

# VII IMPACTS OF TRADE, MACROECONOMIC, AND PRICE POLICIES ON AGRICULTURE

## INTRODUCTION

Trade and macroeconomic policies are important determinants of the rate of overall economic growth. Broad-based economic growth, based on favorable trade, macroeconomic and price policies, can in turn have substantial benefits for agriculture, including the creation of domestic markets for agricultural commodities and the generation of capital for investment in agriculture. Indeed, in much of Asia, particularly East and Southeast Asia, the broad performance of macroeconomic policies, including fiscal discipline, adequate incentives for savings and investment, and an outward-looking trade policy, was overwhelmingly conducive to economic growth, at least until the early to mid-1990s (see also Chapter I).

In addition to setting the economic environment for overall growth, these policies also have a profound impact on the performance of individual sectors of the economy such as agriculture. Trade, macroeconomic, and price policies can affect agriculture by either taxing (disprotecting) or subsidizing (protecting) the sector. Trade restrictions have a direct effect on the domestic prices of tradable (often agricultural) goods, and have an impact on the real exchange rate which, in turn, affects the domestic prices of tradable goods in relation to locally produced goods. For example, import duties and quotas raise the domestic price of import-competing production in relation

to exportables (including many agricultural commodities) and therefore encourage a shift away from export production. The same policy instruments reduce the demand for imports, which lowers the price of foreign exchange so that the domestic prices of tradable goods fall in relation to nontradable goods and hence indirectly bias production incentives against both import-competing and export goods. Protection for industrial import substitutes thus penalizes the domestic production of agricultural goods in the following ways:

- the rise in the domestic price of the protected industrial output reduces the relative price of agricultural products;
- the cost of industrial inputs (fertilizer, pesticides, and farm equipment) for agricultural production increases; and
- the induced appreciation in the real exchange rate renders agricultural exports and import-competing products less profitable than nontradable goods (Bautista 1993).

Alternatively, trade and macroeconomic policies can protect agriculture or specific commodities within the agricultural sector. Agricultural protection, by raising domestic food and agricultural prices above world prices, penalizes consumers and introduces inefficiency by attracting excess resources to production of the protected commodity or sector and by rendering unprotected sectors less competitive. Protectionist policies require large government fiscal outlays to farmers to pay price supports and subsidies and may also encourage excessive use of agricultural chemicals, thus damaging the environment. Input subsidies distort input allocation decisions and compromise scarce government resources that could be used for directly productive investments. In many cases, agricultural protection also represents an inefficient transfer of income from consumers and taxpayers to farmers, because the fiscal costs of protection are higher than the benefits received by farmers and because income is

redistributed to wealthier, large farmers, who receive the greatest share of benefits. In addition, price stabilization policies significantly have influenced agricultural production in many Asian developing economies (see Box VII.1).

Despite the high costs of either taxing or protecting agriculture through trade and macroeconomic policies, a common “developmental” path, consisting of a period of taxation of agriculture followed by increasing agricultural protection, has been adopted by most countries as they develop and industrialize. Will this historical pattern of declining taxation and increasing protection of the agriculture sector be repeated in the developing countries of Asia? What impact might present-day trade and macroeconomic policies on agricultural taxation and protection have on the playing out of this historical pattern in the Asian developing countries? Might developments in international trade negotiations and institutions or developments in the structure of agricultural trade provide countervailing forces to increasing agricultural protection?

## **HISTORICAL PATTERNS OF AGRICULTURAL PROTECTION**

As economies grow, they tend to shift from taxing agriculture to protecting agriculture relative to other sectors. This shift occurs at an earlier stage the weaker an economy’s comparative advantage in agriculture and more rapidly the higher an economy’s growth rate and the faster the decline in its comparative advantage in agriculture (Anderson and Hayami 1986). This pattern has been observed in Western Europe and North America and, more recently, in Japan; Taipei,China; and the Republic of Korea. In Japan, agricultural protection was zero or negative in the 19th century, became positive in the early years of the 20th century, and rose sharply after the 1950s. The Republic of Korea and Taipei,China have followed the Japanese pattern, but at an accelerated pace. Over a 20-year period, beginning in the early 1960s, the Republic of Korea and

### Box VII.1: Price Stabilization Policy

In addition to direct interventions to influence agricultural price levels, many Asian countries have attempted to reduce price fluctuations from season to season and from year to year. Price stabilization—implemented through domestic procurement and imports—concentrates primarily on the main imported staple cereals. Export crops, such as rice in Pakistan and Thailand, are regulated by a public monopoly or through private traders in a system of variable taxation of exports. Rice and wheat trade was monopolized by the governments of Bangladesh, Indonesia, Pakistan, and the Philippines, as well as by the centrally planned economies of the PRC and Viet Nam. For import-competing cereals, domestic procurement and distribution were used to alleviate seasonal instability and to provide a floor price for farmers, whereas imports were used to deal with year-to-year fluctuations.

Although quantitative evidence is limited, it is likely that successful rice price stabilization in the early stages of economic take-off in Southeast Asia had significant benefits. During this period—characterized by a dominance of rice in diets, a large number of smallholder rice farmers, and a highly unstable world rice market—severe swings in domestic rice prices could have triggered general inflation and political instability that would have reduced public and private investment. Successful price stabilization may have had a positive macroeconomic impact under these circumstances.

In the longer run, however, as the share of agriculture in the economy has declined, price stabilization in Asia has provided only small benefits—and at a high cost. Public management of imports has been characterized by bureaucratic rigidity that has caused delays and inefficiencies in adjusting

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Taipei, China shifted from slightly taxing agriculture to heavily assisting it.

The historical rise in levels of agricultural protection in industrializing countries is linked to the changing role of

## Box VII.1 (continued)

imports to variations in domestic production and prices and by forecasting errors in estimating import requirements. Both these results have often increased price variability instead of reducing it. The budgetary costs of managing public stocks and open-market operations have been very high and the lack of operational transparency has encouraged corruption and rent seeking. Public intervention in domestic markets has squeezed the normal seasonal price spreads, driving private traders from the market and reducing market efficiency.

By the late 1980s, many Asian countries were realizing that price stabilization was an ineffective and unsustainably expensive strategy for achieving stable prices. In Pakistan, the government abolished its monopoly in rice in 1988/89; in Bangladesh, the rice monopoly in external trade ended in 1992/93. The Philippines has proceeded slowly, opening up import trade in wheat, flour, and animal feeds to the private sector, but retaining the National Food Authority monopoly on international trade in rice and maize. BULOG in Indonesia, probably the most effective public agency in Asia in stabilizing grain prices (albeit at very high budgetary and market-efficiency costs), is in the process of a significant reduction in its stabilization role. In Viet Nam, a complete liberalization of prices was introduced in the agricultural sector in 1989 and restrictions on imports and exports of important products, such as rice, were relaxed. In 1997, additional implicit and explicit restrictions to internal trade were removed and export quotas were decentralized.

(Balisacan 1998; Timmer 1997; Goletti, Minot, and Berry 1997; Anderson and Roumasset 1996; Islam and Thomas 1996; Dollar 1994).

agriculture during economic growth. This changing role was described in some detail in Chapters I and III. But the economic policy making of agricultural protection also has political aspects. First, the declining importance of food in household budgets as incomes grow reduces the political pressure for low

food prices. Consumer interest in lower food prices becomes highly diffuse; individual consumers do not gain sufficiently from low food prices to motivate strong lobbying efforts. Second, the decline in the relative size of the agricultural sector in employment and production makes it easier for farmers to organize politically to seek special support and less costly politically for the government to provide this support. Farmers increase their effectiveness in lobbying and gain widespread sympathy, especially when the decline of the sector is rapid. In addition, there is a tendency for growing economies (particularly those of densely populated countries) to lose their comparative advantage in agriculture and become net food importers. This development provides greater scope for protecting farmers through “covert” policy instruments, such as import controls, that do not require budget outlays and a political rationale for agricultural protection in the name of food security (Lindert 1991; Anderson and Hayami 1986).

## **TRADE, MACROECONOMIC, AND PRICE POLICIES IN ASIA**

In most Asian developing countries, the indirect effects of trade and macroeconomic policies have caused overvaluation of the real exchange rate, which in turn has lowered effective agricultural prices, taxing the agricultural sector (Bautista 1990). In the Philippines, for example, overvaluation of the exchange rate arising from the protection of domestic industry lowered agricultural prices by 30 percent during the 1980s (David 1989). Policies in Pakistan, Sri Lanka, and Thailand similarly induced overvaluation of the real exchange rate by 15–25 percent during the 1980s (Bautista 1990). Nevertheless, there was a downward trend in the degree of overvaluation in the real exchange rate in most Asian countries throughout the 1980s, followed by a gradual real appreciation in the 1990s that again penalized agriculture and other tradable sectors (see Chapter IX for more detail on real currency appreciation in the 1990s).

To compensate at least partially for the discrimination of trade and exchange-rate policies against agricultural production, most East and Southeast Asian countries have provided subsidies for agricultural inputs (fertilizer, credit, and irrigation) and have targeted direct price supports to favored crops, particularly rice and wheat. These selective subsidies and price supports have fallen far short of fully offsetting the pervasive taxation caused by the trade restrictions. In addition, they distort economic incentives and penalize consumers, while imposing costs on farming activities that receive lower subsidies and on the environment, the latter by encouraging overuse of inputs. However, as David (1990) shows, there was a gradual but significant reduction in direct price support for most food crops in East and Southeast Asia after the mid-1980s: many countries reduced levels of commodity-price protection and moved toward a policy of following the long-term world price in setting domestic agricultural prices.

In Indonesia, for example, taxation of agriculture through currency overvaluation has been minimal. The average overvaluation during 1980–90 was about 7 percent, and when overvaluation reached higher levels (16 percent in 1984 and 14 percent in 1987), the rupiah was devalued to restore balance (Müller 1995). The slight overvaluation was balanced by heavy fertilizer subsidies that kept fertilizer prices at about one half of world prices; by moderate direct price protection of rice and other food crops; and by heavy price protection for favored commercial crops such as sugar, soybeans, and milk and dairy products in order to promote crop-diversification strategies. Beginning in the mid-1980s, policies shifted toward a gradual reduction of fertilizer subsidies and agricultural price protection (Gonzales et al. 1993). By 1994, nominal protection rates were low for virtually all agricultural commodities, estimated at –5 percent for rice, 5 percent for corn and soybeans, –2 percent for cassava, 20 percent for milk, 14 percent for poultry products, 1 percent for beef, and 5 percent for other livestock products (San and Rosegrant, 1998). The reduction in protection of rice led to the elimination of producer subsidies for rice farmers. The annual value of subsidies to rice

production peaked at \$1.1 billion in 1985 and was -\$71 million in 1990 (Müller 1995).

Compared to other Southeast Asian countries, Malaysia's trade and macroeconomic policies have been relatively neutral toward agriculture, with the exception of rice, which has been highly protected. Exchange-rate distortions due to trade and macroeconomic policy have been minimal, with overvaluation averaging only 6 percent from 1980 to 1990 (before the beginning of the real appreciation in the 1990s due to massive short-term capital inflows (see Chapter IX). In contrast, direct rice-price interventions to support farm income and encourage production have resulted in nominal protection rates in excess of 100 percent. Important export crops such as rubber and palm oil, on the other hand, have been subject to export taxes to generate government revenues and to finance research, marketing, and replanting programs. The level of taxation, however, has declined from 25–30 percent in the early 1980s to 5–10 percent in the 1990s.

In the Philippines (as in many Asian countries), providing income support to producers and maintaining affordable prices to consumers were primary (but conflicting) objectives of direct price policy. The policy was intended to prevent or smooth out sharp changes in food prices in response to changes either in world prices or domestic supplies. Low and stable rice prices were considered important for keeping the rate of inflation low, for reducing upward pressure on wages, and for improving the profitability of the industrial sector. In practice, price interventions have had varied impacts for different commodities. Maize has received high protection (averaging 62 percent in 1990–92) through import tariffs and restrictions due to a strong emphasis on import substitution. Rice has fluctuated between being protected during periods of higher imports and being taxed during the years that rice was exported. The export crops, sugar and copra, have been highly taxed, but the level of taxation has declined somewhat since the mid-1980s. Although direct price support favored some crops, an overvalued exchange rate implemented in support of import-substituting industrialization heavily taxed the

agricultural sector. The Philippine exchange rate was overvalued by about 25 percent in the early 1980s, but trade policy reforms implemented after 1986 significantly reduced the overvaluation to around 10 percent in late 1990.

In Thailand, while maintenance of low and stable food prices for civil servants and the urban poor was considered important, the primary objective of price policy was to maximize foreign-exchange earnings from agricultural exports by maintaining a high and stable export price. Before the early 1980s, therefore, price interventions followed the classic pattern of taxation of major export commodities, including rice, rubber, and cassava, and protection of crops targeted for import substitution, including cotton, soybeans, and palm oil. Trade liberalization beginning in the early 1980s, however, has essentially eliminated the taxation of rice, rubber, and maize and has greatly reduced the protection for other crops such as sugar, for which the nominal protection rate declined from over 90 percent in 1985 to -8 percent in 1990. Exchange-rate policies in Thailand resulted in an average overvaluation and taxation of agriculture of about 20 percent during 1980-84, but improvements in current-account balances reduced the overvaluation to about 10 percent in the late 1980s.

Before the PRC began its economic transition process in 1978, the chief role of agriculture was to provide cheap food, capital, and labor for industrial development. Agricultural products were priced below international market prices, thus transferring rents from agriculture to the industrial sector. The implicit taxation of agriculture was enforced by mandatory procurement quotas, a state grain monopoly, strict foodgrain acreage controls, administrative prescription of agricultural inputs, restrictions on nonagricultural activities, and prevention of rural-urban migration. This strategy of squeezing the agriculture sector failed, however, due to the cumulative misallocation of resources and low productivity in agriculture (Stone 1988; Wiemer 1994).

Since 1978, the PRC has been in transition between taxing and subsidizing agricultural production. During the first reform period of 1978-84, state procurement prices for agricultural

products were raised and rural markets were opened; the household responsibility system was also introduced (see also Chapter VIII). Interregional trade was authorized in 1984. In the second phase of reforms, during 1985–93, the agricultural pricing and marketing systems were liberalized and rural off-farm activities were encouraged. By 1993, more than 90 percent of all agricultural produce was sold at market-determined prices. The average nominal rate of protection during 1978–93 ranged from –27 to –68 percent for wheat, from –11 to –56 percent for rice, and from –21 to –57 percent for maize, based on a comparison of quota prices with international prices. Since 1994, however, this high taxation has dropped substantially. Recently, in the face of rising grain prices, declines in production, and increasing inflationary pressure, there have been some signs that the government, at least at the provincial level, is attempting to regain control. In 1995, the governor's responsibility system was introduced, whereby provincial governors are responsible for balancing grain supply and demand and stabilizing grain prices (Fan and Tuan 1998). So far there is no clear indication of a shift to increasingly protectionist policies.

Compared to the more export-oriented growth model of East and Southeast Asia, most of South Asia has pursued a strategy emphasizing import substitution and self-sufficiency in capital-goods production and neglect of agriculture and exports. Direct agricultural-price policies have often compounded the negative impacts of indirect trade and macroeconomic policies in this region, with the result that agriculture has been much more heavily taxed than in Southeast Asia. In Pakistan, for example, some protection was provided by direct price supports for wheat, ordinary rice, and cotton in the 1960s, but the overvaluation of the rupee outweighed the direct protection of these crops, while increasing the price-induced taxation of basmati rice (Dorosh and Valdés 1990). In the 1970s and early 1980s, direct effects of trade policies turned negative and became the dominant form of taxation for wheat, basmati rice, and ordinary rice, because the exchange-rate effect (the distortion caused by the appreciation of the real exchange rate) was smaller than in the 1960s. For cotton, trade policies

had only a small direct effect on domestic prices, but domestic prices remained significantly lower than equilibrium free-trade prices because of the indirect effect of exchange-rate appreciation and overall trade policy.

Beginning in the mid-1980s, large declines in the world prices of cotton and rice resulted in significant reductions in implicit taxation, because domestic prices of these commodities were not allowed to fall precipitously. Thus, the five major agricultural products in Pakistan (wheat, basmati rice, ordinary rice, cotton, and sugarcane) were consistently taxed from the 1960s to the mid-1980s. Dorosh and Valdés (1990) estimate that the combined effect of trade and exchange-rate policies and agricultural-price policies reduced wheat production by 24 percent and basmati rice production by 52 percent during 1983–87 compared to what they would have been without government intervention. In the absence of direct and indirect price interventions, farm incomes from these five major crops would have been 40 percent higher during that period.

Import substitution policies became the cornerstone of Bangladesh's development policy and remained so until the onset of policy reforms in the 1980s. High export taxes and export restrictions, as well as fixed and multiple exchange rates, characterized the external trade regime. The import-control regime and the exchange-rate policy combined to cause an overvalued exchange rate until the mid-1980s, imposing an implicit tax on exportables. The reform process that started in the 1980s included the gradual removal of trade distortions, the introduction of a flexible exchange rate, and the elimination of agricultural input subsidies. Appreciation of the exchange rate during the second half of the 1980s offset the protection provided by direct trade policies for wheat, cotton, and potatoes and increased the implicit taxation of rice, lentils, jute, and tea. Nevertheless, the overall degree of taxation of the agricultural sector had declined by early 1990s compared to the late 1970s. The implicit protection rate of the agriculture sector as a whole averaged  $-18.1$  percent between 1986/87 and 1990/91. Average nominal protection of rice ranged from  $-26.3$  percent during 1976/77–1980/81 to  $-0.5$  percent during 1981/82–1985/86

to -10.3 percent during 1986/87-1990/91. The total nominal protection rate for wheat declined sharply from -21 percent during 1981/82-1985/86 to -0.3 percent in 1986/87 (Rahman 1994).

In India, agriculture has been heavily taxed through both direct and indirect price policies, with only partial compensation through input subsidies that have introduced additional distortions in production incentives. Protection of industry and overvaluation of exchange rates have taxed agriculture and export restrictions on agricultural commodities kept domestic agricultural prices below world prices. Overall taxation of the agricultural sector was estimated at 30 percent during 1970-84 (Ranade and Dev 1997). Even in the state of Punjab, which received substantial input subsidies, Bhalla and Singh (1996) estimate aggregate measures of support of -32.64 percent for the period of 1981/2 to 1992/3.

India instituted economic reforms during 1991 that were necessitated by an unmanageable fiscal deficit and a balance-of-payments crisis. These reforms included liberalization of industrial and trade policy, relaxation of foreign-exchange controls, and reduced trade- and investment-licensing requirements. The reforms were concentrated in the nonagricultural sector, but the liberalization had a positive effect on agriculture by reducing the anti-agricultural bias of protectionist industrial policies. Overall net taxation of agriculture has been cut to just above 9 percent during the post-reform period, although important crops, such as rice, still face taxation rates in excess of 30 percent. In addition, state trading in agricultural commodities is still pervasive.

The Indian government has attempted to compensate farmers for high taxation through indirect and direct price policy by heavy subsidies to fertilizer, power, credit, and irrigation. Total input subsidies grew dramatically starting in the early 1980s, although fertilizer subsidies were reduced during the economic reform process initiated in 1991. Input subsidies were equivalent to 53 percent of plan expenditure in 1982/83, and 131 percent in 1992/93 (Ranade and Dev 1997). Very conservative estimates of losses due to subsidies in 1989/90

range from 0.5 percent of GDP for irrigation; 1 percent of GDP for electricity; and nearly 1 percent of GDP for fertilizers (Srinivasan 1994). By 1995/96, following the introduction of economic reforms, fertilizer subsidies dropped to 0.6 percent of GDP (Joshi 1998).

The record of trade and macroeconomic policies and their impact on the agricultural sector in Asia has thus been highly complex. Policymakers have pursued inherently conflicting objectives, such as maintaining high prices for farmers and low prices for consumers, and have simultaneously taxed and protected agriculture. On balance, trade and macroeconomic policies have until recently produced a substantial bias against agriculture, with the degree of taxation higher in South Asia than in East and Southeast Asia. Economic reforms since the mid-1980s have significantly reduced this bias, however. The evolution in policies can best be described as being toward a reduction in distortions and toward increased liberalization in both direct and indirect policies, rather than the shift from taxation to protection that is implied by the historical pattern of agricultural policies. Developments in international trade institutions and structural changes in international trade also appear to lead to continued liberalization of policies rather than increased protectionism, as seen below.

## GATT AND WTO

The General Agreement on Tariffs and Trade (GATT) served as the multilateral framework for international trade relations for nearly fifty years, following the decision of the United States not to ratify the charter of the International Trade Organization that was proposed at the Havana conference of 1947–1948. Although technically the GATT was not an organization but a multilateral agreement, it nonetheless succeeded in substantially reducing barriers to world trade through eight successive rounds of multilateral negotiations held under its auspices. As a result of the Uruguay Round (UR)

agreement in December 1993, the World Trade Organization (WTO), a formal international organization, subsumed the GATT. As of September 1997, the WTO had 132 member countries and 34 observer countries, all but four of which have applied to join the organization. The Kyrgyz Republic became the 133rd member of the WTO in December 1998. The PRC; Taipei, China; and the Russian Federation are the largest trading countries that are still negotiating accession (see also Box VII.2, on the PRC and the WTO). In addition to creating the WTO

**Box VII.2: The PRC and the World Trade Organization**

China was a founding member of GATT, but withdrew in 1950 after the formation of the People's Republic of China (PRC). It has been seeking to rejoin the international body, now the WTO, since 1986. The benefits of accession by the PRC to WTO are likely to be large, both for the PRC and for the rest of the world.

Bach, Martin, and Stevens (1996), in a general equilibrium analysis, find that the gain to the PRC from accession to the WTO would be \$22 billion, \$17 billion allowing for tariff exemptions. Anderson et al. (1997) estimate that accession of the PRC (and Taipei, China) to the WTO would add 30 percent to the estimated global real income gains from the UR and that aggregate world trade could increase by 13 percent instead of 10 percent by 2005. These results do not include additional (dynamic) gains from increased foreign investments, increased respectability of the PRC abroad, gains to all WTO members from generally greater liberalization and transparency in the PRC, and a "peace dividend" in the form of reduced tensions between the PRC and some of its major trading partners.

The negotiations over PRC accession to the WTO cover all aspects of multilateral trade negotiations, including agriculture, the customs system, import licensing, industrial subsidies, predictability and transparency of the legal system

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and correcting many of the weaknesses of the GATT, the UR agreement brought agricultural trade back into GATT disciplines. Agreement was also reached on measures to strengthen the protection of trade-related intellectual property (TRIPs) and to liberalize trade-related investment measures (TRIMs). Moreover, the dispute-settlement mechanism has been strengthened (Srinivasan 1998).

The inclusion of agriculture in the UR agreement is an important breakthrough. The provisions seek to provide a

Box VII.2 (continued)

and legislative reform, the Agreement on the Application of Sanitary and Phytosanitary Measures, the Agreement on Technical Barriers to Trade, non-tariff barriers, State trading, TRIMs and TRIPS. Other stumbling blocks include

- the need for strict application of WTO rules to this former centrally planned economy (in the light of other transition economies lining up for accession);
- the status (developing or developed economy) of the PRC and the related fear of the PRC's size;
- implications for the textile and clothing sectors;
- the extent of market access offered by the PRC; and
- enforcement of intellectual property rights.

To overcome these stumbling blocks, the PRC needs to include a strong commitment to WTO obligations, provide greater trade-policy transparency, and agree to a compromise on the issue of its developing-economy status in WTO. WTO members also should replace their "moving goalposts" of demands for the PRC with a clear set of requirements within a specified time frame. The return of Hong Kong, China, one of the most liberal WTO members, to the PRC in July 1997 might accelerate the latter's accession into the organization.

(Anderson 1996a; Anderson et al. 1997; WTO 1998)

framework for the long-term reform of agricultural trade and domestic policies, to achieve increased market orientation in agricultural trade, and to strengthen the rules governing agricultural trade in order to improve predictability and stability for both importing and exporting countries (GATT 1994).

The most important component of the agricultural agreement is the requirement that all nontariff border measures be replaced by tariffs that initially provide the same level of protection. Tariffs resulting from this “tariffication” process and other agricultural tariffs are to be reduced for developed and developing countries over a period of 6 and 10 years, respectively, by an average of 36 percent and 24 percent, with minimum reductions for each tariff line of at least 15 percent and 10 percent. Many loopholes and exemptions limit the scope of agricultural trade liberalization under the UR agreements, however. For example, loopholes in the process of tariffication have allowed countries to bind tariffs at levels well above the existing average tariff (so-called “dirty tariffication”). Countries are also allowed to retain import restrictions until the end of the implementation period under certain circumstances.

Developing countries are afforded special treatment—through the “rice clause” negotiated by Japan and the Republic of Korea to continue managed rice imports—that in effect exempts those countries from the liberalization of agricultural commodities that are predominant staples in their traditional diet (Ammar 1997; Srinivasan 1998). The UR on agriculture also restrains domestic subsidies to agriculture, but measures that have a “minimal” impact on trade (so-called “green box” policies), such as income support to agricultural producers that is decoupled from production, are permitted to continue. Agricultural research, disease control, infrastructure, and food-security policies are also among the green box policies. The main farm programs of the United States and the European Union were exempted and Japan was allowed to increase its direct payments to farmers. Moreover, developing countries were exempted from commitments to reduce input subsidies provided to “low-income or resource-poor producers.” Again,

these significant exemptions will limit the immediate effectiveness of subsidy-reducing policies.

Given the high levels of bound or base-level tariffs resulting from dirty tariffication, the fairly long implementation periods, the permitted exemptions, and the exclusion of some trade-distorting policies from elimination, it is likely that the extent of liberalization of agriculture under existing rules will be small. Indeed, available quantitative estimates of the growth in trade and in incomes with full implementation of the liberalization agreed to in the UR show notable but modest benefits (Srinivasan 1998; Anderson 1996a). Hertel et al. (1995) estimate global welfare gains from UR agreements on agriculture and manufacturing of \$260 billion per year, or 0.4 percent of global GDP, by 2005. The largest gains are for developing countries, particularly those that are more open or that liberalize to a greater extent. The East and Southeast Asian developing countries are therefore projected to be substantial gainers, with an increase in GDP of 4.7 percent by 2005. Francois, McDonald, and Nordstrom (1995) also find that Asian developing countries will benefit significantly more from the UR agreements than other regions, with the PRC receiving a boost in GDP annually of 4.0 percent, other developing East and Southeast Asian countries receiving a 3.2 percent increase, and South Asia receiving a 3.1 percent increase, based on 1992 real prices.

Despite the modest quantitative benefits estimated by modeling, integration of agricultural trade into the WTO is a major achievement and the most significant benefits cannot be captured in quantitative models. The dynamic gains to developing countries in Asia are likely to be substantial, including the improvement of access to international technology and capital; strengthening of investor confidence, employment and productivity growth; and encouragement to unilateral trade liberalization programs. The political benefits in Asia (and elsewhere) may be especially large, because the UR agreements will help to break up the existing constellation of political forces that, as described above, has tended to make increasing agricultural protection an inevitable part of economic growth.

Anderson (1996b) argues that multilateral trade agreements can alter the political equilibrium in favor of more open trading policies. A country that reduces trade barriers and allows more imports may harm its import-competing producers, but if its trading partners simultaneously lower their barriers to the first country's exports, the producers of those exports will benefit. Exporters may benefit more than the import-competing industries lose, so that the liberalizing politicians also become net gainers in terms of electoral support—in both countries (Grossman and Helpman 1995).

Political gains from trade negotiations involving exchange of market access will tend to be greater, the larger the number of countries involved and the broader the products and issues coverage of the negotiations. Expansion of membership in the WTO compared to the GATT has dramatically increased the scope for exchange of market access among countries. In addition, it is easier for politicians to placate those harmed by reform when similar producers in other countries are being simultaneously asked to make sacrifices (Anderson 1996b). This has been especially important in the case of farm-policy reforms during the UR (Tyers and Anderson 1992).

Thus, the inclusion of agriculture under the GATT/WTO umbrella is a major step forward, but the limited degree of real agricultural liberalization leaves much to be done in the years ahead. Governing rules should be tightened by reducing or eliminating the special and differential treatment given to both developed countries and to developing countries in Asia and elsewhere. Special exemptions weaken the political benefits of the WTO, because they reduce the scope for governments to use the agreements to justify domestically the adoption of politically unpopular but economically desirable reforms. Elimination of farm-export subsidies should be considered in the next comprehensive round, to bring agriculture into line with nonfarm products, for which export subsidies are banned under the GATT. Dirty tariffication, which set bound tariffs well above actual tariffs, could permit protection levels to be raised considerably, if countries should choose to use tariffs to insulate their domestic markets from fluctuations in international markets. The next

multilateral negotiations should aim to bring those bound tariffs down at least to applied rates (Anderson 1996a).

## REGIONAL TRADE AGREEMENTS

The long and often frustrating UR negotiation, culminating at one point in the collapse of the "final" negotiating session in Brussels in December 1990, was a significant factor in the revival of interest in regional trade agreements (RTAs) that seek to liberalize trade among countries within a region. Prominent RTAs include the North American Free Trade Agreement (NAFTA) and the Southern Common Market (Mercado Comun del Sul, or MERCOSUR) in the southern cone of South America. Negotiations have begun to develop a free (or at least liberalized) Asia-Pacific trade area based on the Asia Pacific Economic Cooperation (APEC) forum. In Asia, ASEAN formed the AFTA in 1992 (see Box VII.3) and the member states of SAARC signed a framework agreement for SAPTA in 1993 (see Box VII.4).

The proliferation of RTAs raises serious questions as to whether these agreements strengthen or weaken the multilateral trading system and the prospects for continued trade liberalization. Modeling exercises show that RTAs generally boost interbloc trade and generate slight positive income gains (see Boxes VII.3 and VII.4). As would be expected due to the smaller number of countries that liberalize trade within a regional bloc, the estimated quantitative benefits of RTAs are significantly lower than for global liberalization under the GATT/WTO.

There is substantial disagreement, however, regarding the broader political and economic implications of RTAs. Josling, Tangerman, and Warley (1996) argue that RTAs are a positive force for liberalization of agricultural trade and international trade generally and that regional liberalization efforts complement multilateral trade negotiations. The complementarity between regional free trade and multilateral liberalization is achieved through the impact of the partial

**Box VII.3: ASEAN (Association of South East Asian Nations)**

The ASEAN is the longest-established regional group for economic cooperation within Asia. The association was created in 1967 with the participation of Indonesia, Malaysia, Philippines, Singapore, and Thailand. Brunei joined in 1984, Viet Nam in 1995, the Lao PDR and Myanmar in 1997, and Cambodia in 1999.

The initial objective of ASEAN was to foster peaceful national development of its member states through cooperation. In 1977, a limited program of preferential trade arrangements was adopted by ASEAN member states, followed by the establishment of an ASEAN Free Trade Area (AFTA) in January 1992, whose full implementation is scheduled for 2002.

ASEAN has been an important forum for political and diplomatic cooperation among the states, but has been relatively ineffective on trade issues, due to the very limited trade concessions given to partners and the lack of common external tariffs or a unified stand on trading issues.

Two recent studies by DeRosa (1995) and Lewis and Robinson (1996) find that the AFTA is trade-creating on a net basis. AFTA contributes comparatively little to higher economic welfare in ASEAN countries, however, except possibly the two highest-income and particularly open ASEAN countries, Malaysia and Singapore, as each would contribute a greater share of the increased intraregional demand for manufactured goods previously supplied by developed countries outside the region. Moreover, as Singapore has no tariffs to remove and Malaysia has very few, preferential liberalization in ASEAN is asymmetric. Most-favored-nation liberalization on the part of ASEAN members would raise trade to a much higher degree. For a regional trading block to take off in East Asia, it is likely that Japan would have to play a catalyzing role.

Recent arrangements among the ASEAN members to accelerate and deepen tariff reductions could in the future lead to faster growth of intragroup trade. A more integrated and unified ASEAN would also command more attention within the Asia-Pacific Economic Cooperation (APEC) forum and possibly at the global level.

(DeRosa 1995 and 1998; Panagariya 1997; Frankel and Wei 1997).

**Box VII.4: SAARC (South Asian Association for Regional Cooperation)**

SAARC was created in 1985 as a follow-up to the South Asian Regional Cooperation (SARC) forum, including Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka, to complement existing bilateral and multilateral cooperation.

During the Seventh Summit in 1993, a Framework Agreement was signed on a South Asian Preferential Trading Arrangement (SAPTA). Under SAPTA, trade cooperation is to be phased in through reduction of tariff rates on an item-by-item basis, reduction of tariffs on a sector-by-sector basis, and establishment of a South Asian Free Trade Area (SAFTA).

Overall trade cooperation efforts have been rather small, however, due to frequent political disputes. Although the SAARC countries have, in recent years, unilaterally liberalized their trading regimes, numerous trade barriers remain. The commodities for which tariffs would be reduced under SAPTA constitute only a small proportion of intra-SAARC trade for each member country. Due to limited trade complementarities, trade is unlikely to pick up significantly after removal of trade barriers. Sri Lanka has the most liberal trade regime of the SAARC countries and would benefit substantially from a removal of restrictive trade policies in the other SAARC countries.

Srinivasan and Canonero (1995) find that SAARC would substantially promote trade for the smaller members, as their initial levels of trade are relatively small, and India and Pakistan would be large enough partners to make a difference in trade for them. Sengupta and Banik (1997) find that intra-SAARC trade could be increased by 30 percent (by 60 percent if informal trade is taken into consideration) if the association were to establish a free trade area, as has been proposed.

Trade expansion within SAPTA and the realization of the envisioned regional integration in the form of a SAFTA would require a serious political commitment to intraregional trade, but would clearly reinforce the pace of economic change in the region.

(Rajapakse and Arunatilake 1997; Rahman 1997; Khan 1997)

opening of borders for national agricultural programs. According to Josling, Tangerman, and Warley (1996), this complementarity operates at four different levels. First, there will be pressure to implement policy instruments that do not distort competition within the RTA. Second, there will be pressure to harmonize national regulations and standards in order to reduce internal transaction costs and diminish the potential for trade conflicts. Third, trade policies, even where nominally decided at the national level, will have a tendency to conform to the rules specified by the RTA; the tendency for external policies to converge in free-trade areas is reinforced by the probable development of coordinated policies toward third-country trading partners in negotiations. Fourth, there is an inevitable weakening of national policy instruments as trade opportunities expand within the regional bloc.

On the other hand, Srinivasan (1998) and Bhagwati (1997) are highly critical of the movement toward regional trading agreements. They argue that RTAs will push the world toward trading blocs rather than toward a multilateral system. By excluding nonbloc members, RTAs are inherently trade-diverting and thereby weaken supporters of an open, multilateral system, while simultaneously creating new interest groups opposing multilateral liberalization. To the extent that trade diversion does take place under RTAs, new interests will oppose further liberalization. Furthermore, given limited resources, the attention of policymakers will be distracted from the global multilateral system when RTAs are under discussion or negotiation. Krueger (1995) notes that the last point is of particular concern. When attention should center on the formation and strengthening of the WTO, it is instead diverted to proposals such as the creation of a more powerful APEC and the addition of new members in NAFTA. Even if, in the long run, RTAs evolve toward multilateral liberalization, the distraction of attention during WTO's formative phase is a significant cost.

According to Bhagwati (1997), the only compelling arguments in favor of active pursuit of RTAs would be the failure of global multilateral trade negotiations, such as the GATT and

the WTO, or the transformation of RTAs into true common markets that would eliminate investment and migration barriers as well as trade barriers and would generate much greater benefits. He argues that the Asian members of APEC should push for active engagement with WTO rather than for transformation of APEC into a regional trade agreement, and should use APEC as a forum to coordinate positions and policies at the WTO and upcoming multilateral negotiations.

The debate over the benefits and costs of RTAs is unlikely to be resolved in the near future. Regional trading agreements in Asia are likely to be moderately trade-creating and to produce small income benefits. Regional trade arrangements may also enforce discipline on national trade policies, allowing nations to speed up liberalization and ultimately producing a self-reinforcing process toward open markets. But RTAs also pose the danger of creating trade blocs that would strengthen antitrade liberalization groups and distract attention from the ultimate goal of global multilateral trade liberalization.

## **STRUCTURAL CHANGES IN INTERNATIONAL AGRICULTURAL TRADE**

### **Policy Reforms in Developed-Country Agriculture**

In addition to progress on multilateral and regional trade negotiations, fundamental changes in the structure of agricultural trade will influence trade and macroeconomic policies in the Asian economies and the impact of these policies on agriculture. The United States and Western Europe have historically provided large subsidies and high levels of protection to agriculture. However, unilateral agricultural policy reform that has been completed in the United States and is under negotiation in the European Union will fundamentally change developed-country farm policies, moving them away from the paradigm of market intervention and price manipulation in favor of direct payments to farmers tied less to output.

In the United States, the Federal Agriculture Improvement and Reform (FAIR) Act of 1996 dramatically altered the support system that US producers had relied upon since the Great Depression. The Act replaces the long-standing, crop-linked, deficiency-payment/supply-management program that covered wheat, rice, feedgrains, and upland cotton with a program of fully decoupled, temporary contract payments based on land acreage. Payments are capped at about \$36 billion over 1996–2002 and are scheduled to decline over the 7-year period. The FAIR Act also eliminates the Acreage Reduction Program, gradually eliminates dairy-price supports, and modifies US peanut and sugar programs.

During 1993–95, the Common Agricultural Policy (CAP) of the European Union went through significant reforms that initiated a shift from direct price supports to decoupled income supports by lowering intervention prices. In July 1997, the European Commission initiated Agenda 2000, which seeks to broaden the shift from price supports to income supports under the CAP, to continue the reduction in intervention prices, and to reduce export subsidies on agricultural products. These policy reforms in previously highly protected agricultural markets should reduce tensions in international markets and encourage the development of a more liberalized agricultural trade system.

## **Changes in the Nature of Agricultural Trade**

Josling, Tangerman, and Warley (1996) note that the nature of trade in agricultural goods is also changing over time, in ways that tend to expand its importance in the multilateral trade system and to increase the relative political strength of interests that favor liberalized trade policy. Agricultural trade has historically been dominated by bulk products, such as cereals, milk, meat, and sugar. Trade in bulk commodities is still based largely on comparative advantage and policy-induced distortions and these bulk products have not generally attracted international investment.

But the share in world trade of differentiated products with higher value added such as processed foods, including fruits and vegetables, is now becoming much larger in both developed and developing countries. Producers of these goods can develop comparative advantage by investment from abroad and can build markets through quality and name recognition. Government price-support policy has traditionally been less important in this trade and is in fact often detrimental to processors who have to deal with high-priced raw materials. Government regulations regarding quality and food-safety standards are more significant. Growing mobility of technology, management, and marketing skills is making it possible to develop the agricultural and food sector through international investment. Foreign processing firms are searching for reliable sources of raw materials at low cost and are increasingly looking abroad. Changing consumer tastes, developed through urbanization and contact with other cultures or introduced by immigrants, have expanded markets for commodities previously considered nontradable. All of these developments point to the globalization and further liberalization of agricultural trade (Josling, Tangerman, and Warley 1996).

### **International Price Variability**

What will be the impact of the agricultural trade liberalization and the changing structure of agricultural trade on international price variability? Some observers have argued that the increasing openness of trade regimes could usher in a period of increasing price variability that could destabilize farm incomes and harm poor consumers who still spend a large share of income on food (Timmer 1997). But with the changing structure of international agricultural trade, a number of countervailing forces will come into play that on balance could actually reduce international price variability.

Policy reforms in North America and Western Europe may indeed have increased the likelihood of increased variability in international prices. Until recently, the developed countries have borne most of the costs of maintaining food stocks, largely as a

byproduct of domestic farm-support programs. However, as North American and European governments scale back price-support programs in favor of direct payments to farmers, they no longer need to buy and hold large reserves. In 1996, the United States and European Union together held less than one half the stocks they held in 1993. This policy-induced reduction in stocks could mean larger price fluctuations in the future, because fewer supplies may be available to the market to dampen price changes when production varies and private-sector stocks may not make up for the difference in reduced public stocks.

Given that the lack of transparency and consistency in government stockholding and trade policies were often sources of instability in the past, however, a reduced involvement by governments in stock management and a more transparent trade policy could contribute to increased stability in the future. Moreover, market liberalization initiatives—including those completed under the UR agreements and those resulting from future multilateral trade negotiations, regional trading arrangements, and other unilateral initiatives—should contribute to stability in international markets by inducing greater adjustments to demand/supply shocks in domestic markets. Protectionist policies in the past shifted the impact of fluctuations in domestic production to the world market, increasing international price variability and insulating the domestic market from external fluctuations. The elimination or reduction of protectionist policies is therefore expected to help reduce price instability in the world market. Improved market integration should also smoothe the effect of international trade on available supplies: the elasticity of demand facing any group of producers would increase, as would the supply elasticity facing any group of consumers. Increased stability should follow in an economy that responded faster and more strongly to shocks as consumers and producers made rational decisions aided by improved information and price transparency (FAO 1996; Islam and Thomas 1996).

Although it is too soon to assess the full impact of trade liberalization and structural change on international price

variability, an analysis by Sarris (1998) of inter-year price variability of cereals from 1972 to 1996 concluded that no increase in interyear variability in world cereal markets had taken place. Recent price changes do not appear to herald anything unusual and are not outside the range of normal annual variations. Furthermore, analysis of the intrayear cereal price variability showed that there does not seem to be a tendency for the coefficients of variation of monthly seasonal prices to increase over time; if any, the tendency is towards a decline in variability. It is unlikely that international price instability will cause significant problems for the continuation of the trade liberalization process.

## CONCLUSIONS

In much of Asia, gradual reform in the mid-1980s and early 1990s of trade and macroeconomic policy regimes that have historically penalized agriculture have recently improved its competitive position. This long-term policy evolution was temporarily interrupted in the early 1990s, when the competitive position of agriculture and other tradable sectors began to erode due to the dramatic appreciation in real exchange rates in East and Southeast Asia (and a significant but smaller appreciation in South Asia); this erosion resulted from macroeconomic policies and the massive influx of short-term foreign capital. The sharp depreciation of currencies in several countries in East and Southeast Asia during the financial and economic crisis that began in 1997 eliminated effective taxation of agriculture caused by real exchange-rate overvaluation. This development should provide a significant stimulus to agriculture in these countries (these issues are discussed in detail in Chapter IX).

Despite the setbacks caused by the highly variable incentive environment for agriculture during the 1990s, continued reform of trade and macroeconomic and price policies would create a level playing field across economic sectors and across agricultural commodities and provide a stimulating

environment for agricultural exports. These conditions would certainly provide further incentives for efficient agricultural growth. The inclusion of agriculture in the UR agreements and the creation of the WTO should provide a supportive international environment for further national agricultural liberalization. It should also provide a framework for reform of agricultural trade and domestic policies, by strengthening the rules governing agricultural trade in order to improve predictability and stability for both importing and exporting countries. International agricultural product differentiation and international investment and technology transfer will further encourage agricultural trade liberalization and encourage agricultural growth.