



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

AGRICULTURE AND GOVERNMENTS IN AN INTERDEPENDENT WORLD

PROCEEDINGS
OF THE
TWENTIETH
INTERNATIONAL CONFERENCE
OF AGRICULTURAL ECONOMISTS

Held at Buenos Aires, Argentina
24–31 August 1988

Edited by
Allen Maunder, Agricultural Economics Unit, Queen Elizabeth House
University of Oxford, England
and
Alberto Valdés, International Food Policy Research Institute
Washington DC, USA

INTERNATIONAL ASSOCIATION OF
AGRICULTURAL ECONOMISTS
QUEEN ELIZABETH HOUSE
UNIVERSITY OF OXFORD

1989

Dartmouth

DEVELOPMENT STRATEGIES AND AGRICULTURAL INCENTIVES

Asian countries have different histories, cultures, political and social structures and economic organizations. In view of the subject of this paper, our concern here is with the experiences of market-orientated economies that have a large agricultural share in gross domestic product (specifically, at least 20 per cent in the early 1970s). Even within this group, comprised of 9 developing countries in the East and South Asia regions, wide variations in income per caput and in economic growth performance are shown.

Historically, as the Asian developing countries (except Thailand) were formerly under colonial rule, their economies before independence were very much integrated with those of the colonizing countries. Rapid industrialization subsequently became a major objective of development policy, motivated by the desire to diversify the economy from a perceived over-reliance on primary production and, more generally, to redirect the country's production capacity away from the goals of colonialism toward providing a basis for modernizing the economy (Bautista, 1983).¹

Perhaps inevitably, the concomitant desire for economic independence led to an industrialization strategy based on import substitution (at least initially), in most cases promoting domestic industries behind high tariff walls and/or quantitative import restrictions. However, this mainly benefited producers of final consumption goods while other manufacturing industries and the agricultural sector were effectively discriminated against. Asian developing countries differed in the intensity and duration of import-substitution policies adopted, some of them eventually shifting to a more outward-orientated development strategy. This would account in part for differences in the current state of these countries' industrial development as well as their past overall economic performance.

To promote exports, the South Korean government introduced trade liberalization policies and other major policy reforms in 1962–5, a relatively early phase in the country's industrialization process, marking a turning point in Korea's industrial and export growth (Westphal and Kim, 1982). Even in the early years of its industrial development, Malaysia had low tariff protection to domestic industry, exchange controls were not imposed, and quantitative restrictions were

*International Food Policy Research Institute.

** The Assistance of David Bruns in the preparation of this paper is gratefully acknowledged.

TABLE 1 *Selected economic indicators*

Country	GNP per caput		Agricultural share in GNP (%)		Average annual growth rate (%)	
	1985 (US dollars)	Average annual growth rate (%) 1965-85	1965	1985	Agriculture	GDP
<i>East Asia</i>						
South Korea	2150	6.6	38	14	3.8	9.1
Malaysia	2000	4.4	30	21 ^a	4.4 ^b	6.8
Thailand	800	4.0	35	17	4.5	6.8
Philippines	580	2.3	26	27	3.9	4.3
Indonesia	530	4.8	59	24	4.0	6.8
<i>South Asia</i>						
Sri Lanka	380	2.9	28	27	3.0	4.3
Pakistan	380	2.6	40	25	3.0	5.4
India	270	1.7	47	31	2.8	4.2
Bangladesh	150	0.4	53	50	1.8	2.7

Notes: ^aFor 1983, not 1985.
^bFor 1970-85, not 1965-85.

Sources: *World Development Report*, 1982, 1986 and 1987.

rarely adopted; this 'was important in the continuing expansion of Malaysia's primary exports and contributed to the rise of a significant export manufacturing sector' (Lim, 1981, p. 189). In Thailand the industrialization strategy became more balanced between import substitution and export promotion in the first half of the 1970s (Akrasanee, 1981). Although trade and industrial policies have become less inward-looking in the other Asian countries since the early 1970s, their foreign trade regime has remained heavily biased toward import-competing industries.

Restrictions on foreign trade affect production incentives in two ways. One is through the differential 'direct' effects on the domestic prices of tradable goods; the other is through the effect on the real exchange rate which in turn affects the domestic prices of tradable goods relative to home goods. For example, import duties and quotas raise the domestic price of import-competing products relative to exportables, encouraging a shift away from export production. The same policy instruments have the effect of reducing the demand for imports which lowers the price of foreign exchange, making the domestic prices of tradable goods fall relative to home goods and hence 'indirectly' biasing production incentives against both import-competing and export goods. Protection to industrial import substitutes then penalizes the domestic production of agricultural goods in the following ways: (1) the rise in the domestic price of protected industrial output reduces the relative price of agricultural products; (2) the cost of industrial inputs (fertilizer, pesticides, farm equipment) to agricultural production increases; and (3) the induced appreciation in the real exchange rate renders agricultural exports and import-competing products less profitable.

Apart from import restriction to protect domestic industry, government policies not specifically directed to the agricultural sector have affected relative production incentives in Asian developing countries. Since the early 1970s, many of these countries have followed the South Korean example in actively promoting non-traditional (mostly manufactured) exports. Traditional (mostly, agricultural) exports have frequently been subject to export duties, which in many Asian countries represent a major source of government revenue. Producers of non-traditional exports not only have been free of export taxes but also have benefited from such subsidies as low-interest credit, labour training subsidy, import duty drawback and export credit insurance, which serve to partially offset the general policy bias against exports. Some of these incentive policies are effective only to the extent that the exporter uses imported inputs, introducing therefore an effective penalty to the use of domestically-produced inputs. This is reflected in the high import content of the major non-traditional export products, such as garments and consumer electronics, and in the crucial importance of Export Processing Zones for the industrial performance of some countries (for example, Malaysia and the Philippines) – inhibiting the development of intersectoral linkages within the domestic economy.

A country's monetary and fiscal policies, foreign borrowing, and nominal exchange rate management may affect critically the real exchange rate and hence the profitability of agricultural tradable goods production. In the Philippines, for example, the government borrowed heavily abroad and pursued expansionary macroeconomic policies in the face of the large current account deficits since the 1973–4 oil price shock; this contributed to the worsening real exchange rate

overvaluation during the second half of the 1970s and early 1980s (Bautista, 1987a). For oil-rich Indonesia, the 'Dutch disease' squeezed profitability in the non-oil goods sectors, both by directly bidding resources away from them and by the induced appreciation of the real exchange rate.

There are, finally, the agricultural sector-specific policies that can offset or reinforce the indirect penalty due to industrial and macroeconomic policies. At one time or another, Asian governments have suppressed producer prices of specific farm products through the imposition of export taxes, operation of agricultural marketing boards and direct control of domestic prices. An important objective of Malaysian agricultural pricing policy, for example, has been to set levels of taxation on rubber and palm oil sectors to finance public investments within and outside those sectors (Jenkins and Lai, 1988). In some countries systems of subsidies for agricultural inputs have compensated for low prices of farm output. Generally, however, as a net effect, agriculture has been worse off than it would have been without government price interventions.

DIFFERENTIAL EFFECTS ON TRADABLE GOODS PRICES

There are at least three implications of the sector-specific and macroeconomic policies described above for a systematic discussion of their effects on agricultural incentives in Asian developing countries. One is the need to distinguish between traditional (agricultural) and new (industrial) exports in the representation of the relative price effects (*vis-à-vis* importables). Second, protection rates on specific agricultural products also need to be considered. And third, which will be addressed in the next section, the indirect price effects of trade and macroeconomic policies transmitted through the real exchange rate should be taken into account.

Table 2 gives some indication of the disparities in the extent to which the production of importables and exportables, the latter distinguished by agricultural and manufactured, had been taxed or subsidized (relative to the border prices at prevailing exchange rates) in Bangladesh and the Philippines during 1970–80. The estimates of 'implicit tax rates' shown in the table include import tariffs, export taxes and other trade-related taxes and subsidies but not the scarcity premia from quantitative import restrictions; hence, they understate the differential price effects on imported goods subject to import licensing.² Nonetheless, it is evident from the table that sector-specific policies indeed favoured the production of import-competing goods, which benefited from the high import tax rates whose average during 1970–80 exceeded 20 per cent in either country. Agricultural exports, on the other hand, had been taxed at average rates of 2.3 per cent in Bangladesh and 5.8 per cent in the Philippines. While industrial export production had been subsidized, the subsidy rates are seen to be generally much lower compared to the import tax rates in the two countries.

A less severe distortion in relative production incentives has been observed for Malaysia, which did not heavily protect import-competing industries. Based on the estimates of Jenkins and Lai (1988), the average implicit tax rate for imports during 1970–80 was only 9.7 per cent, while that for agricultural exports was 4.5 per cent. In sharp contrast, trade taxes in Sri Lanka for the same period

TABLE 2 *Implicit tax rates, 1970–80 (in per cent)*

	Imports		Agricultural Exports		Manufactured Exports	
	Bangladesh	Philippines	Bangladesh	Philippines	Bangladesh	Philippines
1970–72	n.a.	30.1	n.a.	9.5	n.a.	-11.6
1973–75	19.5	9.5	0.6	4.7	n.a.	-19.2
1976–78	29.7	16.9	3.2	4.2	n.a.	-12.4
1979–80	25.8	27.6	3.4	4.1	-4.0	-15.8

Notes: n.a. – not available.

Sources: Basic data from Stern *et al.* (1986) and Bautista (1987a).

were very large, averaging 80.6 per cent for imports and 40.0 per cent for exports (Bhalla, 1988).

A greater number of studies have been done on the price effects of sector-specific policies for particular agricultural products in Asian developing countries.³ Of particular interest for present purposes are the findings of a recently completed World Bank research project on the Political Economy of Agricultural Pricing Policies, which 'provide quantification of the degree of intervention affecting agriculture arising out of both direct and indirect policies on a comparable basis for eighteen developing countries' (Krueger, Schiff and Valdés, 1988, p. 3).

TABLE 3 *Direct nominal protection rates, 1975–85 (in per cent)*

Country and Commodity	1975–79	1980–84
<i>South Korea</i>		
Rice (F)	91	86
<i>Malaysia</i>		
Rice (F)	38	68
Rubber (X)	-25	-18
<i>Philippines</i>		
Com (F)	18	26
Copra (X)	-11	-26
<i>Thailand</i>		
Rice (X)	-28	-15
<i>Sri Lanka</i>		
Rice (F)	18	11
Rubber (X)	-29	-31
<i>Pakistan</i>		
Wheat (F)	-13	-21
Cotton (X)	-12	-7

Note: F and X denote food and export crops, respectively.

Source: Krueger, Schiff and Valdés (1988), pp. 11 and 16.

Table 3 contains estimates of the direct nominal protection rate, representing the deviation of the domestic price from the border price at the official exchange rate,⁴ for the most important import-competing food (F) and export (X) crops in the six Asian countries included in the World Bank study. They indicate a generally significant price disprotection against export crops, rubber in Malaysia and Sri Lanka receiving the most severe penalty from direct pricing policies. By contrast, the import-competing agricultural food products have, in most cases, been accorded positive protection, the direct nominal protection rate even exceeding 90 per cent for rice in South Korea during 1975–79.

Concerning the other Asian countries, direct nominal protection for some major food crops has been estimated in other studies to be as follows: (1) in India, for rice and wheat, –19 and 0 per cent, respectively, during the late 1970s (Binswanger and Scandizzo, 1983) and –37 and –28 per cent respectively, during 1980–5 (Gulati, 1987); (2) in Bangladesh, –24 per cent for wheat and –17 per cent for rice in the late 1970s (Binswanger and Scandizzo, 1983); and (3) in Indonesia, for rice and corn, –16.7 and –18.7 per cent, respectively, during 1974–9, and 2.8 and –8.2 per cent respectively, during 1980–6 (Rosegrant *et al.*, 1987). The generally negative values for these lower-income Asian countries differ from those obtained for food crops in the World Bank study.⁵

THE REAL EXCHANGE RATE AND RELATIVE INCENTIVES

Restrictions on foreign trade distort the real exchange rate relative to its free trade value. Tariffs and quantitative restrictions act as a tax on imported goods, reducing import demand and lowering the price of foreign exchange. Export subsidies have a similar effect on the exchange rate (since they tend to increase export supply), but export taxes have the opposite effect. Thus import taxes lead to real exchange rate overvaluation, while export taxes lead to real exchange rate undervaluation.

Apart from trade restrictions, an imbalance in the external accounts can lead to real exchange rate overvaluation or undervaluation. The unsustainable component of a current account deficit made possible by, say, heavy foreign borrowing, serves to defend an overvalued exchange rate. Also, a temporary boom in one tradable good (for example, oil) sector places upward pressure on the real exchange rate to the detriment of other tradable good (non-oil) sectors. Trade and macroeconomic policies that shape the foreign trade regime and the various accounts in the balance of payments are therefore basic determinants of the real exchange rate.

The price competitiveness of importables and exportables relative to home goods is aggregatively reflected in the real exchange rate. Domestic currency overvaluation (or foreign exchange undervaluation) artificially lowers the price of imported goods – which is a disincentive to import-competing production. It also penalizes export production owing to the lower price of foreign exchange received by exporters. The agricultural sector is particularly vulnerable to real exchange rate misalignment because of the high degree of tradability of agricultural output. For instance, the severe overvaluation of the Philippine peso during the second half of the 1970s has been shown to have effectively lowered the

TABLE 4 *Indirect nominal protection rates, 1975–84 (in per cent)*

Country	1975–79	1980–84
South Korea	-18	-12
Malaysia	-4	-10
Philippines	-27	-28
Thailand	-15	-19
Sri Lanka	-35	-31
Pakistan	-48	-35

Source: Krueger, Schiff and Valdés (1988), pp. 11 and 16.

TABLE 5 *Total protection rates, 1975–84 (in per cent)*

Country and Commodity	1975–79	1980–84
<i>South Korea</i>		
Rice (F)	73	74
<i>Malaysia</i>		
Rice (F)	34	58
Rubber (X)	-29	-28
<i>Philippines</i>		
Corn (F)	-9	-2
Copra (X)	-38	-54
<i>Thailand</i>		
Rice (X)	-43	-34
<i>Sri Lanka</i>		
Rice (F)	-17	-20
Rubber (X)	-64	-62
<i>Pakistan</i>		
Wheat (F)	-61	-56
Cotton (X)	-60	-42

Note: F and X denote food and export crops, respectively.

Source: Krueger, Schiff and Valdés (1988), pp. 11 and 16.

domestic price index of agricultural products relative to home goods by an annual average of 19 per cent (Bautista, 1987a, p.61). Based on regression analysis that takes into account other influences on relative agricultural prices, a 10 per cent real exchange rate depreciation has also been associated with a 3.3 percent improvement in the agricultural terms of trade (that is, relative to nonagricultural products).

Real exchange rate overvaluation in Asian developing countries, arising from industrial import restrictions and/or balance-of-payment disequilibrium, leads to *negative* 'indirect' price effects on the major crops. These indirect effects can be

quite high, attaining levels of 48 per cent in Pakistan, 35 per cent in Sri Lanka, and 28 per cent in the Philippines (Table 4). Combining with the direct protection rates (given in Table 3), they yield the 'total' price effects of government interventions shown in Table 5. A striking observation is the high degree of positive protection for the principal food crop (rice) in South Korea. Malaysia also accorded a high total protection to the major food crop, but disprotected its export crop (rubber). The other countries appear to have maintained high levels of total disprotection for both export and food crops. In some cases (corn in the Philippines and rice in Sri Lanka), the positive direct protection to food crop production was swamped by the negative indirect price effect due to exchange rate overvaluation.

The quantitative importance of the indirect price effects of trade and macroeconomic policies in other Asian countries, transmitted through real exchange rate overvaluation, has also been found in other studies. Binswanger and Scandizzo (1983) obtained the following comparative values of the 'nominal protection coefficient' ($NPC = 1 + NPR$) and the 'adjusted net protection coefficient' (ADNPC), the latter measure based on shadow exchange rates instead of official exchange rates:

		NPC	ADNPC
India:	Rice	0.81	0.65
	Wheat	1.00	0.80
Bangladesh:	Rice	0.83	0.69
	Wheat	0.76	0.63

In Indonesia, a real exchange rate overvaluation due to the 'Dutch disease' associated with the huge oil export revenues during the mid-1970s has been shown to have had a major impact on the domestic relative prices of non-oil tradable goods. The sharp decline in the (purchasing-power-parity adjusted) real exchange rate index of the Indonesian rupiah – from 100 in 1972 to 63 in 1976 – led not only to a substantial squeeze in the profitability of import-competing sectors (Warr, 1984, p.54) but also 'discouraged traditional labour-intensive agricultural exports . . . because of a lack of international competitiveness' (Paauw, 1981, p.157).

OUTPUT AND INCOME DISTRIBUTION EFFECTS

The relative price effects of sector-specific, trade and macroeconomic policies give rise to some further repercussions on output and incomes. Partial equilibrium (mostly supply-based) estimates of the long-run output effects of government price interventions in the six Asian countries included in the World Bank Project have been derived, making use of the estimated total price effects and relevant own-price and cross-price elasticities drawn on existing studies. Generally negative long-run output effects are observed, the exceptions being rice in Malaysia and South Korea. The largest proportionate output losses appear to

involve the export crops – rubber in Malaysia, copra in the Philippines, rice in Thailand, and rubber in Sri Lanka.

The impact of government interventions on income distribution has been represented in terms of their differential income effects by small and large-scale farms, by types of crops grown, and by consumption expenditure patterns. Direct interventions that reduce producer prices have a negative effect in both small and large-scale farm incomes. However, because large farms market more of their produce, they are hurt relatively more by the lower prices received. In Pakistan, for example, small farmers in the Punjab received 16 per cent less income in 1980 than they would without direct interventions, while large farmers received 19 per cent less; indirect interventions affecting the real exchange rate tended to magnify the effect, so that small farmers received 45 per cent less income, while large farmers received 50 per cent less (Hamid *et al.*, 1988). Where there is positive agricultural protection larger-scale producers, marketing a greater share of their output, benefit more. In Korea, income gains of 58 per cent and 16 per cent accrued to large-scale and small-scale farmers, respectively, from direct price supports during 1980–4 (Moon and Kang, 1987). The negative indirect price effects in the 1970s harmed the large-scale farmers more, but as the exchange rate of the Korean won was brought into close alignment with its equilibrium rate over the decade, their relative disadvantage became less marked – tending to increase the income disparity between small and large producers.

Income from export crops tended to be reduced relatively more than from food crops. In the Philippines sugar and copra producers suffered income losses proportionately more than the rice and corn growers (Intal and Power, 1987). The same applies to Malaysia where rice farmers were not hurt nearly as much as those producing rubber and palm oil (Jenkins and Lai, 1988). In Sri Lanka a substantial decline has been noted over the last two decades in the real income of the Tamils, who comprise the majority of tea estate workers (Bhalla, 1987).

There are also regional income effects of government price interventions, depending on which crops are primarily grown in the region. According to Intal and Power (1987), ‘the hardest hit regions were coconut-dependent Eastern Visayas (the poorest region in the Philippines), Western Visayas (the primary sugar region) and the other major coconut producing regions, i.e., Northern Mindanao, Western Mindanao, Southern Mindanao and Bicol’ (p.53); not surprisingly, the growth of the Communist insurgency movement was most rapid in these regions during the 1970s and early 1980s, which represented a shift away from the predominantly rice growing Central Luzon region.

Rich and poor consumers are affected similarly by agricultural price policies, but the effects may differ significantly in degree. If consumer prices are kept artificially high due to the protection accorded domestic producers, the real income of food consumers is negatively affected. However, poorer consumers are affected more unfavourably as a greater proportion of their incomes are spent on food. In Korea low-income consumers lost 6.1 per cent of their real income due to government price interventions during 1980–4, while high-income consumers lost only 2.8 per cent (Moon and Kang, 1987). The indirect price effects arising from exchange rate overvaluation produce an opposite income distribution effect. More affluent consumers purchase more non-agricultural goods that are highly protected, so they suffer more than poorer consumers. In the Philippines

the real income of wealthy urban consumers was reduced by 4.4 per cent due to peso overvaluation in the 1960s, while that of low-income consumers declined by only 1.8 per cent (Intal and Power, 1987).

As indicated above, the effects of government price interventions on food and export crops differ in degree if not in direction. Given the official concern frequently expressed by Asian developing country governments about rural welfare, it is of policy interest to evaluate how agricultural income (from both food and export crop production) would be affected if the incentive biases against food and export crops were eliminated, allowing for intercrop substitution as relative prices change. Based on a supply-oriented model of the agricultural sector with the food-export crop tradeoff in production as a key component, it has been estimated that in the absence of policy-induced domestic price distortions, agricultural incomes in the Philippines would have been higher by as much as 31 per cent during the 1970s (Bautista, 1986).

Substitution possibilities exist of course not only in production but also in other aspects of the national economy. Production structures, consumption patterns, foreign trade and the distribution of incomes are inextricably intertwined. They need to be examined simultaneously and their interactions analysed within an integrated macroeconomic framework to be able to capture fully the economy-wide repercussions of agricultural pricing policies. Accordingly, some studies have made use of computable general equilibrium (CGE) models that provide an integrated macroeconomic framework giving emphasis to agricultural activities and their linkage to the other production sectors and distinguishing rural and urban households in their income generation and consumption patterns. For example, a dynamic 29-sector CGE model for South Korea is developed in Adelman and Robinson (1978), to simulate the effects of various policy measures, mostly rural-orientated, aimed at improving income distribution. A general finding is that the economy adjusts to policy interventions largely through price changes, and that 'among the price effects, the most significant impact on the size distribution of income is due to changes in the agricultural terms of trade' (p.185). In India, 'where 47 per cent of the rural population are net buyers of food', de Janvry and Subbarao (1986, p.93), using a CGE model with seven production sectors, find that agricultural price-support reduces significantly the purchasing power of both the rural and urban poor, while medium and large farmers gain in both nominal and real terms.

Based on a 10-sector CGE model with benchmark data for 1978, it has been found that trade liberalization in the Philippines will raise rural income more significantly than urban income, and that agricultural production will be favoured over non agricultural production (Bautista, 1987b). For Thailand, Amranand and Grais (1984) have investigated the economy-wide effects of removing the export tax on rice, using a 20-commodity CGE model based on alternative values of the price elasticity of world demand for Thai rice (1.0, 34.0, and 10.0). The income effects were found to vary by type of household: crop farmers' income would increase by 1.44–2.05 per cent, while other household incomes would decrease; 'casual workers would suffer most as their real income would decline by 0.64–0.89 percent, . . . followed by rubber farmers, nonagriculture own-account households, blue collar and white collar households, respectively' (p .165).

SOME PERSPECTIVES AND CONCLUSIONS

The price bias against agriculture due to government interventions observed above for many Asian developing countries gives rise to an effective resource transfer out of the agricultural sector. Offsetting this would be the amount transferred into agriculture through government spending. Calculations of net resource transfers out of agriculture show an annual average of about 25 per cent of agricultural value added in the Philippines during 1970–82 (Intal and Power, 1987), whereas in Malaysia the corresponding figure is only 5 per cent (Jenkins and Lai, 1988).

While the extraction of agricultural surplus to finance industrial capital formation is frequently assumed to be a concomitant to structural transformation during development, one can question the efficiency with which the transferred resources are used outside agriculture. In many Asian developing countries where the industrial sector has been highly protected, policy-induced distortions in product and factor markets have led to the inefficient use of investment resources for manufacturing. At the same time one cannot discount the opportunities for rapid productivity growth in agriculture if the capital requirements for rural infrastructure (among other needed investments) are met. An additional consideration is the stimulus to non-agricultural production to be induced by increased rural incomes due to rising agricultural prices and productivity. This form of rural growth linkage is at the heart of recent proposals for the adoption of an employment-orientated, agriculture-based development strategy.⁶ Owing to the adverse income effect of increased food prices on poor consumers as indicated above, short-term price subsidies targeted to the most vulnerable groups may need to be provided.

It bears emphasis that the real exchange rate is an important determinant of agricultural production incentives. 'Getting prices right' for agriculture then requires that the conduct of trade and macroeconomic policies, not just sector-specific pricing policies, be also examined for their effects on the real exchange rate. It will be necessary to prevent the real exchange rate from being overvalued, so as not to impair the price competitiveness of agricultural tradable goods production. This would require, for most of the Asian developing countries, that import restrictions unduly protective of domestic industry be liberalized and that a sustainable external account be maintained. An improvement in real exchange rate policy would in the long run encourage not only export production but also efficient import substitution in agriculture as well as in the rest of the economy.

NOTES

¹Sri Lanka's first decade of independence, a period characterized by free trade and heavy dependence on tree crop exports, deviated from this general pattern. It was only in the late 1950s that the government began to actively promote industrial development via import substitution.

²It is also necessary to point out that the tax rates for imports represent the average for 'all imports'; non food consumer good imports have been taxed more heavily than imports of food and producer goods.

³For example, available estimates of the nominal protection coefficient (NPC) – the ratio of domestic to foreign prices at the same point in the marketing chain – are reported in Binswanger and

Scandizzo (1983) for Bangladesh, Pakistan, India, South Korea, Thailand and the Philippines, involving from two to six major crops in each country.

⁴Adjustments were made for transport costs, storage costs, and quality differences. This measure does not include the protection or penalty from the pricing of intermediate inputs. Due to date limitations, not all country studies in the World Bank project were able to derive estimates of the 'effective protection rate' that would have quantified the extent to which domestic agricultural value added had been protected. It would appear, however, that the protection structure is not significantly affected by taking into account the cost of intermediate inputs, owing to the latter's relatively small share in the value of agricultural output.

⁵Possible reasons are: (1) differences in estimation procedure used and, more likely: (2) political-economy factors favouring higher agricultural protection in countries with a lower share of agriculture in the labour force or GDP (Honma and Hayami, 1987).

⁶See Mellor (1976) for an early statement.

REFERENCES

- Adelman, I. and Robinson, S., 1978, *Income Distribution Policy in Developing Countries: A Case Study of Korea*, Oxford University Press.
- Akrasanee, N., 1981, 'Trade Strategy for Employment Growth in Thailand', Krueger, A. O. *et al.* (eds.) *Trade and Employment in Developing Countries*, (Vol. 1, Individual Studies), University of Chicago Press.
- Amranand, P. and Grais, W., 1984, 'Macroeconomic and Distributional Implications of Sectoral Policy Interventions: An Application to Thailand', World Bank Staff Working Paper No. 627, Washington, DC.
- Bautista, R. M., 1983, *Industrial Policy and Development in the ASEAN Countries*, Philippine Institute for Development Studies, Monograph No. 2.
- Bautista, 1986, 'Domestic Price Distortions and Agriculture Income in Developing Countries', *Journal of Development Economics*, Vol. 23, No. 1.
- Bautista, 1987 (a), *Production Incentives in Philippine Agriculture: Effects of Trade and Exchange Rate Policies*, International Food Policy Research Institute, Research Report 59, Washington, DC.
- Bautista, 1987 (b), 'Multisectoral Analysis of Trade Liberalization: The Philippines, 1978', *Philippine Economic Journal*, Vol. 26, No. 2, June.
- Bhalla, S. S., 1988, 'The Politics and Economics of Agricultural Price Policies in Sri Lanka', paper prepared for the World Bank (revised), February.
- Binswanger, H. P. and Scandizzo, P. L., 1983, 'Patterns of Agricultural Protection', ARU Report No. 15, Agriculture and Rural Development Department, World Bank, Washington, DC.
- De Janvry, A. and Subbarao, K., 1986, *Agricultural Price Policy and Income Distribution in India*, Oxford University Press.
- Gulati, A., 1987, 'Effective protection and Subsidies in Indian Agriculture: Case of Wheat and Rice', *Indian Journal of Agriculture Economics*, Vol. XLII, No. 4, October – December.
- Hamid, N., Nabi, I. and Nasim, A., 1988, 'A Comparative Study of the Political Economy of Agriculture Pricing Policies: The Case of Pakistan', paper prepared for the World Bank, February.
- Honma, M. and Hayami, Y., 1987, 'Agricultural Protection of East Asia in International Perspective', *Asian Economic Journal*, Vol. 1, No. 1, March.
- Intal, P. S. and Power, J. H., 1987, 'Government Interventions and Philippine Agriculture', paper prepared for the World Bank, December.
- Jenkins, G. P. and Lai, A. K., 1988, 'The Political Economy of Agricultural Pricing Policies in Malaysia, 1960–83', paper prepared for the World Bank, February.
- Krueger, A. O., Schiff, M. and Valdés, A., 1988, 'Measuring the Impact of Sector-Specific and Economy Wide Policies on Agricultural Incentives in LDCs', *World Bank Economic Review*, September.
- Lim, D., 1981, 'Malaysia', in Bautista, R. M. *et al.* *Capital Utilization in Manufacturing*, Oxford University Press, for the World Bank.
- Mellor, J. W., 1976, *The New Economics of Growth: A Strategy for India and the Developing World*, Cornell University Press.

- Moon, P. Y. and Kang, B. S., 1987, 'A Comparative Study of the Political Economy of Agricultural Pricing Policies: The Case of South Korea', paper prepared for the World Bank, December.
- Paauw, D. S., 1981, 'Frustrated Labour-Intensive Development: The Case of Indonesia' in Lee, E. (ed.), *Export-Led Industrialisation and Development*, International Labour Organisation, Geneva.
- Rosegrant, M. W. et al., 1987, *Price and Investment Policies in the Indonesian Food Crop Sector*, IFPRI (Washington, DC) and CAER (Bogor, Indonesia).
- Stem, J., Mallon, R. and Hutcheson, T., 1980, 'Foreign Exchange Regimes and Industrial Growth in Bangladesh', Harvard Institute for International Development Discussion Paper No. 222.
- Warr, P. G., 1984, 'Exchange Rate Protection in Indonesia', *Bulletin of Indonesian Economic Studies*, Vol. XX, No. 2, August.
- Westphal, L. E. and Kim, K. S., 1982, 'Korea', in Balassa, B. and Associates, *Development Strategies in Semi-Industrial Economies*, Johns Hopkins University Press.