution* of the gains from economic activities is essential to improving living standards for all

⁵ Of course, a quick review of the math shows that the increased transportation costs associated with farmers acting independently actually reduces total value of these transactions. In the first scenario, each of five farmers earned \$40, and the intermediary earned \$400, for a total of \$600. In the second scenario, the five farmers each earn \$100, while the intermediary is not present. Assuming that the intermediary is not from the local area and that no additional employment is associated with his transactions, the local economy actually gains from following the second scenario.

residents, the picture is not so clear. What then are some of the benefits to localized agribusiness enterprises other than its direct income effect?

First, rural enterprises tend to be more labor intensive than larger enterprises by virtue of labor being the most abundant resource locally. Many of the rural poor are in fact landless, benefiting only indirectly by increases in agricultural productivity associated with many development projects.⁶ Growth in nonfarm employment opportunities not only can address employment issues in general, but could also alleviate gender-specific biases associated with agricultural production (Kinsey, 1987).

Second, increased employment opportunities within the rural areas can help contain pressures for urban migration. Not only does this reduce the stress placed on urban services, but it can keep rural-based families together.

Third, greater capture of the value added associated with post-harvest activities induces a multiplier effect in the local economy. Each additional dollar captured can be spent many times over in local businesses, improving their stability.

Fourth, to the extent that agribusiness activities establish market connections outside the rural area, other crops or activities can benefit from improved lines of transportation, finance, and communication. These connections effectively reduce the transaction costs faced by service providers. Specifically, one of the principal contributions of local agribusiness enterprises will be the establishment of marketing channels.

Hence, although larger scale enterprises are often favored elements of economic performance, it should be clear that more locally based enterprises offer both broad-impact and noneconomic benefits that should be considered in an evaluation of strategies.

Alternative Approaches to Incorporating Agribusiness in Development Strategies

Given the challenges discussed earlier, a direct effort to foster agribusiness enterprises based solely on local talent and resources could prove futile. The same barriers to credit and technical assistance that inhibited a production response to the reforms can have a like effect on investment in new enterprises. In fact, during initial stages of commercialization, it may be advantageous *not* to depend on local enterprise. Smallholder agriculture's ability to participate in reform-induced activities depends on its ability to increase both quantity and price of outputs. Greater initial gains may perhaps be achieved through association with larger, richer entities that can "share the wealth." Here, we examine as options what could be considered progressive stages of agribusiness enterprise in developing countries: public parastatals, multinational and large domestic companies, cooperatives among producers, and individual private marketing enterprises. Although two of these options do not necessarily satisfy the goal of capturing value added locally, they bring particular advantages to the local area that may be critical for private enterprise development.

⁶ Indeed, as productivity is increasingly affected by the introduction of capital-intensive technologies, the rural landless can actually lose ground in their fight against poverty.

Essential to each of these options is a revised role of the government in furthering economic development. That is, while agricultural ministries have long promoted the tools needed for improvements to agricultural production, and health and education ministries have targeted the social concerns, other ministries (such as that pertaining to industry) have seen little role for their assistance in the rural areas. To successfully promote business activities, whether small- or large-scale enterprises, may very well require the joint efforts of those ministries, with a “system perspective” toward development (Food and Agricultural Organization, 1998).

Public Parastatals

Because rural areas can often be so poorly integrated into commercial markets, it may be justified to consider a different role for the public sector than that usually associated with supportive agricultural policy. As discussed earlier, one of the barriers to doing business with smallholder agriculture is the high transaction costs that arise under many conditions. Not unlike the general argument regarding any social concern (public good), the incentives for private action may be insufficient to generate private investment. Indeed, the usual justification for the extensive public involvement in the agricultural sector worldwide has been the perceived social gains associated with raising farm incomes. Few private companies are so motivated.⁷

Nevertheless, in keeping with the trend toward liberalizing markets, the suggestion here is to minimize and focus any involvement by the public sector on activities that support the creation of private enterprise, rather than create a dependency on government services. Moreover, such parastatals should be autonomous in the day-to-day sense, while serving as vehicles for appropriate transfer of public capital (Abbott, 1987).

For example, for crops with significant export potential but which are generally unfamiliar to local producers, some degree of technical and marketing assistance will be needed to convince a switch away from traditional crops. Large numbers of small producers can be reached through a public sector entity temporarily charged with promotion and marketing of that export crop. Similarly, where value added could be captured through a processing facility (e.g., fruit juice), public sector investment in a facility could be justified.

Crucial to these examples and others is that the parastatals have a clearly defined objective, financial accountability (given implied subsidy), and the expectation of eventual privatization of the enterprise. The use of parastatals as an approach to agribusiness development should only be considered until such time as appropriate private investment is attracted. This measure offers, however, a socially consistent means of coordinating small producers into commercialized activities which would otherwise be difficult to achieve.

⁷ Sinha (1995) and Wanders (1993) both warn of the dangers in assuming that the removal of state-controlled functions will automatically lead to benefits for all producers. Until the basic questions of imperfect markets are addressed, there is some justification for government action.

Multinational and Large Domestic Companies

For similar reasons, we also consider the opportunities that multinational and large domestic companies can bring to rural areas. When the benefits of an agribusiness undertaking are dependent on access to external or regional marketing channels, advanced inputs, and new technologies, it is less likely to be initiated by local village members. Through contracts with large firms, farmers can obtain access to markets and technology that would have otherwise been difficult to acquire (Glover, 1994), and doing so opens the door to multiplier effects of that knowledge. Such companies bring a combination of financial resources, tested technology, management skills, access to international marketing channels, brand recognition, and skills in meeting international quality standards and presentation (Abbott, 1987). It is important that public policy not deter the investment by multinationals to the extent that these are important contributions to the local economy.

Nevertheless, in addition to the disadvantage that large firms may offer only limited local capture of value added (depending on the location of their operations), examples are common of exploitation by firms, excessive dependency on the firm by the locals, and the departure of firms that grow frustrated with government regulations. That is, while the benefits that such firms (particularly multinationals) bring to the local areas can be considerable in terms of exposure to technology and access to distant markets, they may not be a long-term solution to the need for stable income generation in poor rural areas.

Producer Cooperatives

Since the challenges associated with many rural areas derive from the small size of most agricultural producers, a natural alternative is to form groups of producers with common goals. While cultural factors are often significant in determining whether cooperative action by producers is a viable option, associations among producers represent a powerful mechanism for overcoming the smallness problem (Sellies, 1993). By joining forces in the marketing, processing, or transport of crops, producers effectively mimic the circumstances of larger producers, often gaining access to credit, technology, and markets that were previously out of reach.

Simple examples include joint efforts to combine, sort, grade, and pack fruit and vegetables for transport to markets or buyers. The sorting and grading functions help distinguish fruit which should command greater prices, while packing together offers a more attractive volume to potential buyers. As individuals, producers in these situations could otherwise receive a price reflecting the worst quality in the bunch. Recall the example, earlier, of five farmers with similar output. In the second scenario, their efforts to transport the commodity could be via an association, perhaps lowering costs from 40¢ to 30¢ per bushel due to greater economies.

Similarly, producers can jointly obtain technical assistance needed to try new crops, venture into commercialized agriculture, and learn new management techniques, all aimed at increasing their integration into markets.

Of course, cooperative efforts are often fraught with difficulties associated with cohesion among members. They are more likely to be successful when there is a homogeneous product in which farmers in the area specialize (Abbott, 1987). They also benefit from members who are educated, have some managerial experience, and are otherwise connected to one another through religious or other ties.

An aspect not typically recognized in the literature on producer associations is that membership does not have to be large for the group to achieve its goals. Mexico abounds with examples of small groups of 5 to 10 producers who jointly commit to the purchase and shared use of a tractor, or the digging and maintenance of an irrigation well. Indeed, for many rural areas, it is the smaller joint efforts which could be most fruitful. A rented truck can hold just enough produce for a handful of producers who combine their output for that trip to the market.

The public policy mandate in these circumstances is to facilitate the development of such organizations, particularly those which require the managerial expertise and financial resources to be successful. In India, the semi-autonomous Operation Flood program assists rural villages in establishing dairy cooperatives via preferential loans for cows, and targeted technical assistance, among other items. It is a favorite phrase in development and charity circles to focus on "helping others help themselves." Ownership and value added are locally captured, and producers see the power to transform their own circumstances.

Individual Private Marketing Enterprises

Where some economies of scale can be identified, service niches can be carved out by individual entrepreneurs (e.g., the locally based intermediary of our example's first scenario). Their local familiarity, flexibility to meet customers' needs, and small operations allow them to respond quickly to changing conditions as well as operate with little capital (Abbott, 1987). While nonfarm enterprises can only indirectly increase farm incomes, their presence helps boost employment and access to other services. Of course, where owned by agricultural producers, their effect on income is direct.

Their success, however, is contingent on some of the same factors that influence smallholder agricultural production. Basic infrastructure, such as roads and communications; access to capital; technical assistance associated with management, marketing, sales, etc.; and a predictable market environment are all crucial to the establishment and durability of individual private marketing enterprises.

It is for this reason that the strategy sequence just discussed should be seriously considered. As larger entities bring business in, many basic services will be improved contemporaneously, benefiting the smaller entrepreneurs. Nevertheless, lack of those same services and infrastructure can inhibit private sector interest in rural areas, bringing that element of the strategy to a halt. Therefore, public initiatives to support these areas thus continue to have importance beyond their contribution to agricultural productivity.

Conclusions

In this study, we have considered the importance of a development strategy that includes promotion of opportunities beyond crop production and harvest. Growing public sector emphasis on the power of markets can leave small producers at distinct disadvantages compared to their larger counterparts, possibly resulting in poor response to changes in economic incentives. Since government involvement in the agricultural sector in developing countries has typically originated in the desire to address conditions of imperfect markets, it is only logical that some attention must continue to be paid to the effects of those imperfections.

Agribusiness enterprises at the local level offer the possibility of capturing value added and thereby increasing local incomes. Since many smallholders have relied on government buyers for their marketing options, the retraction of those services is unlikely to be immediately replaced by private enterprise. Also, even when such services are available, small producers do not present as attractive a transaction to service providers because of the often enormous costs of transacting with many small clients.

To some degree, the immediate question of marketing and capture of value added can be addressed by the public sector, just via different means than the price-distorting mechanisms of the past. Public investment in transport, technical assistance, processing facilities, etc. with the expectation of eventual privatization may be warranted. Alternatives include facilitating the private investment associated with multinational and large domestic firms who bring access to foreign markets, new technology, and considerable managerial expertise. Ideally, however, the ownership and growth of these opportunities would come through local effort—a goal which will require addressing those same imperfect markets that challenge smallholder agricultural production.

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