

PA-ABC-058

AGENCY FOR INTERNATIONAL DEVELOPMENT PPC/CDIE/DI REPORT PROCESSING FORM

ENTER INFORMATION ONLY IF NOT INCLUDED ON COVER OR TITLE PAGE OF DOCUMENT

1. Project/Subproject Number

APAP/936-4084

2. Contract/Grant Number

DAN-4084-C00-3087-00

3. Publication Date

4. Document Title/Translated Title

APAP Staff Paper No. # 26

5. Author(s)

- 1.
- 2.
- 3.

6. Contributing Organization(s)

7. Pagination

8. Report Number

9. Sponsoring A.I.D. Office

10. 26. Quance, Leroy, Steven Block and Luther Tweeten. "Implementing Agricultural Price Reform." August, 1988.

The report summarizes and draws conclusions from APAP country agricultural policy projects relating to implementing agricultural price reform. A general conceptual framework based on price theory and the general goals of agricultural policy is followed by a summary of policy reform efforts relating to input price subsidies in Egypt, output price supports in Liberia, marketing margins of fruits and vegetables in Jordan, consumer food price subsidies in Bangladesh, cereals exports in Togo, and macroeconomic policies in Guatemala. Many such countries are recognizing the need to reestablish a balance between policy interventions and market forces. USAID is gaining experience in how to use technical assistance in helping countries rationally appraise costs and benefits of existing price regimes and to move back from interventionist to market enhancement policies.

11. Subject Keywords (optional)

- | | |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | 6. |

12. Supplementary Notes

13. Submitting Official

William R. Goodwin

14. Telephone Number

(703) 875-4015

15. Today's Date

16. DOCID

17. Document Disposition

DOCRD [] INV [] DUPLICATE []

AGRICULTURAL POLICY ANALYSIS PROJECT

Under contract to the Agency for International Development, Bureau for Science and Technology, Office of Agriculture
Project Office 4250 Connecticut Avenue, N.W., Washington, D.C. 20008 • Telephone: (202) 362-2800

PA-AEC-058
ISN 60374

IMPLEMENTING AGRICULTURAL PRICE REFORM

APAP STAFF PAPER
NO. 26

AUGUST, 1988

BY: LEROY QUANCE
STEVEN BLOCK
LUTHER TWEETEN

Submitted to:

Dr. William Goodwin
U.S. Agency for International Development
S&T/AGR, SA-18
Room 403
Washington, D. C. 20523

Prime Contractor: **Abt Associates Inc.**, 55 Wheeler Street, Cambridge, Massachusetts 02138 • (617) 492-7100

Subcontractors: **Robert R. Nathan Associates, Inc.** 1301 Pennsylvania Avenue, N.W., Washington, D.C. 20004 • (202) 393-2700

Abel, Daft & Earley, 1339 Wisconsin Avenue, N.W., Washington, D.C. 20007 • (202) 342-7620

Oklahoma State University, Department of Agricultural Economics, Stillwater, Oklahoma 74078 • (405) 624-6157

ABSTRACT

The report summarizes and draws conclusions from APAP country agricultural policy projects relating to implementing agricultural price reform. A general conceptual framework based on price theory and the general goals of agricultural policy is followed by a summary of policy reform efforts relating to input price subsidies in Egypt, output price supports in Liberia, marketing margins of fruits and vegetables in Jordan, consumer food price subsidies in Bangladesh, cereals exports in Togo, and macroeconomic policies in Guatemala. Many such countries are recognizing the need to reestablish a balance between policy interventions and market forces. USAID is gaining experience in how to use technical assistance in helping countries rationally appraise costs and benefits of existing price regimes and to move back from interventionist to market enhancement policies.

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SUMMARY

Price policy interventions in developing countries have often taxed farmers, subsidized consumers, destroyed incentives for increasing the production of domestic food and export agricultural commodities, contributed to stagnant agricultural and general economic growth, lowered agricultural exports, increased food imports and worsened debt and balance of payment problems. Many countries are recognizing the need to reestablish a balance between policy interventions and market forces. USAID is gaining experience in how to use technical assistance to help countries rationally appraise costs and benefits of existing price regimes and to move back from interventionist to market enhancement policies.

Existing patterns of policy interventions were years in the making, generally with one intervention leading to another, increasing the market distortions and inefficiency. Such interventions have become institutionalized via parastatal organizations, decreased or stagnant production capacity, and urban expectations of permanently low food prices. They cannot be corrected by sudden, large changes without unacceptable social unrest.

Governments should: (1) gain an understanding of the need for, and commitment, to, price reform; (2) develop the ability and commitment to carefully analyze all important ramifications of price reform options and continually monitor and evaluate structural adjustments, and (3) take appropriate, sometimes small, steps of corrective action, each building on the previous in moving the food and agricultural complexes toward a reasonable balance between the price-setting role of open markets and price stabilizing policy interventions. Policy interventions and relative price relationships at the producer, marketing, processing, domestic consumer and world market levels must be carefully considered and managed as an integrated system so that reforms at one level do not cause unforeseen difficulties at another. Food aid and targeted assistance can offset economically or politically intolerable hardships on those socioeconomic groups suffering losses from socially beneficial adjustments. Border prices, corrected for transitory phenomena, are useful proxy shadow prices for estimating the social costs and benefits of existing policy interventions and options for reform.

Agricultural price policy reform efforts must be closely coordinated with macroeconomic policy reform and debt management. Such macroeconomic adjustments can easily overshadow agricultural sector price reforms. Concurrent with price reform, governments should examine the growth enhancing needs of education, health, transportation, communications and other infrastructure as well as investment in natural resources, research and extension.

In providing policy analysis assistance, maintaining a reasonably long-term relationship between members of the technical assistance team and host government counterparts, training counterparts on the development and use of data sources and analytical techniques and tools, and conducting a policy workshop at the close of the technical assistance activity involving host country policy decision-makers and counterpart analysts facilitates the USAID/host country policy dialogue. This process also contributes to greater confidence and trust on the part of host country policy decision-makers with respect to both price reform options and the ability of counterpart analysts to continue to provide policy analysis support after the technical assistance project is completed. It is not realistic to expect immediate or complete positive response of host country policy decision-makers to price reform recommendations that come out of a

technical assistance project. The information and analytical capability must revert to the host country analysts and internal policy determining processes.

The above comments are consistent with policy reform efforts relating to input price subsidies in Egypt, output price supports in Liberia, marketing margins of fruits and vegetables in Jordan, consumer food price subsidies in Bangladesh, cereals exports in Togo, and macroeconomic policies in Guatemala.

IMPLEMENTING AGRICULTURAL PRICE REFORM

1.0 INTRODUCTION

Agriculture dominates the economies of most developing countries. Agriculture-related activities are often the primary source of income for three-quarters of a country's population, and the sector typically accounts for over one-third of GDP. Agriculture also dominates the expenditures of most people in developing countries, often accounting for up to 70 percent of the expenses of poor families. Agricultural prices simultaneously signal producers as to how to allocate the vast resources devoted to agricultural production, and determines the quantity and types of food consumers can afford to eat. Agricultural prices are thus a pervasive element in the economic and social policies of most developing countries.

This dual role for agricultural prices leads to a fundamental conflict for agricultural price policy: prices play a major role in motivating the dynamic and efficient agricultural development necessary for economic growth; yet, the incentive prices needed to stimulate production may also require higher retail food prices. Such increases directly threaten the nutritional welfare and real income of consumers. Many developing countries realize that the central planning and market interventionist policies they pursued for the last two to three decades have not served their goals of economic growth and food security. After repeated crises, many recognize that the sought-after low food prices and industrial growth came at unusually high cost in terms of Treasury expense, foregone economic growth and social unrest (Blaich, 1986). In other cases, the difficulty is deflected objectives. According to the World Bank (1986), many developing countries pronounce the objective of food self-sufficiency, but follow policies that tax farmers, subsidize consumers and increase food imports.

This paper briefly relates APAP experience providing technical assistance to several developing countries implementing price policy reforms. Countries and issues include producer price interventions in Liberia, input subsidies in Egypt, marketing margins for fruits and vegetables in Jordan, consumer subsidies in Bangladesh, cereals export reform in Togo and macroeconomic policy interventions influencing agricultural price relationships in Guatemala. These experiences reveal not only that markets and prices play a pervasive and powerful role in providing incentives and in allocating resources in agriculture but that interventions in markets can markedly reduce national income. Of course, price policy cannot be isolated from policy goals and management of government interventions in other areas.

We mostly limit our definition of price policy to those government interventions having their initial impacts on price such as a direct tax, subsidy, or quota on the relevant commodity, input or service. By price reform we mean policy interventions restoring the price determining and resource allocating role of the market that has been distorted by past policy interventions or other imperfections in the market. The ultimate objective of such reforms is to transform agriculture into an engine of economic growth without sacrificing and hopefully improving, the real income and nutritional status of the poor.

Markets are not perfect and, thus, indicative planning and policy interventions are essential in a well-functioning economy. Policy analysis is critical, especially in determining the appropriate balance between the public and private sectors. Public involvement is important in providing a macroeconomic environment conducive to making sound long-term public and private investments; and in providing infrastructure, education, research and extension, grades and standards, environmental protection, health and family planning services, and targeted food and other welfare assistance (Tweeten, 1987).

We will turn to the country experiences after reviewing general agricultural policy goals, alternative instruments for implementing and reforming agricultural price policy; and the tradeoffs between policy goals usually involved with use of the various policy instruments. Lessons learned and recommendations for improving future USAID technical assistance in implementing price policy reform conclude the report.

2.0 AGRICULTURAL SECTOR OBJECTIVES AND PRICE POLICY INTERVENTIONS

2.1 Agricultural Prices and the Food Policy Dilemma

In most developing countries, economic growth is highly correlated with, and largely dependent upon, agricultural growth. The central role of agriculture is evident: Agriculture typically accounts for over one-third of GDP and is often the primary source of income for over three-fourths of the population of most developing countries.^{1/}

^{1/} Numerous economic models, beginning with Lewis (1954), have formalized agriculture's role in contributing to economic growth.

Whereas agriculture is a major source of income, food dominates the expenditures of most poor families, often accounting for up to 70 percent of their expenses. This predominance of food and agriculture in both the macro- and the micro-economic environment heightens the importance of agricultural price policy.

Agricultural price policy is one of the primary tools available to governments for promoting agricultural development and food consumption goals. Agricultural prices simultaneously serve two roles: 1) for producers, prices signal what quantity of which commodities to produce and to sell to increase income; 2) for consumers, prices determine the quantity and type of food they can afford to eat. This dual role lies at the heart of the "growth with equity" debate and the food price dilemma.

To the extent that economic growth for most poor countries is tied to agricultural growth, providing price incentives for farmers is essential to economic development. Economic reform programs to provide price incentives often increase productivity, adoption of new technologies, and raise rural purchasing power.^{2/} Prices can be too high or too low. In general, the economically efficient domestic price of traded agricultural products is the world (border) price.

Prices are critical short-term determinants of farm production inputs, marketing services and food use. In the long run, supply of food often is increased most by productivity gains from technological transfers from abroad and research undertaken by the domestic public sector. Here, price policy and public sector growth policy interact in that productivity gains from adoption of improved technology are most rapid in an economy that does not depress agricultural commodity prices by taxes or other market interventions (Tweeten, 1986).

Producer price incentives raising food prices reduce consumers' real net incomes and limit their food consumption choices. For the poorest consumers, increased food prices can turn moderate poverty and malnutrition into severe poverty and hunger. Although long-run economic growth creates the possibility for enhanced employment and nutritional security for all, the short-term welfare and distributional consequences of agricultural price reforms raising prices can be severely detrimental to the poor. The challenge, then, is to design and implement agricultural price reforms supporting economic growth while preserving or promoting equity and nutritional welfare.

^{2/} In addition to increased agricultural prices, reform programs commonly prescribe higher interest rates, lower wages, and currency devaluation as means to correct common economic distortions. As discussed elsewhere, each of these reforms strongly affects the agricultural sector.

2.2 Agricultural Policy Objectives

Agricultural policies in developing countries typically have four broad objectives: 1) efficient economic growth, 2) improved income distribution (in part, through employment generation), 3) a nutritional floor for consumers, and 4) food security.^{1/} Food prices play a strong role in determining the extent to which these objectives are attained.

Efficient resource allocation raises income which may be consumed immediately or saved to invest in human and material capital providing low-cost sources of future income. Because a large portion of national resources are devoted to agriculture, food price policies play an important role in signaling resource opportunity costs. Food prices also have substantial effects on income distribution between urban and rural sectors (e.g., the urban-rural terms of trade). Food intake, particularly for the poor, is strongly affected by changes in food prices. Thus, efforts to provide a nutritional floor beneath society are inseparable from agricultural price policy. Food security, as a function of price volatility and the balance between traded and domestic commodities, is also influenced by agricultural price policy. Thus, governments frequently use agricultural price policy to intervene in the sector in the pursuit of the four general agricultural policy objectives. Conflicts are inherent in use of agricultural price policy to pursue these multiple objectives.

2.3 Common Price Policy Interventions

Government agricultural price policy interventions fall among five broad categories: 1) producer price interventions (input and output), 2) marketing sector interventions, 3) consumer price interventions, 4) international trade policies, and 5) macro-economic policies that influence general agricultural prices. A range of possible interventions exist within each of these categories. Often governments simultaneously intervene in numerous price domains. These interventions may complement one another or they may conflict.

^{1/} These objectives are identified in Timmer, Falcon and Pearson (1983). Some countries also place a premium on policies allowing freedom in making production and marketing decisions.

2.3.1 Producer Price Interventions

Producer price policies take two general forms: taxes (or subsidies) on inputs, and taxes (or subsidies) on outputs. Producers' decisions regarding how intensively to cultivate their land depend partly on the ratio of input prices to output prices. Thus, interventions in input and output prices are best considered jointly, although often they are not.

Farm input interventions alter the supply and demand for inputs by producers. Common input price interventions include: taxes (or subsidies) on an input, fixed prices, and price floors and ceilings (defended by direct government purchases and sales of inputs). Subsidies (either explicit or implicit) are the most common form of input price interventions. Such subsidies can take several forms, including: 1) direct government payments to manufacturers that allow them to charge a price below their costs, 2) subsidized government manufacture of inputs, 3) monopoly sales of inputs by government below market price, 4) rebates to consumers or input purchasers, and 5) overvalued exchange rates which constitute an implicit subsidy on imported inputs. A common but rarely achieved objective of these interventions is to offset less-than-optimal input use by producers who are uninformed, risk averse or lethargic. Under proper circumstances, intervention can increase output and productivity and lower unit costs of production.

Output price interventions are the "flip-side" of input price interventions. Indeed, the same basic range of interventions apply. Governments can directly tax or subsidize output prices through direct purchases above market prices or tax outputs through forced procurement below market prices. Governments can attempt to fix output prices by fiat; however, parallel markets often arise to circumvent such efforts. In the case of traded outputs, overvalued exchange rates reduce real output prices by artificially lowering the price of competing imported goods and making export of the commodity less competitive in world markets. (Exchange rates are dealt with later in the discussion of macroeconomic linkages.)

In principle, input and output price interventions can be coordinated to increase the profitability of farming. Output price supports are often seen as compensation for input taxes or subsidy reductions. It is not uncommon, however, for governments to impose contradictory interventions, subsidizing inputs while taxing outputs, as in the case of Egypt. An input subsidy combined with an output tax leaving farm profit unchanged is almost certain to reduce national income by distorting the input mix or the product mix.

2.3.2 Marketing Sector Interventions

Marketing sector price interventions are also a common element of food policy. Wholesale and retail markets pool supply and demand information to discover price and clear markets. Markets also provide storage, transportation and processing. The price for or cost of these basic marketing functions -- the marketing margins -- separate farmgate from retail prices. Government interventions to alter these marketing margins have important implications for producers and consumers as well as for traders.

Marketing sector interventions typically take the form of fixed prices for marketing services, setting ceiling and floor prices for those services, subsidizing or taxing marketing functions, and direct performance of marketing functions by the government (either as a monopolist or in competition with private traders). These interventions not only affect the supply and demand for marketing activities, but also alter the process of commodity price formation in markets.

One objective of marketing sector interventions is to reduce the conflict between producer and consumer interests by minimizing the margin between farmgate and retail prices. Problems arise from efforts to force those margins below the actual costs of performing marketing functions. Policymakers often fail to recognize that marketing operations are productive activities that require real resources, and that traders require incentives, just as do producers, for services to be supplied. And efforts to reduce marketing margins by replacing the private sector with parastatal corporations typically raise rather than lower marketing costs per unit.

2.3.3 Consumer Price Interventions

Consumer price interventions can take numerous forms, although most of them share the characteristic of either taxing or subsidizing food consumption. Common forms of consumer price interventions include fixed commodity prices (by fiat), direct subsidies for all consumers of a commodity, targeted subsidies (through ration shops or by subsidizing commodities consumed primarily by the poor), food stamps and direct income transfers to certain consumers. Motivations for these interventions can range from humanitarian concerns for hunger and poverty to political calculations of how to garner the support of influential groups. In terms of the four general food policy objectives cited above, consumer subsidies primarily are designed to provide a nutritional floor. Consumer subsidies also result from the political power of urban consumers to obtain economic transfers. Whether or not interventions improve income distribution depends on who pays for and receives subsidies.

Problems posed by the high cost of general food subsidies are discussed later. Here we note that general food subsidies once initiated are politically very difficult to eliminate even though other policies may offer more cost-effective means to use limited public funds to reduce malnutrition.

2.3.4 International Trade Interventions and Border Prices

Price interventions involving international trade are pervasive in most countries. Agricultural border prices (c.i.f. for imports, f.o.b. for exports) determine the opportunity cost of domestic output and resources devoted to agriculture. This consideration suggests that to promote efficient resource allocation, the appropriate level of domestic agricultural production is the point at which the value of the domestic resources used to produce the last unit of food equals the cost of importing or exporting an equivalent unit (as signaled by border prices). The border price is the efficient price only if the exchange rate is not overvalued or undervalued. The import price remains the opportunity cost of domestic output even if the commodity is being dumped on world markets at subsidized prices by other countries. However, a country may wish to protect its producers against transitory world price fluctuations whether those fluctuations arise from dumping or other factors such as weather.

Border prices and trade policy provide policymakers a powerful tool for implementing domestic price policy. Typical border price interventions include tariffs and subsidies on goods crossing the border, quantitative restrictions and grades and standards. In principle, consumers will not pay more for domestically produced commodities than the price at which imported commodities are available (assuming no quality distinctions). Thus, subsidizing food imports as a means of providing inexpensive food to consumers lowers the price received by domestic producers and signals them to devote fewer resources to production. By the same token, restricting food imports raises retail prices and domestic producer prices. Restrictions on exports of domestically consumed products can also be effective tools for lowering retail prices, creating economic transfers from producers to consumers. Commercial trade policies present a pervasive and relatively easily administered tool for implementing domestic price policy for traded goods. Thus trade policies tempt bias against agriculture -- a frequent occurrence in developing countries.

Strict adherence to border pricing would imply free trade. Completely free trade permitting the full volatility of international prices to enter the domestic food economy could increase food insecurity of poor consumers. However, public interventions

such as import controls to insulate a country from world prices often entail greater social cost than the instability they were designed to avert. Nonetheless, strict border pricing would be complicated by short-term volatility in international prices as well as by distortions in the foreign exchange rates through which international prices are translated into domestic food prices. Thus, any long-term price policies based on border prices should be based on trends in border prices evaluated at shadow exchange rates (see Abel and Beach, 1988).

2.3.5 Macroeconomic Linkages with Agricultural Policy

Macroeconomic linkages with the agricultural economy flow in two directions: Macroeconomic policies strongly condition the agricultural price environment while agricultural price policies influence macroeconomic policies and performance of the national economy. The latter is evident because agriculture accounts for a significant portion of GDF and employment in developing countries.

Agricultural output and food price changes can effect the macroeconomy in several ways. For example, the government budget (the financing of which has important macroeconomic consequences) may be drained by large agricultural subsidies. Similarly, agricultural production and price changes influencing the balance of imports and exports can have important implications for the supply of and demand for foreign exchange. Higher farm and food prices can reduce demand for non-food goods and services in the economy. Similarly, lower food prices can stimulate demand for a host of other products, both domestic and imported.

Fiscal and monetary policies are rarely set with agriculture in mind or are advised by the Minister of Agriculture. Yet macroeconomic policies strongly influence agricultural prices, income, productivity and output. As a matter of fiscal policy, government can focus investment to stimulate growth in particular sectors. Similarly, reductions in government investment (whether motivated by deficit reduction or other objective) can reduce public investment in agriculture. Monetary policy also can influence agriculture, particularly as it affects inflation and the supply of credit in the economy. The agricultural sector must compete with all other sectors for credit and investment. To the extent that agricultural product prices do not move up with the general price level (including prices for farm living and production items), inflation is an implicit tax on producers. Foreign exchange rates, interest rates, and wage rates are important "macro-prices" that influence decision-making at every level of the food system (Timmer, Falcon and Pearson, 1983, p. 215).

Policies regarding foreign exchange rates are particularly important for agricultural prices. Overvalued exchange rates, common in developing countries, artificially depress imported food prices. This is similar to a subsidy on imported goods in that it lowers the domestic price against which local producers must compete. Conversely, currency devaluation often increases food prices nearly in proportion to the devaluation. This influences production and consumption decisions as well as foreign exchange reserves, domestic budgets and social unrest. Like other macro-prices, the effects of exchange rate changes are felt throughout the economy, making them a blunt tool for implementing agricultural price policy. Despite their importance to farmers, exchange rate policies, like monetary and fiscal policies, often are made without regard for their effects on agriculture.

Interest rates and wage rates also have important implications for the agricultural economy. Interest rates and wage rates reflect the relative costs of capital and labor. These prices especially influence choices of technique in production and marketing. For example, subsidized interest rates that make capital artificially cheap will shift relative prices to encourage capital-intensive techniques often inappropriate for poor countries. In many developing countries, production and marketing activities (processing in particular) are major sources of employment and income generation. So distortions in interest and wage rates influence employment, efficiency and distribution of income not only in production agriculture but also in marketing and indeed throughout the economy.

Employment rates and income levels are important determinants of the nationwide demand for food and other goods and services. Food is also the primary wage good in industrial sectors. Thus, food prices directly influence industrial wage rates. Cheap food helps industry to maintain real wage incentives; yet, the resulting low farm income reduces the rural demand for industrial goods and services.

Other interactions are often evident, such as between inflation and interest rates. To encourage foregoing of current consumption for savings and investment, market interest rates need to cover real interest cost (commonly 10 percent in developing countries) plus the inflation premium. While an incentive to savers and lenders, such compensation constitutes a hardship to borrowers whose earnings do not rise with inflation and interest rates. While governments often intervene to avoid this hardship by holding down interest rates, a superior strategy is to avoid macroeconomic policies causing inflation.

2.4 Tradeoffs Among Agricultural Policy Objectives

Tradeoffs among the four agricultural policy objectives cited above -- economic efficiency, equitable income distribution, nutritional welfare, and food security -- provide a framework for illustrating in greater depth the agricultural policy dilemma with which this chapter began. Those objectives also provide a basis for evaluating price policy interventions outlined above.

With regard to the first objective -- promoting efficient domestic resource allocation -- virtually all of the interventions introduce welfare losses; i.e., motivate inefficiencies in resource allocation that reduce national incomes (Tweeten, 1985). Fertilizer subsidies, for example, are often cited as wasteful because fertilizer's scarcity value is not reflected in its price to producers, who are thus prone to excessive use. The same can be said of other subsidies and taxes, whether in production, marketing, consumption or trade (with the exception of cases in which these interventions correct existing distortions). Thus, if economic efficiency were the only criterion by which to judge price policy interventions, the only acceptable interventions would be to correct other distortions including externalities and market failures.

In recent decades, government intervention in agriculture and other markets have brought several countries to the brink of economic collapse and many such countries are seeking ways to extricate government from markets (Tweeten, 1987). Although efficiency is one among four objectives it is especially important because without a "growing pie" there are fewer resources with which to promote other objectives such as equity, stabilization, or nutrition. Thus, policies to foster economic efficiency can also help to serve other objectives.

Promotion of the second objective -- improved income distribution -- often conflicts with efficient resource allocation. Income distribution is relevant to agricultural price policy analysis because equity is an objective in its own right and because income transfers result from changes in food prices. From this perspective, the short-view interests of producers, consumers and taxpayers are in conflict. Higher food prices imply a transfer from consumers or taxpayers to producers; lower food prices imply a transfer from producers or taxpayers to consumers. This conflict is minimized by employing efficient transfer mechanisms, that is, that minimize national income lost per unit transferred to the intended recipient (Tweeten, 1985).

Policy objectives need not necessarily conflict, however. For example, policies to provide stability do not necessarily conflict with economic efficiency. A buffer stock policy providing benefits from storage in excess of costs of storage is economically efficient. Sound macroeconomic policies that avoid high interest rates encourage buffer stock storage that stabilizes food prices. Stable farm prices can increase productivity by reducing capital rationing and encouraging technological change. This in turn contributes to economies of size in farm production, lower food prices and to the exit of inefficient producers who find better opportunities in the non-farm sector. Public investment in human resources (schooling, health services, etc.) of youth from low-income families can serve economic efficiency and equity (distributive justice) objectives.

Problems arise from the financial and economic costs of price interventions. Direct subsidies can impose severe and sometimes unsustainable burdens on government budgets. Such burdens limit governments' ability to invest in productive activities to the detriment of economic growth.

The fact that food production is a primary source of income in most developing countries, and that food consumption dominates the expenditures of most families, means that food price changes have profound implications for real income transfers. Efforts to use food prices to improve income distribution require knowledge of whether the poor are predominantly producers or consumers, a question that is complicated by the fact that few members of society fall uniquely within one group or another. Landless rural laborers, common in countries such as Bangladesh, are an example of a group whose income derives from production, yet, who may be hurt in the short run by food price increases intended to transfer income to producers. Unfortunately, untargeted food price manipulations are not only blunt but also are expensive means for effecting income transfers.

The third objective -- providing a nutritional floor for all members of society -- is also related to the question of income distribution. Some consumers are at risk of malnutrition or starvation because their incomes are too low or unstable to ensure meeting minimal consumption requirements at all times. Price reform programs that increase food prices can devastate poor consumers. Recognizing that the poorest consumers are at greatest risk suggests a focused policy response. The consumer price interventions described above can be either targeted or untargeted. Governments concentrating their efforts on the poorest consumers through targeted interventions can minimize unfavorable tradeoffs between efficiency and equity. In fact, efficiency gains from price policy reform potentially provide more than enough additional national income to compensate those who are made worse off, though this notion is meaningless if governments do not intervene to make this compensation.

The fourth general agricultural policy objective -- food security -- entails appropriate buffer stock policy, avoidance of unnecessary transitory price fluctuations and maintenance of access to international food supplies through trade. Food security, loosely defined, is the protection of a country's food consumption level for all households against shocks to its food system. The principal source of food insecurity are shortfalls in domestic agricultural production and upward shocks in international commodity prices.

Many countries aspire to become self-sufficient in food, largely as a means of protecting domestic food prices from the volatility of international markets. Countries thus adopt a variety of border policies including quotas, tariffs, subsidies, and grades and standards to buffer domestic consumers from the instability of external markets. To the extent that such measures remove countries from international markets, the vulnerability of those countries to variability in domestic food production is increased. Thus, food self-sufficiency, particularly if it comes at the expense of foreign exchange-earning activities, is not synonymous with food security. Trade is an essential component of food security; yet, the instability implied by completely free trade may be detrimental to food security.

Food security entails maintaining appropriate terms of trade for farm producers, a balance between imported and domestic commodities to meet food needs using world prices as a general indicator, adequate general economic growth to provide buying power and foreign exchange for food purchases as needed in international markets, and access to an adequate diet for the poor through targeted food assistance. Agricultural price policy (including macroeconomic linkages) is an important determinant of the direction, composition, and quantity of intersectoral migrations and resource transfer, and cross-border trade. Thus such policy plays an important role in food security.

As noted above, trade policy is a pervasive tool for implementing domestic price policy and, as such, has important implications for each of the four food policy objectives. With respect to economic efficiency, a policy that alters border prices incurs a welfare loss. Yet, such policies can be effective means of promoting food security, if, for example, highly volatile international prices would otherwise be passed along entirely

to domestic consumers.^{1/} Using trade policy to stabilize domestic prices also may help to provide a nutritional floor beneath society. Trade policy also has direct implications for income distribution, because wealthier consumers (often urban residents) disproportionately consume imported goods. Thus, restrictions on food imports would shift the urban-rural terms of trade and transfer income from urban to rural areas. To the extent that incomes are lower for rural than for urban residents, shifts in the terms of trade in favor of rural areas would tend to improve income distribution although, as noted above, this is a blunt tool that would harm poor urban consumers.

In short, agricultural price policy is a powerful tool available to governments in their efforts to promote the broad objectives of agricultural policy. Yet, the role of prices as both incentive or restraint on production and consumption and as a distributor of income gives rise to a conflict between long-term dynamic growth in the agricultural sector and the economy as a whole and the short-term income and nutritional requirements of the poor. The combination of limited economic resources and limited policy tools imposes tradeoffs among food policy objectives.

The challenge for analysts is to devise solutions, analyze tradeoffs, estimate costs and benefits among alternatives, and help policymakers define policies that minimize the tradeoffs among competing objectives. The following pages provide selected examples of the Agricultural Policy Analysis Project's experience with facilitating reforms in the price policies outlined above.

^{1/} A policy to stabilize domestic prices at the mean of border prices through a variable import duties and subsidies can increase efficiency. However, many developing countries do not have discipline or administrative capability to avoid either excessively high or excessively low average prices over time.

3.0 SELECTED APAP EXPERIENCE WITH AGRICULTURAL PRICE POLICY REFORM

This section describes selected examples of the Agricultural Policy Analysis Project's experience in analyzing and facilitating agricultural price policy reforms in countries in each of the major developing regions. The cases presented in this chapter illustrate examples from each of the five categories of price policy interventions outlined in the previous chapter. The examples include: (1) producer input subsidies in Egypt (2) producer output price supports in Liberia, (3) fixed marketing margins for fruits and vegetables in Jordan, (4) consumer price subsidies in Bangladesh, (5) cereals export reforms in Togo, and (6) macroeconomic linkages with agricultural price policy in Guatemala.

3.1 INPUT PRICE SUBSIDIES IN EGYPT^{1/}

3.1.1. Agricultural Situation

The Government of Egypt (GOE) plays a pervasive role in food and agriculture. It heavily subsidizes prices of basic foods such as bread, controls cropping patterns and crop output prices, and subsidizes inputs such as fertilizer, fuel and irrigation water.

Farmers are increasingly turning to producing livestock commodities and livestock feed such as berseme clover which are in high demand and not controlled by the government. The government receives significant revenues from cotton exports at world prices above prices paid to Egyptian producers. But Egyptian farmers often plant cotton late or harvest it early in favor of a winter or summer crop of berseme and sell fertilizer distributed for cotton on the parallel market or use it in on more profitable crops. Thus Egypt has difficulties in maintaining its natural comparative advantage in producing and exporting cotton lint.

The GOE has initiated agricultural policy reforms but interventions are so widespread, agriculture has been so isolated from market forces, and government bureaucracy has grown so large and unyielding that progress in restoring balanced incentives for agricultural efficiency and growth is slow and difficult.

^{1/} Summarized from (Bremer-Fox, et. al., 1987).

3.1.2 Fertilizer Price Subsidies and Their Impact

Fertilizer use in Egyptian agriculture has more than quadrupled since 1960. The GOE encouraged this trend in its strategy to raise agricultural production. It has invested heavily in new fertilizer factories, developed an extensive system to distribute fertilizer and provides credit to pay for it under the auspices of the Principle Bank for Development and Cooperation (PBDAC). Both fertilizer production and prices farmers pay for fertilizer are highly subsidized.

The official fertilizer distribution system is supplemented by an unofficial parallel market. This market is supplied by farmers reselling PBDAC fertilizers and perhaps by other diversions from the PBDAC system. Prices on the parallel market are usually two to three times the official price. From 26 to 40 percent of PBDAC fertilizer supplies are resold on the parallel market.

Farmers are generally satisfied with the current PBDAC and parallel market system. All farmers have access to fertilizer and credit to purchase it; nearly all farmers use fertilizer and repay their loans. The distribution system does not have excessive costs and fertilizer losses during storage and transport are not high. But the GOE fertilizer policies have become increasingly costly, distort farmer decision-making, promote wasteful and inefficient fertilizer use at the farm level, and are inconsistent with the GOE's policy of increasing reliance on the private sector for economic growth.

3.1.3 Policy Reform and APAP Experience

The above concerns motivated the GOE to ask the USAID to have APAP undertake an analysis of the market for nitrogenous fertilizer in upper Egypt, addressing the related issues of pricing and private sector involvement in fertilizer distribution.

The APAP team, with excellent support from Egyptian analysts, studied the demand for fertilizer by using existing data to estimate the historical and agronomic bases for the fertilizer market. Fertilizer demand was estimated under a range of price and policy scenarios using linear programming. Costs and technical performance in the current system were compared with estimated costs under alternative privatization approaches.

Analysis indicated that total production and farm income would be reduced by large increases in the fertilizer price unless crop prices were also adjusted. At unsubsidized, factory break-even prices, farmer income could fall by as much as 22 percent with no adjustment in crop prices, and grain production could decline as much as

5 percent. However, if output prices also are adjusted, farm income could actually be higher than at present but grain production would fall, especially if acreage controls were lifted at the same time.

Although farmer demand for subsidized fertilizer is not met by the current supply, the current supply would meet demand at unsubsidized prices and result in more efficient use of irrigation water as well as fertilizer. Input and output prices more in line with international prices would result in a more rational cropping pattern and output mix.

3.2 OUTPUT PRICE SUPPORTS IN LIBERIA

Agriculture accounts for four-fifths of employment and for one-third of Gross Domestic Product in Liberia. Agriculture is especially important to the economic future of the country because two major sources of national income and export earnings, iron ore and high-grade timber, are expected to be severely depleted by the year 2000. A workshop was held at Yekepa, Liberia for policy-makers and analysts in March 1985. The APAP policy analysis delivery system here is notable for the process and methodology as well as information provided for reforming Liberian agricultural policies.

3.2.1 Policy Analysis Delivery Process

Significant features of the policy analysis delivery process are listed below before turning to methodology and policy information.

1. APAP personnel interacted with indigenous analysts and officials in three visits to Liberia to assemble basic background data on the nature of current policies, problems, policy objectives and constraints. Cooperation and support of key Liberian officials was critical; the Deputy Minister of Agriculture for Planning and Development played a central role. Richard Edwards of USAID (on leave from USDA) was especially effective in providing liaison between Liberian officials and APAP analysts.
2. A strong collaborative relationship was developed with Liberian counterparts in the Ministry of Agriculture. These counterparts worked closely with APAP personnel in defining and analyzing issues, co-writing reports, and making presentations at the workshops. Three of these counterparts were brought to Oklahoma State University for a six-week training session in policy analysis concepts and tools, including use of microcomputers for policy analysis.

- Liberian counterparts provided long-term continuity to the project, building on the process initiated by APAP long after the project officially terminated.
3. Policy education and dialogue took place with Liberian policy officials, especially with Assistant and Deputy Ministers of Agriculture in the preparation stage, but also at the Yekepa workshop, attended by the Minister of Agriculture and other high level officials from parastatals, the Party and from the Ministries of Finance, Planning, and Presidential Affairs for a total of over 50 workshop participants.
 4. After APAP analysts and Liberians made workshop presentations detailing major problems and policy options and the costs and benefits of alternatives, open discussion was encouraged among participants. APAP personnel provided information in these free-wheeling discussions but avoided advocacy.
 5. Policy-makers met after the workshop but made no policy recommendations and made no policy decisions. However, within two years, many of the policy reforms considered at the workshop had been implemented. The lesson is that planning policy workshops or related policy analysis delivery mechanisms should not expect nor insist on immediate acceptance and implementation of findings. Reasons for delays are many including local pride and the need for further reflection, consultation, analysis, and convergence of views.
 6. Fourteen papers were published in the proceedings of the workshop and constitute an important archive to be drawn on for future policy analysis and formulation. Of the 14 papers, the five papers from the APAP effort constituted the initiating and "keynote" papers. Because unlike other change agents, APAP has no implementation leverage in the form of withdrawing loans or other substantial aid assistance, APAP influences policy decisions by the force of competent analysis successfully communicated to decision-makers. Although the analytical methods were sometimes complex and sophisticated, emphasis was on clearly conveying only the essential findings to lay decision-makers.

3.2.2 Rice Price Support in Liberia

The major government price program was a support of 18 cents per pound of paddy rice (double the border price) to encourage self-sufficiency, an avowed government policy. Other objectives of government policy were economic efficiency, equity, and stability. To show tradeoffs, costs, and benefits of alternative price policies, three main studies were undertaken by APAP personnel in collaboration with Liberian counterparts in the Ministry of Agriculture.

3.3 MARKETING MARGINS FOR FRUITS AND VEGETABLES IN JORDAN

Agriculture is an important basic industry in Jordan, accounting for 8.5 percent of GDP. Although this percentage is small by developing country standards, major current sources of income such as remittances from Gulf States are uncertain and may fall in the future. Hence, Jordan would like to increase GDP from basic domestic industries including agriculture.

3.3.1 The Policy Analysis Process

The APAP policy analysis process in Jordan was similar to that in Liberia including visits by APAP personnel to define and analyze cogent local problems and to present a workshop to Jordanian agricultural policy-makers, analysts and informal leaders (Jiron et al., 1988). Less emphasis was given to training of local counterparts than in Liberia because Jordan already possessed considerable policy analysis capabilities.

3.3.2 Price Support and Marketing Margins

Two pricing policies were analyzed: (1) government restriction on imports which raised price to consumers of potatoes, onions, garlic and apples, and (2) a formal "reference" pricing system which set prices in the retail markets (though not in the wholesale markets).

Classical welfare analysis indicated that gains to producers and the government parastatal from restrictions on vegetable imports fell short of losses to consumers. For potatoes, for example, National income fell JD (Jordanian Dinar) .3 for each JD gained by producers. This transfer inefficiency was much less than for the Liberian rice price support policy noted earlier but was larger than achievable with a direct cash transfer payment to producers.

The policy of administratively setting fruit and vegetable prices in the retail market was found to have several economically undesirable impacts. Although maximum and minimum prices were set by a public board, allowed marketing margins were set too narrowly to cover marketing costs. Hence, all fruits and vegetables tended to be sold at the maximum price without quality distinctions. Thus the controlled retail market did not send price signals back to producers that some consumers desired and were willing to pay premium prices for premium produce. That is one reason the problem of low quality produce pervaded both domestic and foreign markets for Jordanian fruits and vegetables.

Deregulating the market is one solution to the problem of providing producers with price incentives to supply quality produce. However, conventional wisdom held that such an attempt at liberalization failed during its trial period of December 1985 to March 1986. Extensive analysis by APAP personnel of data from that period revealed that, compared to market behavior in comparable controlled periods, during liberalization retail prices increased for some commodities but decreased for most fruits and vegetables. More importantly, a representative basket of the main fruits and vegetables consumed in Jordan was less expensive during the liberalization period.

These and other results were shared with policy-makers and policy analysts at a workshop held at Aqaba in late January 1988.

3.4 CONSUMER PRICE SUBSIDIES IN BANGLADESH

3.4.1 Food and Agricultural Situation

Rice accounts for 95 percent of total foodgrain production and 85 percent of foodgrain consumption in Bangladesh, though wheat has been gaining rapidly in both categories since the mid-1970s. Total foodgrain consumption in Bangladesh in 1982/83 was approximately 15 million tons, 85 percent of which was supplied domestically, with the remainder consisting primarily of food aid.

The agricultural sector dominates Bangladesh's economy. Roughly 83 percent of the country's 100 million people live in rural areas. Rural groups represent 86 percent of the civilian labor force, 59 percent of which is directly employed in agriculture. As one of the world's most densely populated countries, Bangladesh experiences tremendous pressure on limited land resources. Moreover, the distribution of land ownership and wealth is highly skewed: 4 percent of the population owns one-third of the land, while nearly half of the rural population is landless or near landless. This situation contributes to severe seasonal unemployment and an extremely low standard of living for the rural poor. Per capita income is approximately \$125 per year.

Bangladesh's poverty contributes to widespread malnutrition. The World Bank estimates that less than 40 percent of the population is adequately nourished by the minimum daily consumption standard of 2,020 calories, while 45 percent of the population consumes under 1,650 calories daily. Ninety percent of the malnourished live in rural areas, with the landless and informal non-farm labor (32 percent of the population) surviving on merely 1,500 calories per day, the minimum level necessary to sustain body weight (World Bank, 1985, p.3).

3.4.2 Food Policy Context - Consumer Subsidies

The Government of Bangladesh (BDG) operates two categories of consumption interventions: Open Market Sales (OMS) and a food ration system. The OMS program is untargeted, while the ration system targets specific consumer groups. The OMS program consists of government sales of cereals on the open market. These sales are triggered by open market cereal price increases above pre-established levels. The objective of the program is not to impose a firm ceiling on cereal prices, but rather to buffer market price increase by public sales of limited quantities at a fixed margin (roughly 2 percent in 1985) below the open market price. Thus, the OMS price parallels fluctuations in open market prices, though at a fixed percentage below the open market price.

The BDG also operates an extensive and complex food ration system, known as the Public Food Distribution System (PFDS). The PFDS consists of seven separate ration channels targeted to various consumer groups. Consumers who qualify for various ration programs receive ration cards entitling them to purchase limited quantities of specific commodities below market prices in special ration shops.

Although the ration system is targeted, three of the seven channels are targeted to relatively well-off groups -- urban residents, civil servants, and military personnel. In 1984, over one-third of food rations went to these groups. (OMS and related market operations accounted for 16 percent of public food distributions.) The two targeted rations programs specifically aimed at needy consumers received only 46 percent of total rations.

Most of the beneficiaries of the ration channels oriented to relatively well-off consumers have incomes sufficient to ensure relatively stable foodgrain consumption. Moreover, those groups are the chief beneficiaries of the OMS program. Clearly, these programs exist for political rather than for economic reasons, with beneficiaries of these programs providing vital political support to the government. Unfortunately, these channels also divert scarce food resources from needy consumers.

3.4.3 APAP's Experience with Consumer Subsidies in Bangladesh

The Agricultural Policy Analysis Project's involvement with consumer subsidy programs in Bangladesh came through USAID/Dhaka's request for assistance in designing a PL-480 Title III agreement. As part of its task to recommend a broad set of policy conditions for the Title III agreement, the APAP team reviewed these consumer subsidy programs (Block and Makinen, 1987).

The APAP team found that the OMS program was a well-conceived and well-implemented price stabilization program on the consumption side. Yet, it was also apparent that the OMS program alone was not sufficient to meet the consumption assistance requirements of a great number of the neediest consumers. The poorest consumers lacked adequate income to benefit substantially from the OMS program because they lacked effective demand even at OMS prices. As described above, the dire nutritional situation in Bangladesh meant that the consumers who could not benefit from OMS comprised a significant portion of the population. The need for some form of targeted consumption intervention was clear, as was the need to reform the existing ration system.

The primary objective of the APAP recommendations regarding reform of the ration system was to reduce as much as possible the quantity of food channelled to non-neediest consumers, and to reallocate that food to the poorest consumers.^{1/} Political realities dictated that the BDG could not simply eliminate the ration channels directed to urban centers, the army, and civil servants. Recognizing this constraint, APAP recommended a two-pronged approach to reforming the ration system.

One strategy for lowering the subsidy for non-neediest consumers was to manipulate the ration prices in those particular channels. By gradually raising the ration prices offered to non-neediest consumers to the point that the ration prices approximated market prices, the incentive for those consumers to participate in the ration system could be reduced or eliminated. This approach would be much less vulnerable to political pressure by pacing ration price increases to moderate levels timed to occur during the post-harvest season when prices are ordinarily at their lowest.

A second strategy was to alter the mix of commodities in the standard ration. Empirical analyses of food consumption patterns consistently point to different consumption preferences by different income classes. Wealthier consumers tend to be less sensitive to changes in the price of commodities they consider to be inferior. This distinction extends as well to preferences for different grades of the same commodity, such as rice in Bangladesh. Poor consumers tend to be much more sensitive to price changes in these less preferred commodities. Thus, by changing the composition of the standard ration away from rice (the preferred food), and rationing only low quality rice if any, the BDG could further reduce wealthier consumers' incentive to participate in the ration system.

^{1/} Previous Title III agreements aimed at reducing the fiscal burden of the ration system had already succeeded in reducing its subsidy cost by two-thirds from FY80 to FY84. The need in the new Title III agreement was to re-focus the remaining rations.

3.5 CEREALS EXPORTS REFORM IN TOGO

3.5.1 Agricultural Situation

Although Togo has the potential to increase food crop productivity and to produce an exportable surplus of cereals in most years, productivity remains low. This is due, among other factors, to a low level of domestic demand compared to productive potential, government restricted exports, and a lack of production incentives. In addition, productivity is low because of limited technical assistance and improved inputs reaching the farmer due to poor performance of the extension service and limited agricultural research. Improved seeds and inputs are not as available for cereals as they are for the traditional export crops. Credit programs are largely restricted to coffee, cocoa and cotton producers.

An equally serious constraint is the lack of price incentives for farmers to increase cereals production. Producer prices are highly unstable. High prices in a poor crop year lead to increases in area planted to maize in the next cropping season and, with good weather and government restrictions on exports, this leads to surpluses of maize and depressed prices. For example, in 1984-85, a large surplus of maize, up to 20,000 metric tons, resulted in severely depressed farm-gate prices.

Although the Government of Togo (GOT) prohibited exports, an extensive informal foreign trade in maize and other cereals allegedly existed with maize imports from Ghana and maize, sorghum and millet exports to Burkina Faso, Nigeria and Niger.

3.5.2 Policy Reform and APAP Experience

In 1986, the APAP assisted USAID/Lome and the GOT in designing a policy reform program aimed at liberalizing cereal exports (Hanrahan, 1988). The policy reform program included (1) legalization of cereal exports, (2) a limited role of the Togolese grain Marketing Board in grain marketing and maintaining a food security stock, and (3) an export licensing system. AID was to support these reforms with a cash transfer and technical assistance in data collection, analysis, crop forecasting, market reconnaissance, and in developing procedures to monitor and regulate export marketing for food security.

These policy reforms were undertaken in conjunction with a World Bank supported structural adjustment program and were financed by a grant from AID's African Economic Policy Reform Program. APAP technical assistance included analysis of the grain supply and demand situation in Togo and elaboration of operating rules for limiting grain exports.

Performance monitoring to chart progress on these policy reforms was to begin in July of 1986. Based on agreed performance benchmarks, USAID/Lome could build a performance record that would: (1) justify decisions on disbursement of the second tranche AID monies, (2) identify further steps in the policy dialogue and consideration of subsequent assistance, and (3) serve as the basis for the final program evaluation. In addition, USAID/Lome planned to monitor, on a continuing basis, the progress of policy dialogue and reform implementation, and progress in donor coordination on general structural adjustment and policy reform.

This plan was designed to help the GOT make a smooth transition from the current cereals situation of recurrent production surpluses and restricted exports to higher and more stable production with a stock program to give reasonable stability to producer prices, and supply and utilization -- all consistent with national food security.

3.6 MACROECONOMIC POLICIES AND AGRICULTURE IN GUATEMALA

As in most developing countries, agriculture dominates the economy of Guatemala, and was the primary engine of the country's economic growth from 1970 to 1978. In subsequent years, however, Guatemalan macroeconomic policies have negatively affected agriculture. The basic elements of this set of macroeconomic policies were: 1) low public and private investment in agriculture, 2) a credit policy aimed at financing traditional activities, 3) excessive tariff protection for industry, and 4) an ineffective agricultural price control policy.

3.6.1 Monetary Policies

Since 1982, changes in monetary policy were intended to expand the supply of money and credit in the economy. The effect, however, was to reduce the availability of agricultural credit for production and investment while further strengthening the tendency to direct available credit to traditional export crops. Through rediscount operations the central bank reinforced this trend, concentrating credit almost exclusively on single-crop farming in relatively inefficient enterprises.

3.6.2 Exchange Rate Policy

As noted earlier, exchange rate policies have particularly important consequences for agricultural price policy because most agricultural commodities are tradable. The main objectives of Guatemala's exchange rate policy (since the foreign exchange crisis of 1982) have been to allocate the available supply of foreign exchange to priority imports and to reduce the effect of the devalued currency on the economy.

Towards that end, the government has applied import quotas to ration foreign currency. These quotas have raised the unit cost of production and thus discouraged the adoption of improved production techniques.

The government also operates a three-tiered exchange rate. The "regulated market rate" applies to imports of "essential," items the "official market rate" applies to government debt service payments and the "commercial market rate" applies to banking system transactions. This system neither reduced the balance-of-payments deficit nor prevented a depreciation of the national currency. Preferential exchange rates for machinery and equipment favored the use of capital-intensive technologies to the detriment of agricultural labor. These harmful effects have been mitigated recently by moves to unify the exchange rate; yet, restrictions on the commercial exchange of certain agricultural products continue to separate domestic and international prices.

3.6.3 Credit Policy

Monetary policy acted to limit the supply of credit, and caused a shortage of agricultural credit. Moreover, high inflation rates since 1979 created negative real interest rates, discouraging savings. Access to limited agricultural credit has been greater for producers of traditional export crops (coffee, cotton and sugar cane), leaving little benefit for grain producers.

In general, these macroeconomic policies transferred resources from agricultural to other sectors of the economy. The results have been significant reductions in investments in agriculture and increases in production costs that have reduced the profitability of small and medium-sized farms.

3.6.4 APAP's Experience with Policy Reform in Guatemala

The preceding analysis emerged from a general inventory of policies affecting agriculture performed in Guatemala by APAP economists. This activity was based on the recognition by USAID/Guatemala that macroeconomic policies made with little regard

for agriculture nonetheless had significant effects on the agricultural sector's performance.

In addition to conducting a technical analysis, the team examined the institutional arena in which macroeconomic policy in Guatemala was formed. It was clear that part of the problem lay in the minor role played by agricultural sector officials in macroeconomic policymaking.

The team concluded that the institutional infrastructure had the potential to coordinate planning and policy analysis within the agricultural sector. However, the diffused nature of agricultural policy formation in Guatemala contributed to an underuse of that infrastructure from a sector-wide perspective. The first step towards integrating agricultural interests into macroeconomic policymaking was to improve the inter-institutional planning and analysis capabilities within the sector.

The policy inventory itself provided a guide to focus the analyses of the agricultural sector institutions as they began to directly address specific areas of macroeconomic policy. To improve the capability and coordination between the various agricultural planning units, the APAP team recommended an applied planning exercise be implemented by the planning units. Such an exercise would not only produce concrete agricultural plans and analyses, but would help to forge channels of communication within the sector and between the sector and the centers of macroeconomic policy formation.

4.0 LESSONS LEARNED AND RECOMMENDATIONS

Price policy interventions in developing countries introduce distortions that have often taxed farmers, subsidized consumers, and thereby reduced incentives for increasing the production of domestic food and export agricultural commodities, contributed to undermine agricultural and general economic growth, lowered agricultural exports, increased food imports, and worsened debt and balance of payment problems. Many countries are recognizing the need to reestablish a balance between policy interventions and market forces. USAID is gaining experience in how to use technical assistance in helping countries to rationally appraise costs and benefits of existing price regimes and to move back from interventionist to market enhancement policies.

The existing patterns of policy interventions were years in the making, generally with one intervention leading to another, increasing the market distortions and inefficiency. Such interventions have become institutionalized via parastatal organiza-

tions, decreased or stagnant production capacity, and urban expectations of permanently low food prices. They cannot be corrected by sudden, large changes without unacceptable social unrest and economic dislocation.

In implementing price policy reforms, governments should: (1) gain an understanding of the need for, and commitment to, price reform; (2) develop the ability and commitment to analyze all important ramifications of price reform options and continually monitor and evaluate structural adjustments, and (3) take appropriate, sometimes small, steps of corrective action, each building on the previous in moving the food and agricultural complexes toward a reasonable balance between the price-setting role of open markets and price-stabilizing policy interventions. Policy interventions and relative price relationships at the producer, marketing, processing, domestic consumer and world market levels must be carefully considered and managed as an integrated system so that reforms at one level do not cause unforeseen difficulties at another. Food aid and other targeted assistance can offset economically or politically intolerable hardships on those socioeconomic groups suffering losses from socially beneficial adjustments with positive net social benefits (Block, Bremer and Hanrahan, 1988). Border prices, corrected for transitory phenomena, are useful proxy shadow prices for estimating the social costs and benefits of existing policy interventions and options for reform.

Agricultural price policy reform efforts must be coordinated very closely with macroeconomic policy reform and debt management. Such macroeconomic adjustments can easily overshadow agricultural sector price reforms. Concurrent with price reform, governments should examine the growth enhancing needs of education, health, transportation, communications and other infrastructure as well as investment in natural resources, research and extension.

In providing policy analysis assistance, several types of activities facilitate the USAID/host country policy dialogue and subsequent reforms. These include: maintaining a reasonably long-term relationship between members of the technical assistance team and host government counterparts, training counterparts on the development and use of data sources and analytical techniques and tools, and conducting a policy workshop at the close of the technical assistance activity involving host country policy decision-makers and counterpart analysts. This process also contributes to more confidence and trust on the part of host country policy decision-makers with respect to both price reform options and the ability of counterpart analysts to continue to provide policy analysis support after the technical assistance project is completed. It is not realistic to expect

immediate or complete positive response of host country policy decision-makers to price reform recommendations that come out of a technical assistance project. The information and analytical capability must revert to the host country analysts and internal policy determining processes.

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