*Agricultural Economics*, 8 (1993) 345–375
Elsevier Science Publishers B.V., Amsterdam



# Trade and agricultural development in the 1980s and the challenges for the 1990s: Asia

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(Accepted 7 February 1993)

ABSTRACT

Bautista, R.M., 1993. Trade and agricultural development in the 1980s and the challenges for the 1990s: Asia. *Agric. Econ.*, 8: 345–375

Asian developing countries have had varying experiences in trade and agricultural development in the 1980s, attributable in part to their differing stages of economic development and structural characteristics. Other important influences relate to the external economic environment and the policy choices made by their governments not only during the period but also in the preceding decade.

The achievements of Asian developing countries under the adverse external conditions of the 1980s are discussed in terms of their macroeconomic and agricultural growth, the commodity structure of agricultural growth, their food production and trade, the expansion and diversification of their agricultural exports, and the policy and nonpolicy factors affecting them. Special attention is given to the role of policy reforms implemented in China and the South Asian countries, following similar policy developments in Northeast and Southeast Asia in the 1960s and 1970s, toward greater openness in their trade regime and increased private-sector participation in the economy. These reforms have contributed to the observed acceleration in GDP, agricultural, and export growth in the 1980s. However, macroeconomic imbalances have emerged that threaten the sustainability of economic liberalization in those countries.

The major challenges for the 1990s also differ among the Asian developing countries. In the industrially advanced Northeast economies of Taiwan and South Korea, the primary need is to ease the transition of the remaining rural population as farm incomes continue to fall and workers move to industrial and service activities. This challenge has to be addressed in the context of growing external pressure to further open their domestic market for

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agricultural imports. Among the Southeast and South Asian countries, there is a need to reduce the existing policy biases against agriculture, particularly against export crop production. Moreover, China and the South Asian countries face the additional challenges of continuing to deregulate their trade regime and internal markets, and of promoting macroeconomic stability.

Despite the external trend recently toward regionalism, Asian developing countries generally seem committed to an open trading system, on which in fact their past impressive economic performance has been predicated. An important challenge for them in the 1990s is to play an active role in arresting and reversing any protectionist tendencies arising from the formation of regional trading blocs and to support multilateral initiatives such as the Uruguay Round that promote global trade liberalization.

## INTRODUCTION

Despite continued adverse conditions in the international economy during the 1980s, Asian developing countries (LDCs) as a group showed a significant improvement in overall economic growth. However, their aggregate performance concealed large sub-regional and intercountry variations not only in economic growth but also in agricultural growth, attributable in part to their differing stages of economic development and structural characteristics.

The structural transition from a predominantly agrarian to an industrial economy has been completed in Taiwan in the early 1970s and South Korea in the late 1970s (Oshima, 1987, pp. 56–57). Richer in natural resources, Thailand and Malaysia are in the next tier of developing countries more or less following (since the early 1970s) the outward-oriented growth path of the NIEs (newly-industrializing economies); the Philippines and Indonesia, also located in Southeast Asia, are not far behind. At the lower end of the per-capita income scale, China and the South Asian countries are traditionally more autarchic economies, characterized by a high degree of government regulation of and direct involvement in economic activity.

Another significant factor in the macroeconomic and agricultural growth performance of Asian LDCs during the 1980s relates to the policy choices made by their governments not only during the period but also in the preceding decade. Especially in China and the South Asian countries, important policy reforms have been implemented, with some visible signs of success, toward greater openness in the trade regime and increased private-sector participation in the economy. However, macroeconomic imbalances have emerged that threaten the sustainability of the economic liberalization process.

The agricultural growth and trade experiences among Asian developing countries in the 1980s provide a good illustration of some stylized facts of

economic development. These relate, among others, to the diminishing share of agriculture in the domestic product over time and to the increasing diversification in agricultural production and trade. Not only the evolution of agriculture over time but also the induced changes in the rest of the economy are critical to the development process. In addition to the country's structural characteristics and the external economic environment, government policies can significantly influence the pace and pattern of agricultural growth and the linkage effects on the national economy. It is in this context, and with recognition that domestic policy choices are themselves affected by external factors and the structure of the national economy, that the achievements in agricultural development and trade of Asian LDCs in the 1980s can be usefully examined and the challenges facing them in the 1990s evaluated.

## EXTERNAL ENVIRONMENT AND MACROECONOMIC GROWTH

Whether or not a "world economic crisis" indeed marked the decade of the 1980s (Singh and Tabatabai, 1990, p. 479), developing countries faced a generally unfavorable external economic environment during the period. The slowdown in world economic activity and deterioration in the terms of trade for most agricultural commodities posed severe difficulties for many LDCs that were still adjusting from the turbulence of the international economy in the preceding decade. Moreover, real interest rates were at record high levels during the 1980s, placing an additional constraint to the development efforts of heavily indebted countries.

As shown in Table 1, economic growth in developing countries ('low- and middle-income economies') as a group decelerated markedly in the last decade, and more so than in developed countries ('high-income OECD members') on which they are highly dependent for foreign trade and

TABLE 1

Average annual growth of real GDP by country groups, 1970–80 and 1980–90 (%)

| | 1970–80 | 1980–90 |
|---|---|---|
| High-income OECD members | 3.3 | 2.9 [a] |
| Low- and middle-income economies | 4.9 | 3.4 |
| East Asia and Pacific | 6.6 | 7.4 |
| South Asia | 3.2 | 5.3 |
| Sub-Saharan Africa | 2.8 | 2.0 |
| Latin America and Caribbean | 5.8 | 1.2 |
| Middle East and North Africa | 3.5 | 3.5 [a] |

*Source:* Calculated from annual growth rates in World Tables 1991 (World Bank).

[a] For period 1980–89 only.

capital. However, there were substantial regional differences in the economic growth performance of developing countries. Notably, the GDP growth rates for the East Asia and Pacific region and South Asia even increased significantly in the 1980s – in contrast to the sharp declines in sub-Saharan Africa and Latin America.

Neither of those two Asian regions can be considered homogeneous for the purposes of this paper, since sub-regional (and indeed member-countries') trade and agricultural development experiences during the decade under review differed in some important respects. For this reason it is useful to distinguish between Northeast Asia, represented by South Korea and Taiwan, and Southeast Asia, represented by Indonesia, Malaysia, Thailand, and the Philippines. Even within these two sub-regions, and also within South Asia, represented here by Bangladesh, India, Nepal, Pakistan and Sri Lanka, it is not always possible to generalize, in view of peculiarities in individual country experiences. Finally, while China is a part of East Asia, it merits a separate discussion as a representative of other Asian CPEs ('centrally planned economies') now also implementing fundamental economic policy and institutional reforms.

In the 1970s, each of the nonsocialist economies in East Asia included in Table 2 (i.e., except China) expanded at a much higher rate than the 4.9% for all LDCs considered as a group. This has been attributed to their success in adjusting to the external shocks during the decade which in turn owed much to prudent macroeconomic management and market-oriented policies adopted (Balassa, 1989), enhancing their ability not only to attract external finance but also to realize high returns on domestic investment and to increase export earnings. Export growth is of course a crucial determinant of an LDC's capacity to import, which is necessary for overall growth, and also of its ability to service external debt. The generally impressive GDP and export growth rates that East Asian countries continued to show in the 1980s would seem indicative of the longer-term efficacy of their economic policies.

Two special cases are presented by the Philippines and China. The former relied heavily on foreign borrowing to accommodate an expansionary macroeconomic policy and large current account deficits in the 1970s, but with little regard to the efficiency with which the borrowed funds were invested (Bautista, 1988). In the absence of a sustained policy reform effort and under conditions of political instability, it led to the debt-service crisis of 1983 and subsequent economic disarray that even a new government during the second half of the decade could not adequately deal with. In this respect the Philippines resembled Latin America more than East Asia. In the case of China, radical agricultural price and organizational reforms were implemented beginning the late 1970s, which brought about a marked

TABLE 2

GNP per capita and growth of GDP and total exports

| | GNP per capita 1980 (US$) | Average annual GDP growth (percent) | | Average annual export growth (percent) | |
|---|---|---|---|---|---|
| | | 1970–80 | 1980–90 | 1970–80 | 1980–90 |
| East Asia | | | | | |
| South Korea | 1620 | 9.5 | 9.7 | 23.0 | 12.0 |
| Taiwan | 2270 | 9.0 | 8.0 | 15.8 | 11.1 |
| Indonesia | 470 | 7.6 | 5.3 | 8.7 | 2.2 |
| Malaysia | 1690 | 7.8 | 5.2 | 7.4 | 10.8 |
| Thailand | 670 | 7.2 | 7.6 | 11.8 | 14.2 |
| Philippines | 680 | 6.3 | 1.1 | 7.0 | 5.8 |
| China | 300 | 5.5 | 9.6 | na | 13.0 |
| South Asia | | | | | |
| India | 240 | 3.6 | 5.6 | 3.7 | 6.3 |
| Pakistan | 290 | 4.7 | 6.5 | 1.2 | 8.7 |
| Nepal | 140 | 2.5 | 4.6 | na | na |
| Bangladesh | 140 | 3.9 | 3.8 | −1.9 | 6.4 |
| Sri Lanka | 260 | 4.1 | 3.9 | −2.4 | 4.8 |

*Sources:* World Development Report 1982 and 1983 (World Bank); Trends in Developing Economies 1991 (World Bank); Key Indicators of Developing Asia and Pacific Countries (Asian Development Bank, various issues).
na, not available.

acceleration of output growth in the first half of the 1980s but relative stagnation subsequently. Moreover, "through this decade, China was unable to avoid the macroeconomic instability that has become a hallmark of socialist reform" (Wong, 1992, p. 19).

Compared to the East Asian countries, the lower-income, more autarchic, and more heavily regulated economies of South Asia adjusted less successfully to the external turbulence of the 1970s, and also had much lower growth rates. There was a general acceleration in GDP and especially export growth in the 1980s (Table 2), stimulated in part by marked increases in public expenditure (leading in some cases to macroeconomic imbalances), and in part by a gradual policy emphasis on economic efficiency and an increasing willingness to undertake deregulatory policies and increase private-enterprise participation in the economy. This policy shift followed the economic liberalization efforts in Southeast Asian countries since the early 1970s and in Taiwan and South Korea in the 1960s, although differing in the intensity and scope of policy reforms. Among the South Asian countries, Bangladesh and Sri Lanka posted slightly lower economic growth rates in the 1980s relative to the preceding decade, presumably related to the increased incidence of natural disasters and ethnic conflicts, respec-

TABLE 3

World price indices for selected agricultural products, 1981–89 (1980 = 100, in current US$)

| | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 |
|---|---|---|---|---|---|---|---|---|---|
| Rice | 111.3 | 67.5 | 63.8 | 58.1 | 49.8 | 48.5 | 53.1 | 69.5 | 73.8 |
| Wheat | 91.9 | 78.8 | 81.6 | 83.3 | 76.5 | 70.4 | 66.6 | 83.6 | 95.8 |
| Corn | 104.4 | 87.2 | 108.5 | 108.5 | 89.5 | 69.9 | 60.4 | 85.3 | 89.0 |
| Sugar | 59.2 | 29.4 | 29.6 | 18.2 | 14.1 | 21.0 | 23.6 | 35.6 | 44.6 |
| Tea | 90.4 | 86.6 | 104.3 | 155.0 | 88.9 | 86.4 | 76.6 | 80.2 | 90.5 |
| Copra | 83.5 | 69.2 | 109.3 | 156.5 | 85.1 | 43.5 | 68.1 | 87.6 | 76.7 |
| Palm oil | 97.8 | 76.3 | 86.0 | 124.9 | 85.8 | 44.1 | 58.7 | 75.0 | 60.1 |
| Cotton | 90.7 | 77.4 | 89.9 | 80.3 | 63.9 | 51.2 | 79.9 | 67.8 | 81.2 |
| Jute | 89.3 | 92.8 | 98.1 | 172.3 | 189.3 | 87.7 | 104.5 | 120.1 | 121.2 |

*Source:* Key Indicators of Developing Asian and Pacific Countries (Asian Development Bank, 1991).

tively. However, export growth in those two countries improved markedly, as was the case in India and Pakistan.

The role of domestic policies assumed added significance for the predominantly agrarian economies in Southeast Asia and South Asia in view of the rapid decline in the international prices of agricultural products in the 1980s – at an average −6.4% change annually in real terms (World Bank, 1992, p. 10). Table 3 shows that the *nominal* (undeflated US dollar) agricultural prices of major interest to Asian LDCs were generally lower toward the end of the decade compared to the 1981 prices. The price deterioration was particularly severe for such important crops as rice, sugar, palm oil, copra, corn and cotton during 1981–86. On the other hand, the more industrialized economies in Northeast Asia benefitted from a significant improvement in their external terms of trade, South Korea and Taiwan showing increases of 31% and 27%, respectively, from 1980 to 1989 (Asian Development Bank, 1991, p. 45).

## AGRICULTURAL PERFORMANCE AND POLICIES

A distinguishing feature of Asian agriculture is the traditional importance of the monsoon climate, with heavy rains and high humidity during half of the year and dry weather in the other half. Such climatic conditions were most favorable to rice cultivation in the low land volcanic soils of many Asian countries, and rice became the region's most important crop. According to Oshima (1987), the high population densities in rice-growing monsoon Asia are a consequence of the large labor requirement during the planting and harvesting seasons; in other months of the year, however, the labor force is underutilized and output per worker low.

TABLE 4

Agricultural shares in GDP and employment in 1980 and agricultural growth rates for 1970–80 and 1980–90 (percent)

| | 1980 share of agriculture in | | Average annual agricultural growth | |
|---|---|---|---|---|
| | GDP | Labor force | 1970–80 | 1980–90 |
| East Asia | | | | |
| South Korea | 14.9 | 36.4 | 3.2 | 2.8 |
| Taiwan | 7.9 | 19.5 | 4.0 | 2.3 |
| Indonesia | 24.0 | 57.2 | 3.8 | 3.2 |
| Malaysia | 21.9 | 41.6 | 5.1 | 4.0 |
| Thailand | 23.2 | 70.9 | 4.7 | 4.0 |
| Philippines | 23.3 | 51.8 | 4.9 | 2.1 |
| China | 30.4 | 74.2 | 2.8 | 6.1 |
| South Asia | | | | |
| India | 34.2 | 69.7 | 1.9 | 3.0 |
| Pakistan | 26.5 | 54.6 | 2.3 | 4.3 |
| Nepal | 57.9 | 93.0 | 0.5 | 4.6 |
| Bangladesh | 49.6 | 74.8 | 2.2 | 2.6 |
| Sri Lanka | 25.8 | 53.4 | 2.8 | 2.3 |

*Sources:* World Tables 1991 (World Bank); World Development Report 1982, 1983 (World Bank); Trends in Developing Countries 1991 (World Bank); Key Indicators of Developing Asia and Pacific Countries (Asian Development Bank, 1991).

Despite a number of similarities related to the monsoon conditions of agricultural production, Asian countries differ in size, natural resources, political and social structures, and development strategies adopted, among other things. In 1980 there were significant differences in per-capita income among them; as indicated in Table 1 above, a larger variation existed among the East Asian countries compared to those in lower-income South Asia. The much greater importance of agriculture to the economies of Southeast Asia and South Asia in 1980 relative to Taiwan and South Korea is evident in the comparative values of the agricultural shares in domestic output and employment shown in Table 4.

The contributions of area expansion and yield improvement to agricultural growth during the decade also differed among Asian countries. Table 5 shows that in cereal production significant increases in area under cultivation continued to take place in Nepal, Indonesia and Thailand; however, yield improvement was the larger source of output growth in the latter two countries. Indeed, rising yields generally represented the more important source of growth in cereal production; the exceptions were Nepal, Malaysia, and Pakistan (where increases in area and yield contributed equally). In South Korea, China, India, Bangladesh, and Sri

TABLE 5

Changes in production, area, yield of cereals, 1979–81 to 1987–89 (percent)

| | Production | Area | Yield |
|---|---|---|---|
| East Asia | | | |
| South Korea | 8 | −11 | 23 |
| Taiwan | na | na | na |
| Indonesia | 42 | 11 | 30 |
| Malaysia | −17 | −2 | −16 |
| Thailand | 21 | 9 | 11 |
| Philippines | 21 | 3 | 19 |
| China | 25 | −5 | 32 |
| South Asia | | | |
| India | 29 | −2 | 34 |
| Pakistan | 14 | 7 | 7 |
| Nepal | 36 | 24 | 11 |
| Bangladesh | 21 | −2 | 24 |
| Sri Lanka | 5 | −9 | 11 |

*Source:* FAO Production Yearbook, 1989.
na, not available.

Lanka, the effect of diminishing cultivated land was more than offset by improving yields.

*Taiwan, South Korea and Southeast Asia.* For the two Northeast Asian economies, the preceding one-and-a-half decades was a period of phenomenally rapid, export-led industrial growth (averaging about 16% annually), which induced a strong shift of resources (labor and capital) out of agriculture. The composition of farm output changed significantly – from rice and other staples to higher-value products (livestock, vegetables, and fruits), and in Taiwan particularly, nontraditional agricultural exports (mushrooms, asparagus, etc.) became important. The agricultural labor force began to decline absolutely in Taiwan by the late 1960s and in South Korea by the mid-1970s, but production continued to increase – at a lower rate in the 1980s relative to the preceding decade (Table 4) – due mainly to improvements in labor productivity. Also, from the mid-1960s onwards, agricultural producers in the two countries were increasingly sheltered from foreign competition (Honma and Hayami, 1987). Even so, the contribution of agriculture to GDP declined significantly in the 1980s, evidenced by the large disparity in the observed growth rates of agriculture and GDP. Moreover the rapid loss of comparative advantage in agriculture was reflected in the falling agricultural share in total exports for both countries – from 22% in 1970 to about 10% in 1980 and 5% in 1990 – as manufactured exports became more dominant.

There was also a slackening of agricultural growth among the four Southeast Asian countries in the 1980s relative to the preceding decade. The share of agriculture in GDP continued to decline, except in the Philippines. The comparatively stronger agricultural growth performance in the 1970s can be attributed to the rapid adoption of new agricultural technologies, particularly the high-yielding rice varieties introduced in the mid-1960s in the Philippines and Indonesia, and to the diversification and expansion of agricultural exports in Malaysia (in particular, palm oil) and Thailand (cassava and sugar). Governments were actively supportive of agriculture, especially in cereal production as a consequence of the supply difficulties associated with the world food crisis of 1972–73, in terms of rural infrastructure investments (in irrigation, electrification and transport) that helped overcome various production constraints (Vyas, 1983).

That the output performance of Southeast Asian agriculture in the 1980s was not as impressive as in the preceding decade would be partly attributable to the retrenchment in public expenditure and declining domestic terms of trade for agricultural producers. Thus, government spending in irrigation and drainage declined sharply in Malaysia from 1981–85 to 1986–90 (Jenkins and Lai, 1991, p. 84) as did irrigation development expenditure in Indonesia from 1979–83 to 1984–88 (Rosegrant and Pasandaran, 1992, p. 25). Agricultural sector spending by the Indonesian and Philippine governments were reduced in real terms by 9.2% and 19.0%, respectively, from 1980–82 to 1986–88 (based on expenditure data from IMF (1991, 1984) deflated by the implicit GDP price deflator). Farmers in Thailand faced a declining trend in product prices in the 1980s, in contrast to the increasing domestic agricultural prices in the preceding decade (World Bank, 1991). In the Philippines, the agricultural terms of trade declined in the 1970s and continued to do so in the 1980s.

Nevertheless, agricultural production in three of the four Southeast Asian countries, namely, Indonesia, Malaysia and Thailand, increased at a significantly higher rate than the 2.1% recorded in the 1980s by 'lower-middle-income' countries as a group which include the four Southeast Asian countries (World Bank, 1991, p. 206). The latter figure, coincidentally, was the agricultural growth rate for the Philippines, representing a drastic reduction from the historically high 4.9% annual growth achieved in that country during the green-revolution period of the 1970s.

*China and South Asia.* The agricultural sector in China and in the South Asian countries grew less rapidly than GDP in the 1980s, again bearing out the expectation of a declining relative importance of agriculture in the national economy over time. However, except in Sri Lanka, agricultural growth in the 1980s was a considerable improvement over the much slower

pace in the previous decade (Table 4). The role of policy and institutional reforms undertaken in these countries was significant.

Radical agricultural reforms were implemented in China beginning 1978. The system of rigid production planning in collectivized agriculture was relaxed and local markets were deregulated to encourage private sale and exchange of farm products. State procurement quotas were reduced and redistributed geographically, reducing the supply burden on poor regions and giving producers greater autonomy in resource allocation among alternative crops. Moreover, production incentives were improved across the board, significantly raising the procurement prices for both quota and non-quota sales. Agricultural producers also benefitted from a number of material incentive programs, including the right to purchase inputs at low prices in return for delivery of farm products to the state. Within the production cooperatives, internal incentives were improved through reorganization of agricultural production. Contractual arrangements were made with individual households which took responsibilities for managing collective land and other assets for the production team with bonuses for above-norm performance.

These price and organizational reforms resulted in a dramatic expansion (at 8–9% annually) of agricultural output during 1978–84, fueled by productivity increases in grain production and diversification into cash crops. Subsequently, agricultural growth slowed down (to 3–4% annually through 1989), at least partly attributable to a reversal in the agricultural terms of trade and "the growth of more profitable pursuits outside of agriculture, which have drawn off financial and human resources from the farm sector" (Wong, 1992, p. 65).

Among South Asian countries, growing frustration with past weak economic performance has led, since the late 1970s, to substantial policy changes toward export promotion, import liberalization, and deregulation of internal markets. Despite the falling world commodity prices in the 1980s, the domestic terms of trade did not deteriorate significantly; it even improved slightly in Pakistan and markedly in Sri Lanka. Government spending in agriculture also increased in real terms in the 1980s – by as much as 10.5% annually on average for India and 6.3% for Bangladesh (based on IMF data).

Sri Lanka's 1977 policy reforms included a large exchange rate devaluation, reductions in tariff and export tax rates, and relaxation of quantitative import restrictions; government investment in agriculture was significantly expanded, and food subsidies were cut back (Bhalla, 1991, pp. 200–201). Policy liberalization in India, which began in the late 1970s, lowered tariff and nontariff trade barriers, reduced domestic price controls, and increased entry of private producers into areas previously reserved for the

public sector. In Pakistan the New Agricultural Policy was announced in 1980 which aimed to gradually raise agricultural product prices up to par with world prices, reduce subsidies on farm inputs, and expand "the role of the private sector in general" (Hamid et al., 1991, p. 122). Deregulatory policies were introduced during the decade affecting imports and distribution of pesticides, edible oil imports, price controls on urea fertilizer, and exports of cotton and rice. In Bangladesh public investment in agriculture increased from 19% of the development budget in 1977–78 to 28% in 1984–85, accompanied by a sharp reduction in input (especially, fertilizer) subsidies; also, improved exchange rate management and export promotion policies helped increase nontraditional agricultural exports in the second half of the 1980s. Nepal's structural adjustment program that was begun in 1986 included measures to reform the financial sector, liberalize industrial and trade policies, and promote agricultural production through improvements in fertilizer distribution and irrigation water delivery.

*Policy effects on agricultural incentives*

Agricultural production incentives are affected directly by sector-specific policies and indirectly by trade and macroeconomic policies. At one time or another, Asian governments have directly suppressed producer prices of specific farm products through the imposition of export taxes, domestic price controls, and the operation of state marketing agencies. The direct price effects have differed between export products and import-competing food crops, the former being "disprotected" (taxed) more heavily (Bautista, 1990a). On the other hand, the indirect price effects of trade and macroeconomic policies, which are transmitted via the induced changes in the real exchange rate, apply equally to all tradable goods. Because agricultural output has a higher degree of tradability than nonagricultural output, a depreciating (appreciating) real exchange rate effectively favors (penalizes) domestic agricultural production.

Real exchange rate overvaluation is prevalent in developing countries, owing to existing trade restrictions and unsustainable current account deficits that artificially defend an unrealistic (disequilibrium) exchange rate (Krueger et al., 1988). This affects agricultural producers adversely, since relative prices of tradable farm products are rendered less competitive. A growing body of evidence indicates that the indirect price effect of exchange rate overvaluation, largely induced by trade and macroeconomic policies that protect domestic industry, is generally substantial and often dominates the direct effect of agricultural sector-specific policies (see Krueger et al., 1988; Bautista and Valdés, 1993).

The extent to which the actual (official) exchange rate is overvalued varies among Asian countries. During the early 1980s, for example, the real exchange rate overvaluation has been estimated at 34% for the Philippines but only 6% for Malaysia (Bautista, 1990b, p. 122). The comparative figures reflect the much more restrictive trade policy in the Philippines as well as the macroeconomic policies that accommodated the country's more severe trade imbalance relative to Malaysia during that period. Concerning the other Asian countries included in the study, the real exchange rate was overvalued by 26% for Thailand, 20% for Pakistan, 14% for Sri Lanka, and 6% for South Korea. Except for Malaysia and South Korea, the real exchange rate overvaluation contributed more heavily than sector-specific policies to the price penalty to agricultural producers in those countries.

The real exchange rate in nearly all the ten Asian countries represented in Table 6 depreciated (increased) in the 1980s. The annual rates of change differed significantly among countries. It is notable that the least significant changes in the real exchange rate took place in Bangladesh and Sri Lanka, which recorded the lowest agricultural growth rates among the South Asian

TABLE 6

Real exchange rates, 1980–89 (1975 = 100)

| | Average | | Average annual change, 1980–89 (percent) |
|---|---|---|---|
| | 1980–82 | 1987–89 | |
| Indonesia | 129.2 | 254.0 | 9.2 |
| Malaysia | 117.0 | 128.7 | 1.3 |
| Thailand | 105.3 | 119.2 | 1.8 |
| Philippines | 94.7 | 119.8 | 2.4 |
| China | 124.8 | 210.5 | 7.8 |
| India | 127.0 | 151.4 | 2.6 |
| Pakistan | 112.2 | 169.8 | 5.9 |
| Nepal | 106.5 | 184.3 | 7.9 |
| Bangladesh | 136.6 | 132.2 | −0.4 |
| Sri Lanka | 241.7 | 249.9 | 0.4 |

*Source:* Intal (1992); for Nepal, author's calculations.

The formula used is:

$$\text{RER}_h = \frac{R_{h,\text{us}}}{P_h} \sum_i \frac{\omega_i P_i}{R_{i,\text{us}}}$$

where $\text{RER}_h$ and $P_h$ are the real exchange rate and consumer price index, respectively, in home country $h$; $R_{h,\text{us}}$ and $R_{i,\text{us}}$ are the bilateral exchange rates of the currencies of country $h$ and major trade partner $i$ (representing each of the five largest contributors to country $h$'s foreign trade), with the US$; and $\omega_i$ and $P_i$ are the trade share of and wholesale price index in country $i$.

countries during the decade. On the other hand, the top agricultural growth performers – China in East Asia, and Pakistan and Nepal in South Asia – had relatively higher rates of real exchange rate depreciation. These observations would seem to indicate that moving toward a 'realistic and competitive' real exchange rate can contribute to a strong agricultural growth performance.

Actual changes in the real exchange rate can not of course be attributed solely to the country's trade and macroeconomic policies. Other possible influences are the external terms of trade, foreign capital inflows, technological progress, and capital accumulation (Edwards, 1991). For example, the deterioration in the terms of trade for most Southeast and South Asian countries in the 1980s would likely have contributed to the depreciation of the real exchange rate. Depending on whether these other influences are perceived to be temporary or permanent, policymakers may or may not react to compensate for the induced effects on the real exchange rate.

Combining the indirect effect of economywide policies on agricultural incentives with the direct effect of sector-specific policies, one obtains the total effect of government price interventions, in terms of the deviation of the domestic relative price of an agricultural product from its world (border) price. The findings for six Asian LDCs during the 1980s in a recent World Bank study (Krueger et al., 1991) are contained in Table 7. Higher price protection (or lower price 'disprotection') was generally accorded to agricultural producers in higher income countries. Thus, producer prices of rice in South Korea and Malaysia exceeded the border prices by 74% and 59%, respectively; in the Philippines and Pakistan,

TABLE 7

Divergence of producer price from border price due to total government intervention (percent)

| | | | |
|---|---|---|---|
| South Korea (1980–84) | | Philippines (1980–86) | |
| Rice (M) | 74 | Rice (M) | −24 |
| Barley (M) | 91 | Corn (M) | 4 |
| Beef (M) | 110 | Copra (X) | 46 |
| Malaysia (1980–83) | | Pakistan (1981–85) | |
| Rice (M) | 59 | Rice (X) | −67 |
| Rubber (X) | −28 | Wheat (M) | −50 |
| Palm oil (X) | −14 | Cotton (X) | −43 |
| Thailand (1976–84) | | Sri Lanka (1984–85) | |
| Rice (X) | −33 | Rice (M) | 2 |
| Corn (M) | 20 | Tea (X) | −45 |
| Rubber (X) | −35 | Rubber (X) | −39 |

*Source:* Krueger et al. (1991).

M and X denote import-competing and export products, respectively.

however, domestic prices were lower than border prices by 35% and 44%, respectively. Another striking observation is that agricultural export products were disprotected (penalized) more heavily than import-competing food crops. For example, in contrast to the positive protection given to rice, an import-competing crop, in Malaysia, the country's two principal agricultural exports, rubber and palm oil, faced negative protection of −28% and −14%, respectively. These results conform to the general findings for LDCs in Latin America and Africa included in the World Bank study, and can be attributed to the comparative ease, administratively and politically, of taxing (commercial) export crops vis-a-vis (subsistence) foodcrops.

*Food production, trade and aid*

An important aspect of agricultural performance relates to the sector's ability to provide food for a country's growing population. Increasing food self-sufficiency has traditionally been a major policy objective in most developing countries, especially low-income LDCs, and Asian countries are no exception. The aggregate index of food production per capita increased from 1979–81 to 1987–89 for the Asian LDCs, which in this respect performed better than both the African and Latin American country groups (Pinstrup-Andersen, 1992). Rising food production per capita characterized three of the four Southeast Asian economies (Table 8); the Philippines reflected the country's poor overall economic performance during the decade. In South Asia, Bangladesh and Sri Lanka experienced a reduction in food production per capita, which is consistent with these two countries' comparatively low agricultural growth rates for the 1980s as observed above.

Food security at the national level can also be enhanced by increasing the country's capacity to produce for the export market and earn foreign exchange that can pay for food imports. Exports of agricultural products have traditionally been a major source of foreign exchange earnings in most LDCs. Many Asian countries succeeded in significantly expanding their agricultural exports in the 1980s. Large differences in the trend of agricultural exports are seen among the ten Asian countries represented in Table 8. That the export growth rates in nominal (undeflated) terms were generally lower than those in real terms is indicative of the falling US dollar prices of most Asian agricultural export products. It is notable that Bangladesh, Sri Lanka and the Philippines, countries in which food production per capita declined during the decade, also performed poorly in agricultural export growth.

Indeed the comparative growth rates in Table 8 do not point to the existence of a tradeoff between food and export crops sometimes hypothe-

TABLE 8

Average annual growth of food production per capita and agricultural exports, 1979–89 (percent)

| | Food production per capita | Agricultural exports [a] | |
|---|---|---|---|
| | | Undeflated | Deflated |
| Indonesia | 2.8 | 4.2 | 6.6 |
| Malaysia | 4.9 | 2.5 | 3.9 |
| Thailand | 0.5 | 4.6 | 6.0 |
| Philippines | −1.9 | −5.3 | −5.4 |
| China | 3.0 | 8.9 [b] | 8.8 [b] |
| India | 1.7 | −0.2 | −2.5 |
| Pakistan | 0.4 | 5.0 | 6.0 |
| Nepal | 0.9 | 3.7 | 4.3 [c] |
| Bangladesh | −0.9 | −1.0 | −4.0 |
| Sri Lanka | −1.4 | −0.6 | 0.4 |

*Source:* Calculated from annual data in World Tables 1991 (World Bank), Trends in Developing Economies 1991 (World Bank), Key Indicators of Developing Asia and Pacific Countries (Asian Development Bank, various issues) and FAO Trade Yearbook (various years).

[a] In terms of US$ undeflated or deflated by the unit export value index.

[b] For period 1980–89.

[c] For period 1979–88.

sized for agrarian economies. China, Indonesia and Malaysia were able to increase significantly both food production per capita and exports of agricultural products. It is also worth noting that in countries where agricultural export expansion was rapid, such as Thailand, Malaysia, China, and Pakistan, there was also rapid overall export growth as well as rapid GDP growth (see Table 2). The only exception is oil-rich Indonesia, which suffered a steep decline in the export price of oil during 1983–89 (by 60% in real terms), resulting in a sharp deceleration of total export growth; nonetheless, its non-oil exports and GDP growth rates remained high.

Asian countries that achieved rising food production per capita in the 1980s were able to increase their food export earnings or reduce their food import bill, in one case (Indonesia) becoming a net food exporter towards the end of the decade (Table 9). Where food production per capita declined, there was increasing food imports (Bangladesh), or decreasing food exports (Sri Lanka), or the country changed from being a net food exporter to a net food importer (Philippines). In terms of cereals, significant growth in import volume characterized some Asian countries that expanded production in non-cereal food crops during the decade (cocoa in Malaysia and sugarcane in India and Nepal).

TABLE 9

Average annual net imports of food and cereals, 1979–81 and 1987–89

| | Food (million US$) | | Cereals (1000 metric tonnes) | |
|---|---|---|---|---|
| | 1979–81 | 1987–89 | 1979–81 | 1987–89 |
| Indonesia | 277 | −579 | 2740 | 1861 |
| Malaysia | 691 | 414 | 1415 | 2246 |
| Thailand | −2370 | −3402 | −5110 | −6457 |
| Philippines | −577 | 50 | 796 | 1243 |
| India | −1348 | −978 | −380 | 875 |
| Pakistan | −114 | 112 | −101 | −62 |
| Nepal | −5 | 1 | 7 | 40 |
| Bangladesh | 222 | 412 | 1372 | 2328 |
| Sri Lanka | −109 | −99 | 849 | 883 |

*Source:* FAO Trade Yearbook (various years).

Increasing food aid supplemented the cereal imports of countries that experienced negative growth in food production per capita and agricultural export earnings. Average annual food aid in cereals increased from 1979–81 to 1987–89 as follows (in 1000 metric tonnes): from 90 to 306 in the Philippines, from 1108 to 1358 in Bangladesh, and from 198 to 316 in Sri Lanka (FAO, 1990, pp. 52–54). On the other hand, also not surprisingly, a drastic reduction in food aid in cereals received by Indonesia over the same period (from 606 000 to 194 000 metric tonnes) accompanied the country's impressive growth performance in food production and agricultural exports.

## COMMODITY STRUCTURE OF AGRICULTURAL GROWTH

Changes in the composition of agricultural output and trade over time are part of the structural transformation in the development process for most low-income countries. They are induced by shifts in demand and supply conditions in both product and input markets. The structure of demand responds to changes in relative prices, income and tastes (for example, based on Engel's law). On the supply side, changes in resource endowments (vanishing agricultural land frontier, population growth, etc.), technological progress, and institutional innovations have differential effects on production and transaction costs across commodities, influencing the country's pattern of comparative advantage. Moreover, government policies can reinforce or mitigate the effects on the commodity structure of exogenous shifts in market conditions.

TABLE 10

Average annual growth of agricultural production by commodity, 1979–89 (percent)

| Country and commodity | Growth rate | Country and commodity | Growth rate |
|---|---|---|---|
| Indonesia | | India | |
| Rice | 4.60 | Rice | 4.26 |
| Cassava | 1.86 | Wheat | 4.25 |
| Corn | 5.63 | Sugarcane | 3.65 |
| Crop index | 4.51 | Crop index | 3.54 |
| Malaysia | | Pakistan | |
| Rice | −1.88 | Rice | −0.16 |
| Palm oil | 9.11 | Wheat | 2.70 |
| Rubber | −0.04 | Sugarcane | 1.32 |
| Crop index | 4.34 | Crop index | 3.91 |
| Thailand | | Nepal | |
| Rice | 2.19 | Rice | 4.21 |
| Cassava | 4.64 | Corn | 5.64 |
| Sugarcane | 5.54 | Sugarcane | 6.99 |
| Crop index | 2.88 | Crop index | 4.38 |
| Philippines | | Bangladesh | |
| Rice | 1.94 | Rice | 2.58 |
| Coconut | 0.06 | Jute | 0.97 |
| Sugarcane | −5.69 | Sugarcane | 0.18 |
| Crop index | 0.80 | Crop index | 2.09 |
| China | | Sri Lanka | |
| Rice | 2.25 | Rice | 1.15 |
| Wheat | 4.81 | Tea | 1.02 |
| Corn | 3.06 | Coconut | 1.15 |
| Crop index | 3.25 | Crop index | −0.08 |

*Source:* Calculated from annual data in FAO Production Yearbook (various years).

For many Asian countries the dominance of a few commodities in agricultural production and exports – in particular rice and certain 'traditional' export crops – presented a difficult problem in the face of sharply declining world prices of those products in the 1980s. It accentuated the policy interest in crop diversification (i.e., into nontraditional and preferably higher-value crops) as well as in noncrop (livestock) production. Some indication of the extent to which crop diversification was achieved during the decade is given by the comparative growth rates of production in the three most important crops, and of total crop production in each of the ten Asian countries included in Table 10. Crop diversification away from any of the three crops is implied by a more rapid increase in the index of crop production compared to production growth in the individual crops. In five countries, namely, Malaysia, Pakistan, Thailand, China and Nepal, crop

production evidently diversified away from rice in the 1980s, the first two even showing negative growth in rice production. It is notable that these five countries also had the most impressive agricultural growth performance during the decade (see last column of Table 4). Obversely, the remaining five countries in which rice increased its share in total crop production, reflecting an incapacity for crop diversification away from rice, registered the lowest agricultural growth rates.

Also a striking observation is that the relative importance of such traditionally dominant export crops as rubber in Malaysia, sugarcane in the Philippines, rice in Thailand, and jute in Bangladesh, declined significantly. This was presumably hastened by the sharply lower domestic terms of trade for producers of these crops (based on FAO producer price data). On the other hand, the production of some crops into which substantial diversification took place in the 1970s, such as palm oil in Malaysia and cassava and sugarcane in Thailand, continued to expand at relatively high rates in the 1980s.

A potentially important source of crop diversification for many LDCs is horticultural products (Islam, 1990). The production of fruits and vegetables is labor intensive and has strong linkages with food processing, transportation, and services. As exemplified by the development experience of Taiwan, a substantial shift in the composition of farm output from rice and other staples to higher-value horticultural products and accompanying export expansion of the latter products can pave the way to an efficient, export-led industrial growth.

Comparison of the growth rates of horticultural production shown in Table 9 with those of the crop index (Table 10) indicates that only Indonesia and Pakistan, two of the better-performing Asian economies, significantly diversified into fruits and vegetables in the 1980s. At the other extreme, horticultural production even declined in the Philippines and Sri Lanka, which had the lowest agricultural growth rates during the decade (Table 4). This supports the view that rapid horticultural growth may come about only in the context of a dynamic agricultural sector. Rapid expansion of livestock production is also often regarded as an important element of the "agricultural transformation" (Sarma and Yeung, 1985). The growth performance of Asian countries in the livestock sector during the decade under review was impressive.

Higher growth rates in livestock production are evident from Table 9 relative to crop production in all but two countries (Nepal and Bangladesh). Expansion of the livestock sector was also more rapid than that of horticultural production in all countries, except in Nepal. Agricultural diversification into livestock products in the 1980s was most pronounced in Indonesia, Malaysia, China and India. Unsurprisingly (but not inevitably), in view

of the high income elasticity of demand for livestock products, there is a positive correlation between the growth rates of livestock production and of GDP (see third column of Table 2); in particular, it is notable that the four countries with the lowest GDP growth rates (Philippines, Bangladesh, Sri Lanka and Nepal) also showed the lowest growth rates in livestock production. This would seem to imply a strong role of domestic demand in stimulating growth of the livestock sector.

As regards foreign markets, both horticultural and livestock products increased their share in total agricultural exports of most Asian countries during the decade, based on their export growth rates (Table 11) compared to those of total agricultural exports. Export diversification into fruits and vegetables took place in all ten countries except in Sri Lanka, and into livestock products except in the Philippines and Nepal. The comparative growth rates of horticultural and livestock exports point to a more rapid diversification into livestock in the majority of countries. However, exports of livestock products were generally much smaller than horticultural exports at the beginning of the decade. Only Bangladesh had greater export earnings from livestock products in 1979–81 which however did not last long, owing to a dramatic increase in horticultural exports in 1986. In Malaysia, the much more rapid expansion of export earnings from livestock products resulted in their catching up and even exceeding the value of horticultural exports towards the end of the decade.

## CHALLENGES FOR THE 1990s

At the end of the 1980s agriculture was still a major source of income, employment and export earnings in many Asian countries (Table 12). Except for the industrially advanced economies of Taiwan and South Korea, the achievements in trade and agricultural development of Asian LDCs in the 1990s will be critical to their overall development. In the two Northeast Asian countries whose comparative advantage in agriculture is likely to decline further, the primary need is to ease the transition of the remaining rural population as farm incomes continue to fall and workers move to industrial and service activities.

### *Reducing agricultural protection*

Government policies in South Korea and Taiwan that effectively restricted agricultural imports have attracted much criticism, presumably related to the successful penetration of their industrial exports in world markets. Agricultural tariff reduction and import liberization measures were implemented in the two countries during the 1980s (Liaw, 1990; Suh,

TABLE 11

Production and exports of horticultural and livestock products, 1979–89

| | Production | | Exports | |
|---|---|---|---|---|
| | Average level [a] 1979–81 | Annual growth 1979–89 (percent) | Average level 1979–81 (million US$) | Annual growth [b] 1979–89 (percent) |
| Indonesia | | | | |
| Horticultural | 7672 | 5.0 | 63.6 | 15.1 |
| Livestock | 100 | 8.0 | 7.7 | 18.1 |
| Malaysia | | | | |
| Horticultural | 1594 | 1.1 | 71.2 | 7.5 |
| Livestock | 100 | 10.5 | 16.2 | 26.6 |
| Thailand | | | | |
| Horticultural | 8755 | 1.7 | 861.0 | 6.5 |
| Livestock | 100 | 3.6 | 55.8 | 19.2 |
| Philippines | | | | |
| Horticultural | 7275 | −0.4 | 355.1 | 1.6 |
| Livestock | 100 | 1.5 | 3.4 | −11.0 |
| India | | | | |
| Horticultural | 62108 | 1.0 | 262.3 | 8.6 |
| Livestock | 100 | 5.3 | 78.4 | 3.3 |
| Pakistan | | | | |
| Horticultural | 4943 | 5.2 | 32.2 | 7.5 |
| Livestock | 100 | 5.3 | 1.2 | 33.8 |
| Nepal | | | | |
| Horticultural | 378 | 2.0 | 11.8 | 18.2 |
| Livestock | 100 | 1.6 | 7.3 | 1.8 |
| Bangladesh | | | | |
| Horticultural | 2416 | 1.0 | 0.8 | 35.8 |
| Livestock | 100 | 1.8 | 4.7 | 11.7 |
| Sri Lanka | | | | |
| Horticultural | 2076 | −2.8 | 54.1 | −2.3 |
| Livestock | 100 | 1.4 | 0.2 | 25.1 |

*Source:* Calculated from annual data in FAO Production and Trade Yearbook (various years) and World Tables 1991 (World Bank).

[a] Average production is in 1000 metric tonnes for horticultural products and in index number (1979–81 = 100) for livestock products.

[b] In real terms; deflator used is index of export prices.

1990), albeit inconsistently in the Korean case. Transfers to agricultural producers also increased significantly in South Korea, resulting "in the highest PSEs of any Pacific Rim nation" (USDA, 1992, p. 12) by the end of the decade. Protection of Taiwan's agriculture in 1990 was much lower than South Korea's, based on USDA estimates of average PSEs (30 versus 97).

TABLE 12

Agricultural shares in GDP, employment and exports, 1989 (percent)

| | GDP | Employment | Exports |
|---|---|---|---|
| East Asia | | | |
| South Korea | 9 | 20 | 5 |
| Taiwan | 4 | 13 | 6 |
| Indonesia | 21 | 56 | 21 |
| Malaysia | 20 | 31 | 37 |
| Thailand | 16 | 67 | 39 |
| Philippines | 27 | 45 | 52 |
| China | 32 | 60 | 19 |
| South Asia | | | |
| India | 32 | na | 19 |
| Pakistan | 26 | 51 | 33 |
| Nepal | 60 | na | 13 |
| Bangladesh | 37 | 54* | 28 |
| Sri Lanka | 21 | 48 | 43 |

*Source:* World Development Report 1991 (World Bank); Key Indicators of Developing Asian and Pacific Countries (Asian Development Bank, July 1991).

[a] For 1986.

na, not available.

Agricultural protectionism is a high priority item in the current Uruguay Round of multilateral trade negotiations. Progress in this area is clearly needed if the distortions in international comparative advantage are to be reduced. It will enlarge LDC access to food and agricultural markets and increase the efficiency with which world resources are used. The stakes are made higher by the linkage of trade liberalization in nonagricultural products to agreement in the lowering of agricultural protection.

A recent study (Nguyen et al., 1991), based on a global trade model that differentiates among various categories of Asian developing countries, estimates that a "comprehensive Uruguay Round outcome," involving a 70% cut in trade distortions in agriculture in terms of producer subsidies and border measures along with other trade-liberalization measures in nonagriculture, will have highly beneficial effects on middle-income agricultural exporting (AGX) countries (Brazil, Argentina, and the four Southeast Asian countries) and the middle-income agricultural importing (AGM) countries (South Korea, Taiwan, Hong Kong and Singapore). The AGX group will benefit from the induced increases in agricultural exports by 20% and in light industrial exports by 365%, while the AGM region will expand exports of light industrial products by 284%. The residual category of developing countries, in which the South Asian countries are classified (along with all African and most Latin American countries), are estimated

to expand their agricultural exports by 69% as a result of the comprehensive Uruguay Round outcome. It is also notable that all regions distinguished in the model will have positive welfare effects, with 2.3% and 2.9% increases for the AGX and AGM groups, respectively, and the largest proportionate gains accruing to the OECD countries.

The extent of trade liberalization in agriculture continues to be a highly controversial aspect of Uruguay Round discussions. It is interesting that even a smaller cut in agricultural protection (30% instead of 70%), together with similarly modest reductions in the nonagricultural areas, will lead, based on the model simulation results, to welfare gains "roughly half the size of the more comprehensive outcome" (Nguyen et al., 1991, p. 372).

If the Uruguay Round fails to yield even a modestly successful agreement, not only will the significant gains from multilateral trade expansion be foregone. The global trading system itself will be weakened and its ability to deal with new challenges, including trade mediation relating to discriminatory protection, bilateralism, and regional trading arrangements, will be severely impaired. This "is clearly much less promising for developing countries and small economic actors in general" (Islam and Valdés, 1990, p. 2).

*Responding to external regionalist tendencies*

Among other factors, the uncertainty of a Uruguay Round outcome favorable to multilateral trade expansion has encouraged some developed and developing countries to pursue alternative means of expanding their trade relations, in particular the formation of regional trading blocs. The recently concluded North American Free Trade Agreement (NAFTA) among the United States, Canada and Mexico, the United States' bilateral trade agreements with Caribbean and prospectively other Latin American countries, and the scheduled operation of the European Community as a single market beginning January 1993, have raised fears among Asian developing countries that two of their principal export markets will become less accessible. This has stimulated some interest in the intensification of Asian regional cooperation efforts.

At the subregional level, the Association of Southeast Asian Nations (ASEAN), comprising Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand, is an established forum for intergovernmental consultation and cooperation. However, its achievements in terms of economic integration and policy coordination have been modest at best (Rieger, 1989). The recent agreement at the Fourth Summit Meeting (among the Heads of States) in Singapore to establish the ASEAN Free Trade Area (AFTA) within 15 years beginning January 1993 would seem to have been

encouraged by the observed trend toward regionalism. It is notable, however, that only manufactured goods comprise the 15 groups of products initially identified for tariff cutting (to at most 5% eventually). With respect to agricultural trade, the Singapore Declaration of 1992 indicates no regional bias, explicitly drawing attention to the need "to enhance ASEAN's competitive posture, and to sustain the expansion of ASEAN agricultural exports in the international markets." More generally, the Declaration continues "to uphold the principles of free and open trade embodied in the GATT" and expresses the need "to work towards maintaining and strengthening an open multilateral trading system."

The Asia-Pacific Economic Cooperation (APEC) grouping has a wider membership, consisting of 15 developed and developing countries (Australia, Canada, China, Hong Kong, Japan, South Korea, New Zealand, Taiwan, the United States, and the six ASEAN members). When it was created in 1989, APEC specifically aimed at helping strengthen the open multilateral trading system and enhance the prospects of the Uruguay Round through discussion and consultation among regional decisionmakers. Despite the sentiment expressed recently by a few members that Asian-Pacific nations should promote regional economic integration to counter the threats of exclusionary trading blocs and protectionism elsewhere, there was no indication from the September 1992 ministerial meeting, and it seems unlikely, that APEC will deviate from its original mandate to serve only as a loose forum for discussion of regional trade and investment issues.

A more activist option has been proposed for an Asian-Pacific grouping in which Japan would play a prominent role in support of current restructuring efforts of developing countries in the region. This role would be "similar to that which the United States played in Europe immediately after the Second World War... and which Germany is now poised to play in the restructuring of the less dynamic economies in Eastern and Southern Europe" (ESCAP Secretariat, 1990, p. 13). Again, however, the focus of this proposal is on regional cooperation in *industrial* restructuring; agricultural trade and investment issues are left out entirely. As with other Japan-centered proposals, such as the setting up of an East Asian Economic Caucus to rival NAFTA on the other side of the Pacific, it has not gained much headway. A major reason, apart from Second World War memories, is that Asian developing countries have strong links to the United States and European markets, against which they seem reluctant to discriminate. Moreover, there is a continuing commitment generally to an open trading system, on which in fact their impressive economic performance in the past has been predicated.

While intra-regional trade is around 40% of all East Asian trade and the

share of East Asian countries in world trade is now large (about 20%) and growing, suggesting that they have economic if not political leverage against the outside world, it is widely felt that an open trading system will continue to serve them better than regionalism and protectionism. An important challenge for the market-oriented countries in Asia for the 1990s is to play an active role in arresting and reversing any protectionist tendencies arising from the formation of regional trading blocs and to support multilateral initiatives such as the Uruguay Round that promote global trade liberalization.

*Moving towards a neutral incentive structure*

The chief beneficiaries of economic liberalization are usually the liberalizers themselves. Despite the policy and institutional reforms earlier implemented, China and the South Asian countries are still a long way to having an efficient system of market-based resource allocation. Provided that substantive liberalization of internal markets and the trade regime is pursued, these countries can be expected to sustain the momentum of rapid agricultural and overall economic growth through the 1990s and to become strong competitors in international markets.

As shown above, price and trade policies in the Southeast and South Asian countries have tended to discriminate – in many cases, heavily – in favor of industry over agriculture, nontradable goods over tradables, and among agricultural tradables, in favor of import-competing food products over export crops. In failing to provide a more neutral incentive structure that could have encouraged a more efficient allocation of scarce resources, those policies not only contributed to a relatively inferior agricultural performance in the 1980s, but also generated unfavorable economywide effects that inhibited overall economic growth (see Krueger et al., 1991).

A large part of the incentive bias against agricultural production, in most cases, is induced indirectly by policies not specifically aimed at agriculture. This indirect price intervention largely derives from trade restrictions and other import-substitution policies intended to promote industrial development. Substantial reduction of the policy bias against agriculture, therefore, requires a general shift toward a more export-oriented development strategy while promoting competition in the domestic market. It has been difficult for some Asian LDCs to do this, especially those with a long history of inward-looking trade policy in view of the vested interests that have hardened over time. The movement towards a neutral incentive structure could be attempted only gradually, and in a few cases, haltingly.

Two common sources of apprehension by Asian LDC governments about agricultural price and trade policy reform relate to (1) the volatility

of world commodity prices which, under a more open trade regime, will be transmitted more fully to the domestic price structure; and (2) the transitional costs associated with the short-run negative fiscal, balance-of-payments, and growth effects. Actually, there is no inherent conflict between the adoption of a liberalized trade policy to improve agricultural incentives and government efforts to reduce agricultural price instability. The two objectives are analytically distinct and can be kept separate in practice (Knudsen and Nash, 1990).

Problems of transition arise because there are delays in reallocating resources to the newly profitable sectors and in the expected increases in domestic production and exports. To overcome agricultural supply constraints and hasten the expansion of output and exports, it may be necessary to increase government expenditure on rural and export infrastructures. On the revenue side, the lowering of trade taxes leads to a negative fiscal effect in the short run that can add to an existing budget deficit. It may then be desirable, given the imperfections of the prevailing tax structure in many Asian LDCs, to accompany the liberalization measures with an overall tax reform. The challenge for policymakers is how to develop tax policy instruments that satisfactorily address the multiplicity of fiscal objectives such as revenue generation and minimization of allocative and distributional distortions.

Most of the Asian countries undertaking agricultural price and trade policy reform have been able to obtain external financial assistance, particularly from the World Bank and IMF. The policy targets, performance criteria, and other aspects of loan conditionality will undoubtedly have a bearing on the medium-term prospects of these economies and on whether government commitment to policy reforms will be sustained.

*Promoting macroeconomic stability*

A major impediment to sustained liberalization has been the macroeconomic imbalances resulting from expansionary fiscal and monetary policies. All too often, overspending by the government is accompanied by monetary expansion and quickly followed by inflation, real exchange rate appreciation (especially if external financing is involved), loss of export competitiveness, and increased trade imbalance, which adds pressure for a reversal of the liberalization process.

As shown in the policy reform experiences of the Philippines, China and the South Asian countries, macroeconomic instability can severely undermine the attempt at microeconomic reform. In the Philippines, the government had to discontinue the implementation of a trade liberalization program that began in 1980 owing to the external debt crisis of 1983, which

in turn resulted from heavy foreign borrowing that financed the increased public spending during the period. The budget deficit expanded from 1.3% of GDP in 1980 to 4.2% in 1982, while the current account deficit increased from 5.8% to 8.0%, the latter presumably related to the sharply appreciating real exchange rate during the period.

In China, the unprecedented expansion of aggregate demand after 1984 fueled by easy credit and budget deficits (largely financed by money supply expansion) caused double-digit (urban) inflation rates in 1985 and again in 1988 and 1989. The anti-inflationary measures adopted by the government effectively "reversed the reform program on a broad front, with measures that represented a generalized retreat from price reform and market allocation, including the reimposition of price controls, the reassessment of state monopoly trading in grain, cotton, fertilizers, pesticides and some basic types of steel" (Wong, 1992, p. 21).

Similar difficulties were faced by the liberalizing economies in South Asia. Thus, in Sri Lanka, a substantial expansion of public investment largely arising from the accelerated Mahaweli Development Program, the financing of which entailed a massive inflow of foreign capital, took place after the policy reforms of 1977, causing the budget deficit to balloon from 8.8% of GDP in 1977 to 26.1% in 1980 (Athukorala and Jayasuriya, 1991, chapter 5). In the latter year the Colombo CPI rose to a historic high of 26% and the current account deficit went up to 16% of GDP. The accompanying real exchange rate appreciation was a manifestation of the increasing ineffectiveness of the reform measures.

The lesson from all this would be that excessive spending by the government is a major threat to the reform process, and can be more serious than the direct efforts of interest groups to resist liberalization. It is a continuing challenge for the reforming governments in Asia not only to promote the efficiency and effectiveness of public expenditure but also to ensure that fiscal deficits are manageable and inflation rates low, so as to avoid the macroeconomic imbalances that can only derail the process of policy liberalization.

### *Supporting agricultural development*

The rationalization of agricultural pricing and marketing policies that is expected from economic liberalization will ensure that the profitability of agricultural production is not artificially depressed. 'Getting the prices right' is of course not a sufficient condition for agricultural development. Government support for agriculture is needed to develop infrastructure and provide technology that will generate new opportunities for growth.

In contrast to Africa and Latin America, the arable land frontier has all but vanished in most of Asia. Increases in agricultural productivity will therefore be based primarily on raising the productivity of land already under cultivation. Arable land has in fact begun to decline in a few Asian countries, e.g., China and India, in part due to population pressures. In other countries, expansion of farmland has been achieved by the clearing of forests with attendant ecological and economic costs (Nepal and Thailand) and through government-sponsored land settlement programs (Malaysia and Indonesia).

Since the mid-1960s improvements in crop technology, along with government spending in infrastructure, especially irrigation investments, have sustained the yield increases in Asia. As pointed out by Ruttan (1990, p. 190), "yields of rice, wheat and maize in favored areas, particularly in east Asia, have approached or exceeded the levels achieved in some countries of the developed world." More recently, increasing difficulty has been met in raising "yield ceilings" due to declining response to increase in fertilizer use and rising costs of expanding irrigated area. Furthermore, the technological advances have continued to bypass the rain-fed areas in the region. The proportion of cultivated area devoted to rain-fed agriculture in Asian countries varies markedly, ranging from less than one-fifth in Pakistan to about one-half in Indonesia and over three-fourths in Thailand. Ways to improve land yield in these less favored farming areas have proved elusive and costly, owing to differences in local conditions that make replication in other places difficult. "Agricultural productivity gains are likely to come in smaller increments than in the past, and will be crop, animal and location specific. These sources of yield gains are extremely knowledge and information intensive" (Ruttan, 1990, p. 194).

The implication for policy in the more advanced Asian countries which have to rely on new technological frontiers to sustain yield increases is that research and technology development efforts have to be intensified. Some countries that increased their institutional capacity for agricultural research and technology diffusion in the 1960s and 1970s have had to cut back in the 1980s as part of the an overall fiscal retrenchment. The challenge for the 1990s is to be able to reverse the trend and realize the yield gains from the development and adoption of new technology.

Many parts of Asia, especially those in the South Asian countries, have not yet fully exploited the potential of the existing technology. This is due in part to the anti-rural bias in public expenditure, as documented in various country studies, e.g., in Krueger et al. (1991). Two adverse consequences have been a deficiency in technology dissemination and high marketing costs, which hindered agricultural development. The existence of better production methods will not lead to farm yields approaching those

obtained in research stations unless the knowledge and required skills are transmitted to farmers. As marketed farm produce increases for both domestic sale and export, not only in cereals but also in horticultural and livestock products, lower-income Asian LDCs also need to invest more heavily in rural electrification, transport, communications, and other marketing facilities. Provision of rural infrastructure and services is not only critical to the diffusion of profitable technologies and lowering of marketing costs; it also increases the access of rural households to marketable products and generally promote market integration as a basis for the development of a wide range of rural activities (Ahmed and Hossain, 1990).

*Beyond agricultural growth*

In a fundamental sense, the challenge of agricultural development and trade among the lower-income Asian LDCs is to facilitate the structural transformation of the economy in the overall development process. The Asian experience suggests that agricultural growth is a vital precondition to the expansion of industrial and service activities in the rural areas (Oshima, 1987). However, the magnitude of the induced growth in nonagricultural production can vary. In one study (Bautista, 1990c), the elasticity of nonagricultural value added with respect to agricultural value added is estimated to be less than 0.8 for India and Sri Lanka but more than 1.3 for Indonesia and Malaysia.

A broad-based pattern of agricultural income growth among rural households is conducive to demand increases for food and labor-intensive industrial consumer goods and services produced in the local economy, which can lead to further increases in labor demand and income in a self-reinforcing growth process (Mellor, 1986). On the supply side, the magnitude of response of rural nonfarm activities to the demand stimulus generated by agricultural growth would depend on their relative profitabilities, which in turn are influenced by government policies. Where strong biases exist in the foreign trade regime, public investment, and credit policy against small-scale, rural-based producers, the linkage of agricultural growth to the rest of the economy is likely to be weak. For example, the contrasting experiences of the Philippines and Taiwan, which had comparably rapid agricultural growth in the 1960s, are discussed in Ranis and Stewart (1987).

These considerations point to the need in some Asian countries for a wider sharing of the income gains from agricultural growth (e.g., through an effective land reform program, increased access of small farmers to yield-improving technologies and critical farm inputs, and efficient labor-intensive growth) and for a policy environment conducive to a strong supply response of nonagricultural producers. The consequences will be favorable

in terms not only of the enhanced contribution of agriculture to overall economic growth but also of the increased participation of the poor in that growth.

Indeed, the prevalence of poverty in the lower-income Asian LDCs makes a compelling case for the improvement of the economic opportunities for the poor. In 1985 East and South Asia accounted for 71% of the more than 1 billion people in the developing world estimated by the World Bank to be living in poverty – in absolute terms, 805 million (World Bank, 1990, p. 139). Provided that the momentum of economic growth is maintained through the 1990s, especially in China and the South Asian countries, it is expected that poverty in Asia will be significantly reduced. Based on World Bank projections, Asia will have a much lower share (30%) of the world's poor by the year 2000. However, this will still imply a very large number (435 million) of poor people in the region. Because the vast majority of Asia's poor reside in the rural areas, the development of the agricultural sector and how it affects the rest of the economy will be critical determinants of future changes in poverty in the region. The considerable achievements of Asian countries in the past should not obscure the enormity of the challenge that still lies ahead.

## ACKNOWLEDGEMENTS

Comments from John Mellor, D. Gale Johnson, the two editors, and an anonymous referee on an earlier draft of this paper are gratefully acknowledged. Clemen Gehlhar provided valuable assistance in data collection and processing.

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