

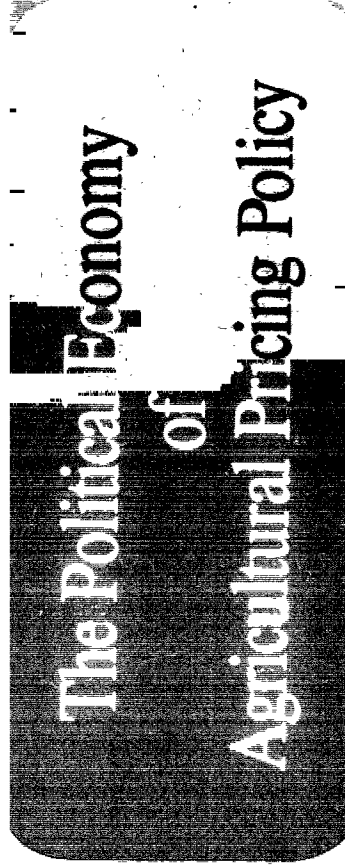
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Krueger

The Political Economy of Agricultural Pricing Policy

Volume 5

Johns Hopkins



VOLUME 5

**A Synthesis
of the
Political Economy
in
Developing Countries**

Anne O. Krueger

A World Bank Comparative Study

5/92



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Preface

This is the fifth of five volumes summarizing the results of the World Bank research project *A Comparative Study of the Political Economy of Agricultural Pricing Policies*. The project consisted of eighteen country studies that employed a common analytical framework and entailed close collaboration between the investigators and the project's three codirectors. Volume 1 deals with the countries studied in Latin America, Volume 2 with those studied in Asia, and Volume 3 with those studied in Africa and the Mediterranean. This volume and Volume 4 present a synthesis and comparative analysis of the findings from each country study.

The purpose of the project was threefold: to provide systematic estimates of the degree of price discrimination against agriculture within individual countries and to explain how it changed over time; to determine how this intervention affected such key variables as foreign exchange earnings, agricultural output, and income distribution; and to gain further insight into the political economy of agricultural pricing policy through a study of the motivations of policymakers, the economic and political factors determining the degree of agricultural intervention, and the attempts to reform unsuccessful policies.

Until recently, analysts were primarily concerned with the direct effect that agricultural pricing policies might have on agricultural product and input prices. According to international trade theory and general equilibrium analysis, however, a policy that protects one particular sector of the economy (in this case, industry) is essentially imposing a tax on other sectors of the economy (in this case, agriculture). The tax is likely to raise the real exchange rate, which will then lower the real return to exportables and unprotected import-competing sectors, which account for most of agriculture. Indeed, a country's general economic policies may have far greater indirect effect on agricultural incentives than its agriculture-specific or direct pricing policies do.

That is why this project proceeded on the premise that it is impossible to judge the impact of a developing country's policies without an understanding of the relative importance of direct and indirect inter-

vention. This approach also provides an effective means of evaluating the political economy of agricultural pricing policies across a number of countries, as explained in the final volumes of this series. The systematic examination of the impact of these policies on output, consumption, government budgets, foreign trade, intersectoral transfers, and income distribution in itself contributes a great deal to our understanding of the workings of these policies in developing countries.

Economic growth is such a complex process that it is extremely difficult to interpret accurately. Because it consists of many phenomena changing simultaneously, the effects of particular policies are hard to isolate, especially if the policies have been in place for a long time. To deal with this problem, we asked the researchers to test three hypotheses in each country study: (a) agricultural pricing policies elicit economic responses (in the market, for example) and political responses (among pressure groups, bureaucratic organizations, and voter blocs) that affect the evolution of those policies; (b) the results of the policies may differ significantly from—and in some cases be opposite to—what was intended when they were adopted; and (c) the costs of price intervention are usually underestimated and tend to rise over time.

Several criteria were used to select the countries for the project. A foremost concern was to represent a reasonable range of country experience. Therefore, some countries in the group are exporters of food, others are exporters of agricultural (but nonfood) commodities, and still others are importers of food. An effort was also made to achieve some balance between low-income and middle-income countries, as well as among geographic regions. The task would have been impossible without able researchers willing to participate in the project and to prepare the country reports (published as individual volumes in the World Bank Comparative Studies series).

The countries included in the project, the participants, and their affiliations were as follows:

Argentina	Adolfo Sturzenegger and Wylian Otrera (assisted by Beatriz Mosquera), Fundación Mediterránea, Buenos Aires
Brazil	José Luiz Carvalho, Universidade Santa Ursula, Rio de Janeiro; Antonio Brandão, Fundação Getulio Vargas, Rio de Janeiro
Chile	Hernán Hurtado and Eugenia Muchnik, Catholic University, Santiago; Alberto Valdés, International Food Policy Research Institute (IFPRI), Washington, D.C.
Colombia	Jorge García García, World Bank, Washington, D. C. ; Gabriel Montes Llamas, Instituto Colombiano Agropecuario (ICA), Bogotá

Côte d'Ivoire	Achi Atsain, Ministère de l'Industrie; Allechi M'Bet, Centre for Economic and Social Research (CIERES), Université Nationale de Côte d'Ivoire, Abidjan
Dominican Republic	Duty Greene, Sigma One Corporation, Quito; Terry Roe, University of Minnesota, St. Paul
Egypt	Jean-Jacques Dethier, World Bank, Washington, D.C.
Ghana	Dirck Stryker, Associates for International Resources and Development (AIRD), Somerville, Massachusetts
Republic of Korea	Pal-Yong Moon, Kon Kuk University, Seoul; Bong-Soon Kang, Seoul National University, Suwon
Malaysia	Glenn Jenkins and Andrew Lai, Harvard Institute for International Development, Cambridge, Massachusetts
Morocco	B. Lynn Salinger, AIRD, Somerville, Massachusetts; Hasan Tuluy, World Bank, Washington, D.C.
Pakistan	Naved Hamid, Asian Development Bank, Manila; Ijaz Nabi, World Bank, Washington, D.C.; Anjum Nasim, Lahore University of Management Sciences
Philippines	Ponciano S. Intal, Jr., University of the Philippines, Los Baños; John H. Power, University of Hawaii
Portugal	Francisco Avillez, Instituto Superior de Agronomia, Lisbon; Timothy J. Finan, University of Arizona, Tucson; Timothy Josling, Food Research Institute, Stanford University, Stanford, California
Sri Lanka	Surjit Bhalla, World Bank, Washington, D.C.
Thailand	Ammar Siamwalla and Suthad Setboonsarng, Thailand Development Research Institute, Bangkok
Turkey	Hasan Olgun and Haluk Kasnakoğlu (with the cooperation of Arslan Gurkan), Middle East Technical University, Ankara
Zambia	Doris Jansen, Development Technologies Inc., Larkspur, California

An advisory board knowledgeable on the issues and experienced in analyzing agricultural pricing policies was assembled to oversee the project. Board members were asked to comment on all aspects of the project and to review various country reports. Board members, their affiliations, and the countries for which they took primary responsibility were as follows:

Romeo Bautista, IFPRI	Korea, Malaysia, Philippines
Hans Binswanger, World Bank	Pakistan, Sri Lanka
Vinod Dubey, World Bank	Côte d'Ivoire, Morocco
Peter Hopcraft, World Bank	Ghana, Zambia
D. Gale Johnson, University of Chicago	Portugal, Turkey
Yair Mundlak, Hebrew University, University of Chicago, and IFPRI	Argentina, Chile, Thailand
Edward Schuh, University of Minnesota	Brazil, Egypt
Marcelo Selowsky, World Bank	Colombia, Dominican Republic

Many other persons helped to bring the project to a successful conclusion, and I thank them here. Project administrator Celina Bermudez and her predecessor Rosario Seoane handled an endless flow of personnel and communications matters; Anne Muhtasib, the project secretary, processed voluminous correspondence and the numerous edited manuscripts; and word processors Myriam Bailey and Estela Zamora provided helpful support. My research assistants—Lilyan Fulginiti, Emmanuel Skoufias, Pierre Nadji, and Claudio Montenegro—reviewed the results in the many country reports and summary chapters and helped me conduct the statistical analysis for this synthesis volume. The editor for the project was Phillip Sawicki, assisted by Paul Wolman, Vicky Macintyre, and Mary Ellen Buchanan.

Terms and Abbreviations

Below is a list of terms and abbreviations found in some or all of the chapters in this volume.

AFRC	Armed Forces Revolutionary Council (Ghana)
APCOM	Agricultural Prices Commission (Pakistan)
BAGRICOLA	Agriculture Bank (Dominican Republic)
c.i.f.	Cost, insurance, and freight
CMB	Cocoa Marketing Board (Ghana)
DGPC	Directorate General of Price Control (Dominican Republic)
E^*	Equilibrium nominal exchange rate
E_0	Nominal official exchange rate
f.o.b.	Free on board
GDP	Gross domestic product
GNAP	Gross national agricultural product
GNP	Gross national product
GNPA	Ghana National Procurement Agency
GNTC	Ghana National Trading Corporation
GSP	Guaranteed Support Price (Sri Lanka)
IAA	Instituto do Açúcar e do Alcool (Brazil)
IDEMA	Instituto de Mercadeo Agropecuario (Colombia)
IMF	International Monetary Fund
INESPRE	National Institute of Price Stabilization (Dominican Republic)
MAF	Ministry of Agriculture and Fisheries (Korea)
NAMBOARD	National Agricultural Marketing Board (Zambia)
NASUTRA	National Sugar Trading Company (Philippines)
NGA	National Grain Authority (Philippines)
P_A	Domestic agricultural producer prices
P'_A	Producer prices in the absence of direct price policies (which equal the border price evaluated at the official exchange rate, after adjustment for transport and other margins)

xii Terms and Abbreviations

P_A^*	Relative producer price of agricultural commodities with no direct or indirect interventions
PHILSUCOM	Philippines Sugar Commission
P_{NA}	Price index of the nonagricultural sector
P	Price index of the nonagricultural sector in the absence of interventions (under free trade and at the equilibrium exchange rate)
PNB	Philippine National Bank
PNDC	Provisional National Defense Council (Ghana)
SIAF	Sugar Industrial Aid Fund (Thailand)
TEKEL	State tobacco agency (Turkey)
TMO	Soil Products Office (Turkey)
t_{NA}	Effect of trade policies on the price of nonagricultural tradables

1

Puzzles about the Political Economy of Agricultural Pricing Policies in Developing Countries

The 1980s were a difficult time for most developing countries. With the worldwide recession of the early 1980s and the debt crisis that accompanied it in developing countries, the economic growth rates of these countries slowed down significantly. In many instances per capita income even fell during much of the decade.

Given the low levels of per capita income that prevailed, these trends made accelerating economic growth a political imperative in many countries. In most cases a higher rate of growth could only be achieved after significant reforms of almost every aspect of economic policy had been undertaken.

In many countries the failure of agricultural output—and of exports of agricultural commodities—to grow had been one of the main factors contributing to unsatisfactory growth and to the onset of the debt crisis. It was evident that a prerequisite for a resumption of growth in most developing countries was an increase in agricultural output and productivity.

This naturally led to interest in developing countries' policies toward agriculture. Most developing countries had, over the years, adopted (and almost continuously amended) policies governing the pricing and distribution of agricultural outputs and inputs. In most cases these policies directly suppressed producer prices. This suppression had been intensified, however, by the overall policy framework, which had included a number of measures that indirectly further reduced returns to agricultural producers.

It was clear that policy reforms would be needed to remove some, if not all, of the direct discrimination against agriculture—and to alter those policies indirectly affecting agriculture as well—if overall economic growth and growth of agricultural production were going to accelerate. Recognition of the need for reform, however, raised a number of questions. The pattern of discrimination against agriculture in developing countries was virtually universal, and an immediate question

was why the pattern persisted so universally. If reform was to be successful, there was a need to understand the political imperative that made discrimination against agriculture so universal.

There had been many studies of agricultural pricing policies in individual countries.¹ The evidence was fairly clear that many agricultural policies were, at best, ineffective and, at worst, leading to outcomes other than those anticipated.² In these circumstances, an important unanswered question was the political economy of policies toward agriculture. Why, in light of the negative effects on the overall economy and on growth, did these policies persist? Why, when policies were clearly perceived to be failing in their intended objectives, did politicians attempt to "fix" them by intensifying them, rather than by removing them?

An effort to answer those questions requires analysis of both the politics and the economics of agricultural pricing policies in developing countries. Analysis of the political context alone cannot address these issues, because many political decisions are reactions to market responses to earlier policies. And economic analysis founders at the point where it is recognized that existing policies are Pareto-inferior and evidently irrational when judged against the criterion of economic efficiency.

The political determinants of agricultural policies in developing countries have been little understood. One of the most puzzling stylized facts of economic policy is that developed countries subsidize their farmers, whereas developing countries tax them: the degree of discrimination against agriculture increases as farmers constitute a larger fraction of the population.³

Such a relationship is puzzling for several reasons. First, in most developing countries there appears to be a political imperative to achieve economic growth and to raise living standards, including those of the poor. Yet there is ample evidence that the heavy taxation of agriculture both depresses living standards and slows the growth of agricultural output (some of this evidence is summarized in chapter 2 below). Second, the negative impact of slow agricultural output growth on aggregate economic growth has been recognized at least since the Indian food grains crisis of the late 1950s. As such, one might have expected leaders concerned to accelerate growth to address the problems associated with lagging agricultural productivity. Yet this has not been the case. Third, one might expect that farmers would be politically more influential in countries where they constitute a majority than in countries where their numbers are small. Yet, the overall relationship between the relative size of the farm population and the rate of taxation on agriculture in the developing countries is positive. This relationship extends to the industrial democracies as well and is not consistent with median voter models of political behavior.⁴

The World Bank Project on the Political Economy of Agricultural Pricing Policies in Developing Countries

In an attempt to better understand the interaction of economics and politics in agricultural pricing policies in developing countries, the World Bank undertook a research project: *A Comparative Study of the Political Economy of Agricultural Pricing Policies*. A comparative project was necessary in order to understand how different economic circumstances, such as types of agricultural outputs, net trade positions, and size distribution of farms, affect the politics and economics of pricing policies. In-depth studies of individual countries were needed in order to understand pricing policies and their evolution over time. It was therefore deemed desirable to combine in-depth studies of individual countries, which would in any event be of value in their own right, with comparative analysis across countries as a research technique for addressing the issues. The question underlying the formulation of the entire set of country analyses, which is described in the preface to this volume and presented in the first three volumes emanating from the project, was to focus on the interaction between economic and political forces in determining agricultural pricing policies. In this regard, it was believed that although political factors might initially determine agricultural pricing policies, the economic consequences of those policies would, in turn, usually result in political pressures leading to changes in policies. A better understanding of these interactions, it was felt, might itself represent a significant contribution to future policy formulation.

It is the purpose of this volume to review and synthesize the evidence regarding the political economy of agricultural pricing policies that emerges from the individual country studies. By "agricultural pricing policies" is meant the entire array of governmental policies that affect agricultural incomes relative to what they would be in the presence of a *laissez-faire* system. These policies include direct interventions to determine agricultural prices, such as government policies determining output prices, subsidies to inputs such as fertilizers and pesticides, and policies affecting the costs of transportation and marketing. Such policies are adopted directly to affect prices, costs, and/or incomes of agricultural producers.

As economists well know, however, measures that favor all other sectors of the economy discriminate as effectively against the remaining sector as does direct price suppression in that sector. In the case of agriculture, most developing countries have not only directly discriminated against agriculture, they have favored most other forms of economic activity, and especially industrial activity.⁵ In so doing, a number of *indirect* policies—including exchange rate policy, quantitative restrictions

and tariffs on imports, and other measures affecting the domestic prices of commodities purchased by farmers for production or consumption—have further reduced agricultural real incomes. In these instances motives for adopting the policies may be economywide, specific to other nonagricultural activities, or partly related to agriculture, but they are indirect in that the scope of the policy instrument is not primarily aimed at agriculture and has ramifications on nonagricultural activities as well.

In the World Bank project, in-depth analyses of agricultural pricing policies were undertaken for eighteen developing countries (listed in the preface to this volume). The findings from the individual studies covered a great many topics: the quantitative magnitude of policies affecting individual farm commodities (exportables, import-competing crops, staples, nonstaples, and so on); the impact of these policies on net prices received by farmers and on output levels; the effects on the incomes of the different groups in society affected by those policies; and the magnitude of the effects on government budgets and foreign exchange earnings.

In this volume and its companion (Schiff and Valdés, forthcoming), analysis of the results of the individual studies is undertaken to ascertain what may be learned on the basis of the country studies. This volume focuses on the political economy questions: why governments in developing countries tax agriculture; what factors—both economic and political—can bring about change in agricultural policies; and how markets and political pressures interact in determining the evolution of those policies. In the remainder of this chapter, some myths surrounding agricultural pricing policies in developing countries are dispelled, and an effort is made to persuade the reader to put aside preconceptions while considering the evidence emanating from the country studies.

Chapter 2 then surveys the range of policy instruments found in the eighteen project countries and provides a framework of analysis for their quantification. Chapter 3 examines the history of agricultural pricing policies in the project countries, covering both the original motives for intervention and the stated objectives of policymakers in perpetuating or changing them. Chapter 4 reviews the chief findings of Schiff and Valdés (forthcoming) as to the quantitative magnitude of direct and indirect interventions and their effects. Chapter 5 analyzes the administrative aspects of intervention.

Chapter 6 reviews the experience of the project countries with programs to reform their agricultural pricing policies, with a view to ascertaining what can be learned about the political-economic interactions that give rise to successful and unsuccessful reform programs. Finally, chapter 7 provides an overview of the insights into the political economy of agricultural pricing policies that have emerged from this World Bank comparative study.

Myths and Realities about Agricultural Pricing Policies in Developing Countries

A major difficulty encountered by those attempting to understand the political economy of agricultural pricing is that they believe in a number of stylized facts which are, at best, not entirely true. In order to clear the way for a better understanding of the subject, it is useful to list each of these presuppositions explicitly and to provide at least a brief sketch as to why each is misleading, if not mistaken. Perhaps most prominent among the beliefs is that the price of food in developing countries is kept low so that poor people can afford it. A second belief is that all agriculture in developing countries is taxed in the interest of raising governmental resources for development. Third, most people accept the statement of politicians that "food security" is a major motive for agricultural pricing policies. Fourth, there is a widespread view that pricing policies in developing countries are effected because of a desire to reduce instability in the prices of agricultural commodities, and especially food, in those countries.

It may first be noted that these beliefs are mutually inconsistent.⁶ Raising government revenue would imply taxation, whereas provision of food security would imply expenditure of government resources, either to raise domestic producer prices or to finance appropriate storage facilities. Providing low-cost food to the urban poor is inconsistent with raising revenue and, probably, with "self-sufficiency."⁷

Moreover, if any one of these motives were predominant, a low-cost solution could be sought. If food security were a major motive, for example, actions could be based on seeking a low-cost solution to the source of insecurity. More than likely, maintaining large foreign exchange reserves to purchase food in the event of domestic shortages would be the low-cost instrument. If not, the buildup of domestic buffer stocks might be accomplished, possibly by providing larger incentives (raising producer prices) for production in years of good weather. There is no sense in which *taxing* agricultural commodities, directly or indirectly, could be expected to work toward that end.

Likewise, if price stability were the sole, or even main, desideratum of food pricing policy, establishing a fund to subsidize exports in the years of low world prices and taxing exports in the years of high foreign prices could effectively stabilize prices and, if price trends were reasonably well estimated, could do so without cost to the central government. For food crops for which there is a very thin international market, such as white maize, a buffer stock policy of purchasing in periods of good harvests and selling later on in the year⁸ or in years of bad harvests would be the most effective instrument of policy.⁹ Yet none of the countries covered in the World Bank project adopted such policies; indeed, in the developing world as a whole, there have been very few instances

of systematic price stabilization funds or buffer stock schemes being employed.¹⁰

If raising revenue for government were the overriding motive for taxing agriculture, one would not observe such taxation through exchange rate overvaluation, a principal instrument for taxation in most of the project countries (see table 4-1 below). Moreover, in most of the project countries, import-competing agricultural commodities were protected, often to the virtual exclusion of imports: permitting more imports subject to an import duty would clearly have achieved the goal more effectively. Finally, in many of the project countries, the total taxation—direct plus indirect—of some agricultural commodities was so great that government revenues fell sharply as production of the affected commodities dropped and/or extralegal markets sprang up which provided producers with better alternatives.

Thus, at a logical level, the sorts of policies found in developing countries cannot be explained by resorting to the combinations of motives just described. Furthermore, as will be seen in chapter 4, the extent to which agricultural pricing policies empirically achieved any of these goals was rather minimal.

An explanation must, therefore, lie elsewhere. It would be too much to hope that any single analysis could provide a definitive explanation in light of the complexity of the subject and of the variety of different contexts in which agricultural pricing policies are adopted in different developing countries. From the individual country studies, however, a picture does emerge. It is one in which the political process is itself a jumble of competing forces, with a multitude of interests (including those of the politicians and bureaucrats) contending within the framework of a guiding ideology, or understanding, of political economy. Simultaneously, markets arise in response to policies, often thwarting the intent of the original policies and sometimes extralegal or illegal. In addition, agricultural producers have technical needs: fertilizers and pesticides must be available at the appropriate point in the season; mechanisms must be available for sale and transport of crops before they spoil; and so on. When policies such as state monopolization of distribution are put into place for political reasons, the technical demands of producers for the timely collection of outputs and distribution of inputs may not be readily met through state agencies. Political pressures arising from these failures alter the political calculus, as politicians seek to amend policies to make things work better.

It is in the interaction between the technical and economic imperatives of production and distribution, on the one hand, and politicians' objectives, on the other, that the political economy of agricultural pricing policies needs to be understood. But this overly stylized explanation is far ahead of the evidence. We return to these themes in chapter 7.

2

Government Policies and Policy Instruments Affecting Agriculture

Agriculture is affected by everything governments do. Even the maintenance of law and order and the size of the military have an impact, just as they do on every other part of the economy. Economic policies such as those regarding ports, railroad freight charges, education, and public health have a more immediate impact. In these and many other cases, however, the policies are nondiscriminatory across sectors of economic activity and are put in place without explicit regard to their impact on agriculture.¹ There are, however, three major sets of policy instruments that most governments in developing countries employ which have major effects on agricultural incentives and incomes. Unlike the maintenance of law and order, whose provision is normally decided without regard to the sectoral origin of the citizen, these three policies are adopted with at least some regard for their sectoral and distributional consequences. These policies may therefore be regarded as being, in that sense, directly discriminatory among economic activities.

First, there are policies directly affecting the prices of agricultural commodities relative to other tradable commodities and to nontradable goods. Chief among these are some policies associated with the trade and payments regime, including taxes on agricultural exports, duties on imports of agricultural commodities, and the treatment of agricultural inputs by the trade regime. Second, there are policies directly affecting the incentives confronted by agricultural producers. These include interventions that affect the prices of individual agricultural outputs and inputs. Third, there are policies that provide the context in which farmers can respond to incentives. These include the development of roads, communications, and power and the provision of education and health services.

In addition to policies more or less directly aimed at agriculture, a number of economic policies have major impacts on returns to agricultural producers, although they are not directly discriminatory. These are termed *indirect* policies. In terms of impact, the most important two are the exchange rate, and the protection accorded under the trade regime to the commodities that agriculturalists purchase for consumption.

Any analysis of policies must evaluate them relative to an alternative. In most instances, and in the case of government policies that directly and indirectly affect agriculture, a natural alternative is the situation that would obtain with an economically efficient allocation of resources and a "neutral" distribution of infrastructure services. This was the criterion used in the World Bank's comparative study of the political economy of agricultural pricing policies in developing countries. The assessment of such an outcome is simplified by noting that, in most circumstances (exceptions are noted in the next section), if domestic producers were confronted with the relative prices prevailing internationally and responded to those relative prices within a reasonably competitive environment, efficiency would prevail.²

Farmers' choices as to crops to plant and the intensity of inputs to employ are influenced by the relative prices of those crops and inputs. Because most agricultural outputs and inputs can be sold and bought on the world market, it makes little sense for domestic producers to allocate resources in ways that yield less international value than could be obtained by producing an alternative commodity bundle and trading internationally. For that reason, comparing domestic prices of agricultural commodities with prices for which they can be bought or sold internationally gives a measure of the divergence of relative prices.³ A second stage of analysis can then estimate the extent of farmers' responses to this divergence and the loss in output evaluated at international prices that results from it.

Because many commodities in addition to agricultural ones can be traded internationally, the same reasoning holds for the relationship between the international prices of traded agricultural commodities and of other goods—minerals, raw materials, and manufactures. To the extent that manufacturers, for example, receive higher prices for their outputs relative to those prevailing internationally than do farmers, relative incomes are affected and farmers, in that sense, are discriminated against.

Given the complexity of government interventions and their effects, it simplifies the analyst's work that most agricultural outputs and inputs are tradable goods. As such, there is a ready-made criterion against which government policies directly affecting the prices of most agricultural outputs and inputs can be estimated: the border prices (adjusted for transport and other distribution costs) that would prevail in the absence of intervention. Fortunately, as further elaborated in the next section of this chapter, these are also the prices that would induce an efficient allocation of resources within agriculture.

Because most agricultural commodities are tradable, policies affecting the structure of protection and the real exchange rate also have a profound influence on the real prices received and paid by farmers. Thus, any analysis of the impact of government policies must take these interventions into account, as well. It is clear that when imports are sub-

ject to high rates of protection or to quantitative restrictions, or both, their domestic relative price will be far above that prevailing internationally. When import-competing goods and services are primarily items that are either used by farmers in production or consumed by farmers, it is clear that such protection constitutes as much of a tax on farm incomes (and hence a disincentive to agricultural production, especially of commodities that are import-intensive in production) as does lowering the price of farm outputs. Moreover, when the nominal exchange rate is held constant during periods of rapid inflation, as has happened in many developing countries, while domestic producers of exportables receive the world prices times the nominal exchange rate, it is clear that policies affecting the rate of inflation and thus the real exchange rate are crucially important in affecting real farm incomes.

The third avenue by which government expenditures differentially affect agriculture is via spending and taxing decisions: to the extent that farm people are less well educated than their urban counterparts, or are provided with far fewer infrastructure facilities relative to the taxes borne by them, it is clear that there is further discrimination against agriculture.

In this World Bank comparative study, all three types of policies were examined. As was seen in the individual studies and in Schiff and Valdés (forthcoming), the magnitude of direct discrimination was large, although it varied widely across the eighteen countries covered by the project. Indirect discrimination through exchange rate policies and protection accorded to industry was even larger in many instances. Finally, in some countries a small part of the discrimination against agriculture embodied in the first two sets of policies was offset by government investment and expenditure policies; by and large, however, the government expenditure policies offset little, if any, of the discrimination against agriculture.

In this chapter, the focus is on the instruments and mechanisms used by governments for affecting relative returns to agricultural and non-agricultural activities. First, however, the conceptual framework within which the divergence between economic efficiency and actual outcomes was estimated is addressed, with emphasis upon the interpretation of how policy instruments and institutions affected efficiency. Thereafter, the most important policies and policy instruments used by governments are discussed.

The first section of this chapter contains a brief discussion of the notion of economic efficiency (and departures from it) and the ways in which it generally applies to resource allocation affecting agriculture. The reasons for focusing on policy instruments and institutions as they affect prices of agricultural commodities are set forth. On that basis, the second section then considers the various policy instruments that directly affect agricultural pricing and other influences on resource allocation. The third section covers the sorts of institutions that are

established to implement pricing policies. The fourth section addresses other governmental policies, especially the exchange rate and the trade regime, that indirectly affect relative prices and hence resource allocation in agriculture.

Policy Analysis: The Efficient Resource Allocation Counterfactual

In any analysis of policy, the analyst is attempting to ascertain what would happen under various policy alternatives. Precise answers are, as always in the social sciences, not feasible, and reasonable approximations must be used. For analysis of the effect of agricultural pricing policies, the question of what the alternative would be is normally dealt with by using a "nonintervention" alternative as the counterfactual for estimating relative prices and then attempting to estimate what responses would have been to that counterfactual situation. Like every other effort to estimate "what would happen if," the measure is imperfect. It nonetheless is the best available and can be rationalized at least as well as any other. The following discussion is intended to provide the analytical foundations for using it. Readers already familiar with the argument can move directly to the next section.

Conceptually, economic efficiency is achieved when it would not be possible to increase anyone's economic well-being without making someone else worse off. In a closed economy, this criterion is satisfied when the marginal rate of transformation in production is equal to the marginal rate of substitution in consumption for all pairs of commodities.⁴ This criterion holds regardless of whether production is in the private or public sector, although the empirical problems of ascertaining the extent to which it is met are somewhat different depending on how production decisions are made.

In an open economy the same criterion applies, except that transformation through trade is an alternative to domestic production. Thus one can speak of the international marginal rate of transformation as reflecting the ways in which commodities can be "transformed" through trade, and the domestic marginal rate of transformation as the rate at which they can be transformed through domestic production. The criterion for economic efficiency then becomes the equality of three marginal rates between all pairs of commodities: substitution in consumption, domestic transformation, and international exchange.⁵ When these conditions are met, it will not be possible for governments to intervene and improve welfare.⁶

Although the criterion holds in general, techniques for empirically estimating the degree of divergence from economic efficiency usually differ depending on whether production takes place in the private or public sector and depending on whether the commodities under con-

sideration are tradable or nontradable.⁷ For, in the case of private production of tradable commodities, domestic producers normally respond to the prices with which they are confronted for their inputs and outputs. By virtue of the tradable status of the commodities in question, relative international prices generally can be taken as reflecting the international marginal rate of transformation between the commodities in question.⁸ For tradable commodities produced in the private sector, one can estimate first the degree to which policies lead to divergences between domestic relative prices and the international relative prices of those same commodities, and then proceed to estimate the quantitative response of producers to those divergences. Because tradables can be purchased or sold internationally, the "production cost" of policies that lead to divergences from the international marginal rate of transformation can be estimated separately from the consumer costs of those same divergences (see Bhagwati 1971 for a full statement of the theory of distortions).

Empirically, this requires estimates both of the relative border prices for tradable commodities and of the domestic prices of those same commodities.⁹ Those estimates, combined with appropriate estimates of producer response to price changes, can then be used to estimate the economic cost of the policies involved. A first task, then, is to identify the policy instruments that affect domestic prices relative to border prices.

In doing that, the cases in which there is public production and in which commodities are nontradable must be considered. In general, when there is public production of tradable commodities, researchers first estimate the real rates of return to factors used in public production, then contrast those rates with ones attainable in producing other commodities. For agricultural commodities, however, there were few cases of public production in the countries covered by the project. Consideration of public production arose largely in two contexts: the provision of nontradable goods and services to agricultural producers including especially public provision of distribution services; and the provision of public goods and services such as irrigation, and research and extension services to agriculture. In the latter case, researchers estimate the value of these inputs to agricultural producers, and the chief problems are empirical.

In order to analyze the public provision of nontradable services, it is first desirable to consider what the economically efficient marginal rate of transformation would be. Starting again with the criterion of equality between the marginal rate of transformation in production to the marginal rate of substitution in consumption, it should first be noted that in a competitive private domestic market in which prices reflected producers' marginal costs and in which consumption choices were based on those prices, economic efficiency would obtain among nontradables. If, in addition, domestic prices of tradables reflected relative border

prices and there were no excess demand for either tradables or nontradables, there would be economic efficiency.¹⁰

This raises two issues. On the one hand, governments can undertake policies that distort the perceived tradeoff between tradable goods and home goods and which therefore reduce economic efficiency. Most of these policies—exchange rate and trade regimes—are macroeconomic in nature and affect economic efficiency in agricultural production and consumption in a variety of ways. These are considered in the last section of this chapter.

On the other hand, when the public sector provides nontradable goods, a first question must be whether the prices at which they are provided appropriately reflect their marginal costs. If prices are above marginal costs, they can be analyzed as a tax on users of those goods, and if prices are below marginal costs, they can be analyzed as a subsidy.¹¹

While policy analysis can therefore be straightforwardly based conceptually on the contrast between actual relative prices (implicit or explicit) and those that would have prevailed in the absence of intervention, a number of problems arise empirically. These relate both to the types of policies adopted and to the ways in which the policy instruments affect relative prices. While the paradigm of economic efficiency is simple in the abstract, its empirical implementation is often difficult.

This chapter, therefore, provides an enumeration of the types of policies adopted by governments that affect the allocation of resources, and indicates which issues must be confronted for empirical implementation. Broadly speaking, there are two types of policy interventions: those that affect the relative prices of agricultural commodities, and those that affect the price of agricultural commodities relative to nonagricultural commodities within the economy. To be sure, almost all policies have some effect both on prices within agriculture and on prices between agricultural and nonagricultural products. Nonetheless, as will be seen, the primary impact of most policies is readily identifiable.

Policy Instruments Affecting Relative Returns within Agriculture

In this World Bank project, analysis has centered in part on how price incentives affecting agricultural producers diverged from those that would have prevailed in the absence of intervention, and on the effects of those divergences. Anything that raises the price of an agricultural commodity—all other prices held constant—will make production of that commodity more attractive to producers; so, too, will anything that lowers the cost of producing the commodity or of getting the commodity to market. Analysis becomes more complex when more than one commodity is considered and more than one agricultural price is

changed. In that circumstance, analysis must also take into account the cross effects between commodities.

All policy instruments affecting relative returns within agriculture must thus be considered as measures that affect the relative attractiveness of producing different commodities. To a considerable degree in developing countries, these measures are pricing measures affecting either input or output prices. In most of the remaining cases, the effects of policies can be analyzed by their impact on either costs or returns, as if they were price policies. Some nonprice measures are very important, however, and must be analyzed separately. These include such phenomena as government investments in infrastructure and expenditures on research and extension. Whereas, in principle, these policies also could be analyzed through their impact on the relative profitability of different activities, in practice, the empirical challenge is insurmountable. For that reason, government expenditure and taxation policies affecting agriculture were considered separately. The findings are summarized in chapter 4 and are analyzed in considerably greater detail in Schiff and Valdés (forthcoming).

In this chapter, the focus is on measures that affect returns to agriculture in directly measurable ways, in large part because these measures require distinct policy instruments. It is not enough to decide to intervene in agricultural pricing. Mechanisms must be established to influence prices through intervention in the market (or, what is the same thing, deciding on the prices to be fixed and then purchasing or selling at that price). Moreover, there must be policy instruments available to the government agencies with which prices can be influenced. Without those instruments, decisions as to what the prices should be are meaningless. As will be seen in chapter 5, in a number of countries decisions as to prices were not fully implemented because of the absence of the necessary instruments.

A variety of methods have been employed by governments to influence the prices received and paid by agricultural producers. In some instances governments themselves have had procedures to establish and determine prices of particular commodities. In other instances governments have created institutions which have then had an impact on prices. Government policies have affected output prices relative to border prices, and they have affected input prices as well. In some cases, the same institution has behaved in ways that have affected both output and input prices; in other instances, the policies affecting the two have been separately established.

Instruments affecting agricultural prices can be viewed through a variety of perspectives. Useful distinctions include border measures that affect imports versus those that affect exports; nonborder measures; policy instruments that affect outputs contrasted with those that

affect inputs; those that directly set prices (of outputs or inputs) contrasted with those that indirectly affect prices; and measures carried out by government agencies contrasted with controls imposed on private sector activity. In the subsequent subsections we consider each of these in turn.

Border Measures Affecting Importables

Most agricultural products are tradable on world markets, although there are exceptions.¹² For those commodities, the presence of the international market would essentially determine domestic prices in the absence of government intervention. Domestic wholesalers, retailers, and transporters would charge for their services so that prices in a particular local market would exceed the landed cost of imports by an amount sufficient to cover their costs and would be below the export price by a like proportion in the case of exportables. In order to affect the price of tradable commodities, therefore, governments must undertake measures to drive a wedge between the international price and the domestic price.

The instruments used to do this differ between importables and exportables. For importables the most frequently encountered policy instruments employed to effect a desired divergence are tariffs and quotas. A tariff imposes an additional cost on importers; it therefore raises the domestic price they will have to receive before they find it profitable to undertake importation.¹³ A number of the importable commodities covered in the various country studies were protected by import tariffs. In Chile, for example, a tariff protected domestic producers of wheat, sugar beets, oilseeds, and milk and milk products for most of the postwar period, although the rate of protection was lowered along with general trade liberalization after 1975 (Hurtado, Valdés, and Muchnik, 1990, vol. 1, p. 51).

An import quota, by restricting foreign supply, permits the domestic price to rise above the international level by a margin greater than the normal distributive markup. Whereas tariffs normally remain constant (in percentage terms, in most cases, although there are a few specific tariffs which are stated in absolute numbers of units of local currency) over fairly long periods of time¹⁴ and are subject only to occasional reviews, quotas usually imply a constantly varying percentage divergence between domestic and foreign prices. Nonetheless, with appropriate data, one can estimate the tariff equivalent of quotas at various points in time and then analyze the resource allocational pulls of those tariff equivalents.

In some instances parastatal marketing agencies have been established. In Colombia, the Instituto de Mercadeo Agropecuario (IDEMA) (and its predecessor agency) was permitted to import agricultural

products without paying duties, which in effect made it the monopoly importer. IDEMA's operations were financed from its profits in wheat imports, while it, in effect, determined the domestic price by deciding on the quantity of imports (García and Montes 1989, pp. 49ff.). In this instance the challenge for the country authors, García and Montes, was to estimate the component of IDEMA's markup which represented normal distributive costs that would have been incurred by private traders, and that part of its markup which in effect represented the tariff equivalent that would have resulted in the same quantity being imported by the private sector.

In Ghana "essential food products" such as wheat, rice, maize, sugar, and vegetable oils were subject to a tariff that changed over time, but averaged between 10 and 25 percent. These commodities were imported by the Ghana National Trading Corporation (GNTC), which held a monopoly on the right to import. It owned retail stores, and it sold the imports to wholesalers and through its own retail outlets (Stryker 1990, p. 103). As in Colombia, the first research task was to estimate the combined effect of the tariff and the tariff equivalent of the import quota implicit in the GNTC's quantity imported.

On occasion, governments have resorted to a measure under which domestic processors of imports or import-competing goods were permitted to import quantities in proportion to the quantity of domestic output they purchased. In Colombia, IDEMA would not permit imports until flour mills demonstrated they had purchased their domestic absorption quota (García and Montes 1989, p. 206). Likewise, in the 1950s, flour millers in Brazil were permitted to import (cheaper) foreign wheat on presenting a receipt from a domestic grower. The government determined the proportions in which domestic and foreign wheat would be blended. Processors were granted import licenses in proportion to the receipts they surrendered from domestic suppliers (Brandão and Carvalho 1987, p. 140). This practice protected domestic producers; flour millers paid them a higher price in order to obtain cheaper foreign wheat.

In instances such as this a tariff could have been set that would have resulted in the same quantity imported and in the same domestic price of wheat; the empirical challenge is to ascertain the prevailing domestic producer price and then to estimate the tariff equivalent of this form of protection.¹⁵ On that basis, a researcher can proceed to estimate the production response to the government's policy, the transfers involved, and so on.

Border Measures Affecting Exportables

When the volume of production is greater than domestic demand at the border price, however, tariffs and quotas are ineffective: even without them, there would be no imports. Hence, if governments wish to

affect the domestic prices of exportable commodities, they must do so through techniques other than tariffs. The counterpart to a tariff for an exportable commodity is an export subsidy, with governments paying producers something in addition to the border price for their commodities.¹⁶ In practice, export subsidies are rarely encountered, a phenomenon that is discussed in greater detail in chapter 7.

Export taxes, however, are often levied on agricultural commodities. An export tax does the opposite of a tariff: it lowers the domestic price relative to the world price.¹⁷ Export taxes are frequently encountered for agricultural commodities which are produced primarily for export. Both Colombia and Brazil taxed coffee exports, for example, with a consequent lower price in the domestic market than prevailed abroad. Brazil taxed sugar exports as well.¹⁸ In Thailand there was an export tax on rubber. There was also an export tax, called a "premium," on rice, which was in fact an ad valorem export duty. In addition to the "premium," the government required that exporters supply a certain amount of rice to the Ministry of Commerce at below-export (after tax) prices (in order to subsidize domestic consumption); in addition, there were quantitative restrictions on the quantity of rice that could be exported. All these measures served to keep the domestic price of rice well below the international price (Siamwalla and Setboonsarng 1989, chap. 2, and especially table 2-3).

In the Dominican Republic all the main, traditional agricultural exports—sugar, coffee, cocoa, and tobacco—were normally taxed as a major revenue source and were a primary instrument for influencing producer prices of those commodities (Greene and Roe 1989, vol. 1, pp. 189ff.). As is discussed in the next section, marketing boards or exporting parastatals often purchase agricultural commodities from producers and sell them abroad. When those agencies pay producers less than they could and still earn a normal rate of return, the effect is the same as an export tax.

In some instances governments have restricted the quantity of an agricultural commodity that could be exported, or indeed, prohibited exportation. This practice also leads to a lower domestic than foreign price. There appear to have been two motives: for food items that were important in the domestic budget, the intended purpose was to maintain low consumer prices of the food items. The quantitative restrictions on exports of Thai rice have already been mentioned and were imposed for this reason.

In other instances, exports of an agricultural commodity which was a raw material were restricted or prohibited in order to protect domestic processors. When the Brazilian government decided systematically to encourage domestic milling of soybean oil and meal, it imposed an export tax on soybeans and also effected a retention scheme under

which exporters were required to sell one ton of soybeans or soybean meal to the government (at a lower price) for every four tons exported.¹⁹

In Argentina exports of hides were prohibited to encourage domestic production of leather goods (Sturzenegger and Otrera 1990, p. 24). In the Philippines exports of copra were banned to encourage the domestic processing of coconut oil. Regardless of the motive for limiting exports, restricting export quantity lowers its domestic price relative to the international price in the same way as an export tax. For purposes of analyzing the impact on producers, a first step is to estimate the export-tax equivalent of the quantitative restriction.

Nonborder Measures Affecting Agricultural Prices

Government authorities can affect the domestic producer and consumer prices of commodities through a variety of measures if they have delinked the commodity from the world market price. Price controls, excise taxes, parastatal marketing and distribution systems (often parastatal enterprises with monopoly rights for both the purchase and the sale of specified agricultural commodities), and government subsidies are the most frequent measures employed. Whereas a tariff or export subsidy raises the domestic price of the commodity both to domestic consumers and to domestic producers relative to the international price, subsidies to producers imply higher producer prices with no effect on consumer prices (which would remain at the world level).

In a number of situations it has been decided to try to maintain low consumer prices, especially of food grains that are thought to constitute a significant budgetary expenditure for the poor. In some instances this was done by establishing low producer and consumer prices and by importing or releasing sufficient government-held stocks to meet demand at the established price. The Moroccan authorities imported additional wheat to meet domestic demand at controlled prices (Tuluy and Salinger 1989, p. 56). The Brazilian government held significant inventories of rice and corn for this purpose, releasing inventories (and increasing imports) when production shortfalls would otherwise have resulted in large price increases (Brandão and Carvalho, 1991b, vol. 1, pp. 68ff.). In these and other countries, policies fluctuated in response to changing conditions, especially the state of government finances.

In many instances, however, price ceilings were imposed on retail outlets, and shortages developed. In Brazil price controls were imposed on retail outlets, and occasionally even on wholesalers, for a variety of food items. The intent here was more to prevent price increases from being reflected in inflationary measures than it was to provide low prices to consumers. Although shortages developed at the retail level, producer prices were nonetheless suppressed, insofar as retailers would

not purchase commodities at prices that would not cover their costs. As Brandão and Carvalho note, the long-term result was to reduce available supplies of the foods whose prices had been so regulated (Brandão and Carvalho 1991b, vol. 1, p. 56). In Chile, also, price ceilings were imposed on food commodities that comprised a significant portion of the consumer budget. As in Brazil, part of the motive was to suppress the rate of inflation. Price ceilings for wheat, flour, and flour products were in effect through much of the period up until the mid-1970s. Because wheat was an importable, the government could meet demand with imports at controlled prices, although black markets did develop and penalties were imposed for hoarding (Hurtado, Valdés, and Muchnik 1990, vol. 1, pp. 56ff.). In Ghana, also, efforts to control consumer prices at retail outlets led to shortages and a disappearance of commodities from the controlled shops (Stryker 1990, pp. 102–4).

In still other cases it came to be recognized that low producer prices were discouraging production incentives, and the authorities attempted to maintain low consumer prices while paying producers more. This was accomplished through a variety of means. In some countries government marketing boards paid producers a higher price than the price consumers were charged in government-operated retail outlets; the marketing boards consequently incurred losses that were financed out of the government budget or by the issuance of central bank credits. This happened in Ghana, the Republic of Korea, and Zambia. In other instances price ceilings were imposed on consumer outlets, and subsidies were paid directly to farmers.²⁰ In still other cases, such as Malaysia and Thailand, growers were given quotas that they were required to sell to the government at low prices but then they were permitted to sell the remainder of their output on the open market (either for domestic consumption outside ration shops or for export) at higher prices. In this instance the divergence between producer prices and those that would have been received in a free market could be computed by estimating the average price received by producers relative to the price that would have prevailed in an uncontrolled market.

When governments did decide to influence producer prices, a number of mechanisms were used. There were countries where a *minimum price* was announced, with the government undertaking a commitment to purchase supplies offered to it at that price. In some instances a *procurement price* was announced. Farmers were then required to sell at least part of their produce at a price below what they could obtain in the open market.

Even when these prices were announced, their effects were different, depending on institutional practices. In some countries, such as Brazil, the minimum prices were announced at about planting time and were designed to give producers some insurance that prices would not be too low. Minimum prices were not intended to offer an above-average

price, but simply to guard producers against a downside risk. In some years market prices were well above minimum prices, but in other years the government did purchase substantial quantities at the minimum prices (Brandão and Carvalho 1991a, p. 59).²¹ Given Brazilian inflation rates, however, the announcement of nominal prices left considerable uncertainty as to what real prices would be.²² In other countries, for example, Turkey, minimum prices were announced just prior to harvest. In cases such as this the announcement itself could not have affected planting decisions.²³

In a number of other countries, minimum prices were announced earlier in the year. In Malaysia a minimum price for paddy rice was set by the government once each season (Jenkins and Lai 1989, pp. 88ff.). In Colombia, too, support prices were announced at the beginning of the season. These prices were intended to provide producers with assurance; IDEMA participated in marketing, but much went through private channels, and the support prices in effect operated as minimum prices (García and Montes 1989, p. 49).

In some other countries, *guaranteed prices* were announced, and these set the price at which transactions would take place. Even here, the precise effect of the guaranteed prices on farmers depended on whether the government had monopoly power over the purchase of the commodity in question, or whether the guaranteed price was binding only for purchases by government agencies. In Turkey, for some commodities (tea leaves and sugar beets, for example) the government agency was the only authorized buyer, and the guaranteed price was therefore the purchase price. In other cases, however, there were both public and private buyers, and the fraction of the crop purchased by the government depended on the relationship of the guaranteed price to the open market price. In some years almost all sales were to the government, whereas in other years only a fraction of output went through government channels. The guaranteed price for some crops therefore determined the market price, whereas for other crops it was more like a minimum price enforced through the government's willingness to purchase at a preannounced price (Olgun 1991, p. 238).²⁴

In Morocco producer prices of soft wheat were guaranteed. For other grains, a minimum support price was announced. Sales in the parallel markets usually took place at prices higher than the minimum support prices, and only about 15 percent of cereals production (mostly soft wheat) was sold to the government (Tuluy and Salinger 1991, p. 141; 1989, p. 62).

For other countries, however, the guaranteed price was the price in effect for all purchases by the government parastatal which held monopoly power, or was by law the legal price for purchases by private middlemen and the government agency. In these instances, the guaranteed price was the effective price for all legal transactions. In Turkey, for

example, tobacco was purchased only by the State Economic Enterprise, TEKEL.²⁵

In some cases, governments combined price support operations with production controls in order to limit the budgetary costs of the program. This was the situation in Thailand, where the government attempted to support the price of sugar (an export crop) at levels above the world market price, and in the years 1968–83 tried to do this primarily by regulating production levels (Siamwalla and Setboonsarng 1989, pp. 80–86). In Turkey, the Sugar Company was a (state-owned) monopolist, and it set prices for sugar beets in the producer market. Simultaneously, it indicated to individual producers the amount of land they could sow to beets, the amount and timing of irrigation and fertilization they could use, and the time at which they could harvest the area sown. The Sugar Company also held a monopoly in sugar, thus controlling every stage of the production process.

A good illustration of how combinations of these measures may be used is provided by Egypt. There, all agricultural crops were divided into four groups. For the first group of commodities (primarily cotton and sugarcane), procurement prices were set, and farmers had to deliver all of their output to the government. For the second group, procurement prices were set, and quotas were given to farmers indicating the amounts that must be sold to the government at those prices; beyond those quantities, farmers were free to sell on the open market. Rice, sesame, and groundnuts fell into this group. The third group included import-competing commodities for which the government indirectly determined price by deciding on the quantity to be imported. The most important commodities in this group were wheat and maize. The final group consisted of those commodities for which market forces were free to determine price. This group included fruit and vegetables, dairy products, meat, and a variety of other products (Dethier 1991, p. 30).

Measures Affecting Outputs and Inputs

Producers respond to the relative profitability of alternative uses of their land. Profitability depends on both output prices and input prices. As already shown above, tariffs, subsidies, price controls, rationing systems, and other techniques were all used to affect producer and consumer prices of agricultural commodities.

In many instances, however, the budgetary costs of maintaining lower prices for consumers than for producers were viewed as insupportable. In a number of those cases the authorities attempted to offset the disincentive effects of low producer prices by providing subsidies for agricultural inputs. In some instances administrative problems were so great that the subsidies helped farm incomes but did not significantly affect producers' incentives. This seems to have happened, for example,

in Brazil, where agriculturalists were eligible for subsidized credit, which they in turn lent out to industrial borrowers. In other cases, however, input subsidies did affect relative profitabilities.²⁶

The two inputs whose prices seem most often to have been kept below their border prices among the countries covered in the project were fertilizer and credit. In the case of credit, funds were often set aside at nominal rates of interest well below the inflation rate for lending to agricultural producers. To be sure, the quantity of such funds was limited, but producers were clearly subsidized to the extent that they received cheap credit, and country authors analyzed the value of these credit subsidies to producers, calculating the proportion by which costs of production were lowered as a result, in those cases where the subsidies could be assigned to individual products.

For fertilizer, the situation was often more complex. On the one hand, domestic production of fertilizer was encouraged, often by quantitatively restricting or prohibiting imports. When domestic fertilizer was produced at prices above those for which it was available through importation, the authorities often sold fertilizer at less than the domestic cost of production. Although this practice was referred to as subsidization, domestic fertilizer users were paying more than they would have had fertilizer been freely importable, and the result was in fact a tax on input use. This happened in Egypt until 1973 (Dethier 1989, vol. 1, p. 40).²⁷ In other countries, however, fertilizer prices were equal to, or below, border prices, despite the existence of protected domestic fertilizer producers. This was the situation, for example, in Portugal and Turkey (Avillez and Josling 1988, pp. 25–26; Olgun and Kasnakoğlu 1989, p. 46).

In addition to fertilizer and credit, governments often adopted measures affecting the prices producers paid for pesticides, water, seed, and other inputs. These operated in exactly the same way as fertilizer and credit subsidies in lowering input costs for those obtaining cheap or free water or pesticides.²⁸ Researchers estimated the values of these subsidies per unit of output and used the estimates to calculate the effective protection to the value added received by domestic producers, taking into account both the taxation or protection of output and the subsidization (or taxation) of inputs (again, in those cases where data by product were available).

Measures Directly and Indirectly Affecting Relative Prices among Agricultural Commodities

Most government policy instruments that are intended to affect relative agricultural prices operate directly on those prices; most interventions that affect the price of agricultural commodities relative to nonagricultural commodities, however, are indirect, and these are dis-

cussed in the last section of this chapter. It remains here to mention those few indirect policies that affect relative agricultural prices and profitability. The most important of these are policies affecting the pricing of distribution services and transportation.²⁹

In many of the countries studied, the government took over the role of collection and distribution of some agricultural commodities. When the government established parastatal enterprises to undertake these functions and gave those enterprises the sole legal right to purchase from producers and to export, the costs of those enterprises significantly affected returns to producers. Clearly, for a given border price of an exportable commodity, the returns to producers will be lower the higher are the transport costs and other costs of getting the goods from farmgate to port (this assumes that higher costs are paid by farmers and not by fiscal deficits). Likewise, for a given price of importables in the major urban consumption centers, the higher the domestic distribution costs, the lower the farmgate prices, and the more so the more distant farmers are from the consumption centers.³⁰

Even when distribution is private or only partially public, a significant component of the distribution cost is transport charges. These are affected by a variety of government policies: governments usually operate the railroads and set the freight rate schedule; governments also decide what sorts of roads to build and how to maintain them, which in turn affect the costs of truck transport. In addition, policies toward the nonagricultural sector (such as import quotas, tariffs, or prohibitions) can affect the prices of transport vehicles and petroleum products.

It is difficult to estimate the impact of these sorts of government policies on relative returns to agricultural producers. In the country studies, the authors estimated the relationship between government investment expenditures affecting agriculture and the agricultural share of gross national product (GNP). These results are analyzed in Schiff and Valdés (forthcoming, chap. 8). In most countries the net impact of government expenditure policies was to reinforce the effects of the sorts of policies discussed above in leading to lower returns to agricultural producers than they would have received under "neutral policies"; even in cases where government investments offset some direct discrimination, the offset was a relatively small fraction of that discrimination.

One other type of frequently encountered policy should be mentioned here. That is, in a large number of cases *panterritorial pricing* policies were adopted. These policies, in effect, set uniform prices for an agricultural commodity or commodities throughout the country in question. In Chile panterritorial pricing was accomplished by subsidizing transport costs for agricultural commodities originating in more distant locations (Hurtado, Muchnik, and Valdés 1990, vol. 1, p. 56). Likewise, in Côte d'Ivoire, panterritorial pricing of rice (an importable)

was accomplished through subsidizing transport costs.³¹ Because transport costs from remote regions are higher than those from nearby regions, panterritorial pricing subsidizes remote and inaccessible areas relative to more favorably located ones. Such policies can result in an uneconomic pattern of cultivation, both with respect to the regions that are intensively cultivated and with respect to the crops grown. When transport costs are high, as they are, for example, in some of the remote regions of Zambia, the resulting pattern of cultivation can be extremely uneconomic (see Jansen 1988, p. 186, for a discussion).

Parastatal Enterprises

Mention has already been made of government parastatal enterprises. In a large number of cases governments established these enterprises, or adapted already-existing enterprises to their particular purposes. As will be seen in chapter 3, many marketing boards were inherited from colonial governments and were immediately perceived as a ready instrument-at-hand for carrying out desired pricing policies. Very often, the marketing boards were converted from agencies that had in effect been organizations supporting the interests of growers to agencies that taxed them. Sometimes, they were converted from exporting agencies to agencies handling domestic food supplies.

In Ghana, the Cocoa Marketing Board had been established during the Second World War to help cocoa growers (Stryker 1990, p. 40). The newly independent government, however, immediately perceived the agency's potential as a revenue source and began collecting a sizable share of its revenues. The agency, which was responsible for the purchase of cocoa from farmers and for its storage and transport, had a legal monopoly on cocoa exports. It was a major employer in Ghana, and it was an important source of revenue for the government (Stryker 1990, pp. 42ff.).

When Côte d'Ivoire became independent in 1960, a marketing board called the Stabilization Fund, which had been established under the French, came to be used to purchase coffee and cocoa at relatively low prices from growers, to handle storage, transportation, and exporting, and to turn over its profits to the government as a source of revenue.³² Marketing boards were also established for palm oil and cotton. To give some idea of the overall importance of state enterprises in Côte d'Ivoire, by 1977 there were altogether 50 public agencies, 34 state corporations, and 170 corporations with state equity (Atsain and M'Bet 1988, p. 12).

In other instances, new agencies were established as governmental policies changed. In the Philippines, for example, the Philippine National Bank (PNB) had traditionally lent to sugar planters and millers; in the 1970s the government charged the PNB with the responsibility of

purchasing the sugar and gave its subsidiary, the Philippine Exchange, monopoly control over exporting sugar. In 1977, however, the government established a new agency, the National Sugar Trading Company (NASUTRA) as a subsidiary of the Philippine Sugar Commission (PHILSUCOM) to handle monopoly sugar trading. Later still, PHILSUCOM and NASUTRA were authorized to acquire and operate enterprises handling the transport of sugar and sugarcane, to maintain bulk storage facilities, and to establish new sugar refineries (Intal and Power 1990, pp. 58–59).

In Ghana, although there was already a Cocoa Marketing Board, the government established the Ghana National Trading Corporation (GNTC) and gave it a monopoly over imports of “essential food commodities.” The GNTC, in turn, established a number of retail shops at which commodities were sold at controlled prices. As in many other countries, a number of other parastatals were established; to name just two: the Ghana Food Distribution Corporation was established to market perishable foodstuffs, and the Grains and Legumes Development Board was established to purchase, store, and sell maize, rice, and palm oil (Stryker 1990, pp. 108ff.).

Interaction among Policies

In most of the countries studied, a variety of interventions of the sorts described above were employed. In the Philippines, for example, farm support prices were established for corn and rice; consumer price ceilings were fixed for rice, corn, sugar, and coconut oil; an import tariff was applied to corn; import controls and/or a government monopoly on importing was established for rice and corn; export taxes were imposed on sugar, copra, coconut oil, and desiccated coconut; there was an export ban on copra (to encourage domestic processing); export controls and/or a government monopoly of the export trade was established for palay and sugar; there were producer taxes on copra; irrigation was subsidized for rice, corn, and sugarcane; credit subsidies were extended for the production of corn and sugar and for the processing of rice, corn, sugar, and coconut; fertilizer prices were subsidized for corn, sugar, and copra; and minimum wages were legislated for all seven commodities studied by Intal and Power (1990, table 2-6).

Even more complex schemes have been developed to confer protection on a domestic industry. In the case of Thai sugar, for example, a “home price” scheme was developed under which domestic consumer prices were above domestic producer prices, which in turn were above world prices. The excess of the consumer price over the producer price was used to subsidize Thai sugar exports (Siamwalla and Setboonsarng 1989, pp. 74ff.). In order to maintain this price differential, the Thai government had to impose strict controls over production and distribution.

Policy Instruments Effecting Direct Interventions

Once policies are in place to intervene in price determination mechanisms, institutions are normally needed to effect those interventions. In some cases, such as tariffs and quotas, an existing agency can collect duties or administer quotas, and all that is needed is a mechanism for deciding upon the permissible quantity to be imported or the duty rate.

As already mentioned, tariff rates are often set by law, and altered only infrequently. However, surcharges of various types can be imposed by the ministry of agriculture, or other government institution, and can be varied with perceived needs. In the Chilean case, for example, protection for dairy products took the form of a variable levy, the import duty being adjusted to a rate deemed sufficient to encourage domestic production (Hurtado, Valdés, and Muchnik 1990, vol. 1, pp. 59–60).

In Colombia the government decided to encourage the expansion of domestic cotton production. To do this, price supports were established, together with mandatory “absorption quotas” that required textile producers to purchase domestically grown cotton in at least a given proportion to imports (García and Montes 1989, p. 48). In Malaysia the government fixed a guaranteed minimum rice price for domestic producers which was typically above the world price. It then permitted imports of rice in proportion to the amount that was purchased from the government stockpile (Jenkins and Lai 1989, pp. 88ff.).

When interventions are domestic, rather than border, measures, however, decisions must be made as to institutions for implementation of prices, as well as a determination of what prices are to be. In cases where economic activity is carried out by private individuals and firms, governmental institutions are usually created for deciding upon the relevant parameters, and they are need instruments for effecting these decisions. In many instances, however, governmental institutions are established to implement the decisions directly, usually through the creation of a state marketing board with monopoly and monopsony powers. Even then, however, problems can arise, as is discussed further in chapter 5.

Decisionmaking Mechanisms and Institutions

In many countries it was initially assumed that a decision—to establish a minimum legal price, for example—was automatically self-enforcing. Experience quickly demonstrated, however, that means must be found to implement decisions. In this section, consideration is given to mechanisms and procedures used to arrive at decisions when the decisionmaking institution is separate from the implementation. Such a separation can occur either because decisions are intended to govern

private sector activity or because a separate government entity implements the decisions.

Turning first to decisions as to price support levels (minimum or guaranteed), a frequently encountered mechanism for decisionmaking was the establishment of a committee, with representation from various parts of the government and possibly also from producer interests. In Pakistan an Agricultural Prices Commission (APCOM) was established to "advise" the government on setting support prices for all major crops (Hamid, Nabi, and Nasim 1990, p. 42).³³ In Portugal an Inter-Ministerial Council, "dominated" by the minister of finance, but representing producer and consumer interests, fixed producer prices for cereals, cork, oilseeds, and olive oil (Avillez, Finan, and Josling 1988, p. 30).

In Morocco an Interministerial Pricing Committee was established to determine support and minimum prices for foods. Consumers were represented by the Ministry of the Interior and producers by the Ministry of Agriculture. The Ministry of Finance had final say to ensure that the budgetary implications of the decision were taken into account (Tuluy and Salinger 1989, p. 57). In Korea the Ministry of Agriculture and Fisheries (MAF) was given primary responsibility for formulating pricing policies toward agricultural products. However, Moon and Kang report that there were interministerial disputes regarding support prices to be set. The MAF tended to want high support prices, but the Economic Planning Board and the Ministry of Finance advocated lower support prices on anti-inflationary and budgetary grounds.³⁴ In Turkey a committee consisting of representatives of the Ministries of Commerce, Finance, and Agriculture met and recommended support prices for agricultural commodities.

In Egypt the determination of prices and of delivery quotas for major crops was regarded as so important, these decisions were made by the Council of Ministers. The Ministries of Economy and Finance, Agriculture, Transportation, Irrigation, Supply, and Trade each decided on subsidiary matters, although the Agricultural and Irrigation Committee of the National Assembly discussed most matters pertaining to agriculture and had an important voice in decisions (Dethier 1989, vol. 1, pp. 66ff.).

In other countries a particular government ministry or agency took the lead in determining price support levels, with other agencies subordinate to them. In the Dominican Republic, the Directorate General of Price Control, of the Ministry of Commerce, set consumer prices of basic food items. Other government agencies were then left to determine and administer producer prices, imports, marketing, and other functions (see Greene and Roe 1989, vol. 1, pp. 30ff). In Zambia the minister of agriculture fixed the prices that the National Agricultural Marketing Board (NAMBOARD) would pay to producers for various agricultural commodities. NAMBOARD then had a monopoly and monopsony of do-

mestic and foreign trade in these commodities (Jansen 1988, pp. 160–61).³⁵ In Côte d'Ivoire the marketing board for cocoa and coffee itself recommended producer prices each year to the government, which then decreed them.³⁶

Although these interministerial groups usually were given criteria on the basis of which they were to make their recommendations, these criteria encompassed such a wide variety of factors that any outcome would have been consistent with them. Typically, criteria included such considerations as "fairness to farmers," costs of production, low consumer prices, the impact on inflation, and the impact on the government budget (see, for example, the description by Intal and Power 1990, pp. 54ff.). Often, the interests of the various ministries conflicted, with the ministry of finance concerned about budgetary costs, the ministry of agriculture concentrating on farmers' incomes, and other ministries focusing on such issues as consumer costs of food commodities, exports, and the like. Leadership of the committee therefore became an important determinant of the outcome. Olgun and Kasnakoğlu report that in Turkey there was a "constant struggle" among the Ministries of Agriculture, Commerce, and Finance to obtain the authority to recommend the prices (1989, p. 184). In Thailand the Ministry of Commerce became the dominant ministry after the mid-1960s; before that time, the Ministry of Finance and the Ministry of Agriculture were also strongly involved in setting the rice premium (Siamwalla and Setboonsarng 1989, pp. 29ff.).³⁷

In most of these cases private traders based their behavior on the government prices. For most commodities, traders in Turkey were free to pay producers the market price, but producers had the choice of selling to a government agency when the offered price was below the guaranteed price (see chapter 5 for an analysis of the administrative costs and effectiveness of this procedure). In Pakistan, APCOM was established when the government was returning marketing and distribution functions to the private sector. The Thai rice premium (tax) was collected from private traders, which in turn enforced the wedge between the lower, domestic price and the higher, foreign one.

In many cases government institutions were established to determine and administer policies. In Pakistan, for example, a new government came to power in the early 1970s. It was highly suspicious of private economic activity and determined to replace markets with government. Between 1972 and 1974, it banned all open market sale of sugar and decreed that sugar was to be distributed by the government through ration shops. Fertilizer distribution was nationalized, and several parastatals were established in different states to handle it. Pakistan Tractor Corporation was established to take over the importation, assembly, and distribution of tractors. A Rice Export Corporation and Cotton Export Corporation were established and given sole power to

export rice and cotton respectively. The government attempted compulsory procurement of wheat to reduce the budgetary costs of consumer subsidies (which were then running at 10 percent of the government's current budget). And a Ghee Corporation of Pakistan was established, with a monopoly over the procurement of vegetable oils and the milling and sale of cottonseed oil (Hamid, Nabi, and Nasim 1990, exhibit 1).³⁸

Administration and implementation of policies was not necessarily simpler or easier when the government had established a parastatal with monopsony rights to purchase a crop. In Korea a national Agricultural and Fisheries Development Corporation was established which used price stabilization funds to manage buffer stocks of peanuts, red pepper, sesame seeds, soybeans, garlic, and onions. Meanwhile, a National Agricultural Cooperatives Federation, consisting of 1,476 local cooperatives for producers of major grains and several other cooperatives for producers of other, less important, crops, had a monopoly of fertilizer distribution, provided other agricultural inputs (including farm credit), and marketed grains under the guidelines laid down by the Ministry of Agriculture and Fisheries for price supports and distribution (Moon and Kang 1989, pp. 57ff.).

Enforcement Instruments

In some instances, the enforcement of government decisions required the establishment of a government institution, or the enlargement of an existing institution. In Zambia, for example, there were constant reorganizations, additions of new agencies, and reassignment of responsibilities, reflecting dissatisfaction with the performance of existing agencies.³⁹

In many cases individual government agencies were charged with responsibility for administering government policies with respect to a particular commodity or group of commodities. In Brazil, for example, the Instituto do Açúcar e do Alcool (IAA) was empowered to determine prices to be paid to sugarcane farmers and to set production quotas for them. Its own agents then proceeded to purchase the sugar destined for export. Producers were permitted to sell "freely" in the domestic market, although at prices fixed by the IAA for the domestic market (Brandão and Carvalho 1991b, vol. 1, p. 82). In Malaysia rice prices were set by an Interministerial Committee, but the rice purchasing agency was the National Rice Board (Jenkins and Lai 1989, pp. 88ff.). In Sri Lanka the tea tax determined the wedge between domestic prices and the international price of tea. It was set by the government, but the Sri Lanka State Trading Corporation was established by the government as a marketing agency, and it became the largest tea exporter in Sri Lanka (Fernando 1987, p. 63).

Government Institutions Implementing Decisions Affecting Farmers

Government agencies assumed all sorts of institutional forms. In some cases they were quasi-autonomous cooperatives, an example being the Turkish Taris, a cooperative sales agency for cotton, figs, raisins, and olive oil. This cooperative was primarily an institution to serve its membership, but it also made support purchases when directed to do so by the government. In other cases they were institutions actually or theoretically under the minister of agriculture. Many were parastatal enterprises, such as the Turkish Soil Products Office, which was established to administer support prices for grains, potatoes, opium, and onions. Perhaps the most frequently encountered form was a marketing board, with the status of parastatal enterprise. Marketing boards were prevalent under colonial rule in a large number of countries covered in the project, including Côte d'Ivoire, Ghana, Malaysia, Pakistan, Sri Lanka, and Zambia.

Marketing boards themselves take a variety of institutional forms. They may have the quasi-autonomous legal status of other parastatal enterprises, or they may be part of a government ministry (see chapter 5 for a further discussion of the evolution of structures over time). They may deal with a single commodity or with many. They may have monopoly power to purchase one or more agricultural commodities, while they may compete with private traders in other countries or for other crops. They may buy agricultural commodities and sell fertilizer, seeds, and other inputs to farmers; they may even extend credit. They may have a monopoly over the export market (or be the sole purchaser of imported inputs or of an imported good) while competing with private traders in the domestic market.

In the Dominican Republic, for example, four autonomous government agencies formulated and implemented agricultural pricing policies. A Directorate General of Price Control (DGPC) mandated domestic food (and other consumer) prices at the retail level. The National Institute of Price Stabilization (INESPRE) then implemented these prices through its marketing, importing, storage, and transporting activities. INESPRES had exclusive rights to import basic food items and, along with another parastatal, Dominican Mills, controlled the importation of wheat and wheat products. INESPRES and Dominican Mills had to negotiate with DGPC for the prices at which they were to sell, and with the Monetary Board for foreign exchange allocations in order to import. The Monetary Board also determined the amount of credit INESPRES could have for the purchase of domestic crops (Greene and Roe 1989, vol. 1, pp. 137ff.).⁴⁰

Each form or organization—separate boards for individual commodities versus one board handling multiple commodities, monopolistic boards or boards competitive with private traders, boards dealing

only with exports but not domestic sales or boards handling both, boards selling inputs to producers and buying their outputs contrasted with boards dealing only in the output market—raises administrative questions and problems that relate both to coordination with other government bodies and to effects on economic efficiency. These issues are dealt with in chapter 5.

Instruments for Subsidizing Consumer Prices

The instruments used to affect consumer prices have generally been different from those governing producer prices. Marketing boards rarely assumed the function of retail distribution, and only infrequently even concerned themselves with retail prices.

When governments decided to regulate consumer prices and keep them below levels that would have prevailed in an unregulated market, their chosen instruments were functions of the tradable status of the commodity in question. In most countries, mechanisms were established to assure that private traders would sell at low prices. In Egypt, for example, registered grocers were entitled to receive low-cost (imported) wheat for resale at controlled prices to those with ration cards. Starting in 1966, consumers were provided with ration cards for kerosene, sugar, oil, and tea; since then, monthly rations have been an essential part of subsidized food programs (Dethier 1989, vol. 1, pp. 62–64). In Korea meat imports were restricted to maintain higher prices for domestic producers; the government then established a ratio of permitted importable meat to be sold at a lower price alongside domestic meat, which was to be sold at a higher price. A similar mechanism was used in Sri Lanka to distribute the rice ration, which was, for many years, free.

In Pakistan, by contrast, “fair price” retail outlets were established by the government and employed to distribute wheat and other grains at prices well below those prevailing in the free market (Hamid, Nabi, and Nasim 1990, pp. 100ff.). Government-owned retail establishments were also used in Ghana and Sri Lanka to distribute food at subsidized prices to consumers.

Policies Affecting Prices of Agricultural Goods Relative to Nonagricultural Goods

A farmer’s real income depends on the prices he receives for the various commodities he produces, the prices he must pay for the inputs he uses in the production process, and the prices he pays for the commodities he purchases in the market. These latter are largely nonagricultural commodities.⁴¹

The ways in which governments intervene to directly affect the first two categories of transactions have already been discussed. There are,

however, two important indirect mechanisms by which farmers' real incomes are affected, given the direct interventions in place. These are the policies used to determine the nominal exchange rate and the degree to which domestic prices of importable commodities consumed by farmers (either as final consumption goods or as inputs in the production process) diverge from those that would prevail if farmers could purchase at the border prices prevailing given the exchange rate.

These two factors are interrelated, of course. If it were decided not to intervene at the border to affect the domestic price of any importable or exportable goods and services, a country's government would have little choice but to take measures that ensured that the macroeconomic policies affecting the price level, the level of economic activity, and the exchange rate were consistent with a sustainable balance of payments position. If, for example, there were no border interventions, a country undertaking policies that resulted in a rapid rate of inflation would have little choice but to permit its exchange rate to float; in the absence of changes affecting significant components of the balance of payments, one would then expect the country's currency to depreciate at a rate equal to the differential between the country's inflation rate and that of its major trading partners.

Many developing countries, however, have chosen to restrict imports, not only to protect domestic industries that were encouraged as import substitutes, but also to constrain the value of imports to levels consistent with foreign exchange availability. In those circumstances, when farmers produce exportable or unprotected import-competing commodities, their incomes are affected both by the failure of the nominal exchange rate to keep pace with inflation and by the higher prices they must pay for importable commodities as a consequence of import restrictions. The extent to which exchange rates affected producer real incomes varied considerably among the countries covered in the project. Stryker estimates that the prevailing real exchange rate in Ghana by 1984 was less than 5 percent of what would have prevailed with a realistic, or equilibrium, real exchange rate (Stryker 1990, table 4). Thus the real return to cocoa producers would have been a very small fraction of the international relative price had there not been some offsets through direct intervention. Even so, Stryker estimates that the real price of cocoa received by farmers was about one-third of what it would have been under pricing policies that reflected the true tradeoffs between alternative activities (Stryker 1990, table 19). In Malaysia, by contrast, the exchange rate was maintained at realistic levels throughout the period. Jenkins and Lai estimate that in no year covered by their study did the real exchange rate affecting producers of major export crops diverge from their estimated equilibrium rate by more than 17 percent (which it was in 1982); in most years the difference was less than 10 percent (Jenkins and Lai 1989, table 11-3, columns 1 and 2). For

Malaysian producers, therefore, government policies directly affecting agriculture were considerably more important than those affecting the trade and payments regime, whereas for Ghana (and many other countries), the opposite was the case.

Schiff and Valdés (forthcoming, chap. 2) provide a summary of the country authors' estimates of the changes in the real value of farm outputs attributable to exchange rate behavior, and to the higher prices of imports and import-competing commodities. Some of the salient findings are summarized in chapter 4 below. There is no question but that the loss in real income due to higher prices for consumption goods resulting from protection and from overvalued exchange rates can be very large. Indeed, one of the important contributions of this World Bank research project was to provide quantification of these effects and also the direct effects of agricultural price interventions, and to contrast their orders of magnitude. Interestingly, for purposes of analyzing the political economy of discrimination against agriculture, the institutions and mechanisms that affect trade and exchange rate policy are quite different from those discussed in the sections of this chapter that are concerned with relative returns and direct interventions. Direct interventions are generally decided on by the ministry of agriculture (or a similar body) and implemented through parastatals, other institutions, and regulations, whereas exchange rate policy is usually the domain of the finance minister or the governor of the central bank.

Trade policy is usually determined by an economics or planning ministry, or a ministry of trade and industry. In Turkey, for example, the Five-Year Plans laid down general guidelines for import substitution policies. Similarly, in Korea, the Economic Planning Board was responsible for setting trade policy targets.

Thus the indirect policies that discriminated against agriculture were normally decided on by decisionmaking groups in which sectoral interests were not supposed to play a special role, whereas the direct policies that affected agriculture were normally decided on by decisionmaking groups charged with sectoral responsibilities for overseeing agricultural incentives.

García and Montes note the political power of some of the agricultural interests in Colombia and relate comments on their influence over direct policies. However, in political debates over indirect policies, these same interests appear to have made little or no effort to influence decisions (García and Montes 1989, p. 198). Likewise, in Turkey, agricultural producers associations were fairly influential in affecting direct interventions but were virtually voiceless in affecting trade and exchange rate policies (Olgun and Kasnakoğlu 1989, chap. 11).

Several interesting political economy questions arise out of the foregoing discussion. One pertains to the reasons why governments, finding that their policies fail, so often intensify those policies rather than

alter them. Another relates to the sorts of instruments that are chosen: quantitative restrictions on trade seem to be preferred to tariffs, and input subsidies partially offset taxes on outputs. Finally, there is an important question as to why agricultural interests were so little represented in the forums making decisions on these indirect policies. Consideration of these questions, however, must await later chapters.

3

The History of Pricing Policies

If the political economy of agricultural pricing policy is to be understood, clues need to be sought as to the political and economic patterns that occur in different countries. In this chapter, therefore, the evolution of direct price interventions in agriculture in the countries included in the project is examined. An examination of the common patterns that emerge can prove useful in suggesting how political and economic factors interact in determining the evolution of agricultural pricing policies.

One of the more striking phenomena that emerge from the country studies is the constant change in policies, instruments, and institutions that were involved in these policies. To be sure, there were reforms (which are the subject of chapter 6), but even without reform, change was continuous in most countries. This pattern gives rise to one of the theses emerging from this volume: when political agents attempt to control economic markets, they frequently ignore aspects of economic behavior. That behavior, in turn, gives rise to results of political decisions other than those initially intended. Those economic consequences in turn affect the political balance, but also influence politicians to change policies. The cycle is then repeated.

At this stage, the effort here is to provide a descriptive history, attempting to use the country studies to trace similarities in patterns that emerge. The task of inferring underlying political-economic interactions is reserved until later chapters.

As will be seen in what follows, there are two significant ways in which history matters. First, once policies and institutions are established, they themselves became a factor in the political and economic equation. Not only do those (including the civil servants employed by the institution or carrying out the policy) who gain from the institution's activities (or the policy) support it, but the political imperative to use the institution becomes a significant component of the political-economic decisionmaking process. Sometimes, the very purpose of an institution

changes, because the dominant political coalition shifts, or for other reasons. But once a policy or intervention exists, political forces are tempted to use it more readily than they would be to create a new one.

Second, past policies and policy changes influence peoples' expectations about the effects of possible further changes being debated or considered. Not only are some proposals not considered credible because similar actions failed in the past, but a history of frequent change gives rise to expectations that there will be change in the future. If, for example, past levels of support prices for agricultural commodities have not been realized, current announcements of support prices will be regarded with some degree of skepticism. Likewise, in countries where there have been wide swings in the degree of discrimination against agriculture in the past, it is unlikely that announcing a major reduction in discrimination will affect behavior to the same extent that it will if past policies have been more consistently followed.

This chapter focuses on the histories of pricing policies in the countries covered by the project. The emphasis is on examining the evidence and seeing what patterns emerge. Attention is also confined to the policies adopted which directly affected the pricing of agricultural inputs and outputs. The impact of macroeconomic policies on agriculture, and the political economy rationale for the often contradictory stances of macro policies and sector-specific policies (see chap. 4 below) are analyzed in chapter 7.

A first section traces the origins of intervention by country and by commodity for the project countries. Next, attention turns to motives for intervention and changes in the level and/or type of intervention. Thereafter, the evolution of policies is examined, including both the spread of interventions to other commodities and efforts at reforms.

The Origins of Intervention

Broadly speaking, interventions in the domestic pricing of agricultural commodities have their historical origins in four sets of circumstances: (1) producers' activities to unite toward a common purpose or purposes, (2) governments' efforts to extract revenue, (3) consumer-oriented pressures to keep food prices low, and (4) adjustments to changing external conditions. Within individual countries, different origins may be found for intervention in the markets for different agricultural commodities, and different circumstances can influence intervention in the same commodity market at different times.

Interestingly, however, the factors prompting initial intervention are, on the whole, somewhat different from those that drive the evolution of intervention once in place. That finding is discussed further in the rest of this chapter.

Political Pressures from Producers

Producers' associations have figured prominently in initiating policy in a number of countries. In some countries, including Chile (see Wright 1976 for an account), Côte d'Ivoire, Kenya, and Colombia, producers' associations were started early in the twentieth century in order to represent producer interests to the government. These interests were sometimes domestic: in achieving better and lower-cost transport for crops to the market or for inputs to farm sites; in lobbying for favorable (or less unfavorable) treatment with respect to taxes, credit, government investments, or other public support; or in influencing the government to change other regulations governing the production and distribution of agricultural output. In many of these cases, producers organized under government auspices to enable the coercive power of the government to enforce their decisions (such as supply management) (see Bates 1983, pp. 71–72). In Malaysia, for example, rubber growers formed an association which, among other things, persuaded the government in the late 1920s to invest in research and development, taxing rubber growers to finance the investment (Jenkins and Lai 1991, p. 76).

In other instances, however, the main objective of the producers' associations centered on exercising their monopoly power, or perceived monopoly power, in domestic and especially international markets. In Kenya, large producers originally organized the Kenya Farmers' Association in 1912–13 to market the maize crop of that year; they strongly supported a proposed law to require employers to give all employees a maize ration. The Association later lobbied successfully for a tariff on imports that would have competed with their maize (Bates 1983, p. 72). In Sri Lanka, the Ceylon Coconut Board was established by the colonial government in 1935 at the request of the large coconut landholders. The growers claimed that the copra market was dominated by a handful of buyers who had consequently depressed the price (Fernando 1987, p. 110). Similarly, in Colombia, coffee producers organized in the 1920s to seek favorable treatment from the government on a variety of issues, including improved transport (García and Montes 1989, pp. 46ff.).

In some instances the colonial governments established controls, often to be administered through producers' associations, in order to benefit the large (expatriate) producers. This was the case in Kenya, Morocco, and Zambia, among others. In Sri Lanka, also, the large estates for tea were almost entirely owned by expatriates; many of the institutions, including a Wages Board, were established in ways that were designed to benefit the estate owners (Fernando 1987, p. 87).¹

It is important to note that producers' associations were usually formed around export crops. Colonial governments generally encouraged the production of these crops, many of which were grown by ex-

patriates. Simultaneously, they neglected food crops and even suppressed producer prices of foods in an effort to keep wages low for plantation agriculture (Commins, Lofchie, and Payne 1986, pp. 12–13).

The Need for Revenue

Governments' needs for revenue have also prompted intervention.² In most cases other needs were also factors. Interestingly, the revenue motive was far stronger in intensifying interventions once instruments and policies were in place than it was in initiating them.

For example, when Argentine terms of trade were improving in the period after the Second World War, the government of Argentina responded by significantly increasing taxes on exports of agricultural commodities. Consequently, farmers' terms of trade improved about 6 percent annually, compared with an 11 percent average annual improvement internationally (Cavallo and Mundlak 1982, p. 20). The improved international terms of trade took place at about the same time that Peron came to power. The Peronist government wanted to promote import substitution and to shift the terms of trade away from agriculture. While revenue was not the only motive, it clearly was one. Once agricultural taxation was a source of revenue, increases in export taxes were effected because of revenue motives.

The rice premium in Thailand and the treatment of coffee in Brazil both exemplify instances in which a major motive was revenue extraction. In the Brazilian case, several producers' associations were formed in response to the government's taxation of export crops: this was true for coffee, sugar, cocoa, and cotton (Brandão and Carvalho 1991a, pp. 88–89).

Agricultural marketing boards were established in many countries, both in Africa and Asia, during the period of colonial rule. In many instances marketing boards were initially intended to assist producers, and their purposes changed over the years. In other cases, however, marketing boards were an instrument for obtaining government revenue from their inception. The Philippine government, for example, established agencies to tax agricultural commodities starting in the 1970s (Intal and Power 1990, p. 58).

Maintaining Low Prices for Consumers

Pressures to keep prices to consumers low have frequently led governments to regulate prices, especially for food crops. In Egypt, Morocco, and Turkey, these considerations lay behind the initial establishment of government marketing agencies for grains. Likewise, in the Dominican Republic, an Agricultural and Credit Bank was established and given monopoly powers over the importation of key food items, with a

mandate to maintain low prices for those commodities. In Portugal, government regulation of prices and marketing of agricultural commodities dates back at least to the beginning of the twentieth century. This intervention appears to have been part of an overall pattern of government controls, and the major purpose seems to have been to keep food prices low (Avillez, Finan, and Josling 1988, p. 23).

Low prices have been an objective of policy for two distinct, but related, reasons: on the one hand, in some countries, such as the Dominican Republic and Egypt, there was a concern that food costs should be low for urban consumers. On the other hand, in some other countries the focus was on keeping the consumer price index from recording too large an increase. Brandão and Carvalho report that in Brazil, for example, food constituted 30 percent of the Rio de Janeiro price index, so that keeping food prices down was considered desirable in order to record low inflation rates (Brandão and Carvalho 1987, p. 80).

External Events Initiating Intervention

Finally, external events have prompted government intervention on many occasions. A number of government agencies and/or regulations were established during the Great Depression. The Turkish government passed a "Law of Protecting Wheat" in 1931 in response to the continued decline in its world price. The Agricultural Bank was established to buy and sell wheat at prices to be determined by the government (Olgun 1991, p. 235).³ In Chile, the first law controlling agricultural prices was effected in 1931. An Agricultural Export Board was created which was authorized to control prices, prohibit or limit exports, trade in wheat, and pay export subsidies. It was followed in 1932 by the creation of a *Comisariato de Subsistencias y Precios*, which was empowered to control the prices and quality of "essential" food articles, export and import these items, and control the marketing of food at the consumer level.⁴ In the Philippines, the decision to bring rice and corn under the purview of government procurement was taken in 1936 under the impact of the Great Depression. Likewise, the Philippines began administering sugar exports after the U.S. imposition of import quotas in 1934 (Intal and Power 1990, pp. 54ff.).

Disruptions surrounding the Second World War were also a major occasion for interventions, especially under the British in South Asia and Africa. In some cases, instruments and institutions were already in place, but in others they were founded. The British government, for example, imposed grain rationing in Pakistan, Malaysia, and Sri Lanka in 1942, as import supplies were greatly reduced. In other cases, it was the inability to export to traditional markets that motivated the establishment of a government agency.⁵ The Cocoa Marketing Board in Ghana was also established during the Second World War and became the mo-

nopoly buyer of cocoa from peasant producers, because traditional markets had been cut off (Stryker 1990, p. 43). In the Republic of Korea, difficulties with grain supplies induced by the Second World War and postwar dislocations led the U.S. military government, which had initially disbanded controls over food grains, to reintroduce them (Moon and Kang 1989, pp. 46–47).

Motives for Intervention

As has been indicated, there was usually a dominant motive for the initiation of intervention. Once institutions for intervention had been established, however, they came to be seen as tools for achieving other ends, and competing political groups added new motives and objectives for intervention agencies.

In almost all countries covered by the project, the objectives of intervention listed by country authors included consumer protection, fair prices to producers, foreign exchange earnings, stabilization of prices received by producers, and anti-inflation. Authors were asked to attempt to weight the relative importance of different objectives over time. While weights changed, they did so slowly, and it was rare for a weight to drop to zero. In Portugal, for example, the following were listed as objectives with positive weights: food costs, farmer income, government revenue, foreign exchange, self-sufficiency, price stability, regional equity, nutrition, and support of the processing industry.

Nutrition was weighted positively only in 1974–80, while self-sufficiency and price stability were assigned zero weights by 1981–85. Otherwise, all objectives were accorded positive weights (see Avillez, Finan, and Josling 1988, table 10). In Zambia in 1965, the first year covered in the study, Jansen assigned positive weights to the objectives of consumer welfare, farmer income, self-sufficiency, price stability, and support of domestic industry. By the last year covered, 1983, all of these objectives still received positive weights; in addition, regional equity and nutrition had begun to matter (Jansen 1988, table 8).

As is evident even from the list, the objectives are not internally consistent. Once instruments of intervention were saddled with multiple functions, decisions over intervention levels became the political arena within which political conflicts between agricultural and other interests were resolved. As this happened, conflicts between motives arose. Whereas price ceilings might be imposed on food grains in order to maintain low consumer prices, for example, this would necessitate budgetary outlays to cover the costs of imports. These budgetary costs in turn would provide the motivation for setting producer prices through direct controls over private dealers and/or the use of government procurement agencies. Producers would then attempt to exert political influence to achieve higher prices. Thus intervention that often began for

one motive rapidly became the outcome of the relative importance of various political and economic motives.

Committees were often formed to decide on agricultural prices, both producer and consumer. These committees were usually at the ministerial level, with representatives of a number of interests. As such, reconciliation of the various objectives took place at that level. Conflicting motives and clashes between political objectives and economic constraints provide much of the focus of the analytical histories of pricing interventions in the individual country studies.

It is always difficult to distinguish between stated and actual motives for particular government policies, and in no case is that more so than with intervention in agriculture. Typically, different groups have different motives for supporting particular policies, so that no single motive carries the day; moreover, some supporters of particular policies find it politic to express their advocacy in terms of factors other than their own self-interest. Here, however, the focus is on stated objectives; in other parts of this volume we analyze outcomes and evaluate policies in light of what actually took place.

To an economist's ear, the list of objectives agricultural interventions are expected to fulfill sounds confused, if not contradictory. Very often, government agencies are instructed simultaneously to guard the consumer interest, protect producers' incomes, increase production, promote small-scale producers, achieve price stability, assist poor consumers, reduce regional income disparities, contribute to foreign exchange earnings (and/or savings), and provide revenue for the treasury. For example, in Zambia, the criteria established by law for setting prices annually are the following: (1) cost of production, (2) fair return to producers, (3) fairness to consumers, (4) import-export parity, (5) relative crop profitability, (6) food security, and (7) political acceptability (Jansen 1988, p. 47).

Nonetheless, the groupings of proximate causes for the origins of intervention provide considerable guidance as to motives. There are two bases on which motives can be distinguished. On the one hand, there are factors that are specific to particular agricultural commodities, such as tree crops, export crops, and food crops. In effect, the factors underlying intervention in agricultural commodity markets differed sharply depending on whether the commodity was an exportable or an import-competing commodity and on whether it was a basic food commodity or not. Indeed, given conventional wisdom that there is overall discrimination against agriculture, one of the surprising findings from the country studies was the degree of difference in the treatment of exportables and import-competing agricultural commodities.

On the other hand, there are a number of factors that influenced the choice of an overall development strategy. These factors—colonial heritage, belief in industrialization, the views of the “modernizing elite,”

and so on—can broadly be described as the “ideology” of development policy. The ideology was a powerful influence in overall economic policy formulation and, therefore, in the decision to embark upon a development strategy of import-substituting industrialization, which in effect legitimated discrimination against agriculture. It affected both the macroeconomic policies that resulted in so much indirect discrimination against agriculture (see chap. 4 below) and the direct taxation of agricultural export commodities.

Attention turns first to these broad determinants of views regarding agriculture. Thereafter, differences in treatment among agricultural commodities based on their status in international trade are discussed.

The Ideology of Development Policy

Most of the developing countries became independent of a colonial power sometime in the 1940s or 1950s. This was true of Ghana, Côte d’Ivoire, Zambia, Egypt, Morocco, Pakistan, Sri Lanka, Korea, Malaysia, and the Philippines. Even some of those countries that had longer histories as independent nations, such as Brazil, Colombia, Argentina, Chile, and Turkey, entered the postwar era with a reexamination of their economic policy stances, or had changed policies during the Great Depression. Among the countries in the project, there are only three where postwar policy might arguably be regarded as largely a continuation of the prewar era: the Dominican Republic, Portugal, and Thailand. Of those, the Dominican Republic and Portugal already had policies that were strikingly similar to those adopted by other developing countries after the Second World War.

To a remarkable degree, in all of the countries defining or redefining their policy goals and instruments, it was accepted that a major objective of economic policy should be rapid economic growth. Furthermore, there was a widely shared view that industrialization was the route to rapid economic growth and that industrialization could be achieved only through import substitution. In part because it was thought that industry would be the leading sector in the growth process, in part because resources were scarce, and in part because it was believed that Japan had successfully grown through taxation of agriculture, the idea that resources should be “extracted” from agriculture to finance industrial development gained respectability.⁶ The experience of the U.S.S.R., where agriculture had also been relatively neglected as industrialization was emphasized, also gave rise to support for this view. These views were complemented by a strong suspicion of the international economy. In part, this suspicion originated in the vicissitudes of the Great Depression, and in part, it may have been a reaction to a colonial heritage and other related factors. For policy formulation, however, it translated into a strong desire for “self-sufficiency” in food

production. Interestingly, in many country studies, country authors reported that a desire for price stability was a motive for agricultural pricing policy. Whether and to what extent a distrust of the international market provided a rationale for intervention that would have happened anyway or whether fluctuations were genuinely the motive for intervention is difficult to judge. It seems clear, however, that distrust of the international market and belief in the necessity for industrialization made the political costs of agricultural pricing interventions much lower than they would otherwise have been.

Moreover, since it was generally believed that peasants were relatively unresponsive to incentives, there was little understanding of the economic losses associated with heavy taxation of agriculture. The two themes—the drive for self-sufficiency in food products and the desire to tax agriculture to finance industrialization—were present in all the country studies, albeit to varying degrees. In Colombia, for example, García and Montes report that the two main economic objectives in the postwar period were industrialization and food self-sufficiency (García and Montes 1989, p. 194). In Zambia, industrialization seems to have been a major objective (Jansen 1988, pp. 25–26); the fact that Zambia's chief export was a mineral and the belief that diversification of exports was desirable led the authorities to place emphasis on increasing agricultural production (Jansen 1988, p. 11). Dethier concludes that in Egypt two objectives were assigned primacy: "first, to provide adequate basic food to all groups of the population, including the poorest; and second, to make the nation self-sufficient in food commodities, except wheat" (1989, vol. 1, p. 37). He describes the objective of self-sufficiency after 1973 as "clearly an obsession" (p. 42).

In Ghana, Nkrumah's desire for industrialization was a major factor motivating discrimination against agriculture. As Killick observes:

It was in his attitudes towards agriculture and industry that Nkrumah's socialism had the clearest impact on politics. Other nationalist leaders have given low priority to agriculture and have thought of rural improvement largely in terms of mechanization, but few have so deliberately withdrawn assistance from the peasant farmers and pinned their hopes so exclusively on state farms. Similarly, almost all nationalist leaders seek to industrialize their countries but few . . . at an early stage of development begin pushing so early for the development of heavy industry [1978, p. 41].

Killick proceeds to quote Nkrumah's views of agriculture as an inferior activity:

Industry rather than agriculture is the means by which rapid improvement in Africa's living standards is possible. There are, however, imperial specialists and apologists who urge the less de-

veloped countries to concentrate on agriculture and leave industrialisation for some later time. . . . The world's economic development, however, shows that it is only with advanced industrialisation that it has been possible to raise the nutritional level of the people by raising their levels of income. [Quoted in Killick 1978, p. 46.]

Thus the prevailing views in the early postwar years explicitly or implicitly endorsed both the direct taxation of agriculture and the indirect discrimination against agriculture implicit in both exchange rate policy and in high protection for import-substituting industrial goods. In a sense, these attitudes were the "legitimizing" factor in permitting the extensive direct and indirect discrimination against agriculture that prevailed. As will be seen, a variety of economic and political factors influenced just how great discrimination would be. But it was the ideological environment that, in effect, sanctioned discrimination against agriculture in the developing countries.

Exportable Crops

Three broad motives may be distinguished as influencing the initial evolution of intervention in exportable commodities. These are (1) a desire for price stability, (2) concern with monopoly power on the international market, and (3) government revenue. Each of these will be elaborated on below. What is perhaps most significant, however, is an obvious omission: in none of the countries covered by the project was increasing production or yields a major motive in determining direct price interventions in exportable crops.⁷

Interestingly, the initial factors prompting intervention often are superseded by other motives over time, so that one cannot infer, from initial motives, how interventionist agencies evolve. For example, as already mentioned, the Cocoa Marketing Board (CMB) in Ghana was established in order to protect growers' interests. In early years, the CMB retained its profits and either invested them in ways that would assist cocoa growers or held them in liquid form against years when cocoa prices would be low. By the early 1950s, however, the profits of the CMB began being "lent" to the government to support development projects. Later still, the profits of the CMB were simply turned over to the government. By that time, cocoa policy and the objectives of the CMB were far removed from those initially envisaged: the need for government revenue and for maintaining a large bureaucracy became dominant in later years. The price received by Ghanaian farmers as a fraction of the world price fell over time, while the shares of marketing expenses of the CMB and of profits turned over to the government both increased (Bates 1983, p. 110).

Fluctuations in world prices have instigated interventions in many instances in which the intent has been to insulate the domestic economy, at least to some extent, from international price fluctuations. In the Dominican Republic, for example, export taxes on coffee and sugar were raised substantially during the 1973–74 commodity boom, but lowered again as the international price fell. However, there was a variable levy on the major export commodities, so that fluctuations in international prices were dampened domestically (see Green and Roe 1989, vol. 1, pp. 155, 124). In Colombia a differential exchange rate for coffee was established in 1951 during the Korean War commodity price boom, but it was abolished in 1955 when the price of coffee fell (García and Montes 1989, p. 47).⁸

The exercise of real or imagined monopoly power has also often been a motive for intervention for exportable commodities. This was a predominant factor in the regulation and taxation of Brazilian coffee exports. Likewise, Colombian coffee policy in recent years has been adjusted largely to conform to the decisions of the International Coffee Agreement. This motive also figured prominently in decisions regarding Turkish tobacco, Egyptian cotton, Malaysian rubber, Sri Lankan tea, and Ghanaian cocoa. In the case of sugar, U.S. import quotas at above-world prices have virtually forced government intervention in exports of that commodity. This was especially important in the Dominican Republic and the Philippines.

Finally, revenue for the government appears to have been the predominant motive for the taxation of exportable crops, even if the initial motive for intervention was based on other considerations. As already mentioned, the Ghanaian Cocoa Marketing Board started as an institution aimed at bringing price stability and exercising monopoly power in international markets; quickly, however, the revenue motive began to predominate, and it functioned more in the interests of raising revenue than in the interests of the cocoa growers. The Thai rice premium, which started because Thailand was supposed to pay war indemnities in the form of rice, rapidly became an important source of government revenue, and revenue motives governed the determination of the level of taxation of rice exports for several decades (Siamwalla and Setboonsarng 1989, pp. 29ff.).

When an export crop is also an input into a domestic processing industry, the revenue motive for intervention is supplemented by pressures to support the domestic processing industry. In Colombia, Egypt, Pakistan, and Turkey, domestically grown cotton was used as an input in the textile industry; the revenue motive was reinforced by the consideration that taxation of cotton exports would provide domestic manufacturers with a cheaper input. Textile producers naturally used their political leverage to urge continuation and increases in taxes on cotton exports.

Import-Competing Commodities

One of the surprising findings of the entire World Bank project was that countries tax export agriculture and protect import-competing agriculture, contrary to the popular wisdom that agriculture is universally discriminated against.

When commodities were exportable, considerations of monopoly power and revenue seem to have been dominant; in addition, if the exportable was a staple food commodity, consumer price considerations also influenced policy (see the next section for a discussion of policy motives regarding staple foods). When agricultural outputs were import-competing, however, motives were different. The overriding motives for intervention and changes in intervention appear to have been the desire for "food self-sufficiency" with respect to food crops and for "saving foreign exchange" with respect to other agricultural commodities.

For major import-competing food grains, the conflict between the desire for "self-sufficiency" and the desire for maintaining low consumer prices is stark. It is with import-competing commodities that the tensions between conflicting motives—low consumer prices, stimulating domestic production through adequate rewards to producers, balance of payments considerations, and budgetary constraints—appear in sharpest relief.

Usually, budgetary constraints prevented maintaining high producer and low consumer prices,⁹ and different motives won out in different countries and at different times in the same country. In Egypt, Ghana, Morocco, and Zambia, maintenance of a low consumer price appears to have been predominant much of the time, although budgetary pressures and stagnant production levels provided impetus for reform of agricultural pricing policies. By contrast, for Malaysian rice, Sri Lankan rice, and, to a lesser extent, Turkish wheat, concerns with raising producer incomes and stimulating production (partly because of concerns with balance of payments difficulties) appear to have received greater weight.

Nowhere is the difference in treatment between importables and exportables better illustrated than in Colombia. There, rice and cotton were import-competing commodities in the years immediately after the Second World War. Subsequently, the output of each increased sufficiently so that both changed to exportables over the next two decades. In each case, policy changed as the tradable status of the commodity changed. Each had earlier been protected, with producers receiving prices above border prices. In each case, once the commodity became an exportable, policy shifted. In the case of rice, the desire to maintain low prices of consumer foodstuffs became dominant; for cotton, policymakers were under pressure from domestic textile producers to keep cotton prices low (García and Montes 1989, pp. 204–6).

Food Crops

Whereas few exportables are major domestic food crops (exceptions include Thai rice, Argentine beef and wheat, Pakistani basmati rice, and Portuguese tomatoes), many basic foodstuffs are predominantly domestically produced, some with significant volumes of imports and others with only marginal imports. Especially for nonexportable food crops, the basic motives for intervention in food crops have been different from those governing exportables.

The desire for self-sufficiency in food was an important stated motive for maintaining domestic producer prices above border prices for many import-competing commodities in most countries.¹⁰ Korean food grains were heavily and increasingly protected relative to world prices after the early 1970s, and food security was the predominant motive. In the Korean case, consumer prices were maintained below producer prices, with large budgetary costs (Moon and Kang 1989, pp. 200ff.; see, also, Moon and Kang 1991, table 2-4). In Zambia and Ghana, as well, self-sufficiency was given heavy weight in discussions of food policy.

For food crops, two motives seem to have been paramount: the provision of cheap food to consumers, especially urban consumers, and stimulus to domestic production. These two goals were at least partly reconciled through the desire for self-sufficiency, already discussed under ideology. However, they clashed sharply with the revenue motive, which is discussed later in this chapter.

One other aspect of pricing policy toward food was very important: that is, the desire for price stability. It is difficult to evaluate the importance of the stability objective: almost every country author mentioned it, yet none assigned it primacy. While it is clear that a significant motive for intervention in export crops was to dampen international price fluctuations,¹¹ for food crops the effort to keep prices "low" seems to have been one-sided: sharp price increases were to be avoided, but there was little political opposition to decreases. If one evaluates what pricing policy in fact accomplished, it would appear that domestic prices of major food grains fluctuated less than did international prices for most countries and most time periods (see Schiff and Valdés, forthcoming, chap. 3).

Factors Influencing the Evolution of Intervention

Many policies toward agriculture are crop-specific. Typically, individual agencies have been established to deal with various aspects of production, the marketing of exportables, and distribution. Interventions have started at different times for different commodities, usually with a single articulated objective. Once established, however, the conflicts

among political objectives and the interaction between government regulation and market forces were responsible for much of the evolution of pricing policies. Johnson has summarized the situation well:

I have observed the developments of agricultural policies in a considerable number of countries for the past four decades. One of the most discouraging lessons . . . is that the failure of a policy measure is almost never followed by the abandonment of that measure. Instead, an effort is made to fix the measure, often in a way that exacerbates its already bad record, or a new measure is introduced designed to offset some of the worst effects of the first measure. If low farm prices inhibit output growth and the adoption of new production techniques, the simple alternative of freeing the price is seldom given more than a moment's consideration; the alternative adopted is to introduce a subsidy on some input such as fertilizer, whose benefits will go primarily to the larger and more well-to-do farmers [1987, p. 360].

Here, the focus is on the various factors that seem to be instrumental in bringing about changes in intervention. Some of these factors, such as the seizure of instruments already in place when countries became independent, are readily understandable in terms of changing circumstances. Some, such as bureaucratic interests, the reaction to difficulties in implementation and enforcement, reactions to the balance of payments constraint, and the revenue motive, are part of a political-economic process featuring the interaction of markets and political forces. Out of these factors seems to arise, over time, a tendency for increasing the scope and complexity of intervention. Other factors, such as changing political coalitions and urban-rural interests, are underlying political determinants of change.

The Seizure of Instruments for New Purposes at Independence

If one were to pinpoint the biggest single impetus for change in the purposes of existing instruments described by the authors of the country studies in the project, it would be the changes in objectives that accompanied independence. In the section on the origins of intervention, it was pointed out that colonial governments often established marketing boards and other interventions of price policy in order to benefit expatriate growers of large exportable crops and that during the Second World War new agencies had been established to handle supply in the context of rationed world shipping capacity.

With Independence, these institutions and instruments were available for newly independent political leaders to adapt to their own political purposes. In most countries, this meant shifting the

responsibilities of the marketing boards or exporting agencies to revenue-generating purposes. The extent to which this happened varied from country to country, but the pattern of discrimination against export crops grown on large estates is virtually universal. In Sri Lanka rubber and tea was implicitly taxed, while rice (grown by small producers) was protected. The same pattern prevailed in Malaysia. In both of these cases, the differential in treatment was sizable. In Ghana, where export crops were heavily taxed, the differential was so great that cocoa production actually fell. By contrast, Ivorian taxation of export crops was much more like that of Sri Lanka and Malaysia (see chapter 4 below for estimates of the magnitude of implicit and explicit taxation of agricultural export commodities). In all these instances, the agency discriminating against agriculture had earlier been established to protect the interests of those who became discriminated against.¹²

A somewhat different example of the evolution of intentions and instruments originating from colonial rule comes from the Pakistani experience. In Pakistan, as already seen, the British colonial government introduced controls over food grains during the Second World War in an effort to assure the civilian population of supplies. Although the government of Pakistan retained the control instruments that had been established by the British, it did not immediately extend them to other commodities. Until the Bhutto government in the early 1970s, government intervention in agriculture was limited to wheat prices and distribution, and agricultural inputs. In the early 1970s, however, the scope of intervention was greatly increased, as the Bhutto government nationalized trade in a number of agricultural commodities, nationalized processing plants, and became much more activist in controlling agriculture (Hamid, Nabi, and Nasim 1990, pp. 41ff.). Here again, existing instruments were molded to new purposes, albeit at a much later date.

Increases in the Scope of Commodities

The Pakistani experience just cited illustrates another point: once intervention was the accepted order of the day for a particular commodity, political pressures arose to add other commodities to the list of those the government attempted to control. In Turkey, for example, after the Agriculture Bank (and later the Soil Products Office [TMO]) had been established to intervene in the wheat market, authority for support purchases of additional crops was added: tea and tobacco in 1940, maize in 1941, and rice in 1944. By this time, however, prices of commodities were high, and procurement policies were designed to raise revenue for the government, rather than to support prices (Olgun 1991, pp. 235–37). The number of commodities in which intervention took place continued increasing until, by the late 1970s, there were twenty-

three separate commodity markets in which government agencies intervened actively (Olgun and Kasnakoğlu 1989, p. 38).

Difficulties with Implementation and Enforcement

Difficulties with enforcement have been encountered in almost all countries where intervention has been more than token, and often led to changes in the scope and instruments of intervention. As seen in chapter 2, the types of intervention can be somewhat different, depending on whether intervention is intended to control private activity or whether it is effected through parastatals and other government agencies. But regardless of their nature, the problems that arise can lead to changes in policy and policy instruments.

Sometimes, the result has been to rescind, or reduce the severity of, the measures that are most frequently evaded; in other cases, the response has been to intensify the scope or intensity of regulation. In Sri Lanka, for example, a Guaranteed Support Price (GSP) for paddy was instituted during the Second World War in order to assure that rice would be distributed in an orderly fashion despite the wartime cutoff from normal import sources. At first, procurement was voluntary, but under this scheme not enough paddy was delivered, so it became compulsory. Later, in the early 1950s, the scheme was continued. At first, procurement was to be through cooperative societies, but they were financially weak and lacked storage facilities; indeed, the majority of benefits went to large farmers, and small farmers continued selling (often below the GSP) to private traders (Fernando 1987, pp. 20–21). In the Sri Lankan case, the response was to continue the scheme, despite its imperfect coverage and the disproportionate benefits to large farmers.¹³

In other situations, however, inability to carry out a scheme as intended has led to its abandonment, or alternatively to the establishment of new regulations and even of new agencies to attempt to eliminate the problem. In the extreme, of course, this led to radical reform efforts, the subject of chapter 6.

Even without reform efforts, however, changes were numerous. Perhaps the best example is Zambia, where Jansen characterizes the evolution of agricultural pricing policies as follows: "Results have always fallen far short of aims, however, and government activity since Independence has been marked by a pattern of periodic reappraisals, followed by announcement and partial implementation of new policies, projects, and programs" (Jansen 1988, p. 38).

The Zambian experience may have been somewhat extreme, but the point is more general. Once agricultural pricing policies and marketing agencies were established, the problems that most economists would believe are inevitable quickly surfaced. When they did, the response

was usually to change the administration of policies, rather than to examine the economic viability of the policies themselves. Thus much of the history of agricultural pricing interventions is a history of changes in structure and form, without any changes in the underlying intended nature of the policy instruments. This phenomenon leads to one of the important questions about political economy: Why do politicians choose policies and instruments that fight the market, and why do they continue with these instruments even when distressed with their past performance?

Bureaucratic Interests

Another factor affecting the evolution of interventions within agriculture has been what might be called "bureaucratic interests." When agencies and bureaus have been established to carry out various policies, the officials within those agencies have often become a powerful force affecting the nature of interventions. This has had three effects: it has intensified the inertial momentum of existing interventions and tended to increase their complexity over time; it has added to pressures for further extension of interventions; and it has proved to be a force resistant to proposals for reform to remove intervention.

There is no country in the project for which the costs of intervention did not, at one or more times, serve as a major brake on agricultural pricing policy for countries attempting to maintain consumer prices below producer prices, or serve as a spur to increased taxation for agricultural export commodities.

We turn first to countries in which the suppression of prices yielded revenue. Siamwalla and Setboonsarng's analysis of Thailand leads them to conclude that rice pricing policy became less discriminatory over the years because other revenue sources increased in importance relatively and absolutely, so that pressures to increase the rice premium (the export tax) became less intense (1989, p. 57ff). Fernando attributes the taxation of tea and rubber in Sri Lanka to the need for revenue. Indeed, Sri Lanka's taxation of tea and rubber seems to have been due largely to the need to finance rice subsidies: "In order to maintain the consumer subsidy [on rice] and meet its rising cost, the government consciously adopted a heavy taxation policy in respect of the tea sector" (1987, p. 71).¹⁴ The taxation of rubber was likewise motivated in large part by revenue considerations: although the Rubber Control Department advocated lower rubber taxes (because it wanted incentives for increased rubber production), the Treasury wanted higher tax rates because of its revenue needs (Fernando 1987, pp. 101-2). For Malaysia, as well, the pricing policy for export crops—rubber and palm oil—was based largely on revenue needs (Jenkins and Lai 1989, pp. 67ff.).

For Colombia almost all finance ministers defended the taxation of coffee on the ground that they needed the revenue. García and Montes tested the importance of revenue needs by regressing the domestic coffee price on the international price and a variety of variables including the Colombian budget deficit; this latter variable turned out to be significant, with a negative sign, implying that the tax on coffee was higher as domestic budgetary pressures increased (García and Montes 1989, p. 210). In Ghana, the Cocoa Marketing Board had, as already noted, started out as an agency designed to help take advantage of Ghana's monopoly power in trade and to assist in price stabilization. By the early 1950s, however, the share of cocoa revenue going to the government had increased substantially, and, in addition, the board was making soft loans to the government with its surpluses instead of investing them in assets against years of unfavorable prices. As Stryker puts it, "This confirmed the transformation of the Board into an instrument of public finance and ended the illusion that it had an important independent role in fixing the producer price" (Stryker 1990, p. 93). The suppression of the domestic price of export crops raised revenue and thus was deemed desirable from the viewpoint of the government. The degree to which these products were taxed was influenced by a number of variables, as will be discussed in chapter 7. Counterpressures, of course, came from the growers of the crops in question and, to a certain degree, from those concerned with stimulating the output of exportable crops.

Olgun and Kasnakoğlu report that in Turkey there was a "constant struggle among the Ministry of Agriculture, the Ministry of Finance, and the Ministry of Commerce to obtain the authority to determine and recommend the agricultural support prices to the Council of Ministers" (1989, p. 184). The authors further report that bureaucrats in the agencies administering pricing policies were reputed to live well above their means, and that the costs of those agencies were often inflated out of their "duty losses," which had to be covered by the state (1989, pp. 190–91). Avillez, Finan, and Josling report that in Portugal a powerful and entrenched bureaucracy was a major factor resisting changes in agricultural policies after the Revolution (1988, p. 124). In Pakistan, too, the bureaucracy was a major interest opposing reforms of parastatal enterprises dealing with agricultural commodities (Hamid, Nabi, and Nasim 1990, p. 123).

Government Revenue as a Motive and a Constraint

It was already mentioned that government revenue was a major motive for initiating interventions. In addition, however, the revenue consequences of attempting to meet other conflicting objectives often became the impetus for changes in the system.¹⁵

In cases in which exportables were taxed, pressures to increase taxes arose from budgetary exigencies. Conversely, when efforts were made to suppress consumer prices, the budgetary costs of doing so exerted pressures to raise those prices.

The level of government expenditures was a major restraining factor in Morocco, Egypt, Turkey, and Sri Lanka for subsidization of urban consumers, and pressures on the government budget were major motives underlying changes in the degree of subsidization. Likewise, Argentina, Brazil, Colombia, Ghana, Côte d'Ivoire, Malaysia, and Sri Lanka were all deriving tax revenues from their export crops. In Sri Lanka the decisions to reduce first the "free rice" and then the rice ration were taken in response to revenue considerations. In Morocco, Turkey, and Egypt the revenue constraint led on occasion to sharp increases in consumer prices, with at least partially commensurate increases in producer prices. In Morocco in 1965, for example, the price of sugar was increased 85 percent within one year in response to a subsidy charge to the Treasury equal to one-fifth of the entire budget deficit (Tuluy and Salinger, 1989, p. 49).¹⁶ Again in Morocco, in the early 1980s, the parastatals charged with carrying out soft wheat price policy were no longer able to maintain the wedge between consumer and producer prices because of the fiscal burden that would have been involved (Tuluy and Salinger 1989, p. 62).

Hamid, Nabi, and Nasim provide a vivid illustration of the linkages between the revenue impact of policies and other objectives. They conclude that the political economy of agricultural pricing policies in Pakistan was driven by the government's attempt to "balance three major considerations . . . ; (i) maximizing foreign exchange earnings to support balance of payments, (ii) the political consideration to keep food prices low for urban consumers, and (iii) the government's own revenue needs. However, given that the three are inter-related, pursuing one soon led to problems with another, so that it has been a tight rope walk . . ." (Hamid, Nabi, and Nasim 1990, p. 128).

Several countries' governments attempted to escape the revenue constraint by permitting importers to import grains at low prices (attributable in part to overvaluation of the exchange rate) but then requiring them to purchase domestically grown grains in a fixed proportion to their imports. Importers were then required to sell grain at prices well below the prices they paid domestic producers, but above the price of imports. Until the 1980s Malaysia appears through this means to have avoided a revenue problem with regard to the pricing of rice—a major food grain, much of which was imported. The Malaysian government's objective was much more to support the paddy farmers than it was to help urban consumers, but it financed its support of producers by requiring importers to mix their low-cost imports with much more expensive, domestically produced rice. This meant that the producer

price of rice was above the consumer price, but at no cost to the government, as consumers were in effect financing the high domestic price. Morocco, a wheat importer, followed this policy with regard to that commodity. However, in the Moroccan case, subsidized consumer prices depressed the price of locally produced substitutes (hard wheat and barley), and import demand increased, so the policy was not sustainable (Tuluy and Salinger 1989, p. 62).

Urban-Rural Interests

Agricultural pricing policy has changed when there has been a significant shift in the relative political importance of rural and urban interests and/or when the disaffection of one group or the other has warranted a shift in the political balance. Perhaps the most notable example of this among the countries covered in the project is Korea. Until the early 1970s, direct Korean agricultural pricing policies were highly discriminatory to agriculture, while the real exchange rate applicable to agriculture was significantly below that pertaining to trade, and especially exports, of manufactures. In an election held in 1972, the fraction of the rural vote won by President Park dropped sharply, and it became evident that rural-urban income disparities were widening sharply. With that came rural discontent. The immediate reaction was to shift from discrimination against agriculture to discrimination in favor of agriculture. The motive was clearly political, and the result was a sharp change in policies toward agriculture in Korea (Moon and Kang 1989, p. 200). Another country that shifted policies in response to a perceived swing in political importance was Chile when President Frei came to power (Hurtado, Valdés, and Muchnik 1990, vol. 1, pp. 12–13).

The same factors were at work in Portugal, although in that country particular commodities were associated with the interests of different geographic regions. As the political imperatives called for greater attention to different regions of the country, the relative treatment of different commodities through agricultural pricing policy changed (Avillez, Finan, and Josling 1988, p. 27).

Increases in Complexity over Time

To a degree, agricultural pricing policy appears to have a life of its own. In response to some of the pressures already enumerated and also for other reasons, there appears to be a tendency for interventions, once started, to increase in scope and complexity, at least until such time as major reforms are attempted.

An illustration of this phenomenon is provided by the history of rice taxation in Thailand. Starting as a straightforward “in kind” tax in or-

der to finance indemnities from the Second World War, there quickly evolved a multiple exchange rate system that combined with a system of taxes which included an ad valorem export duty, a rice reserve requirement (which meant that exporters had to sell a certain percentage of the quantity they exported to the government at a low price), and the rice premium. In addition, there were quantitative restrictions on rice exports. Different ministries held responsibility for administering these separate measures, and it was not until the revenue from rice began falling in relative importance that the system began to be simplified (Siamwalla and Setboonsarng 1989, chap. 2).

In many countries, the desire to provide low prices to consumers and to curtail budgetary costs led to a number of complexities. In Turkey, for example, efforts to maintain low prices of bread and of a cotton cloth ("basma") widely used by low-income peasants in turn led to efforts to suppress prices of cotton and wheat. Those low prices, in turn, resulted in large losses to Sumerbank (the State Economic Enterprise manufacturing the basma) and Toprak Mahsulleri Ofisi (the State Economic Enterprise purchasing and exporting wheat) (Hasan Olgun, letter to author, 13 April 1989).

Balance of Payments Considerations

As already seen, in many countries a major stated objective of policy for import-competing food crops was "self-sufficiency," or at least a reduced dependence on imports. In some cases, self-sufficiency appears to have been a motive in its own right. This certainly seems to have been the case with the Korean protection of rice after 1973. In the Malaysian case, as already mentioned, the major motive for supporting the paddy price was the desire to help paddy farmers, who were ethnically Malaysian and an important source of political support for the government.

In most cases, however, self-sufficiency was viewed as desirable because of the foreign exchange costs of food imports. Interestingly, policies typically conflicted in these circumstances. Attempts to suppress consumer prices usually led to increased consumption beyond that which would have occurred with increasing population and rising per capita income levels. Simultaneously, producer prices were increasingly suppressed in an effort to avoid the budgetary consequences of a large differential between consumer and producer prices. The natural consequence was a large increase in imports. In most cases, the authorities then sought to encourage domestic production in order to remove pressure from the balance of payments.

Self-sufficiency in food production was certainly the major aim of Moroccan agricultural policy (Tuluy and Salinger 1989, p. 63), although

in fact the percentage of domestic consumption supplied by domestic production fell for soft wheat and maize and for cereals as a whole; only for sugar did the fraction of domestic consumption supplied locally increase (Tuluy and Salinger 1989, p. 59).

Self-sufficiency was a goal for import-competing products even for countries which were large net agricultural exporters. García and Montes point out that in Colombia, for example, achieving self-sufficiency in import-competing products was regarded as a prime goal of policy (García and Montes, 1989, p. 28). The Philippines represents an interesting case: the Philippines was a marginal importer of rice from the 1930s until the late 1960s. During that time, self-sufficiency was the stated goal of rice policy and, like many other countries, the government attempted to maintain a price that was low for consumers and high for producers. In the early 1960s the newly installed Marcos government took note of the high-yielding rice varieties and mounted a major campaign to achieve self-sufficiency. In this instance, the campaign was successful, and by the 1970s, the Philippines was a marginal rice exporter. Thereafter, pricing policy toward rice changed significantly (Intal and Power 1990, p. 184ff.).

Egypt is an interesting case in which several motives, including import substitution and self-sufficiency, a desire to subsidize consumers, and budgetary constraints all interacted. Here, wheat prices to consumers were suppressed well below border prices. Producer prices were above consumer prices but below border prices, although wheat and maize (another import substitute) were favored relative to cotton, and policymakers wanted to encourage import substitution to conserve foreign exchange. Policymakers were keenly aware, however, that raising the wheat price would lead to a reduction in foreign exchange earnings, as resources would be shifted from cotton production to wheat production. This awareness, along with budgetary considerations, apparently reduced the magnitude of the producer price increase for wheat. In the peak year, the wheat and flour subsidy represented 30 percent of government budgetary revenues, and food imports (which were predominantly cereals) accounted for US\$2,590 million in 1980, compared with total export earnings of US\$4,692 million.¹⁷

One final, possibly significant, phenomenon should be noted: there were few instances in which governments attempted to control prices to a significant degree for agricultural commodities that were for all practical purposes nontradable. Intervention applied to both import-competing and exportable commodities. An interesting question is whether the realities of markets are more evident when trade is not a possibility, or whether the possibility of trade creates opportunities for intervention that would not otherwise be there. That question, however, must be deferred to chapter 7.

Changing Political Coalitions

It has already been noted that, when the political influence of agriculture increased, pricing policy toward agriculture became less discriminatory or more favorable. Across countries, too, agriculture tended to fare better where its representatives were members of the governing coalition. This is an important point, and one to which attention will return in chapter 7.

There is an additional, somewhat related point that must be noted here: major changes in agricultural policies were most frequently made after a change in government. This was especially so when the change represented a shift in the representation of agrarian interests.

In Ghana, for example, the large landowners had opposed Nkrumah and his party before it assumed power. When Busia became president in 1969, however, his support came much more from rural interests, and the degree of discrimination against agriculture greatly diminished. When the government changed again, so, too, did the degree of intervention. In Turkey, the Justice Party (from which Demirel was prime minister) had much stronger support from the countryside than did the Republican Peoples' Party. When the ruling coalition switched from one to the other, the degree of discrimination against agriculture also changed markedly.

Summary

Interventions in agricultural pricing started for a variety of motives—a particular interest group sought protection, world prices appeared unduly high or low, there was or was thought to be monopoly power in trade, or it was hoped to provide lower consumer prices. Once in place, however, the instruments of intervention became a fact of life in the political-economic evolution of the country.

In the postwar period, the desire of the political (and nationalist) elite for modernization led them to believe that appropriate economic policies called for discrimination against agriculture both through direct taxation policies and through the protection of import-competing industrial commodities and an overvalued exchange rate maintained through quantitative controls on imports. Against that background, the preexisting instruments were generally seized upon for new purposes. Exportable crops were treated more unfavorably than were import-competing agricultural commodities, although all fared less favorably than they would have had agriculture and industry both faced equal treatment relative to international prices.

All of the conflicting motives which different groups have—low consumer prices, high producer prices, revenue, balance of payments considerations, "self-sufficiency," cheap inputs to industry, and so on—came to

bear in affecting the evolution of agricultural pricing policy. Different political groups, and different ministries within governments, weighted these various objectives differently, and political conflict ensued. This was exacerbated by the fact that very often the policies were contrary to market incentives and failed to achieve the goals stated for them.

Because of these factors, and also in reaction to changes in the international economy, agricultural pricing policies in general became more complex and more differentiated over time. In some instances, major reforms were undertaken. Those are described and analyzed in chapter 6 below. In other instances, however, the level at which interventions were applied changed over time, but the instruments were fairly stable.

A next step in the analysis must be to measure the height of intervention and its impact relative to border prices. That is the topic of chapter 4.

4

The Magnitude and Effects of Intervention

The preceding chapters discussed the types of policies that affected the prices farmers received, the prices they paid for their inputs, and the prices of the goods and services they consumed. These three sets of prices essentially determined farmers' incomes.¹ The prices farmers received for their outputs were influenced both by direct pricing policies and by policies adopted vis-à-vis the exchange rate. Prices farmers paid for their inputs were influenced by those policies, and by tariffs on importable or import-competing purchased inputs. The real value of farmers' incomes was also influenced by the prices they had to pay for the nonagricultural goods they consumed, which were in turn determined by exchange rate policy and by the extent of tariff protection and other trade barriers against import-competing goods.

It was seen that there were a large variety of policy instruments used for direct intervention: state marketing boards, export taxation, input subsidies, credit subsidies, protection against imports for import-competing crops, and the establishment of price ceilings, price floors, and guaranteed prices, to mention only some of the major ones.

In addition, macroeconomic policy was usually determined by the central authorities. Exchange rate policy as well as the level of protection—whether explicit (through tariffs) or implicit (through quantitative restrictions)—impinged very significantly on agricultural real incomes. Despite that, decisions were almost universally made with respect to these policies without significant inputs from agricultural ministries and often without systematic consideration of the consequences of those policies for agriculture.

In most countries, the policy instruments employed—and the magnitude of intervention—evolved over time. In many situations, instruments and institutions were in a constant state of flux, with each alteration failing to dispel dissatisfaction with the operation of the system, and new changes being undertaken in consequence. Insofar as agricultural policies were at issue, the focus of policymakers was on the instruments of direct intervention.

This volume is about the political economy of policies—both direct and indirect—that significantly affected agricultural incomes. Any analysis of that subject, however, must take into account the quantitative magnitudes of interventions and their effects. On the one hand, the output and other responses to interventions in turn were inputs into further political decisions, and the magnitude of intervention (and the degree to which incomes were affected and resources transferred) is of interest in relation to the political costs incurred in achieving it.

On the other hand, some important political economy puzzles arise from analysis of the magnitudes and effects of intervention. Perhaps most important, as will be seen below, is that in most countries indirect interventions through the exchange rate and the trade regime had far larger effects on agricultural prices and incomes than did direct interventions. Yet political pressures from agricultural groups arose almost exclusively with respect to direct intervention: agricultural interests appear to have been almost universally silent regarding exchange rate policies and the trade regime.

There are other puzzles, too. Before noting them, however, it is best to examine the extent to which the policy instruments employed in developing countries in fact influenced the prices farmers received and paid, and hence their incomes, for there were a great deal of political activity, resources, and rhetoric surrounding pricing policy. One significant piece of information is what was in fact achieved by that activity.

In itself, analyzing the magnitude of direct interventions that affect the pricing of agricultural inputs and outputs is an enormous task. In addition, the relationship of these direct interventions to the impact of indirect policies on agricultural pricing must be examined. These tasks were undertaken in each individual country study, and Schiff and Valdés (forthcoming) have provided a synthesis of these findings, which is available in their companion volume to this one. The reader interested in understanding the methodologies underlying estimates of impact and their effects and wanting more detail regarding the quantitative impacts of intervention is invited to consult the Schiff-Valdés volume and also the individual country studies.

In this chapter, a brief summary of some of the key quantitative findings in the Schiff-Valdés volume is presented. The reader already familiar with that volume may wish to go directly to chapter 5. The focus here is on the salient findings which are pertinent to an analysis of the political economy of agricultural pricing policies. A first section provides estimates of the quantitative magnitudes of direct and total interventions on the prices of agricultural commodities, grouped by important characteristics of the commodities. A second section then summarizes some of the key findings with regard to the impact of these interventions. A final section then points to some of the political economy puzzles that emerge from these findings.

The Magnitude of Intervention

Agricultural pricing policies in the individual countries covered in the project were so varied that it is impossible to provide summary statistics which adequately reflect the diversity within countries. Each individual crop was treated differently; different regions of the same country were subject to differential intervention for the same crop through panterritorial pricing and through deliberate policies; and even with respect to farm inputs, access to subsidized inputs differed significantly among farmers, both because of their locations and because of the size of their farms. To complicate the picture still further, the magnitude of direct intervention was usually decided on annually, if not even more frequently, and the degree of impact through the exchange rate and the trade regime varied with the restrictiveness of the latter, itself a variable which changed over time.

Nonetheless it is useful to attempt to gain an overview of the magnitude of these interventions, even at the cost of neglecting some of the complexity of intervention at various points in time. This section, therefore, first presents findings on the average extent of direct and total intervention, then some summary evidence on the variation in treatment across agricultural commodities, and, finally, evidence on the variation of intervention levels over time.

Direct and Indirect Intervention

Table 4-1 presents some salient characteristics of intervention and its effects on agricultural prices received by farmers in the various project countries. Estimates are given of the average annual percentage deviation of prices received compared with those that likely would have prevailed without intervention. The latter is based on the country authors' estimates of what prices would have been under two sets of conditions: (1) access by agricultural producers to international prices for all the goods and services they purchased and sold and (2) an exchange rate that permitted an approximate balancing of foreign exchange receipts and expenditures in the absence of protection to domestic industrial goods.² Countries are grouped by their degree of intervention. Schiff and Valdés treated Côte d'Ivoire, Ghana, and Zambia as having the greatest discrimination against agriculture. The Republic of Korea and Portugal were thought to have been, on net, the most favorable group, with mild discrimination in favor of agriculture. The numbers are averages for the periods indicated.

The first column of table 4-1 gives the estimated magnitude of indirect interventions, averaged over all commodities, while the second-to-last column gives the estimated impact of direct intervention. As can be seen, for all the countries covered, direct intervention is estimated, on average, to have depressed agricultural prices by about 8 percent, while

Table 4-1. Direct, Indirect, and Total Nominal Protection Rates for Agriculture, Selected Countries, Selected Years
(Average for period, in percent)

Country and period	Components of indirect rates			Direct ^d (4)	Total of direct and indirect ^e (5)
	Indirect ^a (1)	Degree of over-valuation ^b (2)	Tax caused by tariff ^c (3)		
<i>Group I</i>					
Côte d'Ivoire, 1960-82	-23.3	-29.6	-23.2	-25.7	-49.0
Ghana, ^f 1958-76	-32.6	-38.1	-32.4	-26.9	-59.5
Zambia, 1966-84	-29.9	-50.6	-21.4	-16.4	-46.3
Average for group	-28.6	-39.4	-25.7	-23.0	-51.6
<i>Group II</i>					
Argentina, 1960-84	-21.3	-17.7	-39.5	-17.8	-39.1
Colombia, 1960-83	-25.2	-18.8	-37.8	-4.8	-30.0
Dominican Republic, 1966-85	-21.3	-19.8	-20.8	-18.6	-39.9
Egypt, 1964-84	-19.6	-17.4	-27.5	-24.8	-44.4
Morocco, 1963-84	-17.4	-21.0	-13.4	-15.0	-32.4
Pakistan, 1960-86	-33.1	-31.0	-44.9	-6.4	-39.5
Philippines, 1960-86	-23.3	-19.3	-33.0	-4.1	-27.4
Sri Lanka, 1960-85	-31.1	-14.8	-40.1	-9.0	-40.1
Thailand, 1962-84	-15.0	-16.0	-13.9	-25.1	-40.1
Turkey, 1961-83	-37.1	-30.9	-57.4	5.3	-31.8
Average for group	-24.4	-20.7	-32.8	-12.0	-36.4
<i>Group III</i>					
Brazil, 1969-83	-18.4	-12.8	-21.4	10.1	-8.3
Chile, 1960-83	-20.4	-17.6	-37.4	-1.2	-21.6
Malaysia, 1960-83	-8.2	-7.3	-9.9	-9.4	-17.6
Average for group	-15.7	-12.6	-22.9	-0.2	-15.8
<i>Group IV</i>					
Korea, Rep. of, 1960-84	-25.8	-36.4	-26.7	39.0	13.2
Portugal, 1960-84	-1.3	-2.3	-1.0	9.0	7.7
Average for group	-13.6	-19.3	-13.9	24.0	10.4
Average for all groups	-22.5	-22.3	-27.9	-7.9	-30.3

Note: Countries are grouped by level of discrimination against agriculture, from highest to lowest.

a. The effect of exchange rate overvaluation and industrial protection on the price of agricultural commodities relative to other commodities, P_A/P_{NA} . Given by $(E_0/E^*)(P_{NA}^*/P_{NA})-1$. The figures shown on indirect intervention are not always equal to the weighted average of the degree of overvaluation and of the tax caused by the tariff because these figures are averages over the sample period. The relation holds in each year.

b. Given by E_0/E^*-1 .

c. The tax on agriculture due to industrial protection, t_{NA} . Given by $[1/(1+t_{NA})]-1$.

d. The difference between relative producer prices and border prices at the official exchange rate, $P_A/P_{NA}-P_A^*/P_{NA}^*$, after adjusting for all relevant margins and divided by the relative price in the absence of all interventions, P_A^*/P_{NA}^* . Note that this measure of direct protection is smaller (in absolute value) than the usual measure which uses P_A^*/P_{NA}^* as the denominator.

e. The sum of direct and indirect protection rates.

f. Presented only until 1976 because the border price at the farmgate level for a number of products is negative. The indirect protection rate of the period 1958-84 is -47.6.

Source: Schiff and Valdés (forthcoming, table 2-1).

indirect intervention is estimated to have lowered them by about 23 percent. The impact of indirect interventions is estimated to have been greater than that of direct interventions for each group of countries. Even for Korea and Portugal, whose direct policies on net discriminated mildly in favor of agriculture, the impact of indirect intervention is estimated to have been negative.

Estimates of the effects of two kinds of indirect intervention are shown in the second and third columns of table 4-1. The second column gives estimates of the degree of exchange rate overvaluation, which affected the prices at which producers sold their exportable goods (although direct interventions often prevented international prices from being reflected to domestic producers). The third column gives an estimate of the implicit tax on farmers' purchases of import-competing and importable goods due to their higher prices as a consequence of tariffs and other restrictions on imports. In each group of countries, indirect discrimination had a larger impact on the prices received and paid by farmers than did direct discrimination. As can also be seen, all of the project countries were judged to have had significantly overvalued exchange rates on average over the time period covered.³

Moreover, tariffs and the tariff-equivalents of quantitative restrictions on imports raised the prices (relative to the official exchange rate) of commodities farmers purchased—both for inputs in production and for consumption—relative to what the prices would have been under free trade. The third column gives the estimated percentage loss in the purchasing power of farmers as a result of various types of protection. As can be seen, protection against import-competing goods was especially high and adversely affected farmers' purchasing power most in Turkey, Sri Lanka, and Pakistan, although a number of other countries had very high protection as well. Interestingly, the two countries with the least exchange rate overvaluation—Portugal and Malaysia—also had the least protection of industrial imports and other commodities purchased by farmers.

To calculate the total indirect protection, however, it is necessary to recognize that an exchange rate adjustment would be required if tariffs and quantitative restrictions had to be removed. Therefore, the impact of indirect interventions is the percentage by which protection raises the prices of goods purchased *less* the degree of currency overvaluation. For example, if farmers in Argentina could have purchased all imports at the official exchange rate without any form of duties or other barrier to imports, they would have paid almost 40 percent less than they in fact did. However, had Argentina had free trade, an exchange rate adjustment of about 17.7 percent would have been required. Thus, the impact of the exchange rate and the trade regime taken together was to reduce the purchasing power of farmers' actual outputs of the products covered by Sturzenegger and Otrera by 21.3 percent.⁴ In addition, there

were taxes and other charges on agricultural outputs through direct interventions that reduced receipts by 17.8 percent. Consequently, the total effect on the prices received by farmers relative to prices of nonagricultural commodities was a reduction of 39.1 percent. Stated otherwise, under free trade the average farmer producing the bundle of commodities covered by Sturzenegger and Otrera would have received an income estimated to be approximately 43 percent ($1/0.691$) greater than what they actually earned.

As can be seen, the total impact of interventions on relative prices was in some countries very large. In Ghana, even before 1976, farmers received only about 40 percent of what they would have received under free trade. Stated in another way, the real incomes of farmers would have increased 2.5 times had farmers been able to buy and sell under free trade prices given the commodities they in fact produced. While Ghanaian total discrimination against agriculture was huge, Argentina, Côte d'Ivoire, the Dominican Republic, Egypt, Pakistan, Sri Lanka, Thailand, and Zambia also had total discrimination against agriculture in excess of 33 percent, implying that in all those cases, farm incomes in real terms could have been increased by more than 50 percent by removal of these interventions.⁵

Variations in Intervention among Commodity Groups

The first important finding on the magnitude of intervention from the country studies relates both to the total amount and to the importance of exchange rate policy and protection of industry in discriminating against agriculture. Before concluding that developing countries systematically discriminate against agriculture, however, it is desirable to examine the pattern of direct intervention among agricultural commodities. Table 4-2 presents some summary data.

The first two columns provide estimates of the average direct and total protection to staple commodities in the country in question. In Malaysia, for example, staple crops (dominated by rice) were directly protected by just less than 25 percent; total protection was about 15 percent. The third and fourth columns give the percentage nominal protection for import-competing agricultural commodities, and the fifth and sixth columns provide estimates for exportables. In many instances, such as Malaysia and Sri Lanka, import-competing agriculture and staple agriculture were much the same commodities. In a few, however, they were quite different: in the Philippines, coconut oil was a staple food and coconuts were an exportable crop; in Egypt and Thailand, rice is a staple food and an exportable.

For almost all countries, direct protection was less for exportables than for import-competing commodities. Protection of staples usually lay somewhere in the middle, depending on whether the staples in

question were import-competing or exportable commodities. In Ghana, for example, corn and rice were both importables and were subject to interventions equivalent to average nominal protection rates of about 43 percent. By contrast, cocoa was subject to the equivalent of an average export tax rate of almost 30 percent.

It seems clear from these data, and even more so from the underlying findings in the individual country studies, that the relative comparative advantage of agricultural commodities had a great deal to do with the extent to which they were protected or deprotected. Countries such as Chile and Korea, which apparently had a comparative disadvantage in agriculture generally, were countries which did not discriminate very much against their agriculture. By contrast, Argentina, Côte d'Ivoire, Ghana, and Thailand were all countries where there was apparently a strong comparative advantage in agriculture and in which there was significant direct taxation of agriculture. Even Sri Lanka and Malaysia, two countries that export agricultural commodities and which appear to have significantly milder discrimination against agriculture when judged by the data in table 4-1, discriminate against their export crops (albeit not so markedly) and protect their import-competing ones.⁶

There are a few pieces of evidence from individual crops which also give support to the interpretation that agriculture is treated more or less unfavorably depending on whether the commodities in question are exportable or import-competing. Perhaps the most striking confirmation comes from Colombia. In that country, rice was an import-competing good and subject to considerable direct protection in the 1950s and 1960s. Because of the encouragement to rice producers and other factors, rice production grew sufficiently so that, by the 1970s, rice became an exportable crop. Interestingly, earlier protection gave way to taxation of rice exports after that time.

To a degree, this same pattern may be observed in Korea: in the 1950s, Korea was an exporter of primary commodities, and agriculture was not significantly discriminated against. As Korean growth accelerated, agriculture was left behind, imports of agricultural commodities rose as a percentage of domestic consumption, and the net balance of trade in agricultural commodities became increasingly negative. Simultaneously, Korean direct discrimination against agriculture was changed to direct protection; since that time, direct protection has increased substantially, as Korean comparative disadvantage in agricultural production has apparently increased.

Moreover, only three of the project countries—the Dominican Republic, Egypt, and Morocco—appear to give more weight to suppressing consumer prices of food commodities than they do to protecting import-competing agriculture. If the data in table 4-2 are indicative of “revealed political preference,” it would suggest that in most of the

project countries encouraging import-competing domestic production received more weight than did providing food to urban consumers at low prices.⁷

Patterns over Time

Schiff and Valdés also analyzed the findings from the country studies regarding trends in levels of discrimination over time. Among the entire group of countries covered in the project, there was surprisingly little difference in average rates of discrimination against agriculture over the 1960–72 period and the 1976–84 period. For exportables, pricing policies were equivalent to direct taxation of 13.5 percent in the former period and 16.3 percent in the latter. For importables, the comparable figures were a positive 22.9 percent over the 1960–72 period and 18.8 percent over 1976–84. Likewise, trade and exchange rate policies were equivalent to an average tax of 21.5 percent on all agricultural commodities over the 1960–72 period and 26.8 percent over the 1976–84 period. (See Schiff and Valdés, forthcoming, table 2-3, for the underlying data on individual countries.)

These averages, however, concealed significant differences over time in individual countries. In some countries, including Chile, Egypt, Ghana, Pakistan, Sri Lanka, and Turkey, there were major policy reform efforts which substantially lowered both direct and indirect discrimination against agriculture. In Ghana, discrimination against agriculture increased over the three decades ending in the mid-1980s, and reform began at that time. Reform efforts are analyzed in chapter 6 and need not be analyzed at length here.

In some other countries, including Argentina, the Dominican Republic, Morocco, and the Philippines, there were large fluctuations in the extent of discrimination against agriculture, but no significant long-term trends, at least in the time periods covered by the country studies. In Colombia, Malaysia, and Portugal there appears to have been little variation in the policies affecting prices of agricultural commodities. These three countries stand out as being different from the other countries in the degree of stability in their policies.

The Effects of Intervention

Schiff and Valdés have extensively analyzed and synthesized the effects of the agricultural pricing policies described above on agricultural output, the government budget, foreign exchange receipts, income distribution, and other variables of interest. For purposes of analyzing the political economy of agricultural pricing policies, it is not necessary to reproduce the quantitative magnitudes of the effects

**Table 4-2. Direct And Total Nominal Protection Rates for Agricultural Products,
Selected Countries, Selected Years**
(Average for period, in percent)

<i>Country and period</i>	<i>Staples</i>		<i>Importables</i>		<i>Exportables</i>	
	<i>Direct^a</i> (1)	<i>Total^b</i> (2)	<i>Direct^a</i> (3)	<i>Total^b</i> (4)	<i>Direct^a</i> (5)	<i>Total^b</i> (6)
<i>Group I</i>						
Côte d'Ivoire, 1960-82	26.2	2.9	26.2	2.9	-28.7	-52.0
Ghana, 1958-76 ^c	46.4	13.8	42.9	10.3	-29.8	-62.4
Zambia, 1966-84	-16.4	-46.3	-16.4	-46.3	-3.1	-33.0
Average for group	18.7	-9.9	17.6	-11.0	-20.5	-49.1
<i>Group II</i>						
Argentina, 1960-84	-18.5	-39.8	n.a.	n.a.	-17.8	-39.1
Colombia, 1960-84	9.9	-15.3	14.5	-10.6	-8.5	-33.7
Dominican Republic, 1966-85	-18.3	-39.6	19.0	-2.3	-24.8	-46.1
Egypt, 1964-84	-24.4	-44.0	-5.1	-24.7	-32.8	-51.4
Morocco, 1963-84	-15.0	-32.4	-8.2	-25.6	-18.5	-35.9
Pakistan, 60-86	0.6	-32.5	-6.9	-40.0	-5.6	-38.7
Philippines, 1960-86	-4.6	-27.9	17.4	-5.9	-11.2	-34.5
Sri Lanka, 1960-85	39.0	7.9	39.0	7.9	-18.4	-49.5
Thailand, 1962-84	-27.6	-42.6	n.a.	n.a.	-25.1	-40.1
Turkey, 1961-83	13.8	-23.3	8.2	-28.9	3.6	-33.5
Average for group	-4.5	-28.9	7.8	-13.0	-15.9	-40.2

Country and period	Staples		Importables		Exportables	
	Direct ^a (1)	Total ^b (2)	Direct ^a (3)	Total ^b (4)	Direct ^a (5)	Total ^b (6)
<i>Group III</i>						
Brazil, 1969-83	20.2	1.8	20.2	1.8	5.4	-13.0
Chile, 1960-83	-1.2	-21.6	-1.2	-21.6	13.5	-6.9
Malaysia, 1960-83	23.6	15.4	23.6	15.4	-12.7	-20.9
Average for group	14.2	-1.5	14.2	-1.5	2.1	-13.6
<i>Group IV</i>						
Korea, Rep. of, 1960-84	38.4	12.6	39.0	13.2	n.a.	n.a.
Portugal, 1960-84	15.4	14.1	17.8	16.5	0.5	-0.8
Average for group	26.9	13.3	28.4	14.8	0.5	-0.8
Average for all groups	6.0	-16.5	14.4	-8.6	-12.6	-34.8

n.a. Not applicable because no products were included in that category.

Note: Countries are grouped by level of discrimination against agriculture, from highest to lowest.

a. The difference between relative producer prices and border prices at the official exchange rate, $P_A/P_{NA} - P'_A/P_{NA}$ after adjusting for all relevant margins and divided by the relative price in the absence of all interventions P^*_A/P^*_{NA} . Note that this measure of direct protection is smaller (in absolute value) than the usual measure, which uses P'_A/P_{NA} as the denominator.

b. The sum of direct and indirect protection rates.

c. Presented only until 1976 because the border price at the farmgate level for a number of products is negative.

Source: Schiff and Valdés (forthcoming, table 2-2).

of policies. All that is required is to focus on the orders of magnitude of the gains and losses accruing from these policies. For, to the extent that political economy is of concern, what is of interest is the identity of the gainers and losers and an idea of the orders of magnitude of their gains or losses.

The findings from the individual studies, and the analysis of Schiff and Valdés, suggest several negative conclusions that are important in this regard. First, the evidence does not support the proposition that the taxation of agriculture contributed to a more rapid overall growth of real gross national product (GNP), or of industry. Second, although many of the project countries' governments gained revenues as a result of their policies, the revenue gains diminished sharply over time. Third, most of the countries covered by the project did succeed in reducing domestic price fluctuations relative to those in the international market. Fourth, for most of the project countries, agricultural pricing policies resulted in significant reductions in export earnings relative to what might have been achieved. Finally, with a few exceptions, income redistribution was on the whole rather small. For many of the countries, there were in fact reductions in the incomes of poor urban households. In this section, each of these findings is briefly summarized.

A first conclusion is that agricultural pricing policies did not result in more rapid growth, either of agricultural or of nonagricultural products. Indeed, as the data in table 4-3 make clear, there is strongly suggestive evidence that greater discrimination against agriculture was associated with slower overall economic growth.

Schiff and Valdés divided the eighteen project countries into four groups, depending on their level of discrimination against agriculture. The first group, "Group I," were those discriminating most heavily against agriculture. All are Sub-Saharan African countries. Group II, containing half the project countries, was termed the "representative group" because the mean level of discrimination was so similar across the many countries and was also in the center of the observations. Groups III and IV each had only three countries, and consist of those with very low levels of discrimination and those with some protection of agriculture, respectively.⁸

The numbers in table 4-3 indicate that, over the two and a half decades from 1960 to 1985, the countries that discriminated more heavily against agriculture also on average grew more slowly than those that discriminated less heavily. Certainly, one cannot claim that more discrimination against agriculture led to more resources available for industrial development and therefore to higher overall growth.⁹

Schiff and Valdés also found that the average rate of growth of real agricultural gross domestic product (GDP) was higher, the lower the discrimination against agriculture. Thus, there is evidence to support the

Table 4-3. Discrimination against Agriculture and Real GDP Growth in Selected Countries (Grouped), 1958-86
(percent)

Country group ^a	Nominal Rate of Direct Protection ^b	Nominal Rate of Total Protection ^c	Annual Real GDP Growth
I. Highest discrimination	-23.0	-51.6	3.3
II. "Representative group"	-12.0	-36.4	5.1
III. Low discrimination	-0.1	-15.8	5.3
IV. Favorable to agriculture	-3.2	10.4	6.5

a. Groups are defined in tables 4-1 and 4-2.

b. The difference between relative producer prices and border prices at the official exchange rate, $P_A/P_{NA} - P_A^*/P_{NA}^*$, after adjusting for all relevant margins and divided by the relative price in the absence of all interventions, P_A^*/P_{NA}^* . Note that this measure of direct protection is smaller (in absolute value) than the usual measure, which uses P_A/P_{NA} as the denominator.

c. The sum of direct and indirect protection rates.

Source: Schiff and Valdés (forthcoming, table 3-1).

view that discrimination against agriculture does reduce the rate of growth of real output of that sector, as might be expected on the basis of reduced incentives.

In light of the "foreign exchange shortages" experienced by most of the project countries, it is ironic that agricultural pricing policies contributed significantly to reduced export earnings. In Argentina, it is estimated that *direct* discrimination against the agricultural commodities covered by Sturzenegger and Otrera resulted in a loss of export earnings equivalent to an average 40 percent of export receipts over the 1960-85 period. In Ghana, where the indirect discrimination was so great that there was some direct protection as a partial offset, it is estimated that losses in export earnings represented an average of 80 percent of actual exports over the 1963-85 period. In Pakistan, too, lost export earnings are estimated to have been sizable, especially after 1970: for 1970-79, export earnings were lower by 59 percent as a consequence of direct protection on the commodities covered in the project.

For countries where agricultural exports were less significant and/or where discrimination against the commodities covered by project authors was smaller, the estimated losses from discrimination were

smaller as a percentage of export earnings. In Chile, Korea after 1970, Malaysia, and Portugal, the loss in foreign exchange earnings was estimated to be less than 10 percent of total exports.

For all countries covered in the project, the *average* reduction in export earnings, as a percentage of actual earnings in those countries, was 29 percent.¹⁰ Given the severity of foreign exchange difficulties in many of the project countries, a political economy question must arise with respect to the willingness of the authorities to incur such losses while simultaneously feeling constrained in their ability to import goods and services deemed essential for major governmental activities.

To be sure, there were significant transfers out of agriculture, primarily toward the government as a revenue source. For the "representative group" of countries, Schiff and Valdés estimate that direct transfers out of agriculture averaged about 8 percent of agricultural GNP over the 1960–83 period, while total transfers out of agriculture averaged about 36 percent of GNP. There were significant variations between groups: Brazil in some years, Korea, Morocco, Pakistan, Turkey, and Zambia all had government outlays on agriculture larger than revenues attributable to agriculture. Clearly, the countries in which revenue was important were the countries in which exports of agricultural commodities were most significant (Schiff and Valdés, forthcoming, tables 7-1 to 7-4).

However, had government revenue been the only motive, it is evident that agricultural pricing policies would have been used to encourage the efficient allocation of agricultural resources among agricultural commodities, and then all commodities would have been taxed uniformly. That way, the marginal rate of transformation between agricultural commodities would have equalled the marginal rate of transformation through trade.¹¹ Moreover, one would not have observed the protection of imported foodstuffs and the taxation of export crops; as the numbers just given make clear, it would have provided far more revenue and foreign exchange to impose a uniform tax on all agricultural commodities, with less subsequent diversion of resources into inefficient import-competing crops.

Of the various possible goals of agricultural pricing policies indicated by the country authors, the one which appears to have been realized most systematically across the countries covered in the project is price stabilization. As Schiff and Valdés document (see their chapter 3), by almost any measure, there was less variability in domestic producer prices in each of the project countries than there was in the international prices of the same commodities.¹² The extent to which domestic price variability fell below international price variability was significantly greater in the 1971–84 period than it was in the 1960–70 decade, although this latter reflects more the increase in world price variability than any significant changes in policy in the countries in question. Interestingly, there was no apparent difference between import-compet-

ing and exportable commodities in the extent of reduced variance, nor was there any evident difference in governments' responses to international price increases and price reductions.

In theory, price stabilization is an economic objective that can be sought independently of efforts to raise or lower mean price levels. On the one hand, it seems reasonably clear that politicians in most of the countries covered by the project wanted to reduce domestic price variability.¹³ On the other hand, such an objective does not explain why the mean prices received by farmers were so far below international levels.

As to the impact of pricing policies on overall food consumption levels, there was considerable variation across countries. In countries where food production was protected, estimates suggest that total food consumption fell as a result of agricultural pricing policies. This was the case in Brazil, Ghana, Korea, Portugal, and Turkey. In other countries there was a net subsidy to food consumption, and total consumption was undoubtedly higher on that account: that was the case in Egypt, the Philippines (on average), Sri Lanka, Thailand, and Zambia.¹⁴

One of the frequently heard assertions about agricultural pricing policies in developing countries is that they are undertaken in order to provide better access to food for low-income consumers. Indeed, when reforms of agricultural pricing policies are proposed, the usual objection is that any reform will adversely affect the poor (see chapter 6 for an analysis of reform efforts). For that reason, it is interesting to analyze the extent to which income redistribution in fact occurred under agricultural pricing policies.

Schiff and Valdés (chap. 9) have analyzed extensively the impact of agricultural pricing policies on income distribution in the project countries. Since the majority of the poor are in rural areas, it seems evident that discrimination against agricultural commodities produced by poor peasants would have adversely affected income distribution if they were sellers of those commodities. For countries for which data were available (Brazil, Egypt, Ghana, Thailand, and Turkey), those that discriminated against agriculture did reduce incomes of the rural poor (see Schiff and Valdés, forthcoming, table 9-3). The results are striking precisely because they demonstrate how little that objective was accomplished. First, in only two countries—Egypt and Pakistan—did low-income urban consumers gain an amount equivalent to more than 10 percent of their income because of direct pricing policies. If, instead, total interventions are considered, the only two countries where the impact was in excess of 10 percent were Egypt once again, and Turkey. Interestingly, in Thailand it was estimated that upper income consumers gained more than 10 percent in income because of direct and total agricultural pricing policies.

In all the other countries covered in the project which provided estimates,¹⁵ the gains to urban consumers were less than 10 percent. In-

deed, it is estimated that because of agricultural pricing policies, low-income consumers in Brazil, Colombia, the Dominican Republic, Malaysia, Pakistan, and Portugal had incomes at least 3 percent lower than they would otherwise have had.¹⁶

Moreover, in most instances, high-income consumers are estimated to have gained as much proportionately as did low-income consumers. This is certainly true of Argentina, Egypt, and Turkey, three of the countries in which gains were recorded for low-income consumers. Indeed, the most striking aspect of the findings appears to be the uniformity of impact across urban income groups.

If agricultural pricing policies were adopted because it was hoped to redistribute food to the poor and thus improve income distribution, it must be concluded that the efforts to do so were largely unsuccessful and that, in most of the countries covered, virtually no redistribution was accomplished. In those countries where there may have been some redistribution, it was toward the urban poor and away from the rural poor rather than the urban rich. And, as seen in Schiff and Valdés, even in cases where some redistribution did occur, the cost of redistribution was enormously high.

The Puzzles for Political Economy

In almost all of the countries, there was discrimination against agriculture. The discrimination was crop-specific, often varying from region to region as well as from year to year. On the basis of outcomes, at least, it cannot be concluded that the major aim of agricultural pricing policies was to extract resources from agriculture. Had that been the objective, there would not have been protection for import-competing commodities, and little or no discrimination would have taken the form of quantitative restrictions on imports. Furthermore, "efficient resource extraction" would surely have been undertaken in ways that did not induce a shift of agricultural resources from highly productive exportables to less productive exportables and import-competing commodities.

As will be demonstrated in chapter 5, the discrimination against agriculture was often administratively chaotic, and the political authorities were constantly changing the institutions and instruments of intervention, at least in part because of their dissatisfaction with the outcomes of earlier actions. Much of this administrative difficulty was, to an economist, the natural result of the tensions between market forces and incentives that existed, on the one hand, and the governmental decrees and decisions, on the other.

However, the political economy puzzles do not stop with the overarching finding that discrimination was against export agriculture. Most observers are under the impression, and most of the country authors in-

licated that local politicians stated, that a major objective of agricultural pricing policies was to improve the nutritional status and relative income position of the poor. In fact, however, there were few countries where the urban poor benefited significantly, and fewer still where they benefited relatively more than the urban rich. Only in Egypt, among the countries for which there is quantitative evidence, and probably in Morocco, were food price interventions such that urban incomes were significantly increased on a sustained basis.

There is every reason to believe that the political leaders in virtually all the countries covered in the project genuinely wanted economic development and rising living standards for the population as a whole. Equally, the evidence is overwhelming that agricultural pricing policies did not support those objectives. Analysis of the reasons for this apparent paradox must await chapter 7.

5

Administrative Aspects of Direct Intervention

One of the themes that emerges from the analysis of the political economy of agricultural pricing policy is that market considerations impinge on the political process, while political imperatives equally influence market outcomes.

The distribution of farm inputs, the collection of the crop after harvest, delivery of the crop to market, exporting, and importing are all activities that have technical components. Crops deteriorate and rot if not properly stored; fertilizer applied too late in the season loses its value, failure to grade commodities according to internationally accepted quality standards results in lower prices, and so on.

A decision to subsidize consumer prices, or to suppress producer prices, is not self-enforcing. If consumer prices are to be kept low, either the authorities must ensure sufficient supplies to meet demand at the low price, or they must find mechanisms for ensuring that supplies are sold at that price rather than a higher, market-clearing price. Likewise, if producer prices are to be suppressed relative to border prices, it will be profitable for farmers or traders to attempt to sell through channels other than those offering the suppressed prices.

In the countries studied there were many instances in which administrative and other difficulties were encountered in attempting to carry out agricultural pricing policies. The result was that the technical requirements of an agricultural production and distribution system were not met. When there were important failures, there were sometimes significant political repercussions. For that reason, this chapter focuses on some of the administrative difficulties that arose as governments attempted either to carry out or to enforce their agricultural pricing policies.

Once a government rejects market outcomes, there are two routes it may take. On the one hand, it can leave transactions in private hands; alternatively, it may invest authority in governmental institutions to carry out transactions. In the former case, the government usually will either have to tolerate a parallel market or it will have to establish and enforce penalties for sales and/or purchases at other than the official

price. In the latter case, a government agency or agencies must be empowered to carry out the relevant functions.

Because interventions in markets inherently prevent people from doing things which are privately profitable, governments can intervene only if the economic activity is undertaken within the government sector or if mechanisms are established to monitor and enforce government-decreed prices on private traders. These mechanisms and instruments were reviewed in chapter 2 of this volume, and the effects on producers, consumers, the government budget, foreign exchange earnings, and income distribution are reviewed in Schiff and Valdés (forthcoming).

In this chapter, a different aspect of government intervention is examined. That is, what were the administrative costs, and effects, of the policies described and analyzed earlier? It has long since been recognized that costs of administration exist, in addition to the direct producer and consumer costs evaluated earlier. But little evidence is available as to the magnitude of these costs. They are inherently difficult to estimate, both because the costs of some enforcement efforts (such as the prevention and/or apprehension of smuggling) are not separately reported and because it is difficult to separate the administrative costs of pricing interventions from the costs of other activities of the relevant agencies.

Authors of the individual country studies were asked to provide in their individual reports whatever information they could on the administrative costs of pricing interventions. In this chapter, that information is reviewed with a view to ascertaining, to the extent possible, both the sorts of problems encountered in administering agricultural pricing policies and the order of magnitude of the administrative costs associated with them. Of necessity, much of the evidence from the individual country studies was impressionistic, and this chapter must therefore be impressionistic as well.

At the outset, it must be noted that this chapter analyzes a variety of administrative problems reported by country authors. In some countries, administrative problems were judged overall to be of minor importance. These included Argentina, Chile, Colombia, the Dominican Republic, the Republic of Korea, Malaysia, Portugal, and Thailand. By and large, these are the countries whose discrimination against agriculture was less extreme (and positive, in the case of Korea) and whose interventions consisted largely of border measures.

In some countries, major administrative difficulties occasionally appeared, but they do not appear to have been a driving factor in pressures for change. These countries include Brazil, Côte d'Ivoire, Egypt, Morocco, Pakistan, and Turkey. By contrast, administrative problems seem to have been highly important in the overall picture in Ghana, the Philippines, Sri Lanka, and Zambia. In this latter group of countries, many changes in the system were undertaken because it was perceived

that administrative problems were important. In the former group, by contrast, they were regarded as minor in scope.

The fact that attention here focuses on administrative problems as a political irritant or stimulus necessarily tends to paint a biased picture: some countries' civil servants appear to have been able with relatively little difficulty to administer pricing policies, whereas other countries' civil servants have apparently been unable to do so. The reader is therefore cautioned that the focus in this chapter is on administrative difficulties that appear to have blocked political attentions, and attention to these issues alone clearly overstates the extent to which difficulties were encountered in the group of countries included in the World Bank project as a whole.

It seems useful first to discuss administrative efforts when private agents are undertaking transactions subject to controls, and then to turn to the experience with public sector enterprises when they are charged with carrying out pricing policies. The first section focuses on activities associated with regulating private markets; the next section covers parastatal enterprises. Many countries, of course, relied on parastatal enterprises for carrying out some policy decisions, while regulating private markets for others. The interaction between these regulations, and the nature of parastatals, clearly affected the operation and administration of controls, as did the degree to which regulated prices diverged from border prices. A third section focuses on problems that occurred repeatedly with respect to particular forms or instruments of intervention.

The Costs of Enforcement in Private Markets

All governments intervened to regulate or control private activities in agricultural pricing and distribution. Sometimes intervention was limited to imposition of price ceilings or floors, but usually other controls were also used.

Dual Pricing Enforcement

In many instances, legislation or regulations were put into effect that established a two-tiered pricing system. In some instances, the two tiers were the controlled price and the free market price; in other instances, they were different prices at different points for the same commodity when there was no cost differential; in still other instances, there was a common price when costs indeed differed (panterritorial pricing was the most common here).

Problems of enforcement arose, except when parastatals were purchasing directly from producers at high prices, selling to consumers at low prices, and importing adequate supplies to meet demand at the

predetermined prices. This seems to have been the situation after 1969 in Korea (see Moon and Kang 1989, p. 51ff.).¹ Malaysia and Sri Lanka also protected their domestic rice producers and subsidized domestic rice consumption. As in Korea, government policy was to import a quantity sufficient to meet the difference between production and domestic demand (Jenkins and Lai 1989, p. 89ff.; Bhalla 1991, p. 204-7).

When prices were set below market, however, problems arose in the absence of additional supplies. In Turkey, for example, in the 1984-85 fiscal year, the authorities imposed a higher export tax on Cukurova cotton than on Aegean cotton (presumably because Cukurova cotton is cheaper to produce). As a consequence, almost all cotton was exported as Aegean cotton (Olgun and Kasnakoğlu 1989, p. 187).

In Thailand, the government attempted simultaneously to tax rice exports and to support producer rice prices. In this latter endeavor, it purchased rice on the open market at higher prices than would otherwise have obtained. However, it had no resources for storage, and except for occasional exports under bilateral arrangements between governments, no mechanism for disposing of the rice. The consequence was that rice millers were the major beneficiaries of the program, with rice growers little affected (Siamwalla and Setboonsarng 1989, p. 51-54).

Tax and Tariff Avoidance

When taxes are imposed on imports and exports, enterprising individuals respond by attempting to find means, legal and illegal, to avoid these taxes.

For example, when the Turkish lire was devalued in 1980, an export tax was imposed on hazelnuts, a commodity for which exports constitute a large share of output. Turkey's share of world markets is relatively high. Olgun and Kasnakoğlu report "an increasing volume of hazelnuts . . . being smuggled out of the country" since devaluation and a corresponding increase in efforts to discover and prosecute the smugglers (1989, p. 187).

In the country studies, smuggling was reported in almost all cases in which domestic prices were below border prices, although the severity of the problem varied considerably. Some smuggling of Argentina's agricultural products to border countries, notably Brazil, was reported, although it was apparently a minor problem (Sturzenegger and Otrera 1990, p. 40-41). Likewise, smuggling of rice from the Dominican Republic to Haiti was widely reported in the years from 1973-82, when the Dominican authorities prohibited rice exports in an attempt to keep the domestic consumer price below the international level (Greene and Roe 1989, vol. 1, p. 142-43).

Hamid, Nabi, and Nasim report that smuggling of wheat from Pakistan to India was "widespread" in the 1960s and first half of the 1970s;

the Indian wheat price was 50 to 75 percent above that in Pakistan. However, after the war between India and Pakistan in 1975, heavy patrolling of the border apparently sharply reduced the magnitude of smuggling (Hamid, Nabi, and Nasim 1990, p. 106). After the reforms of the early 1980s, prices in Pakistan were not significantly different from border prices, and smuggling ceased to be a problem. During the 1960s and early 1970s, the government introduced a number of measures in an effort to contain smuggling. These included: restrictions on movements of wheat between provinces; requirements that wheat be transported, when permitted, by rail and not by road; and requirements that private traders declare their stocks.

In contrast to these episodic problems, a number of countries had far more continuous difficulties. For Zambia, black markets and smuggling became almost a way of life. An International Labor Organization Mission reported in 1982 that people in urban areas could at least buy food and other consumer goods on the black market or by queuing; people in rural areas could not obtain commodities at all. Black market prices ranged up to fifteen times the legal price (Jansen 1988, p. 173–74).

It is likely, however, that smuggling was most pervasive in Ghana. There, export crops found their way across the border, where higher prices were paid than those extended by the Cocoa Marketing Board. Although there were “periodic government crackdowns on smuggling and profiteering, [they] only increased the cost of rent-seeking activity without substantially reducing its level” (Stryker 1991, p. 98). In Pakistan, cotton ginning was nationalized in part because the government suspected that cotton was being smuggled out of the country (Hamid, Nabi, and Nasim 1990, p. 122).

Enforcing Low Consumer Prices

When authorities attempt to set low prices of basic foodstuffs for consumers, they can enforce these prices if there are sufficient inventories on hand to complement domestic supplies, or if they decide to import additional quantities to meet domestic demand. These supply-augmenting mechanisms were used in a number of countries. In other cases, however, price controls were instituted and enforcement was attempted through the employment of a staff of inspectors. Greene and Roe report that in the Dominican Republic, for example, the Directorate General of Price Control, which set prices for most basic consumer commodities, had a budget of DR\$550,000 with which they hired “a corps of price inspectors whose primary responsibility was to find and cite wholesalers and retailers selling the controlled products at prices exceeding the mandated levels. . . . [I]f the price ceiling was such that excess demand for the product was created, the number of violations and the number of inspectors would increase” (1989, vol. 1, p. 143).

In Ghana, by contrast, the retail stores were owned by the Ghana National Trading Corporation (GNTC), the state trading corporation with a public monopoly on imports of a variety of foodstuffs. Retailers observed the price ceilings set by GNTC, but shortages frequently developed and black markets sprang up with higher prices. When import licenses were issuable to private traders, it became standard practice for private importers to pay 5 to 10 percent of the value of the license for the right to import. Stryker reports that this, in turn, led to "cumbersome procedures" for the issuance of licenses in an effort to ensure that they would be used for "priority" purposes, but that this did not entirely solve the problem, and "substantial inefficiencies" resulted. Ultimately, token quantities were sold through the GNTC's retail outlets, and the bulk of commodities were sold clandestinely in large quantities to individuals who could then resell on the open market (Stryker 1990, p. 104ff.).

A different sort of problem arose in Zambia, where the government, attempting to keep the cost of living low for rural residents, decreed economywide consumer prices for a variety of essential goods. The result, however, was the disappearance of goods from rural shopkeepers' shelves, as the higher transport costs resulted in larger profit margins for urban sales (Jansen 1988, p. 177-78).

Also in Zambia, the government wanted to subsidize maize meal, a commodity consumed in large quantities by middle-class urban dwellers. Because the government-decreed price for maize meal was below the price of maize, millers bought maize from the government and sold it to farmers, who in turn resold it to the National Agricultural Marketing Board (NAMBOARD) at K20 per bag more than NAMBOARD had bought it for. Farmers also sold maize to NAMBOARD which they otherwise would have consumed on the farm. The maize was then transported to urban areas, milled, and reshipped to rural areas to be sold as maize meal at a lower price than NAMBOARD had paid the farmers for the maize (Jansen 1988, p. 175)!²

In Korea, the government placed ceilings on the retail price of meat. This price was often so low that either butchers could not make a profit if they slaughtered animals and sold the meat legally or retailers could not purchase meat at a sufficiently low price and make a profit selling at the controlled price. Moon and Kang report a number of ways in which illegal mechanisms sprang up: cheaper imported beef was mislabeled and sold to consumers as domestically produced beef, weight was misrepresented; lower quality meat was mixed with higher quality meat, and a black market sprang up which permitted the evasion of taxes and auction commission fees (Moon and Kang 1989, p. 190).

In Chile, also, maintaining low consumer prices of meat presented problems. The government imposed a tariff on imports of beef, but was constantly reducing tariffs in an effort to prevent price increases. None-

theless, shortages developed, and export restrictions were imposed, with exports of most meats prohibited during the 1960s and early 1970s. Even then, shortages often developed at regulated prices. In response, meatless days were decreed, the slaughter of young animals was prohibited, and inspectors began exerting direct controls over slaughter houses and cattle markets (Hurtado, Valdés, and Muchnik 1990, vol. 1, p. 60).

Technical Problems

In addition to difficulties already described, technical problems seem to have prevented government-decreed prices from having their desired effect. As already mentioned, Korea's two-tier pricing system in general worked well, supported as it was by imported supplies. The Korean government's policy to support producer prices, however, was such as to permit very little intrayear variation in prices.³ As a result, farmers attempted to sell all their grain immediately after the support price was announced, private storage facilities were indirectly discouraged, and the burden of such large storage requirements led to a significant deterioration in the quality of rice. This, in turn, led to a difference in market price between government rice and private rice. The price differential induced some traders to purchase government rice at the controlled price and fraudulently resell it as private rice, which commanded a 20 to 30 percent quality premium.⁴ Another sort of problem arose in Turkey: until 1980, support prices for crops were not announced until the harvest season itself (Olgun 1991, p. 237). The result was that these prices had little impact on farmers' incentives, except insofar as farmers could anticipate what support prices would be.

In Brazil, the government announced support prices at planting time; when the harvest was good, it had difficulty locating adequate storage. Brandão and Carvalho note that there was little storage capacity built by the private sector, because it was expensive and because it was anticipated that the government would carry stocks (1991b, vol. 1, p. 73).

These difficulties were repeated in a number of other countries. Fernando's account (1987) documents changes made in the 1950s as the Sri Lankan government attempted to correct perceived deficiencies in its administration of pricing and procurement policies. In Turkey, difficulties arose regarding a number of issues, including differentials in prices for quality differences.

False Invoicing

Another problem concerned "paper traders" or others who profited from an artificial margin created by government pricing policy. In the Philippines, for example, the sugar marketing margin charged by the

National Sugar Trading Company (NASUTRA) was higher than the margin had been earlier when the trade was in private hands. Simultaneously, industrial users and wholesalers were prohibited from buying directly from private refineries. They thus had to purchase from "paper traders," whose function was little more than to collect the right to the sugar from private refineries and pass it on to the users and wholesalers (Intal and Power 1990, p. 193–94).

Underinvoicing of agricultural exports in Argentina, to avoid paying export taxes, was reported, although it was probably not quantitatively large except during years when the gap between the official and the black market exchange rate was very large (Sturzenegger and Otrera 1990, p. 40–41).

In Brazil, efforts in the 1950s to encourage self-sufficiency in wheat were based on policies that required flour millers to purchase domestic wheat, which was expensive, in order to obtain the right to import foreign wheat, which was cheaper. Because wheat was produced in one region, whereas flour mills were scattered all over the country, the government permitted trade in quotas between flour mills. As a consequence of the dual price system for wheat, "paper wheat" (with receipts from growers for purchases which had not been made except on paper) and "wheat walk" grew to large proportions. In response, the government nationalized marketing of both domestic and imported wheat (Brandão and Carvalho 1987, p. 129, 140).⁵

The Experience with Parastatals

As already mentioned, many problems were common to the enforcement of regulations with private traders and to parastatal enterprises. The experience in the countries covered in the project suggests, however, that difficulties in carrying out pricing decisions are not necessarily less when parastatals or other public bodies are empowered to carry them out than they are when private agents operate under government controls. In this section, we review some of the problems that arose, noting first, however, that the problems of underinvoicing, the emergence of smuggling and black markets, and other phenomena discussed above (in the section on tax and tariff avoidance) appear to have been as prevalent in countries where parastatals carried out pricing policies as in countries in which private agents did so under government regulation.

Pressures on Parastatals

Once established, parastatal enterprises were often assigned a multitude of tasks, often with jurisdictions and responsibilities overlapping

those of other agencies and with political pressures and responsibilities that were absent from private enterprises. Pressures to expand employment, to appoint politically well-connected persons, to locate in places other than those that would have been warranted on grounds of economic efficiency, and to purchase inputs from politically connected sources were frequent. Managers were often politicians with little experience or background in managing an ongoing enterprise. In many countries, the history of agricultural pricing policy is a history of the formation of organizations and then their reorganization, the merging of some and the establishment of others, all because of dissatisfaction with the outcomes occurring under parastatals. This sort of phenomenon was pronounced in Ghana, Zambia, the Philippines, and Sri Lanka, as parastatals were formed, merged, reorganized, and recombined. In the Philippines, for example, Intal and Power report:

Although it is difficult to quantify the expansion of the bureaucracy vis-à-vis total government expenditure, that growth took place is evident in the proliferation of new agricultural institutions during the 1970s. A Philippine Coconut Authority and other crop-specific "authorities" were created—all with different pay scales and boundaries of responsibility. Consequently, the function of the Ministry of Agriculture and Food became unclear. Organizational dysfunction may have reached its zenith when the head of a new National Food Authority became a member of the cabinet, alongside the minister of agriculture and food [1991, p. 165].

In many countries, the history of pricing policy is also the history of the proliferation of government institutions. In one sense, the cost of these agencies and their excesses may not be attributable to agricultural pricing policies: the political process may need jobs. It is possible that in the absence of parastatal agencies for agriculture, other equally costly—or even more costly—means of expanding political appointments might have been found. To assess the question of how much of this might have occurred, however, is well beyond the scope of this volume.

In this section, instead, the focus is on the sorts of difficulties that were reported at points of time within countries. These capture only a part of the problems perceived by politicians with parastatal enterprises. To gather more of the story, however, would require a complete recapitulation of the histories of parastatals in many of the project countries. For that task, the reader is referred to the individual country studies.

Staffing and Budgetary Costs

Country authors were asked to examine the staffing and budgetary costs of parastatal enterprises, and their tendency to grow over time. In many instances systematic data were simply not available. In a few

cases, however, it was possible to obtain estimates of the staffing and other costs of these institutions.

One indicator of costs is the number of employees of parastatal and other institutions associated with the procurement, distribution, and enforcement of agricultural pricing policies. Several researchers were able to obtain such estimates for some institutions in their countries.

For Turkey, the number of employees in procuring agencies rose from 7,802 in 1960 to 38,050 in 1980, and fell thereafter.⁶ Olgun and Kanaoğlu note that employment growth did not correspond to growth in the volume of procurements and that there were 12,514 research and extension workers in Turkey in 1984 (1989, p. 189).

In Pakistan, by contrast, Hamid, Nabi, and Nasim believe that the direct administrative costs of the system were not large. The procurement and rationing agencies combined employed 12,000 employees in the mid-1980s, out of over a million civil servants at that time. The authors regarded the budgetary costs as low, equalling about 25 percent of the expenditure on agricultural extension and research (Hamid, Nabi, and Nasim 1990, p. 105).

Ghana's costs appear to have been much higher. Stryker reports that the Produce Buying Division of the Cocoa Marketing Board (CMB) was granted a monopoly on cocoa purchases in 1977. It had 4,300 buying centers, each with four, full-time, year-round employees. "By 1982, the Cocoa Marketing Board and its subsidiaries were paying the salaries of 105,000 workers, 20,000 of which were later determined to have died or to be no longer working for the board" (Stryker 1990, p. 99). As a result of this and an overvalued exchange rate, the costs of the CMB exceeded the f.o.b. value of cocoa sales by 1981–82. Even after the 1985–86 devaluation, CMB costs were still equal to 28 percent of the total value of cocoa sales. For rice and maize, high operating costs resulted in a need for large government subsidies, and, even then, support price operations became increasingly ineffective (Stryker 1990, p. 108ff.).

In Egypt the administration of subsidized food programs appears to have been quite costly. Dethier reports that there were nearly 16,000 workers employed in the distribution section of the Ministry of Supply (the agency responsible for distribution) in Cairo alone. There were also forty-two public companies—wholesale, retail, storage silos, mills, bakeries, and so on—under the Ministry of Supply (Dethier, 1989, vol. 1, p. 72).

The tendency for employment in parastatals to proliferate is demonstrated by the Philippine experience. There, employment in the National Grain Authority (NGA) grew from 2,000 in 1967 to 14,000 in 1984. Simultaneously, the agency was initiated to intervene in the rice and corn markets. It expanded to include sorghum, soybeans, and wheat (Intal and Power 1990, p. 124–25).

In addition to problems with growing administrative costs directly, there seems to have been a strong tendency for budgetary costs to

mushroom under parastatals. The Ghanaian case has already been mentioned. Costs of fertilizer subsidies alone amounted to 25 percent of the current budget for all agricultural expenditures by 1976; the costs of the CMB rose so much that the percentage of export price received by farmers fell from 81 percent in 1964–65 to 36 percent in 1969–70 (when world prices were about the same) (Stryker 1990, p. 102). In Turkey, fertilizer subsidies started as 1.8 percent of gross national agricultural product (GNAP) in 1976; by 1978 they were 3.9 percent of GNAP; and by 1980, 4.0 percent (Olgun and Kasnakoglu 1989, p. 25).

Problems with Effectiveness

Technical problems arose even when governments wanted to purchase commodities at above-market prices. Even when a parastatal enterprise has no budget constraint, it must still have the means to purchase, transport, and store agricultural commodities if it is to be effective. These capabilities were often insufficient to the task at hand and were often impaired still further by budgetary difficulties. Some examples will illustrate.

In Sri Lanka the government decreed support prices for paddy and declared that all villages should establish cooperatives which could buy paddy from farmers at the support price and be reimbursed by the government. Snodgrass (1966, p. 163) reports that an "important question . . . is the extent to which the system has functioned as planned. The scheme lends itself to fraud, and an astonishing variety of abuses have been uncovered." In many cases enterprising middlemen with cash in hand and a means of transporting the crop would show up at harvest time and make a spot offer for rice, at a price of, for example, Rs8 contrasted with a legal buying price under the guaranteed support price of Rs12. Farmers needing cash would accept the offer and sell on the spot, despite the disparity in pricing, because of their need for liquidity. The cooperative societies which were supposed to be established in the villages to buy the crop were not always established; in addition, there were often no storage facilities belonging to the cooperative society, so that it could not immediately accept the crop. Even if it could, it had no means of getting the crop from the farmer's farm to the storage area, and poor farmers did not even own bullock carts, whereas private middlemen could arrange transportation.⁷ Thus, problems of putting together a storage-transport network were so severe in Sri Lanka so that they prevented the support price from being effective in large parts of the country. The country studies do not provide enough evidence, but are certainly suggestive that improved infrastructure might have been more beneficial to farmers than were support prices.

Turkey also encountered a variety of technical problems. Olgun and Kasnakoglu report instances in which part of a crop purchased by a

state agency had to be burned because it could not otherwise be disposed of (1989, p. 66).

Another major difficulty affecting operations of government-owned enterprises (and, to a lesser degree, price support schemes generally) arose from considerations of quality. Governments seem to have been caught in a dilemma. On the one hand, they could set a uniform price for a commodity without regard to quality differentials. If they did so, peasants quickly abandoned cultivation practices which produced superior quality or else sold their high-quality output through channels other than government buyers. As a result, the proportion of processed output that was of inferior quality increased. On the other hand, if governments established price scales based on quality differentials, a different problem arose: inspectors, or other officials, had to negotiate with growers as to the quality of their product. In these cases, there was little to ensure that quality grades would reflect differentials in crops.

In Turkey, for example, the Soil Products Office (TMO) attempted to enforce quality standards. Olgun reports that for wheat purchases alone, the list of technical specifications sent to wheat buyers was fourteen pages in length! TEKEL, the state tobacco monopoly, began with a uniform price support, which was high relative to market prices. In response to this, marginal land was brought into cultivation, which reduced the average quality of the Turkish crop and the average unit price received from exports. Indeed, some tobacco had to be exported at distress prices, and some was actually burned (Olgun 1991, p. 257). It was then decided that tobacco inspectors would have to determine the quality of each farmer's output. Olgun reports that tobacco inspectors were "treated like royalty" wherever they went, and that the examination scores required to enter a school for tobacco inspectors exceeded that for any other university program in Turkey! On average, the price paid for tobacco was very close to the price set for the highest quality product (Olgun and Kasnakoğlu 1989, p. 80). The procurement of tea leaves posed a similar problem. Olgun and Kasnakoğlu report that although world standards dictate that no more than two and a half leaves should be picked per stem, the Turkish procurement agency purchased an *average* of three and a half leaves per stem. As a result, tea was processed in Turkey and stockpiled, since it could not be exported (Olgun and Kasnakoğlu 1989, p. 186).

In Malaysia, farmers were guaranteed a single price for good, clean, dry paddy delivered to the mill. At first, this price was effective for all paddy, with detrimental consequences for the quality of the crop. Subsequently, deductions were made for moisture content, and for the presence of dirt, foreign matter, and immature grains. However, this encouraged farmers to grow low-quality varieties, and when they did grow high-quality rice, they sold it to private traders. The government tried several approaches to ameliorating this problem, of which

the most successful was a grading system based on grain length, which was introduced in 1974 (Lim 1974, p. 242–43).

In Pakistan quality control was a major problem and source of corruption for the Rice Export Corporation. Food inspectors at procurement stations were supposed to ascertain that rice met standards—that it had an acceptable fraction of broken rice, an absence of inferior varieties, and a low fraction of stones and other foreign matter. Hamid, Nabi, and Nasim report, however, that “(in collusion with the superior officers), many inspectors allowed greater contamination in exchange for bribes. This resulted in lower prices for Pakistani rice in the international market” (1991, p. 142–43).

In Chile, price controls were imposed on wheat, flour, and flour products, including pastas and bread. This immediately led to quality problems, and the government had simultaneously to impose regulations concerning the size of bread loaf and its quality. Controls became very “cumbersome” (Hurtado, Valdés, and Muchnik 1990, vol. 1, p. 57).

Administrative Issues

Weak management and corruption were reported in a number of instances. It is difficult to separate these problems analytically, as weak management was often accompanied by corruption, which in turn resulted in efforts to contain it. As reported above, this, in turn, led to the establishment of new agencies or the reorganization of existing ones, which in turn led to other difficulties.

One typical example of this chain was in Ghana. By 1981–82, there was a backlog of unshipped cocoa equal to half the harvest of that season, much of which eventually spoiled. This backlog was the undesired result of “weak management” and difficulties in arranging transportation. Moreover, farmers had been issued IOUs instead of cash, because the agency was short of credit. “Corruption, embezzlement, and diversion of cash were so common that in 1982–83 the authorities began paying farmers by check and established fourteen banks in the cocoa-growing areas for this purpose. This system posed severe problems because many farmers had to travel long distances to cash their checks” (Stryker 1991, p. 96).

Hamid, Nabi, and Nasim believe that in Pakistan “the more important costs [of the procurement/rationing system] were those entailed in the subsidy and the corruption that the procurement system had engendered. . . . According to a recent study, only 20 percent of the subsidized wheat supplied by the government to the flour mills was actually purchased by consumers from the ration shops. . . . The benefit received by consumers was only Rs250 million in 1985–86. However, the cost of the subsidy to the government was Rs1,800 million. . . . This [loss] is equivalent to two and a

half times the annual expenditure on research and extension undertaken by the government" (Hamid, Nabi, and Nasim 1991, p. 139).

For sugar, whose price was controlled below market in Pakistan, there were problems of corruption as well. Enforcement of the low sugar price was intended to be through the issuance of ration cards and rationing. However, a number of false ration cards were issued, and ration shop owners were thus able to divert a part of their quota to the open market. Hamid, Nabi, and Nasim report that this diversion probably constituted about 20 percent of total rationed supply (1990, p. 110).

"Administrative weakness," without corruption necessarily accompanying it, was reported in a number of countries. In general, the term appears to refer to an inability to effect intended actions. This may stem from a number of causes.

Bienen concludes that, although top officers of Nigerian institutions administering agricultural policy were often very able people, these institutions were often unable to locate qualified people further down in the organization. He further comments on the lack of coordination: in the 1970s, an effort was made to correct the problem by reorganizing and centralizing the institutions dealing with agriculture, but these measures were ineffective. To obtain some basic information on the sector, the authorities did conduct an agricultural census. However, "processing was delayed and left much to be desired" (Bienen 1986, p. 15). Another example of administrative problems arose with the extension service: the government decided to introduce high-yielding varieties of seed and practices that could have led to the green revolution, but the extension service had atrophied to a point where it could not reach small farmers and could service only large farmers, farming 100 hectares or more, who were mechanized and used specialized inputs.

In Ghana, there were supposed to be mechanisms to provide a minimum guaranteed price for maize. Lack of storage facilities prevented the guaranteed minimum price for maize from being effective (Stryker 1990, p. 109). Problems arose as well with respect to subsidized inputs. As Stryker reports,

A major problem was inadequate supplies of fertilizer, imported by the Ghana National Procurement Agency (GNPA) and distributed by the Ministry of Agriculture. During the 1960s and early 1970s the problem was largely one of the GNPA's inability to gain access to adequate foreign exchange. As foreign aid was tied increasingly to fertilizer imports, however, those imports rose from 9980 tons in 1971 to 69,630 tons in 1976. Utilization increased less rapidly, however. . . . Small farmers, particularly, obtained timely access to fertilizer with difficulty because of late arrivals, complex administrative procedures, and heavy competition from large farmers at the subsidized prices. There was also some smuggling

of fertilizer across the borders. As a result, the village market price paid by small farmers for fertilizer in March 1977 was NC9.00 per bag, while the official price was NC2.00.

By 1984 the situation was no better, with shipments arriving too late for planting . . . slow mobilization of transport to inland distribution points . . . and indecision on pricing under the government's new desubsidization policy [1990, pp. 114–15].

The same sorts of problems plagued Zambia's Agricultural Rural Marketing Board. Jansen reports that the institution was "understaffed . . . with too many responsibilities. . . . Its sphere of activity was not even carefully defined" (1988, p. 157). There were problems of coordination with other agencies and of enforcing financial controls. In the Zambian case, these difficulties were so acute that the agency was closed in 1969, and a successor agency, NAMBOARD, replaced it and a sister agency in its functions. NAMBOARD, however, appears to have performed no better. Jansen concludes: "During the 1970s, NAMBOARD's operations clearly expanded beyond its management capabilities. The general perception that NAMBOARD is an inefficient, poorly run entity continues to the present, despite frequent reorganizations and management changes" (1988, p. 161).

A number of efforts at price intervention failed for budgetary reasons. In Thailand, for example, a "cess and subsidy" scheme was established in 1961 under which a tax was to be collected on the production of centrifugal sugar. The proceeds were to be collected by a Sugar Industrial Aid Fund (SIAF) and then primarily to finance an export subsidy. However, the volume of sugar production and exports rose, and the SIAF became insolvent; the cess and subsidy scheme was legally terminated in 1966 (Siamwalla and Setboonsarng 1989, p. 75). In the 1950s, the Brazilian government decided to impose a specific tax on cocoa exports in order to finance investments in the cocoa industry; these facilities financed by these funds were to be charged a nominal interest rate of 8 percent. With double-digit inflation, it was not long before the fund was bankrupt (Brandão and Carvalho 1991b, vol. 1, p. 81).

In many cases, where plans failed for lack of financing, alternative schemes were often put in place. In Thailand, another Sugar Act was passed in 1971.

Problems Associated with Particular Types of Intervention

The issues discussed above arose with regard to many types of interventions in many commodity and input markets in many countries. In addition to those sorts of phenomena, a few issues arose that appear to have been specific to the market in which the intervention occurred. In this section, these cases are reviewed.

Credit Subsidization

Perhaps the most frequently encountered difficulties specific to a particular type of intervention surrounded efforts to subsidize rural credit. In the Philippines efforts to subsidize credit "fizzled out" as repayment rates fell sharply (Intal and Power 1990, p. 199). In the Dominican Republic large arrears on subsidized credit loans from the Agriculture Bank (BAGRICOLA) accumulated and had to be transferred to the Central Bank after the debts were forgiven by presidential decree in 1984 (Greene and Roe 1989, vol. 1, p. 51). Arrears appear to have been significant problems in a number of countries.

In addition, other problems arose. In Brazil, conflicts arose between the Ministry of Finance (which wanted lower minimum prices because that would mean less subsidized credit and more monetary control) and the Ministry of Agriculture, which wanted higher minimum prices. Moreover, there is reason to believe that subsidized agricultural credit was used to finance the government through the financial market, as people used the credit to purchase government bonds (see Brandão and Carvalho 1991b, p. 53–54). Carvalho suggests that this may explain why arrears in credit were not a problem in Brazil.⁸

Consumption Subsidies, Dual Pricing Systems, and Input Subsidies

Frequently encountered was the resale of subsidized inputs or consumption goods. When farmers were eligible for input subsidies, or consumers eligible for purchase of cheap food, resale of the commodities to the open market often occurred. In some cases, resale either did not occur or was of sufficiently small scale as to be overlooked by the authorities; in many instances, however, it was perceived to constitute an undermining of the system and, as such, was viewed as detrimental. In Malaysia, for example, farmers were apparently reselling fertilizer that they had received without charge on the open market (Jenkins and Lai 1989, p. 98). In Thailand, the government required exporters to sell a fraction of their exports to the Ministry of Commerce at a price significantly lower than the export price. Rice was delivered to the ministry, which in turn shipped it out to retail outlets. When the rice was of acceptable quality, consumers bought it at the lower consumer price and resold it on the open market. When the rice was not deemed of acceptable quality, retailers delivered it back to the Ministry of Commerce, and it ended up being exported.⁹

In Zambia, NAMBOARD, the state marketing board, was supposed to sell fertilizer at prices that were subsidized by as much as 50 percent, contrasted with border prices. The price at which it was to sell was established by the Minister of Agriculture. When the subsidized price was sufficiently low, large quantities of fertilizer were smuggled out of

the country. NAMBOARD was criticized for having failed accurately to estimate domestic demand, although the smuggling problem made that difficult. The problem assumed such large proportions that the large commercial farmers, presumably the biggest beneficiary of subsidies, argued for its removal (Jansen 1988, p. 163).

In Malaysia the government subsidized fertilizers in an effort to encourage increased fertilizer inputs by producers. The program was so successful that by 1966, five years after the program was introduced, only one-third of the fertilizer demanded was available, and farmers received only enough subsidized fertilizer to cultivate two hectares. In the early 1970s, the fertilizer subsidy program was replaced with one for credit subsidization, since producers had accepted the use of fertilizers so wholeheartedly (Jenkins and Lai 1989, p. 95ff.).¹⁰ Later on, a program to provide free fertilizer for farms of less than 2.4 hectares was introduced. Many larger farms were then subdivided into units small enough to benefit from the scheme (Jenkins and Lai 1989, p. 97).

Conclusions

As mentioned in the introduction to this chapter, administrative problems were of greater importance in some countries than in others. In general, there appears to have been a positive correlation between the extent to which governments were attempting to intervene and the extent to which difficulties in administration were encountered. For countries where the measures of intervention show smaller departures of domestic prices from border or market prices, the magnitude of problems of administration and enforcement appears to have been somewhat smaller.

In countries where the attempted interventions were large and carried out by parastatal enterprises, problems of sufficient magnitude arose so that parastatal enterprises and their functioning often became significant items on the political agenda. It is clear that problems of implementation posed major challenges in many cases and often undercut the pricing policies that had been decided upon. When parastatal enterprises were involved, these problems revolved around the necessity for buying, selling, transporting, and storing commodities in ways that were consistent with predetermined prices. Whether these problems and the mounting costs of parastatal enterprises were attributable to something inherent in agricultural pricing policies or whether, instead, they were problems that would have arisen in any government undertaking because of the pressures governments face must remain an open question.

In chapter 6 the experience of countries with reform efforts in agricultural pricing is considered. In some countries, these efforts included a significant portion directed toward reorganizing the administration

of pricing policies, and that issue is further dealt with there. In chapter 7 the political economy of agricultural price policies is considered, including the pressures that both lead to the formation of parastatals and result in the sorts of difficulties described above.

6

The Political Economy of Reform Efforts

Thus far, attention has centered on the nature, magnitude, and effects of different countries' agricultural pricing policies. In the concluding chapter, it will be argued that many of these interventions have been internally inconsistent, and high-cost relative to what has been achieved.

Before doing so, however, there is one more aspect of experience with agricultural pricing policies that requires discussion. That is, in a number of the countries covered by the project, policies have been significantly altered. Some of these policy reforms have been short-lived, with policies quickly returning to their pre-reform status. Others, however, have been far-reaching in design and have resulted in long-lasting changes in the degree of discrimination against agriculture.

Experience with reforms is of interest for a number of reasons. First, there may be lessons to be learned about how reforms may be less or more costly in their design and implementation. Second, an understanding of the circumstances surrounding reform efforts may permit an assessment of alternative reform packages with regard to their probability for successful and sustained implementation. Third, an examination of the motives for reform in itself may increase understanding of the political economy of agricultural pricing policies. Fourth and finally, since reforms represent episodes in which significant changes occur, experience with them can shed considerable light on the effects of pricing policies and the gainers and losers from them.

A necessary first task is to define what is or is not a reform effort. That is undertaken in the first section of this chapter. A next step is to survey the experience of the individual countries, which is the subject of the second section. Here, systematic quantification is not possible, so individual reforms are analyzed in turn. The third section examines possible common patterns that may be inferred from the individual countries' experiences, including an analysis of the factors that appear to increase the likelihood of undertaking a reform effort, and also the influences most conducive to sustained reforms.

What Is a Reform Effort?

An interesting problem arises with attempting to define what is, and what is not, a reform effort. On the one hand, governments announce programs of reform—of agricultural pricing and other areas of policy as well—which most observers would classify as, at best, minor changes in a regime. In some instances measures taken are so weak that the analyst is led to wonder whether the authorities thought they were making *any* change. In Zambia, for example, changes were almost continuously made in the organization of the institutions deciding on and implementing agricultural policies, but none of these changes has been more than a minor one in incentives at the margin, and Jansen reports significant opposition within the Zambian government to any reform effort (1988, pp. 198ff.). Likewise, there have been a number of instances (see, for example, the discussion of Pakistan below) in which discrimination against agriculture has been significantly reduced over a period of several years without a program of reform being announced.

Because of these phenomena, to use official announcements as a basis for determining when reforms were undertaken makes no sense. One might, therefore, decide to use available data to ascertain when reforms had occurred—data such as the length of time for which incentives were altered and the magnitude of the alteration. The difficulty with this alternative, of course, is that it would overlook failed reform efforts, including those which were intended but not announced.¹

Inevitably, therefore, a degree of judgment must be used in deciding what is a reform and what is tinkering at the margin with an existing regime. Clearly, when the authorities announce a reform effort, analysts need to consider the announcement, its context, and subsequent events in deciding whether there was any genuine intent to reform the regime, and the analysts should give the benefit of the doubt to announcements.²

That is what was done by country authors in the project. They were asked to report reform episodes for their countries, and in this chapter all the episodes reported by country authors are covered. In addition, all cases of significant changes in the extent of discrimination against agriculture are discussed. As will be seen, most reforms were changes of a type that reduced the magnitude of discrimination against agriculture. In a few cases, however, reforms were undertaken which significantly increased it. Both are reported on here.

Reform Efforts of Individual Countries

Detailed descriptions of individual reform episodes can be obtained in the individual country volumes. Here, however, it is useful to provide

a thumbnail sketch of the salient characteristics of each reform episode, as noted by the individual country authors, with a view to analyzing the similarities and differences between the episodes.

First, it should be noted that some countries appear to have maintained their policies over the entire period covered by the country studies. Not only were there no reform efforts, but country authors reported no significant groups urging reform. The hallmark of agricultural pricing policies and their impact in these countries was overall stability, although this was sometimes characterized by continuous ad hoc interventions. Of the countries studied in the project, Malaysia appears to have had the greatest stability of agricultural pricing policies: Jenkins and Lai report no effort of any kind to bring about a significant change in policies during the period covered. Thailand is probably a close second: there was no significant reform effort, although a gradual reduction in the extent of direct discrimination against agriculture took place starting in the 1970s. Colombia, too, appears to have had fairly stable policies; insofar as there were changes, these were brought about by changes in a particular commodity's situation. For example, when cotton and rice production expanded enough to switch from being import substitutes to being exports, pricing policy switched from preferential treatment to discrimination against each crop. Overall, however, there were no regime changes in Colombia. Côte d'Ivoire also appears to have had no major policy shifts: insofar as discrimination against agriculture changed significantly, it was a consequence of changes in macroeconomic policy, especially changes in the real exchange rate. Finally, in Brazil and Zambia, there appear to have been no major reform efforts.³ In the remainder of this section, therefore, the experience of the thirteen countries in which the authors judged that a reform effort had taken place is reviewed.

Argentina

Sturzenegger and Otrera consider the period 1976–78 to be one of attempted reform in Argentina. When a new military government came to power in 1976, the rate of inflation was in excess of 500 percent annually, and the economics team announced a series of reforms. These included a large initial realignment of the exchange rate and a sharp reduction in taxes on agricultural exports. As a consequence, direct taxes on agriculture fell from 64 percent (wheat) and 36 percent (meat) in 1975 to 13 percent (wheat) and 22 percent (meat) by 1977 (Sturzenegger and Otrera 1990, table 10). Similar drops in export taxes were effected for other significant export commodities.

The intent of the economics authorities in the new government was to undertake a far-reaching reform of the trade and payments regime.

By 1978 they had announced a program to reduce all tariffs (which would further have reduced discrimination against agriculture) over five years. However, although inflation had fallen to 150 percent annually (contrasted with more than 500 percent two years earlier), it remained stubbornly at that level. The authorities therefore decided to "prefix" the exchange rate, in the expectation that tight monetary policy and liberalized imports would rapidly induce a decline in the inflation rate to world levels. In the short-term, this macroeconomic policy stance resulted in sizable capital inflows which financed imports,⁴ but inflation did not abate as expected, and by the early 1980s the exchange rate was more overvalued, by Sturzenegger and Otrera's estimates, than it had been in 1976. Indeed, the reduction in direct taxation of agriculture was more than offset by an increase in indirect taxation through the overvaluation of the exchange rate. Sturzenegger and Otrera demonstrate that the failure of the reform effort was the result of the failure of the macroeconomic reforms: direct taxation of agriculture had indeed been reduced (1990, p. 39 and tables 10 and 10a).

Chile

Hurtado, Valdés, and Muchnik identify three periods of reform in Chile: 1964–70, when the Frei regime was attempting to improve rural incomes relative to urban incomes through land reform and changed prices for producers; 1970–73, when the Allende regime was increasing discrimination against agricultural producers; and the period after 1974, when the government's policies were designed to reduce discrimination against agriculture. In the first two, policy instruments were basically unchanged, but the instruments were applied at different levels. In the third, the state agency's monopoly on international trade in grains was abolished, input subsidies were eliminated, and export quotas and prohibitions were abolished. However, other instruments of policy remained in place.

Chilean intervention was largely crop-specific and was the outcome of conflicting considerations: the desire to control inflation, the state of the trade regime (influenced both by the extent of domestic macroeconomic imbalance and by copper prices), and pressures from urban workers for real-wage increases. Discrimination against agriculture diminished significantly in both the Frei regime and under Pinochet. In this latter period, fluctuations in the real exchange rate were important in determining the degree of discrimination against agriculture (see Hurtado, Valdés, and Muchnik 1990, vol. 1, pp. 34ff.). Thus, in the Chilean case, there are two reform episodes that were not enduring—the Frei government's program in 1964–67 and the Allende government's program. Finally, the reforms begun in 1974 appear to have gained

some momentum, and there was less discrimination against agriculture in Chile in the mid-1980s than there had been at any earlier date, judging by data on the effective rate of protection at the adjusted exchange rate (Hurtado, Valdés, and Muchnik 1990, vol. 1, table 3-6).

The Dominican Republic

In the Dominican Republic there were fluctuations in the degree of discrimination against agriculture. There were also differences in the treatment of consumer staples (especially rice) from the treatment of export crops (coffee and sugar). However, the only significant reform reported by Greene and Roe started in 1982 and accelerated in 1984. It was still in progress at the time the Greene-Roe analysis ends.

The reforms were aimed at all of agricultural pricing policy, but they were also gradual. Starting in 1982, a newly elected government began responding to balance of payments pressures (in turn resulting both from domestic fiscal imbalances and from debt service obligations and deteriorating terms of trade associated with the worldwide recession). Although the new government's initial response was to prohibit imports of a variety of consumer goods (rice, pork, and so on), the effect was to reduce the degree to which producers were taxed and consumers subsidized for these commodities. In 1983, still responding to balance of payments pressures, the Central Bank began excluding importables from eligibility for official foreign exchange, thereby raising the domestic price (at an overvalued exchange rate) and thus reducing discrimination against agriculture. Later in that year, the Central Bank established a fund to provide exporters of traditional agricultural commodities with a premium above the official exchange rate on their foreign exchange earnings.

In April 1984 the government reached agreement with the International Monetary Fund (IMF) to undertake a stabilization program. This program prevented sales of foreign exchange by the Central Bank for any reason (including imports of agricultural commodities) except to import petroleum to service debt. Although export prohibitions were placed on maize, tamales, margarine, and milk, the other moves served to increase the prices to producers and consumers of agricultural commodities, and thus to reduce the degree of discrimination against agriculture. The April 1984 measures led to immediate increases in food prices which, in turn, resulted in "major food riots." Greene and Roe believe that the quiet acceptance of the earlier increases in food prices in 1982 was the result of their gradual introduction against the background of very little inflation; in 1984, by contrast, the increase was sharper (as worldwide food prices were higher) and more sudden.

Despite these reforms, domestic inflation at a fixed exchange rate (with occasional devaluations) eroded the benefit to producers and re-

instated the implicit subsidy to consumers. By the end of 1985, however, the exchange rate was altered, and the previous multiple exchange rate system was unified. Greene and Roe estimate that the net effect of these changes was to change the total impact on producers of direct and macroeconomic policies on prices received from -18.3 percent in 1981 to 27.4 percent in 1982, and then from -10.3 percent in 1984 to 46.3 percent in 1985. The degree of consumer subsidy was reduced from 18.6 percent in 1981 to 8.2 percent in 1982; it actually became negative to -37.3 percent in 1984, but then turned positive to 24.6 percent in 1985 (Greene and Roe 1989, vol. 1, p. 216).

At the same time as these changes were occurring, INESPRES, the agricultural marketing agency, was incurring sizable and increasing losses. Although its deficits were partially financed from Central Bank credits (which thus fed the inflation), it was unable to honor its financial obligations in a timely manner. When the Balaguer government came to power in 1986, one of its first decisions was to transfer rice marketing from INESPRES to BAGRICOLA, another governmental organization. According to Greene and Roe, this was the first step toward reforming the entire rice marketing system. It met with almost no political opposition, because of the widespread discontent among both rice millers and producers over INESPRES's inability to pay its debts on time and consumer unhappiness with increased food prices (Greene and Roe 1989, vol. 1, table 8E).

Egypt

The Egyptian system, both of direct and of indirect intervention, appears to have been fairly stable at least from the early 1960s to the mid-1980s. During that interval, there was one—very famous—attempt at reform. It will be recalled that Egypt was a net importer of wheat. Under those circumstances, the maintenance of low consumer prices implied that the government importing agency had to purchase wheat at a higher price than it sold it. By the mid-1970s, the wheat price policy accounted for more than 10 percent of the government's budget deficit, and as much as 28 percent in 1974 (Dethier 1989, vol. 1, table 8.7).⁵ Because of budgetary pressures, it was decided and announced that wheat prices (and hence the prices of flour and bread) would be raised significantly. The resulting urban food riots posed a major political threat to the government, which quickly rescinded the increases.

In fact, Dethier reports that the extent of subsidization actually increased over the next several years: in 1977 the domestic selling price of wheat had been £E30 a ton (contrasted with a world price of £E75.2 a ton); by 1980 the selling price was £E22.3 a ton, while the border price had increased (due to Egyptian devaluation and changes in the world price) to £E117.3 a ton. Consequently, the budgetary cost of wheat subsidization, which had been about 3 percent of government expendi-

tures prior to the reform effort, rose to about 5 percent of government expenditures (and as much as 16 percent of the total fiscal deficit) in the early 1980s (Dethier 1989, vol. 1, table 8.7).⁶

Starting about 1982, there appears to have been gradual reform of direct intervention in producer pricing. Dethier reports a "change in philosophy of the government" as the then Minister of Agriculture announced:

The agricultural pricing policy resulted in distributing income in a way [which was] . . . against the interest of the agricultural sector. Preferential pricing policies resulted in low prices for the farmers, and reduced their real incomes in favor of other sectors as well as the urban population. The next phase will witness a change in the way the State regards agriculture, regarding designing pricing policies that aim at redressing the distribution of income in the rural sector in order to narrow the internal gap between the rural and urban communities. [Quoted by Dethier 1989, vol. 1, p. 38.]

By 1986, these policies had been gradually implemented for most food crops (rice being an important exception), with nonfood crops (including cotton) still subject to strong price controls. Dethier believes that direct discrimination was significantly reduced as producer prices became market-determined; his estimates of the degree of discrimination against agricultural commodities stop in 1985, however, so that the quantitative magnitude of these effects cannot be gauged.

It may be noted that in Egypt, reform of agricultural pricing policies was not accompanied by any major macroeconomic reforms. The altered treatment of agriculture appears to have been independent of any overall reform program.

Ghana

From the early 1970s to the mid-1980s, the Ghanaian economy was in continuous difficulty. GDP per capita fell, at 1975 constant prices, from a high of NC641 in 1971 to NC499 by 1980 and to NC396 by 1983 (Stryker 1990, table 2). Export earnings had fallen even more sharply, as cocoa production and exports fell, in large part in response to the declining real price of cocoa received by growers.⁷ In this process, the government had increasingly lost its role in economic activity, as producers withdrew from participation in markets or entered into smuggling and other illegal transactions.

Starting in 1978 a military government came into power, intending to hold elections the following year. In the meantime, it attempted to institute some reforms in macroeconomic policy as well as to raise producer prices. These reforms were hardly implemented, however, before

another military coup in June 1979. This brought Jerry Rawlings to power as head of the Armed Forces Revolutionary Council (AFRC). Once the new government came into power, it focused on eliminating corruption and prosecuting the former president and many higher-level civil servants for earlier misdeeds. The underlying deterioration of the economy continued, however, as traders (whose prices were strictly regulated) withdrew from the economy and shortages mounted.

The AFRC adhered to the schedule for elections, and another civilian government, headed by Dr. Hilla Limann, won office. As described by Stryker, "The economy was in a state of near total collapse, with a budget deficit equal to about 65 percent of total revenue, inflation running at 54 percent annually, severe shortages of all imported goods, and cocoa exports that were less than 75 percent of their level a few years earlier" (Stryker 1990, p. 73). The government's efforts were therefore directed primarily toward "averting total economic collapse," but it refused to consider a change in the exchange rate. Consequently, the multilateral agencies were unwilling to provide significant assistance. The exchange rate was a crucial issue: if producer prices of cocoa were to be raised without a change in the exchange rate, the cost to the federal budget would be enormous. Inflation was already at 50 percent annually and accelerating.

At the end of 1981 Flight Lieutenant Jerry Rawlings again assumed power and formed a Provisional National Defense Council (PNDC) to run the government. Although the situation was economically disastrous, the new government's initial response again appears to be an effort to tighten controls over markets, including the foreign exchange market, and to regulate transactions. Although government officials maintained contact with international agencies, a change in the exchange rate remained a precondition for assistance and was initially rejected. However, with inflation at 100 percent annually, the PNDC was torn between its commitment to help cocoa farmers and the cost that would result in the absence of a change in the exchange rate: it was estimated that maintaining the existing producer price would cost the government N1.8 billion at the existing f.o.b. price (Stryker 1990, p. 79). Pressures increased still further during the next few months, as the Nigerian government expelled a million Ghanaian workers (thus putting increased pressure on food supplies for a country whose total population was about 12 million people).

There were four coup attempts within a year, all foiled, but reflecting fundamental discontent with the deteriorating economic situation. Finally, after student and worker demonstrations in June 1983, the government announced an Economic Recovery Program and an IMF standby agreement and compensatory financing arrangement of \$382 million. Other donors also supported the new program, which began

with an effort to reduce some of the major distortions in the economy. Initial measures included an exchange rate adjustment and unification of the exchange rate at NC0.0333 per dollar (contrasted with the former rate of NC0.33 per dollar) and an increase in the cocoa price by 67 percent in April 1983, followed by further increases of 50 percent and 87 percent in 1984 and 1985, respectively.

The administration of price controls was greatly relaxed as price ceilings were removed on some commodities, and producers were permitted to increase price in line with cost increases. Price controls were initially maintained on twenty-three items, but the number was reduced to eight by July 1985. Import restrictions were eased, and an exchange auction was introduced for producer goods. Moreover, the fiscal deficit was cut sharply (despite a very poor harvest in 1983) so that inflation fell from its three-digit level of the early 1980s to 50 percent in 1984 and 10 percent in 1985.

As Stryker reports, "The result was a significant revival of economic activity as real GDP increased by 8.6 percent in 1984, 5.1 percent in 1985, and 5.3 percent in 1986. Government revenues as a proportion of GDP also rose from 5.5 percent in 1983 to 8.0 percent in 1984, and 10.4 percent in 1985" (Stryker 1990, p. 84).

The Ghanaian reforms were thus fairly far-reaching. Discrimination against agricultural producers had been so closely intertwined with macroeconomic policies and the trade regime that overall reform had to be undertaken if discrimination was to be significantly reduced. Clearly, the unpopularity of the deteriorating economic situation was the catalyst for change. Political instability continued in response to declining real incomes until means could be found to reverse the continuing decline.

The Republic of Korea

The Republic of Korea is of special interest among the countries in the project, because it is the only country which switched from strong discrimination against agriculture to positive protection of agriculture. In the 1950s, Korea had followed import substitution policies under import licensing and a highly overvalued exchange rate. Receipt of food aid enabled the government to import food at a low official exchange rate,⁸ and then to sell it in the market at a price below that which would have prevailed had the exchange rate been realistic. When the government altered its trade and payments regime and began its outer-oriented trade strategy in the early 1960s, it did so at first by providing a complex set of subsidies to exporters of nontraditional commodities. The effective exchange rate for manufactured exports was therefore well above the official exchange rate, although the relative importance of export subsidies, subsidized export credits, and export tax rebates diminished over time.

While these instruments were powerful in inducing increases in exports of nontraditional commodities, they did not reduce discrimination against domestic agricultural producers, which continued. The government wanted to maintain low domestic urban food prices to consumers and simultaneously to avoid the budgetary costs which would have been incurred had producer prices been higher. Hence, as late as 1970, Korea would have been regarded as a developing country with a relatively high degree of discrimination against agriculture.

In the election of 1971, however, President Park Chung Hee's support in rural areas (which had traditionally been very strong) dropped sharply. As reported by Moon and Kang, "Electoral erosion for the late President Park in rural areas in the 1971 presidential election was perceived as an ominous popular reaction to the bias against agriculture in economic development policy" (1989, p. 200).

The government then instituted drastic shifts in both its policy toward imports of agricultural commodities and its investment policy. The average rate of effective protection for rice rose from -16.4 percent in 1960-64 to 4.9 percent in 1970-74 and 98.7 percent in 1985-86. Similarly, the protection rate for beef rose from -31.5 percent in 1960-64 to 1.1 percent in 1970-74 and 23.5 percent in 1985-86 (Moon and Kang 1991, table 2-6). Moon and Kang estimate that the value of all price and nonprice transfers to agriculture amounted to 3.7 percent of agricultural GDP in 1970-74, 26.2 percent in 1975-79, and 33 percent in 1980-84 (1991, table 17C).

The turnaround was therefore dramatic. Simultaneously, as export growth progressed, the authorities relied less and less on export subsidies to provide incentives and more and more on maintaining a realistic, unified exchange rate. Consequently, the degree of exchange rate overvaluation as it affected agricultural imports diminished sharply. While this by itself would have mitigated, to some degree, discrimination against agriculture, the effect when combined with the change in direct agricultural pricing policies was one of an abrupt turnaround in policy.

While the primary impetus for the reform of agricultural policies originated from the 1971 elections, the runup in world food prices in 1972-73 and the sharp shift in Korean terms of trade in 1973-74 both reinforced the initial decision to reform policy. Moreover, despite an acceleration in the rate of growth of agricultural production after the policy shift, the percentage of the domestic consumption of food grains that was met from domestic production continued to fall, dropping from 93.9 percent in 1965 to 73 percent in 1975 and 44.5 percent in 1986. This, too, led the authorities to support high agricultural prices, in the hope of preventing further reductions in the ratio of imported food grains. There appears to have been little political opposition to the shift.

The Korean reforms shifted the relative trajectories of urban and rural income growth. Moon and Kang report that during 1960-69 the av-

average annual rate of growth of real income for urban wage earners was 14.6 percent, whereas for farm households it was only 3.5 percent. During 1970–76 farm incomes grew at 9.5 percent annually, while those of urban wage earners grew at only 4.6 percent a year.

Several phenomena are notable about the Korean experience. First, the fact that Korea was a net importer of agricultural commodities was an important reason for discrimination against agriculture in the 1950s, but it became an important reason for protection of agriculture in the 1970s. However, by the latter date, the budgetary and consumer cost of protecting agriculture was much lower than it would have been twenty years earlier, when a far larger fraction of the population was engaged in farming and when there was a far smaller urban population over which to spread the implicit tax. The same degree of protection to agricultural producers would have been infeasible in earlier years. Second, the Korean policy shift was very rapid. Once policy had shifted, however, the extent of protection continued to increase over the next decade. Third, there is little evidence of any opposition to the reforms once they had been effected. In part, this was because the increasing gap between rural and urban incomes had become evident to most Koreans. In part, of course, the lack of opposition may have reflected the extent to which there was little discussion of policy issues in the latter years of the Park regime. Then, too, the fact that overall growth was so rapid meant that urban incomes were continuing to rise, which undoubtedly diminished the opposition that would otherwise have arisen to higher food prices.

Morocco

Morocco, like Egypt, is a country in which efforts to keep urban food prices low appear to have driven pricing policy; low prices to urban consumers of wheat (which was domestically produced but also imported) placed pressures on the government budget. That, in turn, led to a reluctance to increase producer prices, because the resulting losses would have increased fiscal imbalances. The result was that, over time, the real price of wheat to producers fell: the real price of soft wheat (in dirham per quintal) fell from an average of around 46 in the 1960–70 decade to around 40 in the 1970–76 period. Real producer prices of other food crops followed a similar pattern (Tuluy and Salinger 1989, p. 61).

Despite constant pressures from the budget to increase consumer prices, a pattern of urban unrest and rioting following such increases led to great reluctance, on the part of the authorities, to increase consumer prices. As reported by Rhys Payne,

It is actually not difficult to see what it is that has obliged Morocco to pursue and maintain such [cheap food] policies. It suffices to survey the results of attempts to abandon or reform cheap food poli-

cies. The spontaneous and widespread riots that follow such reforms have become a regular feature of the Moroccan political landscape and must be figured into any policy calculations. Although serious rioting has broken out periodically over the last few decades (1965, 1970, 1978, 1981, 1984), the incidence of the problem seems to be increasing, for there have been two serious episodes in the 1980s. In June 1981, the country exploded in protest against sharp increases in the prices of basic foods [1986, p. 62].

Payne argues that

What gives the Moroccan food riots their potency and special significance is that they go beyond the particularities of specific issues to threaten the political order itself. The bloody repression that invariably lies in store for rioters shows that they are not quibbling over small matters. . . . It has become increasingly clear that in order to maintain its political legitimacy, the government must take responsibility for providing the population, the bulk of whom are poor, with affordable food [1986, p. 164].

He notes that this responsibility is a legacy of French colonial rule and had not been regarded as a governmental function in earlier periods.

The Moroccan government, therefore, has been caught between budgetary pressures to raise consumer prices and political pressures to keep them low. Periods such as 1981, when there was a serious drought, have forced actions to attempt to provide more incentives for agricultural producers. They have, however, met with serious opposition, as noted by Payne.

By 1984 Morocco's economic difficulties had reached a point where the government adopted a structural adjustment program. This entailed changing the exchange rate and undertaking significant tariff reductions and other measures, as well as refocusing the public investment program away from large-scale projects and toward agriculture. Tuluy and Salinger's data end in 1984, but it is clear that these steps would have had a significant impact in reducing indirect discrimination against agriculture.

Pakistan

If one defines "reform" as an effort to bring about major changes in agricultural pricing policy, Pakistan must be described as having had two periods of reform. In the first period, from 1972-76, the populist Bhutto government came to power; as described by Hamid, Nabi, and Nasim,

The view amongst the party leadership was that since independence, capitalists had controlled the government and exploited

the poor people of the country, and now that a people's government had come into power the capitalists would make every effort to topple it by sabotaging the economy. Therefore, every rise in price or, where prices were fixed by the government, shortage in the market was seen as a capitalist conspiracy and the government responded by taking over the activity and restricting or eliminating the role of the private sector [1990, p. 41].

The result was that negative direct protection to rice and cotton changed from the range of -10 to -20 percent to the range of -25 to -50 percent in the following decade (Hamid, Nabi, and Nasim 1990, p. 162). Procurement of wheat from farmers became compulsory, flour mills and many other distribution and processing activities were nationalized, and government controls over agricultural activities were greatly extended.

In 1977 the Bhutto government was overthrown. The Zia government immediately began reversing the Bhutto government's policies, starting the second period of reform. The Zia government first denationalized flour mills, rice mills, and cotton ginning factories. It also removed bans on private investment in a number of industries supplying agricultural inputs, such as fertilizer. By 1980 the government announced a New Agricultural Policy, in which an important component was to gradually increase domestic agricultural prices to bring them into line with world prices. Simultaneously, subsidies to agricultural inputs were to be phased out. (See Hamid, Nabi, and Nasim 1990, exhibit 1 for a listing of all the reforms.)

Hamid, Nabi, and Nasim report that over the next five years producer prices were gradually brought into line with border prices. Simultaneously, the government denationalized a number of activities, permitted private trade in commodities in which the government had previously held a monopoly, decontrolled prices of several agricultural commodities, including sugar, and discontinued rationing of a number of commodities, including wheat atta in April 1987. However, the government retained a monopoly on the export of the major agricultural commodities.

Thus, the two reforms in Pakistan were each fairly thoroughgoing. The first vastly increased both discrimination against agriculture and the government's role in agriculture. The second reform reversed the process. The two periods of reform coincide with changes in government. The two governments clearly held greatly different ideologies which appear to have determined the direction of their changes.

However, as Hamid, Nabi, and Nasim report, the Zia government experienced considerable difficulty and encountered resistance to its reform efforts. Opposition originated largely from bureaucrats and was greatest when the reform was expected to entail a loss of revenue or jobs. The authors note that in Pakistan the "easy" reforms were under-

taken first in the early 1980s and that success with those reforms laid the groundwork and provided momentum for tackling the more difficult aspects of reform at a later stage. Based on Pakistan's experience, they conclude that gradual reforms probably have a better chance of success than more sudden ones (Hamid, Nabi, and Nasim 1990, p. 123).

The Philippines

Intal and Power date the reform program in the Philippines as starting in 1983. In the case of the Philippines, the liberalization of agricultural pricing policy was part of a more general thrust toward liberalization which started with the country's macroeconomic and debt-servicing difficulties in that year. However, the momentum of reform accelerated sharply after the change in government in 1986, when President Aquino came to power after Marcos was overthrown.

Intal and Power report that until 1985 the greatest pressures for reform came from the IMF and the World Bank and were centered on the coconut and sugar industries. The multilateral institutions were pressuring the Philippine government to privatize both industries and to reduce the control over the industries that was held by two business partners of President Marcos. In response to this urging, the government dissolved the National Sugar Trading Company (NASUTRA), replaced it with a private-sector marketing body, and permitted private traders to enter the sugar trade. The membership of the boards of the government trading corporations was also expanded. Once the new government was established in 1986, the momentum toward liberalization was considerably strengthened as the new government attempted to reduce regulations as well as to privatize trading functions (Intal and Power 1990, pp. 60–61). In the case of the Philippines, the Marcos government used instruments of agricultural marketing and trading much as it did any other, to secure gains for those supportive of the regime. When the government changed, there was significant reform of agricultural pricing policies, along with other interventionist measures, as part of a rejection of the earlier ruling group.

Portugal

Until 1983 Portuguese policy had tended to maintain low consumer prices, which in turn led to budgetary pressures to suppress producer prices. Portuguese agricultural output had grown only slowly, and occasional pressures arising from the sluggishness of output had led to increased prices for major commodities, especially in the latter half of the 1970s. However, even these increases had taken place in the context of pervasive government controls over prices of agricultural outputs and inputs and of an active role for government-owned agencies.

In 1983 an election brought the second Soares government to power. The current account balance was deteriorating sharply, and fiscal deficits were resulting in a rising public debt at an unsustainable rate. The new government immediately implemented an austerity program, which immediately removed subsidies on fertilizers and mixed feeds. Simultaneously, cereals prices were adjusted to reflect full costs when sold by government agencies.

It was also decided that consumer prices must be increased. Milk and meat prices were the first affected. There were significant protests from cereal and milk producers over the increases in their costs of production, but the government responded by permitting increases in output prices that more than offset their loss of subsidized inputs.

Avillez, Finan, and Josling conclude that the major cost of the reform program was born by consumers, who were confronted with higher prices for their purchases. At about the same time, the Soares government decided to pursue negotiations to enter the European Community. This decision was motivated by factors far more overriding than agriculture, but it had significant implications for agricultural pricing policy, as a transition period would gradually turn agricultural policy largely over to Brussels. Policies preparatory to full integration already led to further liberalization of the government's control over agriculture-related activities. For example, an earlier uniform milk price was replaced by a policy that permitted transport cost differences to be reflected in variable milk prices by region. Avillez, Finan, and Josling conclude that entry into the European Communities will assure a continuation of the dismantling of the controls that had been in effect in Portugal over five decades (1988, pp. 123ff.).

Sri Lanka

Sri Lanka's agricultural pricing policies from the 1950s until the mid 1970s were based on taxation of the tree crops (coconuts and tea) in order to provide rice (an import-substituting crop) at low prices to consumers and pay high prices to domestic producers. Bhalla (1991) aptly demonstrates the government's dependence on revenues from export crops to finance the very sizable costs of providing free or heavily subsidized rice to consumers and paying high prices to producers. As rice production increased (partly in response to the relatively high real returns received by producers) and tree crop output stagnated or fell (in response to the low real returns), the revenue generated by the latter became inadequate to finance the rice subsidy. By 1978 fiscal pressures forced a change in the rice subsidy policy and the beginning of a turnaround in policies toward the tree crops.

There was an election in 1978 which was fought largely over economic issues; economic controls had been pervasive over all aspects of

economic activity, and the new Jayawardene government was elected on a platform which promised to liberalize the economy. The year 1978 therefore marked the beginning of a process of liberalization which continued into the mid-1980s—the end of the period covered by Bhalla. The 1978 reforms included a devaluation from 8.8 to 15.6 rupees per dollar; Bhalla estimates that, thereafter, changes in the exchange rate kept the purchasing power parity relationship between the rupee and foreign currencies approximately constant and there was little overvaluation of the currency (1991, p. 211). After 1978, the producer price of rice was moved much closer to world prices, and the degree of negative protection to the tree crops had fallen somewhat. By 1985, for example, Bhalla estimates that the nominal rates of protection accorded to rubber and coconut were -16 and -20 percent, respectively, contrasted with rates of -25 and -22 percent in the 1971-77 period. The direct nominal protection rate for rice had fallen from 81 percent to 26 percent over the same interval (Bhalla 1991, table 6-6).

It is clear that Sri Lanka's reforms were the result of a political change which mandated liberalization of the economy generally, reinforced by the fiscal imperative resulting from a large budget deficit. By the mid-1980s, when Bhalla's analysis ends, the conflict between Sinhalese and Tamil guerillas had taken center stage, and the momentum of reform appears to have been slowed.

Turkey

Turkey's direct pricing policies generally favored agriculture throughout the three decades prior to 1980, although protection to domestic fertilizer producers resulted in negative net transfers until the 1970s. Indeed, crop-specific interventions increased through time, and more and more crops were subject to commodity-specific price supports, minimum purchase prices, and other interventions.⁹

In the Turkish case, the pressures for reform came almost entirely from an unsustainable external balance, which in turn led to severe dislocations in the domestic economy. By 1980 the rate of inflation had approached 100 percent, credit lines were exhausted, and export earnings through official channels were declining; the consequent sharp reduction in imports of commodities such as oil had high economic costs for the domestic economy, and the situation was deteriorating. By the winter of 1980 (a severe one), the lack of heat and the reduction in the carrying capacity of trucks, buses, and autos was evident to all. In 1977 and again in 1979, the international institutions had urged significant policy reforms, but the programs actually undertaken by the government were in fact marginal. In January 1980, by contrast, a major program of reforms was announced: its centerpiece was a sharp devaluation coupled with the stated intention that the economy was to be opened up

and the new real exchange rate maintained through frequent discrete increases in the price of foreign exchange.¹⁰

The stabilization program was initially undertaken under the Justice Party government of Prime Minister Demirel; the deputy prime minister and architect of the plan was Turgut Ozal. When the military took power in the fall of 1980 (in response to civil unrest as much as to the economic situation), the deputy prime minister was retained and the program continued. By 1983 a credit squeeze and other factors led to the ouster of Mr. Ozal. With elections in late 1983, however, the Motherland Party, with Prime Minister Ozal, came to power, and the momentum for reform was resumed.

The initial steps in the program were in most regards quite similar to earlier stabilization efforts in Turkey. Indeed, by late 1981 there were signs that the rate of inflation had stabilized at around 35 percent, and inflationary pressures were once again rising. Even so, the maintenance of a more realistic real exchange rate substantially reduced the degree of discrimination against agriculture.

Moreover, as Olgun demonstrates, several institutional changes were made (in an effort to reduce fiscal deficits as part of the anti-inflationary plan) which resulted in a reduction in the extent of direct intervention: subsidies to fertilizer utilization were eliminated, the number of agricultural commodities subject to direct intervention was gradually reduced (from twenty-four at its peak in the late 1970s to sixteen by 1983), and power to set prices was shifted from the Ministry of Agriculture to individual State Economic Enterprises, which were also given responsibility for reducing their individual deficits. The result was that the remaining support prices were set at levels closer to those prevailing internationally than had earlier been the case.

Reforms continued after 1984. A highly restrictive government policy toward the introduction and distribution of seeds was replaced with a liberalized market in seeds in 1983–84. In 1986 the government rescinded its monopoly over fertilizer distribution, liberalized fertilizer imports, and permitted private trade.

Certainly, at least at the time of writing, the Turkish reforms must be regarded as having been among the most far-reaching and sustained of those undertaken in the project countries. Much of the pressure for reform originated with macroeconomic difficulties, and initial reforms came about in response to the need for external support for the balance of payments. Even direct agricultural interventions were reduced as institutional changes placing more budgetary responsibility on government-owned enterprises were effected for fiscal reasons. Once reform had started, there appears to have been a momentum for continuing measures, as both the degree of direct intervention in support of agriculture and the degree of indirect discrimination against agriculture diminished. Olgun notes that there were no pressure groups in Turkey

supporting the reforms initially, not even farmers' organizations and others who ultimately benefited. While there was considerable initial opposition, there does not appear to have been continuing opposition to the agricultural reforms. One may conjecture that the fact that agriculture as a whole really was better off may have been a considerable factor: agriculture's share of gross national product rose from 9.7 percent in the late 1970s to 15.9 percent in 1980–83 (Olgun 1991, table 6-2).

Patterns of Reform: Initiation and the Likelihood of Success

Perhaps the most striking aspect of reform programs is that, in almost all cases, the effort to reform agricultural pricing policy appears to have been part of a larger program of policy reform. The only apparent exceptions are Egypt and Korea, where recognition of the negative impact of agricultural pricing policies on farmers' incomes was the dominant motivating factor.

The Initiation of Reforms

Two overall motives for reform appear to have predominated. On the one hand, in some countries, including Chile (after 1973), Pakistan, Portugal, Sri Lanka, and Turkey, the reforms were part of a larger package of actions in which the major intent was to relax the controls of the government over the economy generally. On the other hand, in a number of countries an unsustainable macroeconomic situation was the precipitating factor leading to reforms. This was the case in Argentina, Chile (in the first two reform episodes), the Dominican Republic, Ghana, Morocco, and the Philippines. In these cases, liberalization was a result.

When macroeconomic imbalance was a motivating factor in precipitating reform efforts, a major pressure to alter agricultural pricing policies usually originated from the perceived need to reduce fiscal deficits. In the Turkish case, attempts to impose budgetary discipline over State Economic Enterprises resulted in lower support prices and input subsidies for agriculture. Likewise, Moroccan and Ghanaian price supports came under pressure and, when it was decided to address the underlying macroeconomic issues, were replaced with more generalized incentives.

In a surprisingly large number of countries—including Argentina, Chile, Ghana, Morocco, the Philippines, and Turkey—there was a very close relationship between the macroeconomic policies that resulted in difficulties and the direct agricultural pricing policies adopted. Indeed, in the reforms that were undertaken, it would be difficult to categorize some measures as aimed at macroeconomic balance and others as aimed at liberalization; the two motives seem highly interrelated.

Another "commonality" of most reform efforts appears to be the large number that were undertaken by new governments. In Argentina

a military government replaced a populist government and undertook reforms. In Chile each reform began when a new government took office. In Portugal, likewise, it was a new government which undertook significant changes in agricultural pricing policy.

However, the frequency of this pattern does not prove that new governments were the "cause" of reform. It might, indeed, be concluded that dissatisfaction with economic policies was the "cause" of new governments. In Ghana economic difficulties appear to have been a major factor in leading to frequent changes in governments until the reforms began. Governments changed until one was able to effect changes in economic policies. In Pakistan and Sri Lanka new governments quite deliberately reversed the policies of their predecessors, but in both cases it was discontent with economic policies that precipitated the change in governments.

Exceptions to the "new government" generalization are interesting. In Korea it was an election outcome that demonstrated the rural disaffection which led to a reversal of agricultural pricing policies. Indeed, Korea is one of the few countries—along with Egypt—in which the reversal stands out as being aimed at agriculture specifically. In Turkey the macroeconomic imperatives led to a change in policies that then endured despite several changes in government: indeed, the architect of the policy reforms was elected after a military government had begun to reverse them! In the Philippines, reforms were begun (in response to a macroeconomic crisis) under Marcos, but really gained momentum, according to Intal and Power, only after President Aquino was elected.

To be sure, a change of government is in itself a symptom of disaffection with the existing regime. As such, underlying political pressures may bring about the change in government which in turn alters the policies to which a reaction is taking place. In some cases, domestic political pressures reflect discontent with economic outcomes and not with particular policies that cause them. Olgun notes, for example, the absence of any organized group in Turkey supporting reform of agricultural pricing policy; it might even be claimed that fiscal deficits and the resulting inflation were the outcomes of an economic system in which the political process was unable, piecemeal, to appease all claimants. In that circumstance, inflation and its dislocation were the outcomes which gave rise to discontent. It was left to outside groups, including the international institutions and aid donors, to discuss reforms in order for economic changes to occur.

The Process of Reform

Many reform programs were initiated in 1983 or later, and it is too early to be confident of the outcome. This is the case for the Dominican Republic, Egypt, Ghana, Morocco, the Philippines, and Portugal. Set-

ting aside those cases leaves Argentina, Chile, the Republic of Korea, Pakistan, Sri Lanka, and Turkey as countries in which reform was initiated sufficiently in the past to permit inferences to be drawn about the process.

What is perhaps most noteworthy about these instances is that there was only one clear-cut failure: Argentina. There, the macroeconomic reforms undertaken after 1976 failed to achieve the anti-inflation objectives of the government. When inflation accelerated and a macroeconomic crisis again arose, the reforms were quickly reversed.

All the other cases are ones in which the reforms resulted in a sustained reduction in the discrimination against agriculture for a period of years. In Korea, of course, discrimination against agriculture was permanently reversed, with very little political opposition. Once that happened, the magnitude of discrimination in favor of agriculture increased rapidly. In that country, it would have been inconceivable to have had such discrimination a decade earlier: when many more people were engaged in agriculture and fewer in industry, the economic costs of protecting Korean agriculture would have been insupportably high. Once policy had shifted, protection to agriculture increased, apparently with little opposition. The argument that farmers were being left behind as urban incomes increased, combined with an appeal to the "danger of being too dependent on imports," was evidently politically appealing. In the context of rapid economic growth, the fraction of population engaged in agriculture continued to diminish, so that the direct and visible budgetary economic costs of protection did not rise proportionately with increases in the rate of protection. In the Korean case, discrimination against agriculture turned very sharply toward protection of agriculture. Once protection started, the political demand for increased protection seems to have been irresistible.

Perhaps the lesson from Korea is that intervention in favor of agriculture, even if not initially costly, brings about pressures for increased protection which in the context of economic growth are virtually irresistible. As long as the fraction of employment and income generated in agriculture continues to diminish, protection of agriculture will be consistent with continuing Korean economic growth. At some point, however, outmigration will diminish substantially. If that happens while a significant fraction of the population is still engaged in agricultural activities,¹¹ difficult choices will confront Korean policymakers.

In Pakistan, Turkey, Sri Lanka, and Chile, reforms were begun in 1980 or earlier that were then sustained, despite a worldwide recession and major economic pressures on the government. In each case the reform episode started with an abrupt reversal of earlier policies, although in no case was the initial set of measures the end of reforms. In both Chile and Turkey, there were temporary setbacks to the momentum of reforms, in each instance originating from macroeconomic diffi-

culties. This experience probably underscores the lesson from Argentina: a successful reform of agricultural pricing policies undertaken in the context of a major macroeconomic adjustment will hinge in large part on the success of the macroeconomic reform program.

In a sense, there is a "vicious" and a "virtuous" circle. When macroeconomic instability is present, it is fueled in part by budgetary deficits arising from efforts to offset the indirect effects of unrealistic exchange rates and other factors on agriculture which in turn result in deficits by the agencies concerned with agricultural pricing policies.

When macroeconomic reform is undertaken, pressures are strong for a reduction in the extent of direct intervention at the same time that indirect discrimination against agriculture is diminishing. When direct policies have discriminated against agriculture, changes in both macroeconomic policies and in direct policies tend to increase agricultural incomes. When direct policies have offset part of indirect discrimination, as happened in a number of countries, uniform-across-the-board policies replace specific ones. The consequent change in relative incomes is significantly less than it would be if direct policies were changed in the context of a constant rate of discrimination through the exchange rate and industrial protection. This was certainly the case in Turkey and Chile. Combining macroeconomic reform (to permit exchange rates and liberalized imports to provide greater incentives and rewards to agricultural producers) with diminished direct intervention in agricultural prices clearly offers a mechanism to buffer the impact of diminished direct price intervention for agriculture. Even in Sri Lanka, where reforms were undertaken without major macroeconomic imbalances, a sharp change in the exchange rate helped reduce the impact on agricultural producers of the drop in rice price supports; exporters of tree crops gained on both counts.

It would appear that it is important to achieve a "momentum" of reform. As noted by Hamid, Nabi, and Nasim, that "momentum" permits further, sometimes more difficult, reform to be undertaken. In each case of successful reforms, the first policy changes were by no means the last.

Reforms appear to have been most difficult, and to have had the least chance of success, when government policies have discriminated against agriculture in order to finance (through implicit taxation of producers) low prices to urban consumers. Although raising producer prices appears to arouse little political opposition directly, raising prices to urban consumers is quite another matter. In Morocco, Egypt, Zambia, and Côte d'Ivoire reform efforts have failed because of the opposition of urban consumer groups. Only in Sri Lanka, where administrative difficulties and budgetary costs of controls made them unpopular, was the government able to reduce food subsidies. Interestingly, it was the budgetary costs of rice subsidies that forced their gradual reduction in Sri Lanka, as producers were protected.

An important lesson for policy, albeit a difficult one to implement, may be that it is desirable to separate producer pricing policy from issues associated with food subsidization and to bear the cost of the latter directly from budgetary resources. Keeping consumer subsidy costs within the budget accomplishes two goals: it prevents discrimination against agricultural producers from reaching the extremes that might otherwise occur, and it makes the cost of the programs visible and likely to be reduced when budgetary difficulties do arise.

When budgetary pressures combined with the desire for low consumer prices have not been the chief motivation for discrimination against agricultural producers, however, it appears that efforts to reform agricultural pricing policies have met with less opposition than might have been expected a priori. One must therefore conclude that the outcome of the spate of reforms in the 1980s will hinge in large measure on the success of the countries' undertaking them with macroeconomic policy reform. If that is successful, it is likely that the reform of agricultural pricing policies will gain momentum, permitting further moves toward nondiscriminatory pricing policies for agriculture.

7

The Political Economy of Agricultural Pricing Policy

To an economist, the political economy of agricultural pricing in developing countries is at first sight a complete enigma, especially once economic analysis of those policies has been undertaken. The impression that emerges is one of large political noise and action for very little economic or political benefit. Worse yet, the accepted stylized fact is that rich countries, where farmers are in a small minority, subsidize their farmers, whereas poor countries, where farmers represent a much larger fraction of the population, tax them. The economic illogic of agricultural pricing policies cannot therefore be explained by any simplistic appeal to a political principle of majority rule.

Even in a project as large and as ambitious as this World Bank comparative study, it would have been too much to hope that the enigma could be entirely resolved, especially as the perspective was largely that of economists. Nevertheless, emerging from an analysis of the country studies are some features and lessons of the economic-political interaction that are clearly important in explaining agricultural pricing policies in developing countries. It is the purpose of this chapter to assess these economic-political interactions in light of the experience of the eighteen developing countries that were studied.

A first section sets forth the puzzle and points to the inadequacy of some of the explanations that have heretofore been offered for it. A second section then contains a discussion and analysis of some of the themes that emerge from consideration of the experience of the eighteen countries. A third section covers the interaction between economic and political markets. Based on that, a final section assesses the prospects for changing policies within those countries that still discriminate heavily against agriculture and considers some of the policies that might be conducive to a more rapid reduction in that discrimination.

Stylized Facts and Explanations

Before turning to an analysis of those factors driving the evolution of agricultural pricing policy, it is useful to start with some widely

believed propositions that are at best only partly correct and to subject them to scrutiny in light of the findings from the World Bank project. At the outset of the project, these propositions were accepted by the project codirectors as constituting at least a significant part of the political rationale for discrimination against agriculture. In a sense, therefore, the findings from the country studies are important in refuting, or at least sharply refocusing, the then-widely-held set of beliefs.

There are four propositions worthy of discussion for present purposes: (1) that poor countries tax, while rich countries subsidize, their agriculture; (2) that a major motive for this taxation is either a desire to help the urban poor or alternatively to keep urban workers tranquil; (3) that another major reason for this taxation is to foster industrial development; and (4) that international price instability has virtually forced developing countries into intervening with agricultural prices in order to stabilize their domestic economics in the face of sharp fluctuations in their international terms of trade. There is some truth, but also something misleading, in each of these stylized facts. Taken individually or taken together, they fail to convey much of what is important about agricultural pricing in developing countries. In this section, each of the four propositions is subjected to scrutiny. Thereafter, attention can turn to the important elements of the political economy puzzle that appear to be missing from the stylized facts and which appear to be significant in light of the country studies.

Proposition 1: Rich Countries Subsidize, and Poor Countries Tax, Their Agriculture

That rich countries subsidize their agriculture, while poor countries tax theirs, is one of the widely believed stylized facts of late-twentieth-century life (see, for example, Friedman 1987; Lindert 1989; Hayami 1987; Anderson and Hayami 1986). Certainly, as the data in table 4-1 indicate, the majority of countries included in the World Bank project taxed their agriculture. Estimates for other developing countries indicate similar patterns.

Why, then, is this a misleading statement? First, historically, poorer countries did not tend to tax their agriculture (see Lindert 1989). Second and more important, developing countries do not tax all of their agriculture. Developing countries (and many developed countries) tax (directly and indirectly) many of their exportable activities and encourage, through protection and other means, many import-competing agricultural activities (see table 4-2). Because the agriculture of most developing countries is, on average, more heavily weighted toward exportables than is the agriculture of most developed countries, inspection of the *average* treatment of agriculture indicates that developing countries tax agriculture more heavily.

To be sure, other factors influence the degree of taxation. The need for government revenue is certainly an important influence on the extent of direct taxation of exports; the extent to which foreign exchange pressures have been seen as a constraint on policymaking and on growth has influenced the magnitude of discrimination and protection for various commodities. Quantitative restrictions on imports have provided relatively high levels of protection for import-competing goods in some countries when balance of payments problems have become severe. Even, as will be argued below, the extent to which agricultural interests have been represented in the governing coalition has affected the magnitude of taxation of agriculture. But the fundamental stylized fact is that almost all countries tend to protect their import-competing sectors and to tax their exporting sectors.¹

Proposition 2: Developing Countries Tax Agriculture to Help the Urban Sector

More than a decade ago, T. W. Schultz observed, "There are many 'reasons' why governments undervalue the economic contributions of agriculture. . . . Even though the rural population in low-income countries is much the larger, the political market strongly favors the urban population at the direct expense of rural people. Politically, urban consumers and industry demand cheap food" (1978, pp. 10–11).

Certainly, there is truth in this observation. In some countries, including Egypt, Morocco, and Zambia among those covered in the project, major political difficulties arose when efforts were made to raise urban food prices. In most of the countries covered by the project, however, the striking finding is how little urban incomes were affected by large taxation of agriculture. And, to the extent they were affected, it was more by the demands of the politically influential urban workers and industry (perhaps because of the impact on wages). Indeed, within the urban sectors, it was frequently the middle- and upper-income groups or just the upper-income groups (as, for example, in Thailand) that benefited most: poorer urban consumers, like poor rural consumers, were slightly adversely affected. Zambia, where governmental efforts to remove the subsidies to maize meal led to urban riots, illustrates the point well. In that country, subsidized maize meal was consumed primarily by the middle- and upper-income groups and had not been an item in the diet of the poor (Jansen 1988, p. 203). Except in countries, such as Egypt, where foreign aid or other factors permitted the government to pay higher prices to rural producers than it charged to urban consumers, it proved infeasible to subsidize urban food consumption to any significant degree.

What is true is that a desire to keep food prices down was an important contributor to the motivation for intervention in agriculture. Even

more significant, however, was the political difficulty of increasing them (even to maintain the real price constant) once they had been suppressed. For Africa, Robert Bates has stressed:

When urban consumers are poor, expenditures on food consume a higher percentage of their incomes; the lower their incomes, the more they benefit from reductions in food prices. Nations with lower per capita incomes are thus more likely to adopt policies in support of low-priced food. . . .

Among the basic determinants of the demand for low-priced food by owners of firms are the proportion of their costs represented by wages. . . . It should be noted that for governments, wages represent a high fraction of their costs. . . . Little wonder, then, that among the industries of Africa, it is the governments themselves which are among the most vocal in calling for low-priced food [1981, pp. 124–25].

A significant offset to this motivation has been the fact that in the sort of low-income countries described by Bates, low levels of income make the budgetary costs of large wedges between producer and consumer prices infeasible. And, once the gap has been stretched, negative producer responses result in the increased need for imports if demand is to be met at suppressed prices. Once imports are seen to expand rapidly, the budgetary cost of the differential between imported and domestic prices (or, when nominal exchange rates are held fixed in the face of rapid inflation, a foreign exchange shortage) limits the extent to which suppressed consumer prices of food are sustainable.

Thus, while “helping the urban poor” has been a factor influencing agricultural pricing policy, the political influence of the urban middle-income groups and of those concerned with wage policy has probably been equally significant. Even then, the extent to which consumer prices could be suppressed was in fact usually smaller than might at first glance be believed from political rhetoric.

In addition, the desire to suppress consumer prices has been based on several other motives. In the high-inflation countries of Latin America, concern about the inflationary consequences of permitting increases in the price of food led to the maintenance of low consumer prices (see especially Brandão and Carvalho 1991a, p. 56).

Proposition 3: Agriculture Is Taxed to Help Industry

It is certainly true that taxation of agriculture was undertaken in the belief that industrialization had to be encouraged. Again, Bates has put the argument well: “Political action is purposeful behavior, and . . . among the major purposes of governments are the pursuit of certain social objectives and the resources needed to achieve them. Foremost

among the social objectives of governments in the developing areas is to shift the basis of their economies away from the production of agricultural commodities and toward the production of manufactured goods" (1981, pp. 3–4). The ideological basis for agricultural pricing policy will be examined further in the section "Factors Conducing to Discrimination against Agriculture." Here, there are several important points. First, as already noted, not all of agriculture was taxed: some import-competing crops, including food crops, were protected, and their domestic prices were above those that would have prevailed in the absence of government intervention. Thus, even when governments did extract resources from agriculture, they extracted those resources largely from exportable agricultural commodities and transferred a part of the resources to agricultural commodities competing with imports.²

A second consideration is that in many countries, including Ghana and Sri Lanka among the project countries, the suppression of agricultural prices was not done by means which would extract resources for industry. Ghana's production of cocoa in fact declined in response to very low prices received by farmers, and foreign exchange earnings fell; total implicit and explicit taxation of cocoa farmers therefore fell, although the rate of taxation was very high. A government committed to extracting the maximum surplus from agriculture would certainly have lowered the rate of taxation on Ghana's cocoa (and also on Sri Lanka's plantation crops). Moreover, had the objective been to maximize resource extraction from agriculture at minimum efficiency cost, production of all agricultural commodities would have been taxed in proportion to their elasticities of supply. The empirical evidence is overwhelming that the chosen rates of taxation bore no relation to those that would be selected under principles of optimal taxation.

Third, the implicit taxation of agriculture sometimes took forms which did not extract resources efficiently. For one thing, taxation on exportable crops was often so great that producers shifted to subsistence production, shifted to the production of uncontrolled commodities, or indeed moved to cities. On occasion, exports of food commodities were prohibited or subject to quantitative restriction (as in Turkey and Chile); in these instances, additional resources could have been raised for industry by permitting the exports during periods of exchange rate overvaluation.

Proposition 4: Governments Intervene for Domestic Price Stabilization

As Schiff and Valdés document, the one objective of agricultural pricing policy that was achieved by most governments in the project countries

was smaller fluctuations in domestic prices than in international prices of major agricultural tradable commodities (forthcoming, chap. 3).

However, there are two issues. First, price stabilization could usually have been achieved at relatively lower cost through means other than those actually used.³ Second, and much more fundamental, however, price stabilization could have been achieved without taxation of agriculture. Both at the level of logic and at the level of policy, stabilizing prices and altering the mean level of prices are two distinct objectives and normally would be achieved with distinct policy instruments. It is as straightforward to stabilize a price at its international mean as it is to stabilize it at a level below or above it.

Recurring Phenomena and Themes of Political Economy

Given the present state of knowledge, it would be folly to attempt an overall "theory of political economy" to explain agricultural pricing policies in the developing countries. As is evident from the individual country studies and from the analysis of the preceding chapters, the subject is complex. Insights from both economics and political science are needed, and all that can be done here is to suggest some of the patterns and themes that emerge from examining the experience of individual countries. These themes will surely be part of any consistent theory of political economy of policymaking in developing countries. In this section, they are first considered individually; thereafter, a stylized descriptive history of the evolution of agricultural pricing policy in developing countries—consistent with both the pattern in the countries covered by the project and with the themes—is presented.

Before considering these, however, a few preliminary considerations are in order. First, decisions made within a governmental process are clearly the result of group interaction. The "political equilibrium" that is represented by a decision is presumably the balancing point between those wanting more and those wanting less. As such, it is not enough to say, for example, that discrimination against agriculture must be explained: questions remain as to why it was x percent and not twice, or one-half, x . When, for any reason, the political benefits of a particular policy increase or the political costs (that is, opposition) are reduced, the same policy instrument may be increased in its application. For example, it will be argued in the next section that an ideology which held industrialization to be central to raising per capita income was prevalent in almost all developing countries after the Second World War. That ideology legitimated discrimination against agriculture through the main macro policy instruments of the exchange rate and the trade regime. To the extent that the ideology prevailed, it decreased the effectiveness of opposition to discrimination against agriculture and

increased the effectiveness of proponents of discrimination. As such, the ideology permitted greater discrimination than would otherwise have constituted a political equilibrium.

Ideology was much the same across countries; yet different countries' governments discriminated against agriculture to varying degrees. In a sense, the ideology may be regarded as a "shift" in a political demand curve: the political and economic "benefits" from a given degree of discrimination against agriculture were less costly than they would have been in the absence of that ideology. As a consequence, the equilibrium level of discrimination against agriculture—which nonetheless differed from country to country—was one of greater discrimination than it would have been (holding all other political pressures constant) had the ideology (and its knowledge base—see the next section) been altered.

Policy outcomes can be viewed as the result of a process in which competing political groups exert their influence (Becker 1983). In that perspective, a second major preliminary point follows. That is, it is seldom useful to regard a government as a monolithic decisionmaking (or implementing) entity. There can be utility in examining the institutions and mechanisms that are used to make decisions: these can influence the relative strength of different competing groups in affecting outcomes, and thus alter the political equilibrium. However, at least for purposes of considering the political economy of agricultural pricing policies, it does not appear useful to regard the outcomes quantified in the country studies and analyzed both in Schiff and Valdés and earlier chapters of this volume as having been the result of a process that can be analyzed as if it were a rational decision made by an individual.⁴

Seen from this perspective, a number of themes emerge from consideration of the analyses in the country studies. These may be grouped into three categories: (1) factors leading to discrimination against agriculture, (2) phenomena influencing the discrimination among agricultural commodities, and (3) differences in discrimination against agriculture among countries. In this section, the focus is on the political considerations that influence economic policy formulation as it affects agriculture. Attention to the economic factors that impinged on those decisions, and to their interaction with the political forces, is left for the section titled "Interactions of Policies and Markets."

Factors Conducing to Discrimination against Agriculture

All of the countries covered by the project except the Republic of Korea and, arguably, Portugal discriminated against agriculture. Although a number of factors led to the discrimination, the evidence strongly points to the role of two key phenomena: ideology, on the one hand, and imperfect knowledge, on the other.

There are two striking uniformities that appeared from the individual studies. The first is that indirect discrimination against agriculture was usually far more costly for farmers than was direct discrimination. Moreover, discrimination through the exchange rate (which was uniform across commodities) and protection of industry were in most countries the largest sources of discrimination against agriculture. For many import-competing commodities, direct measures provided only a degree of offset to indirect taxation. The second uniformity is that farmers' associations and other groups attempting to influence the political process focused their efforts on influencing *direct* interventions and were relatively silent in political fora where exchange rates and quantitative restrictions and tariffs on industrial imports were decided on.

In a sense, the failure of farmers' organizations to attempt to exert influence over these variables is an important clue as to the relative importance of ideology and knowledge: even in countries, such as Colombia, in which farmers' organizations were described as being "politically powerful," there was a consensus of the modernizing elite that "industrialization," and the pulling of resources from agriculture to industry in order to finance it, was a top-priority societal goal.⁵

It is difficult to overestimate the role of this belief in "industrialization" in legitimating the overall tilt of policy to taxing agriculture and favoring industry. As Bates stated in introducing his themes:

Like all nations in the developing world, the nations of Africa seek rapid development. . . . Common sense, the evidence of history, and economic doctrine all communicate a single message: that these objectives can best be secured by shifting from economies based on the production of agricultural commodities to economies based on industry and manufacturing. The states of Africa, like states elsewhere in the developing world, therefore adopt policies that seek to divert resources from their "traditional" economic sectors (the production of cash crops for export) to their "modern" or "developing" sectors (their nascent industrial and manufacturing establishments) [1981, p. 11].

Lal puts the same point equally cogently:

Industrialisation has become identified with development in much of the Third World. Modern industry is seen to be the hallmark of a developed economy. Haunted by memories of colonialism, most Third World elites also consider the lack of an industrial base to be the major reason for their relative lack of power in their dealings with the West. Industrialisation is seen as an essential base both for their self-respect and for waging modern wars. . . . In the 1950s and 1960s, therefore, industrialisation came to be regarded as the major objective, and planning as the means to engineer economic development [Lal 1983, p. 70].

It would be difficult to underestimate the role of this widespread belief. It underlay economic policy formulation in virtually every developing country in the first quarter century after 1945. Indeed, it is still a powerful motivating force behind economic policy formulation in many developing countries.

Had the ideology of industrialization through planning and controls been widely at variance with perceived knowledge in the 1950s and 1960s, it is doubtful whether discrimination against agriculture would have been as prevalent and, even where it still prevailed, whether it would have been as great as it in fact was. However, at that time, development economists believed that there was "surplus labor" in agriculture that could be costlessly transferred to industry (see, for example, Rosenstein-Rodan 1984, pp. 208ff.). Simultaneously, there was a widespread belief that peasants in developing countries were economically irrational, and that the supply curve for most agricultural commodities was highly inelastic. Schultz summarized well the then-prevailing views before launching on his seminal work which challenged them:

The doctrinal answers run as follows: the opportunity for growth from agriculture is among the least attractive of the sources of growth; agriculture can provide a substantial part of the capital that is required to mount industrialization in poor countries; it also can provide an unlimited supply of labor for industry; it can even provide much labor at zero opportunity costs because a considerable part of the labor force in agriculture is redundant in the sense that its marginal productivity is zero; farmers are not responsive to normal economic incentives but instead often respond perversely, with the implication that the supply curve of farm products is backward sloping; and large farms are required in order to produce farm products at minimum costs [1964, p. 8].

Thus, not only was it believed that agriculture could grow at best only slowly, but it was widely believed that taxing agriculture was virtually costless. Peasants were thought not to respond to incentives. Moreover, it was expected that measures taken directly to alter peasant behavior would increase farm incomes. These measures were to include actions such as the introduction of fertilizers, pesticides, and other chemicals; the provision of irrigation; the education of farmers, researchers, and extension workers; and the organization of farmers into large-scale farms.⁶

It is thus clear that the ideology of development, which was based on the belief that industrialization was the key to higher incomes, was the foundation that sanctioned, or legitimized, political actions which discriminated against agriculture.⁷ The fact that the economics profession at that time did not have the knowledge to show that such discrimination was costly permitted the ideology to prevail without serious challenge.

Moreover, agricultural interests were evidently relatively powerless to question the overall stance of economic policies favoring industrialization because of the consensus that had arisen in support of the sorts of import-substitution industrialization policies that were adopted. Insofar as those agricultural interests were organized and effective, they therefore opted instead to support sector-specific policies and to attempt to offset some of the direct discrimination against agriculture. As will be seen, organization was often on a commodity-specific basis, which further reduced the potential for pressures to remove or reduce the overall discrimination against agriculture entailed by exchange rate and trade regime policies.

Determinants of Differential Treatment of Individual Agricultural Commodities

Even when it was believed that there was little overall supply response from agriculture, it was recognized that producers (although possibly not poor peasants) would shift their land and resources among competing alternative outputs in response to the incentives with which they were confronted. In light of that, one might have expected that those willing to tax agriculture to subsidize industrial development would have imposed reasonably uniform taxation on agriculture and let the matter rest there.

In fact, within each of the countries covered by the project, direct measures were adopted which significantly affected the relative returns to different agricultural activities. As mentioned at the beginning of this chapter and as demonstrated by Schiff and Valdés, discrimination between exportable and import-competing agricultural commodities was pronounced in almost all of the countries covered by the project. Furthermore, there were systematic differences in the treatment of staple food crops and other agricultural commodities. Finally, there were even differentials in the degree of discrimination within each of these categories, depending on a host of factors.

Turning first to the most predominant pattern, exportable crops were normally the target not only of the indirect discrimination accorded by the exchange rate and the trade regime, but also of export taxes and other measures. By contrast, some of the indirect discrimination against exports was partially or entirely offset for individual import-competing commodities. This again attests to the power of ideology (and lack of knowledge): just as it was believed that industrialization was the key to development, it was also believed—as already mentioned—that supply responses were highly inelastic *and* that prospects for the expansion of exports of primary commodities were highly limited. Lewis well summarizes the state of thinking in the 1950s:

In the 1950s two arguments were developed against the agricultural export strategy: the terms of trade argument and the dependency argument. The terms of trade argument was in two parts, one historical and one theoretical. The historical argument was that since the commodity terms of trade had a long-term bias against agriculture, primary production should be avoided. . . . The theoretical argument is different from the historical. Whatever may have happened in the past, if primary producers develop their exports faster than the industrial countries demand, then the terms of trade must move against them. . . . Dependency belongs to a class of arguments that rejects the economists' usual objective. . . . In dependency one seeks instead fast independent growth. In this class also belongs a preference for one set of institutions rather than another (for example, family farms as opposed to plantations) [1984, pp. 123–25].

Analyzing further the terms of trade argument, Lewis noted: "The case of inelastic export earnings was also opened up in the 1950s. International trade theory assumes that a country can always earn more foreign exchange by exporting more commodities or services. It is, however, logically possible for a country to have difficulty in earning more" (1984, p. 127).⁸

Whether one wishes to classify the terms of trade and dependency arguments as "ideology" or "state of knowledge,"⁹ there is little question that they formed the intellectual basis for "import substitution" among agricultural commodities and discrimination against traditional export crops.

Among the experiences of the countries covered in the World Bank project, that of Colombia is perhaps the most vivid illustration of the differential treatment of agricultural commodities as a function of their trade status. Like most developing countries, the drive toward industrialization through import substitution in Colombia was strongly supported by the "modernizing elite," as García and Montes refer to the politically influential intellectuals, businessmen, government officials, and other middle class. This resulted in overall discrimination against agriculture, but treatment varied systematically with tradable status.

Coffee was the most heavily taxed commodity (with an average implicit taxation rate of 34 percent), followed by cotton (another exportable, with an average implicit taxation rate of 25 percent), and wheat (also exported, with an average implicit taxation rate of 17 percent). While some argued that there was a degree of monopoly power in trade regarding coffee, that argument certainly did not apply to other exportables. Meanwhile, rice was protected when it was import-competing and became taxed when it became an exportable commodity. As rice production gradually supplanted imports, the degree of direct protec-

tion fell and, finally, by the 1970s, rice was the second most heavily taxed commodity (García and Montes 1989, pp. 73ff.).

There were certainly factors additional to a country's drive for import-substituting industrialization that affected the extent to which individual commodities were taxed in various countries. In times when foreign exchange was perceived to be scarce (itself a result of the trade and exchange rate policies supporting import substitution policies), efforts to encourage domestic production of import substitutes intensified. Moreover, the regional location of the production of different commodities and the relative political power of these regions mattered. Portugal provides an especially good example of the regional dimension of pricing policies.¹⁰ As the political importance of different regions changed, the relative treatment of different agricultural commodities also changed, although other variables were also naturally influential. Côte d'Ivoire is another example of a country in which regional considerations were important: protection of rice was high in part because it was import-competing but also in part because rice was grown in the north.

More generally, the political influence of the producers of different commodities affected relative taxation. In Sri Lanka and Malaysia, rice growers tended to be small producers whose support was important to the major political parties. By contrast, the major export crops were grown on large plantations whose owners had much less political influence. In these instances, support for rice and direct discrimination against plantation crops was greater than in circumstances in which large growers had more influence in the governing political coalition.¹¹

One other important factor must be considered. Despite indirect discrimination against agriculture in all the project countries, and in virtually all developing countries, there was a partial offset in government policies toward the provision of vital agricultural inputs. In many instances these inputs were heavily subsidized, at least when they were available. Some, such as irrigation water, were on occasion provided without charge to end users.

The commodity-specific incidence of input subsidies varied with the technology of production and also with the availability of subsidized inputs. In many instances producers with access to subsidized inputs received in effect an offset to a substantial part of the implicit direct and indirect taxation to which they were otherwise subject, while producers who did not receive subsidized inputs had no offset.¹² Obviously, the extent of the offset would have varied across commodities, both with the rate of subsidization and with the percentage of output price that the input subsidies represented. No country author, however, reported significant variation on that account. What was frequently reported was that it was the larger producers who had more favored access to subsidized inputs.¹³ It is interesting to note how pervasive the phenomenon of the tilt toward large-scale farmers was. Among the countries in which au-

thors noted the phenomenon were Turkey,¹⁴ Morocco (Tuluy and Salinger 1989, p. 134), Ghana,¹⁵ and Sri Lanka (Fernando 1987, p. 90).

More generally, the political scientist Henry Bienen has noted: "There is an accumulation of evidence that men of power and influence are better able to take advantage of government programs through access to loans, through getting land rights, and by having timely information. This is no news in Africa. It is also true that extension and sales agents prefer to deal with educated farmers" (1986, p. 42).

The Bienen quote points to an interesting interaction which will be discussed further under "Interactions of Policies and Markets": the bias of the system of subsidized input distribution toward larger farms was fed both by considerations of political desirability and also by the realities of administrative feasibility. Larger and more prosperous farmers tend to be located in areas more reachable by low-cost modes of transport; such farmers are likely to be geographically clustered in some regions of the country (usually those more populous and thus more politically valuable); and it is easier to parcel out, for example, subsidized credit, in larger amounts than in smaller ones. Thus, not only was it politically convenient to gain support of larger, more influential farmers through the provision of subsidized inputs, but this sort of distribution network was also one that was relatively easier for the bureaucracy to administer.¹⁶

To the extent that some agricultural commodities were grown more in large farms than in small ones, therefore, the offset to direct and indirect implicit taxation provided by subsidized inputs was greater for the large-farm commodities.¹⁷ Quantitative estimates of the magnitude of the offset are difficult to come by, because data on the distribution of subsidized inputs by farm size—and even by commodity—are seldom available. What is certain is that, in the aggregate, input subsidies were not sizable enough to offset any significant portion of the implicit direct and indirect taxation of agriculture. However, the extent of taxation was probably less for large-scale farmers than for small-scale ones, who bore the brunt of the implicit taxation and had much more limited access to subsidized inputs. This phenomenon will be discussed further in the section "Built-in Inertial or Perpetuating Factors in Policies," in which the use of existing institutions for current political purpose is discussed.

Differences among Countries in the Degree of Discrimination

It has already been indicated that to "account for" discrimination against agriculture is not enough: differences in the treatment of individual farm commodities and differences among countries in the degree of discrimination must also be considered. In one sense, the factors already discussed may partially account for these differences: the fact that some countries' agriculture was strongly export-oriented

while others' was less so is clearly one factor in explaining differences in the average degree of discrimination. Likewise, the extent to which import-substituting industrialization was pursued was probably a factor.¹⁸

There remain, however, significant differences among countries in their overall discrimination against agriculture. This shows up clearly in the difference in discrimination against agricultural export crops between Côte d'Ivoire and Kenya on the one hand (see Lofchie, forthcoming) and Ghana and Zambia on the other. But it also shows up in other parts of the world and in changes within countries over time. Colombia appears to have discriminated less against traditional export crops than did the Dominican Republic and Argentina. Korea shifted from discrimination to protection of agriculture in the 1970s.¹⁹ To a considerable degree, these differences are explained by the extent to which farmers or their representatives were part of the governing coalition. That variable clearly affects the degree of overall discrimination. As articulated by Bates:

One source [of variation among countries] appears to derive from the political origins of the governments which came to power with the end of colonial rule. In particular, the location of farming interests, with respect to the coalition seizing power from the colonial government, appears to have made a major difference in the pricing policies of the post-independence regimes. In Ghana and Zambia, for example, the parties which seized power had a strong urban base. . . . Moreover, in both cases, the political movement which seized power had earlier broken away from and subsequently out-manuevered more conservative political factions which had been based upon commercial agriculture. . . . By contrast, in the Ivory Coast and Kenya, the political movements which seized power at the time of independence remained strongly centered on a political base made up of commercial farmers²⁰ [1983, p. 113].

The same pattern is observable in other countries covered in the project: in Sri Lanka, the Sinhalese peasants were an important part of the political base of the governing party in the post-1978 period, whereas the ruling party was much more urban-oriented during the period of severe agricultural discrimination. In Pakistan, Bhutto's government appears to have been much more urban-oriented than was that of Zia. In Malaysia, the rural base of the governing party stands out strongly, as does the relatively minor degree of discrimination against agriculture in Malaysia, as contrasted with most other developing countries. Even in Latin America, the pattern persists: the political basis for most Argentine governments was strongly urban; that for Chile was also urban-oriented.²¹

Another telling piece of evidence comes from Hansen's "twinning study" of the similarities and differences in the development patterns of Turkey and Egypt. Hansen directly addressed the question of why Egypt, where the rhetoric of support for farmers was so strong, in fact discriminated against them more than did Turkey, where the rhetoric was far less insistent.

The weak price position of Egyptian agriculture from the early 1950s to the late 1970s as compared with that of Turkey probably reflects the changes in the political power structure of the two countries. . . . The shift from autocracy to parliamentary democracy in Turkey, in time coinciding with the opposite shift and the destruction of the big and middle-sized landowner classes in Egypt, tilted the relative political balance in Turkey in favor of agriculture and in Egypt in favor of urban society. The shifts were reflected in the relative price structures. . . .

[In Egypt] after the land reforms of 1952 and later and the accompanying destruction of landowner power, . . . agriculture not only was on the defense . . . but became the exploited underdog. With the big and middle-sized landlords eliminated, agriculture was left without any political clout because . . . the peasantry was never given any serious political role under Nasser. . . . While thus, beyond all dispute, small farmers gained instantaneously from the redistribution of land, over time agriculture as a whole, including small farmers and landless labor, tended to lose from the destruction of the big and middle-sized landowner classes. . . .

Long term structural developments in Turkey have . . . been almost the opposite of those in Egypt. . . . The futile attempts at land reform . . . never seriously threatened big landowners and were never pushed by landless labor. . . . Parliamentary democracy gave clout to agricultural and rural population through the popular vote. The competition for the rural vote since the 1950s has been reflected in relatively favorable support price policies for agricultural outputs and subsidization of inputs²² [1992, pp. 532–35].

Further confirmation of this basic pattern arises from consideration of the various reform efforts. What is striking is the extent to which reforms which basically altered the direct degree of discrimination against agriculture also altered trade and exchange rate policies in ways which reduced indirect discrimination. This pattern, which was surprisingly pronounced in the countries covered by the World Bank project, is pervasive: almost all significant improvements in the direct treatment of agriculture were accompanied by a marked change in exchange rate policy and hence an improvement in the treatment of agriculture through indirect means. Moreover, many reforms took place at a time when the government changed.

This striking finding is further confirmation both of the proposition that the influence of agricultural interests within the ruling party (or coalition) was important in affecting the degree to which governments were willing to discriminate against agriculture and of the hypotheses set forth in the first section of this chapter as to the commitment of governments to development through industrialization. The set of ideas that supported import substitution through industrialization and discrimination against agriculture was ingrained. Indirect discrimination was going to take place in any event in the name of development and industrialization. The best that agricultural interests could do when they did have political power was to reduce the degree of discrimination and to offset part of the indirect discrimination.

Conclusions: The Political Economy Basis for Discrimination against Agriculture

The pieces of the underlying puzzle can now begin to be put together. In all the developing countries that were studied, there was a strong consensus among the modernizing elite that raising living standards and achieving economic development were major social objectives. That consensus translated, however, into the view that industry was to be highly encouraged through protection against imports, subsidization of imports of needed capital goods and inputs, and other means. It was further believed that most of agriculture represented "backwardness," that agricultural output was unresponsive to incentives, and that, therefore, agriculture could be discriminated against in order to raise a surplus for industry without large economic costs.

This set of ideas, or rationales, for policy was supported, or at least not seriously challenged, by the state of economic knowledge at the time. The limits, therefore, to the extent of discrimination against agriculture arose from two sources. First and foremost, when agricultural interests were important in the governing coalition, those interests could resist to a greater or lesser degree the political impulse to increase discrimination against agriculture. Secondarily, there was considerably more support for—or at least less discrimination against—import-substituting agriculture than there was for exportable agriculture. In part, this was again ideologically derived, buttressed by the belief held at the time that world demand for primary agricultural commodities was much less income- and price-elastic than subsequent evidence has indicated. In part, however, the support for import-competing agriculture derived from difficulties with foreign exchange and other problems with which governments were confronted as a consequence of their neglect of exports. Finally, the economic consequences of the policies themselves limited and influenced what could be done and simultaneously induced policymakers to alter policies.

This consideration, however, leads directly to analysis of the economic influences on policy formulation, the second major theme that must be considered in the political economy of agricultural pricing policies. To a considerable degree, the responses to prevailing economic policies are not entirely anticipated and generate political reactions, which in turn feed market responses. That is the subject of the next section.

Interactions of Policies and Markets

The last section analyzed the forces that led to a willingness on the part of governing coalitions to discriminate against agriculture as part of their quest for modernization and development. That focused on the underlying ideology of industrialization, the lack of economic understanding of some of the implications of that strategy, and the relative power of agricultural interests to restrain political impulses to discriminate more heavily still against agriculture.

If those considerations were all, or even most, of the story of agricultural pricing policies in developing countries, however, most of the analysis of why countries did or do discriminate could be left to political scientists. In fact, there is a second half to the story, and that centers largely on the consequences, for the evolution of policy, of the fact that economic variables constrained, sometimes sharply, political behavior. In turn, economic responses to policies on occasion changed the nature of the political equilibrium.

For, as will be argued below, the economic consequences of agricultural pricing policies (and other policies intended to foster industrialization) were often other than anticipated, and the economy failed to yield the hoped-for results. The second half of the political economy story, and one that is perhaps as important as the first half, is how consequences of policies undertaken then induced changes in the political decisions.

In a sense, it is a much messier story than the first part. Much of it may best be characterized as the "whoops!" theory:²³ policymakers, desirous of achieving one of their goals, decided on a particular line of action.²⁴ Once that was decided on, however, market responses (including unanticipated administrative difficulties) resulted in undesired effects. The unfavorable surprises then led to consideration of further policy alternatives, which, when put into effect, led to further undesired effects. Once this cycle started, policymaking became considerably more ad hoc than had initially been intended.

It is interesting to contrast the reactions of political scientists and of economists. Two authors have explicitly addressed this issue. Johnson states:

I have observed the developments of agricultural policies in a considerable number of countries for the past four decades. One of

the most discouraging lessons I have learned is that the failure of a policy measure is almost never followed by the abandonment of that measure. Instead, an effort is made to fix the measure, often in a way that exacerbates its already bad record, or a new measure is introduced designed to offset some of the worst effects of the first measure. If low farm prices inhibit output growth and the adoption of new production techniques, the simple alternative of freeing the price is seldom given more than a moment's consideration; the alternative adopted is to introduce a subsidy on some input such as fertilizer, whose benefits will go primarily to the larger and more well-to-do farmers [1988, p. 360].

Bates, by contrast, refers to a "bureaucratic" cycle:

Suppose that a panic has just occurred and government prices are therefore high while stocks are low. Production responds and is high at the time of the fall harvest in year "1." Because of its desire to build adequate reserves, the government keeps prices unchanged. As a result, production is again high in year "2." But now public stores are full, so the board does not accept all the maize that is grown. The government realizes it has a problem; its stocks constitute a financial burden and it cannot take in next year's harvest. So it authorizes exports and drops the price offered to farmers. The price decline is announced early in year "3," and the farmers, hurt by last year's nonacceptance and confronted with lower prices, reduce production. . . .

It is important to note that the cycle outlined here refers to public stocks and price-induced deliveries to the board. It does not include variables over which the government has no control, including such key factors as the weather. Nonetheless, there is a powerful and immediate relationship between the weather and the phenomena described. For the pressures which systematically operate on the bureaucracy induce periodic states of vulnerability, when public stocks are low. If a drought should hit at a time of vulnerability, then . . . sales by the board will rise dramatically and the board's stocks decline dramatically. Policy-induced shortages in reserves thus become weather-induced food crises when natural "external shocks" hit endogenously generated shortages in maize stocks [1987, pp. 58-59].

Each of these explanations captures part of the story. Johnson notes the political imperative for intervention, while Bates focuses on the interaction of the misunderstood economic responses to policies and the evolution of policy. Whether benefits are less than anticipated by proponents of policy or whether the costs are underestimated, the negative impact of policies is likely to generate political pressures for alternative solutions, and these become important in any understanding of the po-

litical economy of agricultural pricing policies. What is a political-economic equilibrium at a period of time may, without changes in policy or underlying economic parameters, nonetheless not be an equilibrium in the longer term. Those who were neutral toward a policy may come to oppose it (if consequences are unfavorable) or support it (if they are favorable), and the intensity of support and opposition can also change.

There are additional elements: in many countries, the initial motives for agricultural pricing policies were those of a "benevolent guardian" government; over time, however, interest groups—including the bureaucracy itself—sprang up to defend their interests in the programs. Moreover, once policies, or policy instruments, were in place, politicians perceived those instruments to be useful political tools and were reluctant to, or could not, relinquish them.

Jansen aptly describes the phenomenon for Zambia in her conclusion:

The Zambian government has accorded the agricultural sector an important role in national development and has implemented a wide variety of policies, projects, and programs to further its development. Results have always fallen far short of aims, however, and government activity since Independence has been marked by a pattern of periodic reappraisals, followed by announcements and implementation of new policies, projects, and programs. To date, no coherent strategy has been found [1988, pp. 38–39].

The economic reactions differed in different countries, depending on the nature of policies pursued, the extent of the divergence between market pressures and government policies, and other factors. In some cases—notably Ghana, Sri Lanka, and Turkey (and, to a lesser degree, Egypt and Morocco), the interactions of policies and market responses continued in a downward spiral until fundamental reforms were undertaken in reaction to the economic consequences of earlier policies.

In at least two other cases—Argentina and Zambia—the downward spiral continued and had not been reversed to the time of writing. In other instances, including notably Chile, Korea, and Pakistan, the political power of agriculture changed, either because of a change in government, or because of a change in the political perception of agriculture's support for the ruling coalition. In Brazil, Colombia, Côte d'Ivoire, the Dominican Republic, Malaysia, and Thailand, the situation appears to have stabilized, with continuing modifications in the instruments of intervention and with the capture by various groups of the political and economic benefits from the system, but with little fundamental economic pressure for changes in the system.

Descriptions of the various economic and political pressures for change and for perpetuation of the policy instruments are available in the country studies and need not be repeated here. Instead, the focus is on economic reactions: those leading to the necessity for change and

those perpetuating the status quo. Clearly, the outcome—a bureaucratic cycle, radical policy reform, a downward spiral, and so on—was the result of the interaction of these market forces with the political interests analyzed in the last section.

Several sets of reactions have been discussed in earlier chapters of this volume. Here, what is required is an attempt to provide a systematic identification of the ways in which these pressures interact with the political process. First, production and market responses were important in many instances in inducing policy changes. Second, pressures on governmental resources—financial and administrative—were important influences on policy in a number of cases. Third, administrative and bureaucratic inabilities to deliver as promised in policy pronouncements led to pressures for change. Finally, and working in the opposite direction, once policy instruments were in place, a number of economic responses increased the political support for their perpetuation. Naturally, there were interactions between these various categories. A market response to smuggle crops out of the country, for example, would automatically intensify financial pressures on a government. Nonetheless, it is useful to consider them separately in what follows.

Production and Market Responses

As discussed under “Factors Conducting to Discrimination against Agriculture,” agricultural pricing policies, especially in the 1950s and early 1960s, were undertaken in the mistaken belief that supply responses would be very small. These responses in fact were significantly larger than anticipated and took several forms: (1) production shifted from exportable crops to import substitutes, with an attendant loss of foreign exchange earnings; (2) rural people migrated to urban areas even more rapidly than they otherwise would have, thus shifting downward the supply of agricultural commodities and raising urban demand; (3) unofficial markets sprang up through which the smuggling of export crops and black markets for domestic food crops reduced the span of control of the government and its ability to extract resources from agriculture; and (4) uneconomic policies—such as pan-territorial pricing—led to much more costly resource misallocations than had been anticipated.

All of these responses led to political reactions. Sometimes, as in Bates’s bureaucratic cycle, prices were raised, and the degree of discrimination reduced, in direct response to perceived production shortfalls, although this happened more often among import-substituting commodities than with exportables. By contrast, when production of exportable crops was declining, or at least failing to grow, the likelihood of a balance of payments crisis and subsequent realignment of the trade and payments regime (including a devaluation of the nominal ex-

change rate) increased sharply. In those cases, pressures of the market were felt through their impact on export earnings and therefore on the overall foreign trade position. This is certainly what finally happened in Ghana and Turkey.

When the response to price and other controls was to engage in smuggling or black market activity, that also put pressure on policymakers. Many policymakers were aware of smuggling and black markets and recognized that the presence of those alternatives limited the extent to which they could discriminate against agriculture.²⁵ Sometimes, however, the phenomena of smuggling and/or black markets led to crackdowns and attempts at tighter enforcement. This was true, for example, in Ghana in the 1970s and in Pakistan in the 1960s. However, when black market activity increased, the effectiveness of policy instruments also fell sharply. When export crops were smuggled out of countries, there was often a negative effect not only on official receipts of foreign exchange, but also on government revenues as export crops escaped the taxation net. Moreover, when black markets increased in importance for food crops, the effectiveness of domestic programs to provide "low-cost" food to urban consumers sometimes diminished sharply, and governments simply could not provide enough food to supply the market at the prices that had been decreed.

Pressure on Governmental Resources

A striking phenomenon that emerges repeatedly from the individual country authors' analyses is the extent to which objectives of agricultural pricing policy were mutually inconsistent. At least, they would have been recognized to be mutually inconsistent if budget constraints had been recognized. Keeping consumer prices low is inconsistent with inducing increased agricultural production (once it is recognized that agricultural supply is responsive to price) unless (as in the case of Egypt) there is a mechanism to cover the financial costs of the policies.

Thus, as might be expected, budgetary pressures were a major factor in limiting the magnitude of the subsidy to urban consumers in most of the project countries. Indeed, it is probably the existence of these pressures which account for the very small magnitudes of the realized transfers to urban consumers, as documented by Schiff and Valdés (forthcoming). Budgetary pressures also operated to restrain input subsidies.

In some countries the inability to reconcile political objectives within the constraints set by a governmental budget led to large and growing fiscal deficits. In those instances the lack of reconciliation was a hallmark of the entire political process and not simply the process of agricultural decisionmaking. Generally, the result was inflation. The cycles of economic policy could be described as follows: a period of inflation

and excess expenditure would culminate in an effort to stabilize the economy, with a consequent temporary reduction in the magnitude of a variety of governmental spending programs (including those for agriculture). These measures would be followed by a slowdown in the rate of inflation and an improvement in the international economic position. That, in turn, would be followed by a period of rising expenditures and increased fiscal deficits. And so a new cycle would begin. This was the Turkish pattern prior to 1980, when the authorities undertook an effort at more fundamental reforms. It would also appear to have been the Argentinian pattern throughout much of the period since the Second World War.

In other countries, when budgetary pressures increased, efforts were made to reduce expenditures by resorting to direct controls instead. Efforts at compulsory procurement of food grains, such as occurred in Pakistan and Sri Lanka, are examples of this sort of response. In these and other instances, the political response to fiscal constraints was an effort to transfer to farmers, or others, the costs of programs that were off budget. As that happened, production responded negatively.

Bureaucratic and Administrative Failures

The inability of a government to deliver once policies were decreed appears to have been a particularly imperative political mandate to change: the political costs of administrative ineptitude appear to have been high. Despite the frequency of administrative difficulties, the responses to them were sufficiently rapid (although often unrealistic) so as to lead one to conclude that governments cannot afford the appearance of incompetence.

Once a policy to provide food to urban consumers at price x or to purchase all of crop y at price z from farmers has been announced, the inability to deliver on the commitment has serious consequences for governments. The history of Sri Lankan pricing policies reads almost as if it was nothing but bureaucratic responses to an inability to carry out announced policies. Inadequate storage facilities, inability to deliver inputs to farmers on time, and other administrative breakdowns prompted continuing changes in the system. In some instances, the "administrative failure" was well outside the control of the parastatal agency charged with the provision or distribution of food or other agricultural commodities. In many of the country studies, inadequate transport facilities prevented the timely collection of crops from rural centers and simultaneously blocked the delivery of fertilizers, insecticides, and other inputs at appropriate times.

Yet it was these failures that prompted "reorganizations" through the consolidation of existing parastatals, the splitting of functions, changes in the lines of command, and other bureaucratic responses

more quickly than the falloff in production levels or the emergence of black markets. Whether this is because the "technical" requirements of an economic system, such as transport and storage, are those that are most visible to onlookers, or whether it is because a failure to deliver on promises provides a lack of credibility of the government, which in turn is politically costly, is a question that cannot be answered on the basis of the evidence from the World Bank project. What is clear is that administrative incapacities were at least as important in driving changes in agricultural pricing policies and instruments as were governmental resource constraints and/or market responses to those policies.

Built-In Inertial or Perpetuating Factors in Policies

As pointed out by Johnson and quoted above, the continuous evidence of unsatisfactory outcomes often does not appear to result in the abandonments of policies, but rather in changes. Sometimes these changes make matters worse over the medium, and even the short, run. Usually, they do not go to the heart of the difficulties prompting the change.

A key question, therefore, is why the impetus for change, and the evidence of unsatisfactory and undesired results, even when it emerges repeatedly, usually does not lead to the abandonment of direct controls and interventions and to lasting reductions in the degree of discrimination against agriculture. There is, of course, no simple answer. Nonetheless, a few key ingredients may be identified.

First, a government institution, once established, becomes a political instrument, perceived as useful by politicians. Second, once institutions are established, they are very often "captured" by groups who use them for their own purposes, often different from those initially intended. Third, those who administer institutions or are employed by them have a vested interest in the perpetuation of the institution.

The first proposition, that government institutions become useful political tools, is perhaps better understood by political scientists than economists and has been well explicated by Bates:

One obvious conclusion sometimes drawn from the economists' critique of . . . agricultural programs . . . is that governments should withdraw from agricultural markets and let economic forces prevail. Such counsel is naturally ignored by policy-makers as hopelessly naive. Similarly, although governments intervene in markets to secure social objectives, it would be unrealistic to believe that these public objectives are the sole force behind their choices. . . .

To increase food supplies, governments could offer higher prices for food, or they could invest the same amount of resources in food production projects. There is every reason to believe that pricing policies are the more efficient way. . . . But governments in

Africa systematically prefer project-based policies to price-based policies. I shall argue that they do so because they find project-based policies politically more useful.

To strengthen the incentives for food production, governments can increase the prices of farm products, or they can subsidize the costs of farm implements . . . governments prefer the latter policy . . . in part because of its superior political attractions.

In the face of shortages, governments can allow prices to rise, or they can maintain lower prices while imposing quotas. . . . African governments choose to ration; and when they do so, they give no systematic preference to the poor. Their use of nonmarket mechanisms in the face of shortages reflects not their social values but their calculations of how their political interests can best be served [1981, pp. 4–5].

Bates then summarizes his conclusions: “Government intervention in markets generates political resources, and . . . these resources are then distributed to build organized support for the political elites and the policies they propound. Market intervention becomes a basis for political control” (1981, p. 7).

The Bates argument, thus, is that by intervening in markets and preventing prices from equilibrating demand and supply, the political authorities are in effect expropriating resources, the rights to which they then transfer to others. In so doing, they buy the loyalty of those to whom the valuable commodities or rights are transferred at below-market prices. At first glance, the argument should be no more applicable to agriculture than to any other type of economic activity. However, when combined with the propositions set forth above—that the modernizing elite believed in industrialization and was ill-informed as to the economic consequences of strong discrimination against agriculture for the growth of agricultural production—it is evident why agriculture has been the victim of so much greater discrimination than other economic activities.²⁶

Related to the political instrument argument is the “capture” phenomenon. It was seen in chapter 3 that in most of the developing countries, intervention in agricultural pricing started under colonial governments or during the Great Depression. In the former set of cases, the motive was usually to assist the large-scale expatriate farmers or to assure a supply of agricultural commodities during the Second World War and had little to do with the well-being of the small farmers. In the latter case, the motive was closely linked to insulation of domestic prices from the impact of the worldwide fall in prices associated with the Great Depression.

In both circumstances governments after the Second World War inherited marketing boards whose purposes were generally not consistent with the objectives held at the time by the governing coalition. One

might have anticipated that marketing boards, perceived to have been established to help the expatriate farmers at the expense of native farmers, might have been shut down. In fact, they were universally converted into agencies undertaking a similar set of tasks but for very different purposes.

In some instances marketing boards changed from being instruments to support large-scale farmers into agencies charged with the support of local, small-scale farmers. This seems to have been the case in Malaysia, Pakistan, and in Sri Lanka. In other instances marketing boards changed from being agencies concerned with supporting farmers to agencies concerned with extracting revenue from agriculture. This was certainly true in Ghana, as documented by Stryker, and probably true in most African countries (see Bates 1981, p. 26).

Generally, changes in function initially took place with little change in organization. Only after administrative difficulties of the type discussed in the previous section took place were administrative changes introduced. This is fairly strong evidence that suggests that governmental institutions, once established, are perceived as instruments by those competing in the political arena. Once an institution is there, it becomes a vehicle to be used to further the political ends of all participants. As such, institutions may be captured by groups very different from the intended beneficiaries and can change function. If they are serving the interests of an important group in the governing coalition, the question to which the authorities are likely to address themselves is not, *Is this institution fulfilling a useful social function?* Rather, it is likely to be, *Are the functions being performed by this institution maximizing the institution's political value to the coalition?* If not, to what uses can the institution be put?

As such, institutions may outlive the purposes for which they were initially intended or, as is more likely, be captured by interested parties for purposes quite different from those for which they were established.

Clearly, Olson's ideas apply with considerable force in this circumstance: those most interested in coffee, for example, are the producers. A coffee board is very likely to be an instrument of the growers when they are in the governing coalition; when they are not politically influential, the coffee board may well become an instrument of taxation of producers.

Among the findings emerging from the country studies, perhaps the most vivid demonstration of this "capture" principle comes from experience with input subsidies and their distribution. One of the more pervasive findings was that it seemed almost inevitable that to be the large-scale landowners were the prime beneficiaries of input subsidies, despite the frequent initial intention that they help the smaller farmers. An obvious reason for this was the greater political importance of the large landowners relative to the smaller ones. In this circumstance the admin-

istrative and bureaucratic factors that were conducive to distribution favoring the large-scale farmers were consistent with the political interests of the governing group in keeping the support of politically influential farmers in the governing coalition.

In addition to the capture of institutions by interested groups, there is also a tendency for institutions, once established, to create their own support. In the case of agricultural marketing boards and other government agencies involved in administering agricultural pricing policies, those benefiting from the institutions certainly included not only the officials deciding on agricultural pricing policies in ministries of agriculture and elsewhere in government, but also the employees of the parastatals carrying out the collection, transport, and distribution of agricultural commodities. In many instances, the employees of these institutions themselves became an obstacle to change. Among the countries covered by the project, this was most evident in Pakistan, where the group most strongly resisting reforms of agricultural pricing policies in the early 1980s (and the closure of some of the institutions which had been established in the 1970s) was the civil servants employed in the implementing agencies (Hamid, Nabi, and Nasim 1990, p. 123).

Conclusions

Discrimination against agriculture in developing countries has generally been pronounced. It has been more extreme the more ideologically committed those influencing policy have been to the notions of modernization through industrialization and import substitution; it has been more extreme where agricultural production consists predominantly of traditional exportable commodities; and it has been more extreme when agricultural interests have not been part of the governing coalition.

Indirect discrimination against agriculture through trade regime and exchange rate policies is generally of greater importance than direct discrimination. Interestingly, however, most major reforms of direct agricultural pricing policies have been carried out in conjunction with major reforms of the overall trade and payments regimes.

Several factors account for this. First, the underlying rationale for import-substituting industrialization has been important in providing the political resources to support the "extraction of resources from agriculture" directly, as well as in determining the nature of the exchange rate and the trade regime. Second, although there are a number of market forces that tend to erode the functioning of direct controls which suppress agricultural price, they are offset to a considerable degree by inertial factors which lead to alterations and tinkering with the system, rather than fundamental reforms. By contrast, in many countries the economic consequences of the trade and payments regime on overall

economic growth and macroeconomic stability have been sufficiently negative so that there have been questions regarding the wisdom of policies to industrialize through import substitution.

When those questions or the economic realities of a balance of payments crisis have led to fundamental economic reforms, they have encompassed not only the exchange rate and the trade regime but also agricultural pricing policies and a variety of other direct interventions.

Given the experience of the 1980s and the disillusionment with import substitution policies, it may be hoped that discrimination against agriculture, with its deleterious consequences for agricultural productivity and growth, will diminish as governments undertake policy reform programs. To the extent that an understanding of the consequences of severe discrimination against agriculture increases, that too should contribute to less discriminatory treatment for agriculture in future years.



Notes

1. Puzzles about the Political Economy of Agricultural Pricing Policies in Developing Countries

1. Most of these studies, however, focused only on agricultural policies that directly affected agricultural prices. A complete picture of policies affecting agricultural prices and incomes can be obtained only when economywide measures that affect returns (termed “indirect” in this volume) are also taken into account.

2. Some of the evidence is summarized in chapter 2 below, but there is much more in the individual country studies. See also Schiff and Valdés (forthcoming).

3. This pattern has apparently not been true over time. See Lindert (1991, pp. 29–83) for an analysis of the history of pricing policies toward agriculture in developed countries.

4. That farmers do relatively better in countries in which their numbers are proportionately smaller might, at first sight, be explained by their greater ability to organize when they are more concentrated. This would be consistent with Olson’s (1965) suggestion that the “free-rider” problem and organizational costs place relatively concentrated groups at an advantage in the political process. As will be seen, however, there are several other stylized facts that are not consistent with that explanation. In particular, developing countries systematically discriminate against export agriculture and support import-competing agricultural production.

5. Discrimination against agriculture, conversely, has clearly had effects on nonagricultural economic activity.

6. To be sure, there are multiple objectives served by policy instruments and, in principle, with enough instruments, any set of objectives could be achieved. In practice, however, conflicts between objectives are often not recognized and, at least regarding economic objectives, policy B offsets policy A so that the same outcome could be achieved at lower cost if policy B were abandoned and policy A set at a level approximating the net impact of the two policies. For agricultural pricing policy, one area in which this has had significant efficiency losses has been input pricing. Many developing countries have suppressed producer prices and then, in an effort to stimulate agricultural output, have subsidized input prices. The resulting wastes and inefficiencies have, on occasion, been substantial.

7. When a country exports food commodities, an export tax can be used to gain revenue, but to the extent that domestic prices are suppressed, producers may respond by producing less of the taxed commodities. Moreover, additional revenue could be obtained if taxation were on output, rather than on exports of the commodity. Food security is usually not an issue for exported foods, although there have been instances in which, over time, exports have ceased and imports begun as consumption increased more rapidly than production in response to low domestic prices.

8. In most cases government agencies purchasing foods do not explicitly distinguish between their interannual and interseasonal goals regarding stocks. This creates considerable confusion in debates over stock policy. (Correspondence from Alberto Valdés to author, 5 June 1990.)

9. The issue of whether public purchase and sale or strengthening of private traders would be the more effective policy instrument is left aside here.

10. An exception is Papua New Guinea, which did successfully adopt buffer stock policies for a number of key agricultural commodities (see World Bank 1986, p. 91). Estimates of the long-term trend in world prices for key commodities were used, and the government taxed half the excess and subsidized half the shortfall of the world price outside the estimated "normal" zone. Buffer stock arrangements that work through taxing and subsidizing the difference between the normal price range and the world price are probably cheaper than domestic stockpiling schemes, especially for dealing with annual fluctuations. Several countries, however, have stockpiled in an effort to offset annual fluctuations in the size of harvest due to weather. For example, the government of India has stockpiled key food grains, selling in years of bad harvest and purchasing in years of good harvest.

2. Government Policies and Policy Instruments Affecting Agriculture

1. To be sure, when decisions are made on such matters as whether to increase enrollments in primary schools at location A or B, politics are involved in the allocation of public resources. Such considerations, however, are not sector-specific.

2. Some observers have noted that subsidies of the European Communities, U.S. farm policies, and other practices of large producers may result in international prices for agricultural commodities which are below those which would prevail in an efficient world economy. As long as those relative prices are expected to continue, they nonetheless reflect the opportunities available to small trading nations and should be used to infer opportunity cost in the world market. Moreover, because most developing countries suppress producer prices even below those prevailing in international markets, the argument would not come into force until such time as border prices were at least at the international level.

3. When there is monopoly power in trade, the relevant contrast from a national viewpoint may be the marginal returns from additional sales of a particular commodity, rather than the international price of the commodity. For commodities for which monopoly power was deemed to exist, such as Thai rice and Ivoirien palm, efforts were made to base the counterfactual analysis on the marginal returns. The same situation applied to exports of sugar for those coun-

tries, such as the Dominican Republic and the Philippines, which exported sugar to the United States under its quota.

4. This equality can be achieved only when all buyers of factor services are subject to the same factor prices. Some analysts have insisted that there might be dynamic gains associated with some sorts of activities which might make the static resource allocation criterion inappropriate for developing countries. This would imply some uncapturable externalities associated with some activities. For purposes of analyzing agriculture, however, these considerations are not usually regarded as significant, and they will be ignored here. It should be recognized, however, that some defenders of discrimination against agriculture would defend that discrimination on grounds of the dynamic effects of industrial activity. See World Bank (1986) for a critical evaluation of this view, and chapter 7 for implications in the context of political economy.

5. If a country possessed monopoly power in trade, achieving equality between the domestic and international marginal rates of transformation would require the imposition of "optimal tariffs." See note 8 for a description of the empirical relevance for countries covered in the project.

6. Just as advocates of "industrialization" have insisted that dynamic gains might justify departures from efficient resource allocation in a closed economy (see note 2 above), the infant industry argument has been used as an argument to justify the protection of industrial activities (and therefore discrimination against agriculture) because of the presumed dynamic externalities of industrial activities. See Baldwin (1969) for a critical analysis of the infant industry argument. In practice the evidence is strong that patterns of industrial protection in developing countries could not be defended on infant industry grounds. See, for example, Bhagwati (1978) and Krueger and Tuncer (1982). Allowing for uncertainty and for imperfect competition also alters the argument. For purposes of analyzing discrimination against agriculture in developing countries, however, only the uncertainty argument warrants careful attention. See Schiff and Valdés (forthcoming, chap. 3) for a full analysis.

7. A nontradable commodity is generally defined as one whose transport costs are so high that domestic prices can fluctuate within a fairly wide range without inducing either imports or exports. Frequently cited examples of nontradable goods are electricity and construction, although these cases also illustrate the point that the same commodity may be nontradable in some circumstances and tradable in others: electricity is clearly a nontradable for Australia, but it is tradable between the United States and Canada and also among some European countries, and there are international construction firms that undertake contracts in which they import their equipment, materials, and labor to a construction site.

8. As mentioned, the exception is when the country has monopoly or monopsony power in trade and influences the international price by the amount it sells or buys. In that circumstance the international marginal rate of transformation is not the international price, but the marginal quantity of the other commodity obtainable when one more unit of the exportable or importable is sold or purchased. For expository purposes, it is assumed in this discussion that there is no monopoly power for the countries and commodities under consideration. In the individual country studies there were no commodities in which it was deemed that the countries covered had monopsony power as importers; in cases in

which it was judged that there was significant monopoly power in exports—or other market imperfections that resulted in a failure of the international price to reflect the relevant tradeoff, as in the case of sugar in the Dominican Republic—the authors attempted to estimate the elasticities of demand facing those commodities in international markets and to adjust their estimates of the marginal rate of transformation accordingly.

9. While it is conceptually simple to do this, there are a number of empirical difficulties in obtaining these estimates. If a policy mechanism such as a tariff is the only instrument used to influence the relationship between domestic and international prices, it is legitimate to use the height of the tariff as an estimate of the degree of divergence between the domestic and international price for the commodity in question. When other policy instruments are employed, however, the matter may not be as simple. If, for example, there is a marketing board which has monopoly power over imports and exports, a variety of empirical problems arise in estimating the prices that producers would receive if they could sell freely in a competitive market.

10. If a country would realize a high real rate of return on investment with a balanced current account, a deficit on current account financed by a capital inflow might take place. Such an inflow would balance tradables demand and supply over time, although the country's utilization of tradables might exceed or fall short of its production of tradables at any given time, depending on the balance between domestic investment and savings at the prevailing world real interest rates.

11. A difficult problem sometimes arises when public sector enterprises are clearly overstaffed or otherwise incur excess costs for political reasons. In principle, when overstaffing and other excess costs can be clearly identified, it is appropriate to treat those excess costs as a tax on users of the nontradable resulting from the policy generating the excess costs. In practice, it is exceptionally difficult to identify those costs empirically. The issue is important in analyzing pricing policies in countries where marketing boards are significant, because producer prices of tradables in a competitive situation would be the border prices less (for exportables) or plus (for importables) the costs of getting the commodities to and from the border or the consumer. Estimating the marginal costs of efficient domestic transport is exceptionally difficult when terrain differs from route to route and when there are questions as to the costs attributable to political motivations. This issue is also important when considering panterritorial pricing. See the section in this chapter titled "Nonborder Measures Affecting Agricultural Prices."

12. Most commodities covered in the project were tradable; the only major exception was white maize in Zambia and other Sub-Saharan countries, although a few other commodities, such as meat products in Chile, were deemed to be essentially nontradable. See table 1-1 of Schiff and Valdés (forthcoming) for a complete listing and classification of commodities that were covered.

13. A frequently encountered practice is for governments to impose border charges that are called something other than tariffs. Among the terms frequently encountered are "port handling tax," "import surcharges," and "guarantee deposits" (when potential importers must, at the time of placing an order, deposit with the government a sum of money in a noninterest bearing account which is refunded only after the commodity has cleared customs). For purposes

of analysis, each of these measures can be converted into a tariff equivalent—the amount of additional duty that importers would pay and be indifferent between payment of the duty and the payment of the other border charge.

14. Tariffs are normally set by legislation, which requires action by parliament. In many cases they are bound under the rules of the General Agreement on Tariffs and Trade. By contrast, decisions as to the domestic prices of agricultural commodities are normally made by a ministry or a committee of ministers. For this reason, tariffs are more difficult to change, and are therefore set in percentage terms.

15. A challenge for political economy is why these measures are chosen instead of tariffs. The latter raise revenue, whereas the former do not.

16. An export subsidy can be expressed as a percentage of producer price or as a percentage of f.o.b. price. In some instances countries have used multiple exchange rates as an equivalent method of taxing exports (as major exportable commodities were eligible for fewer units of local currency per dollar than were other transactions). In those circumstances an exportable eligible for a large number of units of local currency per dollar would be implicitly subsidized. The amount of the subsidy can be estimated once a uniform exchange rate has been estimated (see the last section in this chapter).

17. An exportable commodity subject to a production tax in the absence of monopoly power is discriminated against, but there is no differential between the domestic and foreign price. It is therefore treated as a domestic measure and discussed in the next section of this chapter.

18. Brazil taxed coffee exports, probably in the belief that Brazil held monopoly power with regard to coffee. However, Brandão and Carvalho did not include coffee among the commodities they covered. See García and Montes (1989, pp. 46ff.) for a discussion of coffee policy in Colombia. Export taxes were employed throughout the period they covered, and multiple exchange rates were in effect part of the time. Coffee was always subject to a lower number of pesos per dollar earned than were other categories of exports.

19. The Brazilian authorities also subsidized and taxed cotton exports on various occasions, and Brazil suspended cotton exports entirely in 1973. See Brandão and Carvalho (1991b, vol. 1) for discussions of cotton (pp. 62ff.) and soybeans (pp. 73ff.). Brandão and Carvalho note the wide swings in policy applying to exports of soybeans.

20. To be sure, shortages often resulted and black markets developed. See chapter 5 for a discussion.

21. It may be noted that when policies such as these are effective, they result in prices to producers *above* those that otherwise would have prevailed given the existing trade and exchange rate regime.

22. Starting with the 1981–82 crop year, minimum prices were indexed to avoid this problem. See Brandão and Carvalho (1991b, vol. 1, p. 52).

23. To the extent that farmers knew there would be a minimum price established and could estimate how the authorities would determine it, the institutional existence of a mechanism for setting minimum prices may nonetheless have altered perceptions of relative profitabilities.

24. One might anticipate that a price set by the government would result in either all or none of the crop being sold to the government. That this did not happen was a consequence of several factors: government procurement took

place throughout the country, whereas private traders were absent from some areas; the dates at which private traders would purchase differed from the government's timetable so that farmers anxious for cash would sell at a lower price to private traders; and the terms of sale (including judgments as to quality, responsibility for transport to the collection point, and so on) differed.

25. Governments have not always been able to honor their commitments. In Sri Lanka, for example, storage and transport facilities were insufficient to permit government agents to purchase agricultural commodities in a timely manner. See Fernando (1987) for an interesting account of the efforts of the government to increase its ability to carry out its policies.

26. Changing the price of a particular commodity affects the incentive for producing it but generally does not affect the farmer's choice of inputs for production, although there may be instances in which low output prices discourage the application of inputs. In the case of input subsidies or taxes, there are two effects. On the one hand, subsidizing an input used in the production of a particular crop makes the production of that crop more profitable; on the other, it can also induce substitution of that input for others and thus lead to economically inefficient techniques of production. For example, tractors were heavily subsidized in the 1950s in Turkey. This clearly made the production of wheat more profitable than it would otherwise have been; it also induced the use of mechanical means of production in a country which, at that time, was heavily abundant in labor. Thus resources were diverted to wheat production which would have earned more (valued at international relative prices and taking into account the international cost of tractors) in alternative uses; in addition, wheat was grown with more capital inputs and fewer labor inputs than was economically efficient. See Hirsch and Hirsch (1963) for an analysis.

27. The protection to domestic fertilizer production, and hence the excess of domestic price over the border price charged to farmers, reached 82 percent in 1972.

28. As will be seen in chapter 5, there were often difficulties in distributing cheap or free inputs, and different farmers benefited differentially from input subsidies. In some instances, benefits differed by location and by product (in particular, crops grown on irrigated land received differential benefits from crops grown on land without irrigation); in others, by size of farm. In other cases, problems in administering the system resulted in the delivery of inputs such as water or fertilizer too late in the growing season for maximal effectiveness.

29. Nonagricultural inputs into agricultural production are used in different proportions for different agricultural commodities. As a result, anything that affects the relative price of nonagricultural commodities affects the relative profitability of alternative uses of farm resources. In the country studies, however, the differential impact of indirect macroeconomic policies was very small contrasted with their impact on the overall profitability of all agricultural activities. As a result, this avenue of transmission of indirect policies is not discussed here.

30. This statement does not hold in the case of panterritorial pricing, a practice found in many of the countries. With panterritorial pricing the producer price is uniform over a large area (usually the entire country), and the government absorbs the higher transport costs to and from more distant locations. Countries adopting panterritorial pricing in the project included Chile, Egypt, Ghana, Morocco, Sri Lanka, and Zambia.

31. An indication of the costs of panterritorial pricing is provided by Atsain and M'Bet (1988, p. 33): it is estimated that the cost of panterritorial pricing of rice was equal to 27 percent of the total transport costs.

32. Even prior to independence, Ivoirien growers received lower prices for their crops than did French growers. A tradition of marketing at below-border prices was thus already established.

33. APCOM was established under President Zia, and controls were less pervasive than they had been under the Bhutto government. APCOM was charged with basing its decisions on a number of criteria, including "costs of production" and export/import parity ratios.

34. This was referred to as the "interministerial purchase price war." It apparently caused delays in the announcement of the final purchase price of farm products, resulting in delays in payments to producers (Moon and Kang 1989, p. 185).

35. In one of the many efforts to improve its performance, the government removed NAMBOARD's monopoly power in 1973 but continued to be a major buyer and marketing agent.

36. Under this system coffee growers received an average of 54.5 percent of the f.o.b. price during 1960-80, while cocoa growers received an average 56 percent of the border price. Atsain and M'Bet (1988, p. 52) note that the fraction of the border price paid to farmers decreased over the interval.

37. It is interesting to note that other ministries lost much of their influence (and possibly their incentive for) determining the rice premium after the government had decided that revenues from the premium were to go into the Farmers' Aid Fund, rather than into general revenues.

38. Further parastatals were established in 1975 and 1976 to administer other components of altered agricultural pricing policies.

39. NAMBOARD itself had earlier been established as an amalgamation of two existing agencies. See Jansen (1988, pp. 158ff.) for a description.

40. See table 8B in Greene and Roe (1989, vol. 1) for a listing of all the governmental agencies in the Dominican Republic that had responsibilities regarding one or more aspects of agricultural pricing policies.

41. Farmers have a choice of producing for market or for their own consumption, but their decision in that instance turns largely on the relative prices of the various possible crops and other commodities they may produce. Likewise, official prices may not be those received by farmers, either because official prices are not enforced or because farmers may market through extralegal channels.

3. The History of Pricing Policies

1. The Wages Board was established in 1944 and consisted of representatives of owners, the government, and labor. But "... the government representatives together with owner representatives have successfully kept the wage rates at low levels over the years" (Fernando 1987, p. 87).

2. Indeed, as will be seen below, even when producers' organizations were initiated for other reasons, governments often were driven by the need for revenue to transform them into quasi-tax-collecting agencies.

3. Wheat is a major crop in the Anatolian plateau.

4. The agencies were in fact not fully able to carry out the functions granted to them. For present purposes, however, what is noteworthy is that it was the circumstances of the Great Depression that spawned the birth of these agencies. See Hurtado, Valdés, and Muchnik (1990) and Valdés, Hurtado, and Muchnik (1991, pp. 103–4).

5. A key factor was the shortage of ships; the allied governments were allocating cargo capacity.

6. Indeed, even in 1986, when the World Bank's *World Development Report 1986* was focusing on policies for the growth of agricultural output and incomes, it was felt necessary to examine the extent to which Japan had taxed agriculture (p. 81) and to consider alternatives to agricultural taxation. Interestingly, most analyses of agricultural taxation centered on shifts in domestic terms of trade between agriculture and industry from some base date, rather than on divergences between domestic prices and international prices. See Schiff and Valdés (forthcoming, chap. 7).

7. In many countries, efforts were made to encourage the use of modern inputs. In some instances, input subsidization was not on a commodity-specific basis, in which case producers of exportable crops were eligible for these subsidies. Here, what is considered are the motives mandated to the price-setting authorities to guide their decisions.

8. As a further illustration of how motives for using the same instrument can change rapidly, the coffee tax was reimposed in 1958: by that time, the motive was clearly to increase government revenue.

9. This was the pattern in Egypt and Morocco, however, and it seems to have been budgetary pressures that were important motives for reform when the costs of this resolution of the conflict became too high.

10. There is an important anomaly here. In some countries, "indirect" discrimination against agriculture via the exchange rate and protectionist policies toward nonagricultural activities was sizable. Authors' estimates suggest that some food commodities that were in fact import-competing would have been produced in sufficiently large quantities to be exported if incentives had been appropriate. This was not, however, recognized by the authorities. Zambia offers perhaps the best example, where wheat, which was imported, would probably have been exported had a realistic set of relative prices been in effect. See Jansen (1988, p. 70) for a discussion of wheat pricing policy.

11. Even here, intervention always started when international prices rose and the government could raise revenue by taxing. When international prices fell sharply for tradable commodities in which intervention did not already exist, there were no instances of intervention starting with a subsidy to producers.

12. Note that protection to rice increased in Malaysia and Sri Lanka; earlier there had been little systematic policy toward peasant producers.

13. It is also reported that, in districts where the GSP exceeded the market price, officials split the price difference with local farmers. Corruption became an issue by the mid-1950s.

14. Fernando also notes that "the high taxation policy on the tea sector was facilitated to some extent by the lack of definite ties between the local owners of tea lands and the political parties in power" (1987, p. 72). See chapter 7 for further discussion.

15. See Schiff and Valdés (forthcoming, chap. 6) for a summary of the budgetary impact of agricultural pricing policies in individual countries.

16. Urban consumers then rioted and the price increase was partially rolled back.

17. See Scobie 1981, pp. 14–15. Much of this was imported with funds from aid donors, of course. Nonetheless, because the major donors were committed as to the foreign exchange value of their assistance to Egypt, the “real” cost of these imports should probably be viewed as close to the recorded cost.

4. The Magnitude and Effects of Intervention

1. In addition, policies that affect public sector investment in agriculture and services provided to it (such as research and extension) influence agricultural productivity and hence incomes. Here, however, the focus is on the interventions affecting the prices of goods that are produced, used as inputs, and consumed.

2. See Schiff and Valdés (forthcoming, chap. 2) for an exposition of the underlying rationale and methodology. Table 4-1 reproduces Schiff and Valdés’ table 2-1.

3. Given the fame of Korea’s export drive, the estimated “free trade exchange rate” for Korea is interesting. To a significant degree, it reflects the fact that many of the incentives for export consisted of export subsidies, tax rebates, credit extension, and other measures that did not operate through the exchange rate and were available only for manufacturing exports. A time series calculated to estimate the real effective exchange rate for Korean manufactured exports would look very different. See Frank, Kim, and Westphal (1975).

4. Note, however, that at different relative prices, the composition of outputs and input usage would also differ. Hence, incomes would likely be affected in greater magnitude than prices.

5. This statement holds for a farmer producing an average bundle of commodities covered in the country study. In fact, income gains might have been even greater, as farmers would have shifted the commodity composition of their outputs more toward the commodities against which there was most discrimination.

6. The Zambian numbers are hard to interpret. In the Zambian case, copper is the major export commodity, and agriculture is really viewed as an import-competing sector. However, indirect discrimination against agriculture is large, as seen from table 4-1, and the differences in implicit nominal taxation rates between categories of commodities are reasonably small by contrast.

7. See Schiff and Valdés (forthcoming, table 2-4) for estimates of the impact of agricultural pricing policies on consumer food prices. While producer prices do not entirely reflect consumer prices, in most countries budgetary pressures were so strong that it was not feasible to provide food to consumers at a significant loss.

8. It should be noted that Brandão and Carvalho (1991b) did not cover coffee in their analysis of Brazilian agriculture. Had coffee been included among the commodities in their study, Brazil would have been shown to have a higher level of discrimination and would not be in group IV.

9. Schiff and Valdés also ran regressions relating overall growth with several measures of discrimination against agriculture. They found a significant nega-

tive relationship between the estimated magnitude of discrimination and the rate of growth of real GDP over the eighteen countries. See Schiff and Valdés (forthcoming, chap. 5).

10. These data, as well as all estimates of forgone export earnings, are from Schiff and Valdés (forthcoming, chap. 5).

11. This assumes no monopoly power in trade. The usual caveat regarding monopoly power applies.

12. This was less true of consumer prices (see Schiff and Valdés, forthcoming, chap. 5).

13. In some instances, the objective appears to have been to dampen fluctuations in income levels for farmers. In other cases, control of domestic inflation seems to have been a more important objective. However, had this latter frequently been the major objective, one would have anticipated greater responses to international price increases than to price decreases. This was not observed.

14. In addition, there were a number of countries where protection of some foods encouraged considerable substitution in consumption away from those commodities and toward the unprotected food products. In West Africa between the late 1960s and the late 1970s, consumption of traditionally grown domestic foodstuffs—millet, sorghum—remained virtually stationary. However, the relative price of imported foodstuffs—rice and wheat products—fell in large part because of increasing currency overvaluation. The consequence was a rapid increase in per capita consumption of imported foodstuffs, 2.8 percent per year for rice and 8.5 percent annually for wheat products. See World Bank (1986, p. 92).

15. The studies for Côte d'Ivoire, Ghana, Morocco, and Sri Lanka did not provide estimates of the real income effects of agricultural pricing policies, and those four countries are therefore excluded from the results reported on here.

16. If direct policies only are taken into account, the list of countries in which lower income consumers were at least 3 percent worse off is: Brazil, Chile, Colombia, Dominican Republic, Philippines, Portugal, and Zambia.

5. Administrative Aspects of Direct Intervention

1. There were, however, efforts to limit the quantity of rice consumed in some years.

2. Jansen points out that a factor contributing to this situation was that different ministries were responsible for setting the price of the processed food and the farm product.

3. The motive for this policy apparently was to prevent seasonal factors from influencing the cost of living index (see Moon and Kang 1989, p. 188).

4. The highly concentrated acquisition program also caused a large jump in the money supply at harvest season (Moon and Kang 1989, pp. 188ff.).

5. Brazil also encountered a problem with "paper fertilizer" (see Brandão and Carvalho 1987, p. 99).

6. The year 1980 was when the reform of agricultural pricing policies in Turkey started. See chapter 6 for a description and analysis of that reform episode.

7. Snodgrass (1966, p. 163) also reports cases in which middlemen purchased the crop from farmers at a low price and resold to the cooperatives at the support price, pocketing the difference. In these instances, it was the lack of alter-

native means of transporting the crop that permitted the middlemen to profit from support prices.

8. José L. Carvalho mentioned the unimportance of arrears in a letter to the author dated 16 March 1989.

9. Siamwalla and Setboonsarng report that there were at least some instances of a circular flow of paper in lieu of the physical transportation of the rice (1989, p. 52). By 1981, the government replaced the requirement that rice be physically surrendered with the requirement that exporters pay cash to the ministry.

10. A different program was started after the world price of fertilizer rose sharply in 1974.

6. The Political Economy of Reform Efforts

1. There is also the possibility that a particular policy line might have led to reforms, intended or otherwise, had circumstances been different. For example, it might be argued that the agricultural reforms in Turkey—which were part of an overall policy reform program—would not have been sustained if the elections of 1983 had turned out differently. This is not the place to speculate on that counterfactual outcome. But if a different election outcome and set of overall economic policies had resulted, with a return to exchange rate overvaluation and highly restrictionist trade policies, Olgun would probably not have viewed the post-1980 period as one of reforms. The point is that in the Turkish case, the 1983 election results led to the continuation of policies which, had they been abandoned, would have led one to conclude that the cycles in the Turkish trade regime were simply continuing unaltered. It seems clear that there was no particular intent to reform agricultural pricing policies: rather, the intent was to undertake reforms in the trade regime which had the result of reforming agricultural pricing policies.

2. An analogy with trade regimes may be helpful. There are many cases of announced exchange rate and trade regime reform programs supported by the multilateral institutions. In some of these cases, it is evident to most observers that the majority of officials involved in the decisionmaking process have little or no intention of carrying out the task except to the extent they feel constrained to do so in order to qualify for assistance from the multilateral agencies and donors. At the extreme, the authorities can even take actions to offset what little they do under a stabilization program. For a discussion of one such case—Egypt in 1963—see Hansen and Nashishibi (1975).

3. The set of policies affecting direct discrimination against agriculture was constantly changed, but policies appear to have been largely crop-specific and subject to ad hoc weekly and monthly interventions without any change in the overall pattern. There was a major change in exchange rate policy in the late 1960s which altered total discrimination against agriculture, but its effects were short-lived, as the exchange rate became increasingly overvalued in the 1970s.

4. Early tariff reductions were not effective in placing downward pressure on domestic prices of import-competing goods, probably because there was considerable water in the very high Argentine tariffs so that early tariff cuts did not force domestic price reductions (see Sturzenegger and Otrera 1990, p. 39ff.).

5. Estimating the cost of the wheat program requires an estimate of the "true" cost of wheat imported under PL480 programs. See Dethier (1989, vol. 1, table 8-7) for alternative estimates.

6. The fiscal numbers used are based on the assumption that food aid was purchased at the c.i.f. price.

7. In 1972 prices, the cocoa price received by growers fell from an average of more than NC500 in the late 1950s to NC349 in 1970, NC252 in 1978, and NC125 in 1983 (Stryker 1990, p. 101).

8. There was a multiple exchange rate system in effect.

9. Tobacco and hazelnuts, two export crops, were generally subject to negative direct intervention, although cotton was typically subject to high positive direct protection (see Olgun 1991, table 6-7).

10. This discussion draws on Krueger and Aktan (1992, pp. 8-16).

11. It is estimated that 17 percent of the Korean labor force still derives part of its livelihood from agriculture. Part of the political difficulty in lowering protection is that many individuals are employed and earn the bulk of their living in nearby towns, but nonetheless are keenly sensitive to the level of agricultural protection.

7. The Political Economy of Agricultural Pricing Policy

1. This statement probably holds even for Japan, where almost all agriculture is strongly import-competing and most industrial production is exportable. See Hayami (1988).

2. A part of, but not the entire, political explanation for this lies in the fact that exportable crops were more often produced on expatriate plantations, and during the colonial years small-scale agriculture, often producing import-competing or nontradable home goods, was not encouraged. Certainly in Malaysia and Sri Lanka, the pattern of taxing traditional exportable crops (which historically were plantation activities) and subsidizing the food crops produced by peasant farmers, has an easy political interpretation. Such an interpretation does not, however, apply to countries such as Thailand, Brazil, and Colombia, where the same pattern of taxing exportables and protecting import-competing commodities is observed.

3. Indeed, if a government were stabilizing prices at least cost, there would be a policy of stockpiling (either of domestic production or of imports) during periods of low prices and exporting during periods of high prices. Such a policy would generally achieve greater price stability than did those policies which were pursued. It should be noted that stabilizing domestic prices is generally not consistent with maximizing the transfer of resources from agriculture to industry, which would normally entail passing on international prices to producers and inducing increased production of commodities whose prices were relatively high.

4. That group decisionmaking processes may be distinctly different from individual maximization has long since been recognized. The Prisoners' Dilemma is perhaps the most vivid illustration of a general proposition that individual self interest may not lead to a Pareto optimum outcome.

5. It is also possible that the large influential farmers were themselves investing in industry. This is not, however, the explanation cited by country authors. See, for example, García and Montes (1989, pp. 198ff.).

6. Interestingly, it was also believed that the world demand for many agricultural commodities would not grow and that even if the output of exportable agricultural outputs were increased, export earnings would fail to increase because prices of commodities would fall. That doctrine, in turn, underpinned the greater discrimination against agricultural export commodities than against import-competing ones. For further discussion, see the section "Determinants of Differential Treatment of Individual Agricultural Commodities."

7. In a related context Papanek quoted from a speech given by a former adviser to the Ministry of Agriculture in Pakistan: "Farming is a rather morbidly dirty business that has little appeal to the . . . poet-civil servant whose interests tend more toward an ever whiter shirt and a higher capacity air conditioner. Another explanation [for the neglect of agriculture] is the sincere belief that very rapid industrialization is a cure-all that some day, in some unspecified way, will remedy the grubby, stubborn illness of low agricultural productivity" (1967, p. 145).

8. Many trade theorists have since pointed out that if the "immiserizing growth" thesis were correct, a country could immediately improve its situation by imposing an optimal tax on its exports. See, for example, Bhagwati (1965).

9. Lewis discusses the extent to which these arguments were in error, seen in current perspective (1984, p. 128).

10. See Avillez, Finan, and Josling (1988, pp. 11–13) for a description of the various regions. See also their description of pricing policies (pp. 107ff.), where the regional dimension is clearly brought out.

11. Note that here a large number of small-scale producers had more influence than a few large-scale ones—the opposite of the story often told to account for the difference in agricultural treatment between developed and developing countries.

12. For a vivid account of the difficulties in providing subsidized inputs—especially for fertilizer, where timing of delivery is important—see Fernando (1987).

13. An exception was Malaysia where, as already reported, the small peasants—the Bumiputra—were part of the majority coalition of Malays. Another exception was the Dominican Republic, where there was very little subsidization of inputs.

14. For an analysis of the impact of subsidized inputs on income distribution within agriculture in Turkey, see Ulasan (1980, especially pp. 130, 139).

15. Kraus reports that "most of the heavily subsidized fertilizer available," 80 percent of low-cost credit, and a large percentage of extension assistance went to "capital-intensive agriculture" (1986, p. 126).

16. In some countries, the provision of subsidized inputs only to larger farms was deliberate government policy. This was for a period the case in Ghana. See Kraus (1986, p. 126).

17. In Morocco, for example, fertilizer was subsidized by 40 to 60 percent of its cost. Irrigated crops, including sugar, citrus, vegetables, and cotton, were grown by larger farmers. These crops were grown on 10 percent of the total land, yet accounted for about half of all fertilizer usage in 1978–79. See Tuluy and Salinger (1989, p. 52).

18. However, thorough political economy theory of economic policy would have to account for the greater commitment to import-substituting industrialization in some countries than in others.

19. In Korea the shift took place in a period of rapid growth, when the demand for food was rising sharply and imports were becoming increasingly important in Korea's food supply; the motivation for the shift, however, appears to have been largely political, as the Park regime discovered how badly it had lost rural support in the 1972 elections. See Moon and Kang (1989, pp. 200ff.).

20. Lofchie argues that Kenya is different from all other African countries, because "The distinctive feature of Kenyan politics is the degree to which the political leaders who frame and implement agricultural policy have personal and class interests in the well-being of the country's farm sector" (forthcoming).

21. The fact that Chile's agriculture was much more import-competing than Argentina's, however, meant that Chile's overall level of discrimination was somewhat less.

22. It is worth mentioning that Hansen notes the contrast between direct protection and indirect implicit taxation of agriculture in Turkey and speculates as to why farmers, who were so influential in direct pricing policies, made no effort to influence the exchange rate. He concludes that agriculture was powerful enough to influence agricultural policies, but could not challenge national policies for which support was derived from the commitment to industrialization and import substitution (1992, p. 535).

23. The term was coined by Peter Hopcraft, who used it in one of the working parties of country authors in the course of the World Bank project to explain how agricultural pricing policies were formulated and worked in Africa.

24. Note that not all of those agreeing to a policy need to have similar expectations as to its consequences. For present purposes, it is enough that some advocates of policy change their position when the outcome of that policy is evident.

25. In many countries widespread knowledge that there *is* smuggling is itself a political negative.

26. Political scientists would hasten to add that agricultural interests were also politically weak, as discussed above.



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Anne O. Krueger

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