



## Globalization and Poverty: Implications of South Asian Experience for the Wider Debate

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### **Abstract**

This paper discusses linkages between globalization and poverty in four South Asian countries, drawing upon eight papers prepared for a DFID-supported project. These countries were chosen, in part, because liberalization occurred in these countries in the mid 1980s to early 1990s and was substantial, providing clear globalization shocks as a laboratory experiment to discuss linkage. Countries generally seem to experience declines in absolute poverty over the period with roughly constant relative poverty (i.e. inequality). Determining linkage effects is, however, difficult as the analyses show. Excluded, non-globalization, variables such as changes in remittances in the Pakistan case, account for much of the inequality change, and once removed can change its sign. Depending upon whether trade liberalization is in the form of tariff change. Whether tariff revenue is forgone by an equal yield VAT or a progressive income tax or other factors, different inequality impacts can be attributed to globalization. Grand generalizations as to globalization-poverty linkage do not seem to follow from these country episodes.

**KEYWORDS:** Globalization, poverty, inequality, South Asia

**JEL classification:** O2, O53

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## 1. Introduction

Substantial heat and in some ways limited light surrounds the linkages between globalization and poverty. Despite the allegations and concerns that globalization adversely affects the poor (Khor, 2002; Watkins, 2002), and especially so in poorer countries, and counter-claims that it has ‘supported’ poverty reduction (World Bank, 2002), conclusive evidence on the linkages and the magnitude of effects is difficult to find. There is extensive literature discussing the possible channels through which globalization and poverty are linked<sup>1</sup> and a body of theoretical and empirical literature seeming to provide evidence either in one direction or the other (O’Rourke, 2001; McKay, Winters and Kedir, 2000; Dollar and Kraay, 2001; and Weller and Hersch, 2002) so the outcomes are, at best, ambiguous.

Precise definitions of globalization are elusive, but it is usually interpreted as an increase in integration between and within countries, manifested through an increase in the movement of commodities, labour, capital (financial and physical capital), and technology. The wide-ranging nature of these globalization processes and the inherent difficulties in identifying and measuring them, in terms of either their initial shocks or their impacts on various parts of the economic system (especially their impact on welfare and poverty) creates a number of analytical and empirical challenges. Even if we focus on one kind of globalization shock (e.g. trade liberalization) and we consider the consequences analytically (via a modeling framework) it might be seen to have quite different effects in different models and under different rules and experiments.

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<sup>1</sup> For example, McCulloch, Winters and Cerera (2001) review the transmission channels of trade liberalization on poverty.

As regards poverty, great care is needed in clarifying what form of poverty one is discussing. It can be interpreted as 'money-metric' based poverty or expressed in terms of more broadly-based social indicators (Ravallion, 1993). Clearly the measure of poverty used matters. Measures depend on the choice of relative or absolute numbers below poverty lines, on nominal or real incomes, the reference unit (households, individuals, household subgroups); or they may rely on other measures of relative poverty based on skilled/unskilled wage differentials, or on the relative incomes of population subgroups. Data on poverty is often fragmentary, and where available data may be inconsistent one source compared with another, so inferences are quite difficult to make<sup>2</sup>.

In this paper we address many of these analytical difficulties by identifying some linkages between globalization and poverty in four South Asian economies that have been the subject of investigation in a DFID project, involving researchers from Bangladesh, India, Pakistan, and Sri Lanka. In the project each researcher has executed some modeling work aimed at quantitatively evaluating the sign and significance of key elements of linkage; how capital flows and changes in foreign remittances occurring simultaneously with tariff changes influence the results of tariff/inequality studies; how significant export surges in garment industries have been for reducing gender inequality; how the separate influences of trade and technical change occurring under globalization can be measured; and other such targeted analyses. In the course of executing this work, broader questions have also been considered. Just what has been the record on poverty and inequality change in these countries as globalization processes have occurred?

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<sup>2</sup> Throughout this paper inequality is referred to as relative poverty' in order to reflect the income or well-being of one group (e.g. the poor) relative to another (e.g. the rich).

When did major globalization shocks (such as trade liberalization) occur, and how did inequality measures seemingly respond and when? What does a crude data based analysis of linkage suggest? What are some of the pitfalls in using data in model based counterfactual analyses in trying to unearth directions and size of linkage mechanisms? The paper addresses these issues by considering some of the broader themes and results that emerge from the project.

An appraisal of the data on poverty in the South Asian countries suggests that major change has occurred in terms of absolute poverty (numbers below the poverty line) and that this change has accelerated as growth performance has picked up post liberalization. Nevertheless the broad picture is one of relatively unchanging relative poverty (inequality) in the region over the last few decades (at least until recently) despite a major trade liberalization in the late 1980s and early 1990s. Still, some paradoxical situations do emerge from the data; increasing inequality in Pakistan post liberalization; a period of slightly increasing and then falling relative poverty in Bangladesh post liberalization; and some evidence of sharper increases in inequality in India in the late 1990s. A major change does seem to have occurred in terms of absolute poverty (numbers below the poverty line) in the region, and this change has accelerated as growth performance has picked up post liberalization. But it is difficult to ascribe precise reasons for these poverty outcomes.

In assessing the role of various elements of linkage, the paper makes a number of points. One is that the choice of poverty measure, even going beyond the relative and absolute poverty issue, matters. Another is that the structure of models used to unearth linkage is critical. Models with specific immobile factors have localized rents that change in a narrow and focused way with

trade liberalization; models with mobile factors do not have this feature. Quotas in models (if unauctioned) confer rents which liberalization takes away; quotas which are auctioned or sought (rent seeking) do not have these features. Trade policies that raise revenues (tariffs), if replaced by similar revenue raising instruments (a progressive income tax, or a VAT), may see their perceived inequality effects largely determined by the replacement policies. Many other pitfalls exist in such analyses, to the point that one can argue that meaningful discussion of globalization poverty linkage can only take place if very precise contours for the discussion exist. Is globalization inequality worsening in a particular model of a particular economy using certain assumptions and conducting a precise experiment? Without such specificity, precise answers to the linkage conundrums cannot be given; with any small change in setup the answers could change.

As such, our paper differs from the recently published DFID Handbook on Trade Liberalization and Poverty (McCulloch, Winters and Cirera (2001)) that provided the background work to the DFID White Paper on globalization. This piece argued that ‘in general, trade liberalization is an ally in the fight against poverty’ (McCulloch, et al, 2002; 3) without drawing the relative/absolute distinction. It focused on impacts on goods prices, wages, and employment; not the conventional equilibrium/shifting impacts. It also suggested that agriculture and services were key sectors for poverty alleviation with limited intersectoral analysis; and did not highlight the many pitfalls in assessing the nature and magnitude of linkage. The current paper uses detailed analyses of the South Asian experience to add to the debate on globalization and poverty linkage. Besides this introductory section the paper is organized into four other sections. Section 2 considers the evidence and some of the difficulties (both conceptual and practical) in

determining when liberalization occurs and at what speed. In two of the countries (Sri Lanka and Pakistan) liberalization was gradual, whereas in India and Bangladesh liberalization was much more rapid. The evidence on changes in poverty is briefly reviewed in Section 3. Section 4 then draws together the results from the simulation exercises. There is considerable variety in terms of both the experiments and the modeling approaches. We purposely do not use one single generic model and apply it to each country. Instead, the models range from small, stylized, and more transparent models to much larger, CGE models embracing macro and micro closures. The final section, Section 5, distills from these experiments some conclusions about the broad effects of globalization on poverty.

## **2. Dating globalization shocks in four South Asian economies**

As 'globalization' and 'liberalization' are terms which are open to such wide interpretation, it is not surprising that there is little consensus about identifying dates when countries may be said to have 'globalized' or 'liberalized'. But the issue pervades much of the literature, most notably in the recent paper by Dollar and Kraay (2001) in which they attempt to subdivide a sample of developing countries into 'post-1980 globalisers' and the rest (i.e. essentially 'non-globalisers'). Their aim was to consider the relative growth and poverty performance of the two groups. Dollar and Kraay identify post-1980 globalisers in terms of two alternative, simple, trade-related measures. The first is an outcome measure, based on the growth in trade relative to GDP while the second is a policy measure, based on the decline in average tariff rates. Each measure has some deficiencies and Dollar and Kraay acknowledge certain anomalies in the classifications.

A second measure, the Sachs-Warner index (Sachs and Warner, 1997) is more to do with the timing of liberalization than with the aim of producing a binary classification. Their measure is based on five tests: (1) average tariff rates below 40%; (2) average quota and licensing coverage of imports of less than 20%; (3) a black market exchange premium of less than 20%; (4) no extreme controls (taxes, quota and state monopolies) on exports; and (5) not considered a socialist country by the Kornai standard (Sachs and Warner, 1997; 339). An economy is deemed to be open to trade if all five tests are satisfied. In principle of course, the Sachs-Warner index could be used to identify the *speed* as well as the timing of liberalisation, by observing how rapidly the five tests are satisfied. However, each test is scored on a pass/fail basis so it would give no indication of how rapidly average tariff rates or average quota coverage (say) are reduced, it would only indicate the rate at which the cumulative position on the five tests has been attained.

Some countries are generally believed to have liberalized more quickly than others in terms of key indicators (especially trade and financial indicators) and objective measures are hard to devise. The four South Asian countries considered here are a case in point. India and Bangladesh appear in both of Dollar and Kraay's lists of 'Post-1980 globalisers'; Pakistan appears in the list under one criterion (a reduction in tariffs) but not the other (and Dollar and Kraay seem unconvinced by its inclusion anyway); and Sri Lanka does not appear at all. However, in the original Sachs-Warner index (Sachs and Warner, 1995) the picture is a little different. Sri Lanka and India are included in the list of developing countries that had 'opened' by 1994 (after initial closure) and Bangladesh and Pakistan are in the list of countries that were still closed by 1994. But all four countries have liberalized, at least to a large degree. What really distinguishes them

is the speed at which they have liberalised their trade. So to appraise this more carefully we now consider some evidence for each country in turn. Table 1 provides some comparable evidence on trends in average tariff rates (unweighted) and the coverage ratios of NTBs over the period 1984-1993. These are crude measures and they do not necessarily cover the entire relevant periods for all four countries, but they are indicative of a general increasing trend in trade liberalization policies.

**Table 1** Pre- and Post-Uruguay Round Nontariff barriers for All Goods, 1984-93 (Coverage ratio of NTBs)

Country	1984-87	1988-90	1991-93
Bangladesh	49.4		
India	80.7	65.4	62.6
Pakistan	83.1	25.4	14.5
Sri Lanka	13.9	10.1	3.8

**Trends in Tariff Rates (unweighted, percent), 1980-99**

	Bangladesh	India	Pakistan	Sri Lanka
1981		74.3		
1982			77.6	
1983	99.9		77.0	41.3
1984			77.0	
1985			77.0	31.0
1986	81.8	100.0	66.0	
1987		98.8	68.9	27.3
1988	102.2		69.0	27.3
1989	94.0		65.0	
1990		81.8	64.8	28.3
1991	88.6	79.2	66.0	26.9
1992	71.0	53.0	61.1	25.0
1993	50.0	47.8	56.0	24.2
1994	42.0	47.8	51.0	26.0
1995		41.0	50.7	20.0
1996	27.4	38.7	41.7	
1997	24.6	35.0		20.0
1998	23.8	30.0	46.5	
1999	22.2	32.2		

Source: World Bank: ([http://publications.worldbank.org/catalog/content-download?revision\\_id=1526199](http://publications.worldbank.org/catalog/content-download?revision_id=1526199))



### *Pakistan*

Although Sachs and Warner (1995) list Pakistan as not having yet liberalized by 1994, some liberalization measures were introduced as early as 1981 with some dismantling of quotas on a range of imported goods, including capital goods. But the replacement of non-tariff barriers by tariffs from 1987-88 onwards combined with some reduction in tariff rates marked the beginning of the main era of trade liberalization. Table 2(a) shows that there was a marked shift in the decade of the 1980s in the percentage of industries where domestic prices exceeded import prices including tariffs towards those where domestic prices are lower. This is an indication of a reduction in non-tariff barriers in this period. During the 1990s there was a gradual but general reduction in tariff rates, the (weighted) average tariff rate declining from 22.2% to 13.3% over the decade from 1988 to 1998. The effect of a change in trade policy can sometimes be observed by changes in the openness ratios. The final panel in Table 2(a) shows a barely discernible change in openness over the period from 1984 to 2001. But this is an imperfect measure; so many other factors may be affecting the openness outcome besides tariff and quota reductions.

### *Bangladesh*

The move towards liberalization in Bangladesh commenced in 1979, although between 1979 and 1990 the reforms were introduced at a relatively slow rate. The trade reforms introduced during the 1980s were mainly geared towards rationalising and, to a lesser extent, reducing import tariffs and removing quantitative restrictions. From 1990 onwards Bangladesh embarked on much more liberal policy reforms, involving both trade and financial liberalisation, and privatization. Both the number of commodities subject to tariffs and quota restrictions and the

level of tariffs declined significantly between 1990 and 1999; Table 2(b) shows the number of QRs in place fell by two thirds. Also, the average import tariffs declined (un-weighted) from over 57% to 20%. In the face of these quite dramatic changes the 1990 and 1995 the openness ratio increased quite sharply (from 17.3% to 25.0 %). However, in respect of some other facets of liberalisation, progress has been less pronounced. Foreign direct investment (FDI) (measured as a ratio of GDP), though rising during the first half of the 1990s, now averages only 0.03 percent of GDP which is only a 25% of the corresponding ratio for all developing countries and is only 75% of the ratio for South Asian countries. The pace of financial integration, measured by portfolio equity investment, is also very slow.

### *India*

The devaluation of the rupee by 20% in 1991 marked the beginning of a major trade liberalization programme in India. Table 2(c) records some evidence on tariffs and quotas in the subsequent period. In the pre-1990 period, India's trade policy regime was marked by a structure of high tariff levels, and especially by a range of non-tariff restrictions via import licenses. Some modest trade liberalization began in 1985 when there were some simplifications to the quotas, although restrictions were not removed, there were some simplifications. Tariff levels were reduced quite significantly over a period of seven years, the (weighted) average tariff rate falling from around 87% in 1990/91 to about 20% in 1997/98. Before liberalization, the top tariff was 400% and about 60% of tariffs were in the range 110-150%. But liberalization involved more than trade reform. Initially the exchange rate was highly over-valued and the devaluation in 1991 was a significant shock. Also with exchange controls applying to both capital and current

accounts, and there were restrictions on FDI flows into India. Both sets of restrictions have been relaxed and are recognized as key elements of the reform package.

### *Sri Lanka*

Sri Lanka embarked on a series of trade reform measures in 1977 when exchange control was removed. Prior to this, the country faced a complex structure of tariff and non-tariff measures, with 19 major tariff bands with tariff rates as high as 500%. Many import quotas were removed in 1977, the 19 tariff bands were reduced to 6 in 1978 (top rate of 100%) and by 1995 were further reduced to 3 bands (top rate of 35%). Similarly, export controls and duties were also gradually reduced; duties on all minor agricultural exports (that is, with the exception of tea, coconut and rubber) were abolished by 1988, and the duties on major agricultural exports were removed in 1992. The main feature of Sri Lanka's liberalization is not so much the degree and intensity of reform but the relatively long time horizon over which the reforms were introduced. In terms of the openness ratio (an outcome measure) Table 2(d) shows some rather mixed results. At face value, the ratio leaps from 34.7% in 1977 to 65.4% in 1978, presumably as a direct result of the initial relaxation of exchange and import controls. But after 1978 neither the total (X plus M) nor the individual ratios show clearly discernible trends. This again illustrates the general point that outcomes may subsume both the effects of the policy instruments, as well as a complexity of responses.

Table 2(a) Trade liberalization in Pakistan

Tariff Structure by Commodity Group					
Years	Final goods		Raw Materials		Weighted Average
	Capital goods	Consumer goods	Capital goods	Consumer goods	
1980-81	32.15	28.42	34.06	13.79	22.06
1984-85	15.02	17.66	94.09	12.94	19.19
1987-88	19.54	24.56	31.92	19.53	22.22
1988-89	18.55	14.32	24.38	18.38	17.37
1989-90	19.77	11.53	23.32	20.12	17.48
1994-95	12.48	13.90	31.56	20.85	17.84
1997-98	8.31	11.10	19.27	16.22	13.30

Percentage of industries protected by tariff and non-tariff barriers

Impact of protection on domestic producers prices	Percentage of industries affected in	
	1980-81	1990-91
Domestic prices are higher than c.i.f. import prices plus tariffs plus sales tax	34.4	2.0
Domestic prices are lower than c.i.f. import prices plus tariffs plus sales tax	57.8	71.7
Domestic prices are equal to c.i.f. import prices plus tariffs plus sales tax	7.8	26.3

Openness ratios: Pakistan

Year	M/GDP <sub>mp</sub>	X/GDP <sub>mp</sub>	Openness ratio
1984-85	22.60	10.57	33.17
1985-86	20.11	12.30	32.41
1986-87	19.09	13.81	32.90
1987-88	19.43	13.86	33.28
1988-89	20.35	14.07	34.42
1989-90	20.25	14.79	35.03
1990-91	18.49	16.93	35.42
1991-92	20.42	17.27	37.69
1992-93	22.30	16.20	38.50
1993-94	18.90	16.16	35.06
1994-95	19.26	16.57	35.82
1995-96	21.21	16.73	37.94
1996-97	20.52	15.89	36.42
1997-98	17.53	16.48	34.01
1998-99	16.97	15.35	32.32
1999-00	17.76	16.16	33.92
2000-01	19.38	17.40	36.78

Source: Data provided by R Siddqui

**Table 2(b) Trade liberalization in Bangladesh**

**Import Liberalization in Bangladesh**

<b>A. Quantitative Restrictions (QRs)</b>					
<b>Period</b>	<b>Total QRs in place<sup>a</sup></b>	<b>Trade reasons</b>			<b>Non-trade reasons</b>
		<b>Banned</b>	<b>Restricted</b>	<b>Mixed</b>	
1989/90	315	135	66	52	62
1990/91	239	93	47	39	60
1995/97	115	5	6	12	92

  

<b>B. Average Import Tariffs</b>		
<b>Period</b>	<b>Un-weighted</b>	<b>Import-weighted</b>
1991/92	57.3	24.1
1992/93	47.4	23.6
1993/94	36.0	24.1
1994/95	25.9	20.8
1995/96	22.3	17.0
1996/97	21.5	18.0
1998/99	20.2	14.1

<sup>a</sup> There are a total of 1,240 four digit tariff headings under the Harmonized System.

**Openness Ratios: Bangladesh**

	<b>1990/91</b>	<b>1991/92</b>	<b>1992/93</b>	<b>1993/94</b>	<b>1994/95</b>	<b>1995/96</b>
Imports/GDP	11.12	11.22	12.70	13.31	15.50	15.63
Exports/GDP	6.15	6.37	7.41	8.05	9.21	9.35
Openness ratio	17.27	17.59	20.11	21.36	24.71	24.98

Source: Data provided by M Mujeri

**Table 2(c) Trade liberalization in India**

**Average tariff structure**

	1990-91	1993-94	1995-96	1996-97	1997-98	1999-00	2000-01
Unweighted	125	71	41	39	35		
Weighted	87	47	25	22	20		
Consumer goods	153	86	36	33	25		
Intermediate goods	77	42	22	19	18		
Capital goods	97	50	29	29	24		
Maximum tariff rate	355	85	50	52	45	40	35

**NTBs on imports**

Types of NTBs	1998-99		1999-00	
	Products	%share	Products	%share
Free	7213	70.2	8170	79.3
NTBs	3068	29.8	2134	20.7
Prohibited	59	0.6		
Restricted	2831	27.5		
TOTAL	10281	100	10304	100

**Openness ratios: India**

	1982	1987	1991	1992	1995	1996	1997	1998
X/GDP	0.064	0.061	0.091	0.095	0.110	0.106	0.108	0.111
M/GDP	0.088	0.075	0.091	0.103	0.122	0.118	0.121	0.126
Openness ratio	0.153	0.136	0.182	0.198	0.233	0.224	0.230	0.238

Source: Data provided by B Pradhan

Table 2(d)

**Trade liberalization in Sri Lanka****Trade liberalization in Sri Lanka: Milestones**

## Imports:

1977: Imports were liberalized except for 150 items

1981: Private sector was allowed to import sugar and rice.

1987: Textile imports were liberalized.

1996: Only 223 items were under import license out of 6000 items.

## Exports:

1977: 21 items under export control

1987: 11 items under export control

1994: 4 items under export control

## Tariffs:

1978: Six band tariff rates 0%-5%-12.5%-25%-50%-100%

1980: Turn-over tax on domestic industry, 2%-5%-10%.

1987: Four band tariff, range from 5% to 60%

1993: Maximum import duty 50%

1994: Four band tariff, 10%-20%-35%-45%

1995: Three band tariff, 35%-20%-10%

Export duties were abolished in 1992.

**Openness ratios: Sri Lanka**

Year	X/GDP	M/GDP	Openness ratio
1977	18.23	16.50	34.73
1978	30.95	34.42	65.38
1979	29.17	43.03	72.19
1980	26.45	51.02	77.47
1981	24.76	43.04	67.79
1982	21.62	42.27	63.89
1983	20.64	37.47	58.10
1984	24.29	30.92	55.21
1985	22.30	33.29	55.58
1986	18.98	30.40	49.38
1987	20.91	30.77	51.68
1988	21.14	32.00	53.14
1989	22.30	31.85	54.15
1990	24.70	33.48	58.18
1991	22.08	34.01	56.10
1992	25.36	36.11	61.47
1993	27.66	38.74	66.40
1994	27.38	40.68	68.06
1995	29.22	40.76	69.98
1996	29.50	38.94	68.44

Source: Data provided by J Weerahewa

### 3. Identifying poverty responses in an era of globalization

The broad picture on the changes in absolute and relative poverty experienced during the last two decades in each of the four South Asian countries under study can be set against the background of their records on globalization. As discussed extensively elsewhere (Ravallion, 1993), it is usually quite difficult to provide a clear and unequivocal assessment of either the level or change in poverty. For example, there are issues about whether we refer to income (or consumption) based measures, or whether we should take into consideration broader social indicators (health, mortality, literacy, etc.). Comparative modeling work based on income or other money-metric measures is more tractable. However, even if we confine ourselves to these there are still many alternative poverty measures (headcount, poverty gap, and other  $P_\alpha$  measures, etc.) that can be used to assess changes in poverty. So in this context, the aim is not to present a comprehensive or definitive profile of changes in poverty in each country but, instead, to provide some overall indications of the magnitude and directions of change, distilled from the individual project material. In most cases the evidence is predominantly based on the authors' own poverty assessments carried out under the MIMAP project.

#### *Pakistan*

Evidence on changes in poverty in Pakistan (see Table 3(a)) suggests that in the period from the mid 1980s through to the early 1990s, absolute poverty (measured by the headcount ratio, and based on consumption measures and local and international poverty lines) declined substantially. But then from 1992/3 there was a period of high volatility in these measures although they are set in the context of a rising trend. Measures of relative poverty and inequality tell a similar



story. The Gini coefficient was fairly constant throughout much of the period, although it declined slightly from 1984/5 through to 1996/7, but was then followed by a steep rise between 1996/7 and 1998/9. Other manifestations of relative poverty, such as urban-rural differences, suggest a similar decline during the period before 1987/88 followed by an increase in the later period.

### *Bangladesh*

The picture concerning the changes in poverty and inequality over the period from the early 1980s through to the mid to late 1990s (Table 3(b)) reveals fairly clear evidence that the level of absolute poverty has fallen in Bangladesh, while there is some evidence that inequality appears to be increasing. Based on detailed evidence from Household Expenditure Surveys conducted at intervals of two or three years from 1983/84 through to 1995/96, and extended through to 1999 using the Poverty Monitoring Survey (Mujeri and Khondker, 2000a), the headcount index has fallen quite sharply. These trends are quite robust irrespective of the choice of the absolute poverty line ('poor' and 'hard core' poor). Taking the broad sweep of results into account the headcount index has fallen from around 63% in 1983/4 down to 45% in 1999. A similar trend is found in both urban and rural areas, although the downward trend in rural areas seems less pronounced and this is significant because this is where the overwhelming majority of the poor live.

### *India*

The assessment of changes in poverty in India has been the subject of much ongoing debate. Clearly, as over 25% of the World's poor live in India (under World Bank estimates), estimates

of the change as well as the level of poverty in India will be highly significant to global estimates. But as Deaton (2001, 2002) has explained, there is much uncertainty about recent poverty estimates. Large-scale household surveys have been infrequent; the recent release of the 1999-2000 consumption survey was the first since 1993-94, and there have been major revisions to the latest survey questionnaire which make comparisons between them difficult. The trend has been downwards, Table 3(c) confirms the outcome on absolute poverty measured by headcount ratios up to 1997. The situation since then, based on smaller ('thin') surveys indicate poverty may be rising. But Deaton has re-estimated the headcount ratios on the basis of the 1999-2000 survey and confirms a continuing downward trend, reaching 28 percent in comparable terms in that year. Measures of inequality are less available and are no more certain. The second panel, showing Gini ratios for urban and rural areas separately, indicate a slight decline, although this is within the range of year on year fluctuations. A sizeable portion of national inequality can be attributed to 'between rural and urban areas' inequality.

### *Sri Lanka*

Poverty profiles of Sri Lanka have often been viewed in much broader terms than simply income and/or consumption. Human development, as measured by the HDI, has been notably higher than would usually be expected of Sri Lanka's level of income per capita and is similar to the HDI scores of higher income economies. Table 3(d) sets out some comparable data on poverty and inequality beginning in 1980-81, which is some way into the liberalization period. After some apparent initial increase in absolute poverty during the early 1980s (except in the Estate sector) there is evidence of a decline in the second half of the 1980s, and a further reversal in the first half of the 1990s. Overall (i.e. national) inequality shows a slight increase and then a

decrease over the same period, although there is a good deal of variation within the urban, rural and estate sectors, suggesting that there may be problems of comparability between survey results. The results confirm how difficult it is to generate comparable poverty statistics and to discern trends and movements over time. Gunetilleke (2000) reports on a growing awareness, in Sri Lanka, of relative deprivation and of broader perceptions of poverty than is captured in headcount ratios and Gini coefficients. This further exacerbates the difficulties of assessing linkage between policies and outcomes.

**Table 3(a): Poverty Trends in Pakistan**

*Absolute poverty and inequality*

<b>Year</b>	<b>Headcount ratios</b>	<b>Gini (household)</b>	<b>Ratio highest 20% to lowest 20%</b>
1963-64	40.2	0.386	7.1
1966-67	44.5	0.355	5.7
1969-70	46.2	0.336	5.2
1971-72		0.345	5.4
1979-80	30.7	0.373	6.1
1984-85		0.369	6.2
1985-86			5.8
1986-87	28.6		5.5
1987-88	29.2	0.348	5.5
1990-91	29.4	0.407	8.6
1992-93	35.9		7.8
1993-94	35.7	0.348	7.3
1996-97	*	0.407	7.1

Source: Data provided by R Siddiqui

**Table 3(b): Poverty trends in Bangladesh***Absolute poverty*

Year	Headcount ratios (Rural)	Headcount ratios (Urban)	Headcount ratios (National)
1983-84	61.9	67.7	62.6
1985-86	54.7	62.6	55.7
1988-89	47.8	47.6	47.8
1991-92	47.6	46.7	47.5
1995-96	47.1	49.7	47.9
1996	47.9	44.4	47.0
1997	46.8	43.4	46.0
1998	47.6	44.3	46.7
1999	44.9	43.3	44.7

*Inequality*

Year	Gini (household) (Rural)	Gini (household) (Urban)	Gini (household) (National)
1983-84	0.350	0.370	0.360
1985-86	0.360	0.370	0.370
1988-89	0.368	0.381	0.379
1991-92	0.364	0.394	0.388
1995-96	0.384	0.444	0.432
1996	0.430	0.380	0.430
1997			
1998	0.370	0.310	0.370

Source: Data provided by M Mujeri

**Table 3(c) Poverty trends in India***Absolute poverty*

Year	Headcount ratios (Rural)	Headcount ratios (Urban)	Headcount ratios (National)
1977-78	50.6	40.5	48.4
1983	45.3	35.7	43.0
1986-87	38.8	34.3	37.7
1989-90	34.3	33.4	34.1
1991	37.4	33.2	36.3
1992	43.5	33.7	40.9
1993-94	36.7	30.5	35.0
1994-95	39.8	33.5	38.5
1995-96	37.5	28.0	35.0
1997	35.6	30.0	34.4

*Inequality*

Year	Gini ratios (Rural)	Gini ratios (Urban)	Gini ratios (National)
1973-74	0.276	0.301	
1977-78	0.339	0.385	
1983-84	0.298	0.330	
1987-88	0.298	0.354	
1993-94	0.282	0.339	

Source: Data provided by J Weerahewa

**Table 3(d): Poverty trends in Sri Lanka**

*Absolute poverty*

Year	Headcount ratios (Urban)	Headcount ratios (Rural)	Headcount ratios (Estate)	Headcount ratios (national)
1980-81	16.9	25.9	25.0	*
1985-86	18.4	35.6	20.5	30.9
1990-91	15.0	22.0	12.4	19.9
1995-96	14.7	27.0	24.9	25.2

Source: Department of Census and Statistics; data provided by J Weerahewa

*Inequality*

Year	Gini (household) (Urban)	Gini (household) (Rural)	Gini (household) (Estate)	Gini (household) (national)
1980-81	0.44	0.38	0.27	0.43
1985-86	0.48	0.43	0.31	0.46
1990-91	0.62	0.42	0.25	0.47
1995-96	0.46	0.48	0.44	0.48
1996-97*	0.47	0.40	0.27	0.43

Source: Department of Census and Statistics (data based on spending units)  
Data provided by J Weerahewa

#### **4. Evaluating the mechanisms of globalization-poverty linkage in South Asia**

After assessing the data on changes in poverty in South Asian economies and liberalization episodes (taken for the purposes here as the globalization shocks), the next step is to assess what form the linkage actually takes. The central difficulty is that the data outcome that is observed reflects the combined influence of several factors, some of which are seemingly unconnected with liberalization per se. Some form of counterfactual analysis is therefore needed to isolate the component of the overall change that is attributed to globalization influences.

If, for now, we take globalization to be equated with trade liberalization, primarily in the South Asian countries but also in OECD export markets, a number of channels of influence on inequality can be identified.

### *Tariff-based liberalization*

The central form of linkage to poverty from tariff-based liberalization discussed in the theoretical literature is from relative goods prices which change as tariffs fall to factor prices. These effects are associated with Stolper and Samuelson (1941) who provided conditions under which the factor that is intensive in the production of the imported good would lose. Stolper-Samuelson effects in the South Asian case would therefore appear as a reduction in the relative return to labour used in protected sectors, typically more skilled labour. These effects are widely thought to be pro-poor.

Many other related effects also arise however. If the rich purchase relatively more of the imported good, then reductions in tariffs will be more beneficial to them on the demand side. If there are fixed, or specific, factors used in production, then the owners of these factors rather than owners of factors more generally will be the losers. Depending upon how tariff revenues are, or are not, replaced various distributional effects will follow. Replacing revenues using a progressive income tax will have different effects from a VAT or payroll tax, for instance. If quotas remain in effect as tariffs are changed, their effects are only lump sum since they merely affect the value of the quota rents. Other distortions in the economy can be germane. If there is average product pricing of labour in the traditional (agricultural) sector and marginal product pricing of labour in the modern sector, then tariffs can affect these distortions and intersectoral migration patterns change with policy change.

### *Quota-based Liberalization*

The South Asian economies were also characterized, pre-liberalization, by extensive use of both tariffs and non-tariff measures in the form of quotas and other trade restraints. Quotas, however, when changed, can produce quite different effects on poverty than from tariffs. A number of sub-cases can be identified.

One case is where import quotas are merely allocated by national governments, so recipients of quotas also receive quota rents. In this case, trade liberalization that removes the quotas also takes away the quota rents. If quotas are allocated to the rich, such liberalization becomes pro-poor in its income redistribution effects, in addition to having the relative goods and factor prices effects noted above for the tariff case.

Another case is where the quotas are auctioned by governments, so that in this case revenues accrue very much like the tariff case. In these situations, the poverty implications of tariff and quota based liberalization become very similar.

Yet another case is where quotas are sought after via rent-seeking behaviour that uses real resources. Examples would be taking on surplus labour to demonstrate unemployment in the enterprise so that a licensing board will allocate quotas for imports of machinery. Such instances are discussed for India pre-liberalization in Mohammed and Whalley (1984) who for India in the 1970s put rent-seeking costs for all major policy interventions in India (not just trade) at 15-40% of GDP. If rent-seeking accompanies trade-based quotas, then no revenues accrue to either the private sector or to government and no income effects arise directly from quota removal.

### *Economy Wide Models*

The ways in which these elements of linkage can be investigated usually involve the use of numerical simulation models, typically of the general equilibrium variety. Econometric methods are unable to deal with the richness of the underlying structural forms involved and generally are not used. Numerical simulation and computable general equilibrium modelling approaches are much more useful for counterfactual analysis.

The typical procedure is to build a model with goods and factors, with trade in goods but no trade in factors. Such models are usually calibrated to a base year data set around which counterfactual equilibrium analysis is performed (see Shoven and Whalley, 1992). The counterfactuals typically involve the removal or reduction of tariffs and quotas, with an equal yield replacement tax in the tariff case (often a VAT surcharge).

Increasingly, these models are being used in double calibration mode with calibration taking place to a pair of years' data. This is because the use of the model is ex post rather than ex ante; seeing how important one of a number of components of a combined change are for a change that has occurred (such as a change in inequality). The methods used for this are discussed in Abrego and Whalley (2002).

Many issues arise with using these models. One is that the precise structural form used can, to a large degree, predetermine the conclusions. Models with fixed factors, for instance, tend to yield concentrated outcomes from liberalization, while models with mobile factors yield smaller but



broader economy-wide effects. Short run models with adjustment costs can produce sharply different implications from longer run models without them (see Edwards and Whalley, 2002).

Another is that results are parameter dependent. Typically, a subset of key model parameters are pre-selected (such as key elasticities of substitution) and liberalization impacts change as parameter values change, often quite sharply. General results are thus typically not generated by numerical simulation. Results are indicative rather than definitive.

Yet another issue is how poverty is analyzed using these approaches. The typical model tends to analyze factor price effects (such as the differential between skilled and unskilled wage rates) rather than a broader concept of income including capital income and transfers and taxes. Siddiqui's (2002a) data for Pakistan suggests a high income share for capital income (perhaps 30% in aggregate) indicating how partial this approach is. Some modelling efforts (such as Cockburn, 2001) have attempted to add micro-simulation detail to conventional factor income type analyses. These approaches allow for calculations of movement of individual incomes above and below the poverty line, and other broader measures of income change.

#### *Results from models*

In Table 4, we have attempted to summarize some of the results from a sample of numerical simulation models used to analyze globalization-poverty linkages, mainly in South Asian countries, but with Vietnam added due to its policy relevance.

**Table 4 Recent Numerical Models Evaluating Linkage Between Trade Liberalization and Poverty**

<b>Author</b>	<b>Country</b>	<b>Type of Model</b>	<b>Base Year Data Used in Calibration</b>	<b>Conclusion</b>
Weerahewa (2002a)	Sri Lanka	Static 2 sector Ricardo-Viner type model	Double calibration to pairs of years (1977, 1994, 2000)	Trade plays no essential role in explaining poverty change (either relative or absolute). Technical change and endowment changes are the main drivers.
Khondker and Mujeri (2002b)	Bangladesh	Static 2 sector Ricardo-Viner type model	Double calibration to 1985 and 1996 data	Trade is the minor determinant of poverty change compared to technical change and endowment growth
Siddiqui and Kemal (2002a)	Pakistan	Static 11 sector Ricardo-Viner type model	Single calibration to data for 1989-90 and forward projections	Non-globalization variables are key to understanding how globalization affects poverty measures. Model runs including or excluding remittance changes alter the sign of effects
Pradhan et al (2002b)	India	Static 13 sector Ricardo-Viner type model	Single calibration to data for 1994 and forward projections	Trade policy change has small impact on poverty effects
Chan et al (2001)	Vietnam	Static 12 sector fixed factor model	Single calibration to data for 1997 and forward projection	Trade policy change is pro-rich, since in Vietnam consumption data suggest the rich buy proportionately more imports than the poor

Three of these (Weerahewa, 2002a, Mujeri and Khondker, 2002b, and Pradhan, 2002a) use double-calibration techniques for simple models of Sri Lanka, Bangladesh and India respectively to analyze the relative importance of trade, technical change, and endowment change as determinants of inequality change. They take liberalization to be given by the actual tariff and quota changes from the years that are analyzed, looking at revenue-preserving change.

A feature of these models is that they all embody some degree of factor specificity. This is due to a general model feature that if models capture all factors as being fully mobile across sectors then typically only a relatively small range of factor price changes can be accommodated as resulting from a goods price change without encountering problems of equalisation. These problems are also noted in Johnson (1966) and Abrego and Whalley (2001) and are widely accepted in the modelling literature. As a result, pure Stolper-Samuelson effects do not show through from these models as rewards to fixed factors are involved.

Nonetheless, these studies all point to the conclusion that the influences of trade-based liberalization, and of trade in general, on both absolute and relative poverty (i.e. inequality) are quite small. This is the strong and broad conclusion from these studies.

Other results shed further light on this conclusion. Siddiqui and Kemal (2002a) show how, in the Pakistan case, there is a clear and potentially major role for excluded variables in the analysis of linkage. In the early 1990s both absolute and relative poverty increased in Pakistan. But this occurred along with a reduction in remittances that tend to go heavily to the poor (as a percentage of income). If the remittance change is removed from the analysis then trade changes alone generate an opposite effect both on absolute and relative poverty.

Table 4 also refers to results from a Vietnam model project, which, while not for South Asia, are also germane to the cases here. These results show trade policy changes to be pro-rich because household budget data show that expenditure shares on imports are significantly higher for the rich than for the poor.

Other studies, not cited in Table 4, shed further light on these linkages. Pradhan (2002a) analyzes both tariff-based and quota-based liberalization in India, showing how impacts on inequality measures under liberalization change. Siddiqui and Kemal (2002b) analyze the poverty impacts of trade liberalization under scenarios where capital flows are also liberalized at the same time, concluding that relatively little added impact occurs. Weerahewa (2002b) analyzes how outward trade surges in textiles and apparel from Sri Lanka impact on the relative

male-female ratio, concluding that outward orientation has served to partially lower the gap in this case. Bussolo and Whalley (2002) show how in the Indian case, changes in transaction costs that occur contemporaneously with trade liberalization also serve to impact on relative wage inequality, particularly when it is factor biased in effect.

## **5. Conclusions**

Globalization shocks in South Asia appear worthy of careful study because, to the outside observer, they appear to have occurred dramatically and to be concentrated over a relatively short time period. If there are discernible impacts of globalization on poverty measures, then surely they could show through in these cases. Here, we examine the four cases of Pakistan, Sri Lanka, India and Bangladesh over the 1980s and 1990s.

At first sight, they seem to be cases of declining absolute poverty, which accelerates some time after liberalization, and relatively constant inequality. There are departures from this situation, rising absolute and relative poverty in Pakistan, and a few years of rising relative poverty in Bangladesh. All in all, at a broad sweep of the brush the picture seems to be one of almost no impact on relative poverty, and some acceleration (through higher growth) on absolute poverty. However, separating out the linkages from other effects and influences, many problems are encountered. There are conceptual problems with measuring and dating liberalization. These are measurement and data problems in ascertaining exactly what has happened to poverty changes over the time period, especially with regard to different measures and income concepts. There are problems with model-based analyses. Model structures make a difference, as does the

precise liberalization experiment used. Hence, even in a case where, at first sight, the linkages between globalization and poverty are seemingly exposible, conceptual, data, and modelling issues preclude overly firm conclusions. Specificity of experiment, model, and other factors all matter. The debate on globalization and poverty linkages appears to be pitched at too general a level even in these cases to be able to draw firm conclusions.

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