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ABSTRACT

The link between trade liberalisation and poverty has become one of the most debated topics in international trade and development in recent years. Despite theoretical predictions to the contrary, there is persistent concern among policy analysts and policy makers that trade liberalisation may have an adverse impact on poverty in developing countries. The purpose of this paper is to conduct an interpretive survey of the relevant literature, with an emphasis on the South Asian experience. The key finding is that there is no unique answer to the question of whether trade liberalisation reduces poverty or otherwise in the South Asian region. Empirical studies have provided contradictory results, with some studies concluding that trade liberalisation reduces poverty and others finding that trade liberalisation increases poverty. Trade liberalisation produces some winners in some countries, but there are also losers, especially where labour regulations are inflexible. All in all, trade liberalisation is not a “magic bullet” in reducing poverty; indeed, it could potentially contribute to poverty. Thus, as advocated by a number of authors, in implementing trade policy changes, it is essential to maintain complementary policies to combat poverty.

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1. Introduction

The link between trade liberalisation and poverty has arguably become one of the most debated topics in international trade and development in recent years, for a number of reasons. Firstly, poverty reduction has remained a key priority of national governments and multilateral institutions such as the UN and the World Bank since the setting of millennium development goals (MDGs) by the United Nations (UN). According to MDG 1 (the poverty goal), the world would reduce absolute poverty by half between 1990 and 2015 on the basis of the international poverty line (using the US$1-a-day poverty line). Secondly, poverty has become an important issue as a result of the social and political consequences of rapid globalisation (UNCTAD, 2004, p.68). In a recent report, UNCTAD (2004, p.67) argued that trade can play an important role in reducing poverty in both least developed and developing countries, although the link between trade and poverty is not clear and automatic. Finally, recent food price rises and the global financial crisis have made achieving MDG 1 even more challenging for policy makers in developing countries and for international organisations.

The current debate on this topic centres on the question of how trade liberalisation affects poverty. Some argue that trade liberalisation is good for the poor; others, that it is not. In between there are some who maintain that it can be good for the poor if implemented with correct complementary policies. Concerns regarding the effects of trade liberalisation have generated an extensive literature. Not long ago Hertel et al., (2003, p.1299) noted that “the analysis of [a] link between trade reform and poverty is in [its] infancy, but considerable progress has been made in recent years”. Since then, the literature has continued to grow rapidly. Research projects launched by well-known economists around the world have contributed to this. Several edited book volumes (for example, Bussolo and Round, 2006; Hertel and Winters, 2006; Nissanke and Thorbecke, 2007; Harrison, 2007), as well as numerous book chapters and research papers, have been published on the link between poverty and either trade liberalisation or globalisation. Correspondingly, a number of literature reviews have also been conducted (Bannister and Thugge, 2001; Hertel and Reimer, 2002; Goldberg and Pavcnik, 2004; Winters, et al., 2004; Goldberg and Pavcnik, 2007).
There is persistent concern among some policy analysts and policy makers that trade liberalisation may have an adverse impact on poverty in developing countries, such as those in South Asia. Over the last two decades or so, countries in this region have implemented substantial trade policy reforms, moving away from protectionist trade regimes. During that time, the region has also grown faster than most other regions of the world (except for South East Asia). As a result, the overall absolute poverty ratio in the region has fallen. Yet the region is still home to around 43 per cent of the world's poor. Moreover, to date there has been no comprehensive review of the available evidence on the link between trade liberalisation and poverty in South Asia. Thus, an examination of this link in the South Asian context is warranted. Accordingly, the objectives of this interpretive survey are: to provide a brief overview of the trade liberalisation process in South Asia; to examine the stylised facts on poverty in South Asia; to critically review the empirical literature relating specifically to South Asia concerning the link between trade and poverty; and to draw lessons from the South Asian experience.

The rest of the paper is structured as follows. Section 2 provides a brief overview on trade liberalisation in South Asian countries, and the stylised facts on poverty in South Asia are presented in Section 3. Section 4 then presents a brief review of the general literature on the channels or mechanisms through which trade liberalisation affects poverty, as well as the empirical literature concerning the trade-poverty link in South Asia. The final section summarises findings, draws lessons from past experiences and presents policy options.

2. Trade Liberalisation in South Asia: An Overview

After implementing protectionist trade regimes until the late 1980s (except Sri Lanka, which opened the economy in 1977), many South Asian countries made substantial progress in opening their economies to the outside world by undertaking trade policy reforms from the late 1980a and 1990s. In recent years a number of studies have documented these reforms in general (see for example Pigato, et al, 1997; Bandara and McGillivray, 1998; Panagariya, 1999; World Bank, 2004 and 2007, ABD 2008). The main purpose of this section is to provide an overview on trade policy reforms drawing on the available literature. There are conceptual disagreements on the definition of trade liberalisation and measuring it. Nevertheless, there is a broader agreement on the relevance of measures such as removals of quantitative restrictions (QRs), moving from QRs to tariffs (tariffication), lowering average nominal tariffs, narrowing
the range of nominal and effective tariffs, real devaluation of currency, unifications of multiple exchange rates, removal of export taxes and other restrictions and implementations of export subsidies etc. South Asian countries implemented more inward-oriented policy regime and, in fact, these countries had one of most inward-oriented policy regimes in the world for more than four decades. These policy regimes included stringent trade barriers to international trade with high tariffs and QRs, restriction on foreign investment, large public sectors and pervasive state interventions. In the 1960s and 1970s, some of these countries experienced short-lived episodes of trade liberalisation. The 1980s experienced limited reforms driven principally by donors’ initiatives, which accelerated and gathered momentum in the 1990s. The common characteristic is that all these countries had highly protective trade regimes until the late 1980s (with the exception of short-lived trade liberalisation episodes and the 1977 trade policy reforms in Sri Lanka). Table 1 summarises the main features of current trade Policy regimes in South Asian countries.

Although most trade reforms in South Asian countries were initiated in the 1980s (with the exception of Sri Lanka), substantial progress was not made until the 1990s. During the 1995-1999, the average simple tariff rate in South Asia was the highest (around 25 percent) among all regions in the world. Although the region managed to reduce this high average tariff rate up to 13 percent by 2007, South Asia is still a highly protected region in the world according to World Trade Indicators 2008 (Islam and Zanini, 2008). Being a latecomer to integrate into the world economy South Asia is still regarded as a region with high protection than its trading partners and competitors. Timing and the pace of reform differ across eight countries (Afghanistan, Bhutan, Bangladesh, India, Maldives, Nepal, Pakistan and Sri Lanka) in the region (members of South Asian Association for Regional Corporation, SAARC). Individual countries’ experience can be summarised as follows by using information from a report on World Trade Indicators (Islam and Zanini, 2008).

After decades of conflicts and wars, Afghanistan inherited a highly protective and differential tariff regime in the early twenty first century. The Afghan government implemented a tariff reform package by simplifying the tariff structure and reducing tariff from a maximum of 150 percent to a range of 2.5 to 16 percent with six tariff slabs. By 2007 Afghanistan managed to reduce the average MFN tariff to 5.7 percent and the trade-weighted average tariff to 6.2 percent which were the lowest among South Asian countries. Although the maximum tariff rate has increased up to 40 percent recently, Afghanistan is trying to maintain a low tariff
regime and open up its economy to the region as well as outside the world. With the recent formation of a Western friendly government Afghanistan has been benefited from a number of tariff preferences offered by developed countries including trade preferences under the EU’s “Everything But Arms” initiative.

After the separation from Pakistan in 1971 Bangladesh adopted a protectionist trade regime during 1972-1980. This regime was characterised by an import licensing system and other restrictions under the Import Policy Orders (IPOs). Under structural adjustment programs the Bangladesh government began moderate trade policy reforms in 1980 and introduced substantial changes to the trade policy regime in 1984 by abolishing the import licensing system. Further comprehensive trade policy reforms were introduced in the 1990s. These reforms included removal of QRs, significant reductions in tariffs and moving from multiple to a unified and flexible exchange rate (see Raihan, 2008 for details). Although Bangladesh is still one of the least liberalised countries in the world in terms of Trade and Tariff Restrictiveness Index (TTRI), it managed to reduce the simple average tariff from 21.8 percent in the late 1990s to 14.6 percent in 2007 and the maximum tariff rate from 300 percent to 25 percent during the same period. While the trade integration index has continuously increased in recent years its share of FDI to GDP is still relatively low (see Table 1).

As a land-locked country, Bhutan followed India’s trade regime. It introduced structural reforms in the 1990s and initiated tariff reforms. Currently Bhutan is in the process of obtaining WTO membership. Although Bhutan was virtually a closed economy in the 1960s it has now become a small open economy as indicated by the trade integration index (118.8). More than 80 percent of Bhutan’s trade has been carried out under free trade agreements with India and Bangladesh. The Bhutanese government has given priority to gradual integration into the world economy as it is one of the main objectives in its ninth five year plan (2002-2007) and its draft tenth five year plan (2008-2013). The current tariff system contains eight slabs and tariffs are ranging from 0-100. Bhutan’s simple average tariff was around 21.9 percent in 2007 which was the highest in the region.

After independence India adopted a highly protectionist trade regime until the 1980s. In the 1980s the government introduced some liberalisation measures. However, the continuous gradual trade liberalisation process began in 1991. South Asian integration into the world has largely been driven by Indian reforms since India is the biggest economy in the region and the
dependence of small economies like Bhutan and Nepal on India. It has reduced tariff protection substantially since the 1990s and its current simple average rate is around 14.5 percent which is still higher than other emerging economies like Brazil, China, Mexico and Russia. The import-weighted tariff average has declined to 7.8 percent. However, the average tariff rate on agricultural imports is still around 42 percent which is about seven times higher than the average tariff on non-agricultural product. There are high levels of nontariff restrictions in India as well. Trade liberalisation process is supported by the simplification of FDI rules. In addition, the government has introduced reforms in infrastructure, deregulation and restructuring of the financial and services sectors as complementary measures to trade reforms.

The Maldives had a protectionist trade regime until the late 1980s. It maintained significantly high tariffs and import restrictions for the purpose of raising government revenue and protecting government trading corporations. The Maldives began its policy shift towards outward-oriented, private sector-led growth strategy in 1989. It became a member of WTO and notified its trade policy commitments to WTO in 1995. Currently its simple average of MFN tariff is around 20 percent and the import-weighted tariff rate is around 22 percent. Although its average tariffs are among the highest in South Asian countries, it has been the most integrated economy into the world economy in the region in terms of the trade integration index (see Table 1).

The history of Nepal’s trade regimes has three distinctive episodes. There was a free trade regime since 1923 – 56 in Nepal and it moved towards a protectionist trade regime since 1956 similar to other South Asian countries. The period of 1956-1985 was protectionist trade regime and it started its liberalisation process in 1985. It has implemented a series of trade and market-oriented reforms process in the 1990s partly related to the process of Nepal’s WTO membership. It removed most of the QRs and licensing requirements during the trade liberalisation process over the last fifteen years or so. Nepal’s current simple average of tariff is around 12.6 percent and the import-weighted tariff average is around 14.4 percent. Because of the landlocked nature and the special relationship with India Nepal’s reform process was constrained and it has adopted a gradual liberalisation process.

Pakistan also adopted a protectionist trade regime until the 1980s with several short-lived partial liberalisation episodes in the 1960s and 1970s. It began a gradual liberalisation
programme after 1980 and it gathered momentum in the 1990s. Although the tariff protection in Pakistan is still high according to the world standard similar to other South Asian countries, it has reduced tariff substantially over the last two decade or so. Its simple average of tariff and import-weighted tariff rates are 14.1 percent and 15.3 percent, respectively. Pakistan has also managed to reduce high level of quantitative restrictions. Nearly hundred percent of its tariffs are now bound. Pakistan has also undertaken substantial liberalisation measures in services area.

Similar to India and Pakistan, since its independence in 1948 Sri Lanka continued with a liberalised trade regime until 1956. However, from the late 1950s to 1977 it implemented a protectionist trade policy regime (with the exception of a partial liberalisation episode of 1965-1970). It introduced a liberalised trade regime in 1977 and successive governments continued with the open economic policies. Sri Lanka is considered as the most open economy in the region as it is the first country in South Asia to implement comprehensive trade policy reforms in 1977. It maintains consistently lower average tariff rate than all other countries in the region. Its simple average of MFN tariff (around 11.4 percent) and import-weighted average of tariff (9.5) have been the lowest in the region (see Table 1). Trade in services has also been more open than other countries in the region.

In addition to unilateral trade liberalisation, the countries in the region have attempted to increase cooperation and trade among themselves by signing regional and bilateral trade agreements. In 1993, members of the South Asian Association of Regional Cooperation (SAARC) – Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka – signed the South Asian Preferential Trade Area (SAPTA) Agreement, which became operational in December 1995. SAPTA became SAFTA (South Asian Free Trade Agreement) in 2005. Because of less success of SAPTA and SAFTA, a number of bilateral FTAs have also been signed between countries in the region such as Indo-Sri Lanka FTA and Pakistan-Sri Lanka FTA.

In general, a number of common features of South Asian trade regimes can be identified.

- The region has made substantial progress on liberalizing trade regimes and cutting tariffs since the early 1990s when most of the countries started with reforms.
- A large number of QRs have been abolished.
• All countries have moved away from multiple exchange rate regimes to unified floating or managed floating exchange rate systems.

• The countries in the region reduced average tariffs from extremely high levels of the 60-100+ percent range in the early 1990s to much lower 6-21 percent range by 2007.

• Since the 1990s the countries in the region have also initiated bilateral and plurilateral PTA reducing tariffs further.

• Between 1990 and 2007, the trade integration index (trade as a percentage of GDP) has increased from below 15% to over 55% in India, from 25% to 42% in Pakistan, from 17.6 % to 56% in Bangladesh, from 23% to 59% in Nepal, and from 57% to 62% in Sri Lanka.

• While South Asian region has implemented substantial trade policy reforms since the 1990s, it is still the most protective region in the world.

• Although the region still needs to continue with trade reforms to reduce its protection, its unilateral trade liberalisation initiatives have slowed down.

• In countries like Sri Lanka the average tariff rate has gone up in recent years.

• The proliferation of para-tariffs and other trade-related taxes in some South Asian countries in the mid-2000 has become a disturbing trend.

• South Asia has one of the worst business environments among all regions in the world.

As summarised in this section, the South Asian region has made a considerable progress in trade liberalisation since the 1990s although it has a long way to go. As a result of this progress in trade policy area and integration into the world economy, South Asia’s trade has grown faster than any other region in the world over the last decade (mainly driven by significant performance of India’s exports and trade). South Asia has also become the second fastest growing region in the world. India, the largest economy in the region, is the second fastest growing economy in the world. The governments and the private sector in the region consider that strong performance in exports is the key for overall economic growth and poverty reduction, and export-led growth has become the main ingredient of economic strategy in each country. The next section will examine whether recent growth in the region has translated into the reduction in poverty in the region by using some stylised facts.
3. The Trade-Poverty Nexus in South Asia: Some Stylised Facts

As noted in the previous section, countries in the South Asia region have embarked on trade liberalisation programs since the late 1980s (Sri Lanka since the late 1970s), despite the long delay and the slow progress in trade liberalisation. As shown in Table 2, economies in the region have grown rapidly in recent years compared with other regions in the world. The region has entered the second decade of rapid economic growth (World Bank, 2006). As the World Bank (2006, p.4) further observes in a recent report, South Asian countries need to maintain a faster economic growth to end poverty in one generation. According to this report, income poverty in the region will fall to a single-digit level “if growth can be accelerated and sustained at 8 percent a year, and the fast response of poverty to growth is maintained”. Figures shown in Table 2 demonstrate that South Asia performed poorly during 1960–1980, well during 1980–2000 and very well during 2000–2005, in terms of growth, according to Salvatore (2007, p.637). However, poverty reduction remains the main challenge in the region, which, as shown in Table 2, is still far behind other regions in the world (except Sub-Saharan Africa) in terms of the average purchasing power parity (PPP) per capita income. It is also home to the largest proportion of the poor in the world (43.3%). Within this context, this section of the paper highlights important recent trends in poverty.

Although poverty is a multi-dimensional concept with longstanding controversial complexities related to its measurement, absolute poverty (Head Count Index) has now become a widely accepted yardstick for assessing the overall performance of poverty reduction in developing economies (Chen and Ravallion, 2007, p.2). Because of these complexities and measurement problems, different estimates are available in the literature. Data on absolute poverty have always been questionable. There are two ways of measuring absolute poverty; by using either national accounts data or data from national surveys.

Different studies and estimates using different methods have provided different numbers for poverty (see Kapalinsky, 2007 for a comparison). In this paper, internally consistent estimates of a time series (for nine “reference years”) based on survey data for regions developed by Chen and Ravallian (2007 and 2008) are used to explain the stylised facts related to South Asia in comparison with other regions in the world. The main poverty line used in the discussion is the $1.25 a day poverty line since it is more realistic and “consistent with the definition of poverty underlying prior international poverty lines used by the World Bank”
Poverty in South Asia has always been consistently high compared with other regions in the world except for Sub-Saharan Africa.

According to recent estimates, there has been a steady decline in poverty in South Asia, particularly in India, in terms of the proportion of population living on less than US$1.25 a day. However, India is still home to more than 456 million poor people: it is the only country in the world to provide a home for such a large number of poor.

Although the poverty rate has fallen from about 59.4% to 40.3% over the period of 1981–2005, it was not sufficient to reduce the number of poor in the region. In fact, the number of poor people in the region has increased by about 47 million between 1981 and 2005, while the world poor fell significantly by around 519.5 million during the same period.

The progress in poverty reduction, however, has been even slower in South Asia in terms of the US$2.50-a-day poverty line. In terms of this poverty line, more than 84.4% people in South Asia live in poverty.

In fact the number of poor living on less than US$2.50 a day is continuously increasing in South Asia during the period of 1981-2005, compared with declining trends in some other regions like East Asia and the Pacific.

In comparison with East Asia and the Pacific, in which the proportion of poor in terms of both poverty lines fell sharply, the South Asia region does not perform well.

As noted by Chen and Ravallion (2007, p.10) in their comments on overall poverty reduction in the world, the slow progress in reducing poverty in South Asia on the basis of the US$ 2-a-day poverty line indicates the increasing number of people who are living between $1 and $2 in South Asia. In other words, those people who escape poverty in the region cannot rapidly enter the “middle-class”.

The most striking trend is that the highest proportion of the world poor is living in South Asia and this proportion has increased from 28.9% in 1981 to 43.3% in 2005. In contrast, the same proportion has fallen from 56.5% to 22.9% in East Asia during the same period.

Table 3 shows the poverty trends in some individual countries in South Asia. Although scattered data are available on poverty in these countries from different sources, they are not
consistent. Recently established *pov*al*Net* web site of the World Bank (http://econ.worldbank.org/povcalnet) can be used to generate a consistent series of poverty data for individual countries. These series are shown in Table 3. A number of important points can be identified in relation to poverty trends in South Asian countries.

- Poverty head count index has fallen significantly in Bhutan, India, Nepal, Pakistan and Sri Lanka.
- Surprisingly, Pakistan and Sri Lanka have been the most successful countries in the region in reducing poverty according to data generated by the *pov*al*Net* (while the poverty head count index has fallen from 72.9 to 22.59 in Pakistan during the period between 1981 and 2005, it has fallen from 31.01 to 10.33 in Sri Lanka for the same period).
- The head count index has fallen in both rural and urban areas in India.
- In contrast to other countries in the region, Bangladesh poverty rate has increased from 44% in 1981 to 50% in 2005.

Looking beyond the aggregates, it is important to examine the composition and geographical distribution of the poor in South Asian countries. While appreciating the decline in the proportion of the poor in these countries over the last two decades, some observers have raised concerns on rising inequalities among different segments in these countries. For example, observing the recent Indian experience, Rajan (2006, p.55) notes that “rising inequality between rural and urban areas, fast-growing and slow-growing states, forward castes and backward castes” has been a major concern in India. A recent World Bank (2006, p.9) study has further emphasised this point, stating that “poverty in South Asia will increasingly be concentrated in lagging regions, stagnant sectors, disadvantaged ethnic and caste groups and vulnerable populations”.

Poverty in rural areas has long been a concern in these countries. Table 3 demonstrates the existence of wide disparities between rural and urban poverty ratios in India. The poverty ratio in the rural sector is higher than that of the urban sector India. Further, the number of people living in rural poverty has increased over the time, compared with the falling trend in East Asia, particularly in China. According to the estimates of Ravallion, et al., (2007), the number of poor living in the rural sector has increased from 384.99 million to 407.03 million between 1993 and 2002 in the region. According to their estimates, South Asia is also one of the two
regions with the highest urban poverty across regions, with its approximately 46% of the total world urban poor in terms of the US$1-a-day poverty line.

There is a huge variation in the poverty ratio across states or provinces in these countries. For example, five poor states in India (Bihar, Uttar Pradesh, Madhya Pradesh, Orissa and Rajasthan) are lagging behind states in South and West India; creating regional disparities (see Datt and Ravallion, 2002 and World Bank, 2006). Similarly, Balochistan and the North West Frontier province are poorer than the rich Punjab province in Pakistan. In Sri Lanka, Southern, Northern, Eastern, Sabaragamuwa and Uva provinces are lagging behind the Western province (see World Bank, 2007). In all of these countries, poverty is a major problem in poor states and provinces.

The above stylised facts reflect that poverty is still a serious concern in South Asia despite the fall in poverty in terms of the US$1.25-a-day poverty line. What are the prospects of achieving the MDG of halving the proportion of people in extreme poverty between 1990 and 2015 in South Asia? Conflicting evidence is emerging from different values of poverty lines. For example, as suggested by Chen and Ravallion (2008, p.22), if the current trend were to continue until 2015, the poverty rate would fall to 32.5% in terms of the poverty line of $1.25 per day. In other words, South Asia can not achieve MDG (reducing 51.7% of poverty rate in 1990 by half by 2015) without a higher trend rate of poverty reduction. However, as Chen and Ravallion (2008, p.22) further point out, the poverty rate would fall to 15.7% by 2015 and South Asia is on track of achieving MDG in terms of a lower poverty line of $1.00 per day at 2005 prices.

4. The Trade–Poverty Nexus in South Asia: What does the Empirical Literature really tell us?

Measuring the effects of trade liberalisation on poverty is complex because of the indirectiveness of the different mechanisms through which trade liberalisation affects poverty. For instance, trade liberalisation affects both relative prices of goods and services and factors of production, and in turn both aggregate income of household and investment and saving decisions creating inter-temporal effects. It may also alter government income and expenditure. The effects of trade liberalisation also depend on rural infrastructure and market
structures (see Coxhead, 2003). Because of all of these complexities, there is a heated debate over selecting empirical methods to investigate the trade-poverty link in the literature. As reviewed by many authors, establishing the trade and poverty nexus is an even more difficult task. As Goldberg and Pavcnik (2004, p.250) note:

… perhaps a more manageable approach is to relate changes in trade policy to particular phenomena that are highly correlated with poverty. To this end, it is instructive to first understand through which channels poverty can be affected.

Following the conceptual framework in decomposing the trade and poverty links provided a few years ago by Winters and his colleagues (see for example, Winters, 2000a, 2002; Winters, et al., 2004), a number of researchers have identified the channels through which trade liberalisation affects poverty (for example, Bannister and Thugge, 2001, Hertel and Reimer, 2002, UNCTAD, 2004, Goldberg and Pavcnik and Nissanke and Thorbecke, 2007). To my knowledge, different authors have identified these channels in different ways following the introduction of the main conceptual framework by Winters and his co-authors. For example, Goldberg and Pavcnik (2004, p.250) have identified three main channels: “the participation and earning of household members in labour markets, household consumption, and household production”. As well, Bannister and Thugge (2001) have identified five main trade-poverty channels, while Nissanke and Thorbecke have identified seven channels focusing on globalisation. Rather than repeating what has already covered in the above studies, this section provides a brief overview of these channels in order to set a background for the remaining section. In general, the literature identifies the following main channels through which trade liberalisation affects poverty (see details in Bannister and Thugge, 2001, pp.5–14; Nissanke and Thorbecke, 2007).

(i) *Prices of tradeable goods*: Trade liberalisation leads to a change in prices of imports and exports. These price changes affect the poor.

(ii) *Factor prices, income and employment*: Trade liberalisation gives rise to a change in the relative prices of factors of production such as skilled and unskilled labour and capital. These changes affect the income and the employment of the poor.

(iii) *Government income and expenditure*: Trade liberalisation may lead to a decline in government revenue affecting government expenditure, with direct transfers to the poor.
(iv) *Incentives for investment and innovation:* Trade liberalisation can affect the long-run economic growth through its incentive effect.

(v) *External shocks:* Integration through trade liberalisation makes an economy vulnerable to external shocks which will have impact on the poor.

(vi) *Short-run risk and adjustment costs:* During the liberalisation process economies face certain adjustment costs which will create effects on the poor.

(vii) *Flow of information:* Trade liberalisation facilitates the flow of information and knowledge globally, impacting on the poor.

(viii) *Institutions:* Institutions at global, national, regional and local levels mediate various channels and mechanisms linking liberalisation and poverty, creating effects on the poor.

As Nissanke and Thorbeke (2007, pp.23–24) note:

…these channels can be compared to rivers and canals flowing into a common sea or a lake. Some of the rivers may be muddy and even polluted, while others may be crystal clear. The resulting quality of the lake or sea water depends on how these various flows combine, and similarly, the ultimate net effects of the different globalization-poverty channels depend on their combined individual effects.

It is, however, difficult to examine the combined effects of trade liberalisation on poverty under all the above channels in a single empirical study. Therefore, many studies covered in recent surveys have focused on only one or a few of these channels while ignoring others. Since the first two channels through which trade liberalisation affects poverty are the most important, many empirical studies have focused on them. Many analysts have used household survey data to examine the effects of the changes in prices of tradeable.

Different analysts have used a number of different empirical methods to capture the combined effects of different channels through which trade liberalisation affect poverty. As highlighted in the introductory section in this paper, there is now a growing body of literature on this topic. Following recent surveys by Hertel and Reimer (2002, 2005), Goldberg and Pavcnik (2004) and Aisbett (2007, pp.38–39), all the methods employed in empirical studies can be categorised under the following six categories.
• Cross-country regression analyses (using aggregate data sets) which examine the link between trade, growth, income, poverty, and inequality measured at the national level.
• Partial equilibrium/cost-of-living analyses based on household expenditure data which focus on commodity markets and their role in determining the effects on poverty.
• General Equilibrium studies using single-country computable general equilibrium (CGE) or applied general equilibrium (AGE) models and global CGE models.
• Micro-macro simulation studies (known as “micro-macro synthesis”) combining CGE modelling and micro simulation models.
• A macro-meso-micro approach in analysing the impact of a particular value chain on poverty.
• Microeconomic studies that analyse micro level data from household or plant-level surveys and other micro-level studies linking trade liberalisation and poverty.

Although a great deal of empirical work has been carried out in other parts of the world, such as Latin America and Sub-Saharan Africa, to examine the link between trade and poverty, the empirical work focusing on the South Asian region or individual countries in the region is limited, but growing. Round and Whalley (2006) have already surveyed a small number of CGE studies focused on South Asian countries and highlighted some lessons from the South Asian perspective. However, their survey is limited to only 4 CGE studies. This section will undertake a more detailed review of a number of empirical studies under different categories, including those covered by Round and Whalley (2006).

4.1 Cross-Country Studies

As Bhagwati (2004, p.53) points out, the analysis of the link between trade and poverty is based on “a two-step argument: that trade enhances growth, and that growth reduces poverty”. A number of cross-country or multi-county studies have been carried out to examine this two-step link between trade liberalisation, growth and poverty. The early studies of Dollar and Kraay (2002, 2004) have established the positive link between trade and poverty by relating trade liberalisation with growth and growth with poverty. South Asian countries are included in this analysis and therefore the findings of these studies are relevant to South Asian countries as well. Their main conclusion is given below:
The increase in growth rates leads on average to proportionate increases in incomes of the poor. The evidence from individual cases and cross-country analysis supports the view that globalisation leads to faster growth and poverty reduction in poor countries” (Dollar and Kraay, 2004, PF22).

According to their findings, trade liberalisation is good for the poor: trade liberalisation in countries around the world including South Asia leads to a reduction in poverty. However, their published studies and findings attracted criticisms from different directions (for example, Rodrik, 2000). Much has been written in the literature on this debate: unnecessary repetition is avoided in this section. A brief summary of the main problems of these studies is given below using recent literature. Ravallion (2001, p.1803) argues that “cross-country correlations are clouded in data problems, and undoubtedly hide welfare impacts; they can be deceptive for development policy”. Very often, there has been broad generalisation that trade leads to growth and growth leads to a reduction in poverty. Harrison (2007, p.15) and Nissanke and Thorbecke (2007, p.5) point out that the evaluation of the trade and poverty nexus using cross-country studies remains problematic for the following reasons:

1. Finding precise measurements for globalisation;
2. Problems associated with definitions of globalisation and poverty;
3. Difficulty in finding appropriate instruments for trade policy at the country level and adequately controlling other changes that are occurring at the same time;
4. Technical problems associated with econometric techniques used in these studies;
5. The quality of data on the incomes of the poor;
6. Growth potentially leading to unequal gains across different income levels even if cross-country studies establish a positive link between trade and growth; and
7. The heterogeneity across different segments of the population including spatial dimensions.

Harrison (2007) has revisited the evidence on the link trade and growth and highlights the problems of previous multi-country regression analysis. She finds that “there is no evidence in the aggregate data that trade reforms are good or bad for the poor” (Harrison, 2007, p.13). Rather than focusing on trade only (as an approximation to openness), Heshmati (2007) has recently developed two composite indices of globalisation – the Kearny index and his own index with four components (economic integration, personal contact, technology and political
engagement) – to indicate the level of globalisation of 62 countries including some South Asian countries. Using these indices he has undertaken a multi-country regression analysis to examine the impact of globalisation on poverty. In this study, which also included South Asia as a region, Heshmati (2007) finds a weak link between globalisation and poverty. Ravallion (2007) has also attempted to contribute to the debate using a multi-country data base (‘macro lens’). He finds that “based on cross-country comparisons, it is hard to maintain the view that expanding external trade is, in general, a powerful force for poverty reduction in developing countries” (Ravallion, 2007, p.138). All the other cross-country studies demonstrate that there is no clear and strong evidence to suggest that trade liberalisation reduces poverty in South Asia.

As a result of recent dissatisfaction with using cross-country studies to evaluate the trade and poverty link, some policy analysts have emphasised the need for case studies. For example, Ravallion, (2004) emphasises the need for more detailed and deeper micro empirical research in the area. Echoing similar sentiments, Nissanke and Thorbecke (2007, p.5) note that “while a number of studies have been conducted to investigate the globalisation-poverty relationship through cross-country regressions, a deeper insight into this critical nexus cannot be obtained by regression studies alone, as it requires detailed empirical research in a country and region-specific context”. This claim has been supported by a number of recent studies and surveys (for example, Hertel and Winters, 2006; Harrison, 2007).

4.2 Partial Equilibrium Studies - Cost-of-Living and Microeconomic Analyses

Hertel and Reimer (2002 and 2005) identify that these studies focus on only one or a limited number of markets using mainly, survey data. Their survey covered a number of such studies related to several South Asian countries including India and Bangladesh. These studies have focused on different channels (previously listed) through which trade liberalisation affects poverty. For example, Ravallion (1990), in examining the welfare effects of food price changes in Bangladesh, finds that while an increase in the price of rice will be likely to have adverse effects on rural household in the short run, the poor households are likely to benefit from such price changes in the long run. Using expenditure data from the 1987–88 and 1993–94 Indian National sample surveys, Deaton and Tarozzi (2000) have examined the link between price and poverty, focusing mainly on the price indices and poverty lines. In their
study they find that, although there are problems with the current procedure in calculating official poverty lines, their results agree with the trends in official price indices over the time.

A large number of studies have also attempted to examine the link between trade and poverty by focusing on different poverty channels using partial equilibrium approaches. For example, Dorosh and Valdes (1990) have studied the link between farm gate prices and trade policy reforms. They observe that farm gate prices received by farmers have increased significantly in Pakistan because of trade reform. Similarly, Gisselquist and Grether (2000) show that trade liberalisation creates benefits to agricultural producers in Bangladesh as a result of increased availability of inputs. Consumers are also benefited from the increased availability of goods. Ninno and Dorosh (2001) have demonstrated how trade liberalisation assisted to mitigate the post-flood food crisis in Bangladesh in 1998, with private imports of rice stabilising market prices and increasing supply. Kabeer (2000) has shown how trade liberalisation has assisted in creating jobs for women in the clothing industry in Bangladesh.

Krishna (2004) has undertaken a micro-level study focusing on 35 North Indian villages using household surveys. According to this study, while members of 11.1% of 6,376 households in these villages have escaped from poverty, 7.9% have fallen into the poverty trap in the last 25 years. He finds that different sets of factors are associated with escaping poverty and falling into poverty. Therefore, this study advocates distinct sets of policies to promote poverty reduction and to arrest falling into poverty.

Topalova (2007) has undertaken a study to examine the impact of trade liberalisation on poverty and inequality in Indian districts using a regression analysis. Using household survey data before and after trade policy reforms in India, Topalova suggests that the poor in rural areas gained less from trade liberalisation than other income groups or the urban poor. Further she demonstrates that the progress in poverty reduction in rural areas has been slow. According to her study, Indian states with more flexible labour laws have been able to minimise or eliminate adverse effects of trade liberalisation on the poor. In a previous study, Topalova (2004) also finds that the factor mobility is extremely limited in India because of inflexible labour laws. Sharma, et al., (2000) examine the link between liberalisation and productivity in the manufacturing sector in Nepal and they argue that the effects of liberalisation on productivity is small because the lack of complementary policies such as policies on investment in infrastructure.
4.3 CGE and Macro-Micro Simulation Studies

Chen and Ravallion, (2004, p.31) observe that “although partial equilibrium analysis requires little or no aggregation of the primary household data, it misses potentially important indirect effects of prices and wages”. Similarly, after evaluating a number of studies presented to a recent conference, Coxhead (2003, p.1308) comments that “a complete picture of poverty changes can only be obtained in [a] general equilibrium context; partial equilibrium estimates (based only on output prices, for example) will be misleading”. Some analysts argue that a general equilibrium approach is more suitable for capturing economy-wide effects of trade liberalisation on poverty. This view has given rise to a number CGE studies on trade and poverty in South Asia. Many trade and poverty analysts have used both global and single-country CGE models to examine the link between trade and poverty. What do these studies tell us? Not all of them demonstrate that trade liberalisation reduces poverty; some even show a negative relationship between trade and poverty. In this section, a survey of a selected number of studies is presented.

In recent years, the global CGE modelling technique (particularly using the GTAP database and the modelling framework) has been used to estimate the effects of global trade liberalisation on poverty in different regions and individual countries, since these models are capable of capturing poverty channels of product and factor price changes. A summary of the results of a few selected studies is given in Table 4.

Anderson, et al., (2006) have found that for poverty reduction, full merchandise trade liberalisation with domestic reforms (increasing productivity) is more effective than trade liberalisation under the Doha round is, although in both cases, trade liberalisation reduces poverty in South Asia, according to that study. UNESCAP (2008) has also attempted to evaluate the effects of trade liberalisation on poverty, finding that poverty in countries in South Asia is projected to increase under the Doha scenario in the short run as well as in the long run. However, the UNESCAP study suggests that comprehensive agricultural trade liberalisation may reduce poverty in Bangladesh and India, but not in Sri Lanka in either the short or the long run (see Table 4). These multi-country CGE studies, therefore, do not provide a clear view on the trade-poverty nexus in South Asia: their results provide some inconclusive mixed messages.
In addition to the poverty impact of trade liberalisation obtained from global CGE studies for the South Asia region and for some individual countries in the region, there have been a number of attempts to undertake single-country CGE studies in relation to all five large South Asian countries. A summary of these studies is presented in Table 5. Some of the early CGE studies carried out related to Bangladesh, India and Pakistan under the Micro Impact of Macroeconomic Adjustment Policies (MIMAP) project funded by the International Development Research Centre (IDRC). Iqbal and Siddiqui (2001) have surveyed these studies. The general message emerging from these country studies is that trade liberalisation favours high-income groups compared to low-income groups. To avoid repetition, these early studies are not included in this survey.

Other South Asian CGE studies on the trade and poverty link found in the literature were carried out as components of recent multi-country research projects on trade liberalisation (or globalisation) and poverty. The results of four of these studies (case studies of Bangladesh, India, Pakistan and Sri Lanka) have been summarised by Round and Whalley (2006). The main features and a summary of the results of selected studies, including the studies covered in Round and Whalley (2006), are shown in Table 5.

The results of four CGE applications applied to Bangladesh are summarised in this table. The first three of these four studies were undertaken by a small group of researchers as components of multi-country trade-poverty related projects. These three studies show some mixed results. The authors of these studies find that trade liberalisation plays a minor role in reducing poverty in Bangladesh and that unskilled rural workers do not benefit. They also observe that domestic trade liberalisation and migrant remittances are powerful tools in reducing poverty in Bangladesh. The fourth Bangladeshi case study focuses on the impact of trade liberalisation on income distribution rather than on poverty itself. The results of this study also indicate that urban educated skilled labourers benefit more from trade liberalisation than do rural unskilled labourers.

Using the same CGE methodology applied in the first Bangladesh case study as a part of a multi-country study, Pradhan (2002) has attempted to examine the link between trade liberalisation and poverty in India. He finds that trade liberalisation has only a minor impact on poverty in India. Cockburn (2006) has used a more sophisticated CGE study to examine
the trade-poverty nexus in Nepal. Although many CGE models contain representative households, this study has attempted to replace the conventional CGE modelling approach of representative households by a sample of actual households (3,373) and to incorporate them into a CGE micro simulation model. The results of this study demonstrate that trade liberalisation favours urban households in Nepal. According to this study, trade liberalisation leads to a fall in urban poverty and a rise in rural poverty in Nepal.

There have been some attempts to examine the trade and poverty link in Pakistan using CGE models, after the early attempts under the MIMAP project, covered in the survey by Iqbal and Siddiqui (2001). Siddiqui and Kemal (2002) have shown that non-globalisation variables are important to understanding how globalisation affects poverty. They have also shown the positive role that remittances play in reducing poverty. In a recent study, Butt and Bandara (2009) have examined the link between trade and poverty within a regional context using a regional CGE model. This study finds that while large states benefit from trade liberalisation, small states are affected by trade liberalisation, which allows room for regional conflicts.

The last four studies summarised in Table 5 are Sri Lankan CGE case studies. Weerahewa (2001) attempted to examine the link between trade and poverty using a very simple CGE model. The results of this study show that trade does not play a role in explaining poverty changes and that technical changes and endowments are the main drivers of poverty changes. Weerahewa (2006) attempted to examine the effects of the removal of the import ban on rice and of its related subsidies in agriculture. This study finds that liberalisation in the rice sector improves household welfare. Government transfer payments play an important role in reducing poverty. Naranpanawa (2005) has developed a poverty-focused CGE model to examine the trade-poverty link in Sri Lanka. This study observes that the effects of trade liberalisation on low-income groups are insignificant in the short run, but that the situation would change in the long run.

Naranpanawa and Bandara (forthcoming) have also attempted to examine the trade-poverty link focusing on income distribution. This study demonstrates that trade liberalisation in the manufacturing industries tends to widen the gap between broader groups of low-income and high-income earners. However, tariff reduction may help to reduce the absolute poverty within low-income groups.
Micro-Macro Simulation Models are extensions of standard CGE models. Apart from Cockburn’s (2006) study considered previously in this sub-section, there have not been, to the author’s knowledge, attempts to examine the trade-poverty link under the category of micro-macro simulation models in South Asia. In fact, one of the most advanced and sophisticated ways of capturing the effects of trade liberalisation on poverty has been the combination of CGE and micro simulations models. Unfortunately, it is difficult to find such a study for South Asian countries.

It is clear from the above discussion that many analysts prefer to use CGE modelling framework to examine the effects of trade liberalisation on poverty. Recently it has become one of the most popular empirical methods of investigating the trade-poverty link. This has also attracted a number of criticisms in using trade policy analysis in recent years. Some recent critics have raised concerns over general equilibrium effects by highlighting limitations of the technique (see for example Ackerman, 2005; Charlton and Stiglitz, 2005 and Taylor and von Arnim, 2007). Therefore, it is important to note some of the criticisms directed towards CGE applications to highlight why further refinements are necessary in examining the trade-poverty link using CGE models.

According to these critics, the results derived from CGE models are subject to a number of limitations. Firstly, these models are based on a set of restrictive assumptions such as the utility maximising and profit maximising behaviour of consumers and producers, perfect competition in factor and commodity markets and perfect capital mobility. Taylor and von Arnim (2007, p.2) have demonstrated that the results obtained from CGE models such as GTAP are highly problematic and that these models are based on “implausible assumptions about elasticities, the exchange rate and macro causality”. They argue that one of the main problems of these models is that they assume that central macroeconomic indicators such as trade deficits and foreign debt, which are important to developing countries, do not change as a response to any trade policy change. They are further critical of using the well-known ‘Armington’ specification incorrectly. Some even find that the assumptions used in these models are so rigid that the models tend to provide pre-determined answers.

Assumptions made on important parameter values such as export demand elasticities, substitution elasticities between labour and capital, and imported goods and locally produced good (the so-called Armington elasticity) play an important part in the results generated by
CGE models. Recently Dixon (2009) illustrated how a report prepared by a group of researchers at the Australian Productivity commission has generated implausible welfare benefits (about A$500 million) using a CGE model related to an experiment of the effects of a tariff cut on the Australian Automotive industry. He further demonstrates that the welfare gains from the above experiment are smaller (even negative) by reworking the same experiment with more realistic parameter values. This is an eye opener for other CGE modellers and users.

Secondly, they are basically comparative-static models and do not incorporate second- or third-generation effects of trade liberalisation. So far, all CGE studies undertaken to examine the effects of trade liberalisation in South Asia have been the "first generation" of standard static GTAP model or single country CGE models which assume perfect competition, constant returns to scale and so on. This ignores scale and variety effects as well as dynamic effects of trade liberalisation. In order to capture these effects, it is necessary to use "second generation" CGE models (which allow for increasing returns and imperfect competition in some industries) and "third generation" CGE models (which incorporate dynamic accumulation effects) to evaluate the effects of trade liberalisation on poverty in South Asian countries (see Baldwin and Venables 1995 for details of these models). When the modellers add features such as increasing returns to scale, the effects of trade liberalisation tend to be larger.

Thirdly, the labour market is not properly modelled in the standard CGE models. As Kurzweil (2002, p.2) noted, “besides, a split-up of the working force in skilled and unskilled labor, there are neither labor market policies nor other employment specified characteristics implemented” in the standard GTAP model. Charlton and Stgltiz (2005) have noted that CGE models do not account for unemployment which is an important feature in developing countries. Therefore, the impact of trade liberalisation on poverty via labour market channels cannot be fully captured in these standard models.

Finally, data problems and interpreting the results generated from large and complex global and single country CGE models have become major issues. In other words, the modellers have very often not been able to present the results in a convincing way to explain “where the results come from”. Therefore, some label such models as giant “black boxes”. Recently, Adams (2005) has articulated the way in which the results from CGE models like GTAP can be presented and interpreted.
Although CGE models are subject to the above criticism, they are still useful tools in evaluating trade policy issues if the modellers attempt to improve the techniques and data. Taylor and von Arnim (2007, p.3) have put forwarded this idea clearly as follows:

“CGE models can be useful quantitative supplements to experimental thinking about the importance of different potential linkages among economic variables at the country or world level. However, mechanically churning out ‘projections’ of welfare gains or any other indicator subject to one single set of causal assumptions and parameter values is a fundamental misuse of a sometimes helpful tool.”

After surveying CGE studies on the trade-poverty link in South Asia and highlighting their limitations, this sub-section can be concluded by using a quotation of Charlton and Stiglitz (2005, p.297): “we do not place much faith in the actual values derived from CGE analysis, but they do highlight many interesting general equilibrium effects and enable us to draw inferences from comparisons across alternative scenarios”.

4.4 Macro-Meso-Micro Studies

There are some studies carried out to examine the impact of a global value chain on poverty in developing countries. Recently, Jenkins (2007) has used this maro-meso-micro approach to examine the impact of globalisation (not only trade liberalisation) on poverty. Bangladesh has been included in his study. Jenkins (2007) finds that the growth of labour-intensive exports of manufactures such as ready-made garments which has resulted from globalisation has provided employment to low-income rural women. This has established a positive link between globalisation and poverty in Bangladesh. Thus, in contrast to the CGE studies related to Bangladesh, this study finds some positive effects of trade liberalisation on unskilled labour.

What are the messages that emerge from the studies surveyed in this section? Although the studies are not comparable and the link between trade and poverty is complex, some broad findings are emerging. Firstly, the empirical evidence from South Asia on the trade-poverty link shows some mixed results. Many of these results indicate that trade liberalisation is not good for the poor. For example, the results of a number of multi-country and single-country CGE models indicate that the poor in Bangladesh are affected by trade liberalisation. In
contrast, two other studies (partial equilibrium and miro-meso-macro) show that trade liberalisation provides opportunities for the rural women in Bangladesh and therefore trade liberalisation is good for the poor. Secondly, some studies demonstrate that trade liberalisation is not the only reason for the fall in poverty in South Asian countries. They find that the increase in remittances has played a major role in reducing poverty in some of these countries, like Bangladesh, Pakistan and Sri Lanka. Thirdly, the evidence shows that different segments and geographical locations are not benefited from trade liberalisations. For example, the rural poor and poor provinces with poor infrastructure are lagging behind the rich provinces and the urban rich. Finally, it is clear from the empirical evidence that countries in the region need to implement complementary policies with trade liberalisation to reduce poverty in these countries.

5. Concluding Remarks

This paper has provided an interpretive survey of the trade-poverty link in terms of available stylised facts and empirical studies for South Asia. Although South Asian countries have been relatively slow and late to embark on trade liberalisation, they all have made considerable strides in this direction. As identified in this paper, South Asia has been the second fastest growing region in the world. The stylised facts are that although poverty as a proportion to population has fallen in the region during the past two decades, the total number of people below the poverty line has remained more or less constant -- and may have even increased, depending on which definition of the poverty line is used. What is beyond dispute is that the region still faces major challenges in its efforts to reduce poverty. This has become an even more daunting task because of the adverse effects of food price rises in early-2008 and the recent global financial crisis.

A number of messages and lessons have emerged from this survey. Firstly, the paper found that the link between trade and poverty is not clear-cut: indeed, because of its complexity, it is difficult to test empirically. Therefore, definitive empirical answers to the question of whether trade liberalisation reduces poverty in the South Asian region have proved elusive. Empirical studies have provided contradictory results, with some studies concluding that trade liberalisation reduces poverty and others finding that trade liberalisation increases poverty overall. Secondly, while trade liberalisation has produced winners in some countries in the region (with some segments of society and areas experiencing reduced poverty) there have
also been losers among the poor. For example, a case study of India found that trade liberalisation has been associated with a rise in poverty in regions where labour laws are inflexible. Thus, not only is trade liberalisation no “magic bullet” in reducing poverty; potentially it could even contribute to poverty.

Thirdly, as advocated by a number of authors, in implementing trade policy changes it is important to maintain complementary policies to combat poverty. This conclusion is in line with a recent UNCTAD report that stated: “The controversy about the effects of openness has now seesawed between ‘it is good’ and ‘it is bad’ to reach the more nuanced position that ‘it is good if the right complementary policies are adopted’…” (UNCTAD, 2004, p.70).

What are the policy options available for countries in South Asia for reducing poverty? The evidence reviewed in this paper suggests that trade liberalisation can play an important role in reducing poverty, although it is not the only policy variable available. The evidence also shows clearly that policy makers in these countries need to implement a raft of policies which are complementary to trade policy changes, including safety nets for affected groups in society, investment in rural infrastructure, and domestic commodity and factor market reforms. Finally, above all, maintaining good governance is essential to ensure the benefits of trade liberalisation are spread across all different segments of society and geographical areas.
Table 1: A Summary of Trade Regimes in South Asian Countries

<table>
<thead>
<tr>
<th>Policies</th>
<th>Afghanistan</th>
<th>Bangladesh</th>
<th>Bhutan</th>
<th>India</th>
<th>Maldives</th>
<th>Nepal</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange Rate</td>
<td>Unified</td>
<td>Unified</td>
<td>Unified</td>
<td>Unified</td>
<td>Unified</td>
<td>Unified</td>
<td>Unified</td>
<td>Unified</td>
</tr>
<tr>
<td>Exchange Rate Determination</td>
<td>Free Float</td>
<td>Peg to Indian Rupee</td>
<td>Free Float</td>
<td>Peg to Indian Rupee</td>
<td>Managed Float</td>
<td>Managed Float</td>
<td></td>
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<tr>
<td>Payment Convertibility</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Current Account</td>
<td>Yes, Some Limit</td>
<td>Yes</td>
<td>Yes, limited</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Capital Account</td>
<td>No</td>
<td>No</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Import Restrictions</td>
<td>No</td>
<td>Yes, Limited</td>
<td>Yes, Limited</td>
<td>Yes, Limited</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Import Licensing</td>
<td>No</td>
<td>Yes, Limited</td>
<td>Yes, Limited</td>
<td>Yes, Limited</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>QRs on Imports</td>
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<td>Yes</td>
<td></td>
<td>Yes</td>
<td></td>
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<td>Yes</td>
<td>Yes</td>
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<td>State Monopolies</td>
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<td></td>
</tr>
<tr>
<td>MFN Tariff Simple Average</td>
<td>56</td>
<td>14.6</td>
<td>21.9</td>
<td>20.7</td>
<td>N/A</td>
<td>14.1</td>
<td>20.2</td>
<td>12.6</td>
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<tr>
<td>WTO Tariff Trade Weighted</td>
<td>6.2</td>
<td>13.2</td>
<td>14.8</td>
<td>7.8</td>
<td>3.1</td>
<td>4.8</td>
<td>3.7</td>
<td>2.8</td>
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<td>ROW Applied MFN Tariff Trade Weighted</td>
<td>9.4</td>
<td>4.5</td>
<td>0.6</td>
<td>4.8</td>
<td>N/A</td>
<td>3.1</td>
<td>3.7</td>
<td>2.8</td>
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<tr>
<td>Average of MFN Tariff Rates</td>
<td>N/A 169.2</td>
<td>N/A 50.2</td>
<td>N/A 36.9</td>
<td>N/A 26.0</td>
<td>N/A 59.9</td>
<td>N/A 30.3</td>
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<td>Export Policies</td>
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<td></td>
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<td></td>
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<tr>
<td>Some Export QRs</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Some Export Taxes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (on only</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Some Direct Export Subsidies</td>
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<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Indirect Export Subsidies</td>
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<td>Yes</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Ease of Doing Business (rank out of 181)</td>
<td>162</td>
<td>110</td>
<td>124</td>
<td>122</td>
<td>69</td>
<td>121</td>
<td>77</td>
<td>102</td>
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<td>Logistic Performance Index (1-to 5 best)</td>
<td>1.2</td>
<td>2.5</td>
<td>2.2</td>
<td>3.1</td>
<td>N/A</td>
<td>2.1</td>
<td>2.6</td>
<td>2.4</td>
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<tr>
<td>Trade Outcome</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Trade Integration (% of GDP)</td>
<td>N/A</td>
<td>56.5</td>
<td>84</td>
<td>54.8</td>
<td>187.1</td>
<td>58.9</td>
<td>41.8</td>
<td>62.3</td>
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<td>DFI Flows (%GDP)</td>
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<td>1.0</td>
<td>1.0</td>
<td>2.7</td>
<td>9.9</td>
<td>3.2</td>
<td>3.2</td>
<td>1.5</td>
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<tr>
<td>Real Export Growth (%)</td>
<td>31.4</td>
<td>8.7</td>
<td>118.8</td>
<td>6.2</td>
<td>8.4</td>
<td>-8.9</td>
<td>-8.9</td>
<td>5.2</td>
</tr>
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</table>

Source: World Bank and WTO.
Table 2: Weighted yearly average of PPP per capita income growth and population below poverty line

<table>
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<tr>
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<td></td>
<td>Dollars</td>
<td>PPP</td>
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<td></td>
<td></td>
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<tr>
<td>East Asia and Pacific</td>
<td>2.9</td>
<td>6.1</td>
<td>8.0</td>
<td>1627</td>
<td>5914</td>
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<td>South Asia</td>
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<td>3.0</td>
<td>5.9</td>
<td>684</td>
<td>3142</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>40.3</td>
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<td>595.6</td>
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<td>43.3</td>
</tr>
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<td>Middle East and North Africa</td>
<td>3.2</td>
<td>0.2</td>
<td>3.6</td>
<td>2241</td>
<td>6076</td>
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<td>Sri Lanka</td>
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<td>18.01</td>
<td>15.01</td>
<td>14.7</td>
<td>16.32</td>
<td>16.05</td>
<td>13.95</td>
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Table 4: Empirical estimates of global CGE studies: Change in poverty

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<tr>
<th>Study</th>
<th>South Asia (change in millions)</th>
<th>Bangladesh (change in millions)</th>
<th>India (change in millions)</th>
<th>Sri Lanka (change in millions)</th>
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<td>1. Anderson, et al., 2006</td>
<td></td>
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<tr>
<td>Full Doha simulation (with productivity effect)</td>
<td>-2.6</td>
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<tr>
<td>Full liberalisation (with dynamic effects)</td>
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<td>2. ESCAP (2008)</td>
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<tr>
<td>Under Doha reforms (short run)</td>
<td>0.4</td>
<td>5.9 (rural)</td>
<td>0.0</td>
<td>1.3 (urban)</td>
</tr>
<tr>
<td>Under Doha reforms (long run)</td>
<td>0.3</td>
<td>5.9 (rural)</td>
<td>0.0</td>
<td>1.3 (urban)</td>
</tr>
<tr>
<td>Under comprehensive agricultural reform (short run)</td>
<td>-2.5</td>
<td>-10.2 (rural)</td>
<td>0.1</td>
<td>-2.2 (urban)</td>
</tr>
<tr>
<td>Under comprehensive agricultural reform (long run)</td>
<td>-2.4</td>
<td>-10.0 (rural)</td>
<td>0.1</td>
<td>-2.1 (urban)</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Country</td>
<td>Type of Model</td>
<td>Type and source of data</td>
<td>Main findings</td>
</tr>
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<td>-------------------------------</td>
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</tr>
<tr>
<td>Khondker and Mujeri (2006a)</td>
<td>Bangladesh</td>
<td>CGE model with 25 sectors, 7 factors of production (including 6 labour categories) and 7 types of households</td>
<td>Calibrated to a SAM for 1995/96 calibration to 1985 and 1996.</td>
<td>Trade reforms have neither readily nor necessarily benefited the poor in Bangladesh. Few skilled categories of workers are benefited while the rural unskilled are not benefited.</td>
</tr>
<tr>
<td>Annabi, et al., (2006)</td>
<td>Bangladesh</td>
<td>Sequential dynamic CGE model with 15 sectors, 4 factors of production and 9 household groups</td>
<td>Calibrated to a SAM for 1999/2000 and used data from the 2000 household survey</td>
<td>The Doha scenario has negative welfare and poverty impacts. Free world trade scenario has similar but larger welfare and poverty impacts. Domestic trade liberalisation produces positive welfare and poverty effects in the long run even though it produces some negative effects in the short run. Domestic liberalisation effects far outweigh those of free world trade when free world trade is combined with domestic trade liberalisation. Remittances are a powerful tool of reducing poverty.</td>
</tr>
<tr>
<td>Hoque (2006)</td>
<td>Bangladesh</td>
<td>Comparative-static CGE model of the ORANI tradition with 86 industries/sectors, 94 commodities and 3 factors of production (including 8 types of labour) and 9 household groups.</td>
<td>Used I-O tables for 1999/2000 plus household survey data</td>
<td>Urban high-educated households are mostly benefited from trade liberalisation in terms of real consumption. Urban skilled labour benefit from trade liberalisation.</td>
</tr>
<tr>
<td>Cockburn (2006)</td>
<td>Nepal</td>
<td>CGE-micro-simulation model with 15 sectors, 5 factors of production and 3 regions</td>
<td>Model is based on a previously developed CGE model and the Nepalese 1995 Living Standards Survey (NLSS).</td>
<td>The trade liberalisation favours urban households as opposed to Terai (fertile plains) and hills/mountain households. The impacts of trade liberalisation distribution appear to be small. Urban poverty falls and rural poverty increases. Simulations with and without remittances produce different results on poverty. Non-globalisation variable are key in understanding the link between trade and poverty.</td>
</tr>
<tr>
<td>Siddiqui and Kemal (2002a)</td>
<td>Pakistan</td>
<td>Static 11-sector Ricardo-Viner type model</td>
<td>Single calibration to data for 1989-90 and forward projections</td>
<td>Simulations with and without remittances produce different results on poverty. Non-globalisation variable are key in understanding the link between trade and poverty.</td>
</tr>
<tr>
<td>Butt and Bandara (forthcoming)</td>
<td>Pakistan</td>
<td>'Top down’ regional CGE model with 4 regions and 38 sectors.</td>
<td>Calibrated to data for the year 1991.</td>
<td>While large regions are benefited from trade liberalisation, small regions are affected.</td>
</tr>
<tr>
<td>Author (Year)</td>
<td>Country</td>
<td>Model Description</td>
<td>Calibration Data</td>
<td>Findings</td>
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<td>----------------------</td>
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</tr>
<tr>
<td>Weerahewa (2006)</td>
<td>Sri Lanka</td>
<td>A comparative static CGE model with 5 sectors, 2 factors and 8 provinces</td>
<td>Single calibration to I-O data for 2000</td>
<td>Import ban on rice reduces household income and welfare. Removal of tariff on rice along with removals of the import tariff on fertilizer and or/subsidy payments on other agricultural sectors would improve economic welfare and household efficiency across provinces. The key channel of transmission of trade shock to households appears to be through government transfer payments that are influenced by change in government expenditures payments.</td>
</tr>
<tr>
<td>Naranpanawa (2005)</td>
<td>Sri Lanka</td>
<td>Poverty focused ORANI type CGE model with 8 types of labour and 5 types of household sectors. Poverty has been linked with the model indirectly with FGT measures</td>
<td>Single calibration to SAM data for 1995</td>
<td>In the short run, the effects of overall trade liberalisation on low-income groups are insignificant. This situation would change in the long run. Compared with agricultural trade liberalisation, liberalisation of manufacturing sector is pro-poor. Reduction in tariff revenue plays an important part.</td>
</tr>
<tr>
<td>Naranpanawa and Bandara (forthcoming)</td>
<td>Sri Lanka</td>
<td>ORANI tradition CGE model focusing on income distribution with 18 sectors, 8 labour categories and 14 groups of households</td>
<td>Single calibration to SAM data for 1995</td>
<td>Trade liberalisation may lead to widening the income gap between the rich and poor. However, liberalisation in manufactures may reduce absolute poverty within low-income households.</td>
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Figure 1: Percentage of Poor Living Below US$1.25 a Day by Region

Source: Chen Ravallion (2008)

Figure 2: Number of People Living Below US$1.25 a Day by Region

Source: Chen and Ravallion (2008)
Figure 3: Percentage of Poor Living Below US$2.50 a Day by Region

Source: Chen and Ravallion (2008)

Figure 4: Number of People Living Below US$ 2.50 a Day by Region

Source: Chen and Ravallion (2008)
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