View metadata, citation and similar papers at core.ac.uk

brought to you by CORE

provided by Research Papers in Economics

Part IV

Making trade work for poverty reduction: reality or fantasy?

Chapter IV

TRADE LIBERALIZATION AND POVERTY: LESSONS FROM ASIA AND AFRICA[1]

By John Cockburn, Bernard Decaluwé and Véronique Robichaud

Introduction

In recent years, the impacts of macroeconomic shocks, such as fiscal reform and trade liberalization, on income distribution and poverty have become the subject of intense debate. Which tax regime is most equitable? Do the poor share in the gains from freer trade? What alternative or accompanying policies could be used to ensure a more equitable distribution? What are the mechanisms linking macro policies to micro impacts, particularly with regard to poverty.

The standard story begins with the observation that initial tariff rates are generally much higher for industrial imports, so that trade liberalization leads to an expansion in the agricultural sector that provides relatively greater benefits for unskilled workers and rural households than for capital owners and urban households. The results of this study challenge the standard story in important ways. Most importantly, trade liberalization was found to favour urban households in general and actually lead to an increase in rural poverty in four of the seven countries analyzed. The explanations for these results reveal a number of unexpected channels of impact through which trade liberalization influences these economies and, ultimately, poverty.

The analyses of macroeconomic shocks and poverty are generally based on very different techniques and sources of data. Income distribution and poverty issues are generally analyzed based on household data, in recognition of the heterogeneity of these agents and the importance of capturing their full distribution. On the other hand, given its economy-wide nature and the strong general equilibrium effects they imply, macroeconomic shocks are ideally examined in the context of a computable general equilibrium (CGE) model based on national accounting data. The use of a CGE model is also justified by the complexity of the impacts of trade liberalization on households, as they involve changes in wage rates, returns to land, capital returns, consumption prices and compensatory direct and indirect taxes. Finally, CGE simulation analysis has the advantage over ex post econometric analysis of generating a counterfactual in the absence of trade liberalization as well as of allowing ex ante predictions.

[1] This paper was prepared with funding from the Poverty and Economic Policy (PEP) Research Network, financed by the International Development Research Centre (IDRC).

This study melds these two currents. Average household income variations following trade liberalization were estimated at the household category level in CGE models of seven Asian and African countries: Bangladesh, Benin, India, Nepal, Pakistan, the Philippines and Senegal. These variations were then applied to individual households within each category, using base-year income data from household surveys. These results were then contrasted with initial income values through the estimation of standard Foster-Greer-Thorbecke (FGT) poverty indicators.

Underlying individual country studies were all conducted by local researchers in the context of the PEP-MIMAP research network.[2] The differences between these countries provide a natural laboratory to understand better the impact of trade liberalization on the poor. The economy-wide modelling framework adopted in this study allows the principal channels of influence to be identified and compared. Every effort was made to ensure the comparability of the modelling frameworks in each country to ensure that all observed differences reflected actual differences rather than differences of approach.

A. Brief literature review

There have been numerous attempts to use CGE models in the analysis of income distribution and poverty issues.[3] The simplest approach is to increase the number of categories of households. In this context, it is possible to examine how different types of households (rural vs. urban, landholders vs. sharecroppers, region A vs. region B etc.) are affected by a given shock. However, nothing can be said about the relative impacts on households within any given category as the model only generates information on the representative (or "average") household. There is increasing evidence that households within a given category may be affected quite differently according to their factor endowments, location, demographics, education, consumption patterns etc. Of course, this problem of intra-category variation decreases with the degree of disaggregation of household categories. Yet even in the most disaggregate versions – Piggott and Whalley (1985) have more than 100 household categories – substantial intra-category heterogeneity in the impacts of a given shock is likely to subsist.

A popular alternative is to assume a lognormal distribution of income within each category where the variance is estimated using base year data (see De Janvry and others, 1991). In this approach, the CGE model is used to estimate the change in the average income for each household category, while the variance of this income is assumed to be fixed. Decaluwé and others (1999) argued that a beta distribution was preferable as, unlike the lognormal, it could be skewed left or right and thus better represent the different types of intra-category income distributions commonly observed. Here, no specific functional form is imposed on the distribution function. Instead, the income variation obtained for

---

[2] Poverty and Economic Policy (PEP) research network: www.pep-net.org and Micro Impacts of Macro and Adjustment Policies (MIMAP) Project: www.mimap.org.

[3] A detailed review of the CGE literature on the welfare, poverty and distributional effects of trade liberalization is provided by Cloutier, Cockburn and Decaluwé (2003).

each household category in the CGE model simulation is applied to the income of each individual household belonging to this category. This provides a vector of household incomes before and after the trade liberalization simulation on which a standard poverty analysis can be performed.

A final alternative, currently pursued by the members of this research network, is to model each household individually in a micro-simulation model. This micro-simulation model can be either linked to a CGE model (Savard, 2003) or fully integrated into a CGE model (Cockburn, 2001; Cogneau and Robilliard, 2001).

Section B tracks the effects of trade liberalization through the economies studied in order to explain the welfare poverty results. In particular, the authors trace the channels of impact on sectoral production and trade, factor prices, household income and consumer prices before revisiting the welfare and poverty analysis in the light of the preceding results. Throughout, the authors draw a series of lessons, many of which contrast with the standard trade liberalization-poverty story outlined in the introduction. Section C provides concluding remarks.

B. Simulation results

The standard expectations for the impacts of trade liberalization on poverty are as follows. First, as initial tariffs are generally higher for industrial goods, it is expected that the agricultural sector will be the main beneficiary of trade liberalization. This, in turn, raises the relative returns to factors used intensively in the agricultural sector – unskilled labour and land. Rural and poor households, which derive a relatively large share of their income from these two factors, should therefore be the "winners" from trade liberalization in income terms. On the other hand, consumer prices are expected to fall more for industrial goods, which is to the advantage of rich and urban households. The net effects on poverty will depend on the relative strength of the income and consumer price effects, although it is generally assumed that the income effect will dominate and the poor will thus benefit. The results of the authors' simulations in these seven quite different developing countries challenge these expectations in a number of important ways.

1. Welfare and poverty impacts

Lesson one: Trade liberalization increases welfare and reduces poverty marginally

The results of this study indicated that trade liberalization has positive, although generally small, aggregate welfare and poverty effects in most of the countries studied (table 1). Note that welfare indicators concern all households, whereas poverty indicators compare the income of the poorest households with a minimum income required to satisfy their basic necessities. Overall welfare effects, as measured by equivalent variations (EV), are generally small but positive, with the exception of Benin (-0.3 per cent) and India (-0.1 per cent).

Table 1. Impact on income, welfare and poverty

(Unit: %)

Country	Income	CTH	CPI	EV	P_0	P_1	P_2	Initial poverty level		
								P_0	P_1	P_2
Bangladesh	**-3.1**	**-2.7**	**-2.8**	**0.1**	**0.13**	**0.53**	**0.71**	**0.418**	**0.099**	**0.034**
Rural	-3.2	-2.9	-2.8	-0.1	0.10	0.53	0.71	0.461	0.109	0.038
Urban	-3.1	-2.5	-2.9	0.4	0.46	0.53	0.67	0.204	0.047	0.016
Benin	**-4.2**	**-3.1**	**-3.2**	**-0.3**	**-1.02**	**-1.00**	**-1.23**	**0.354**	**0.110**	**0.050**
Rural	-5.5	-5.2	-2.4	-3.0	2.38	3.12	3.76	0.389	0.109	0.043
Urban	-3.1	-1.1	-4.1	2.0	-4.92	-4.84	-4.86	0.320	0.110	0.056
India	**-9.7**	**-9.2**	**-9.1**	**-0.1**	**-0.10**	**-0.13**	**-0.16**	**0.383**	**0.133**	**0.064**
Rural	-9.8	-9.8	-9.1	-0.2	0.00	0.27	0.32	0.404	0.134	0.062
Urban	-9.5	-9.0	-9.1	0.1	-0.14	-0.27	-0.31	0.376	0.133	0.065
Nepal	**-5.9**	**-5.0**	**-5.2**	**0.0**	**-0.74**	**-0.43**	**-0.46**	**0.395**	**0.121**	**0.054**
Rural	-5.8	-5.0	-5.2	0.0	-0.83	-0.48	-0.53	0.377	0.107	0.045
Urban	-6.4	-5.0	-5.2	0.0	0.00	-0.18	-0.23	0.636	0.302	0.176
Pakistan	**-6.7**	**-5.5**	**-5.7**	**0.3**	**-0.50**	**-0.55**	**-0.89**	**0.383**	**0.086**	**0.028**
Rural	-6.8	-6.4	-5.6	-0.8	1.70	2.78	3.19	0.372	0.081	0.026
Urban	-6.6	-4.5	-5.8	1.3	-3.42	-4.64	-5.74	0.397	0.094	0.031
Philippines	**-3.0**	**-1.8**	**-2.5**	**0.8**	**-0.75**	**-1.47**	**-1.88**	**0.485**	**0.171**	**0.079**
Rural	-3.1	-2.1	-2.5	0.4	-0.56	-1.37	-1.79	0.632	0.228	0.107
Urban	-2.9	-1.7	-2.5	0.9	-1.10	-1.68	-2.06	0.337	0.112	0.051
Senegal	**-3.7**	**-2.6**	**-3.1**	**0.3**	**-0.24**	**-1.49**	**-2.19**	**0.691**	**0.284**	**0.147**
Rural	-3.8	-1.6	-3.4	1.9	-0.49	-1.80	-2.48	0.884	0.401	0.218
Urban	-3.7	-3.2	-2.9	-0.2	0.63	0.47	0.61	0.390	0.100	0.036

Notes: CTH = consumption; CPI = consumer price index; EV = equivalent variations; P_0 = headcount ratio; P_1 = poverty gap; P_2 = poverty severity.

At the same time, poverty falls in all countries but Bangladesh, regardless of the poverty indicator chosen. Headcount ratios (P_0) fall substantially in Benin (-1.02 per cent) and moderately in all other countries, except for Bangladesh (0.13 per cent). Similar, if sometimes stronger, reductions are noted in the poverty gap (P_1) and poverty severity (P_2), the latter decreasing by 2.19 per cent in Senegal. The remainder of this chapter is devoted to explaining this and the following lesson.

Lesson two: Trade liberalization is pro-urban and may increase rural poverty

Trade liberalization affects rural and urban households quite differently. In every country, apart from Nepal and Senegal, welfare increases and poverty decreases most for urban households. This contrasts with the standard story, which suggests that rural households will be the “winners” from tariff reductions. Indeed, welfare actually decreases and poverty increases in the rural areas of four (Bangladesh, Benin, India and Pakistan) of

the seven countries studied. To understand these results more clearly, the impacts of trade liberalization are traced below through its effects on resource allocation, factor remuneration and the price structure.

2. Trade and output effects

Lesson three: Industrial output increases relative to agriculture due to a stronger export response and greater input cost savings

The pro-industrial nature of trade liberalization can be explained by three major factors: (a) a muted impact of import price reductions on domestic demand for local products, given their imperfect substitutability and low initial import penetration rates; (b) a stronger positive industrial export response; and (c) greater input cost savings in the industrial sector. These factors are outlined in more detail below.

The initial impact of trade liberalization is felt by imports. The elimination of tariffs directly reduces import prices (table 2). In all seven countries, import prices decline more in the industrial sector as a result of higher initial tariff rates. Consequently, the import response (a 1 per cent to 10 per cent increase) is higher among industrial imports in all the countries studied. As this response also depends on the degree to which imports and domestic goods are considered as substitutes, which varies across countries, the increases in import volumes are not necessarily proportional to the fall in import prices. The smallest import increase is observed in Nepal, where initial tariff rates are lowest. In the case of India, the strong industrial import response is also due to the elimination of quantitative restrictions, whereas these restrictions had already been removed by the mid-1990s in the other countries.

Table 2 shows that in the agricultural and industrial sectors, domestic demand for locally produced goods ("dom. sales") declines in the face of lower-priced imports. However, imports represent on average less than 20 per cent of domestic consumption in all countries and are considered imperfect substitutes for local goods; therefore, the resulting falls in the price and volume of domestic sales of local goods are quite limited. Although these impacts are strongest in the industrial sector (except in the Philippines), the differences with regard to agriculture are generally small. A particularly strong price reduction is observed in India, where quantitative imports restrictions are simultaneously removed.

With a fixed current account balance, the increase in imports following trade liberalization leads to a real exchange rate depreciation. This, in turn, stimulates exports. The strength of this export response depends on the fall in prices for domestic sales, the capacity of local producers to substitute between local and export markets, the price elasticity of world demand for these exports[4] and initial export intensities. As domestic prices fall most and initial export intensities are highest in the industrial sector, this sector generally has the strongest export response.

---

[4] World demand for exports from Benin, Nepal, the Philippines and Senegal are assumed to be perfectly elastic.

Table 2. Impact on production, trade and prices

(Unit: %)

Country	Sectoral shares*			Ratios*		Volume changes				Price changes				
	Value added	Imports	Exports	Imports/ Cons'n	Exports/ Output	Imports	Dom. sales	Exports	Output	Value added	Imports	Dom. sales	Exports	Output	Value added
Bangladesh				**9.1**	**5.0**	**10.0**	**-0.1**	**15.3**	**0.6**	**0.0**	**-13.3**	**-4.0**	**-8.2**	**-3.8**	**-3.3**
Agriculture	22.3	5.2	8.1	2.4	1.9	8.9	-0.7	6.7	-0.5	-0.6	-8.1	-3.3	-2.1	-3.2	-3.1
Industry	22.1	94.8	91.9	24.4	14.0	10.0	-0.4	16.0	1.9	1.2	-13.6	-4.7	-8.8	-4.0	-2.9
Services	55.5	0.0	0.0	0.0	0.0	–	0.2	–	0.2	-0.3	–	-3.9	–	-3.9	-3.5
Benin				**19.6**	**17.0**	**3.6**	**-1.4**	**5.0**	**-0.2**	**0.0**	**-14.9**	**-5.4**	**0.0**	**-4.4**	**-3.9**
Agriculture	36.3	3.0	6.0	2.7	3.9	3.3	-1.1	2.6	-1.0	-1.0	-9.6	-4.8	0.0	-4.6	-5.1
Industry	13.5	91.5	37.7	39.7	18.4	4.1	-3.0	2.6	-2.0	-2.2	-15.8	-5.4	0.0	-4.4	-7.1
Services	50.3	5.6	56.3	3.3	24.7	-4.6	-1.0	6.9	1.4	1.3	0.0	-5.8	0.0	-4.4	-2.2
India				**5.5**	**6.1**	**8.1**	**-0.7**	**10.3**	**-0.1**	**0.0**	**-14.6**	**-10.1**	**-3.2**	**-9.8**	**-10.0**
Agriculture	30.2	3.4	5.3	0.9	1.3	3.6	-0.1	7.3	0.0	0.0	-11.0	-9.6	-2.3	-9.5	-9.9
Industry	19.8	87.6	69.0	12.8	9.7	9.9	-1.3	11.6	0.1	0.2	-15.8	-10.8	-3.6	-10.1	-10.1
Services	50.0	8.9	25.7	1.2	4.7	-8.0	-0.4	7.2	-0.2	-0.1	0.0	-9.9	-2.3	-9.6	-10.0
Nepal				**15.4**	**15.0**	**1.0**	**-0.1**	**3.8**	**0.2**	**0.0**	**-7.9**	**-5.8**	**0.0**	**-5.5**	**-6.2**
Agriculture	57.9	15.1	8.6	5.5	1.2	1.0	0.1	3.4	0.1	0.0	-7.6	-6.0	0.0	-6.0	-6.2
Industry	6.7	84.9	62.3	54.4	28.0	1.0	0.0	3.1	0.8	0.9	-7.9	-5.9	0.0	-4.3	-6.2
Services	35.4	0.0	29.1	0.0	4.6	0.0	-0.3	5.3	0.0	-0.1	0.0	-5.6	0.0	-5.3	-6.3
Pakistan				**11.6**	**9.7**	**6.8**	**-0.8**	**10.4**	**0.1**	**0.0**	**-18.0**	**-7.9**	**0.0**	**-7.2**	**-7.3**
Agriculture	28.7	6.3	3.0	3.4	1.1	-0.2	-0.3	3.9	-0.3	-0.3	-6.4	-6.6	-1.5	-6.6	-6.7
Industry	19.5	85.4	79.6	24.3	16.3	8.7	-1.6	11.3	0.6	0.7	-20.1	-8.6	0.0	-7.2	-8.6
Services	51.9	8.3	17.4	2.5	6.5	-7.7	-0.4	7.5	-0.2	-0.2	0.0	-7.9	0.0	-7.6	-7.2
Philippines				**17.4**	**17.5**	**7.7**	**-1.1**	**6.9**	**0.3**	**0.0**	**-16.2**	**-5.2**	**0.0**	**-4.2**	**-3.1**
Agriculture	20.0	1.5	6.5	1.8	7.5	5.5	-1.6	4.7	-1.1	-1.0	-7.0	-4.1	0.0	-3.8	-4.0
Industry	23.2	87.9	59.3	33.3	25.4	9.2	-1.3	9.2	1.5	1.3	-18.0	-6.9	0.0	-5.1	-1.8
Services	56.8	10.6	34.3	4.6	13.7	-4.7	-0.8	3.3	-0.2	-0.2	0.0	-4.3	0.0	-3.7	-3.3
Senegal				**19.7**	**15.5**	**6.5**	**-2.0**	**8.8**	**-0.3**	**0.0**	**-13.6**	**-4.1**	**0.0**	**-3.4**	**-3.8**
Agriculture	19.4	14.6	0.7	14.8	0.6	3.1	-2.6	4.3	-2.6	-2.6	-11.9	-3.1	0.0	-3.1	-5.1
Industry	25.8	66.3	73.3	26.9	23.2	10.0	-3.0	8.1	-0.4	0.1	-17.2	-4.8	0.0	-3.6	-3.4
Services	54.7	19.0	26.1	11.8	10.0	-2.9	-0.3	10.8	0.9	0.9	0.0	-3.7	0.0	-3.3	-3.6

* Initial shares and ratios.

Indeed, this response is strong enough to counteract the reduction in domestic sales such that total industrial output actually rises relative to total agricultural output in all but one country (Benin). Even there, the difference in output response is much smaller than the difference in domestic sales. This pro-industrial "export-push" effect of trade liberalization is not often noted in studies of trade liberalization. However, the combined effect of fixed or falling export prices and falling prices for domestic sales is a fall in output prices that hits the industrial sector slightly harder than the agricultural sector, except in Benin and Nepal.

Given higher initial tariff rates and import penetration rates in the industrial sector, consumer prices systematically decline much more than in the agricultural sector.[5] As the industrial sector consumes a higher share of industrial inputs in most countries, it benefits most from the resulting input cost savings of trade liberalization. While industrial output prices fall relative to agricultural output prices in five of the seven countries, value added prices actually increase in the industrial sector relative to the agricultural sector in four (Bangladesh, Nepal, Philippines and Senegal) of these seven countries. This counteracting input cost effect of trade liberalization on the relative value added prices of industry and agriculture is another novel finding of this study.

This chapter now turns its attention to the impacts on the service sector. Initial tariffs on the limited or inexistent imports of services are all zero. Consequently, where there are any imports of services, their price remains constant and import values actually decrease as consumers switch to cheaper agricultural and industrial goods. Domestic sales decline nonetheless, albeit much less than in agriculture or industry, as import penetration ratios are small and real depreciation leads producers to increase their exports. However, the net impact on the output and value added of services is generally small and negative, except in Benin and Senegal, which have the two of three highest export intensities for services. Output and value added prices fall roughly in proportion with the agricultural and industrial sector.

In conclusion, in most countries a similar pattern is observed concerning the trade and output effects of trade liberalization. Higher initial tariffs on industrial imports translate into greater reductions in their import prices. However, due to their imperfect substitutability with regard to domestic goods and generally low import penetration ratios, the resulting reductions in domestic output prices and volumes are much smaller. Furthermore, due to its high export intensity, the industrial sector benefits most from the resulting export expansion, such that industrial output, with the exception of Benin, rises relative to agricultural output. This pro-industrial impact is further reinforced by industry's more substantial input cost savings. Finally, the service sector is characterized by generally small output effects, as it has no initial tariffs.

---

5 This result is discussed further in subsection B6.

3. Factor price effects

This subsection shows how the general fall in value added prices affects factor prices, which are the prime determinants of household income and, ultimately, poverty effects.

Lesson four: Relative wages increase, returns to capital fall

Perfect sectoral mobility of labour but no intersectoral mobility of capital is assumed.[6] Consequently, variations in capital prices differ from sector to sector, whereas variations in wage rates are uniform. The two exceptions here are Bangladesh and Benin, given that these models distinguish numerous labour categories: male and female low, medium and high-skilled workers in Bangladesh, and informal, modern and civil servants in Benin. Thus, wage rate variations are weighted averages of the variations in the corresponding wage rates of these labour categories, where the weights differ between sectors.

In general, the cost of mobile factors is expected to be less affected than the cost of fixed factors. The more rigid the market for a factor, the greater will be the price response and vice-versa. Therefore, it is not surprising if a smaller fall is recorded in wage rates than in capital prices. Although the fall in average returns to capital is relatively greater than in wages in most countries, sectoral impacts mimic changes in value added prices.

Hence, sectors within which value added prices fall more will also show a greater decline in the returns to capital. The factor share in value added will determine the degree to which the impact on value added price is transmitted to return to capital. Finally, the overall impact will depend on the sectoral share in overall factor payments.

In the models of India, Nepal and Senegal, land is distinguished. In the case of India and Nepal, constant relative agricultural prices lead to stability in the returns to land, relative to the other factors of production. In Senegal, returns to land fall relative to all other factors, reflecting the stronger fall in agricultural value added relative prices in that country. In conclusion, with the exception of Nepal and Senegal (relative gain for capital), trade liberalization leads to an increase in the relative price of labour.

4. Household income effects

Lesson five: Nominal income tends to fall most in rural areas

In the preceding subsection, nominal returns to all factors fall were seen to fall as a result of trade liberalization. Consequently, it is not surprising that nominal household income also falls in all countries (table 4). The fall is the greatest for countries where the reductions in nominal factor returns are the strongest, i.e., India (-9.7 per cent), Pakistan (-6.7 per cent) and Nepal (-5.9 per cent). Conversely, nominal incomes are least affected

[6] The long-term effects with capital mobility are examined later in this chapter.

Table 3. Impact on factor prices

(Unit: %)

Country	Change in		Sectoral shares in factor payments*				Factor shares in value added*				Change in price			
	VA price	VA	Labour		Capital	Land	Labour		Capital	Land	Labour		Capital	Land
			Unskilled	Skilled			Unskilled	Skilled			Unskilled	Skilled		
Bangladesh	**-3.3**	**0.0**	**100.0**	**100.0**	**100.0**	**–**	**25.2**	**21.2**	**53.7**	**–**	**-3.1**	**-3.2**	**-3.4**	**–**
Agriculture	-3.1	-0.6	30.0	10.9	23.2	–	33.9	10.4	55.8	–	-2.9	-2.9	-3.3	–
Industry	-2.9	1.2	12.9	13.6	29.8	–	14.7	13.0	72.3	–	-2.6	-3.0	-2.8	–
Services	-3.5	-0.3	57.1	75.4	47.0	–	25.8	28.8	45.4	–	-3.3	-3.3	-3.7	–
Benin	**-3.9**	**0.0**	**100.0**		**100.0**	**–**	**63.1**		**36.9**	**–**	**-2.7**		**-5.3**	**–**
Agriculture	-5.1	-1.0	33.2		41.5	–	57.8		42.2	–	-3.8		-6.9	–
Industry	-7.1	-2.2	10.6		18.3	–	49.9		50.1	–	-2.5		-10.0	–
Services	-2.2	1.3	56.1		40.3	–	70.4		29.6	–	-2.0		-1.6	–
India	**-10.0**	**0.0**	**100.0**		**100.0**	**100.0**	**48.8**		**39.2**	**12.0**	**-9.8**		**-10.0**	**-9.9**
Agriculture	-9.9	0.0	30.9		7.9	100.0	50.0		10.2	39.8	-9.8		-9.9	-9.9
Industry	-10.1	0.2	17.6		28.6	0.0	43.4		56.6	0.0	-9.8		-10.4	–
Services	-10.0	-0.1	51.5		63.5	0.0	50.2		49.8	0.0	-9.8		-9.8	–
			Unskilled	Skilled			Unskilled	Skilled			Unskilled	Skilled		
Nepal	**-6.2**	**0.0**	**100.0**	**100.0**	**100.0**	**100.0**	**24.8**	**12.3**	**64.0**	**62.9**	**-6.2**	**-6.4**	**-6.2**	**-6.2**
Agriculture	-6.2	0.0	68.7	36.4	–	100.0	29.4	7.7	–	62.9	-6.2	-6.4	–	-6.2
Industry	-6.2	0.9	2.9	6.3	19.7	0.0	10.8	11.5	77.6	–	-6.2	-6.4	-6.2	–
Services	-6.3	-0.1	28.4	57.3	80.3	0.0	19.9	19.9	60.2	–	-6.2	-6.4	-6.2	–
Pakistan	**-7.3**	**0.0**	**100.0**		**100.0**	**–**	**39.3**		**60.7**	**–**		**-6.4**	**-7.9**	**–**
Agriculture	-6.7	-0.3	44.3		18.6	–	60.7		39.3	–	-6.4		-7.2	–
Industry	-8.6	0.7	15.5		22.1	–	31.2		68.8	–	-6.4		-9.5	–
Services	-7.2	-0.2	40.2		59.4	–	30.5		69.5	–	-6.4		-7.6	–
Philippines	**-3.1**	**0.0**	**100.0**		**100.0**	**–**	**44.9**		**55.1**	**–**	**-3.0**		**-3.1**	**–**
Agriculture	-4.0	-1.0	21.2		19.0	–	47.7		52.3	–	-3.0		-4.8	–
Industry	-1.8	1.3	21.6		24.6	–	41.7		58.3	–	-3.0		-0.7	–
Services	-3.3	-0.2	57.2		56.5	–	45.2		54.8	–	-3.0		-3.5	
Senegal	**-3.8**	**0.0**	**100.0**		**100.0**	**100.0**	**62.0**		**34.2**	**3.9**	**-3.9**		**-3.4**	**-6.7**
Agriculture	-5.1	-2.6	18.2		12.5	100.0	58.1		22.0	19.9	-3.9		-6.7	-6.7
Industry	-3.4	0.1	21.1		37.4	0.0	50.6		49.4	–	-3.9		-2.9	–
Services	-3.6	0.9	60.7		50.1	0.0	68.7		31.3	–	-3.9		-2.8	–

* Initial shares.

Table 4. Impact on income

(Unit: %)

Country	Change in rate			Share in total income			Contribution to change in income		
	Rural	Urban	All	Rural	Urban	All	Rural	Urban	All
Bangladesh									
Unskilled wage	-3.1	-3.1	-3.1	36.5	12.0	24.2	-1.1	-0.4	-0.7
Skilled wage	-3.2	-3.2	-3.2	18.4	22.3	20.4	-0.6	-0.7	-0.7
Capital	-3.4	-3.4	-3.4	43.7	59.6	51.7	-1.5	-2.0	-1.7
Other income	0.0	0.0	0.0	1.5	6.0	3.8	0.0	0.0	0.0
TOTAL	–	–	–	100.0	100.0	100.0	-3.2	-3.1	-3.1
Benin									
Wage	-2.7	-2.7	-2.7	79.0	47.4	61.5	-2.1	-1.3	-1.6
Capital	-5.3	-5.3	-5.3	19.8	36.6	29.1	-1.1	-2.0	-1.5
Other income	-1.9	0.0	-0.1	1.2	16.0	9.4	-2.4	0.1	-1.0
TOTAL	–	–	–	100.0	100.0	100.0	-5.5	-3.1	-4.2
India									
Wage	-10.5	-10.5	-10.5	47.6	48.6	48.1	-4.7	-4.8	-4.7
Capital	-10.6	-10.6	-10.6	21.3	40.8	30.0	-2.1	-4.1	-3.0
Land	-10.5	-10.5	-10.5	20.4	0.3	11.5	-2.0	0.0	-1.1
Other income	0.0	0.0	0.0	10.6	10.2	10.5	-1.0	-0.6	-0.8
TOTAL	–	–	–	100.0	100.0	100.0	-9.8	-9.5	-9.7
Nepal									
Unskilled wage	-6.1	-6.8	-6.2	22.6	14.8	21.4	-1.4	-1.0	-1.3
Skilled wage	-6.1	-7.0	-6.4	8.4	23.0	10.6	-0.5	-1.6	-0.7
Capital	-5.8	-7.2	-6.2	15.1	23.8	16.4	-0.9	-1.7	-1.0
Land	-6.2	-5.9	-6.2	34.7	8.2	30.6	-2.1	-0.5	-1.9
Other income	0.0	-0.1	0.0	19.3	30.2	21.0	-0.9	-1.6	-1.0
TOTAL	–	–	–	100.0	100.0	100.0	-5.8	-6.4	-5.9
Pakistan									
Wage	-6.4	-6.4	-6.4	53.1	34.0	42.8	-3.4	-2.2	-2.7
Capital	-7.9	-7.9	-7.9	37.0	46.0	41.8	-2.9	-3.7	-3.3
Other income	-0.1	0.0	0.0	9.9	20.1	15.3	-0.5	-0.8	-0.7
TOTAL	–	–	–	100.0	100.0	100.0	-6.8	-6.6	-6.7
Philippines									
Wage	-3.0	-3.0	-3.0	48.4	53.2	51.6	-1.5	-1.6	-1.6
Capital	-3.1	-3.1	-3.1	37.2	31.0	33.0	-1.1	-1.0	-1.0
Other income	0.0	0.0	0.0	14.4	15.8	15.4	-0.5	-0.3	-0.4
TOTAL	–	–	–	100.0	100.0	100.0	-3.1	-2.9	-3.0
Senegal									
Wage	-3.9	-3.9	-3.9	22.4	55.4	48.4	-0.9	-2.1	-1.9
Capital	-3.4	-3.4	-3.4	29.0	10.5	14.4	-1.0	-0.4	-0.5
Land	-6.7	-6.7	-6.7	14.1	0.0	3.0	-1.0	0.0	-0.2
Other income	0.0	0.0	0.0	34.5	34.1	34.2	-1.0	-1.2	-1.2
Total	**–**	**–**	**–**	**100.0**	**100.0**	**100.0**	**-3.8**	**-3.7**	**-3.7**

by trade liberalization in the Philippines (-3 per cent) and Bangladesh (-3.1 per cent), where factor incomes fall the least, and in Senegal (-3.7 per cent) where fixed "other income" (inter-household transfers) is a major part of household income.

In all but Nepal, rural households experience a larger nominal income reduction than urban households. Thus, it is concluded that trade liberalization tends to be pro-urban or anti-rural. Different explanations underlie this result, depending on the country analyzed. In Bangladesh, Benin, the Philippines and Pakistan, urban households are less affected due to their greater reliance on relatively stable other (non-factor) income such as government transfers and domestic or foreign remittances. In the cases of India and Senegal, rural income losses can be traced primarily to the reduction in returns to land. Finally, in the case of Nepal, the nominal income of urban households falls more than that of their rural counterparts, as skilled wages, returns to capital and "other income" decline more for urban households than for rural households. These results follow the greater price reductions in the service sector, which uses skilled labour and capital more intensively.

Once again, the use of full-scale realistic models has led to a surprising conclusion concerning the important positive impact of non-factor income for households and the substantial negative impact of land income for rural households. These two effects outweigh the more traditional labour and capital-income share effects.

5. Consumer price effects

Lesson six: Nominal consumer prices fall more in industry than agriculture or services

The analysis in the preceding subsection suggests that trade liberalization is pro-urban in terms of its impacts on nominal income. However, by reducing import prices and local competing goods, trade liberalization may also substantially reduce consumer prices. These impacts may also differ between households according to their consumption patterns. It is the net impact of these income and consumer price effects that ultimately determines the welfare and poverty impacts of trade liberalization.

Table 5 shows that consumer prices fall by only 3.4 per cent in Senegal but by as much as 9.7 per cent in India as a result of trade liberalization. In all countries, the fall in consumer prices for industrial goods is substantially greater, 5.8 per cent to 10.9 per cent, than for the agricultural and service sectors, reflecting high initial tariff rates and/or high import penetration ratios in the industrial sector.

Lesson seven: Cost of living effects vary

In all countries but Senegal, rural households devote a larger share of their total consumption to agricultural goods than do their urban counterparts, whereas urban households consume relatively more services. It should be stressed that "industrial goods" are defined very broadly here to include very simple food processing such as milled rice (23 per cent of household consumption in Bangladesh). Consequently, in most countries, rural households

benefit less than urban households do from the fall in the relative consumer prices of industrial goods, resulting in a smaller reduction in their consumer price indices. In India, Nepal and Pakistan, rural and urban households consume roughly the same share of industrial goods. Although rural households consume relatively more agricultural goods and fewer services, consumer prices in these two sectors vary in roughly the same proportion; thus, there is little urban-rural difference in the variation in consumer price indices. Thus, it can be said that trade liberalization is pro-urban in terms of income as well as consumption.

6. Welfare and poverty effects revisited

Having now followed the channels of impact of trade liberalization through these different economies, we are in a position to return to the original poverty and welfare results to understand better the underlying mechanisms. As mentioned above, there are two main channels of impact linking trade liberalization to household welfare and poverty,

Table 5. Impact on consumer prices

(Unit: %)

Country	Import share of consump-tion	Compen-satory sales tax	Change in prices			Share in total consumption			Contribution to change in CPI		
			Imports	Dom. sales	Con-sumer	Rural	Urban	All	Rural	Urban	All
Bangladesh	**9.1**	**1.3**	**-13.3**	**-4.0**	**-3.7**	**100.0**	**100.0**	**100.0**	**-2.8**	**-2.9**	**-2.8**
Agriculture	2.4	1.3	-8.1	-3.3	-2.1	16.8	14.1	15.5	-1.9	-1.8	-1.9
Industry	24.4	1.3	-13.6	-4.7	-5.8	55.1	36.2	46.2	-3.3	-4.0	-3.6
Services	0.0	1.3	–	-3.9	-2.6	28.1	49.7	38.3	-2.2	-2.3	-2.3
Benin	**19.6**	**3.8**	**-14.9**	**-5.4**	**-4.3**	**100.0**	**100.0**	**100.0**	**-2.4**	**-4.1**	**-3.2**
Agriculture	2.7	3.8	-9.6	-4.8	-1.4	34.7	31.2	32.9	-1.5	-1.5	-1.5
Industry	39.7	3.8	-15.8	-5.4	-7.0	51.8	39.8	45.6	-3.1	-7.6	-5.1
Services	3.3	3.8	0.0	-5.8	-2.6	13.5	29.1	21.5	-2.0	-2.0	-2.0
India	**5.5**	**0.9**	**-14.6**	**-10.1**	**-9.7**	**100.0**	**100.0**	**100.0**	**-9.1**	**-9.1**	**-9.1**
Agriculture	0.9	0.9	-11.0	-9.6	-8.9	42.6	29.2	37.1	-8.9	-8.9	-8.9
Industry	12.8	0.9	-15.8	-10.8	-10.9	26.2	27.2	26.6	-9.9	-9.6	-9.8
Services	1.2	0.9	0.0	-9.9	-9.0	31.2	43.5	36.3	-8.9	-8.9	-8.9
Nepal	**15.4**	**1.1**	**-7.9**	**-5.8**	**-5.1**	**100.0**	**100.0**	**100.0**	**-5.2**	**-5.2**	**-5.2**
Agriculture	5.5	1.1	-7.6	-6.0	-5.1	79.3	65.3	77.3	-5.1	-5.1	-5.1
Industry	54.4	1.1	-7.9	-5.9	-6.0	14.3	19.5	15.1	-6.1	-6.1	-6.1
Services	0.0	1.1	0.0	-5.6	-4.5	6.4	15.1	7.7	-4.3	-4.3	-4.3
Pakistan	**11.6**	**2.7**	**-18.0**	**-7.9**	**-6.9**	**100.0**	**100.0**	**100.0**	**-5.6**	**-5.8**	**-5.7**
Agriculture	3.4	2.7	-6.4	-6.6	-4.1	39.7	28.0	34.0	-4.1	-4.2	-4.2
Industry	24.3	2.7	-20.1	-8.6	-9.6	39.9	39.1	39.5	-7.5	-7.6	-7.5
Services	2.5	2.7	0.0	-7.9	-5.2	20.4	32.9	26.5	-5.0	-5.1	-5.1
Philippines	**17.4**	**3.4**	**-16.2**	**-5.2**	**-4.3**	**100.0**	**100.0**	**100.0**	**-2.5**	**-2.5**	**-2.5**
Agriculture	1.8	3.4	-7.0	-4.1	-0.9	14.6	9.8	11.4	-0.9	-0.9	-0.9
Industry	33.3	3.4	-18.0	-6.9	-8.2	52.1	40.6	44.4	-4.2	-5.3	-4.9
Services	4.6	3.4	0.0	-4.3	-0.9	33.3	49.6	44.1	-0.5	-0.5	-0.5
Senegal	**19.7**	**3.1**	**-13.6**	**-4.1**	**-3.4**	**100.0**	**100.0**	**100.0**	**-3.4**	**-2.9**	**-3.1**
Agriculture	14.8	3.1	-11.9	-3.1	-1.6	17.1	20.3	19.2	-1.6	-1.6	-1.6
Industry	26.9	3.1	-17.2	-4.8	-6.0	54.3	43.3	47.1	-5.6	-5.6	-5.6
Services	11.8	3.1	0.0	-3.7	-0.3	28.6	36.4	33.7	-0.3	-0.3	-0.3

i.e., income effects and consumer price effects. To examine these effects, the income and consumer price changes discussed in the preceding two subsections are reproduced in the first two columns of table 1. Total consumption of households is also reproduced since the closure chosen in the models implies that household savings should vary to equilibrate the investment-saving condition.

It becomes clear that the generally positive welfare effects of trade liberalization can be explained by the fact that the reduction in consumer prices is greater than the fall in total consumption, which accounts for the variation in income and savings. It is also noted that the welfare effects of trade liberalization favour rural households over their urban counterparts only in Senegal. This result, which occurs despite greater nominal income reductions among rural households, can be attributed to the greater fall in total consumption for urban households. In this model, rural savings are maintained fixed. Consequently, compensation for lower governmental saving must be entirely covered by urban households. In all the other countries, the higher decline in income is mirrored by a higher decline in total consumption. Except in the Philippines and Senegal, urban households therefore gain from trade liberalization whereas rural households experience a slight reduction in welfare. Urban welfare gains can be traced primarily to their greater reliance on stable "other income" sources and their proportionately lower consumption of agricultural goods, for which prices fall least.

Poverty reductions are greatest in Benin, although overall welfare declines slightly. Gains in welfare thus principally reach the poorest households while losses are concentrated among rich households. In India, Nepal and Pakistan, poverty reductions are very small. It is quite understandable in India, where welfare slightly decreases, and in Nepal, where welfare gains are non-existent. It suggests, in the case of Pakistan, that the welfare gains from trade liberalization accrue primarily to richer households.

(a) Compensation mechanisms

Liberalizing trade implies a change (generally negative) in government revenue, since tariff revenue represents a more or less important part of it. Government income being fixed, this revenue loss must be compensated for; the adjustment variable chosen can influence the results. The simulation described previously specifies a sales compensatory tax, increasing by between 0.9 per cent in India and 3.8 per cent in Benin, which directly affects consumption prices. To understand this influence, the results of the same trade liberalization scenario are compared using another compensation mechanism – direct compensatory tax on households' income and a production tax.

(i) Direct compensatory tax

Using a direct compensatory tax does not significantly alter overall welfare, which is still marginally positive in most countries. Poverty, on the other hand, now increases – even if marginally – instead of decreasing in most countries. Moreover, rural and urban relative gains are often changed and more definite than with a sales tax, except in India where rural-urban difference in welfare variations is less important. This is as expected,

since a sales tax (mostly influencing resources allocation) compared with an income tax (directly influencing household welfare) should bring more equalized results if income taxation rates are considered to be more differentiated among households than are income sources and consumption patterns.

In terms of allocation of resources, the same decrease in import prices (except in India, where quotas are present) drives a higher demand for agricultural and industrial imports (except for Benin's industrial imports) since, without the sales tax, the import price on the market is lower. Qualitative results concerning exports, output and domestic prices are unaffected by the compensation mechanism while, quantitatively, domestic and output prices often decline more in industry and less in agriculture and services, and domestic and output supplies increase more. A notable difference is Bangladesh, where domestic demand now increases by 0.7 per cent. Interestingly, Nepal and Benin are more in line with other countries in terms of agricultural vs. industrial magnitude of responses, indicating that the sales tax has a significant impact in these countries. In Nepal, this is explained by the extremely small difference between tariff rates (and thus, import price decline) in agriculture and industry while in Benin, it follows from the high level of the compensatory tax. Impacts on services go in the same direction but are generally weaker than with a sales tax.

On the factor market, while value added prices do not follow output prices as closely, in general they still decrease. Exceptions are Benin, the Philippines and Senegal, where overall and some sectoral value added prices increase. Being directly linked to value added prices, wage rates decrease in every country except Benin, the Philippines and Senegal. Capital return generally exaggerates more than mirrors value added price variation to compensate for the increase or insufficient decrease in wages, while a land return decrease is diminished. In other words, in the absence of a sales compensation tax, returns to labour and service sector capital experience a higher relative gain because of the lower decrease in value added prices. Following changes in wage and return rates, household incomes still decline (less than is the case with sales tax) in every country except in Benin, the Philippines and Senegal, where wage rates increase.

The disadvantage to rural households in India, the Philippines and Senegal is again explained by changes in other income and in land returns that largely compensate for wage rate benefits. In all the other countries, a small relative income gain by rural households is observed. In other words, before-tax income changes are more equally distributed than in the presence of a sales tax. Consumer price variations are still negative but stronger in most of the countries, as the fall in prices is not compensated by increased indirect taxes.

Even if consumer prices decline more and incomes decline less, overall welfare effect is still marginal since decline in total consumption (including changes in savings and, especially, in direct tax) is more important, showing the significance of the compensation mechanism. Income tax increases significantly in Benin, Pakistan, the Philippines and Senegal. Highly taxed urban households in Benin, Senegal and the Philippines experience

an especially significant decline in total consumption compared with the increase in income. Despite this result, and mostly because of significant falls in consumer prices, urban households still benefit more from trade liberalization than do their rural counterparts in terms of welfare. Households benefiting from a rise (decline) in welfare also benefit from a decline (rise) in poverty. Overall, poverty increases compare with trade liberalization using sales tax compensation, but changes in overall poverty levels are marginal. Compared with the sales tax situation, urban-rural welfare and poverty effects are unchanged.

(ii) Production compensatory tax

When using a production tax instead of a sales tax, most results are roughly unchanged. In effect, contrary to income tax, a production tax and sales tax both affect the allocation of resources directly. Therefore, the results also look much alike.

First, the decreases in import prices being the same, import demand, domestic sales and prices as well as export and output responses are qualitatively and quantitatively quite similar, as when a sales tax is used. A pro-industry impact is maintained although Benin and Nepal are still exceptions. When using production tax, a significant difference is the much more important decrease in output price. In effect, this price includes the production tax while the sales tax affects the consumption price although its value is not included in it. The services sector reaction is similar when using a production tax in all the countries.

On the factor market, value added prices decrease roughly in the same proportion as output and therefore decrease more than with a sales tax. The industrial-agricultural is inversed in five of the seven countries.[7] Consequently, the variation in the wage rates, capital return and land return are also qualitatively similar but quantitatively more significant. The relative gain to labour is maintained, again with the exception of Senegal. This higher fall in factor return brings a higher income loss for every household. Rural-urban share of this loss is similar. The pro-urban income effect of trade liberalization, except in Nepal, is therefore maintained in the presence of a production tax. It is explained by the same factors, except in the case of Nepal where the urban loss is principally linked to skilled wages. Consumer prices also decrease more in every sector and for every household in the presence of a production tax, and the pro-rural consumption effect of trade liberalization is maintained.

Income and consumer prices both decrease more but in similar proportions as, with a sales tax compensation mechanism, impacts on welfare and poverty are quite comparable. Overall, welfare is still negligible and poverty generally falls. Urban households gain in welfare except in Nepal and Senegal. As a result, urban poverty increases in Senegal and Nepal.

---

7 Bangladesh, Benin, Nepal, the Philippines and Senegal.

(b) Long term versus short term

Choosing to consider trade liberalization in a long- or short-term perspective can lead to different conclusions. In effect, capital mobility assumed in the long term allows firms to react more adequately and to adapt to changes in the economic environment more smoothly; capital goes where it is needed the most without creating artificial scarcity.

With this idea in mind, simulations of trade liberalization specifying capital mobility are compared with the base simulations (using the three compensatory mechanisms) where capital immobility is required. Overall welfare and poverty results are basically the same. The sole exception is Nepal, where the relative position of rural and urban households changes. With sales and production compensatory taxes, rural (urban) Nepalese households lose (gain) welfare in absolute terms while poverty decreases (increases) in relative terms, when capital is mobile; however, they gain (lose) or are unaffected when capital is sector-specific. With direct compensatory taxes, they become relative winners (losers). Therefore, in every country, welfare and poverty results are slightly pro-urban in the presence of sales and production taxes and are pro-rural in the presence of the income taxes, no matter what time frame is used.

These results follow from the fact that mobility of capital allows both consumer prices and income to decrease less than when capital is sector-specific, but in a more or less similar proportion. Income decreases less since capital is allowed to go into industry, where demand is higher and then consequently competes less intensively with labour, allowing the overall wage rate and the overall return rate on capital to drop by a smaller amount. An interesting case is Bangladesh, where both the wage rate and capital return even increase, indicating that trade liberalization affects factors considerably, especially capital demand. Consumer prices decrease less since import price changes are the same and domestic prices decrease less following the significant export push from the gain in competitiveness permitted by mobile capital.

The principal exception here is India, where both income and consumer prices decrease more than in the reference simulation, but also have no differential impact in terms of welfare and poverty. In India, land return is highly affected by trade liberalization. The positive capital return in agriculture due to the presence of land being replaced by negative return rates (the same in every sector), combined with a still negative – in two thirds of the cases, even more negative than with immobile capital – land return (land is still specific to the agricultural sector), implies a important decrease in value added, output and domestic as well as consumer prices in agriculture. Consequently, both income and consumer price index decrease more in the mobility case. This effect is not as influential in Nepal and Senegal, since the decrease in land return is not as important.

C. Conclusion

The authors note than because they are economists, it is perhaps not surprising that the main conclusion drawn from this study of the impacts of trade liberalization on poverty is that there is no general relationship between trade liberalization and poverty; rather, the conclusion is that "it depends". As this detailed analysis based on disaggregated large-scale CGE models shows, trade liberalization is more complicated than policymakers may want to admit, with numerous complex and opposing impacts on these economies that channel through the output, factor and product markets to influence household income and consumer prices. The main contribution of this chapter is to point out some general trends as well as explain carefully on what factors the poverty impacts of trade liberalization "depend".

Nonetheless, it does appear that trade liberalization generally increases welfare and reduces poverty marginally, although some categories of households and certainly some specific households clearly lose out. An almost clear conclusion emerges concerning the rural-urban bias in the welfare and poverty impacts: urban households gain in terms of welfare and poverty, while rural households lose from trade liberalization.

When the channels of impacts are examined, some interesting results emerge. Initial tariffs tend to be higher for industrial imports. As a result, trade liberalization generally reduces import, domestic and output prices of industrial goods with regard to their agricultural and service counterparts. The cases of Pakistan and India are interesting in this regard, as they show how trade liberalization and ensuing export expansion may lead to a greater fall in export prices where a country faces world demand that is not perfectly elastic (i.e., demand for price reductions as exports increase). However, greater export intensities in the industrial sector imply that this sector benefits more from the ensuing export expansion, such that industrial output actually increases more than output in the other two sectors in all but Benin.

Another remarkable result of the analysis is the importance of the input cost effects of trade liberalization. As each sector consumes a large share of inputs from within the sector itself, the industrial sector – where price reductions are greatest – gains the most in terms of cost reductions from trade. Indeed, these cost savings are so strong that, in most countries, value added prices actually fall less in the industrial sector than in the agriculture sector. However, it is the service sector, which is essentially cut off from international trade, which often experiences the smallest reductions in value added price following the removal of tariffs. As value added prices determine factor remunerations, these results have important welfare and poverty implications.

As labour's principal source of income is the service sector, wage rates tend to fall less than the returns to capital and land. Conversely, the returns to land, where this factor is explicitly taken into account, fall relative to the other factors given its tight links with the agricultural sector, where value added prices decline most. Capital is assumed to be sector-specific, so that the returns to capital in the service sector fall less than in the other two sectors.

Surprisingly, it is not the differences in the returns to the two principal factors of production – labour and capital – that drive the household income results. Instead, it is the greater reliance of urban households on relatively stable non-factor income and the greater reliance of rural households on the strongly falling returns to land that explain a general pro-urban bias in the household income effects of trade liberalization.

The impacts of tariff removal on consumer prices also hold a few surprises. Although the effects are about the same for both types of households in most countries, rural households consume relatively more agricultural goods, such that they benefit less from the reduction in the prices of industrial goods than do urban households. Finally, positive welfare and poverty effects are found to be driven by consumer price reductions that outweigh the reductions in total consumption, with nominal income taking into account variation in savings. However, it should be noted that income effects may dominate consumer effects when looking at the rural-urban bias in specific countries.

References

Cloutier, M., J. Cockburn and B. Decaluwé, 2003. "Welfare, poverty and distributional effects of trade liberalization: A review of the CGE literature" (mimeograph). Université Laval, Québec.

Cockburn, J., 2001. "Trade liberalisation and poverty in Nepal: A computable general equilibrium micro simulation analysis", discussion paper 01-18. Centre de Recherche en Économie et Finance Appliquées, Université Laval, Québec.

Cogneau, D. and A. Robilliard, 2001. "Growth distribution and poverty in Madagascar: Learning from a micro-simulation model in a general equilibrium framework", TMD discussion paper 61. Washington, D.C., IFPRI.

De Janvry, A., E. Sadoulet and A. Fargeix, 1991. "Politically feasible and equitable adjustment: Some alternatives for Ecuador", *World Development*, vol. 19, No. 11; pp. 1577-1594.

Decaluwé, B., A. Patry, L. Savard and E. Thorbecke, 1999. "Poverty analysis within a general equilibrium framework", working paper 9909. Department of Economics, Université Laval, Québec.

Piggott, J. and J. Whalley, 1985. *UK Tax Policy and Applied General Equilibrium Analysis*. Cambridge, Cambridge University Press.

Savard, L., 2003. "Poverty and income distribution in a CGE-household model: A top-down/bottoms-up approach" (mimeograph). Dakar, Senegal, IDRC.

Comment

DOES TRADE MITIGATE OR ENHANCE POVERTY?

By Mustafizur Rahman

When first reading the title of this session,[1] "Making trade work for poverty reduction: Reality or fantasy?" my initial response was that the answer would lie somewhere in between. Then I remembered the words of German philosopher Hegel: "People generally tend to think that the solution to a problem lies between two extremes; but between two extremes lies not the solution, but the problem!"

Therefore, I would like to start by asking what type of trade and trading system we are considering. The answer to whether trade is poverty mitigating or poverty enhancing will critically hinge on an answer to this question.

In answering the question posed in the theme, I would like to draw insights from the Bangladesh experience. I feel strongly that Bangladesh's experience tends to epitomize the rewards and risks as well as the opportunities and challenges that LDCs, both in general and as a collective, face in the context of the multilateral trading system and WTO. The answer to the question posed in the title of this chapter will depend on how the attendant issues are addressed in the context of the multilateral trading system.

Before looking at the substantive issues, it should be recalled that global community of nations have jointly agreed to help the developing nations attain the eight MDGs, including MDG-1 which mentions halving global poverty by 2015, and MDG-8, which aspires to make trade, together with debt relief and aid, work for attaining the other seven MDGs. Therefore, it is fair to argue that all countries have promised to work towards making trade work for the advancement of the developing world.

It must also be kept in mind that the discussion of this theme is in the context of the Doha Development Round; in particular, let us not forget the middle 'D'. Thus, while discussing the power of trade to mitigate poverty and posing this issue as a question, it must be remembered that we are discussing the issue of making trade work for poverty alleviation in the context of a Round that prides itself for putting development at the centre of the multilateral trading system. Therefore, rather than asking whether making trade work for poverty alleviation is a reality or a fantasy, the question should be what measures need to be implemented in the context of the multilateral trading system in order to make trade work for poverty alleviation.

Paraphrasing Marx, who said "so far philosophers have been engaged in explaining the world; the task, however, is to change it", our task should be to design a multilateral trading system that is sensitive to the needs of poor nations and that addresses the needs of poor people.

---

[1] Refers to the "Post-Doha Research Agenda for Developing Countries" held in Macao, China on 30 and 31 October 2006.

I will attempt to offer some insights by taking the experience of Bangladesh as a test case. In 1972, immediately after Bangladesh was born, a book was written that subsequently became an important reference source. In the preface of the book, entitled *Bangladesh: a Test Case for Development,* the authors explained that the newborn country was beset with such extraordinary difficulties in managing its economy that it would perhaps continue to remain predominantly aid-dependent for years to come. Hence, if development was possible in Bangladesh, it would be possible in all developing countries; it was in that sense that Bangladesh became a test case for development.

This same Bangladesh could now be a test case, but in a context that is quite different from the one mentioned in *Bangladesh: a Test Case for Development*.

It should be noted that during the years since independence, Bangladesh has been able to achieve a very crucial graduation, from a predominantly aid-receiving nation to a trading nation. Some stylized facts will help explain this change. In early 1990s, Bangladesh's degree of openness was about 20 per cent, whereas it is now about 40 per cent. Bangladesh's export-to-aid ratio at that time was about 1:1; in financial year (FY) 2006, the ratio was 14:1. In FY 2006 Bangladesh exported US$ 10 billion worth of goods and US$ 4.2 billion worth of services (remittances). In fact, US$ 14 billion worth of exports of goods and services for a country with a GDP of about US$ 60 billion is a truly noteworthy attainment – this is especially so for a country where the per capita income is US$ 450 and the per capita export of goods and services income is about US$ 100. With export-oriented ready made garments (RMG) contributing 75 per cent of exports, Bangladesh has, so far, successfully met the challenges emanating from the phase-out of the MFA (in FY 2006, export growth of RMG was about 21 per cent).

In the decade of the 1990s, poverty was being reduced at a pace of 1 per cent per annum. The signals coming from the data generated for the past five years indicate a doubling of the pace of poverty reduction. Yet, about 40 per cent of the population in Bangladesh is living below the poverty line. There is growing inequality in income, rural-urban inequality and spatial inequality are increasing and the number of people living below the extreme poverty line is on the rise.

No doubt, income generated through export-oriented activities did have a positive impact on Bangladesh's economy and her achievements. However, whether overall trade liberalization policy has achieved a positive impact on poverty alleviation and income distribution has been questioned in the Bangladesh context.

Take the RMG sector, which accounts for 76 per cent of exports by Bangladesh. The minimum wage fixed in 1994 was equivalent to US$ 30 per month. In 2006, in the face of worker agitation, the minimum wage was increased by 70 per cent; yet, it is now actually equivalent to just US$ 27 per month and the workers are asking for US$ 40. Entrepreneurs say that if they have to pay US$ 40 per month as a minimum wage they will not survive in the global market. Therefore, an LDC such as Bangladesh is able to export to the global market only by giving less than US$ 1 a day to a worker, which is below the international poverty line. It therefore appears time to consider the way the multilateral

trading system works, even for "successful" LDCs. What is happening to terms of trade? How to move up-market, ensure higher local value addition, increase productivity, enhance product diversification and strengthen trade-related capacity-building? These are the challenges that Bangladesh must meet.

It is in that context that a comprehensive aid-for-trade package in support of LDCs becomes pertinent and vital. While it cannot be denied that Bangladesh and other LDCs will need to do their own necessary homework in order to address these challenges, it is equally true that the rules of the multilateral trading system will also need to be suitably fashioned to help the LDCs in this regard. The developed countries will also need to undertake necessary obligations in this respect.

An effective aid-for-trade package and greater market access for LDC products (under a global zero tariff, zero quota market access) could be two measures for enabling LDCs to take advantage of the current phase of globalization.

In terms of market access, the major offensive interest of LDCs in the context of the Doha Development Round is the demand for duty-free-quota-free (DF-QF) access for all products from all LDCs in the markets of all developed countries. However, Annex 36(F) of the Hong Kong Declaration stipulates DF-QF access for only 97 per cent of tariff lines, leaving scope for avoiding the provision of zero tariffs on exports of virtually all products from LDCs to the United States market, which is the major market of interest to the LDCs.

In the European Union, where LDCs receive DF-QF under the "Everything but Arms" initiative, the rules of origin continue to be stringent and only about 60 per cent of Bangladesh's exports can actually access the DF facility. "Everything but Arms" provided zero-tariff access to 919 agricultural items, but the lack of supply-side capacities means LDCs cannot reap the potential benefits.

Even though LDCs were not asked to undertake commitments at the WTO Hong Kong Ministerial Meeting, their export competitiveness will be negatively affected because of preference erosion. Market access to the United States would have positively offset the negative impact of tariff erosion; but that did not happen at the Hong Kong Ministerial Meeting. In 2005, the import duties on Bangladesh's exports to the United States amounted to some US$ 420 million; this was several times higher than bilateral United States aid to Bangladesh. A fund created from such import duties could be used for trade-related support, including trade-related capacity-building in LDCs. Analysis indicates that zero-tariff market access is likely to increase Bangladesh's exports to the United States by 30 per cent.

All studies, including those by the World Bank, have shown that LDCs stand to gain substantially from exports of services. An International Monetary Fund study showed that opening up even a 3 per cent labour service market in the developed countries would bring about US$ 150 billion to developing countries and LDCs in remittances. However, as is widely known, there has not been any tangible progress in the negotiations on the

temporary movement of natural persons under GATS mode-4. The analysis of HIES data in Bangladesh clearly shows a high correlation between poverty alleviation and household earnings from remittances. However, some 80 per cent of such remittances to Bangladesh come from other developing countries.

The worsening terms of trade for products from Bangladesh is also not helping. Compared with the mid-1990s, Bangladesh has seen a decline in the terms of trade index from 100 to 86 in recent years.

The strengthening of S&DT provisions in WTO and more faithful implementation are needed. There is also a lack of harmonization between trade policies in WTO and aid policies of development partners at home. Even if WTO negotiations had carved out some policy space for LDCs, they had to abandon using it under aid conditionalities imposed by aid donors with negative implications for applying policy space to development objectives. LDCs demand harmonization and alignment between WTO decisions and aid conditionalities.

The discussion of an aid-for-trade package in WTO is making good progress and a number of good suggestions have been put forward. However, LDCs have concerns in that regard. Will it be new money? What will be the LDCs' share? Will conditionalities be attached? Will LDCs have a say in the allocation and use of those resources? LDCs would like to use aid-for-trade support for trade-related supply side capacity-building in upgrading the growth of productivity as well as modernizing ports and infrastructure development, for supporting trade facilitation measures.

Bangladesh as a trade dependent LDC firmly believes that if the multilateral trading system and its rules can be crafted along these lines, making trade work for poverty reduction will indeed become a reality and no longer remain a fantasy.

Some of the research questions that could be asked in this context are:

- How to identify country-specific demands for the aid-for-trade package from the perspective of poverty alleviation?
- How should trade policies be integrated in poverty reduction strategic plans of LDCs? (This will require the identification of the transmission mechanisms of the gains from trade as well as how to ensure that poor people have a share in the process.)
- Which services sector openings under node-4 will have the greatest poverty alleviating impact?
- Under the ongoing GATS negotiations, LDCs are being asked to open up services sector under offer and request modality. Liberalization of which services sectors will be beneficial from the perspective of poverty alleviation?