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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

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INTERNATIONAL ASSOCIATION OF
AGRICULTURAL ECONOMISTS
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1989

Dartmouth

INTRODUCTION

In an exhaustive World Bank study of agricultural incentives in 18 developing countries, it was found that the generally held perception, that agriculture is discriminated against while industry is largely protected, is accurate (see Krueger *et al.*, 1987 for a summary of the results). But it was also found that this simplistic view concealed considerable differences in the degree and source of the discrimination. The researchers established that economy-wide interventions, as reflected in overvaluation of the real exchange rate, dominated more direct price interventions. Furthermore, they found that exports were generally taxed while, at least compared to exported crops, import-competing food products were protected. However, the protection to food products was less than that granted to industry. While some of the background reports for the study investigate the political economy of this practice, the main authors have reserved their conclusions on the reasons for these policies for a later volume.

While the overall results for the Latin America countries appear to be consistent with the conclusions of the authors, considerable differences exist between countries, products and periods. A summary of the results of direct and indirect protection for the five Latin American countries in the study are shown in Table 1. Several examples illustrate. Discrimination against wheat in Argentina was primarily in the form of direct taxation in 1975–79 while it consisted of mainly indirect taxation in 1980–84. In the Dominican Republic, rice alone among food products was heavily protected. During 1975–79, Chile protected grapes indirectly and then taxed them slightly in 1980–4. Moreover, the levels of discrimination measured depend on the assumptions and base data chosen for the calculations of the real equilibrium exchange rate, since most cases of agricultural taxation originated in overvalued exchange rates. Although much work went into the detailed calculations of the exchange rate – for example, accounting for the level and trends of industrial protection – a certain amount of arbitrariness creeps into the calculations. Nevertheless, the general thrust of the conclusions

*This paper reflects only the views of the author and should be used and cited accordingly. The findings, interpretations, and conclusions are the author's own. They should not be attributed to The World Bank, its Board of Directors, its management, or any of its member countries.

The author would like to acknowledge the very helpful comments of Marcelo Selowsky, Jean-Jacques Dethier, John Nash and Felipe Jaramillo.

TABLE 1 *Direct, indirect and total nominal protection*¹

Country	Product	1975-79			1980-84		
		Direct	Indirect	Total	Direct	Indirect	Total
<i>Rates for Exported Products (%)</i>							
Argentina	Wheat	-25.1	-16.4	-41.4	-12.7	-36.7	-49.4
Brazil	Cotton	13.4	-31.9	-18.5	2.6	-13.7	-11.1
Chile	Grapes	1.0	22.4	23.4	-0.0	-7.3	-7.3
Colombia	Coffee	-7.0	-24.5	-31.5	-4.9	-34.2	-39.1
Dominican Republic	Coffee	-14.9	-17.5	-32.4	-32.3	-19.3	-51.6
<i>Rates for Imported Food Products(%)</i>							
Brazil	Wheat	35.2	-31.9	3.4	-6.5	-13.7	-20.2
Chile	Wheat	10.8	22.4	33.2	9.3	-7.3	2.0
Colombia	Wheat	4.8	-24.5	-19.7	8.9	-34.2	-25.3
Dominican Republic	Rice	19.6	-17.5	2.1	25.7	-19.3	6.3

Note: The DIRECT Nominal Protection Rate is defined as the difference between the TOTAL and the INDIRECT Nominal Protection Rates, or equivalently, as the ratio of (i) the difference between the relative producer price and the relative border price, and (ii) the relative adjusted border price measured at the equilibrium exchange rate and in the absence of all trade policies.

Source: Krueger, Schiff and Valdés (1987).

remain valid for Latin America, that is, agriculture was generally discriminated against through indirect means, for example, overvaluation of the exchange rate, but direct protection varied considerably between crops, principally based on whether they were exported or imported.

In this paper, we will explore these conclusions in more depth and speculate about the political economy of direct and indirect taxation. We will argue that this political economy arose out of an equilibrium of interests which is now undergoing radical change in the 1980s. A new political economy is emerging that possibly offers greater efficiency and prosperity for the rural economies of Latin America. We will also extend this analysis to some issues surrounding indirect taxation of agriculture, the stability of real exchange rates and their implications for agriculture growth, diversification and exports.

THE POLITICAL ECONOMY OF DIRECT PROTECTION

The stylized view of agricultural price policy in Latin America is often presented as a conflict between rural producers and urban consumers. Rural producers struggle for higher product prices while urban consumers demand low and stable food prices. It is argued that urban interests have prevailed over rural demands, resulting in a general discrimination against agriculture. In other words, urban interests have driven agricultural policy. This scenario contrasts with industrial country policy, where urban interests are secondary to demands of farmers who have won high and increasing subsidies from the government (see, for example, the World Development Report, 1986).

What does not ring true about this view is the characterization of Latin American farmers as so much weaker than their United States', Japanese, and European counterparts. Although it contains many smallholders, Latin American agriculture cannot be characterized as dominated by small, inarticulate producers. In many countries of Latin America producer groups are powerful political forces. For example, the Rural Agricultural Society in Argentina is an influential and well organized body. Similar groups exist in Chile, Brazil, Ecuador, Mexico, Dominican Republic and Uruguay. In Mexico, coalitions of farmers' groups in the Northwest are wealthy and powerful while the dominant political party (PRI) derives much of its support in rural areas. Highways have been shut down over producer protests several times in Mexico. In Brazil and Colombia, coffee producers are also organized and politically important. In the Dominican Republic, rice producers have lobbied successfully for high prices even in the midst of political reform of subsidies. In contrast, urban interests are not well organized, and although political protests over increase in food price have occurred (Dominican Republic in 1984 most notably), they are not prevalent enough to explain the long and continuing discrimination against agriculture and the apparent means chosen, the exchange rate. Indeed, another explanation must be used to replace this hypothesis of urban consumer interests driving agricultural policy.

In reality, governments in Latin America have done much to attempt to help farmers. Throughout Latin America agricultural credit and fertilizer have almost universally been subsidized. Capital and operating and maintenance costs for irrigation systems have rarely been recovered, even from commercial producers. Almost without exception, extension services have been provided free to farmers. Quantitative restrictions on food imports have been prevalent in almost all countries. Even Chile, despite its open economic and free market policies, protects ('stabilizes prices') producers of wheat, oilseed, sugar and milk. Most Latin American countries have also established parastatals to procure one or two major cereals at above world prices. CONASUPO and its affiliate companies in Mexico have procured large quantities of maize and wheat and other agricultural commodities. In Peru, ECASA has had a legal monopoly to purchase and sell the entire rice crop. In Ecuador, ENAC procured and distributed rice and hard maize. In Argentina, the grain board buys and stores wheat on behalf of the milling industry. Certainly, the benefits of these subsidies and interventions have been unequally spread among farmers, with large producers garnering the greatest share. But this multitude of programmes and subsidies is inconsistent with the view that agriculture has been a neglected sector in Latin America.

The fact is that while agriculture has been taxed mainly through the exchange rate, producers of certain commodities have received significant subsidies and incentives while other groups, equally powerful politically, have received few incentives and have actually been directly taxed. The reason for these differences is that the former group was able to establish an equilibrium of interest while the latter was unable to bring together such a coalition of common interests. While in each country this coalition formed out of different historical circumstances, the resulting equilibrium is remarkably the same.¹

Across countries in Latin America, we have observed (until recently) the following common characteristics of agricultural and food policy: in each

country, generally one and sometimes two staple food products have received special incentives and subsidies. In Mexico, it has been maize; in Brazil, it has been wheat; in Dominican Republic, Peru and Ecuador, it has been rice and so on. The remaining crops, whether produced by larger farmers or important to the diets or incomes of the poor, exported or imported, receive little support and often have been directly taxed. Furthermore, each of the supported commodities has been directly subsidized to the consumer through a parastatal enterprise while the subsidies and incentives have been largely paid for in a non-transparent manner, for example, through the credit system or by external borrowing. Producer incentive prices, directed credit and input subsidies and consumer subsidies have been administered by the government directly or through one of its entities and principally financed out of credit lines from the central bank. Parastatal procurement and distribution have been conducted under the general umbrella of non-tariff trade restrictions. Input subsidies, mainly credit subsidies packaged with fertilizer subsidies, have created a system of patronage. Producers, parastatal managers and employees, and private processors supported by subsidies, politicians seeking rural support, and consumers bought off by global food subsidies have produced the equilibrium of interests. Costs of the system were spread throughout the economy and were largely invisible. Government subsidies were paid for by lines-of-credit from the central bank and external debt acquired by the principal parastatal, by general inflation, and sometimes differential exchange rates and across-subsidies. Transparent budget transfers directly from the treasury played a small role in financing this system (see Table 2). The beneficiaries were quite specific – a coalition of large farmers with a multitude of smaller farmers partially benefiting, processors and parastatal employees, and government officials handling the rents inherent in the system. While the costs were diffused and non-transparent, consumer subsidies garnered the support of the urban populations. Exporters were unable to get a similar level of benefit – they had nothing to offer the consumer – and were easily taxable.

The rhetoric of food self-sufficiency supported the ruse. But self-sufficiency was not the goal, for this did not require consumer subsidies, just sufficiently high producer prices. In many countries, it was not even the most important food staple in the diet that received this favourable treatment. Furthermore, self-sufficiency that depended on imported inputs, primarily fertilizer, and subsidized credit that decapitalized agricultural banks could not be considered as sustainable or very secure. True food security could have been obtained through strong export earnings achieved by not taxing exports and by valuing the exchange rate fairly.

The equilibrium was not necessarily a conscious effort of policy makers. It came about, perhaps quite sincerely, as an attempt to help poor farmers and hungry consumers. But in practice it turned out quite differently: credit and input subsidies went primarily to large farmers, consumer food subsidies benefited those who spent the most on food – the middle and higher income city-dwellers. And the increasing involvement of the state forced the private sector out of processing, distribution and storage and created, in a perverse way, the need for the government to remain in these commercial activities. Once established, the equilibrium had sufficient benefit to the principals – the large producers of staples, the consumers, the government officials distributing rents and the parastatals, which had acquired a near monopoly in the marketing and importing

TABLE 2 *Taxonomy of agricultural support to favoured crops*

Country	Favoured Crop	Rate of Nominal Protection	Product Support Mechanisms	Principal Source of Financing
Brazil	Wheat	36% ^a	Procurement, directed subsidized credit, trade restrictions	Central Bank Credits
Chile	Wheat	11% ^a	Price band with variable tariffs, procurement	Central Bank Credit to co-operative (COPAGRO)
Dominican Republic	Rice	20% ^a	Price support, input subsidies	Central Bank Credit, Budget Transfers
Ecuador	Rice	61% ^c	Price support through procurement, directed subsidized credit, input subsidies.	Central Bank Credits
Mexico	Maize	28% ^b	Price support, directed subsidized credit, fertilizer and irrigation subsidies	Central Bank and External Credits
Peru	Rice	—	Price support, credit subsidies, irrigation subsidies	Central Bank Credit, Cross-subsidies through exchange rate

Notes: ^a 1975–79
 ^b 1983–86
 ^c 1984–87

of food – to maintain itself and capture strong, if not almost sacred political support. However, it had one critical weakness – the need to keep the actual costs invisible and diffused.

This equilibrium of interests began to crumble with the onset of the debt and economic crisis in 1982–83. The key elements of the equilibrium began to disappear with the inability to finance the system through credit. Parastatals that had carried the costs of the subsidies through external and internal debt to the central bank were without sufficient funds to continue food subsidies. Treasuries were forced to take over the debt accumulated over numerous years of subsidies. In Mexico, over one billion dollars of CONASUPO debt was taken over by the treasury and global subsidies were largely eliminated. Countries such as Ecuador, which had used parastatal procurement from ENAC to support rice producers, were unable to sustain producer prices. International institutions continued to urge unification and devaluation of exchange rates, control of monetary growth and fiscal deficits, transparency in finance, real interest rates and export promotion; but now with more effect. Pockets of equilibria similar to those in agriculture also felt the crisis and began to crumble. Industrial non-tariff protection in some countries began to be dismantled in favour of low and more uniform tariffs. And

TABLE 3 *Comparisons between GDP and agricultural GDP growth, 1965–80 and 1980–86*

	GDP Growth Rate		Agr. GDP Growth		Difference between Agr. and Total GDP growth rates		Percentage change in growth rates between periods	
	1965–80	1980–86	1965–80	1980–86	1965–80	1980–86	GDP	AGR GDP
<i>Low Middle Income</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Bolivia	4.5	-3.0	3.8	-1.8	-0.7	1.2	-7.5%	-5.6%
Dominican R.	7.3	1.1	4.6	1.0	-2.7	-0.1	-6.2%	-3.6%
Honduras	4.2	0.6	1.6	2.2	-2.6	1.6	-3.6%	0.6%
Nicaragua	2.6	0.2	3.3	1.4	0.7	1.2	-2.4%	-1.9%
Jamaica	1.3	0.0	0.5	1.4	-0.8	1.4	-1.3%	0.9%
Guatemala	5.9	-1.2	5.1	-0.4	-0.8	0.8	-7.1%	-5.5%
Paraguay	6.9	1.1	4.9	1.9	-2.0	0.8	-5.8%	-3.0%
Peru	3.9	-0.4	1.0	2.2	-2.9	2.6	-4.3%	1.2%
Ecuador	8.7	1.8	3.4	1.0	-5.3	-0.8	-6.9%	-2.4%
Colombia	5.7	2.4	4.3	2.3	-1.4	-0.1	-3.3%	-2.0%
Chile	1.9	0.0	1.6	3.1	-0.3	3.1	-1.9%	1.5%
Costa Rica	6.2	1.3	4.2	2.2	-2	0.9	-4.9%	-2.0%
<i>Upper Middle income</i>								
Brazil	9.0	2.7	3.8	2.0	-5.2	-0.7	-6.3%	-1.8%
Mexico	6.5	0.4	3.2	2.1	-3.3	1.7	-6.1%	-1.1%
Uruguay	2.4	-2.6	1.0	-0.7	-1.4	1.9	-5.0%	-1.7%
Panama	5.5	2.6	2.4	2.2	-3.1	-0.4	-2.9%	-0.2%
Argentina	3.4	-0.8	1.4	2.3	-2.0	3.1	-4.2%	0.9%
Venezuela	5.2	-0.9	3.9	2.3	-1.3	3.2	-6.1%	-1.6%

Source: Data from *World Development Report*, 1988.

overall agricultural GDP growth accelerated with respect to declining GDP growth (see Table 3), even though many of the staple food crops lost some of their favourable treatment. The turning from overvalued exchange rates to, in some cases, highly undervalued exchange rates favoured both import-competing and export crops, despite historically low international prices.

All, however, is not sweet for agriculture. The general economic crisis, the end of global food subsidies and food prices pushed upward by the exchange rate have put tremendous pressure on the food budgets of the poor. Parastatals, although still active, have found their role dramatically reduced and are stuck with many employees unable to find alternative employment. Credit institutions for agriculture have been severely decapitalized after a decade of subsidized interest rates and now must cope with renewed inflation. Irrigation systems have deteriorated from lack of operation and maintenance, and public investment budgets for agriculture are only a fraction of their past levels. This is all occurring at the moment that the United States and Europe have accelerated their export subsidy war, forcing down international agricultural prices further. The drought in North America has recently turned international prices upward, benefiting some cereal and oilseed exporters but harming net food importers. But this is only a temporary phenomenon as the United States prepares to increase subsidies to farmers under the artifice of drought relief. Finally, agricultural GDP growth in Latin America is still well below historical levels. And some countries continue to hang on to the legacy of the past, attempting to finance the maintenance of the crumbling equilibrium through inflation and multiple exchange rates – but that effort also is nearing its conclusion as political support declines.

THE POLITICAL ECONOMY OF INDIRECT TAXATION

The second part of the stylized view of agricultural discrimination is that continued overvalued exchange rates produced relatively higher taxation of agriculture compared to other tradable sectors, such as industry. While largely true, the actual facts are more complicated.

While the nominal exchange rate is important for debt issues and short-run market clearing, the real exchange rate predominates in the analysis of actual incentive structures and resource movements for developing countries. One of the contributions of the Krueger *et al.* studies (1987) is the systematic valuation of the distortions in the exchange rate linking these to the overall incentives in the agricultural sector. Certainly one of the important forces that caused systematic overvaluation of exchange rates in Latin America was the level of industrial protection. But movements in the real exchange rate are also responsive to a number of other factors – government deficits, monetary policy, including the level of real interest rates, and external shocks, along with structural characteristics such as the pattern of trade protection. While there has been considerable variability in the fiscal and monetary policies of Latin American countries, they have also been subject to a series of external shocks that have thrown the real exchange rate into large movements. These external shocks include the major recessions experienced by the OECD countries in

TABLE 4 *Comparison of real exchange rate instability indexes,¹ 1962–72 and 1975–86*

Country	Period		Percentage Change
	1962–72	1975–86	
Argentina	0.360	0.713*	98.3%
Bolivia	0.030	0.042 &	41.2%
Brazil	0.852	0.683\$	-19.8%
Chile	0.612	1.507 #	146.4%
Colombia	0.382	0.767	100.8%
Ecuador	0.731	1.171	60.3%
Costa Rica	0.242	2.108	770.4%
Dominican Republic	3.982	625.812	15616.9%
El Salvador	0.931	6.305	577.2%
Guatemala	8.925	27.561	208.8%
Haiti	1.424	2.208	55.1%
Honduras	2.239	3.223	44.0%
Jamaica	3.980	11.602	191.5%
Mexico	0.149	1.245	733.2%
Nicaragua	0.497	2.702	443.3%
Panama Ex. Cz.	1.816	16.558	812.0%
Paraguay	0.083	0.727	775.4%
Peru	1.490	2.875	93.0%
Uruguay	3.667	2.199@	-40.0%
Venezuela	1.605	2.457	53.1%

Notes:¹ Real exchange rate calculated using an SDR-WPI world price index and the GDP deflator; instability is calculated as deviations from an exponential trend.

* Missing data for 1963–70.

& Missing data for 1985–86.

\$ Missing data for 1962.

Missing data for 1970–72.

@ Missing data for 1962–63.

1974–75 and the early 1980s, the sharp movement of commodity prices in 1973–74 and then again in 1979–80, the dramatic fall in the dollar in the 1970s and then its sharp rise in the early 1980s and now its collapse once again, and rapid changes in inflation and real interest rates throughout the 1970s and 1980s. Finally, of course, is the debt crisis and the reversal of capital flows to Latin American countries. These external shocks coupled with the historical vagaries of domestic macroeconomic policy have created a roller-coaster ride for the real exchange rates of Latin American countries. Real exchange rates have moved 40 to even 150 per cent in short periods. These dramatic movements have created an unstable incentive structure for agriculture that cannot be compensated for by domestic price interventions, moving the sector from one receiving highly favourable stimulus to growth and exports to one having dramatically discriminatory external terms of trade. Agricultural price policy has little meaning under such instability except in creating relative price distortions among crops and, as discussed above, of distributing rents.

While instability in the real exchange rate has always plagued Latin American countries, it has dramatically increased since the oil shock of 1973–74. Table 4, comparing real exchange rate instability before 1972 with that after 1974,

shows the dramatic increase. If this is combined with the price instability of many of the agricultural commodities traded by Latin American countries, the full effect of price and exchange rate instability on agriculture can be imagined. This instability in real exchange rates had dwarfed the instability in dollar-based export earnings in the 1975–86 period. This result contrasts to the outcome in the pre-oil boom period where not only were real exchange rates more stable but their instability was less than dollar-based export earnings. This instability may explain why many Latin American countries attempted to initiate price stabilization measures in the 1970s. Unfortunately, the means chosen to stabilize price was the same used to differentiate direct incentives, namely quantitative controls on trade and parastatal intervention. Although some stability in agricultural prices was achieved, it was at tremendous costs in terms of efficiency and budgets (see Knudsen and Nash, 1988). In the second half of the 1980s it has brought forth interest in more indirect means to stabilize prices, including buffer funds such as those used in Papua New Guinea for copra, coffee and cocoa and in Chile for copper, and variable tariffs such as employed in Chile for wheat and oilseeds.

While these movements in real exchange rates swing the incentive structure for agriculture in general, they do tend to stabilize the earnings streams of agricultural exports that constitute a major share of aggregate export earnings. When the world price falls and export revenues decline, pressure is put on the exchange rate to depreciate; that is, the exchange rate in units of local currency tends to rise. Thus, the price received by producers tends not to fall as dramatically as the international price. The opposite effect of course occurs when the price rises. Except for the outliers, in general, export earnings are more stable in domestic currency. While the countercyclical movement of the exchange rate tends to stabilize export earnings of the major exports, it tends to destabilize export earnings from a country's minor exports, especially if the price of the product is uncorrelated or negatively correlated with the price of the major export. One unexplored issue is whether this destabilizing effect has prevented countries from diversifying their export base as swings in the real exchange rate tend to destroy emerging non-traditional exports.

This instability in the real exchange rate and the strong effect of external shocks placed exchange rate issues somewhat outside of the political debate on agricultural and food policy. Even well intentioned governments that attempted to open up their economies sometimes fell victim to appreciating real exchange rates. Agricultural interest groups were unable to influence macroeconomic policy and, if they had, it is unclear whether many governments had sufficient control over their fiscal and monetary policy to make changes. Furthermore, the real changes needed were also structural – dismantling industries that had grown up supplying local markets and replacing them with industries able to compete internationally, restructuring and selling public enterprises and providing a climate for private domestic and foreign investment, and controlling public expenditures and finding and developing new tax bases. The trick was to do this in an international climate of great economic uncertainty. Today it remains the major challenge for reformers of agricultural policy in Latin America.

CONCLUSIONS

In this paper, we have attempted to give more refinement to the stylized facts about agricultural policy in Latin America. We have challenged the simple notion of agricultural discrimination being driven by urban consumer interests. We have argued that the differential direct protection and assistance offered certain domestic crops are inconsistent with this view. If consumer interests had actually been the driving force then we most likely would have observed staple foods being less protected than other crops.

We have also attempted to sow a seed of doubt in the notion that overvalued exchange rates have been a consistent policy instrument in promoting domestic growth at the expense of tradable sectors such as agriculture. While exchange rates have been overvalued perhaps on average, real exchange rates in Latin America have moved all over the place, partly in response to domestic policy, partly in reaction to external shocks, and have, as a consequence, also dramatically varied the incentives to largely tradable sectors such as agriculture. The onslaught of the debt crisis has brought forth reform of domestic agricultural policy in some countries – a movement away from differential protection through input subsidies and non-tariff protection to more transparent assistance. But there still remains the legacy of the past in the parastatal structures that were used to administer the old agricultural policy. Although reform is pressing forward, the issue of macroeconomic stability endures, in particular as reflected in the variability in the real exchange rate. Since real exchange rates are a function of both domestic policies and external shocks, it is unlikely that the incentive structure for agriculture and other tradable sectors will be stable. While stabilization of the real exchange rate will remain an important issue in macroeconomic policy, price stabilization and risk management will become more of a focus for agricultural policy. With proper care the new emphasis will not recreate the mistake of past interventions but will produce more transparent instruments such as variable tariffs, buffer funds and, in more sophisticated agricultural economies, domestic futures and options markets.

NOTES

¹There exists a multiplicity of theories of the economic aspects of government behaviour. These can be roughly characterized as voting models of public choice, bureaucratic models where goals of administrators are important, and interest group models including those based on class interest. See Lecture 10 of Atkinson and Stiglitz (1980) for a summary. In the case of food policy, see A.E. Janvry (1983) and the responses of Pearlberg and Garner.

REFERENCES

- Atkinson, Anthony and Stiglitz, J., 1980, *Lectures on Public Economics*, McGraw-Hill, New York.
 Janvry, A., 1983, 'Why Do Governments Do What They Do? The Case of Food Price Policy', in D. Gale Johnson and G. Edward Schuh (eds.), *The Role of Markets in the World Food Economy*, Westview Press, Colorado.
 Knudsen, Odin and Nash, J., 1988, 'Agricultural Price Stabilization and Risk Reduction in Developing Countries', AGRAP Working Paper.

Krueger, Anne O., Schiff, M. and Valdés, A., 1987. 'Measuring the Impact of Sector-Specific and Economy-wide Policies on Agricultural Incentives in LDCs', paper presented at American Economic Association Annual Meetings, December 28–30.
World Bank, *World Development Report*, 1986 and 1988.

DISCUSSION OPENING – FRANCISCO E. THOUMI

I enjoyed reading this paper, and find it difficult to criticize it. Thus my comments will attempt to complement it. In particular, I find extremely valuable its emphasis of macroeconomic and exchange rate instability as a factor affecting the effectiveness of traditional protection policies. Furthermore, the paper cautiously warns us about the complexity of the incentive systems of various countries and of the major forces that drive them.

Let me begin with some minor points. First, as the paper clearly argues, the complexity of the incentive systems makes the estimation of their impact quite difficult and thus their interpretation could be sometimes difficult. For example, the estimates of direct, indirect and total nominal protection of coffee in Colombia do not show the whole picture as the government's participation in the international coffee agreement is likely to have led to higher export prices. Thus the protection estimates overestimate the negative bias of government policies towards coffee.

Second, it is true as noted in the paper, that consumer food subsidies tend to benefit more those who spend the most on food, that is, middle and higher income city-dwellers. However, it is likely that these benefits as a share of household income are higher for the lower classes, which is the reason why they are politically so hard to remove. Frankly, I do not believe that many middle and higher income individuals would publicly protest about the removal of food subsidies.

Third, I agree that the weakness of the subsidy systems during the current crisis has been the need to keep their costs invisible and diffused. As noted in the paper, Ecuador had to stop supporting the price of rice because of the implicit budgetary reasons. However, it has continued and gradually increased subsidies to the consumption of fuels as that simply entails an increase in oil pumping or a difficult-to-see decline in oil exports, but it does not require an outright budget expense.

Now let me turn to a more substantial point that illustrates not only the complexity of the incentive systems, but also the growing interdependence of incentive policies of various countries. As the world economies become more interdependent, protection or subsidies policies designed to affect domestic consumption by a country frequently have unexpected effects in other countries.

Two simple examples illustrate this point. First, the illegality of narcotic trade and consumption in the United States has resulted in extremely high protection levels in the US market for South American producers of cocaine who enjoy a virtual monopoly in production due to climatic advantages impossible to reproduce elsewhere. Second, the large fluctuations in bilateral exchange rates among Latin American countries during the 1980s which resulted from each country's attempt to face up to the debt crisis, coupled with their subsidies' policies have resulted in drastic changes in border trade flows, and have had dramatic spillover

effects on some industries of neighbouring countries. For example, after Venezuela devalued by about 400 per cent in 1982 and subsidized some food prices to keep down inflation, a large amount of contraband of those products to Colombia had substantial effects on this country's agro-industries' ability to compete in their domestic market. Similarly, illegal flows of gasoline from Ecuador to Colombia and Peru, and foods and medicines from Peru to Chile, Bolivia and Ecuador, have had substantial effects on the real protection of these industries in the importing countries.

Inflation is another element of importance in the generation of incentive policies, which I do not believe has been taken fully into consideration in the studies summarized by Knudsen. As inflation begins to accelerate, many governments realize that, as the exchange rate adjusts, one way to keep the price index down is by controlling the price of non-internationally traded goods. In several countries many local consumption agricultural products fall into this category. And thus a growing inflation indirectly causes a bias against traditional agriculture as the government attempts to control these prices. This of course is another reason why macroeconomic stability is such an important policy goal in Latin America.

Finally, I would like to posit that the real exchange rate instability of the Latin American countries has also created a bias towards high tariff levels. Since any industry would need protection sufficient to operate at times of extreme exchange rate overvaluation, and since the tariff levels cannot be counted on to change countercyclically with the real exchange rate, industry will seek a higher level of nominal protection than the one it would have sought had it expected a relatively stable real exchange rate.