

VI THE POLITICAL ECONOMY OF FOODGRAIN AND FERTILIZER DISTRIBUTION

What is the “right” price for an agricultural commodity? Economists have an easy answer to the question, but only in a world of perfect information, with competitive markets, without other government interventions into the economy, and without political concerns for the impact on income distribution.

– C. Peter Timmer (1986)

INTRODUCTION: WHY ARE FOODGRAINS SPECIAL?

If looked at casually, it might appear that foodgrains possess all of the characteristics required for private markets to function competitively: cereals such as rice and wheat are divisible, relatively homogeneous commodities, free of externalities, and usually have many sellers and buyers who have generally equal access to the market and market information. Given this, why should governments intervene in the private markets that would be expected to produce an economically efficient outcome? To answer this, one must consider the other characteristics of food. That people should have the ability to acquire and consume food of at least the minimum level needed for their sustenance and that of their children is considered to be a basic need. Thus, food is a merit good, one whose effective demand society often deems too important to be limited by purchasing power. Unfortunately, many households in Asia to this day remain too poor

to meet their basic food needs, because their effective demand falls short of what is desirable for them to consume. Moreover, unlike industrial production processes, the supply of food is subject to predictable seasonal variability and, more important, to unpredictable fluctuations due to weather, pests, and other factors. These fundamental reasons why food is different from other private goods are accepted by nearly all policymakers as providing a rationale for government intervention in the market.

Assuring that basic needs can be met in an unpredictable world is not the only, nor even the most important, consideration that motivates Asian governments to intervene extensively in the foodgrain markets, as they have almost continuously since World War II. More compelling is the fact that, in most of Asia's developing countries, foodgrain supplies and prices have been instrumental to overall economic performance and to the distribution of income among urban and rural areas. In the urban areas, food constitutes the biggest single item in the budget of poor consumers. Thus, foodgrain prices have a major influence on real wages, which, in turn, are a key determinant of the profitability of industrial investment. Governments intent on rapid industrialization would therefore wish to keep urban food prices low. This is the "wage-good argument" for government intervention, and it is inherently urban-biased. Political considerations also figure into the calculus: when food is scarce, urban consumers have often exerted strong and effective political pressure for the Government to prevent food prices from rising.

In most of Asia, foodgrain pricing policies have generally tended to favor consumers, often with an explicit urban bias in South Asia.¹ In general, if rural producers had a stronger political voice, the pressure would naturally be greater for higher food prices, since foodgrains constitute the single biggest component of their income. But as explained in Chapter II, rural people generally have a poor record of articulating their political views and thereby influencing government policy. Notwithstanding the lower rural political voice, however, when the green revolution opened up the opportunity, governments, as

¹ It should be kept in mind that "consumers" does not necessarily mean "urban," since many rural families also depend upon market purchases of food during some seasons of the year.

never before, lavished resources on the rural areas in the form of subsidies on fertilizer, irrigation, and other inputs. These subsidies served the dual purpose of keeping urban retail prices low and supporting rural incomes. Fertilizer, in particular, became a strategic commodity and, therefore, one for which State market interventions were almost as widespread as those for the foodgrains themselves.

This chapter is divided into two main sections, each providing a distinct perspective on government objectives and strategies for intervening in foodgrain and fertilizer markets. As in much of this volume, the discussion is placed in the historical context of Asia's green revolution, the rapid expansion of the region's urban industrial sector, and the growing importance of electoral politics as a consideration in government decision making. The perspective of the first section is largely economic. Although it is sprinkled, as economists are wont, with the jargon of political economy, the main focus is on the economic efficiency of alternative interventions.

The second section asks why, if relatively cost-effective interventions can be found, have governments often chosen much less efficient approaches? To answer this question, it is necessary to delve deeply into the structure of political institutions and the political incentives faced by policymakers. Since these institutions, incentives, and other relevant characteristics vary widely in Asia, the section presents a detailed comparison of the evolution of food policies in Thailand, Malaysia, and Indonesia during the green-revolution years of the 1970s and early 1980s.

ASIA'S MODELS OF MARKET INTERVENTION AND FOOD PRICE STABILIZATION IN A RISKY WORLD

Intervention in Foodgrain Markets before 1970

Many of the foodgrain programs and agencies currently in place in Asia derive from measures introduced during World War II or immediately afterward, when there was the simple

need to ensure that people had sufficient food. These measures were implemented by the colonial powers, which then ruled most of South and Southeast Asia, through State enterprises that often evolved into the organizations being used by today's independent governments to intervene in the food markets. (country studies of this evolution are contained in Mears [1961, Indonesia]; Mears et al. [1974, Philippines]; Ahmed [1979, Bangladesh]; and Gavan and Sri Chandrasekera [1979, Sri Lanka]).

Because of their origins during a time of scarcity, these institutions were mainly interested in procuring sufficient food to feed the crowded cities. In South Asia, the food (mainly rice and wheat) was distributed through ration shops at below-market prices. The need to keep these distribution channels operating then became the driving force for the State enterprises and indeed also for the food markets that remained outside the government system. In particular, procuring enough food from the producers, or through imports, became the central obsession of the State enterprises.

It would be obviously wrong to conclude that it was only the imperative to provision the cities that drove foodgrain policies for decades. That the system of interventions in their various forms lasted so long meant that there were other considerations leading many otherwise market-oriented governments to intervene extensively. In addition to the merit- and wage-good rationales given above, there were thought to be problems in foodgrain markets as well. These problems led to three further explanations for the persistence of State interventions: one sociological, the second economic, and the third political-economic:

- First, the colonial experience of many Asian countries left many of their domestic trading systems in the hands of nonnatives: Indians in Myanmar, Vietnamese in Cambodia, and Chinese everywhere else in Southeast Asia. In India, trade was mostly in the hands of a few specific castes or of individuals from a particular region. The instinctive ethnic animosity toward these

groups was combined with a class animosity and led to the claim that traders conspired to keep marketing margins high—a claim that research has consistently proven to be erroneous (e.g., by Lele in India [1971]²; Mears et al. in the Philippines [1974]; and by Mears in Indonesia [1981]).

- Second, it was felt that, if left to its own devices, the market could not ensure price stability—and price stability usually meant asymmetric protection against a sharp upward movement in prices. Price stability will be discussed at length below.
- Third, in bypassing—and in some cases, explicitly prohibiting—private market activity, the State interventions in effect became self-perpetuating. As noted above, the need to keep open the pipeline of public food distribution led governments to engage in various procurement systems. The easiest was a monopoly on imports, both through food-aid and through commercial channels—in the latter case to be sold below cost. The general impact was to keep domestic food prices below border prices. More distortionary steps included compulsory delivery to the State procurement system, usually at prices well below market. South Asia and the PRC practiced different versions of this system. Such compulsory measures extracted resources from (i.e., taxed) the agricultural sector.

Even exporting countries were not immune to the pressure to stabilize their domestic markets, although the policy

² Lele found the degree of concentration in Indian grain trading to be quite high at the local level but not at the interregional level. She also detected an increase in concentration in some states, but that could be attributable to the growth of monopoly procurement in those states. Mears (1981), on the other hand, found that with government intervention, marketing margins in Indonesia narrowed. The difference in the impact of government arises because of the different objectives and instruments of policy.

instruments were far simpler. All they had to do was to limit exports by means of quantitative restrictions, by State trading and export monopolies (as in present-day Myanmar and in the past, Thailand and Viet Nam), by simple export taxation, or all three.

Malaysia—because of its peculiar ethnic makeup—was the only Asian country to reverse the taxation of food grain producers before 1970 (Goldman 1975). That did not preclude the Government from intervening extensively in the rice market and setting up a State enterprise to procure and distribute rice, but the objective in Malaysia's case was to protect farmers from the full brunt of foreign competition. The end result was to drive down the private sector's share of trade and processing activities (Tamin and Meyanathan 1988). The political and institutional context of Malaysia's food policy will be discussed in this chapter's second section.

Similarly, the Republic of Korea and Taipei, China began to take a protectionist stance in the early 1970s, again with a prominent State role. The Government procured rice in order to support prices, using cooperatives as its handling agents (Myoung and Lee 1988).

In most countries, however, the wage-good argument was used to justify an extractive policy. A corollary to this argument was the notion that the supply effects of such a policy would be small, since it was widely believed (at least among its proponents) that the elasticity of supply of agricultural products was near zero.

Intervention in the Fertilizer Market

Emergence of the Fertilizer Subsidy

While many of the assumptions underlying the extractive policies were indubitably wrong, it was not the economic research refuting these assumptions that led to the change in the earlier policies of extraction. Rather, it was the combination of the green revolution and the Asian food crisis of the early 1970s.

These two developments did not reduce the interventions by Asian governments in the markets for foodgrains. In fact, the scope of the interventions expanded to the input markets as well. What the green revolution did was to overturn the perception of policymakers that there was an absolute limit on food production. For the first time, they realized that food production could be made to respond to policy inducements. With the new high-yield crop varieties, farmers could be induced to produce more food for the Government to procure to feed the cities: that was and remains the central imperative. While policymakers could continue to believe that the own-price elasticity of food supply is zero or near zero, they could also be persuaded to believe that the elasticity of foodgrain supply with respect to fertilizer prices was significantly negative (Suprpto 1988). Coupled with the belief common among urban policymakers that farmers were technologically backward, this concept of negative elasticity became the germ of a subsidy to fertilizer prices.

Indeed, Barker and Hayami (1976) made precisely this case. A well-known proposition from economic theory is that the relationship specifying the value of the marginal product (VMP) of an input determines (indeed is the same as) the demand curve for that input. Barker and Hayami inserted the assumption that the demand curve for fertilizers lay to the left of the VMP curve, i.e., farmers underestimated the value of fertilizers in production. From there it was easy to show that the amount of fertilizer used by the farmers was below what was optimal for them and for society as a whole. Under these circumstances, a fertilizer subsidy increased welfare, thus in effect making fertilizer a merit good.

As a policy option for increasing grain production, a fertilizer subsidy is said to be superior to a higher price for output, because it targets the money on those farmers whose production is more responsive because they use fertilizers. By contrast, an output subsidy benefits all farmers, including those who are not so responsive, with a smaller net benefit in terms of added grain. At the same time, the fertilizer subsidy encourages fertilizer to leak from foodgrains to other crops,

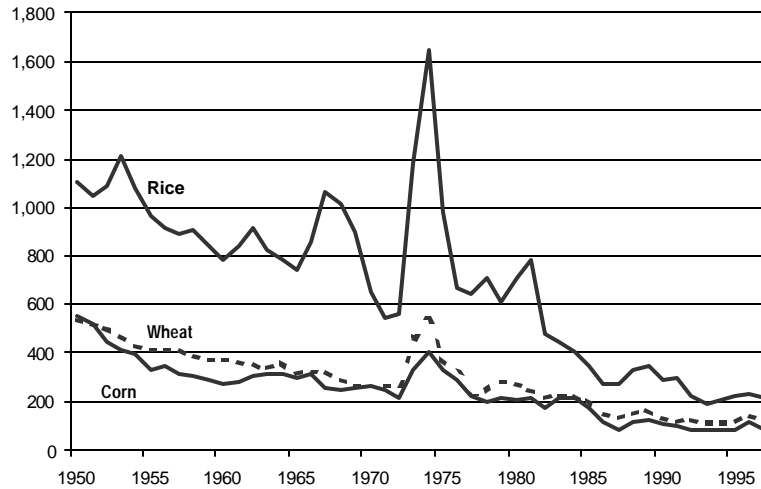
which may require the Government to undertake countermeasures (see below).

It was not surprising that the Barker-Hayami analysis struck a chord, as it emerged at the time of the food crisis, when policymakers all over Asia suddenly found it very expensive to procure rice and wheat in the international market (Fig. VI.1). The green revolution and the food crisis therefore led to the emergence of a widespread policy of input subsidies. These came in various forms, but, given the complementarity of the green revolution inputs, it was common to provide a “package” that included credit, seed, and fertilizers, all at subsidized rates. Examples include the Masagana 99 program in the Philippines and the BIMAS program in Indonesia. For programs with a credit component, there was also an additional assumption: that the preexisting credit market was imperfect (Rosegrant and Herdt 1981).

It is debatable how much benefit these programs brought to the countries in the long term. They could be justified at the onset of the green revolution, because farmers could be assumed to underestimate the productivity of fertilizers. Note the similarity of this argument to the “infant-industry” rationale for protecting or subsidizing industry in its early stages. As with infant-industry protection, beyond a certain point, i.e., after farmers had become fully familiar with the use of fertilizers, the continuation of fertilizer subsidization led to a real distortion. And if the devastation wrought to rural financial markets by the subsidized credit programs is added (see Meyer and Nagarajan [1999]), then there are grounds for believing that over all, the persistence of credit and fertilizer subsidies caused significant net losses.

If the purpose of the policy was to reduce the price of fertilizers to farmers, then a fertilizer subsidy could, in principle, have been administered easily, without the Government having to take over the function of marketing itself or engaging in elaborate forms of market intervention, such as uniform pricing (and attendant arrangements to subsidize transport) and the like. The subsidy could have been given at the border if the fertilizer were imported, or at the few factories where it was

Figure VI.1 Real Prices of Rice, Wheat and Corn 1950–1997
(1990 \$)



Notes: Thai rice, 5% broken, milled, f.o.b. Bangkok; US wheat, No. 2, Soft Red Winter, f.o.b. Gulf Ports; US corn, No. 2 Yellow, f.o.b. Gulf Ports; Deflated by G-7 consumer price index (1990=100)
Sources: IRRI (1990); World Bank (Various Years).

produced, and a competitive market should have ensured that the subsidy was passed on to the farmers. However, many governments first of all did not believe that the marketing chain would pass on the subsidy to the farmers (another version of the exploiting middleman problem) and, second, governments also wanted to economize on the subsidy by targeting it specifically to food crops.

The Fertilizer Subsidy Becomes Fertilizer Distribution

In Indonesia, the Government arranged the delivery of fertilizer to the farmers. Under the BIMAS program, the credit and fertilizer subsidy was initially administered through the cooperatives, in coordination with the Bank Rakyat Indonesia. By making them agents of the Government, the Government added to its generally heavy-handed attitude toward the cooperatives and caused their development to be stunted.

In Bangladesh, the Government tightly controlled fertilizer distribution. The Bangladesh Agricultural Development Corporation (BADC), a State enterprise, had an absolute public monopoly in fertilizer procurement and distribution, down to the level of the *thana* (comprising 50–150 villages). Below that level, it licensed a set number of dealers (usually 15 per Union, a unit consisting of about 6–12 villages), fixed the retail price, and set the dealer's commission. The control was relieved somewhat in 1978, when dealers were permitted to set up shop by merely registering with BADC, and the dealers' commission was increased to provide more of an incentive. In particular, BADC reduced its distribution points to a smaller number of viable locations. In 1983, the price control below these distribution points was lifted (Mudahar and Kapista 1987). Liberalization of the fertilizer market continued through the early 1990s; by 1993, a vibrant private import and marketing system had developed and public subsidies to fertilizer had been largely eliminated (detailed assessments are provided in Ahmed [1995] and ADB [1996a]). Unfortunately, the ill-advised reintroduction of government controls beginning in late 1994 seriously disrupted the fertilizer market, illustrating the importance of consistent, predictable application of policy in food and input markets.

In the Philippines, a State enterprise was established in 1973 (the Fertilizer Industry Authority, to be renamed in 1977 the Fertilizer and Pesticide Authority). Its functions included the control and regulation of prices, production, imports, marketing, and extension of financial assistance to the fertilizer industry. In the beginning, the Government administered a higher level of subsidy for what were considered the highest priority crops (rice, corn, feed grains, and vegetables). However, because of massive diversion of fertilizers from these priority crops to others, the subsidies were eventually equalized. All subsidies were abolished in 1982 on account of fiscal difficulties (Balisacan 1990).

The way the subsidy was administered in the Philippines is worth dwelling upon, for it shows how the Government's entry into the fertilizer business can have unintended consequences. When the Masagana 99 program was launched,

the country's four fertilizer companies were required to sell the fertilizers below cost, with the loss covered by cash subsidies. These were never paid in full and the arrears accumulated over the years. When one of the companies (Planters Products Inc. [PPI]) failed in 1984 (apparently for other reasons), the Government undertook, with the company's foreign bank creditors, to pursue a fertilizer pricing policy that would enable PPI to cover its costs and to repay its creditors (Balisacan 1990). This undertaking was tantamount to making the farmers pay back in the 1980s part of the subsidies that they obtained in the 1970s.

The Indian Government's intervention in the domestic fertilizer sector was extensive. Fertilizer prices were fixed under the "retention price scheme," whereby prices were set factory by factory so as to ensure a 12 percent rate of return on post-tax net worth, provided the plant was run at 80 percent of capacity and certain efficiency norms were met. Despite the provisos, however, such a cost-plus formula for price regulation was not conducive to the optimal efficiency of the firms (Mudahar and Kapista 1987).

Probably the costliest component of the fertilizer subsidy was the insistence of some governments on ensuring supplies of fertilizers by promoting the establishment of domestic production, much of which turned out to be inefficient, absorbing the bulk of the subsidy. Thus, in the Philippines during the crucial period 1973–1982, despite the direct cash subsidies to importers and producers, the implicit tariffs whose burden was eventually borne by the farmers averaged 20 percent (Balisacan 1990). In India, 86 percent of the fertilizer subsidy during the crop year 1983/84 went to domestic producers and 14 percent went to importers, although in this case, unlike that of the Philippines, farmers were still receiving their fertilizers at below-world prices (Mudahar and Kapista 1987).

Fertilizer marketing in most countries remained multichannel, involving the participation of firms from the public, private, and cooperative sectors. In some cases, however, governments adopted a policy of uniform pricing, which required them to take over more of the marketing functions,

either directly or through administrative interventions to cross-subsidize transport costs. A study of India, Indonesia, and Bangladesh (Mudahar and Kapista [1987] suggested that this cross-subsidization was relatively easy to administer.

By taking over some or all of the functions of the distribution, the Government also took on the responsibility of ensuring that the fertilizer arrived at the farm gate on time. At the same time, what was delivered was not to exceed requirements. Fertilizer has a short shelf life, particularly if the storage facilities are poor, as would be the case in rural areas, so it is expensive to store over the season. The logistics of fertilizer distribution are thus more demanding than would appear at first sight. Many governments did not fare well in this operation.

Does the market fare any better in this respect? After all, there are inherent risks in the fertilizer trade. Planting intentions cannot be forecast precisely, either by the Government or by private traders, nor can the weather. In Thailand, where the Government role in fertilizer distribution is smaller than elsewhere, importers and domestic producers normally sell warehouse certificates to local distributors or to groups of farmers a few months before the planting season, with payment expected at the time of delivery. In this way importers and producers have a reasonably firm idea as to planting intentions, since local distributors would have a better idea of what the needs are. When the time comes for taking delivery, the buyers arrange for the transport themselves, saving the importers or producers the complex logistical task of planning. Of course, the risks of weather remain. But at least mistakes in forecasting the weather can be met by storage in the better warehouses of the importers or producers. The Thai Government, it should be noted, did not subsidize fertilizers to nearly the same degree as other Asian countries (see the following section). With less government interference, fertilizer prices were higher in Thailand than in the rest of Asia, while the private sector was provided with an adequate economic incentive to participate in the market. Although Thailand has been somewhat unusual in giving the private sector a dominant role in fertilizer distribution, there is

no reason why innovations such as the system of warehouse receipts could not be employed elsewhere.

The Retreat of the Fertilizer Subsidy

During the 1980s, country after country began to dismantle the fertilizer subsidies and the Government's roles in distribution. The changes that took place in the Philippines and Bangladesh have been touched on above, but the trend was Asia-wide, with India being the major exception.³ Three interrelated reasons combined to bring an end to the era of subsidies.

The first and most important was that the food crisis of the 1970s was easing: indeed, cereal prices were sinking to all-time lows (see Figure VI.1). Asian importing countries were achieving their goal of self-sufficiency and therefore the drive to produce more, which pushed governments to put money into the subsidy in the first place, was no longer so urgent. After almost a decade of exposure to the new technology, the Barker-Hayami rationale, based on the assumption of an imperfect perception of the new technology by farmers, began to look less plausible.

The second reason was the developing countries' debt crisis of the early 1980s, which brought their governments into IMF or World Bank structural adjustment programs. By this time, the fertilizer subsidies were taking hefty chunks of some governments' budgets, so they were ripe targets for donor conditionality. The subsidies, besides entailing direct financial costs, had generated many forms of inefficiency that had become intolerable as the 1970s atmosphere of food crisis was replaced in many countries by the 1980s' debt and fiscal crisis. Mudahar and Kapista (1987) summarize these inefficiencies, most of which have already been alluded to:

³ Even as late as 1993/94, India was spending as much as \$1.4 billion annually, or 3 percent of the national budget, on fertilizer subsidies (Bumb and Baanante 1996), a figure that in absolute terms is about the same as what it was in the mid-1980s.

- High-cost domestic plants;
- Poor administration and implementation of subsidies;
- Poor accounting on how much is was actually spent on the subsidies; and
- Absorption of the subsidies by the high-cost marketing system, leaving less to benefit the farmers.

The third reason arose from the linking of the fertilizer subsidy with the provision of credit in countries like the Philippines and Indonesia. In the Philippines, the government even guaranteed the loans that were provided by the rural banks. This created an obvious moral hazard problem that soon led to the collapse of the credit program and, eventually, the end of Masagana 99 and the almost total disappearance of rural banks. In both the Philippines and Indonesia, the arrears in credit repayment provided additional impetus to end the fertilizer subsidy as well.

Stabilizing Output Prices: the Southeast Asian Style of Intervention

The withdrawal of governments from the fertilizer market was not, in general, followed by a parallel withdrawal from the foodgrain market. The latter has come about more gradually, despite the achievement of self-sufficiency, which should have lessened the burden on the government agencies involved in food procurement and distribution.

Government intervention in the markets for foodgrains has taken two broad forms: one prevalent throughout South Asia and the other more common in Southeast Asia.⁴ The South Asian form builds upon a public distribution system, often

⁴ The PRC has a tradition that places it closer to the South Asian form. The Republic of Korea and Taipei, China, on the other hand, follow a mode of stabilization like that of Southeast Asia, but in these countries the policy of price support to the farm sector is so dominant that stabilization is automatically achieved as part of that policy.

down to the retail level, which tries to ensure that consumers, or at least the poorest among them, can receive a ration of foodgrains at a low price. The Southeast Asian form, on the other hand, focuses more on stabilizing the market price of foodgrains, with little or no retail distribution. From the point of view of the governments, the Southeast Asians set prices (for both producers and consumers) as targets, while the South Asians manipulated the supply of foodgrains, including procurement (or import) of a targeted quantity. The Southeast Asian price-targeted form of intervention includes a floor price to protect producers and a ceiling price to protect consumers. To achieve these targets, governments have two instruments at their disposal: storage and variations in the volume of trade.

Storage

Storage of agricultural goods stabilizes prices within three time frames (Ammar 1988). The first is short-term, involving precautionary stocks to prevent spikes in prices due to unforeseen interruptions in supply. Since supply interruptions of this kind occur most often in international trade, this motive makes storage complementary to trade. The second is the normal seasonal variation in the flow of production; this is the phenomenon that private and public storage usually focus on. The third is year-to-year, arising from production fluctuations that are often met by variations in the volume of imports or exports rather than through storage.

The Southeast Asian style of intervention in the rice market starts with the setting of a floor price, usually for paddy, and a ceiling price for rice. The floor price is defended by the relevant State enterprise buying the paddy or rice in the open market, usually at the beginning of the season, and storing it until the latter part of the marketing year, when it is released to defend the ceiling price. The size of the State operation (i.e., how much is procured and how much released) depends essentially on whether the gap between the floor and ceiling prices provides enough spread to induce the private sector to store over the season. Where that gap is small, the State enterprise has to

engage in a major operation, buying a large share of the supply in the beginning of the season to be stored for later release.

A crucial requirement for the success of the operation is that the State enterprise must have access to finances—both foreign and domestic—that are, in principle, unlimited. Scarcity of financing for procurement must never send a signal to the market that the State enterprise is “running out of money.” If imports are necessary, the State enterprise must have access to foreign exchange to bring in sufficient supplies to defend the ceiling price. Similarly, it must have adequate domestic currency to defend the floor price. Inasmuch as Southeast Asia’s food agencies typically buy small shares (less than 10 percent) of domestic supplies (Islam and Thomas 1996), the market’s confidence in their commitment is critical and has important consequences for their performance.

For example, Indonesia’s National Logistics Agency, known by its Indonesian acronym BULOG, had almost unlimited access to concessional central bank credit for its operations, at least until the late 1990s. In contrast, the Philippines’ National Food Authority (NFA) has its resources constrained by annual appropriations from the Government. In some years, the resources supplied were insufficient for NFA to conduct its own operations and the inadequacy became obvious to the market. Hence, its success in defending the target prices was less than that of its Indonesian counterpart.

A primary objective of government intervention has been to reduce the seasonal spread in prices. Some seasonal spread is necessary, of course, to cover the real resource cost of the storage, which is often quite high in Asia. Its components include the transportation from the countryside to the storage facility, the costs of physical storage (including losses), and interest, of which the last is the largest

In Indonesia, Mears (1981) undertook a detailed analysis in which he found BULOG’s monthly interest cost to be about 1.2 percent during the early 1970s. Rates were often higher in the private sector, as much as 2.6 percent per month. BULOG’s physical cost of transport and storage came to approximately 0.5 percent per month, a figure that was somewhat higher than that of the private sector. In total, therefore, storage costs were about

1.7 percent for BULOG and about 2–3 percent for the private sector. For the years 1969/71, a period during which rice production was more or less on trend and BULOG's operations were small relative to the market, the seasonal (roughly, semiannual) spread ranged between 13 percent and 28 percent, with the rice-deficit areas at the upper end of this range. Thus, Mears concluded that rice storage in Indonesia was profitable *on average*, although the probability of a loss was not negligible: if the interest rates had been much higher, storage would have been unprofitable.

Conceding that the real carrying cost and therefore the seasonal spread are quite high is not the same thing as proving that middlemen do not exploit farmers at harvest time. But Mears' detailed analysis showed that it is difficult to turn a consistent profit from storing rice (or most other cereals), since years in which the seasonal spread is high are interspersed with years in which it is low or even negative. His research on rice in Indonesia and the Philippines is buttressed by Lele's work on sorghum in India (Lele 1971). Other research has shown that the levels of seasonal price rise and the uniformity of price seasonality at the farm, wholesale, and retail levels are influenced by the quality of storage facilities at the farm and wholesale levels, as well as the patterns of international trade (see, for example, the studies of maize in the Philippines by Mendoza and Rosegrant [1995] and of rice, maize, and root crops in Ghana by Southworth [1981]).

From the late 1970s onward, NFA and BULOG were able to reduce the seasonal spread by expanding and improving their operations. Bouis (1983) reported that between 1974 and 1978, NFA reduced the seasonal spread in the Philippines to only 6 percent. Since the seasonal spread reflects real resource costs and, as has already been argued, the private sector does not appear, on average, to make excess profits from storage, public intervention to reduce the price movement could only succeed by subsidizing the carrying cost. How big was the subsidy? The answer depends primarily on two variables: the gradient of monthly storage costs and the "squeeze," i.e., the extent to which policymakers wished to contain prices at levels below the normal seasonal price rise.

Direct measurement of the subsidy is very difficult, since the financial accounts of State enterprises like BULOG and NFA are not always transparent. Ammar (1988) attempted an indirect measurement of the subsidy component of BULOG for a single marketing year (April 1979/March 1980). Based on the actual movements of rice into and out of BULOG storage and estimates of the seasonal spread with and without BULOG intervention, he calculated that the implied subsidy by BULOG came to only \$7.2 million, a small amount in relation to the total value of Indonesia's rice marketings. Domestic procurement in 1979/80 was abnormally low, but even at the much higher level of intervention the following year, when procurement expanded more than fivefold, the subsidy was still relatively small, primarily because BULOG's operations allowed for a reasonably wide price spread. Moreover, BULOG accounted for less than 10 percent of the rice produced in Indonesia and, on average, it stored rice for only a few months during the year .

Ammar's estimate represents only the difference between the carrying costs of the private sector and those of the subsidized BULOG. There are other costs associated with the nature of State grain procurement, the most important arising from price variations due to differences in quality. Rice, in particular, has many qualities and the quality-price gradient is fairly steep. Valuation of rice quality is done on a transaction-by-transaction basis by the private sector and requires considerable skill and judgment. A bureaucratic organization may not be well equipped to handle such valuations, often subjecting rice and paddy to only the most superficial grading standards, such as moisture content. Because of their inadequacies in this respect and, just as important, because they are buyers of last resort, State enterprises in most countries (including South Asia) tend to end up with the lowest quality of rice, with the better-quality rice flowing into private channels. This became apparent during the mid-1980s, when the Philippines and Indonesia started to export rice and quickly discovered that the prices obtainable for State-procured rice were very low. Thus in setting a procurement price for anything

better than low-quality rice, the State enterprises may provide an additional subsidy to producers.

Another cost—and one that defies documentation—is mismanagement within the State enterprises. Large, vertically-integrated grain-trading operations are very difficult to administer because systems of internal control and accountability are difficult to institute.⁵ When these enterprises are working in a highly volatile price environment, the problem of control becomes acute. The international trade in rice is relatively informal and is often conducted on a personalized, government-to-government basis. When the State enterprises have a monopoly in trade, it is very difficult for outsiders to gain an accurate idea of the price at which individual transactions are concluded. The problem of control is compounded by the fact that there is no clear reference price for rice, such as exists for corn at the Chicago Board of Trade.

Nonetheless, it is fair to say that BULOG's domestic rice operations have been conducted efficiently, with relatively favorable outcomes in terms of the price stability achieved. However, this conclusion should not be extended to BULOG's monopolies of wheat, sugar, and soybean imports.

As this chapter was drafted, rapidly evolving developments beginning in 1998 led to significant changes in Indonesia's food economy. In the wake of the economic and political crisis that began in 1997, private imports of rice were first allowed in September 1998 and, by 1999, accounted for more than half of the rice import total. BULOG's monopoly of wheat, soybean, and sugar imports has also ended. The copious, State-backed "liquidity credit" used to finance BULOG's market operations has been curtailed; the organization must now obtain most of its credit on a commercial basis. In order to bring public procurement

⁵ In the private sector, vertically integrated grain trading operations exist only in developed countries, where there are other market institutions (e.g., futures markets) that help in their internal control structure. In Thailand, where the Government has had relatively little substantive impact on the grain trade (except through the rice export tax), vertical integration has taken place only in the highly specialized fragrant rice market.

closer to the farmer, BULOG's purchase operations have shifted from milled rice to paddy. The role of the cooperatives as the front line in procurement has become moribund, while the ethnic Chinese are reported to have a reduced presence in the domestic foodgrain trade as a result of the country's political and economic instability. Thus, the food economy is in flux at the present time. As was noted above for the Bangladesh fertilizer market, considerable disruption of traditional market relationships has occurred in Indonesia as the result of these rapid, unpredictable shifts in policy. Nonetheless, these changes do not diminish the point of this discussion: BULOG's roles during the decades of the 1970s and 1980s illustrate the objectives, performance, and limitations of what has been one of Southeast Asia's stronger and better-functioning food buffer stock agencies.

BULOG shows what can be achieved by a State agency if there is a clear, sustained direction to policy and firm supervision of its implementation. BULOG's place in the political infrastructure of Indonesia is discussed in the second part of this chapter. Is BULOG a model for other Asian countries to emulate? It is debatable whether a Government that has not yet established a food buffer stock mechanism should embark on this kind of operation. There do exist other methods by which the Government can achieve price stability with a much smaller management requirement; a discussion of them follows.

Variations in Trade

If a country is an importer of foodgrains, then in addition to the use of storage to keep the seasonal spread within policy-prescribed limits, managing the timing of imports would help reduce the storage burden further. The State enterprise could bring in the imports late in the marketing year, saving the country from having to store for year-end consumption. This strategy would pay if the seasonal movements in the world market are narrower than in the domestic market, which is normally the case because the world market has many sources of supply that tend to even out the flow of rice through the year.

In actual operations, the size of the seasonal spread is not the only consideration. The correct timing of imports vis-a-vis the seasonal fluctuation of domestic harvests obviously matters too. Between 1961 and 1974, before the Philippines' NFA (or rather, its predecessor organization) had had a major effect through its storage operations, but after it had acquired the import monopoly, it frequently mistimed import arrivals. Indeed, the timing of imports had a greater impact on seasonal price movements than did the fluctuations in wet- or dry-season harvests (Bouis 1983). This implies that for trade to play its proper role, it must be well executed. In addition, an adequate amount of precautionary storage is absolutely essential, as hitches can generally be expected in procuring supplies from overseas. It is in this sense that precautionary storage is complementary to trade.

But when it comes to annual fluctuations in the volume of output due to harvest failures, then trade and storage are substitutes for each other; in an important group of countries—those that regularly import foodgrains—trade may be superior as a means of stabilizing domestic prices. A regular importer has the option to vary the volume of trade in order to achieve a given level of price stability. Depending upon trade is likely to be cheaper, on average, than maintaining buffer stocks. With buffer stocks, the country is locking up resources as grain in storage, which has a positive carrying cost. Instead, the country could set aside a foreign exchange reserve to provide for imports. In contrast to holding grain in storage, carrying foreign exchange earns revenue. This, ultimately, is the logic behind the use of foreign trade to even out fluctuations in domestic availability and to cope with fluctuations in world prices.

Of course, complete dependence on trade passes on to the domestic market any price instability in the world market. Therefore, to achieve what are considered strategic food security goals, most Asian importing countries have chosen some balance between domestic storage and government trading monopolies that can insulate the domestic market by selling foodgrain at subsidized prices. Provided the foreign exchange is well managed, the

wherewithal both to purchase the grain and to subsidize its domestic sale should be at hand.

But the above measures all rely on government decision making. A more market-oriented approach, which has never been tried in Asia but which would avoid the pitfalls (and the management demands) of both the buffer-stock operations and variability in trade, would be a variable border tax. Under such a scheme, the Government sets a price target and imposes a variable levy (or subsidy), but the trading decision is left to private importers and exporters. This would minimize management by the Government and lead to automatic and transparent decision making.⁶ This does not quite let the Government off the hook, however, for even with the decisions left to the private sector, better statistical information still has to be obtained by the Government and made available. Accurate information regarding harvest and grain movements is essential, regardless of whether the Government or the private sector is making the decisions to import.

Rationing and Targeted Consumer Subsidy: the South Asian Model

As stated above, most of the patterns of intervention in grain markets, both in South and Southeast Asia, have their origins in the procurement, distribution, and rationing systems established during World War II. In South Asia, unlike in Southeast Asia, these systems remained in place well into the postcolonial era and were designed primarily for the urban areas. Indeed, in most cases, ration shops only existed in urban areas. Relative to the Southeast Asian approach, three basic problems with the South Asian model can be identified: its instability, its inequitable urban bias, and its high public cost.

⁶ It remains unclear what the GATT's ruling on variable levies will be. Offhand it would appear that as long as the absolute level of the levy at any time exceeds the country's bound tariff rate, then a variable levy should be acceptable. As of now, the matter has yet to be resolved.

South Asia's rationing systems essentially make procurement (and import) policies follow a quantity target, as compared to the price-targeting approach that has been described for Southeast Asia. In normal times, the difference between the two is only of academic interest. But during a crisis, the quantity target becomes much more rigid and demanding—and peculiarly unstable. Except implicitly, by their urban location, the availability of food from the ration shops was nearly universal. At times there was not even a quantity restriction. Under such circumstances, if a shortage developed, the gap between ration and free-market prices could quickly widen, causing increased offtake from the public system and requiring greater effort at procurement, which in turn would drive free-market prices further upward. To break the spiral, the Government had to obtain foodgrains from outside the system, usually from abroad and often from food aid. If domestic sources had to be relied on, then some form of squeeze on the farmers was almost inevitable. Thus, in India during the 1960s and onward, a compulsory rice levy was imposed on farmers (implemented through the rice mills), although this was managed without inducing too much impact on prices.

If the purpose of ration shops was to protect the poor, then, in bypassing the rural poor, the structure that evolved in the decades after World War II became increasingly and manifestly unfair. Moreover, in bypassing market mechanisms through which supply and demand both respond efficiently to changes in prices, the South Asian systems entailed enormous and unsustainable public budgetary costs. In the few cases, notably Sri Lanka and Kerala, India, where the ration shops were open in both rural and urban areas, these costs continually increased. As in the case of fertilizer, with the debt crisis of the early 1980s and considerable prodding from donors, many governments took the opportunity to reform their systems. The cases of Bangladesh and Sri Lanka illustrate the nature and impacts of these reforms.

In Bangladesh, the evolution of food policy during the past two decades has involved an as yet unfinished search for a suitable balance between the often contradictory goals of

food security for consumers (both nationally and among vulnerable groups), producer income support, and greater efficiency of public interventions in foodgrain markets (ADB 1996a). In the early 1980s, State interventions in the foodgrain marketing system of Bangladesh were among the most extensive in Asia. State enterprises held monopolies in international trade (including the country's considerable food aid), grain exports were effectively banned, private domestic storage was stifled, and a massive Public Food Distribution System (PFDS) was responsible for procuring grain from millers, storing a large share of the country's annual grain supply (more than 20 percent in 1988), and distributing this through a variety of often inefficient, poorly targeted rationing and program channels. The budgetary and efficiency costs of these interventions were enormous.

Reforms were initiated gradually in the mid-1980s and accelerated in the early 1990s. Legal barriers to private foodgrain trade and storage were reduced, prohibitions against private imports and exports were largely dismantled, the most egregious of the public rationing channels were abolished while the others were streamlined, and significant cutbacks in PFDS staff began. To replace the traditional millgate procurement system, which had awarded rents in the form of price premiums to grain millers, two somewhat competing new mechanisms were introduced to improve the efficiency of domestic procurement: a farmer floor price and a market-based open tender system for milled grain. By the mid-1990s, the private sector had taken over a major share of domestic and international trade in foodgrains. As a result, the reforms reduced the Government's annual budgetary costs for PFDS operations from \$199 million in 1990/91 to \$93 million in 1994/95 (ADB 1996a). Although conceptually sound, the reforms met considerable administrative and, at times, political resistance, with the former often being most vocal in the State agencies under the PFDS. As of the late 1990s, Bangladesh's food policy—encompassing strategies both for production and marketing—was still evolving and subject to fits and starts as the result of political unrest, weather-related production fluctuations, and other factors. Nonetheless, the tangible achievements of

market liberalization were so obvious as to make them appear irreversible.

Sri Lanka gave up its universal food distribution system beginning in 1978 and introduced a means test to target the subsidy toward poorer groups. This reform was occasioned by trade liberalization accompanied by a large devaluation, which increased the fiscal burden of the food subsidy. The reform therefore had as its primary objective the reduction of this burden. It was achieved in three phases. The first phase introduced a mild means test for eligibility to receive rations: families simply declared whether their monthly income was less than 300 rupees (about \$15). Despite openness to abuse, this immediately reduced the roll of those eligible to about 50 percent of the population, although this share later increased steadily (because inflation made the rationed food more attractive) until a freeze was declared in 1980. The second phase, implemented in 1979, converted the ration scheme into a food-stamp program. This allowed consumers the option of choosing the mix of goods (kerosene was also included) that could be purchased with the subsidy. Here a trick was inserted to control the level of food subsidies: the allocation of the budget for the food stamps was fixed at a *nominal* level for the future, automatically ensuring the erosion of the real resources transferred through the program. The third phase freed food prices altogether.

As in Bangladesh, the Sri Lankan reforms significantly reduced government expenditures and had a positive impact on the fiscal balance (Ederesinghe 1988). Agricultural incomes rose substantially because of price liberalization. But the precision of the program's targeting mechanism was still poor, illustrating one of the major inefficiencies of the South Asian model: according to a survey by the Central Bank of Ceylon, 30 percent of the nonpoor received food stamps, while 30 percent of the poor did not. The share of food subsidy expenditures captured by the poor rose from 50 percent with the ration system to 60 percent under the food stamps, but this was mostly through the elimination of items such as wheat and dairy products from the subsidy programs. Of course, with the declining real value of the subsidy,

the Government's contribution to a poor household's budget declined steadily. The most disturbing impact of the reforms was a decline of some 8 percent in the calorie intake of the bottom income quintile. Their intake prior to the reform was already perilously low (about 1,500 calories per day). This result appeared to be due to the decline in real income that resulted from the increase in general food prices (Ederesinghe 1988).

The whole issue of targeting deserves some elaboration. In an economy where people do not have regular salaries or income that can be easily measured or documented, it is very difficult to single out the poor for special attention. This is especially true if better nutrition is the objective, since almost all households—rich and poor—partake of the consumption of basic starchy staples. More stringent means tests than that used in Sri Lanka are possible, but they are still open to abuse.⁷ Self-targeting mechanisms are therefore desirable. Often, self-targeting results from the way in which the distribution is handled. For example queuing for food tends to exclude the rich, whose opportunity cost of time is higher. Similarly, if the public distribution system provides only the poorest grades of food (aesthetically, although not nutritionally), then the system will better target the poor. Bangladesh is well known for having pioneered the food-for-work program, which may be considered an even more efficient approach to self-targeting. A public-works program is self-targeting if it creates jobs for the most unskilled among the labor force and if food, particularly low-grade food, is provided in lieu of monetary payment. In Bangladesh in the 1980s, the food-for-work program distributed wheat that came in as food aid. Wheat at that time was less preferred than rice among the Bangladeshis and therefore enhanced the self-targeting mechanism.

The justification for using food instead of money is that when a labor-intensive public-works program is initiated in a given area, the local demand for food may suddenly rise, putting upward pressure on prices. The Government can avoid this

⁷ For example, Bangladesh introduced a means test based on the union council taxes paid by households.

by paying the workers directly in food. In contrast, if the share of the workers' budget spent on food is small, or if the marketing system is well developed, then wage payment in money instead of food would suffice.

Assessment of the State Roles

Three questions can be asked about the role of the Government in the area of foodgrain and fertilizer marketing:

- Should it have any role at all?
- Given that it has played a major role and will continue to do so, has it been "excessive," at least in an economic sense?
- Could the State's social and economic objectives be met by more efficient means?

A Marketing Role for Government?

With respect to fertilizer, a clear answer can be given: the governments had a role to play in the 1970s in the wake of the food crisis and with the advent of the green revolution technology that required a period of adaptation by farmers. But by the late 1980s, there was little reason for continuing the fertilizer subsidy anywhere in Asia.

The response is more complex with respect to foodgrains. Superficially, it can be argued that food is a private good and providing it is best done by the private sector. But food is also a merit good of strategic importance. The Government has a clear role to ensure that vulnerable households have adequate access. At the same time, the Government should confine its role to well-targeted subsidization as much as possible. In this respect, some of Asia's experiments in efficient targeting should be continued.

Can a price stabilization role be justified? Here a more complex argument is required. There is no question that society benefits if foodgrains are purchased when supplies are

abundant and stored until they are scarce. However, if the interest component of the storage cost reflects the social opportunity cost of capital, and if expectations in the private sector are rational, then the market mechanism, not the Government, will, from *the standpoint of economic efficiency*, arrange for the optimal amount of storage at all times (given the information available), and therefore the optimal degree of price stabilization.

Of these two conditions, it is common for the interest costs facing middlemen to be higher than those of the Government. This may constitute a rationale for the Government to intervene, as it can lay hands on cheaper funds. But caution is in order here. First, if constraints in the financial system limit the credit that is available to private traders, one way out may be for the Government to support the strengthening of the banking system rather than engaging directly in the grain trade.⁸ However, this should definitely not be taken as suggesting that the Government should become directly involved in lending to middlemen, particularly given Asia's generally dismal record of State-directed credit to agriculture. Second, even if the banking system is efficient, it is possible, even likely, that the private sector faces a high cost of capital because there is a risk premium attached. A potential policy prescription would be to develop market mechanisms for risk bearing, (e.g., a futures market), rather than for the Government to wade in and become a market stabilizer directly. "Potential," is stressed here because not all countries have the legal and regulatory infrastructure ready for the development of such markets.

It is easy to be skeptical about the second condition, that all actors in the market have rational expectations. To justify government intervention to stabilize markets, however, it must also be claimed that the Government is more rational (has better

⁸ In some cases, solutions may be straightforward. In Bangladesh, for example, antihoarding laws were left on the books well after the Government embarked on liberalizing the grain trade. Although no longer enforced, these laws nevertheless provided a real disincentive for commercial lending to private grain traders through the mid-1990s.

information or makes better forecasts from the information at hand) than private actors. There may be cases when Government superiority can be justified, for example, when markets and prices are so volatile that private actors cannot form reasonable expectations about the future. In practice, however, this probably occurs only rarely.

In conclusion, there is a clear case for government intervention to ensure that society's nutrition objectives are attained, but a less clear case for the Government to intervene to stabilize prices of foodgrains. There is no longer any case for intervention in the fertilizer market.

Has State Intervention Been Excessive?

There can be no simple answer to this question. A brief (and not very satisfying) answer is simply to say that it all depends! It depends on how much society values price stability; on the nature of the intervention; on a country's size in relation to the world market; on its levels of income, human capital, and other economic resources; on the slopes of the food supply and demand curves; on the extent of poverty and malnutrition; on the level and variability of food supply in the absence of intervention; on the macroeconomic environment; and, last but not least, on all of the market distortions and various natural risks that may lead outcomes in private food markets to depart from what is judged to be socially optimal. During the past decade, economists have become very clever at incorporating these variables in computable general equilibrium models that estimate the distortionary costs of policy. However, a review of this literature is well beyond the scope of this volume.

What can be offered more constructively is the observation that governments have at times misdirected their efforts, doing too much in some areas and not enough in others. By concentrating on price stabilization, governments have expended a great deal of their resources on one objective. While the measurable resource costs of providing price stability may not be very large—at least in relatively

normal years—the intangible costs may turn out to be significant: many governments have invested a great deal of their scarce managerial capacity in grain-trading enterprises, and, as will be seen below, the methods they have deployed to achieve their objectives have been especially management-intensive. At the same time, very serious problems related to poverty and malnutrition are not getting the attention they deserve because resources are being diverted to activities for which there is much more political clamor. To correct this resource misallocation, a general recommendation is to seek—consistent with the bounds of society’s food policy objectives—market-based solutions, let the private sector do its job, monitor the market carefully, and provide very selective, targeted support to nutritionally vulnerable groups.

Could the Objectives Be Achieved More Efficiently?

Here the answer is unambiguous. In many instances, and particularly in South Asia, the management-intensive enterprises that were created and maintained over the entire postwar era to ensure food security have become extravagant anachronisms.

In addition, now that trade and exchange-rate regimes are increasingly liberalized, the rationale for a foreign-trade monopoly has declined. Fortunately, more efficient, market-based mechanisms exist and are being applied in Asia. The principal suggestion of this volume, for countries that are regular foodgrain importers, is for measures like a variable-levy regime, whereby the Government exerts itself only through the taxation mechanism, without engaging in trading operations. As alluded to above, other government measures to increase market efficiency include the provision of timely market information, monitoring of the marketing system, and efforts to encourage the growth of a healthy financial system.

THE POLITICS OF AGRICULTURAL POLICY MAKING

The Importance of Institutions and Political Dynamics

The economics of Asian agriculture and agricultural policy making are increasingly well understood. As suggested above, theoretical and methodological advances in the discipline of economics, combined with rich applied research on rural Asia, have yielded increasingly powerful insights into the welfare, productivity, and efficiency implications of particular policy measures.

Much less impressive is our understanding of *why* governments make the policy choices they do. All Asian governments face similar circumstances in making decisions about intervening in foodgrain markets, as noted above: the need to ensure adequate food supplies at the lowest possible prices for the urban poor, the desire to avert social and political unrest over constricted food supplies or precipitate food-price rises. Notwithstanding heightened attention to political economy by economists and political scientists, most observers' grasp of why governments opt for one policy instrument over another remains weak.

Repeatedly one encounters writings by policy analysts making vague references to "politics" undermining this or that initiative or obstructing policy reform. Although not wrong, such statements conceal as much as they reveal and are of little utility to practitioners, who are left with the daunting task of crafting economically rational policy measures while at the same time navigating the theoretically uncharted waters of the politically feasible.

The one major innovation of the past 15 years has been the work on the political economy of urban bias. Much (but not all) of this literature grows out of the work of Olson (1965, 1982) on collective action and distributional coalitions. The most influential studies have been those of Lipton (1977), Bates (1981, 1983), Anderson and Hayami (1986), and Lindert (1991).

The central insight of this body of literature is that farmers are likely to suffer policy discrimination in poor countries; but as countries industrialize, as food costs come to constitute a smaller share of living costs and as the obstacles to collective action (lobbying) by farmers decline, reflecting the correspondingly smaller and more concentrated profile of the agricultural sector, the bias will swing to protecting farmers. The Republic of Korea, Malaysia, and Taipei, China have already been cited as examples of this evolution. Among the main subsidiary points is that the potential for collective action by rural producers varies by industry, reflecting the number of players and the incentives to free-ride. Rice farmers, for instance, are less likely to mobilize for effective political action than, say, rice millers or sugar growers.

These are important advances that provide some basis for predicting change over the long run and, more immediately, for anticipating the influence of political dynamics between economic actors and across sectors. Correctly handled, these conceptual advances have real practical implications for policy analysts.⁹

Rather than dealing with the strengths and weaknesses of the urban bias literature, the focus here is instead on what it omits. All this work—like so much of the so-called “new political economy”—is very much demand-side political economy. That is to say, it concentrates on the preferences of a given coalition, sector, or industry and infers policy outcomes from them. Societal preferences or interests—the demands—are assumed to be the critical causal determinants of policy outcomes.

There is much to be gained from such an approach, but also much that is left out. Policymakers—politicians and bureaucrats—are reduced to passive respondents to public pressures (with the partial exception of predatory rent-capturing behavior). Such an approach tells us little or nothing about why agricultural policymakers in different countries who

⁹ For an important critical review of the literature on urban bias, see the special issue of the *Journal of Development Studies* (Varshney 1993).

are contending with similar constellations of economic interests make very different policy choices. To gain some purchase on these issues it is necessary to factor in the institutional environment, that is, the political architecture of a country. The central proposition of this section is that in order to anticipate more effectively the political feasibility of a given economic strategy for promoting rural development, analysts need to focus on the incentives facing not just economic actors, but policymakers as well. Powerful, if not perfect, insight into the incentives of politicians and bureaucrats can be gained from an understanding of how the political structure within which they must function constrains their actions in designing and implementing policy.

There is a growing and rich literature concerned with the impact of political institutions on economic governance.¹⁰ This literature has been primarily concerned with North America and Europe. Increasingly, however, it is expanding to embrace Latin America and parts of East Asia (principally Japan and Taipei, China). As yet, little attention has been paid to the rest of Asia, and even less to linking political institutions to the particular circumstances of agricultural policy. This section offers an initial attempt to connect this literature to food policy in rural Asia.

Three country case studies are offered: Thailand, Malaysia, and Indonesia. Two interrelated policy issues are investigated across these countries: the handling of rice-price stabilization and the handling of farmer income support. The focus is on the 1970s and early 1980s. There are several reasons for this choice of time frame. First, this was the period during which green revolution technologies were introduced and rice agriculture in Asia was changing most rapidly. Second, it is a period for which the data and the broad outlines of the economic stories are reasonably clear. Third, the institutional framework of Government in these three countries that was

¹⁰ For a review that contrasts this literature with the broad interests-based political economy literature, see Haggard (2000). Cox and McCubbins (2000) provide a powerful synthesis and extension of the institutionalist literature.

in place (or took shape) during this period remained largely unchanged until the upheavals linked to the current regional financial and economic crisis.

It should be emphasized that for the purposes of this exercise, the time frame, the countries, and the policy issues are not in themselves important; any or all of these three variables could be changed. The focus here is on the policy process rather than the policy outcomes. The aim is not to illuminate the economics of these issues and cases—that is the topic of the first half of this chapter, as well as other volumes of ADB's Rural Asia study—but rather to highlight the impact of political institutions on the way the issues were handled in these three countries.

Thailand, Malaysia, and Indonesia make it possible to see three quite different political systems at work. From the early 1970s, Thailand had an increasingly competitive political process in place—one that was evolving, to be sure, and not without setbacks, but nonetheless one in which elections and civilian politicians came to play a steadily larger role (even as they shared the stage with military officers and bureaucrats). Malaysia had a more clearly competitive political system in place, even though a range of political controls was introduced in the wake of the race riots of 1969. While electoral competition is of fundamental importance in both Malaysia and Thailand, this section will show that their differing institutional configurations had important consequences for policy making. In political terms, Indonesia presents a very different case, for although the electoral process was not insignificant, it was clearly much more closely managed than Malaysia's or Thailand's. The weakness of the electoral imperative and, moreover, the particular institutional characteristics of Indonesia's presidential system had important consequences for food policy.

Apart from highlighting the impact of differing political frameworks, the wider rationale for this approach is that we can observe three countries, in the same time period, all located in the same neighborhood, all having strong natural resource sectors but undergoing rapid industrialization. In all three, rice is a key crop and rice farmers are an economically and politically important

segment of the labor market. All three countries intervened in rice markets to stabilize prices and each took at least some measures (as part of the stabilization process and/or through subsidies for direct inputs) to support farmer income.

There are also critical differences among the three countries that need to be recognized at the outset. A basic difference for policy orientation is that through the period examined here Thailand was a rice exporter while Malaysia and Indonesia were rice importers. Similarly, it makes a difference for fiscal flexibility that Indonesia and Malaysia were oil exporters and Thailand was an oil importer during a period when oil prices were rapidly rising. It matters, too, that Malaysia's income per capita was roughly three times that of Indonesia's.

There can be no doubt that intervening variables such as these have a direct bearing on whether a country will seek to stabilize rice prices above or below world prices and the extent to which it can afford to provide subsidies to farmers. The focus here is on *how* governments sought to achieve their policy objectives given these structural economic constraints. Put differently, given the economic circumstances they faced, why did they choose the policy techniques or instruments they did? And more specifically, what does the institutional configuration of politics have to tell us about the choice of instruments?

Thailand

Rice production has long been a central part of the Thai economy. Unlike Malaysia or Indonesia, Thailand was able to enjoy easy expansion of output through the 1950s and 1960s on the basis of its underutilized land. So important was rice to Thailand in the post-World War II period that taxes on rice exports loomed large in the country's fiscal profile, constituting 32 percent of budget revenue in 1953 but declining steadily to just 7 percent by 1969 as other sources of revenue grew in importance (Panayotou 1989). As might be expected, during the early era of authoritarian politics the core priorities for

rice-pricing policy were clear: collecting tax revenue and ensuring that consumer prices for the urban elite in Bangkok were neither too high nor too volatile for fear of the economic and political consequences. Price stabilization was a relatively straightforward matter, involving the imposition of export taxes and quantitative controls at the border that were adjusted to keep domestic prices comfortably below world prices. There was little consideration given to boosting farmer income during this early period.

By the early 1970s, however, several important aspects of this picture were shifting. First, the global food crisis of 1972–74 brought the whole question of rice-pricing policy much more sharply into focus. Second, rice taxes had become a minor part of budget revenue. Third, although there were bumps in the road, authoritarian government was replaced by democratic government; from 1973 onward, elected politicians became pivotal in policy-making. Following a coup in 1976, a military regime again came to power, but this was short-lived. From 1978 onward elected politicians were integral to all governments, initially in a power-sharing arrangement with the military and appointed officials and then on their own, with a brief interruption following another coup in 1991.

Pinning down the key elements of the institutional framework of Thai politics during this period is a particularly slippery task, as the framework was undergoing continuous evolution. If we set aside the brief return of strongly authoritarian politics in 1976–78, a stylized sketch of the reasonably democratic years on either side of this would highlight several features. First, Thailand had a parliamentary system of government, but one that featured two fully functional chambers (even if the Senate was unelected). Another key feature that separated Thailand from the classical Westminster (or British) model of parliamentary government was the electoral system: although Thailand did have the plurality (or simple majority) vote-counting rule, instead of having a single member of parliament for each electoral district, Thailand frequently had two or three members per district.

This seemingly mundane fact is often overlooked, but carries very important implications. Instead of tending toward a small number of strongly disciplined parties, Thailand's electoral system encouraged multiple and weak parties. The key to this result is the fact that multimember districts with plurality voting pit members of the same party against one another. Because of this, politicians are unable to differentiate themselves and campaign on the basis of party affiliation and so have to develop personalized strategies that tend to center on the delivery of services and benefits to voters and opinion leaders in their districts.¹¹ By contrast, in the classical British model, there is only one seat per district to be contested, so parties field only one candidate, as illustrated here by the Malaysian case. Accordingly, candidates tend to campaign on the basis of party affiliation, striving to deliver broader public goods-type policies to voters rather than divisible benefits.

Thus, Thailand had a bicameral parliamentary system in which there were many weak parties. Governments were constructed on the basis of shaky multiparty coalitions; the Prime Minister faced constant battles to hold a coalition together. Ministers (and members of parliament more generally) were encouraged under this system to pursue strongly pork-barrel-style policy measures. This contributed to and was reinforced by the widespread pattern of vote buying in a number of rural areas.

As to Thailand's approach to rice price stabilization, a number of earlier studies (Ammar 1975; Ammar and Kanok 1985; Ammar and Suthad 1989; Panayotou 1989) have provided careful explanations for the country's economic performance in this area. Apart from their operational effectiveness, the striking feature of Thailand's price-stabilization efforts is their disjointedness.

¹¹ The key work in this area on Thailand is important new research being undertaken by Allen Hicken, a doctoral student at the University of California at San Diego. For development of the wider logic of electoral systems that promote intraparty competition, see Cox (1984, 1987) and Carey and Shugart (1995).

A range of taxes was deployed to counterbalance fluctuations in world prices. The Ministry of Commerce collected a tax known as the rice export premium. This was the heaviest of the export taxes and was regularly adjusted in response to global market conditions. The Ministry of Finance collected a separate flat 5 percent export duty. A third tax was the rice reserve requirement, whereby exporters were obligated to sell a varying amount of rice to the Government at below-market prices for every ton of rice exported. This tax was also administered by the Ministry of Commerce and along with being an effective stabilization instrument, it was also nominally used as a modest consumer subsidy for the Bangkok market. A fourth *de facto* tax instrument was the requirement that all exports be licensed, enabling the Ministry of Commerce to impose quotas.

In 1974, in the wake of the global food crisis and the emergence of democratic government in Thailand, the management of rice export taxes was overhauled as part of the Farmers' Aid Act—a major legislative reform passed by the newly invigorated parliament. Henceforth, although the Ministry of Commerce's administration of the rice premium was formalized, it effectively lost control of the tax, since adjustment of the premium now required Cabinet approval. The revenue raised from the premium was channeled into a special nonbudgetary fund, the Farmer's Aid Fund. Control of the Farmers' Aid Fund was given to the Ministry of Agriculture for the purpose of assisting farmers (of which more below).

Because of these changes, the management of price stabilization shifted. In this case, the end result was the same—effective price stabilization—but with a very different confluence of policy preferences. Prior to this, the Ministry of Commerce had clear leadership in pricing policy and the export premium was its principal instrument. Now the approval of the Cabinet was required to vary the level of the premium, thus shifting the decision-making authority to a loose coalition of diverse and competing political parties, as well as such members of the military and the wider bureaucracy as were included in the Cabinet at the time. Whether the Commerce

Minister could persuade his Cabinet colleagues about a particular export premium adjustment depended on the vagaries of his party's standing in the shifting politics of coalition government. In addition, he had to contend with the entry of a new player, the Ministry of Agriculture.

Denied flexible control of its traditional instrument for price stabilization, the Ministry of Commerce increasingly relied instead on the rice reserve requirement. As Ammar and Suthad (1989) explain, had it not been for the Ministry of Commerce's loss of control of the premium tax, the rice reserve requirement might well have been allowed to wither in the 1970s, since its role in subsidizing Bangkok consumers had become largely a charade. Nevertheless, it quickly became the lead instrument for shielding domestic prices from global fluctuations until its eventual abolition in 1982, in the face of the collapse of global commodity prices and a wider process of economic liberalization. The rice export premium was removed in 1986.

If the primary effect of Thailand's political framework on rice price-stabilization efforts during this period is the disjointed nature of policy interventions, the impact of policy initiatives for farmer income support is more striking and more consequential. In broad terms, a rice-exporting country would usually be reluctant to maintain domestic prices above the world level, as to do so would entail a net fiscal burden, regardless of how the price support was implemented. Nonetheless, the Thai Government from the mid-1970s directed increasing efforts to support for farmer income. This came at a time when rice prices were declining sharply, as were rice export taxes, which fell to just 4 percent of budget revenue in the 1970s and 2 percent in 1982 (Panayotou 1989). At least in part, the efforts were an immediate result of elected politicians' coming to hold executive power (Ammar and Suthad 1989).

Two income support initiatives deserve special attention: rice price-support schemes and subsidization of farmers via the price of the principal industrial input, fertilizer. In the case of the former, a floor price for paddy had in fact been in place in Thailand since 1966, but it was rendered irrelevant because it was set below

the market price. In the early 1970s, the market price moved below the floor price, but the floor price still had negligible impact, since the volume of rice procured was too small to influence the domestic market price. With the coming of democracy in the mid-1970s and increased attention to farmer welfare (read: rural constituents), increased (but fluctuating) support for a meaningful floor-price program could be seen. This intensified in the early 1980s with the collapse of commodity prices and the emergence of real hardship among farmers.

The fragmented nature of government in Thailand was reflected in the choice of instruments and implementation of the rice price-support schemes. Rather than a standard procurement and stockpile operation, there was variation, depending on whether the Minister of Agriculture or the Minister of Commerce was designated as the lead player (and which parties controlled these ministries). If Agriculture was in the lead, it bought up rice from millers using a parastatal agency under its control called the Marketing Organization for Farmers. Conversely, if Commerce was in charge it bought up rice from millers using its preferred parastatal agency, the Public Warehouse Organization. During 1981–82, political competition between the two ministers (who were from different parties) was so strong that *both* agencies were involved. Agriculture would fund its operations from the premium revenue in the Farmers' Action Fund, while Commerce would fund its operations from the proceeds of official government-to-government rice trade (supplemented by the rice reserve requirement).

More notable than this disjointedness, as Ammar and Suthad (1989) demonstrate, is that the procurement was not conducted in a way designed to defend a floor price or to benefit farmers. In order to maximize the public profile of the price-support program, the funds available to support procurement were recycled in locations scattered across the country, with the result that the purchased stock did not exert any significant upward pressure on prices. The principal beneficiaries of such rents as were to be had were rice millers rather than farmers.

Why should this be so? Bear in mind that the focus here is on how Thai policymakers chose to use resources, rather than the level of resources or the efficiency with which they were deployed. It is not that senior Thai policymakers were unusually venal or incompetent. Their actions directly reflect the incentives of the political framework in which they operated. As noted above, Thailand's electoral system strongly discouraged politicians from campaigning on the basis of party reputation and strongly encouraged them to generate policies that provided for divisible goods that could be delivered to particular electorates. Rice millers were among the leading economic figures and vote mobilizers at election time in many rural districts (indeed, a number were also members of parliament), so they were natural allies for politicians with rents to award. These were not rents being transferred from farmers to urban consumers. These were public (though nonbudgetary) resources being transferred to politically influential constituents in rural districts.

A parallel story can be seen in the history of direct subsidies to agricultural inputs. Fertilizer subsidies are the typical instrument for direct transfers to rice farmers. Thailand began to subsidize fertilizer, which had previously been subject to significant taxes, under the Fertilizer Act of 1975, (a parallel initiative to the Farmers' Aid Act of 1974). Under the auspices of the Ministry of Agriculture, the fertilizer was distributed through the Marketing Organization for Farmers. The subsidies only affected about 13 percent of the fertilizer sold and amounted to 35 percent of the wholesale price, but Panayotou (1989) reports that less than half of the rent was actually received by farmers, with the rest again being captured by local intermediaries.

The clear point is that this is not a simple story of corruption and administrative leakage (though, no doubt, those were present too). The pattern of rent creation and distribution is strongly consistent with politicians responding to the incentives of an electoral system based on multimember districts with plurality voting. Thailand was unlikely to spend much on farmer income support, but that

policymakers should choose these instruments over others reflects the impact of the specific institutional framework of politics then in place. Policymakers could, after all, have opted for a more universalistic or public goods-type method of income support much more simply by easing export taxes slightly. Recall that it was revenue from export taxes (via the Farmers Action Fund and the government-to-government sales of the Public Warehouse Organization) that was funding the rents that were nominally to be distributed to farmers. Policymakers did not opt for a direct nondivisible transfer via lowering export taxes. Nor did they simply steal all the rents themselves. Instead they opted for a strategy that would transfer rents to local power brokers in various electorates. This outcome was a direct consequence of the specific form of Thailand's political institutions

Malaysia

Malaysia is a rice importer with a long history of State intervention in rice markets to promote price stability and protection for rice farmers, as well as direct measures to support rice-farmer income. From 1970, State intervention rapidly intensified, with levels of direct and indirect support for the rice sector becoming very high by the mid-1980s. As in Thailand, the institutional framework of politics helped shape the choice of instruments adopted by policymakers, although these choices differed from Thailand's as a result of Malaysia's different political architecture and socioeconomic circumstances.

Ethnic politics have been a powerful factor in Malaysia's political economy: deep Malay sensitivity about the economic dominance of the ethnic Chinese has been a major determinant of the behavior of Government. At the same time, with the exception of the brief but powerful upheaval of Malaysian politics as a result of the race riots of 1969, competitive elections have been a constant and

fundamental element of the country's political architecture. Political authority in Malaysia is much more concentrated than in Thailand. This is not just a function of the tight political controls that have accumulated since the 1970s (Crouch 1996). As compared to Thailand, the parliamentary structure and electoral system of Malaysia tend to generate much stronger and more centralized governments. Not only is executive authority concentrated in one chamber of parliament (rather than spread over two) but the electoral system of single-member districts with plurality voting tends to produce fewer, more coherent, and more strongly disciplined political parties. In this regard, even allowing for its ethnically-based coalition of parties, Malaysia exhibits the core features of centralized, British-style Westminster parliamentary government. Thus, provided a prime minister continues to command majority support with the dominant Malay party, the United Malays National Organization (UMNO), his powers are great and far-reaching.

Two other important institutional features require amplification. In stark contrast to Thailand, Malaysia's electoral system, when combined with its parliamentary government, *did* encourage politicians to campaign on the basis of party affiliation. Where Thailand's electoral system forced members of the same party to compete against each other, thus placing a premium on their ability to deliver particularistic goods to constituents, Malaysian politicians faced far fewer pressures of this sort. This does *not* mean that patronage systems and rent-seeking behavior were rare in Malaysia; the literature on Malaysia's political economy is replete with accounts of patronage and rent-seeking activities in the rural sector (Scott 1985), in the industrial sector (Gomez and Jomo 1997), and in politics more generally (Crouch 1996). But it does mean that the political system was less heavily geared towards enabling politicians to generate divisible rents. In short, in *relative* terms, Malaysia's system of government was institutionally more disposed to generate public goods and to allocate rents in a broader-based fashion.

Also significant is that, according to most observers, Malaysia's electoral boundaries were redrawn to increase the

number of electoral districts in rural areas, thereby strongly favoring the largely-rural, ethnic Malay voters (Crouch 1996). Quite apart from the advantages this conferred on particular political parties (principally UMNO), it also forced the Government to be more responsive to rural Malay interests than it might otherwise have been. Along with being rural, rice farmers are almost all Malay.

As to the specific issue of rice price stabilization, Malaysia, like Thailand, has been quite successful at stabilizing domestic rice prices. But where Thailand stabilized prices below world prices, Malaysia—except for years of unusually high world prices—stabilized its prices *above* world prices. The bias has thus been clearly and consistently in favor of rural producers at the expense of urban consumers.

Since Malaysia was and is an importer, the stabilization task was daunting. The year after the traumas of the 1969 race riots, a major review of rice policy was undertaken; it resulted in refocused and intensified market interventions. One immediate result of this overhaul was the creation of a new superagency, the National Paddy and Rice Institute (LPN from its Malay initials), that centralized all existing stabilization measures. Until then, the key stabilization instruments had been a rice stockpile and a floor price. Once the international price hikes of 1973–74 eased, the LPN began to use these instruments much more aggressively. The floor price was raised and the LPN began to soak up a growing share of local production. The LPN bought paddy either directly from farmers or as rice from millers, provided the mill could demonstrate that it purchased the paddy at the guaranteed floor price. Previously, the impact of the floor price and the stockpile had been undercut by rice imports by private traders. To overcome this problem, beginning in 1974 the LPN monopolized all rice imports, enabling it to enforce an effective floor price above world prices.

The LPN was also granted wide-ranging, and in some instances draconian, regulatory powers (Fredericks and Wells 1983). In addition to controlling farm-gate and border prices, it also set wholesale and retail prices. The effect of these price

controls was to squeeze private millers and traders. Further pressure was applied on private operators during the 1970s, when the LPN entered into direct competition with millers and traders by rapidly expanding the number of public integrated milling operations. In 1969 there were four State-owned mills; in 1982 there were 31 (Pletcher 1989). With the expansion of its own direct milling operations, the LPN bought up an increasing share of domestic production. Between 1973 and 1985, the private sector's share of the paddy market fell from 88 percent to 54 percent (Tamin and Sahathavan 1988). With an import monopoly and fixed domestic prices, price stabilization could now be achieved by administrative decree and budgetary subsidy. Henceforth, the stockpile ceased to be a stabilization instrument and became primarily a strategic reserve for food-security purposes.

The LPN's import monopoly and domestic price controls, together with its expanding share of the paddy market, implied a growing subsidy from consumers and the Malaysian Treasury to rice farmers. Hardest hit by these measures were the Chinese millers and traders forced out of the market by the expansion of the LPN's activities (Jenkins and Lai 1991). An intriguing puzzle, which ties back directly to discussion in the first half of this chapter concerning the efficiency implications of different policy measures, is why the Government chose to intervene so heavily in rice milling itself. Although no solid explanation is offered here, a number of hypotheses come to mind. Was it simply a function of ethnic politics and the Government's desire to redistribute wealth from the Chinese to the Malays? Was it a function of Malaysia's having a porous border with Thailand and thus being vulnerable to smuggling? Or was it a function of Malaysian paddy being of generally low quality and LPN having to pick it up itself because the market would not set a politically acceptable price?

In the area of farmer income support, the Government's pricing policy clearly had important implications for farmer income. In spite of the substantial subsidies to farmers via the floor price system and other direct subsidies and income-support

measures, the incidence of poverty among rice farmers remained stubbornly high through the 1970s. The number of rice-farming households below the official poverty line at the end of the 1970s was higher than for the rural sector overall and very much higher than the national average (Pletcher 1989).

With the second oil boom in 1979, fertilizer prices began to rise rapidly. To prevent this from accentuating the poverty problems among rice farmers, the Government intensified its efforts to provide direct assistance. In this, it was of course greatly aided by the fact that Malaysia was an oil producer. Without doubt, the most important of the Government's farmer income-support measures was the Paddy Price Support scheme introduced in 1980. In effect, this was a supplement to the subsidy provided through the floor price for rice. In January 1980 the Government announced that there would be an automatic bonus of M\$2 per *pikul* (60 kgs.) of rice sold.

The launch of this program was badly mishandled, however. Under the original plan, the M\$2-per-pikul subsidy was to be transferred to farmers via a coupon for deposit in a long-term savings account with a government bank. This, it was thought, would both boost farmer income and aggregate savings. However, the immediate market reaction was for millers and traders to cut the prices they offered farmers by M\$2 per pikul. This triggered farmer outrage and on January 23, in the largest political unrest since the 1969 riots, some 10,000 farmers demonstrated in Alor Setar. The protest was contained only by the use of tear gas and the imposition of a curfew. The protest was notable both for the sharp reminder it provided to the Government about conditions in the rice sector and for the fact that the demonstrations took place in the home district of the deputy prime minister (soon to be Prime Minister) Dr. Mahathir Mohammed. Dr. Mahathir and the UMNO leadership generally were particularly sensitive to the possibility of PAS, a Muslim-based Malay opposition party, making electoral inroads amongst Malay rice farmers.

The protests forced the Government to redesign the program and, in the process, raise the value of the bonus to M\$10 per pikul and make it cashable immediately. Once in

operation, the Paddy Price Support program amounted to a very substantial subsidy to farmers (Pletcher 1989). Reviewing government interventions in the rice sector over several decades, Jenkins and Lai (1991) conclude that it was not until the Paddy Price Support scheme was introduced that farmer incomes increased significantly.

Other policy instruments provided subsidies to inputs. The most important was the fertilizer subsidy (others included agricultural chemicals, cultivation machinery, and, less directly, drainage, irrigation, and rice research). The Government had experimented with a number of fertilizer subsidies, but the most focused initiative came in 1979 in response to the jump in market prices for fertilizer. Coming at the same time as the Paddy Price Support program, this new initiative provided a 100 percent subsidy: fertilizer was free up to the requirements of the average rice farm (2.4 hectares). For the 1979–82 period the value of this subsidy was estimated to be M\$211 per hectare—making it a significant bonus for farmers (Pletcher 1989).

Malaysia's interventions to support farmer income during this period, like its pricing policy instruments, were very intensive. This is consistent with the broad character of Malaysia's political economy at the time: strongly interventionist policy measures launched in the name of building up local economic capabilities and of redistributing income and economic opportunities in favor of the Malay population. But within this context, how do Malaysia's political institutions tie into this policy outcome? We have seen how in Thailand the political architecture produced very weakly coordinated interventions and predisposed politicians to seek policy measures that generated divisible rents. Malaysia's demographic and political architecture encouraged different, indeed opposite, outcomes.

Regardless of their very different economic circumstances, the types of policy action taken by Malaysia in rice pricing and farmer income support would have been very difficult to carry out in Thailand, given its often shifting party coalitions. Policies such as Malaysia's required solid, sustained political consensus on issues having major fiscal and distributive

implications. Malaysia's highly centralized system of Government was very "permissive": it made it relatively easy for the Government to take strong and decisive policy action on these issues. The LPN was invested with high-level political and economic backing from the Malaysian Government and given a clear and strong mandate to stabilize prices and support farmers. Malaysia's electoral system encouraged fewer and much more cohesive political parties, which greatly increased the executive autonomy of the Government. This effect was intensified by the fact that Malaysia's upper house of parliament had no effective veto authority. In short, the heavy centralization of authority arising from the political structure meant that there were few institutional constraints on government action.

There is a third and subtler dimension to this. As noted earlier, the combination of parliamentarism and single-member electoral districts with plurality voting places a very much lower premium on the ability of politicians to deliver special pork-barrel type benefits to their constituents. This is typical of Westminster systems: politicians campaign primarily on the basis of their party affiliation. By contrast, Thailand's different electoral system meant that party affiliation was of much less significance and that politicians were typically forced to rely on their own independent electoral strategies. It is not surprising therefore that the policy instruments adopted by Malaysia, both to control prices and to support farmer income, were more arms-length or universalistic in nature. By design at least, rents were to be distributed broadly across the rice sector.

This is not to suggest that all farmers benefited equally or that there were not real problems of rent diversion through State agencies. Indeed, it takes little imagination to sense how much inefficiency was built into many of the LPN's operations (Tan 1987). There is also certainly evidence of some subsidies being slow to reach some areas or of village officials discriminating against farmers known to be PAS supporters (Scott 1985; Jenkins and Lai 1991).

Clearly, while the Malaysian and Thai policy measures differ starkly, the choice of policy preferences in both countries

was strongly shaped by the institutional framework in which the policymakers functioned. In Thailand, the whole logic of the policy instruments was to permit the distribution of discreet and selective benefits to particular districts. Malaysia's political architecture did not predispose the country to such an orientation. Rather than being determined by the framework of Government, the preferences of Malaysia's political leaders are exogenously determined by a range of factors, including economic circumstances and ethnic politics.

Indonesia

From the 1970s to the early 1980s, Indonesia was an importer of rice (although it became self-sufficient in rice in the mid-1980s). Having exhibited very strong urban bias in its policy towards the rice sector in the 1950s and 1960s, from the 1970s on the balance was gradually reversed until, in the early 1980s, domestic rice prices moved above world prices. The path Indonesia followed during this period was perhaps the most challenging in policy terms of the three country cases considered here. The Indonesian Government intervened in the market strongly and directly, but in a manner that was reasonably market-conforming in important respects. In broad terms, its stabilization record was marked by success, except for a few exceptional years (such as 1973–74) when the Government lost control of prices. Like Malaysia, Indonesia was also very active in the area of farmer income support.

Indonesia's political architecture was, without question, the most heavily centralized in this sample of countries. Electoral competition was a much less potent constraint on government behavior than in either Malaysia or Thailand. At the center of the Indonesian political framework stood a very powerful presidency: because of the way the political laws were constructed, President Suharto had little to fear from other institutions of government. Nor did he have to bargain with the legislature, since he had formal control over the leadership and membership of all parties. Similarly, he had no

need to worry about bureaucrats with loyalties divided between the executive branch and the legislature. And not only was the presidency not subject to direct elections, the whole presidential appointment process was carefully stage-managed, with the President himself effectively appointing more than half of the body (the legislature) responsible for appointing him. More broadly, the President enjoyed far-reaching powers of appointment, as well as extensive monitoring and oversight mechanisms. In short, none of the “problems” often associated with presidential systems—legislative gridlock, control of the bureaucracy, etc.—pertained in Indonesia.

Further, as with parties and the legislature, interest groups were also heavily centralized and controlled, officially organized under a vast and elaborate corporatist, or State-dominated, network. In an effort to contain political demand-making by societal actors, interest groups were, in effect, regulated by the State. An official State-sanctioned organization existed for each sector or industry and virtually all were formally organized under the wider political umbrella of the corporatist State political “party,” GOLKAR. And GOLKAR itself of course came under the direct control of the President. In sum, this was a massively centralized political system, with a supremely powerful presidency (MacIntyre [forthcoming]).

The final aspect of Indonesia’s political framework that requires some comment was the pervasive presence of patronage relations, the informal and personalized self-help and political-exchange relationships that were often indistinguishable from simple cronyism and corruption. Although these problems were by no means unknown in Thailand or Malaysia, it is not surprising (even if unverifiable) that Indonesia should be seen as being much more prone to this pattern of political representation and exchange. In political systems where the electoral mechanism is weak or nonexistent, patron-client relationships usually proliferate. As is now well understood, this typically results in widespread diversion of public resources, as officials from the top to the bottom of the political hierarchy seek to capture rents created by regulatory initiatives for themselves and their networks of supporters.

Being a massively centralized state, Indonesia unsurprisingly was thoroughly permeated during this period by personalized patronage networks.

If the position of the Malaysian Prime Minister was considerably stronger than that of his Thai counterpart, the position of the Indonesian President during this period was stronger still. Indonesia's political architecture was the most permissive of all; Indonesia exhibited the fewest institutional constraints on executive action in this sample of countries. This is not to say that the President was subject to *no* constraints on policy action: he did need to maintain the support of the armed forces, he did need to avoid food riots or mass discontent, and (as has recently been graphically illustrated) he did need to maintain the confidence of local and foreign investors. But these were not institutional constraints. The critical point about the architecture of Indonesia's political system is that it afforded the President enormous freedom of policy action.

As to the specific issue of rice-price stabilization, it is immediately apparent that the Government played a pivotal role. The policy instruments employed were a monopoly on imports and exports by BULOG, as well as the maintenance by BULOG of a national rice stockpile used to support a floor price for farmers and a ceiling price for consumers. BULOG stabilized farm prices from fluctuations before and after the rice harvest and protected consumers against fluctuations in world prices. Importantly, however, BULOG worked very much with and through the private sector. In Indonesia, there was no strong policy drive to squeeze out Chinese millers or traders. During the 1970s, BULOG procured between 2 and 5 percent of domestic production, a figure that rose to 10 percent in the 1980s (Ali 1986). Contrast this with the figure for Malaysia, which approached 40 percent in the early 1980s, and for Thailand, which was around 5 percent. All the rice that BULOG did buy up for its stockpile was purchased through the network of farmer cooperatives spread throughout rural Indonesia.

In addition to maintaining a much smaller rice stockpile than Malaysia, Indonesia managed it in a different way. Market forces played a greater role. Unlike the LPN in Malaysia,

BULOG did not fix prices rigidly. They were reviewed more frequently and the pricing calculations in setting them were more complex because of the large role allowed for private millers and traders in the food system. The size of the stockpile was constantly being adjusted upwards or downwards depending on price pressures at the production and retail levels, with international trade operations making up the difference as necessary (Timmer 1993). BULOG did not attempt to displace the millers or wholesalers and retailers.

In common with Malaysia, however, BULOG received very high-level political support. In the late 1960s it was completely overhauled and beefed up for the urgent task of reining in rice prices. It was given substantially increased economic resources as well as priority political attention. BULOG came to be headed by an influential general who had easy access to the President and all the key economic ministers. As in Malaysia, key pricing decisions were not made without top-level political guidance. Arguments about appropriate levels for BULOG's floor and ceiling prices would be made before the President by the heads of relevant agricultural and economic agencies, with the President then making a determination (Timmer 1993).

The consideration of the impact of political institutions on the management of price stabilization measures in Indonesia has a number of interesting dimensions. First, as in Malaysia, it is apparent that the heavily centralized nature of the political system greatly facilitated the task of bringing together the necessary economic and political resources to make such a massive enterprise possible. Such a complex and multi-dimensional undertaking was enormously facilitated by the ability of the President to direct that diverse resources be focused on the task. Such an undertaking would have been extremely difficult in a political system such as Thailand's, in which executive authority was spread across a shifting coalition of players.

Also interesting is the decision to adopt a model that, although having a large role for the State, nonetheless relied heavily on the actions of private actors. Why did Indonesia not adopt the more statist approach of Malaysia? After all, in

broad terms, Indonesia's economy during this period was more heavily regulated than Malaysia's.

There are a number of factors that appear to have been at work here, including Indonesia's searing economic experiences with socialist-style economics in the 1960s and the influence of the World Bank in the early days of President Suharto's regime. Also important, however, was a dimension of institutional politics that has not been discussed at length to this point: administrative capacity. The anticipated political costs of failure in rice stabilization were extremely high. The ethnic sensitivities about the role of Chinese middlemen in rice markets were no less strong in Indonesia than in Malaysia. This was overlooked, however, in part because of a recognition that the Government simply did not have the administrative capacity to ensure that it could manage the process efficiently on its own. Rice price stabilization was too politically important to be allowed to fail. Accordingly, one reason why Indonesia did not proceed along an even more heavily interventionist policy path of the sort Malaysia did was because the country's administrative capacity was simply not up to the task.

The final factor to be noted here is the decision to use the farmer cooperatives as a key actor in the implementation of the price-stabilization scheme. Technocratically inclined officials in economic agencies such as Finance, Economic Planning (Bappenas), and even BULOG would have preferred to buy directly from farmers rather than work through the cooperatives. President Suharto, however, was insistent on the role of the cooperatives. Although the reasoning behind this strategy is inevitably speculative, his choice was very much in keeping with the logic of the country's vast corporatist network of representative organizations. Although typically passive or even idle bodies in terms of articulating and advancing collective member interests, these corporatist organizations were an integral element in the overall framework of political management in Indonesia. They both served to contain independent sectoral demand making and also promoted support for GOLKAR at election time. Of all sectors of society, rice farmers were the last that the Government wished to see become politically active or outspoken; the Communists

had been able to attract widespread political support among farmers in the 1960s and the Government was desperate to avoid this happening again. Insisting that the rural cooperatives be involved in the marketing of rice was an effective way of maintaining the corporatist structure for managing interest-group activity and channeling support towards GOLKAR.

Turning from price stabilization to the issue of support for farmer income, the broad picture roughly parallels that in Malaysia. From the early 1970s and then particularly in the late 1970s and the 1980s, the Indonesian Government directed very considerable resources to support the incomes of rice farmers, with a view to making rice farming a more profitable undertaking (and thereby lifting production) and to redressing the income imbalances between rural and urban areas. Various measures were adopted, including cheap credit and subsidies on seeds, water, pesticides, fuel, and machinery. As in Malaysia, the largest subsidization effort was directed at fertilizer. Fertilizer subsidies grew through the 1970s on the back of the oil boom, rising very rapidly from the late 1970s. Between 1977 and 1984 the total value of the fertilizer subsidy rose from 32 billion rupiah to 732 billion rupiah (Hill 1996). Use of fertilizer by farmers picked up quickly: per hectare use in irrigated rice grew by 12 percent annually between 1972 and 1983, reflecting, as Timmer (1989) notes, both heavy subsidization and a distribution system capable of getting the fertilizer to farmers effectively. The fertilizer was produced by a State enterprise, PT Pusri, and, from the late 1970s onward, distributed in rural areas primarily by private traders, though the cooperatives and a State-owned rural distribution company also had considerable involvement, particularly during the early years of rice intensification.

Indonesia's remarkable success during this period with both price stabilization and income support for rice farmers has been the subject of much acclaim. Implicit in such acclaim is surprise that these huge undertakings did not become ensnared in the usual web of problems involving patronage, cronyism, administrative leakage, and corruption that came to characterize so many areas of State activism in Indonesia during these years.

Why is it, for instance, that the rents attaching to the fertilizer subsidy did—in large measure—make it through to rice farmers? Certainly this was not true of subsidies to other areas of agriculture or indeed, to the industrial sector; typically, they were largely captured and diverted. Why was support for rice farmer income different? Or, one might equally ask, why was BULOG's rice price-stabilization program run on a remarkably technocratic basis when other parts of its operations (such as the wheat, sugar, and soybean monopolies) were notorious rent-seeking operations?

The answer to this question that is most often heard is that Suharto was determined to avoid a resurgence of rural radicalism and political instability of the sort that had gripped the country in the mid-1960s—in short, that the success of these initiatives was a function of his keen political survival instincts. There is much to accounts of this sort; undoubtedly this extraordinary feat of effective State intervention could not have taken place if it had not been powerfully in the President's interests for it to do so.

But again, as has been consistently emphasized in this discussion, political interests are only part of the story. Also integral was the institutional framework of politics. The massive concentration of authority in the office of the President gave him the ability both to focus resources intensely on this policy challenge and to monitor it closely. There is no reason to believe that BULOG officials and others scattered down through the hierarchy from Jakarta to the districts were more public-spirited than any other officials. They did not make a special exception for rice and restrain normal rent-seeking practices out of any sense of commitment to the national good. Rent-seeking and theft were contained at relatively low levels because it was universally understood that this was a high priority of the Government's and that any significant meddling would be a risky undertaking, possibly inviting severe sanctions from above.

There is of course an irony here, for in large measure it was the very centralization of power that gave rise to the President's ability to monitor and deter large-scale rent-seeking in the rice sector. This circumstance in turn also contributed directly to the persistence of the patron-client-type political behavior that had

given rise to the high risk of diversion and capture to begin with. Further, it may seem odd to suggest that the massive centralization of power in Indonesia helped to produce an economically efficient and equity-enhancing outcome, yet empirically there is no other plausible explanation for the rents' not being diverted as they were in other countries.

Models for understanding the dynamics of heavily centralized political frameworks are less well theorized than are models for political systems with competitive elections. One innovative foray into this area is the work on corruption by Shleifer and Vishny (1993). MacIntyre (1999) has applied this to Indonesia to show how the country's very heavily centralized political framework enabled the President for many years both to allow corruption to flourish and to "contain" it at levels that were tolerable to investors. Put simply, on matters of very high priority, the strongly centralized framework of Government in Indonesia gave the President the ability to deter serious transgressions and abuse in policy implementation by virtue of his ability to monitor that implementation and to punish offenders. Plainly, however, rice (along with a few other areas of very high priority) was the exception rather than the rule in Indonesia.

Political Institutions and Agricultural Policy: Lessons for Policy Analysts

Policy analysts have always known that "politics matter." Taking politics into consideration in the design of programs, however, has been much more difficult. The aim of this section has been to make the challenge of incorporating political realities into program design more tractable. To this end, it has attempted to push beyond the familiar and very general ideas associated with the urban-bias thesis. Specifically, the central proposition advanced here is that by focusing on the structure of political institutions in a country—the national political architecture—it is possible to obtain powerful insight into the incentives and choices available to policymakers.

It is standard practice to examine the economic incentives of market actors when designing food policy and agricultural development programs. Indeed, it is widely accepted that failure to take account of economic incentives is likely to doom a program. The argument here is that this same logic needs to be extended to include consideration of the political incentives of policymakers. By and large, international development agencies cannot escape working with and through governments. Yet little attention is routinely given to such incentives.

The handling of price stabilization and farm income support has been examined in three countries in order to demonstrate the powerful incentives that differing political and institutional frameworks exert on policymakers, shaping their approach to a problem and the types of instruments they select to deal with it. A critical part of the reason why policymakers in different countries handle common problems in different ways is that the political frameworks within which they function put different pressures on them.

Little research has been undertaken on the impact of political institutions on agricultural policy making in Asia, so this discussion is illustrative rather than definitive. Nevertheless, the insights of this approach are strong and its relevance to policy and program formulation is obvious. There has been no attempt to demonstrate all the possible ways in which different political and institutional configurations constrain policy behavior. That is a very much larger enterprise and is the subject of an emerging body of scholarly research. Nevertheless, some strongly indicative examples of the impact of institutions have been provided. It is clear, for instance, that the making of coherent policy is much more difficult when authority is dispersed among a large number of institutions. It is also clear how and why some political frameworks place a much greater premium than others on policies that generate divisible and targetable rents. This analytical approach could readily be extended to cover the extent to which authority is delegated from national to local units of government, the ways in which the bureaucracy is structured, and the extent to which

the legal system is empowered to review and pass judgment on the actions of government.

The general lesson is that in order to maximize the effectiveness of their policy dialogues and the likelihood of efficient program outcomes, international agencies must have due regard for the institutional framework of government. Of course, institutions are not everything: a policymaker's preferences—what he or she *wants* to do—will have a prior bearing on what he or she seeks to do. But the preferences of policymakers in any given country are forced through an institutional filter that exerts a powerful and, more importantly, predictable, bearing on what they *can* do. As research in this area advances, the ability to predict the policy consequences of institutional configurations can only grow (Haggard and McCubbins [forthcoming]).

It makes little sense to proceed as if all policymakers, whether they are politicians or the officials who support them, function in a standardized operating environment. They simply do not. Indeed, national political frameworks vary widely. To ignore this is to doom policy recommendations and program initiatives to a highly intermittent or patchy impact. It is unrealistic to think that policy recommendations or programmatic initiatives can be tailored perfectly to the political framework of every individual country. Nonetheless, some movement in this direction and some sensitivity to the institutional context in which policymakers function is likely to yield an appreciable increase in the social and economic return on development interventions.