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EXECUTIVE SUMMARY

THE BIAS AGAINST AGRICULTURE

Trade and Macroeconomic Policies
in Developing Countries

Edited by
Romeo M. Bautista
and Alberto Valdés

International Center for Economic Growth

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—*Executive Summary*—

The Bias against Agriculture
Trade and Macroeconomic
Policies in Developing Countries

Edited by
Romeo M. Bautista and Alberto Valdés



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Preface

From the 1940s to the 1980s, developing countries saw industrialization as the key to rapid growth. Consequently, when economists studied the trade and macroeconomic policies of developing countries, they focused on how those policies advanced or hindered manufacturing. Some pioneers warned that agriculture plays a critical role in development, and since the 1970s there has been increasing recognition of this fact. Only recently, however, has recognition increased for the general equilibrium context of policy and its effects on agriculture and other sectors of the economy.

In June 1987 the International Food Policy Research Institute (IFPRI) gathered experts in the area of agriculture and economic growth, from both government and academia, to examine how trade and macroeconomic policies have affected agricultural performance. Their findings, compiled in the resulting volume and outlined in this executive summary, center on a number of country studies done by researchers at IFPRI's Trade Program and their collaborators. They show that the indirect effects of trade and macroeconomic policies have often diverged from and invariably overwhelmed the direct effects of such policies. The result is that agriculture has faced unintended but severe obstacles. For example, while the government invested in agricultural research and rural infrastructure, its exchange rate policies designed to promote industry worked against agriculture and in fact succeeded in reducing agricultural output.

The Bias against Agriculture, edited by eminent development economists Romeo Bautista and Alberto Valdés, contains important lessons for developing country policy makers who seek to reform their economies. In low-income developing countries, agricultural growth is important for overall economic growth and the alleviation of poverty and food insecurity. Trade and macroeconomic policies, in turn, are

important for agricultural growth. Efforts to assure agricultural growth and poverty alleviation, therefore, must not ignore the effects of trade and macroeconomic policies. By avoiding the policies that harm agriculture, even indirectly, policy makers have a better chance of achieving their development goals.

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Summary of Conclusions

For the past several decades, most developing countries have pursued a development strategy based on rapid industrialization, largely at the expense of agriculture. Economists are now giving increasing attention to the extent of the bias against agriculture, as well as the effects of that bias. It is becoming evident that the agricultural sector, which plays a key role in the economies of most developing countries, has suffered not only from internal intervention but also from trade and macroeconomic policies that have traditionally been used as instruments to support industry. The contributors to *The Bias against Agriculture* examine the effects of trade and macroeconomic policies on agriculture in various developing countries and regions, and their conclusions include the following:

1. The trade, macroeconomic, and sector-specific pricing policies adopted in developing countries since the early 1950s have given rise to several strong incentive biases:
 - The production of nontradable goods has been favored over that of tradable goods.
 - Within the tradable goods sector, import-competing goods have been favored over exports.
 - Within the export sector, manufactured goods have been favored over agricultural products.
 - Within agriculture, food crops have been favored over export crops.

In failing to provide a more neutral incentive structure that could have encouraged a more efficient allocation of

scarce resources, these policies have had an adverse effect not only on agricultural performance, but also on the economy as a whole and thus have inhibited overall economic growth.

2. The agricultural sector has been hurt by both sector-specific policies and economywide policies. Harmful sector-specific policies include:

- taxes on agricultural exports
- specific levies on export crop production
- the setting of low prices for food for the benefit of urban populations
- pricing policies that discriminate against agriculture producers set by state marketing agencies
- low levels of investment in agricultural extension, infrastructure, and technology

Detrimental economywide policies are mainly those that lead to an overvalued exchange rate, thereby hurting agricultural tradable goods, especially those that are export-oriented. Such policies include:

- heavy industrial protection through tariffs and quantitative restrictions
 - subsidies for industrial exports
 - unsustainable fiscal deficits
3. One of the most important findings is that, by and large, the indirect effects of economywide policies on agriculture are more powerful than the direct effects of sector-specific policies. The greatest price penalty usually imposed on agriculture is the implicit (or indirect) tax on tradable agricultural products arising from the overvaluation of the real exchange rate. Therefore, in addition

to paying attention to sector-specific pricing policies, governments should monitor the effects of trade and macroeconomic policies on the real exchange rate.

4. The complementary nature of improved incentives for farm producers and increased public investment in agriculture is often neglected in discussions of their relative effectiveness in raising agricultural output. In most developing countries, each of these two policy instruments is likely to increase the effectiveness of the other. Moreover, where agriculture is underdeveloped, it would not be wise to address only one of these two issues.
5. Liberalizing trade and exchange rates will generally improve producer incentives for exportable and import-competing farm products. Over time, liberalization will shift resources toward the production of agricultural tradables and increase both traditional and nontraditional agricultural output and exports, supporting the growth of the whole economy. Such liberalization may not, however, be easy.
 - Even where prices adjust quickly, there will be some costs and delays in reallocating resources to the newly profitable sectors and in expanding exports to world markets.
 - In the short run output losses in industries that used to be highly protected may offset the gains from the improved incentive structure, and thereby slow down economic growth.
 - Government may need to increase its expenditures on rural and export infrastructure.
 - Public resources may be required to compensate for the adverse affects of trade liberalization on the poor.
 - The lowering of trade taxes may have a negative fiscal effect in the short run that can add to an exist-

ing budget deficit. Changing quantitative restrictions to tariffs, however, can offset the negative effect.

6. The success of liberalization policies may be affected by factors such as
 - macroeconomic policies
 - the external economic environment
 - initial economic conditions in the country
 - financial assistance from development agencies to ease the adjustment process

The economic and political difficulties of the transition can be mitigated by an expanding world economy and better access to export markets. For developing countries in a debt-service crisis, an adequate inflow of foreign resources, favorable interest rate movements, and liberal debt rescheduling terms would also be helpful. It is equally clear that domestic policy should support trade liberalization and complementary internal reforms involving the financial, labor, and land markets. Developing countries with a long history of domestic market regulation, industrial protectionism, and policy bias against agriculture in particular need to provide a credible commitment to a liberalized trade regime.

7. Unrestricted trade for agriculture is politically unattractive in many developing countries in part because world commodity markets are perceived to be incapable of providing a satisfactory degree of price stability. In fact, however, there is no inherent conflict between the idea of adopting a more open trade regime to improve agricultural production incentives and efforts to reduce agricultural price instability. The two objectives are distinct in concept and can be kept separate in practice.
8. Typically, governments use three mechanisms to stabilize domestic prices:

- buffer stocks
- government monopoly over the country's foreign trade in staple food grains
- enforced price targets for consumers and producers

If international supplies are reliable, which seems to be the case for most major food staples, it is more cost-effective to rely on foreign trade than on public stock-holding as a way to cope with the fluctuations in both domestic output and world prices from year to year. The rationale for interseasonal holding of stocks is stronger, since trade and seasonal storage are not close substitutes—although proper timing of trade flows can also generate some savings.

9. Some developing countries have had success stabilizing prices by using buffer funds, which collect taxes on primary exports when export prices are high and give subsidies to producers when export prices are low. Countries may save on the cost of operating such funds by combining buffer funds for different commodities into a common fund.
10. Developing country governments must create the institutional arrangements necessary to ensure that agricultural policy makers participate in the formulation of trade and macroeconomic policies. At the same time, policy makers need to make the public better aware of the consequences of alternative trade and macroeconomic policies and to generate the coalition of interests that can make policy reform politically feasible.

An Overview of

The Bias against Agriculture

Until recently, the development literature gave scant attention to the effect of trade and macroeconomic policies on the economic opportunities available to agricultural producers. One reason is the narrow, sectoral orientation of past agricultural policy analysis; another is the widespread misconception that agriculture plays a limited role in economic development arising from dualistic growth models and the structuralist school in Latin America.

The main objective of development policy in most developing countries has been rapid industrialization. In actively promoting domestic industry, however, many of these countries distorted price incentives against agriculture, substantially diminishing the positive effects of public investment policies meant to support agricultural research and extension, the development of rural infrastructure, and the marketing of agricultural exports. As a result, their agricultural output has been lower than it would have been under a more neutral incentive structure, the real purchasing power of the rural population has declined, and many of these countries have experienced a significant demand-side constraint on economic growth.

Over the years, the share of agriculture in the total output of developing economies has declined. Although this shift is a natural result of economic development, policies emphasizing rapid industrialization—usually by means of import substitution, at least initially—have hastened the process. Developing countries have promoted import-competing industries through high tariffs and quantitative import restrictions. They have also made foreign exchange for the related imports of capital goods and materials available at highly favorable terms.

In the 1970s developing countries began to recognize the value of exporting manufactured goods and granted subsidies to certain industrial exports. These subsidies did not fully offset the general bias against exports, however, and some incentives were made available only if export producers used imported inputs.

Producers of agricultural exports were in an even worse position. They received no subsidies whatsoever, and most farm products were subject to an export tax (applied either explicitly or implicitly through the pricing policy of state marketing boards). The urban bias in developing country policies also tended to keep food prices down, with the result that the general level of wages remained low and industrial enterprises were able to recruit labor from agriculture at a reduced cost. In addition, agricultural producers had to pay high prices for industrial inputs such as fertilizer, pesticides, and farm equipment because of the protection accorded to their domestic production. The subsidies for farm inputs provided little compensation to agricultural producers for the artificially low prices of their output.

Apart from their direct effect on agricultural production incentives, industrial import restrictions reduce the demand for imports and thereby lower the price of foreign exchange. This causes the prices of tradable goods in domestic currency to fall in relation to those of nontradables and indirectly discourages the production of tradable goods. Industrial export subsidies have the same qualitative effect on the exchange rate (since they tend to increase export supply); agricultural export taxes have the opposite effect. The agricultural sector is particularly vulnerable to distortions in the real exchange rate because the agricultural output of developing countries tends to be highly tradable, whether it is produced by an upper-income developing country such as Chile or by a low-income country such as Zaire. Not surprisingly, trade liberalization and real exchange rate management appear to have a more positive effect on agricultural production than on non-agricultural production.

The real exchange rate can also be affected by an imbalance in a country's external accounts. The unsustainable component of a current account deficit—due to, say, heavy foreign borrowing—serves to defend an overvalued exchange rate, exemplified by the Philippine experience after the oil price shocks of 1973–1974 and 1979–1980.

Another factor that may cause the exchange rate to appreciate is the Dutch disease—so named because of the Netherlands' experience with the discovery of natural gas. This disease arises when a boom in one tradable good reduces the profitability of producing other tradable goods by directly bidding resources away from them. The Dutch disease usually refers to the way in which spending and the resource movement connected with the development of a natural resource affect the national economy.

Country Studies

Peru. David L. Franklin and Alberto Valdés examine trade policy in Peru and its incidence on the structure of incentives. They show that the large and persistent decline in Peru's exchange rate after the mid-1960s made it less profitable to produce tradables than nontradables. The authors attribute this decline largely to the sharp increase in trade restrictions, as measured by the uniform tariff equivalent (estimated for each year from 1949 to 1982), which gradually closed the Peruvian economy to international trade.

Franklin and Valdes found that raising the uniform tariff on manufactured goods by 10 percent (provided that tariffs on agricultural goods do not change) imposes an implicit tax of 5.6 percent (with respect to home goods) on the production of importables such as rice, and an implicit tax of 6.7 percent on exportable agricultural goods such as cotton and sugar. When agricultural prices are compared with the prices of nonagricultural importables, the implicit tax effect on both types of agricultural goods is 10 percent. These results indicate that Peru permits a high degree of substitution between home goods and nonagricultural importables and that exports bear a large part (more than half) of the burden of the tariff on imports.

The three elements analyzed are the incidence of trade policy on relative prices, agricultural supply, and household expenditures. The authors use a simulation model to assess the short- to medium-term adjustments of a change in the overall level of protection. Their empirical findings indicate, first, that restrictive industrial trade policies rather than the direct price policies for agriculture had the greatest

impact on food consumption and income distribution in Peru. Second, as a result of the change in relative prices, there was a noticeable shift in the diet (especially among those living in the highlands) away from traditional foods to importable foodstuffs, together with lower incentives for the production of traditional foods. This shift slowed the growth of the production of agricultural tradables and made Peru more dependent on imported food. Third, as consumers of food, upper-income urban dwellers benefited more in relative and absolute terms than people in the rest of the country, especially those in rural coastal areas.

Colombia. Colombia's coffee boom and expansionary fiscal policies contributed to the declining performance of agriculture from the mid-1970s to the early 1980s, according to Jorge García García. (Coffee represents about 44 percent of Colombia's total official exports.) The substantial rise in the world price of coffee between 1975 and 1979 and the subsequent expansionary fiscal and monetary policies led to a sharp increase in the relative price of home goods. The appreciating real exchange rate in turn caused the production of tradables to become relatively less profitable and instead promoted the consumption of tradables, which expanded imports and reduced the export surplus. Thus the coffee boom and expansionary macroeconomic policies biased production incentives against the entire tradable goods component of agriculture.

The large and unpredictable fluctuations in export prices in Colombia have made it difficult to maintain a real exchange rate consistent with long-term growth and export diversification. The paradox for this country—which is associated with the Dutch disease phenomenon—is that even a promising temporary development, such as a sharp rise in the world prices of certain exportables, can have an adverse effect on the rest of the tradable goods sector, including agriculture, for a number of years.

García García also finds that the decline in relative agricultural prices in Colombia, attributable to the coffee boom and continuous budget deficit, significantly lowered agricultural investment and reduced real wages in agriculture.

Nigeria. The Nigerian government pursued an import-substitution strategy in the 1960s and the early 1970s to promote rapid industrial growth. As Ademola Oyejide notes, a subsequent oil boom and accompanying trade, exchange rate, and other macroeconomic policies reinforced this trend toward industrialization. In response—as in Colombia during the coffee boom—the real exchange rate appreciated significantly, and competitiveness, output, and employment in the nonbooming tradable goods sectors, most notably agriculture, declined.

Nigeria is an interesting case because the increased revenue from oil enabled the government to introduce policy reforms intended to favor agriculture. For example, it eliminated export taxes on farm products, reorganized the marketing boards, subsidized fertilizer, and guaranteed minimum prices for farm output. The level of protection at the official exchange rate increased for both food and export crops. In 1982, crop production received substantial protection, ranging from 18 percent for rubber to 14 percent for maize. Only cotton was explicitly taxed. Despite these moves, growth in real agricultural output stagnated or declined.

The reason is found in the way other sectors reacted to these incentives. Between 1970 and 1984, real producer prices declined sharply and then remained constant. In the process, agricultural exports declined by more than 20 percent, to a level less than 3 percent of total export revenues, and agriculture's share in non-oil GDP fell from 60 percent in 1960–1965 to 30 percent in 1978–1981. To a significant extent, labor and capital moved to services and infrastructure. Government spending increased faster than GDP (its share rising from 6 percent of GDP in 1960 to 30 percent in 1980) and caused a massive buildup of internal and external debt.

One of the most dramatic manifestations of the combined effect of the Dutch disease phenomenon and industrial protection was the tremendous flow of labor out of agriculture. Because Nigerian agriculture has been very labor-intensive, peak-period labor shortages and low labor productivity have probably been the binding constraint on production and the main reason for the country's poor agricultural performance. At the same time, as other sectors developed, they provided improved off-farm employment opportunities that pushed up rural wages: their index went from 100 in 1970 to 232 in 1982.

The adverse effect of the oil boom on non-oil tradables was more severe for agriculture than for manufacturing, because of the special labor constraints of agriculture and because manufacturing received more import protection than did agriculture. Thus, both the Dutch disease associated with the oil boom and general trade and exchange rate policies taxed agriculture in Nigeria.

Zaire. Zaire has thus far been the subject of few economic policy studies and has a poor data base. Agriculture employs 80 percent of the labor force and generates 40 percent of GDP; it accounted for only about 16 percent of total exports between 1971 and 1981. Copper is the dominant export.

Using a simple incidence parameter model, Tshikala Tshibaka examines some of the implications of trade and exchange rate policies for agriculture in Zaire in the context of the substantial structural and institutional changes that followed independence in 1960. He concludes that these policies imposed heavy implicit taxation on all agricultural exportables and some import-competing food crops. He suggests that the production of exportables such as palm oil, cotton, and groundnuts could compete with the major staples such as rice and maize, an important opportunity for Zaire given the thinness of its world markets for white maize and rice.

Philippines. Romeo M. Bautista provides a quantitative analysis of the effects of trade and exchange rate policies on relative incentives in the Philippine economy, particularly in agriculture. Bautista shows that the trade and exchange rate policies in effect from 1950 to 1980 for the most part heavily favored producers of import-competing goods over exports. He computes average effective exchange rates by product category to highlight the differences in the effects on different classes of exports and imports, and his estimates reveal a persistent bias against the production of traditional agricultural exports such as sugar, coconut, pineapple, and tobacco.

Bautista also uses the aggregative incidence parameter model to simulate a free-trade scenario. The results here, too, indicate a heavy bias against the production of exportables relative to home goods and

industrial import-competing activities. Traditional primary-product exports bear a heavier burden than nontraditional industrial exports.

The study analyzes two sources of real exchange rate misalignment in the Philippines, namely, trade restrictions and sustained trade deficits. In general, trade policy has been a dominant factor in the price bias against agriculture. At the same time, the impact of the trade deficits on the real exchange rate explains why, even after a significant liberalization of trade restrictions in the Philippines in the 1970s, the production of agricultural exportables continued to be taxed, albeit implicitly.

Pakistan. In his study of Pakistan, Paul Dorosh finds that the overvaluation of the rupee in the 1960s outweighed the protection provided by the sectoral price policies for wheat, ordinary rice, and cotton and increased taxation of basmati rice. In the 1970s and early 1980s, the economywide policies reinforced the direct taxation through sectoral price policies for wheat, basmati rice, and ordinary rice, although the influence of the real exchange rate was smaller than in the 1960s. Sugarcane is a different story: it was given substantial direct protection until 1982, and in spite of the misalignment in the prevailing real exchange rate, sugar production received positive total protection throughout the period, except in the years between 1972 and 1977.

Argentina. Domingo Cavallo, Yair Mundlak, and Roberto Domenech conclude that agriculture was a strong force behind Argentina's rapid economic growth from 1913 to approximately 1930. Thereafter, the country's economic vitality declined significantly. Although the world prices of its agricultural exports declined continuously in real terms, the authors attribute the slower growth mainly to domestic economic policies.

The hypothesis of the study is that macroeconomic and trade policies were the principal determinants of economic performance. The authors constructed an econometric model to examine the dynamic effects of a hypothetical policy reform in 1930. To simulate the effects of trade liberalization, they estimated behavioral equations for consumption, private investment and its sectoral allocation, factor share, employment, output, and trade flows. This empirical analysis predicts

a significantly higher growth rate for agriculture than in the base run, mainly as a result of the induced rapid capital accumulation in agriculture and faster growth in nonagricultural output. To the extent that new technologies are embodied in capital goods, new investments in agriculture have a positive effect on the level of agricultural productivity beyond that attributable to capital deepening. The simulation results also bring out the significant trade-off between the protection of urban real wages and the performance of the economy.

Chile. Juan Eduardo Coeymans and Yair Mundlak develop a growth model to study the causes of the substantial variations in the growth rates of agriculture and nonagriculture in Chile between 1960 and 1990. They conclude that macroeconomic policies resulted in an unstable economic environment that harmed agriculture.

Macroeconomic policies affected the price level over the period, its rate of change (or rate of inflation), and the acceleration of inflation. These price changes in turn affected the real exchange rate, real wages, the real interest rate, and the level of confidence in the economy and the direction it was taking. As the macroeconomic policies affected the real economy, they affected the trade balance, which had implications for trade policies and decisions on the nominal exchange rate.

Macroeconomic policies also affected the level of investment. In Chile the investment-output ratio declined by almost half from its peak in 1963 to its trough in 1976. This decline had a huge cost in terms of overall growth that affected all sectors. The recovery in the 1980s returned the investment-output ratio to the level of the 1960s and thereby led to the expansion of output in the economy in general and in agriculture in particular.

Agriculture was also strongly affected by land reform in the 1960s. The direct effect on productivity was marginal. The uncertainty generated by the process, however, reduced investment in agriculture and thereby discouraged production.

Policy makers should therefore maintain a stable economy and let the markets direct resource allocation. The response of agricultural output to such policy changes may be slow to materialize, but they will be sizable.

Regional Surveys

The regional surveys of Asia (by Romeo M. Bautista), Africa (by Ademola Oyejide), and Latin America (by Jorge García García) review the findings in other studies on the extent to which trade and macroeconomic policies have influenced agricultural incentives in developing countries. A common theme is that agriculture in developing countries, particularly agricultural exports, has borne a heavy implicit tax burden as a result of industrial protection, real exchange rate appreciation, and related macroeconomic policies.

Most countries in the three regions have relatively open economies, with foreign trade contributing 25 percent or more of GDP. Their trade is often dominated by agricultural exports, whose performance has significant implications for their foreign exchange earnings. However, the link between macroeconomic policies and agriculture go beyond the sector's contribution to foreign exchange earnings. Trade and macroeconomic policies exert their influence on the entire structure of relative prices, essentially through the real exchange rate mechanism. A central premise in this study is that, in view of the high degree of tradability of agricultural output, the real exchange rate is perhaps the variable that has the greatest influence on the structure of price incentives for agriculture. The theory of real exchange rate determination is therefore particularly relevant in empirical assessments of the effects of sector-specific and economywide policies on agricultural incentives.

Among the many policy influences on agricultural incentives, industrial protection appears the most pervasive. In the case of Africa, for example, Oyejide observes that the agricultural exports of Cote d'Ivoire and Mauritius absorbed a tax amounting to more than 80 percent of the protection for the industrial sector in those countries during the 1970s and early 1980s. The evidence cited by Bautista on Asia and García García on Latin America indicates that agricultural exporters in those regions, along with the producers of unprotected import-competing products, have paid at least half the cost of the heavy protection of domestic industry.

Government expenditures are another policy variable influencing the real exchange rate. Particularly in the cases of Latin America and

sub-Saharan Africa, the real exchange rate has often appreciated because of a lack of fiscal discipline. That hurt the relative profitability of producing tradable goods and constrained the growth of output.

Agriculture plays a strikingly similar role in the development strategies of the three regions. One common feature of these strategies was their emphasis on industrialization as the key to economic growth, financed partly through a transfer of resources from agriculture. Second, many countries depended quite heavily on taxes from trade as a source of government revenue, a practice that inevitably imposed a heavy burden on agricultural exports.

One of the most important findings of the three regional surveys is that, by and large, the indirect effects of economywide policies were more powerful than the direct effects of sector-specific policies. The surveys also reveal that a strong link exists between macroeconomic policies and wages (and employment) in agriculture in some countries: in Nigeria, where the policy response to the Dutch disease phenomenon in the 1970s resulted in a labor cost squeeze that led to a significant loss of competitiveness by the agricultural sector, and in Colombia and Chile, where macroeconomic policies during the 1960s and 1970s led to a marked decline in real rural wages and agricultural employment.

Agricultural Price Stabilization in Developing Countries

Theory and experience suggest that price stabilization schemes seldom if ever realize benefits that outweigh their costs, according to Odin Knudsen and John Nash. But the political reality is that they are likely to continue to be used. Knudsen and Nash present some broad guidelines for the construction of price stabilization schemes.

First, whenever possible, rely on normal market mechanisms to provide most of the stabilization. The most reliable market mechanism is a flexible production system that allows farmers to produce a variety of crops and then to market or store them as price expectations dictate. Complementing this flexibility should be transparent market mechanisms such as options and futures markets. Although these conditions are rarely present in developing countries, the first step in determining whether price stabilization is necessary is to determine whether gov-

ernment policies or interventions are obstructing this flexibility and impeding the development of futures markets.

Second, avoid having the government directly handle and store a commodity. Government purchasing, storage, and sales of commodities are associated with high costs and severe distortions in the location and timing of production and consumption.

Third, rely primarily on transparent trade measures, such as variable tariffs and subsidies, whenever possible. The administrative mechanisms surrounding nontariff barriers to trade encourage rent seeking (including outright graft) and impose costs in the form of burdensome paperwork and delays.

Fourth, use average international prices as the guide in establishing the ranges for domestic prices. Most price stabilization schemes ultimately resort to setting prices based on surveys of the cost of production. Because actual production costs vary across regions and farms and over time, this pricing rule tends to maintain domestic production in crops that have lost their comparative advantage and to discourage the adoption of technology that permits international competitiveness. Within a prescribed band based on the average international price, therefore, the government should not intervene at all but should allow market circumstances to translate into price movements.

Some Policy Perspectives

Anne Krueger considers discrimination by trade regimes against agriculture, the case for government intervention, and the liberalization process.

It is clear, she notes, that trade and payments regimes can and do significantly discriminate against agricultural producers. When that discrimination is added to the discrimination that results from the suppression of producer prices, the total impact on agriculture can be large. In that sense, even once it is recognized that agricultural output falls into all relevant trade categories (import-competing, exportable, and nontradable), it is probably true that, for many developing countries, the trade and payments regimes discriminate against agriculture because such a large fraction of agricultural output in developing coun-

tries consists of exportables. While highly restrictive trade and payments regimes with an overvalued real exchange rate supported by tariffs and quantitative restrictions on imports are not inherently discriminatory against agriculture, they are discriminatory against a country's exportables, and when agricultural outputs are heavily weighted by exportables, discrimination against agriculture as a whole results.

Although most economists believe that there has been too much discrimination against agriculture, some suggest that lower levels of intervention, and more targeted intervention to achieve specific purposes (such as low-cost food for poor people), would be desirable. Moreover, some think that direct and indirect discrimination against agriculture can, or could be, offset by subsidizing agricultural inputs or increasing investment in agricultural infrastructure. In international economics at least, and especially with the analysis of protectionist trade regimes, there is growing concern with these assumptions.

Not enough is known about the interactions between the political and economic markets to be confident of the political economy of intervention in any particular instance. In any event, governments must perform a wide variety of functions, especially if they wish to stimulate the growth of agricultural productivity. Nonetheless, enough has been learned to provide a warning that it is important to be very careful when advocating interventions of the type that will drive a significant wedge between private and social profitability, directly benefit an identifiable group that will lobby for enhancement of the program, or place a heavy burden on a government's administrative capacity.

Efforts at liberalization are bound to face a number of difficulties. First, regardless of the initial reasons for intervention, interest groups made up of those benefiting from the intervention will have sprung up. Second, protection pulls resources into the highly protected economic activities and out of others. Liberalization, or reducing the protection, will of necessity affect the workers and employers engaged in the highly protected sectors. Third, nothing in theory or historical experience suggests that slower liberalization may reduce the costs, while both theory and historical experience suggest that extremely slow liberalization is likely to fail. Fourth, one of the greatest obstacles to liberalization is a lack of conviction that it will succeed.

This fourth consideration raises the issue of the role of knowledge. Many economic analysts tend to be both fatalistic and deterministic in their view of the political process. That attitude ignores the role of knowledge in affecting economic policies. Increasing knowledge is likely to help the situation in two ways. First, political decisions are more readily taken when they are seen to have "legitimacy," and are more difficult when they are not so viewed. Second, greater understanding of the benefits of liberalization and of how it is best achieved will influence new governments in their decisions whether to make the effort and will also increase the likelihood of success, as past mistakes can be avoided.

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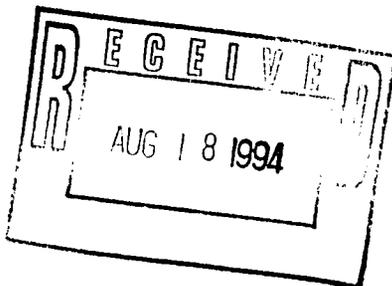
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