

Trade and Poverty in the Developing World

Edited by
John Cockburn
Paolo Giordano



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Introduction

Since the late eighties, developing countries have progressively integrated global markets through unilateral broad structural economic reforms, bilateral free-trade agreements, and multiparty trade negotiations. From a developmental perspective, after almost thirty years of trade reform, the degree of tariff liberalization, on average, has not coincided with proportional reductions in overall poverty as initially expected. Although several factors beyond trade policy appear to have contributed to this divergence, it is also true that the links between trade openness and poverty are not well understood, thus making it particularly difficult to design and implement trade-induced pro-poor public policies. In this context, further research – based on new methodological approaches, improvements on existing techniques and accessibility to high-quality data – and continued dialogue with policy makers are two key conditions to ensure the political viability of trade reform and strengthen its poverty nexus.

Then, based on current knowledge, what can be said with reasonable certainty? Few, but definitely critical cornerstones. First, closing up the economy to international trade does not help. Second, the relationship between trade openness and poverty is neither direct nor unambiguous. In other words, the potential of trade to alleviate poverty depends on a multidimensional set of economic and institutional factors. A “one-size-fits-all” policy approach lacks empirical support since most of the effects of trade openness are highly contextualized. Finally, increasing and robust evidence suggests that economic integration into global markets unleashes multiple and potentially favorable forces – diffusion of technology and information, innovation, increasing specialization, institutional change, competition, increased product variety, among others – which render the effects of trade reform endogenous and dynamic in nature.

The selected papers presented in this book push back the frontiers of knowledge in the trade and poverty policy debate, while also addressing central methodological and conceptual issues. Although they cover many different dimensions of the trade and poverty nexus, the authors concur, as a group, in drawing several broad and important lessons. First, while theory generally suggests that trade openness is both pro-growth and pro-poor, empirical evidence shows mixed results. The impact of trade reform on poverty appears to depend on a combination of pre-existing conditions – such as geography, market size, and institutional capacity – and complementary policies designed to help the poor participate in the positive opportunities that emerge while protecting them from the most harmful consequences. The mismatch between theory and available empirical evidence may partly reflect some strong modeling assumptions of dubious relevance for most developing economies, such as the presence of full employment, the existence of perfect labor mobility across sectors, and symmetries in cross-border market structures, just to name a few.

The second shared lesson is that the examination of trade-poverty links requires a combination of both *ex ante* modeling techniques and *ex post* econometric analysis. Both have important advantages and disadvantages. Modeling techniques, notably Computable General Equilibrium (CGE), are difficult to validate empirically and often require controversial and simplistic assumptions, which may strongly affect results. Robustness analysis should be used more systematically and many of the assumptions and critical parameters should be estimated and tested more rigorously. On the other hand, *ex post* econometric analysis confronts serious difficulties in isolating the impacts of trade from all the other forces at work within a given country. It also poses difficulties in identifying the channels through which trade affects poverty, where the source of trade expansion – agricultural, natural resources, manufacturing – may substantially modify its poverty impacts.

Third, studies must place a strong focus on micro analysis. Macro analysis, although useful in learning about average cross-national effects, does not allow for detailed, country-specific results, particularly when the poverty impacts caused by trade liberalization seems to be highly contextualized and contingent on multiple domestic socio and economic conditions. From a public policy perspective, all three lessons are extremely important as only robust empirical results can provide a solid foundation for recommendations on the design and implementation of a sound, pro-poor trade policy.

Martin Cicowiez and *Adriana Conconi* open the book with a comprehensive review of the theoretical and empirical literature on the trade and poverty nexus. Trade and poverty, they assert, are linked through economic growth. Unfortunately, the empirical evidence for both the trade-to-growth and growth-to-poverty links is controversial. Even though the literature identifies, on average, a positive cross-country correlation between trade and poverty, the relationship is not necessarily causal. Nevertheless, the authors also assert that there is no credible evidence pointing to the opposite view, that trade liberalization impedes growth and poverty reduction. The critical element in translating economic growth to reductions in poverty seems to be complementary and multidimensional public policy. In the absence of these policies, *Cicowiez* and *Conconi* conclude that strong statements about the pro-poorness of trade-induced growth are subject to debate and, in any event, need to be carefully contextualized.

Reinforcing *Cicowiez-Conconi's* remarks, *Rob Vos* adds that "trade liberalization is no panacea for poverty reduction" and calls attention to the challenges in acquiring sound empirical evidence to identify favorable policy scenarios where opening up the economy may result in tangible social benefits. *Vos's* paper focuses on identifying and recommending improvements to strengthen standard methodologies and frameworks for analyzing the trade and poverty nexus. He observes the inconsistencies between strongly-held opinions on globalization's impact on poverty and the lack of robust factual evidence. Since little is currently known on the subject of trade and

poverty, empirical findings may be highly sensitive to the researcher's assumptions. In that regard, the author argues that the sensitivity to basic modeling and parameter assumptions helps to explain the wide range of results in the trade liberalization and poverty literature. Several explanations could be behind the contrasting empirical findings. First, CGE models — the preferred modeling framework to assess the poverty impact of trade reform — rely heavily on the Armington assumption of imperfect substitution between domestic and imported goods, where the value of the elasticity of substitution, generally borrowed from estimates in other (and often very different) countries, may drive overall results (the higher the elasticity, the greater the trade creation). A striking example is the assessment of Sub-Saharan Africa's benefits from the Doha Round, which can change from positive to negative in a CGE model depending on the value of the specified elasticity. Second, the use of unrealistic assumptions — such as the equalization of wages across sectors, full employment, and perfect labor mobility — calls into question the accuracy of the reported results. Considering these inconsistencies, the author warns policymakers to be extremely cautious when interpreting the available empirical evidence to determine policy. His remarks also call for a stronger dialogue between policymakers and modelers, aimed at making the most of available techniques.

The contribution of *Renato Flores* shifts the focus of the analysis towards Latin America. He recognizes that the region has a considerable challenge in enhancing the opportunities offered by trade openness due to the small market size of most of its countries, which limits the ability of local producers to reach economies of scale. Also, the vast geographic diversity within countries increases the costs of fully integrating sub-national markets. *Flores* identifies several gaps in the methodologies used in trade and poverty studies that shape policy in the region, which leads him to recommend interpreting results carefully. In particular, he argues, if the information-measurement-model-evaluation paradigm is used, it must first be expanded to account for the existing heterogeneity — ranging from geographical

constraints to logistical difficulties in integrating local and global markets – within Latin America.

The case of Africa takes centre stage in the analysis presented by *Adrian Gauci and Stephen Karingi*. Here, the authors identify two main limitations to poverty-reducing strategies in a context of increasing global market integration: the structure of current trade patterns – mostly dominated by commodity-based exports – and the lack of linkages between tradable and non-tradable sectors. Under these conditions, can trade liberalization be pro-poor in Africa? If so, what are the transmission channels? Since the empirical literature offers an ambiguous response, the authors contend that the export expansion observed in Africa did not translate into poverty alleviation – it actually coincided with an increase in the poverty headcount – because of the oligopolistic structure of agricultural exports, where middlemen become the primary beneficiaries of any increase in export value. Therefore, complementary policies can be useful in ensuring that vulnerable groups benefit from trade. Finally, they emphasize the importance of conducting more micro-level analysis focusing on household welfare as such studies may provide more specific and policy-relevant information about the trade and poverty nexus in that continent.

Marzia Fontana provides an updated literature review on the gender aspects of the trade and poverty debate. Exploring the gender-specific effects of trade liberalization is important because women already suffer disproportionately more from poverty. *Fontana* recognizes several mechanisms through which trade — via income distribution — may affect women and men differently: changes in relative prices of goods, relocation of labor across sectors, changes in consumption patterns, and adjustments in government expenditure. It is very difficult to conclude decisively whether or not trade openness is good or bad for women given the fact that the analysis is further complicated by the heterogeneity in the employment behavior and consumption patterns among women. Under these conditions, some women will certainly benefit while others will not. For purposes of

mitigating the gender-related risks associated to trade, she identifies research gaps to be filled and stresses the importance of the implementation of complementary government policies.

In summary, the authors concur in recognizing the limitations of existing empirical evidence and analytical methodologies which are supposed to deliver critical findings to assist in designing concrete policies as part of a pro-poor trade strategy. Research on the subject has come a long way in recent years. Yet, as the experts argue, more work is still needed in terms of both breadth and depth of the studies. Robust findings resulting from empirical and theoretical work are needed to better comprehend the trade and poverty nexus. It is only once this point is reached that a clearer picture will arise, in a way that trade policy can be tailored to positively impact economic growth and mitigate poverty.

The collection of articles presented herein therefore constitutes a necessary starting point for policymakers seeking to harness trade to sustain growth and reduce poverty, and for researchers interested in serving the policymaking process by compiling sound and relevant empirical evidence. It is hoped that this publication helps to bring these two communities together.

John Cockburn and Paolo Giordano

Linking Trade and Pro-poor Growth: A Survey*

Martin Cicowiez
Adriana Conconi

Abstract

In this paper we review some of the theoretical and (ex-post) empirical literature that links trade, growth, and poverty. We conclude that it is not possible to draw strong conclusions regarding the pro-pooriness of trade-induced growth. However, some of the reviewed literature presents evidence of the pro-pooriness of trade-induced growth when combined with other policies such as increased access to capital, technical assistance, reduction in transaction costs, and investment in better infrastructure (both in quantity and quality).

Keywords: Literature Review, Trade, Growth, Poverty

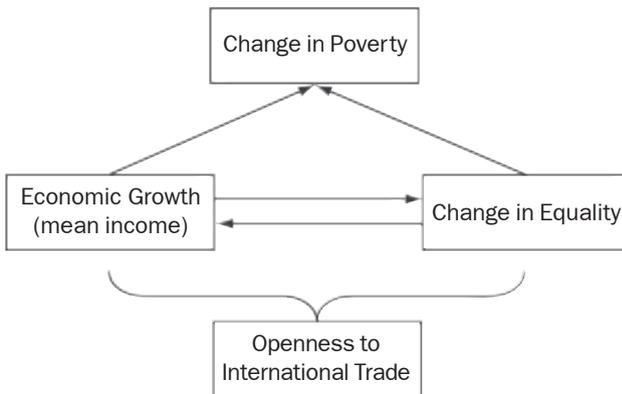
Introduction

The reduction of poverty (rather than the pursuit of economic growth) has become one of the main goals of development efforts as evidenced by the adoption of the Millennium Development Goals by most developing countries and international agencies. At the same time, there has been an ongoing debate about the elements that should be at the center of any poverty-reducing strategy. Specifically, it is not completely clear which policies should be at the center of any such strategy.

* We are grateful for the comments received from José Duran and other participants at the PEP-IDB Policy Forum on Trade and Poverty. The usual disclaimer applies.

This paper tries to assess the relevance of trade in achieving pro-poor growth through a survey of the existing literature. However, it is important to understand first why the link between trade and poverty matters. The most obvious answer to the question is that poverty and trade liberalization matter individually. Poverty is the greatest challenge to public policy, and reducing it is the most fundamental objective. Trade liberalization is believed to be an important part of the policy package for prosperity and growth and potentially for poverty alleviation. Thus, it is only merely common sense to ask whether these forces complement or hinder each other and how they can be jointly optimized. Only if poverty, growth, and trade policy were known to be wholly independent, then there would be no reason to think about the links between them. Yet clearly that is not the case (see Figure 1 for a summary of our framework).

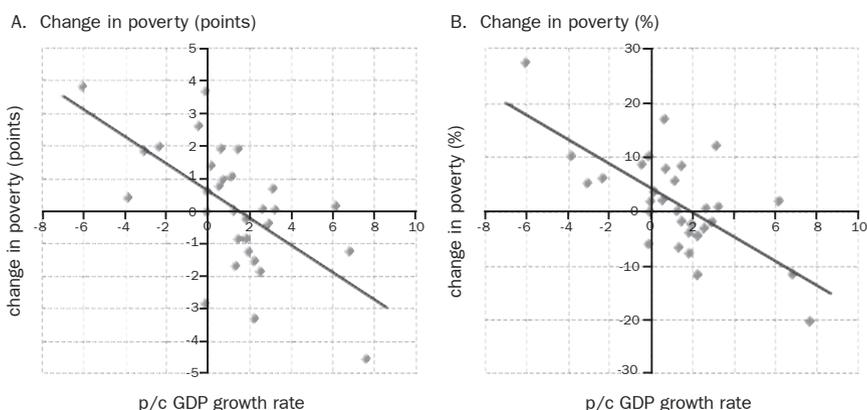
Figure 1: Poverty, growth, inequality, and trade



However, we must not jump from this observation to the conclusion that the links between trade and poverty are always of critical importance; poverty arises from such phenomena as lack of assets, poor access to communal resources and public services, geographical isolation, poor health and education, powerlessness, and vulnerability.

As a starting point to analyze the relevance of growth for poverty reduction, we can observe some evidence from Latin America and the Caribbean countries. As shown in Figure 2, the relation between poverty and per capita GDP is negative.¹

Figure 2: The relation between the 2 USD poverty incidence and GDP in LAC countries



Source: Own estimations based on National Accounts and SEDLAC (CEDLAS and The World Bank).

The evidence suggests that there exists a close relationship between aggregate economic growth and poverty reduction. However, it is important to stress that these simple correlations do not prove any causal relationship, but they do show the relevant role that pro-growth policies play in any poverty-reducing strategy.

Based on Winters (2002), trade can affect poverty through different channels (economic growth, price changes, labor market, and government revenue). The focus of this literature review is on the links between trade and poverty through growth. In order to address this issue, we need to analyze the effect of trade openness on growth and inequality. After defining pro-poor growth, we analyze the relation

¹ The same result holds if we replace per capita GDP with the average income computed from household surveys.

between trade, growth, and poverty in the following sections. We concentrate on the theoretical literature as well as on the ex-post empirical studies of the relation between those variables. Consequently, we do not consider ex-ante evaluations of the link between trade, growth, and poverty based on, for example, computable general equilibrium models. We note from the beginning that the reviewed papers use different definitions of trade openness; some use policy measures such as tariffs while others use outcome-based measures such as the share of imports plus exports on GDP.

What Is Pro-Poor Growth?

According to Ravallion and Chen (2003), the growth process can be said to be pro-poor if it reduces poverty. Such a definition is too broad; it implies that most real world instances of growth are pro-poor, even if poverty decreases only slightly and income distribution worsens during a period of strong growth. A more appropriate definition has growth being referred to as pro-poor if, in addition to reducing poverty, it also decreases inequality. Despite being an improvement, this definition still does not reflect well what should be understood as ‘pro-poor growth’ and falls short of providing straightforward answers to various plausible combinations of growth, poverty reduction, and inequality changes.

There are two definitions for measuring pro-poor growth used in recent literature and policy-oriented discussions that may help to better understand what pro-poor growth is.

Relative Definition

The relative definition of pro-poor growth compares changes in the incomes of the poor with respect to changes in the incomes of the non-poor. Using this definition, growth is pro-poor when the distributional shifts accompanying growth favor the poor (see Klasen, 2004; Kakwani and Pernia, 2000; Baulch and McCulloch, 2000; Kakwani *et al.*, 2002).

As discussed in Lopez (2004), this relative definition of pro-poor growth presents some limitations, particularly when used in a policy context. First, by focusing on inequality, this definition could lead to sub-optimal outcomes for both poor and non-poor households. “For example, a society attempting to achieve pro-poor growth under this definition would favor an outcome characterized by average income growth of 2 percent where the income of poor households grows by 3 percent over an outcome where average growth is 6 percent, but the incomes of poor households grows by 4 percent. In short, the relative definition places a premium on reducing inequality through growth more than reducing poverty”.

Second, under this definition an economic contraction could be pro-poor if the incomes of poor households fall by less than those of non-poor households, despite the fact that poverty has not fallen. Finally, “this definition might favor public sector interventions that reduce inequality regardless of their impact on growth”. Naturally, a disregard for the impact of such actions on growth is likely to be of limited practical use.

Absolute Definition

Growth is considered to be pro-poor if and only if poor people benefit in absolute terms (Ravallion and Chen, 2003). Under this definition the aim is to achieve the greatest amount of poverty reduction possible through growth and progressive distributional change. Hence, although generally considered pro-poor, an outcome characterized by average growth of, say, 6 percent with the income of the poor growing at a mere 0.1 percent would not be as desirable as an outcome where the income of the poor grows by 4 or 7 percent.

Trade, Growth, and Poverty Reduction

Nowadays, it is widely accepted among economists that, with other things being the same, countries with few restrictions on trade will have faster economic growth than countries that heavily restrict trade (Baldwin, 2003; Winters *et al.*, 2004; Duncan and Quang, 2003), and

that absolute poverty will be reduced more quickly with faster economic growth. Accordingly, countries are encouraged to reduce trade barriers in order to reduce absolute poverty. Trade liberalization is seen as a policy that leads to faster economic growth because it reduces distortions in relative prices, and allows those activities with a comparative advantage to expand.

Usually, poor countries present high ratios of labor to land and labor to capital and thus have a comparative advantage in labor-intensive activities. According to the traditional trade theory, the removal of trade barriers in these countries would induce the development of labor-intensive activities providing employment and income for larger numbers of poor people, while trade-restricting policies would distort relative prices in favor of capital-intensive activities. On the other hand, the removal of trade barriers leads to a decline in the value of assets of protected industries and the loss of jobs in those industries. Consequently, trade liberalization also implies adjustment and is thus likely to have distributional effects.

From the above, it is not surprising that debate over the benefits of trade liberalization for poverty reduction arises among economists. As we will examine next, differences exist over the impact of trade liberalization on economic growth and over the relationship between economic growth and reductions in poverty.

Linking Trade and Growth

According to Winters *et al.* (2004), “in the long run economic growth is the key to the alleviation of absolute poverty. It creates the resources to raise incomes, and governments will have scope for stronger redistributive measures when income is higher and growth is faster.” We analyze this topic by separating it into two parts; the links between openness and growth, and between growth and inequality. In the next section we address the importance of growth and inequality to changes in poverty.

Theoretical Literature

The advantages and disadvantages of openness between countries

have been a source of debate over the last century; the idea that trade is positively correlated with economic growth goes back at least to Adam Smith. Has trade been a source of divergence between countries? Can freer trade benefit all of the countries concerned and give more impulse to growth or is it a zero-sum game with winners and losers? In what follows we summarize the three main theoretical approaches to the trade and growth nexus: neoclassical, endogenous growth, and the institutional approach. The empirical evidence arising from these approaches has so far been mixed; estimation of the impact of trade liberalization on growth produces ambiguous results and the direction and magnitude of the impact appear to depend on the particular circumstances of the country.

The *neoclassical approach* to the trade and growth nexus is based on general equilibrium models with constant or decreasing returns to scale, rational individuals acting solely through markets, and no transaction costs. The trade patterns among countries are determined by comparative advantage. In Ricardian models, the comparative advantage takes the form of technology differences, while in Heckscher-Ohlin models the comparative advantage takes the form of differences in resource endowments. The general prediction of the neoclassical models is that a country will have static gains from trade liberalization, the most important being an increase in allocative efficiency. By lowering trade barriers, the country faces the international relative prices that induce the efficient allocation of domestic resources to sectors with comparative advantage. As a result, the aggregate welfare increases. However, this approach only captures increases in the level of income; trade liberalization does not lead to a persistent increase in the rate of growth. The validity of the key assumptions on which the neoclassical approach is built has been questioned by a number of authors. For example, Rodrik (1988), Devarajan and Rodrik (1989), and Krugman (1994) argue that, under conditions of scale economies and imperfect competition, the welfare impact of trade liberalization can be negative.

Since the mid 1980s, many papers have incorporated some new elements to the standard neoclassical growth model, while keeping most of its features. What is common among these models is that growth is considered endogenous. The *new growth* (or *endogenous growth*) theory incorporated a produced “accumulable” factor; if an increase in the productivity of the inputs producing the accumulable factor occurs at some point, an increase will occur in the rate of accumulation and the growth of output in subsequent periods. This presents a major difference with the neoclassical theory; in the new growth models there is a reason for trade policy to impact both the level and the long-run rate of growth of an economy, and not only its level of income. According to Duncan and Quang (2003), “for developing countries, protection that denies access to imported capital goods embodying improved technology is thought to be a particularly growth-inhibiting factor. The “spillover effect” is a related effect with trade leading to the diffusion of new knowledge.”

During the 1990s, the presence of institutional factors emerged as a new possible explanation for many economic outcomes. Regardless that the *new institutional economics* has not yet developed a complete theory establishing the linkage between growth and trade, this stream of literature claims that trade liberalization has a positive impact on growth but is conditional on the existence of appropriate institutions. When this is not the case, trade reforms and many other structural reforms will be ineffective. According to this approach, trade liberalization thus has a much wider effect than changing relative prices; it also implies multiple institutional changes.

Based on the previous analysis, there does not seem to be a unidirectional link between trade and growth, at least from a theoretical point of view. Therefore, we present some empirical evidence on the openness-growth link, since this link turns out to be an empirical matter.

Empirical Literature

During the past five decades, developing countries have experienced important changes in their trade policies. This provides a good source

of empirical evidence on the nexus between trade and growth. Following the theoretical debate, it is not surprising that some studies find a positive correlation between openness and growth, while others do not find systematic evidence of a relationship between both, and still others conclude that the impact of reducing trade barriers is negative on economic growth.

After the pioneer studies of Little *et al.* (1970) and Balassa (1971), many papers have attempted to relate trade policy variables to economic performance and growth. The modern empirical work can be classified into two groups: (a) multi-country studies that investigate in detail the experience of some countries that have been subject to trade reforms; and (b) cross-country econometric studies that analyze the relationship between openness and trade.

The majority of the cross-country regression studies conducted during the 1990s share the common finding that openness is associated with more rapid growth (see Dollar, 1992; Sachs and Warner, 1995; Ben-David, 1993). However, most of these studies are subject to different critiques (see Rodriguez and Rodrik, 1999). For example, they do not treat the causality between trade and growth adequately. As Rodrik (2001) emphasises, “openness might be an outcome, rather than a prerequisite of growth.”

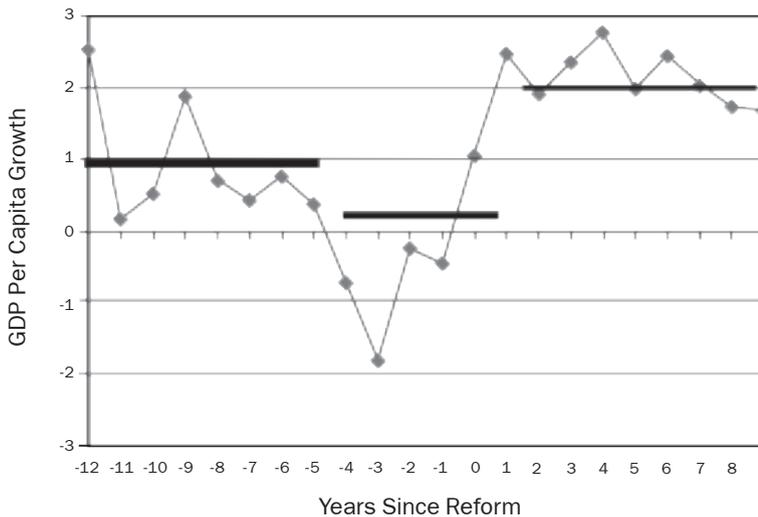
In order to deal with the problem of causality, Frankel and Romer (1999) analyze only the effect of the component of trade that cannot be influenced by growth in the short term, mainly those caused by populations, land areas, and distances. They conclude that “this component explains a significant proportion of the differences in income levels and growth performance between countries and from this might be inferred a general relationship running from increased trade to increased growth.”

Dollar and Kraay (2002) have attempted to link trade liberalization directly with reductions in absolute poverty. However, they do not address the problem of causality mentioned above and the measures of trade openness used were also questioned.

In a recent paper, Salinas and Aksoy (2006) extend the previous

work on cross-country evidence by correcting the “before and after” methodology. They use within-country estimation to circumvent the need to measure trade openness, carefully select the group of countries, and only consider some years before and after the trade liberalization episode. They estimate an average increase in growth of GDP per capita after trade liberalization that varies between 1.2 and 2.6 percent (see Figure 3).

Figure 3: GDP per capita growth before and after reforms



Source: Salinas and Aksoy (2006).

Salinas and Aksoy (2006) conclude that “the economic acceleration that has followed trade liberalization shows that reforms did not bring doomsday for liberalizing countries and that the evidence actually suggests that trade reforms did make a very important contribution to sustained economic development across developing countries.”

One important thing to consider is that, although there are some studies that do not find a positive relation between trade liberalization and economic growth, there is no evidence on it being an obstacle to

growth either. Moreover, even if it does not have a direct impact on growth, a freer trade regime has a positive influence on promoting greater efficiency, less arbitrary policy intervention, and (at least in the long-run) more stability (see also Winters *et al.*, 2004).

As is widely accepted, improved productivity is positively correlated with economic growth. Another way of looking at the relationship between growth (i.e. improved productivity) and trade is by using firm-level data. The work by Bernard and Jensen (1995) started the use of data on firms to look at productivity differences between exporters and non-exporters.² There are two hypotheses that explain why exporters can be expected to be more productive than non-exporters (Bernard and Jensen, 1999; Bernard and Wagner, 1997). First, self-selection of the more productive firms into export markets occurs because of additional cost of selling goods in foreign countries. Second, learning-by-exporting happens because knowledge from international buyers and competitors helps to improve the post-entry performance of export starters.

This literature computes (a) the exporter premium defined as the percentage difference of (labor) productivity between exporters and non-exporters, and (b) the difference in productivity growth between exporters and non-exporters. The results from different studies of this empirical work show that (1) exporters are found to have higher productivity and often higher productivity growth, (2) the results favor the self-selection hypothesis (i.e. the good firms do export), and (3) mixed evidence regarding the learning-by-exporting hypothesis; exporting does not necessarily improve productivity.³

Difficulties in Establishing an Empirical Link between Openness and Growth

According to Winters *et al.* (2004), there are three potential problems that might arise while trying to establish an empirical link between openness and economic growth. In the first place, when countries

² They used data from firms in the US collected by official agencies.

³ For a complete survey of this literature see Wagner (2007).

are closed to trade, it can be very difficult to measure their trade stance. Second, trade liberalization by itself does not guarantee a long-term effect on growth; it needs to be combined with other structural policies. Third, as it has already been mentioned, causality is difficult to establish. As Rodriguez and Rodrik (2001) observe, actual openness, measured by imports plus exports relative to GDP, is likely to be endogenous; but there is also concern that even policy-based measures, e.g. average tariffs, could be so.

Trade Policies in Practice

The debate about the nexus of trade liberalization and economic growth has also affected the trade reforms and strategies implemented in many developing countries. In spite of the supposedly positive relation between both, the majority of developing countries implemented industrialization policies during the three decades after World War II based on a limited degree of international openness. These policies, which were known as “import substitution industrialization”, had their modern origins in the thinking of Raul Prebisch and Hans Singer (see Baldwin, 2003), and were based on two fundamental premises: (1) a secular deterioration in the international price of raw material and commodities would result in an ever-growing widening of the gap between the rich and the poor countries, given the absence of industrialization in the least developed countries; and (2) in order to industrialize, the smaller countries required (temporary) assistance in the form of protection to the newly emerging manufacturing sector. These ideas were particularly influential in Latin American countries.

It was not until the late-1980s that the protectionist regimes began to lose importance; many developing countries shifted from import-substituting industrialization to export-oriented industrialization, which implies trade liberalization. Krueger (1998) summarized the main arguments against import substitution industrialization as follows:

- Developing countries in general have comparative advantage in labour-intensive industries and import capital-intensive

goods and services. Protection of import competing industries means that developing economies have to substitute domestically-produced, capital-intensive goods at higher costs for imported ones. Higher prices for investment goods imply a lower level of real investment for the same nominal investment expenditure, and hence results in a lower rate of growth.

- Protection in developing countries will allocate resources away from exports towards import-substituting sectors and hence aggravate the foreign exchange shortage.
- Low income per capita implies that markets in developing economies are relatively small, and protection of these markets can result in either concentrated market power or fragmented industries with too many small firms with sizes below minimum efficient size. In either case, domestic consumers have to pay a higher price than for imports.
- One important consequence of an import-substitution regime is the tendency for the corruption of bureaucrats having control over import licensing and collection of customs duties.

Linking Growth and Inequality

The theoretical literature on the relationship between growth and inequality starts with the Kuznets hypothesis (Kuznets, 1955) which suggests that economic inequality increases over time while a country is developing (i.e. as an economy transforms from rural to urban and from agricultural to industrial) and then, after a critical average income is attained, begins to decrease. Consequently, the relationship between growth and income inequality would resemble an inverted U curve. More recently, several theoretical papers conclude that inequality is harmful to growth. They claim that redistributive policies, sociopolitical instability, and credit constraints (particularly for poor households) are associated with high levels of inequality and are bad for growth (Aghion *et al.*, 1999; Alesina and Perotti, 1996; Alesina

and Rodrik, 1994; Galor and Zeira 1993). Other authors argue that inequality is likely to promote growth by drawing on the greater ability and propensity of rich people to invest (i.e. Kaldor hypothesis) and the need for unequal wage structures as an incentive framework (Mirrlees, 1971). Briefly, the theoretical literature is divided on the relation between growth and inequality.

The empirical literature has found no consistent relationship between growth and inequality. For example, Deininger and Squire (1998) found Kuznets's inverted U in 10 percent of the countries they studied, an ordinary U in another 10 percent, and no statistically significant relationship in the remaining 80 percent. On the other hand, there is some evidence that asset inequality is detrimental to growth (Deininger and Olinto, 2000; Birdsall and Londoño, 1997). More recently, Lopez (2005) finds that the relationship between growth and inequality for a sample of developing and rich countries was negative in the 1970s and 1980s (for the 1970s it was not significant), but the relationship became positive and significant in the 1990s. Similarly, Ravallion (2005) finds a positive link (a correlation coefficient of 0.26 that is significant at the 5 percent level) between the growth rate of mean per capita consumption and (relative) inequality across 80 countries in the 1990s.

The Link between Policies, Growth, and Poverty

One of the most important benefits claimed by proponents of openness is its positive effect on economic growth which, in turn, is the key to poverty reduction. The share of the population living in absolute poverty will decrease as the average income increases, unless growth seriously deteriorates the income distribution. On the other hand, the relation between non-income indicators of poverty (infant mortality, maternal mortality, educational levels, among others) and economic growth is less direct. Therefore, government actions will be critical in determining how growth is translated into reduction in other dimensions of poverty. Naturally, it will be easier for governments to

raise revenue for poverty-alleviation policies when incomes are growing.

Recently, some studies have explored the relative contribution of income growth and distributional changes to changes in poverty. As summarized by Lopez (2004), this literature suggests that the extent to which governments should focus on growth or distributional changes to achieve poverty reduction depends on country conditions such as the level of economic development, initial inequality, and the society's level of aversion to inequality (see, for example, Deininger and Squire, 1998; Foster and Szekely, 2001; Dollar and Kraay, 2002; Ravallion, 2001 and 2004; Bourguignon, 2003; ECLAC *et al.*, 2002; Lopez and Serven, 2004).

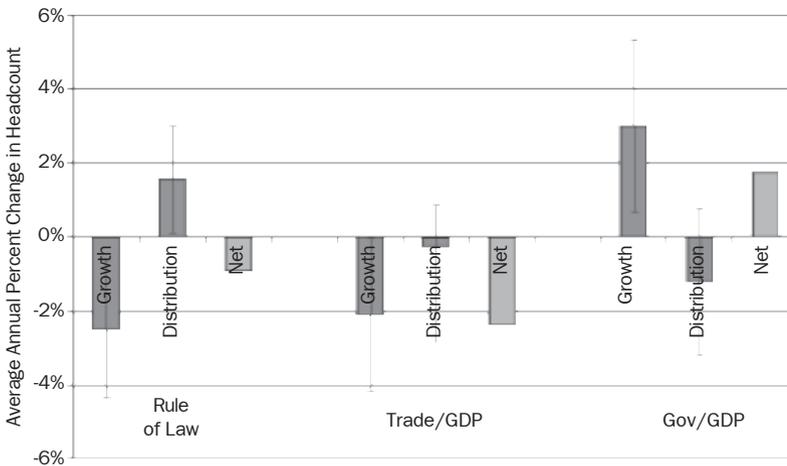
The theoretical and empirical literature has studied what Bourguignon (2004) refers to as the poverty-growth-inequality triangle. However, from a policy perspective, it is more interesting to know what policies a country should pursue in order to reduce poverty.

The empirical literature based on cross-country data regressions aims at inferring how pro-growth policies impact on inequality and poverty. In practice, most pro-growth policies might be expected to have an impact on inequality and poverty. Consequently, advising on the expected growth impact of policies alone could lead to unpleasant outcomes. Unfortunately, this is likely to be one of the weakest strands among the empirical literature on pro-poor growth, for two reasons. First, it is inherently difficult to link a micro phenomenon like poverty changes to policies which are usually in the macro domain. Second, the available empirical work relies on different control variables, estimation techniques, and model specifications. As a result, comparisons and robustness checks are difficult to implement. With these caveats in mind, the reviewed work agrees that higher inflation leads to higher inequality, and more and better infrastructure as well as more human capital leads to lower inequality, but little else.⁴ On trade, there is no agreement. Some studies find that greater openness would lead to higher inequality while others find no impact at all.

Kraay (2004) documents the partial correlations between two sources of pro-poor growth (growth in average income and changes in relative incomes) and a number of variables of interest. In the case of openness to international trade, the correlation with growth is stronger than the correlation with distributional change (see Figure 4). Moreover, he finds that distributional change tends to be poverty-reducing in countries that trade more. Dollar and Kraay (2002) also find evidence that trade openness generates pro-poor growth.

Srinivasan and Bhagwati (2001) claim that in-depth studies of country experiences are the best approach for understanding the link between trade and growth. Many of these studies find that openness has a positive impact on growth through different channels (see, for example, Edwards and Lederman, 2002; Besley and Cord, 2007;

Figure 4: Policies and the Growth and distribution components of changes in poverty



Source: Kraay (2004).

⁴ By following Lopez (2004a), we reviewed the work by Barro (2000), Dollar and Kraay (2002), Li and Zou (2002), Lundberg and Squire (2003), Calderón and Servén (2003), Kraay (2004), and Lopez (2004b).

World Bank, 2005; Ravallion and Datt, 2002; Ravallion and Chen, 2002; Ravallion, 2004; Ravallion and Lokshin, 2004; Arbache *et al.*, 2004).⁵ The country case studies in Besley and Cord (2007) suggest that for low-income countries (Bangladesh, Ghana, Uganda, and Vietnam) trade liberalization allowed them to benefit from export-led growth. However, the increased growth was accompanied by higher inequality.

This positive correlation between changes in growth and inequality means that poor households benefited less than non-poor households from growth. The impact of trade liberalization on those countries has varied depending on the size of production units, access to capital, technical assistance, and transaction costs. For example, trade liberalization along with land reform promoted the emergence of Vietnam as a major world exporter of rice and coffee in the 1990s, benefiting smallholders. The findings by Ravallion and Datt (2002) in the case of India also suggest that pro-poor growth is more likely to occur where initial conditions offer the poor an opportunity to take advantage of growth.

To summarize, cross country regression studies suggest that education, macroeconomic stability, and infrastructure are good for growth and inequality. However, with regard to the impact of trade liberalization on inequality, the results are much less conclusive. The comparison of country-case studies shows that similar reforms may have different impacts on different countries. In turn, this suggests that for a number of reforms little advice can be given beyond the need to carefully analyze the problem in the particular country context.

Conclusions

The evidence showed that there is still some disagreement concerning the relationship among trade, growth, and poverty. Naturally, it is difficult to draw broad generalizations from country case studies

⁵ For a survey on the link between trade and poverty in the Latin America Region see Giordano and Florez (2007).

because of their specificity. However, these studies are useful in uncovering the mechanisms at work. In contrast, econometric studies based on quantitative data concerning trade and growth for a cross section of countries do permit broad generalizations. Unfortunately, these studies are limited by the scope and comparability of available quantitative data.

We know that sustained growth reduces poverty. This is not to say, however, that any income growth increases the incomes of the poor in every growth episode in every country. We cannot draw strong conclusions about the importance of trade as a determinant of pro-poor changes in relative incomes from the available evidence. However, some of the reviewed literature presents evidence of the pro-poorness of trade-induced growth when combined with other policies such as increased access to capital and technical assistance, a reduction in transaction costs, and investment in better infrastructure (in quantity and quality).

Finally, we can conclude that the elimination of restrictions to trade should not be thought of as a policy to reduce poverty. The evidence suggests that a poverty reduction strategy should be separate and should focus on identifying and removing obstacles to the poor's participation in economic activities. In this way the effect of trade liberalization on growth and the reduction of poverty as the consequence of growth should both be maximized.

References

- Aghion, P., Caroli, E., and Garcia-Peñalosa, C. 1999. Inequality and Economic Growth: The Perspective of the New Growth Theories. *Journal of Economic Literature* 37: 1615-1660.
- Alesina, A. and Perotti, R. 1996. Income Distribution, Political Instability, and Investment. *European Economic Review* 40: 1203–1228.
- Alesina, A. and Rodrik, D. 1994. Distributive Politics and Economic Growth. *Quarterly Journal of Economics* 108: 465-490.
- Arbache, J.S., Dickerson, A. and Green, F. 2004. Trade Liberalization and Wages in Developing Countries. *The Economic Journal* 114: 73-96.
- Balassa, B. 1971. *The Structure of Protection in Developing Countries*. Johns Hopkins University Press.
- Baldwin, R. 2003. Openness and Growth: What's the Empirical Relationship? NBER Working Paper 9578.
- Barro, R. 2000. Inequality and Growth in a Panel of Countries, *Journal of Economic Growth* 5 (1): 5-32.
- Baulch, R. and McCulloch, N. 2000. Tracking Pro-Poor Growth. ID21 Insights 31. Sussex Institute of Development Studies.
- Ben-David, D. 1993. Equalizing Exchange: Trade Liberalization and Income Convergence. *Quarterly Journal of Economics* 108: 653-679.
- Bernard, A. B. and Jensen, J. B. 1995. Exporters, Jobs, and Wages in U.S. Manufacturing: 1976–1987. *Brookings Papers on Economic Activity*.
- Bernard, A. B. and Jensen, J. B. 1999. Exceptional Exporter Performance: Cause, Effect, or Both? *Journal of International Economics* 47 (1): 1–25.
- Bernard, A. B. and Wagner, J. 1997. Exports and Success in German Manufacturing. *Review of World Economics* 133 (1): 134–157.

- Besley, T. and Cord L. (eds.) 2007. *Delivering on the Promise of Pro-Poor Growth: Insight and Lessons from Country Experiences*. Palgrave Macmillan and the World Bank.
- Birdsall, N. and Londoño, J. L. 1997. *Asset Inequality Matters: An Assessment of the World Bank's Approach to Poverty Reduction*. *American Economic Review* 87 (2): 32-37.
- Bourguignon, F. 2003. *The Growth Elasticity of Poverty Reduction: Explaining Heterogeneity across Countries and Time Periods*. In Eicherand and Turnovski (eds.). *Inequality and Growth: Theory and Policy Implications*. MIT Press.
- Calderón C. and Servén, L. 2003. *Macroeconomic Dimensions of Infrastructure in Latin America*. The World Bank.
- Deininger, K. and Squire, L. 1998. *New Ways of Looking at Old Issues: Inequality and Growth*. *Journal of Development Economics* 57: 259-287.
- Deininger, K., and Olinto, P. 2000. *Asset Distribution, Inequality, and Growth*. World Bank Policy Research Working Paper 2375.
- Devarajan, S. and Rodrik, D. 1989. *Trade Liberalization in Developing Countries: Do Imperfect Competition and Scale Economies Matter?* *American Economic Review* 79: 283-287.
- Diaz-Alejandro, C. 1978. *Foreign Trade Regimes and Economic Development*. Columbia University Press.
- Dollar, D. 1992. *Outward-Oriented Developing Economies Really Do Grow More Rapidly: Evidence from 95 LDCs, 1976-1985*. *Economic Development and Cultural Change*, 40 (3):523-544.
- Dollar, D. and Kraay, A. 2002. *Growth is Good for the Poor*, Policy Research Working Paper 2587.
- Dollar, D. and Kraay, A. 2002. *Growth is Good for the Poor*. World Bank Policy Research Working Paper 2587.
- Duncan, R. and Quang, D. 2003. *Trade Liberalization, Economic Growth and Poverty Reduction Strategies*. National Centre for Development Studies. The Australian National University.

- ECLAC, IPEA, UNDP. 2002. Meeting the Millennium Poverty Reduction Targets in Latin America and the Caribbean. ECLAC Books 70.
- Foster, J. and Székely, M. 2001. Is Economic Growth Good for the Poor? Tracking Low Incomes Using General Means. Interamerican Development Bank Research Department Working Paper 453.
- Frankel, J. A. and Romer, D. 1999. Does Trade Cause Growth? *American Economic Review* 89: 379–399.
- Galor, O. and Zeira, J. 1993. Income Distribution and Macroeconomics. *Review of Economic Studies* 60 (1): 35-52.
- Giordano, P. and Florez, V. 2007. Assessing the Trade and Poverty Nexus in Latin America. IADB.
- Kakwani, N. and Pernia, E. 2000. What Is Pro-Poor Growth? *Asian Development Review* 18(1): 1-16.
- Kakwani, N., Khamdker, S. and Son, H. 2002. Pro-Poor Growth: Concepts and Measurements with Country Case Studies. International Poverty Centre Working Paper 1.
- Klasen, S. 2004. In Search of the Holy Grail: How to Achieve Pro-Poor Growth? Proceedings of ABCDE-Europe. The World Bank.
- Kraay, A. 2004. When is Growth Pro-Poor? Evidence from a Panel of Countries. World Bank Policy Research Working Paper 3225.
- Krueger, A. 1998. Why Trade Liberalization is Good for Growth. *Economic Journal* 108 (450): 1513–1522.
- Kuznets, S. 1955. Economic Growth and Income Inequality. *American Economic Review* 45 (1): 1-28.
- Little, I., Scitovski, T. and Scott, M. 1970. *Industry and Trade in Some Developing Countries*. Oxford University Press.
- Lopez, J. H. 2005. *Growth and Inequality: Are They Connected?* The World Bank.
- Lopez, J. H. and Servén, L. 2004. *The Mechanics of Growth-Poverty-Inequality Relationship*. The World Bank.
- Lopez, J. H. 2004. *Pro-Poor Growth: A Review of What we Know (and of What we Don't)*. The World Bank.

- Mirrlees, J. 1971. An Exploration in the Theory of Optimum Income Taxation. *Review of Economic Studies* 38: 175–208.
- Ravallion, M. 2001. Growth, Inequality and Poverty: Looking Beyond Averages. *World Development* 29 (11).
- Ravallion, M. 2004. Pro-poor Growth: A Primer. World Bank Policy Research Working Paper 3242.
- Ravallion, M. 2005. A Poverty-Inequality Trade-Off. *Journal of Economic Inequality* 3 (2): 169–181.
- Ravallion, M. and Chen, S. 2003. Measuring Pro-Poor Growth. *Economics Letters* 78 (1): 93-99.
- Ravallion, M. and Datt, G. 2002. Why has Economic Growth been More Pro-Poor in Some States of India than Others? *Journal of Development Economics* 68: 381-400.
- Ravallion, M. and Lokshin, M. 2004. Gainers and Losers from Trade Reform in Morocco. The World Bank Policy Research Working Paper 3368.
- Rodriguez, F. and Rodrik, D. 1999. Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence. NBER Working Paper 7081.
- Rodrik, D. 1988. Imperfect Competition, Scale Economies and Trade Policy in Developing Countries. In Baldwin, R. (ed.). *Trade Policy Issues and Empirical Analysis*. University of Chicago Press.
- Rodrik, D. 2001. The Global Governance of Trade as if Development Really Mattered. United Nations Development Programme.
- Sachs, J. and Warner, A. 1995. Economic Reform and the Process of Global Integration. *Brookings Papers on Economic Activity*.
- Salinas, G and Aksoy, A. 2006. Growth Before and After Trade Liberalization. World Bank Policy Research Working Paper 4062.
- Srinivasan, T. N. and Bhagwati, J. 2001. Outward Orientation and Development: Are Revisionist Right? In Deepak and Shape (eds.). *Trade, Development and Political Economy: Essays in Honor of Anne Krueger*. Palgrave.

- Wagner, J. 2007. Exports and Productivity: A Survey of the Evidence from Firm-level. Data The World Economy 30 (1): 60-82.
- Winters, A. 2000. Trade Liberalisation and Poverty. School of Social Sciences. University of Sussex.
- Winters, A., McCulloch, N. and McKay, A. 2004. Trade Liberalisation and Poverty: The Evidence So Far. Journal of Economic Literature 42: 72-115.
- World Bank 2005. Pro-Poor Growth in the 1990s: Lessons and Insights from 14 Countries. The World Bank.

What We Do and Don't Know About Trade Liberalization and Poverty Reduction¹

Rob Vos

"The only thing I know, is that I don't know anything"

– Socrates –

Abstract

Strong opinions about the impact of globalization on poverty are not always backed by robust factual evidence. As argued in this paper however, it is not all that easy to lay our hands on 'robust' facts. Quantitative analyses of trade liberalization appear highly sensitive to basic modelling and parameter assumptions. Altering these could turn the expectation that, for instance, Africa's poor stand to gain from further trade opening under the Doha Round into one in which they would stand to lose. Most studies agree though that trade opening probably adds to aggregate welfare, but gains are small and unevenly distributed.

Keywords: Computable General Equilibrium Models; Trade Policy; Economic Integration; Trade and Labour Market Interactions; Welfare and Poverty; International Linkages to Development; Foreign Exchange Policy.

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Introduction

When I thought about a short answer to the question to what extent trade liberalization affects poverty, I could not come up with anything better than a Socratic response. As about 150 countries have signed up as WTO members now, the world seems set for further trade liberalization. But multilateral negotiations under the Doha round have stalled and much of the controversy is about the development agenda and in many ways along the traditional North-South, rich country-poor country dividing lines. On the one hand, there is the developed world which is resisting full liberalization of its agricultural sectors and the lifting of not only export subsidies, but in particular also domestic production subsidies, while at the same time demanding greater access to developing country markets for manufactures and services. On the other hand, there are two developing country camps. One consists of large developing countries, such as India, China, Argentina and Brazil which hope to reach an agreement that allows protection and development policies in precisely those manufacturing and services sectors, while demanding substantial reductions in OECD country tariffs and subsidies on agricultural products. The other developing country group is that of the poorest countries, often heavily dependent on aid and primary commodity exports, which feel the need to defend their preferential trade agreements and demand more policy space promote exports and export diversification.

This is, of course, a rather simplified sketch of the divide, but it does reflect different perceptions as to how further trade liberalization would contribute to welfare increases on each side of the fence, and whether it will contribute to poverty reduction for the developing countries. Gains, if there are any, are often presented as aggregate welfare improvements, but the losers may not see societal gains as relevant to their fate and therefore perceive trade opening as something non-beneficial. Much rigorous analytical work has not helped to overcome such controversies. Not in the least because, no matter how rigorous the instruments, our analytical tools are ultimately

creatures of our own perceptions of how the world works, and outcomes of our trade models largely depend on how those perceptions have been translated into the assumptions of the models that underlie the analytical work.

Nonetheless, most empirical studies tend to find that trade opening most often produces, on balance, aggregate income gains for the economy. The overall gains tend to be rather small however, particularly when measuring the impact in terms of economic growth. The implications for poverty reduction are less clear, though. This is in part because many studies do not look at the effects for sub-groups within society. This particularly holds for global trade models which tend to confine the assessment to aggregate welfare gains across countries. Studies that do look into the implications for sub-groups give a muddled picture for a variety of reasons: some methodological, some empirical. More particularly, the effects on income distribution seem to be mixed. But as with the average income gains, in most cases, the poverty effects tend to be small as far as one can tell from the existing evidence.

Luckily, many of the methodological issues that may lead to different assessments are well recognized. In this sense we thus know a lot, but more so about the limitations of our assessment methods. This observation may not be very helpful for policy makers, of course. Especially not if they are confronted with a variety of outcomes from different studies and if those studies fail to clarify to what extent the findings are sensitive to the assumptions made and which assumptions matter most to be able to determine which findings seem to be most plausible. Without trying to be comprehensive, let me take you through what I consider to be some of the key issues at stake.

Some theoretical notions and their empirical evidence

Trade reforms have been justified by expected increases in efficiency and output growth. However, the governments and international

institutions promoting them have been less explicit about their distributional consequences. During the 1990s, the predominant view was that liberalization is likely to lead to better economic performance, at least in the medium-to-long run. According to this view, even if there are adverse transitional impacts, they can be cushioned by social policies and, in any case, after some time has passed they will be outweighed by more rapid growth. However, neither perceived theory nor the available empirical evidence confirm this will necessarily be the case. Let me start with some analytical issues.

Trade and economic growth

Also from a theoretical perspective, the welfare gains from trade liberalization and free trade agreements (FTAs) are not obvious. According to old trade theory rooted in the Heckscher-Ohlin-Samuelson (HOS) framework, trade liberalization should lead to welfare improvements as countries are expected to specialize in trade according to their relative factor endowments. Further, based on the Stolper-Samuelson theorem, it has been argued that trade liberalization will be good for the poor as it would increase the demand for and the remuneration of the more abundant production factor. That is to say, the expectation would be that poorer countries see rising remuneration for the production factor of which they possess ample amounts (supposedly, unskilled labour) with respect to that of the scarce factor (say, capital or skilled labour). The inverse would hold for more developed countries.

However, these outcomes depend strictly on the limiting assumptions of the framework, including the case of a two-factor, two-commodity and two-country context and market conditions that would lead to factor price equalization. As soon as these assumptions are changed welfare outcomes and their distribution across countries and production factors change as well (see e.g. Wood, 1994, 1997; and Winters, McCulloch and McKay. 2004). For instance, the presence of a third trading country (say China) may explain why – next to

other factors related to product market imperfections and exchange rate and capital flow effects on remunerations –Latin American countries did not gain much in terms of increased labour-intensive exports and rising wages following their aggressive trade liberalization in the late 1980s and early 1990s (see Wood, 1994; Taylor and Vos, 2002; and further below).

More specifically in the context of FTAs, the Viner-Meade version of the Heckscher-Ohlin-Samuelson (HOS) framework applied to customs unions would suggest three additional effects determining the aggregate welfare outcomes of FTAs: (i) “trade creation” as a result of changes in commodity trade in the countries within the customs union; (ii) “trade diversion” caused by changes in trade between the customs union and the rest of the world; and (iii) “terms-of-trade” effects triggered by changes in international prices facing the countries. Trade creation and terms-of-trade gains are generally welfare-enhancing for countries within the customs union, whereas trade diversion and terms-of-trade losses are potentially damaging to countries outside the union.

This turns the question whether an FTA is welfare-increasing into an empirical one. From their comprehensive review of theory and empirical literature on regional trade agreements, Burfisher et al. (2004) draw what they consider to be two ‘robust’ conclusions regarding the lessons learned from the empirical work in the Viner-Meade framework. First, such agreements are generally good for the member countries and not seriously detrimental to non-members, but global (multilateral) liberalisation would always be better. Secondly, the potential benefits of trade liberalisation in general, and regional FTAs in particular, tend to be rather small as shares of national product. The latter is due in part because the HOS framework does not take any dynamic factors into account, other than the efficiency gains that would emerge from reallocating resources according to comparative advantage.

But even these findings need to be taken with some caution and consider the economic structures of the countries that engage in

regional integration arrangements. Venables (2003), for instance, argues that countries with what he calls ‘extreme’ comparative advantage (that is, specialization in few commodities only) have much less to gain from integration than countries that can specialize in a broader range of commodities. Under such conditions, forms of South-South integration may not be beneficial for poorer countries as, for instance, it may draw much of manufacturing production to the country that is part of the agreement and that has an already more developed and diversified economy. Hence, for such agreements to yield welfare outcomes that are distributed more or less equitably among its members, trade integration measures would have to be complemented with industrial and other production sector development policies to strengthen economic integration at the national level.

The “new trade theory” does account for some of those forces (knowledge spill-over effects through trade, imperfect competition, rent-seeking behaviour, etc.), though related empirical work is based on more eclectic and less coherent frameworks. It is not surprising, therefore, that the empirical testing of the relationship between trade and economic growth has stirred some controversy and has given far from conclusive results (see, e.g., Rodriguez and Rodrik, 1999; Baldwin, 2003; Burfisher et al., 2004; United Nations, 2006; Rodriguez, 2007).

Coe, Helpman, and Hoffmaister (1997), for instance, estimated trade-productivity links for 77 developing countries, finding sizable spill-over benefits of research and development in developing countries through exports of machinery and equipment to developed countries. They estimated that a one-percent increase in the import share of machinery and equipment to GDP results in a 0.3 percent increase in total factor productivity (TFP). Frankel and Romer (1999) analyzed a 98-country sample, controlling for capital inputs per worker and schooling. They found that a one-percentage point increase in the trade share of GDP increased the contribution of productivity growth to increases in overall output by about two-percentage points.

But these estimates are based on one-sector growth models overlooking that much of productivity shifts in developing countries stem from structural changes as economies move, in differing degrees, from low to high productivity sectors, rather than “pushing the production technology frontier” as assumed in the new endogenous growth literature (see United Nations, 2006 and Ocampo and Vos, 2008 for such a commentary).

The empirical evidence on the role of trade or openness *per se* in stimulating growth is also surrounded by some controversy. Rodriguez and Rodrik (1999),² for example, argue that the positive links between openness and income growth are greatly overstated and that the empirical work is suspect given the mixed quality of the data and problems related to measurement and empirical methodology. Furthermore, most of the trade externalities are based on macro relationships between measures of openness and measures of income or productivity growth. Instead of openness and trade expansion, Rodrik et al. (2004) argue for the primacy of institutions in explaining economic growth. They find that the effect of trade on income, after controlling for institutions and geography, is almost always insignificant, although it is positively related to effective institutions.

Trade reforms in general, and FTAs in particular, are often seen as vehicles to introduce additional reforms that make the investment environment more appealing to attract foreign direct investment (FDI) from developed countries through which there may potentially be a transfer of global technology and increased productivity. Waldkirch (2006) shows that foreign investment is also subject to sovereign risk and FTAs may serve as a commitment mechanism in order to achieve higher sustainable levels of FDI. Raff (2004) even argues that FTAs affect the location of FDI since governments may adjust taxes and external tariffs to compete for FDI; whether this raises or lowers welfare is shown to depend on the relative size of the efficiency gain from

² See also Rodriguez (2008) for a further discussion, including a rebuttal of the critiques on the original Rodriguez-Rodrik paper.

integration and the revenue loss associated with tax competition. These findings reiterate the point that the welfare gains from trade and attraction of FDI through FTAs are context-specific, as well as that the gains are likely stronger for economies that already have more integrated domestic economies to begin with.

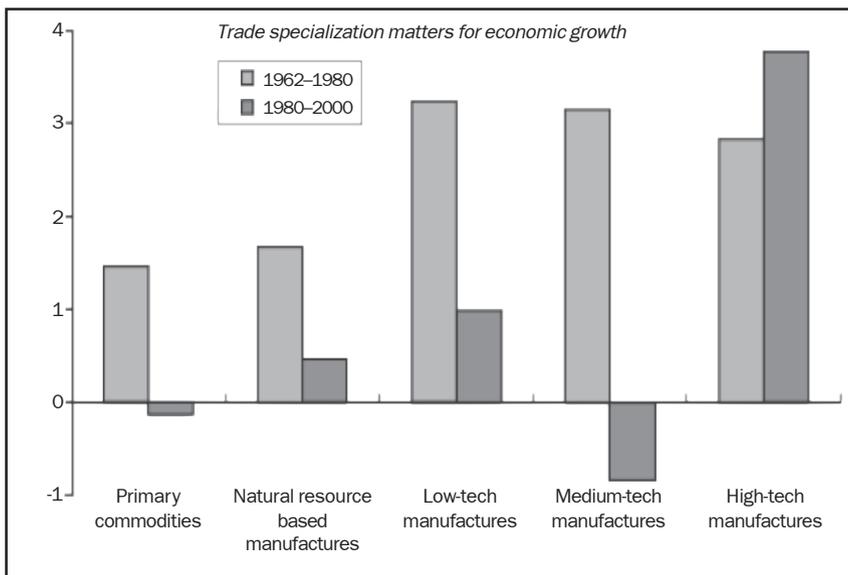
Finally, the old trade theory focuses on efficiency gains through trade by concentrating on comparative advantage. However, natural resource-abundant economies, for instance, have been found to have systematically lower long-term growth rates for a variety of trade and non-trade related mechanisms (see e.g. Murshed, 2006 for a review). Low-income developing countries often have both a relative abundance of labour and natural resources, but foremost remain specialized in one abundant factor in general: primary exports, or some others have moved towards both comparative advantages combining primary exports with labour-intensive *maquila* type exports, as has been the case in several African and most of the Central American countries, for instance. Both types of specialization share the same weaknesses when put in a broader comparative perspective: trade dependence on activities with weak integration with the rest of the economy, low levels of technological sophistication in production (hence low knowledge spill-overs), and vulnerability to rather high volatility in the corresponding commodity markets. As analyzed in the United Nations' World Economic and Social Survey of 2006, such weaknesses are associated with substantially lower long-term per capita growth rates as compared to countries with stronger domestic linkages and which have diversified into export commodities with higher technology content (United Nations, 2006).³ Figure 1 highlights the latter aspect. Hence, it matters what you export, likely more so than how much you trade.

³ Sánchez and Vos (2007) confirm this, showing more sustainable gains from freer trade in Costa Rica than in Nicaragua in a comparative analysis of the likely effects on these two countries of the free trade agreement between the United States and the Central American countries and the Dominican Republic (DR-CAFTA).

Trade liberalization and poverty

In the first place, the link between trade and poverty reduction would depend on the implications for income levels and economic growth, which has been a major concern of empirical studies of the welfare implications of trade reforms. However, the poverty implications will further depend on whether trade policies will also change the distribution of income. Again here we have some clear theoretical notions, but all are very sensitive to the key assumptions made.

Figure 1: Per capita GDP growth (y-axis) relative to dominant pattern of trade specialization, 105 developing countries, 1962-2000



Source: United Nations (2006).

Policy views stressing the output gains from trade (and through those, positive implications for poverty reduction) basically stem from supply-side arguments. The purpose of trade reform is to switch production away from non-tradables and inefficient import substitutes toward exportables in which countries have a comparative advantage. Presumed full employment of all resources—labour included—permits

such a switch to be made painlessly. As indicated, standard trade theory based on the Heckscher-Ohlin model and Stolper-Samuelson theorem (HOS) would predict further that workers in developing countries would benefit from freer trade, because this would lead such nations to specialize in types of production that make more intensive use of the most abundant factor, which would presumably be (unskilled) labour. Under the given assumptions, this should be conducive to greater income equality.

Empirical research on the link between trade liberalization and wage inequality in developing countries has produced mixed results. Evidence for East Asia indicates an improvement in income equality after a strong export-led strategy was introduced in the 1960s and 1970s. In line with this view, Wood (1994, 1997) has found evidence of rising demand for unskilled labour and a decline in wage inequality in the Republic of Korea, Taiwan (China), and Singapore following trade liberalization. More recent evidence for China, however, gives an indication of widening wage inequality, especially across regions and between urban and rural sectors (e.g. Wan, Lu and Chen, 2007). Further, despite its very high growth rates (almost 10 per cent per annum since 1990), employment growth has been just over 1 per cent per annum when looking at official labour statistics. This reflects, of course, very strong labour productivity growth through structural change, but not all of that comes on account of trade opening, as a lot of job shedding has resulted from public enterprise reforms.

In Latin America, in contrast to the first Asian tigers, the opening of domestic markets to external competition in Latin America is mostly associated with greater wage inequality (Berry, 1998; Beyer, Rojas, and Vergara, 1999; Cragg and Epelbaum, 1996; Feenstra and Hanson, 1997; Hanson and Harrison, 1999; Ocampo and Taylor, 1998; Robbins, 1996; Robbins and Gindling, 1999; Wood, 1994, 1997; Vos and Taylor, 2002; Vos, Ganuza, Morley and Robinson, 2006). Much of the increase in wage inequality and unemployment in several countries over the last two decades has been attributed to the change in the structure of labour demand in favour of skilled workers. This is

reflected in the overall increase in the returns to education for skilled labour and, in some countries, in the rise of unemployment among less skilled individuals (Freeman, 1995; Gottschalk and Smeeding, 1997).

Márquez and Pages (1997) estimated labour demand models with panel data for 18 Latin American countries and found that trade reforms had a negative effect on employment growth. Meanwhile, Currie and Harrison (1997), Revenga (1997), and Ros and Bouillón (2002) have analyzed the cases of Morocco and Mexico, respectively, and found that reductions in tariff levels and import quotas have had a modest but negative impact on employment, which has partly been the result of firms' efforts to cut margins and raise productivity. Also, a more recent survey of empirical studies on the trade liberalization and poverty nexus in Latin America by Giordano and Florez (2008) concludes that trade opening in many, but not all, countries of the region has come with rising wage inequality, although possibly foreign direct investment and capital account liberalization may have been more important factors in driving up the gap between wages for skilled and unskilled workers and between capital and labour remunerations. Similarly mixed outcomes are found in terms of the impact on poverty. In line with the findings in Vos, Ganuza, Morley and Robinson (2006), the survey concludes that trade liberalization in most Latin American countries appears to have contributed to a reduction in poverty, but the effects tend to be rather small. Multilateral trade integration in most cases would induce greater poverty reduction effects than unilateral moves in that direction in particular, as such would be expected to improve the terms of trade especially for agricultural exporters through the elimination of subsidies in developed countries. Again, however, such outcomes are not generalizable and country-specific.

This apparent contrast between experiences could suggest that the issue is an empirical matter rather than a theoretical puzzle. Economists, however, do not agree on the causes of the change in the structure of labour demand. The controversy is based mainly on

the HOS model and interpretations of the recent wave of technological innovations, which has had strong impacts on the structure of labour demand. Because developing countries tend to have abundant unskilled labour, the increasing inequality is puzzling. According to the HOS model, developing countries should specialize in the production of goods that are intensive in unskilled labour, thus increasing the relative demand for this factor and reducing wage differentials.

The question has been raised, however, as to whether the empirical evidence of rising inequality is sufficient to challenge the relevance of the Stolper-Samuelson theorem, because Latin America's comparative advantage may not be to specialize in labour and low-skill-intensive production. This possibility has been brought up not only because of Latin America's abundant endowment of natural resources, but also because the predominance of low-skilled workers (say, with fewer than nine years of education) is probably less marked in the region's labour force than in much of Asia and Africa. These conditions will change the expected outcomes of trade liberalization. Latin America's abundant endowment of land (relative to labour) and its unequal distribution has been shown to drive up income inequality following trade liberalization. Other factors, such as China's growing presence in world markets, for instance, may also depress wage improvements in Latin America's export sectors (De Ferranti et al., 2002; Wood, 1994, 1997).

These conditions are probably only part of the explanation for rising inequality following trade liberalization. An alternative hypothesis suggests that the recent opening to trade observed in various developing countries may have unleashed a simultaneous process of technological modernization and an increase in capital stock that have had a positive impact on the demand for skilled labour. These developments would then drive up the returns to human capital and intensify the dispersion of wages.

Although trade reforms may have important supply-side effects, aggregate demand also has an impact on growth and distribution,

just as capital inflows have an impact on relative prices. The old import-substitution model relied on the expansion of internal markets with rising real wages as part of its strategy. Under the new, more open trade regime, the question of controlling wage costs has taken centre stage. As long as there is enough productivity growth and no substantial displacement of workers, wage restraints need not be a problem because the expansion of output can create room for the growth of employment and real incomes. But if wage levels are seriously reduced and/or workers with high consumption propensities lose their jobs, then the resulting contraction of domestic demand could cut labour income in sectors that produce for the domestic market. Income inequality could then rise if displaced unskilled workers end up in informal services for which there is a declining demand. Larger inflows of capital following liberalization tends to lead to real exchange-rate appreciation, which can offset liberalization's incentives for the production of traded goods and force greater reductions in real wage costs.

On the demand side, though, capital inflows may stimulate aggregate spending through increased domestic investment (either directly or through credit expansion) and lower saving (credit expansion triggering a consumption boom). Furthermore, although macroeconomic stabilization policies that use the exchange rate as a nominal anchor may exacerbate real exchange rate appreciation, inflation can be brought under control, thereby allowing a recovery of real wages. Poverty — and in particular urban poverty — may decline, because much of the short-run economic expansion will be in non-traded goods. The expansion of aggregate demand may quite likely prove to be short-lived if the consequent widening of the external balance is not sustainable and if volatility in short-term capital inflows and a lack of regulatory control put the domestic financial system at risk. However, even if a financial crisis can be avoided, the economy may be pushed onto a deflationary path. A stop in capital inflows, as what happened in the late 1990s, may not trigger a strong export drive in response if there has been an earlier erosion of competitiveness

and aggregate demand, and in this case imports will have to be slashed.

Morley and Vos (2006) showed that exports became the main driving force of aggregate output growth in most Latin American countries in the second half of the 1990s, even though the export sector was not very dynamic and virtually none of the economies managed to increase their penetration in world markets. For sure, this is export-led growth on a slippery path. The thrust of these observations is that the effects of balance-of-payments liberalization on growth, employment, and income distribution arise out of a complex set of interactions involving both the supply and the demand sides of the economy. Income redistribution, poverty and major shifts in relative prices are endogenous to the process, and there are no simple conclusions about the effects of liberalization.

Modelling Issues

CGE models are by far the preferred framework of economists to assess the implications of trade liberalization be it unilaterally, in regional agreements or multilaterally, under the umbrella of the WTO. CGE models have great virtues such as bringing together demand and supply factors, enabling a high degree of flexibility in managing alternative degrees of sector detail and factor and household classifications, having clear simulation purposes, and are quite suitable to conduct counterfactual analyses, which allows for ex-ante assessments of the potential impact of trade liberalization on affected economies.

CGE models have strong theoretical foundations in neoclassical theory, but have evolved over time to capture differences in the structure and behaviour of economies, among others, by assuming different macroeconomic closure mechanisms and rigidities in commodity and factor markets. CGE analysis used to be quite an undertaking, typically a multi-year project, but standardized and widely accessible frameworks plus great advances in solving algorithms and computer programs have greatly eased the work. The numbers produced by the CGE models tend to have considerable influence in the public discourse about the

effects of trade liberalization.

The Global Trade Analysis Project (GTAP) provides a core trade modelling framework and database to a wide network of users and has enabled modelling of regional and global trade scenarios. The World Bank LINKAGE model shares many similarities with the GTAP framework and also uses the GTAP data base (Van der Mensbrugge, 2007). The World Bank global trade analysis is mostly based on a dynamic version of LINKAGE. The International Food Policy Research Institute (IFPRI) has developed a 'standard' model which is widely used as a basis for country-level trade policy analysis. Again the static version of this model is very similar in its specification as the GTAP and LINKAGE frameworks but is flexible, among other things, in setting alternative macro closure rules.

So much similarity in these influential modelling frameworks helps the comparability of different country analyses, analyses of regional free trade agreements, and alternative scenario analyses of options in multilateral trade negotiation, for instance. Yet while drawing on similar modelling frameworks, outcomes may differ substantially. Global trade models interestingly can bring out the distribution of economic gains from trade by regions and countries. However, some studies predict, for instance, that agricultural liberalization in the context of the Doha Round will lead to average income gains for Sub-Saharan Africa, while others will show losses (Anderson and Martin, 2006; Decreux and Fontagné, 2006; and Polaski, 2006). The sources of such qualitatively important differences are not always immediately clear and more sensitivity analysis needs to be done. Many of the possible candidates are known and could relate to different assumptions about key parameters, closure rules or other limitations to our modelling framework. Let me highlight a few by way of example.

On key parameters and trade functions: Armington specifications of trade linkages

One key feature of modelling trade linkages in the standard CGE

frameworks is to use Armington specifications (Armington 1969), which assumes imperfect substitutability between domestic products and imports (and vice versa between foreign products and exports). The related import and export functions are fully dependent on relative prices and incomes. By assuming imperfect substitutability, the Armington specification avoids complete specialization and makes multilateral trade easy to model. The specification also forces the pass-through effects of tariffs on supply prices to be less than 100 per cent. All the mentioned CGE frameworks work with such Armington specifications. In general, with higher Armington elasticities trade liberalization will create more trade and accordingly higher incomes. Bouët (2006) reviewed 16 studies of global trade liberalization using global CGE frameworks showing the sensitivity of trade parameter choice. The World Bank's LINKAGE model, for instance, uses higher elasticities than those generated by the Global Trade Analysis Project (GTAP) network, consequently yielding expected benefits from multilateral trade liberalization that are 33 percent higher.

In their critical assessment of the implications of the Armington specifications for outcomes of trade liberalization, Von Arnim and Taylor (2007) show that, because of the Armington assumption, tariff cuts may reduce consumption rather than enhance it. One would expect consumption to increase because domestic import prices will fall with the tariff cut. However, when applying particular macro closures, one could obtain the opposite effect. If the fiscal deficit is assumed to be fixed, then a tariff reduction must be offset by higher income taxes which will induce a drop in private consumption. Subsequently, Van Arnim and Taylor show that the higher the Armington elasticity of substitution, the lower the consumption crunch. Figure 2 shows this interaction of fiscal policies and liberalization under different values for the Armington elasticity under a scenario of full global trade liberalization and a simplified, two-region version of the LINKAGE model as constructed by Van Arnim and Taylor. The implications for the assessment of the welfare gains

thus critically depend on the closure rule used for the fiscal balance as much as the value of the Armington elasticity. In the case of Africa it could make a world of difference what parameter values were chosen.

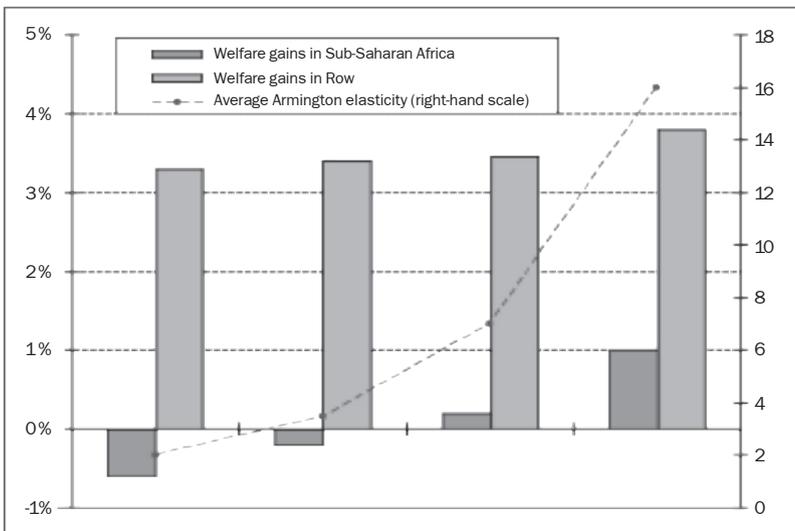
As such, this finding need not be too worrisome as one could run scenarios under alternative fiscal policy rules and Armington elasticities may be estimated for the specific context being analyzed. However, the problem in many practical applications is that alternative closure rules are not being tested in conjunction with alternative elasticity values and Armington elasticities are often borrowed 'from elsewhere' rather than estimated, with the 'elsewhere' not always being clear. The Armington elasticities mostly used in the LINKAGE and also in GTAP applications are typically rather high. If these are indeed 'too high,' as some critics argue, then the welfare gains from trade liberalization may well be overestimated and the same will apply to all those who 'borrow' such elasticities conveniently from these models. However, higher trade elasticities also ease the adjustment in trade balances and hence require less adjustment in other macroeconomic variables (such as the exchange rate) with further implications of such assumptions.

In fact, the possible effects depend not only on the value of the Armington elasticity and fiscal closure rule, but also on the size of the tariff cuts. In a recent country-based CGE study I conducted with Marco Sánchez on the welfare and poverty implications of DR-CAFTA in Nicaragua, the consumption-compressing effects of a higher Armington elasticity within a reasonable bound were not found to be very strong (Sánchez and Vos, 2006). In line with Van Arnim and Taylor's argument though, when assuming a flexible government closure (and fixed tax rates) the simulated welfare gains were slightly larger. In a similar study for Costa Rica though, Sánchez (2007) shows that even with rather low Armington elasticities and a flexible fiscal closure, there is no consumption-compressing effect, essentially because the size of the tariff cuts are small.

In global trade models, the Armington effect may be more

important in terms of the implications for the terms of trade. I will discuss this also further below, but a recent paper by Van der Mensbrugge (2007), brings out some sensitivities of the Armington specification for the terms of trade in the context of the LINKAGE model. Countries can gain market shares through price reduction and to the extent that a country's trading partners have relatively lower tariffs, that country will have to adjust export prices downward more strongly. A higher Armington elasticity can attenuate such terms-of-trade effects because it would define greater demand responsiveness. Simulations of the welfare gains and losses of an agreement in the Doha negotiations under the 'standard' assumptions of LINKAGE (see below) would lead to terms-of-trade losses for developing countries, especially those in Sub-Saharan Africa. Hence differences in assumptions about Armington elasticities may well explain the differences in the degree of terms-of-trade losses and in the conclusion as to whether African countries stand to gain from the Doha Round or not.

Figure 2: Welfare changes relative to GDP: full liberalization in the World Bank's closure with different Armington Elasticities



Source: Von Arnim and Taylor (2007: Figure 5).

Labour market assumptions

Equally alternative assumptions for the labour market adjustment could yield quite different results for the welfare and poverty outcomes. In a response to some critics, Dominique van der Mensbrugghe (2007) analyzed the possible welfare implications of a potential Doha Round accord by running the World Bank's LINKAGE model under different labour market closure rules. In the standard closure rule, applied in much of the World Bank's global trade analyses, wages are uniform across sectors and labour is perfectly mobile and fully employed. These are basic neoclassical assumptions, but can hardly be called realistic for any context. Under these labour market assumptions, the World Bank finds net positive global welfare gains from the Doha trade liberalization, with most of the gains accruing to the high-income countries in absolute terms, and the developing countries gaining equally in relative terms (see Figures 3a and 3b). South Asia and also part of Sub-Saharan Africa would lose under this scenario, especially due to terms-of-trade losses (which will affect all developing countries, but more so these regions). As mentioned, terms-of-trade losses may in part be attributed to the Armington assumption.

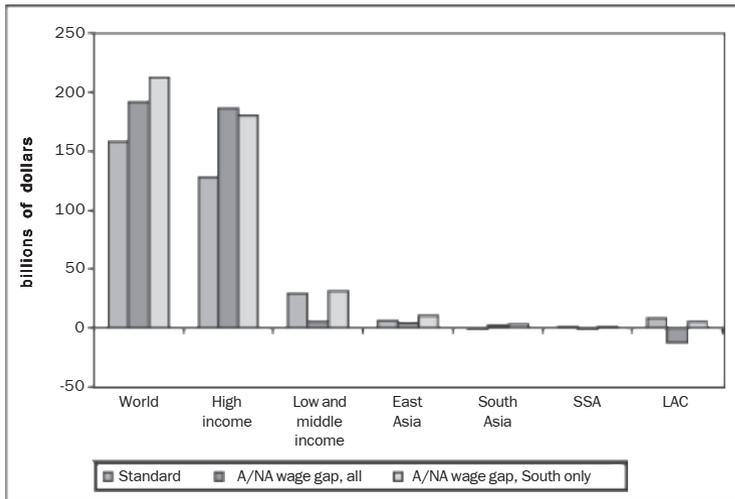
The alternative labour market closures relax the assumption of a uniform wage and assume that there is a gap in the wages for agricultural and non-agricultural workers. In the first alternative such a gap exists in all economies. This may have productivity implications as workers can move from low to high-productivity sectors and vice-versa. As a result, trade liberalization pushes up overall welfare gains, but on average developing countries would be less well off, as in those countries with a greater specialization on primary agricultural products would shift labour demand to the lower productivity sectors inducing an overall negative productivity effect, especially in Africa and South America (see, once again, Figures 3a and 3b). In addition, if the assumption of full employment is dropped for urban workers in developing

countries and the agricultural-non-agricultural wage gap only applies for developing countries, those countries stand to gain more from the Doha Round, but the gains are more strongly felt in developing countries with a comparative advantage in manufacturing and services (with generally higher productivity, compounded by gains through the use of slack capacity, i.e. lower unemployment, in the economy).

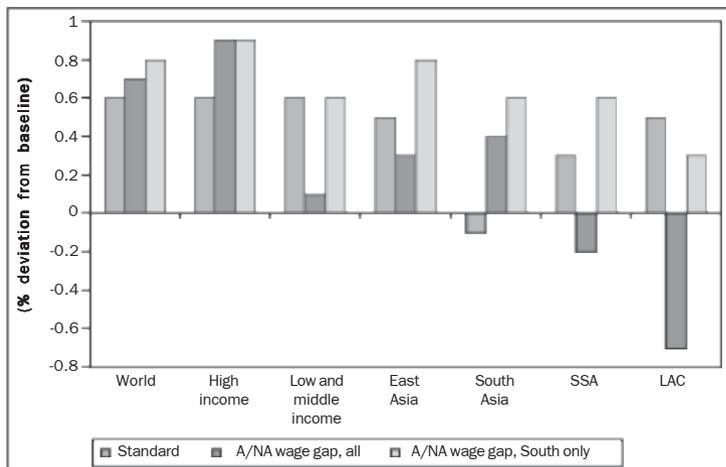
Labour market closure rules will, of course, also matter for distributional and poverty outcomes. If markets are segmented and labour is not fully mobile across sectors or labour categories, wage gaps will emerge. If wage rigidities exist, adjustment will fall on employment. The effects on wage inequality and employment may well offset each other. In a study covering 16 Latin American countries which I coordinated for UNDP a few years ago (see Vos, Ganuza, Morley and Robinson, 2006), we found that either unilateral or multilateral trade liberalization generally gave rise to positive employment effects, but also resulted in rising wage inequality, especially between skilled and unskilled workers. At the household level, however, the combination of these two effects would lead to little change in inequality of per capita incomes and some slight poverty reduction. Running the (static) CGE models under alternative labour market closure rules suggested that the initial economic structure was the main factor in explaining differences in that average finding. Inequality effects would be stronger in the countries with more heavy reliance on (few) primary exports (such as in Bolivia, Ecuador, Peru and Venezuela), and in some of these cases these would outweigh the positive employment effects leading to poverty increases because of trade liberalization.

Figure 3: LINKAGE model simulation of Doha Round, under alternative labour market closures

a. Real income effects in billions of US\$



b. Real income effects a percentage deviation from baseline



Source: Van der Mensbrugge (2007).

Macro closure rules

The implications of alternative macro closure rules on the outcomes of trade policy analysis are well known.⁴ I will not go into detail here, but by way of example, let me focus on the role of the external closure. In typical CGE analysis, two alternative external closures are considered: one can either assume that the trade balance is fixed and the real exchange rate adjusts to equilibrate aggregate exports and imports, or that the real exchange rate is fixed and the trade balance is endogenous. In the type of CGE frameworks indicated above one should expect that trade liberalization will shift relative prices in favour of tradables and if the tradable goods sector has a higher average productivity and labour-intensity than non-traded activities, this should lead to an expansion of aggregate output and employment along the lines of the dependent-economy model. The expansionary effect may be compounded, in the short run, by reduced import cost and a larger influx of foreign capital to finance a rising trade deficit if import demand responds more strongly than exports to trade opening.

Thus, if the given conditions hold, we would expect a stronger expansionary effect of trade liberalization under a fixed-exchange rate regime, as in this case, expanding domestic demand and a widening external balance will not hit a foreign-exchange constraint. The ensuing real exchange rate appreciation depresses the positive impact on exports and traded-goods output, but if trade elasticities are relatively low (which typically holds for primary exporters in particular) the foreign capital impulse and expansion of non-traded goods tend to outweigh the effects on export production. For similar reasons, devaluations tend to be contractionary. Under a flexible exchange-rate regime, the real exchange rate depreciates to accommodate a rising trade deficit triggered by import liberalization while the level of foreign savings is kept fixed. The expected result

⁴ See, for example, Sen (1963), Taylor (1983, 1990), Rattsø (1982), Robinson (1989, 1991, 2003), and Dewatripont and Michel (1987).

would now be a strengthening of the export drive and tradable goods output and employment but more restricted aggregate demand growth, as access to external borrowing is restricted. In the study on trade liberalization in Latin America to which I just referred to in the above (see Vos, Ganuza, Morley and Robinson, 2006), we found such effects to be present in most cases. Because of the stronger real wage and employment effects, poverty reduction effects would be somewhat stronger as well (or, poverty increases less).

Many real trade models tend to assume a flexible exchange rate for the external closure, but many countries retain managed or fixed exchange rate regimes. As indicated, the implications of this assumption are not trivial. Also, the flexible exchange-rate closure assumes that foreign savings are fixed, hence ignoring a role for foreign financing in the adjustment process to trade opening. In contrast, under a fixed exchange rate, foreign savings would accommodate any ensuing trade imbalance. This again may be unrealistic over time as countries running trade deficits cannot infinitely borrow abroad. Typically, trade models do not impose any restrictions that may emerge from debt sustainability problems or speculative capital movements and hence may ignore macroeconomic adjustment effects referred to earlier.

Dynamics

Dynamic CGE models are increasingly being applied in general equilibrium analysis of trade reforms. However, in most cases the dynamics is rather rudimentary. Typically, a recursive framework is used to drive 'dynamics' in the form of updating stock variables, especially of capital and labour. The LINKAGE, GTAP and IFPRI frameworks often additionally assume that total factor productivity growth is endogenous, as a response to trade openness. The latter assumption is admittedly ad hoc and not uncontested empirically, as discussed earlier. Also, and perhaps even more importantly, these CGE frameworks deal poorly with imperfect competition, as much as they are unable to handle activities shifting towards product

differentiation or the introduction of entirely new activities, which may well be part of dynamic and diversification responses to trade integration. In general, while the insights from new trade theory are gradually being incorporated in some CGE applications, the more widely used model frameworks and especially those most influential in the policy debate are still quite far from fully incorporating such insights.

Transitional problems and volatility

Most studies (and model frameworks) focus on income and (un)employment effects of trade liberalization rather than on the volatility of labour markets or transitional problems caused by structural changes in the economy. Jansen and Lee (2007) provide a review of studies which show that job insecurity has risen during periods of trade liberalization. Of course, trade opening probably has only been but one factor in driving up job insecurity and frictional unemployment. In the CGE frameworks, labour shifts across activities are typically assumed to be instantaneous and painless. In practice, however, such adjustments have dramatic job and income implications for groups of workers. Social and active employment policies (e.g. cash transfers, emergency employment programs, retraining programs) could attenuate such costs of course, but the effectiveness and costs of such policies typically are not part of the assessments of the welfare implications of trade reform.

Poverty analysis

Finally, the CGE frameworks experience problems in adequately capturing poverty effects. One major reason is that they incorporate rather aggregate, representative household groups and labour categories. Distributional effects are thus limited to the between-group income distribution of those categories. More importantly, within-group distributional effects thus tend to be missing enough detail to make appropriate assessments of the implications for income poverty. Some CGE model frameworks (references) include given distribution

functions to capture such effects. However, it is not at all clear that the within-group income distribution will be unaffected by trade reform. Rather, trade liberalization is expected to induce structural change and shifts in the composition of labour demand; hence, one cannot assume such distribution functions to be stable. For instance, if trade opening leads to less unemployment it may matter who in the overall distribution will find a job; similarly, if higher productivity sectors demand more workers, a question to be answered is which workers are most likely to move to such sectors. This will require more detailed modelling efforts.

A recent trend is to do so outside of the CGE framework through a variety of microsimulation methods. In this sequential modelling approach some of the key results of the CGE model simulations are distilled and imposed on household survey data representing the full income distribution. The microsimulation approaches as developed by Bourguignon et al. (2002) and Ganuza, Paes de Barros and Vos (2002) take the CGE-simulated changes in labour market parameters (unemployment, employment by sectors, labour categories and skills, and real wage levels and wage differentials) and translate those into effects on household incomes. The focus on labour market effects could be a limitation in itself, but many analysts believe that the main impact from trade reform on household income distribution and poverty should be expected to come from shifts in employment and labour incomes.

A key methodological issue these methods have to deal with is who within each labour category would be expected to move position, for instance, if trade reform affects the relative demand for skilled and unskilled workers, if there is an increase or decrease in labour demand across sectors, or if jobs get lost. Bourguignon et al. (2002) suggest approaching this through a behavioural labour market model determining occupational choice, returns to labour and human capital, consumer prices, and other individual and household income components. Econometric estimation of such a model would give the probabilities by which workers may be expected to receive higher

wages or to move across categories, which then can be used to simulate how existing workers and new labour market entrants are expected to shift across categories. The counterfactual results for the more aggregate labour market parameters of the CGE model are then combined with the outcomes of the microeconomic model of the labour market to obtain the full distributional implications of the trade reform.

The approach proposed by Ganuza, Paes de Barros and Vos (2002) is one of less additional modelling intensity. It is a non-parametric approach that uses a randomized process to simulate changes in the labour market structure. That is, random numbers are used to determine which persons at working age will change their labour force status, who will change occupational category, who will find a job in another economic activity, and so on. The assumption is that, on average, the effect of the random changes correctly reflects the impact of actual changes in the labour market or the likely changes under the counterfactual of trade liberalization. Because of the random assignment, microsimulations are repeated a large number of times in Monte Carlo fashion, which allows the establishment of confidence intervals for the simulated effects on poverty and inequality.

Applying the method to a large number of Latin American countries, Vos, Ganuza, Morley and Robinson (2006) obtain results which stay within 99 or 95 percent levels of confidence. As indicated above, they find that in general trade liberalization has had small but positive impacts on poverty in most countries of the region. Poverty outcomes mainly result from changes in average real wages which may offset increases in rising wage gaps. Aggregate employment changes or employment shifts across sectors as a consequence of trade reforms are not found to be large enough in the case of Latin America's trade reforms to exercise a significant impact on poverty and inequality at the household level.

The merits of these microsimulation methods need to be tested further. Thus far no solid comparative work has been undertaken on the outcomes of alternative microsimulation methods in specific cases

in order to assess whether using one or the other would influence the simulated poverty effects from trade liberalization.

Conclusions

Recall the initial question posed in this paper: What do we know about the links between trade, income and poverty? From the overview of issues I have given, as incomplete as these may be, I probably should take some distance from the quote from Socrates, because in fact we do know a lot about these links, and the wide array of studies has given us much more insight into the likely transmission mechanisms. Also, much of the sometimes conflicting evidence can be brought back to specific assumptions, differences in methods, and limitations in the data. Policy makers may not wish to be burdened by such complications, but probably they should before they start running away with findings which do not stand the test of minimal robustness. The mentioned analytical and modelling problems may sound trivial, and many are indeed trivial. Unfortunately, however, analysts – and this may include all of us – do not always take these sufficiently to heart and make sufficient and relentless efforts to justify assumptions against reality (rather than just make assumptions) and test for the sensitivity of the outcomes to alternative assumptions, specifications or methodological approaches. As obvious as this may seem, too little of this comes to the fore in the literature, especially when it comes to the interpretation for policy makers.

Having said this and at the risk of gross overgeneralization, my reading of the evidence on the growth and poverty effects of trade liberalization gives rise to the following answers as to what we know about this phenomenon:

- More trade — and thus, trade opening on balance — tends to generate positive aggregate income effects, but clearly not all countries and groups within countries benefit to the same degree, and some stand to lose more than others;

- Employment, distribution and poverty effects show more mixed evidence depending on the country case, especially on the initial production structure and options for finding new ‘specializations’ and on the functioning of the labour market (or the assumptions made about these);
- Even if these effects are positive they tend to be relatively small, especially when looking ahead at new trade agreements. This is so, in part, because trade liberalization has already progressed over the past decades and additional trade opening may affect certain sectors or groups to some extent, but the effects on the overall economy tend to be small. Small welfare gains also result because of the unrealistic assumption of full employment, which unfortunately is still being applied in many CGE models. It may also be due to our relative ignorance about the dynamic gains from trade in practice. If they are considered at all, the underlying mechanisms tend to be treated in rather ad hoc ways and existing evidence is fiercely contested. The assumptions made about the dynamic productivity effects have a major bearing as to whether there will be any tangible growth effects or not. The optimistic findings from the LINKAGE model, for instance, suggest that the Doha Round would generate less than a one per cent increase in the average world income level and some countries (either in the static or dynamic versions of the model) could increase average incomes to up to around 4 per cent at best. Such average income gains spread over a number of years translate, of course, to almost negligible increases in the growth rate of the economy;
- We have further learned that if you want to grow faster (and probably have more poverty reduction), it matters more what you export and how diversified your exports are than how much you trade. This calls for more active industrial and

- other production sector development policies to accompany (or even precede) trade liberalization; and
- Having said all this, it is also clear that trade liberalization is no panacea for poverty reduction. Average welfare gains are mostly small and in many instances have been inequality enhancing. Across countries, most of the absolute gains would accrue to the developed countries. Developing countries gain or lose, depending on their trade structures and, to a large extent, on the terms of trade effects originating from trade liberalization. At the country level, mixed but generally small poverty effects have been reported. As indicated, however, in many cases we cannot be entirely sure whether these would be true outcomes or “figments of our imagination,” especially where there are serious doubts about the degree of realism of the assumptions made in our model frameworks.

So, with regard to trade liberalization and poverty reduction, we know much more than ‘nothing,’ but we need to look critically at the frameworks we use and work much harder to improve these if we want provide a better guide to the debate on trade policies which is still stirring a lot of controversy.

References

- Anderson, Kym, and Will Martin. 2006. *Agricultural Trade Reform and the Doha Development Agenda*, New York and Washington D.C.: Palgrave Macmillan and the World Bank.
- Armington, Paul S. 1969. "A Theory of Demand for Products Distinguished by Place of Production," *IMF Staff Papers*, 16: 159-178.
- Baldwin, Robert E. 2003. "Openness and Growth: What's the Empirical Relationship?", National Bureau of Economic Research Working Paper No. 9578.
- Berry, Albert (ed.) 1998. *Poverty, Economic Reform, and Income Distribution in Latin America*, London: Lynne Rienner.
- Beyer, Harald, Patricio Rojas, and Rodrigo Vergara. 1999. "Trade Liberalization and Wage Inequality." *Journal of Development Economics* 59 (1): 103–23.
- Bouët, Antoine. 2006. "What can the poor expect from trade liberalization? Opening the 'black box' of trade modelling," MTID Discussion Paper No. 93, Washington D.C.: International Food and Policy Research institute (IFPRI).
- Bourguignon, François, Anne-Sophie Robilliard and Sherman Robinson. 2002. "Representative versus real households in the macro-economic modeling of inequality." Washington, D.C.: World Bank and International Food Policy Research Institute (mimeo).
- Burfisher, Mary E., Sherman Robinson and Karen Thierfelder. 2004. "Regionalism: Old and New, Theory and Practice," in G. Anania (ed), *Agricultural Policy Reform and the WTO: Where Are We Heading?*, Cheltenham, U.K. and Northampton, Mass.: Elgar, pp. 593-622.
- Coe, D. T., E. Helpman and A. Hoffmaister. 1997. "North-South R&D and Spillovers," *Economic Journal*. Vol. 107, No. 440: 134-49.
- Cragg, Michael I., and Mario Epelbaum. 1996. "Why Has Wage Dispersion Grown in Mexico? Is It the Incidence of Reforms or

- the Growing Demand for Skills?" *Journal of Development Economics* 51 (1): 99–116.
- Currie, Janet, and Ann Harrison. 1997. "Sharing Costs: The Impact of Trade Reform on Capital and Labor in Morocco." *Journal of Labor Economics* 15 (3): S44–S72.
- Decreux, Yvan, and Lionel Fontagné. 2006. "A Quantitative Assessment of the Outcome of the Doha Development Agenda," *Working Papers* 2006-10, CEPII Research Centre, Paris.
- De Ferranti, David, Guillermo Perry, Daniel Lederman, and William F. Maloney. 2002. *From Natural Resources to the Knowledge Economy: Trade and Job Quality*. Washington, DC: World Bank.
- Dewatripont, M. and G. Michel. 1987. 'On closure rules, homogeneity, and dynamics in applied general equilibrium models,' *Journal of Development Economics*, 26 (1): 65-76.
- Feenstra, Robert C., and Gordon H. Hanson. 1997. "Foreign Direct Investments and Relative Wages: Evidence from Mexico's Maquiladoras." *Journal of International Economics* 42 (3/4): 371–93.
- Frankel, J.A. and D. Romer. 1999. "Does Trade Cause Growth?," *The American Economic Review*. Vol. 89, No. 3, pp: 379-99.
- Freeman, Richard B. 1995. "Are Your Wages Set in Beijing?" *Journal of Economic Perspectives* 9 (3): 15–32.
- Ganuza, Enrique, Ricardo Paes de Barros, and Rob Vos. 2002. 'Labour Market Adjustment, Poverty and Inequality during Liberalisation,' in: Rob Vos, Lance Taylor and Ricardo Paes de Barros, R. (eds.) *Economic Liberalisation, Distribution and Poverty: Latin America in the 1990s*, Cheltenham (UK) and Northampton (US): Edward Elgar Publishers, pp. 54-88.
- Giordano, Paolo and Victoria Florez. 2008. 'Assessing the trade and poverty nexus in Latin America,' Inter-American Development Bank, Washington D.C. (processed).
- Gottschalk, Peter, and Timothy M. Smeeding. 1997. "Cross-National Comparisons of Earnings and Income Inequality." *Journal of Economic Literature* 35 (2): 633–87.

- Hanson, Gordon, and Ann Harrison. 1999. "Trade, Technology and Wage Inequality." *Industrial and Labor Relations Review* 52 (2): 271–88.
- Jansen, Marion and Eddy Lee. 2007. *Trade and employment: Challenges for policy research*, Geneva: ILO and WTO.
- Löfgren, Hans, Rebecca Lee and Sherman Robinson. 2002. "A standard computable general equilibrium (CGE) model in GAMS," Microcomputers in Policy Research 5. Washington, D.C.: International Food Policy Research Institute.
- Márquez, Gustavo and Carmen Pages. 1997. "Trade and Employment: Evidence from Latin America and the Caribbean." Unpublished paper. Washington, DC, Inter-American Development Bank.
- Morley, Samuel and Rob Vos. 2006. "Bad luck or wrong policies? External shocks, domestic adjustment and growth slowdown in Latin America and the Caribbean," in: Vos, Rob, Enrique Ganuza, Samuel Morley and Sherman Robinson (eds.) (2006) *Who Gains from Free Trade? Export-led Growth, Inequality and Poverty in Latin America*, London and New York: Routledge, pp. 8-54.
- Murshed, S. Mansoob. 2004. When does natural resource abundance lead to a resource curse?, IIED-EEP working paper 04–01. International Institute for Environment and Development, London. <http://www.iied.org>.
- Ocampo, José Antonio and Lance Taylor. 1998. "Trade Liberalization in Developing Economies: Modest Benefits But Problems with Productivity Growth, Macro Prices and Income Distribution." *Economic Journal* 108 (8): 1523–46
- Ocampo, José Antonio and Rob Vos. 2008. *Uneven Economic Development*, New York, London, Hyderabad and Penang: Orient Longman, Zed Books and Third World Network
- Polaski, S. 2006. 'Winners and Losers: Impact of the Doha Round on Developing Countries,' Carnegie Endowment for International Peace, Washington D.C.
- Raff, Horst. 2004. "Preferential Trade Agreements and Tax Competition for Foreign Direct Investment," *Journal of Public-Economics*, 88(12): 2745-63.

- Rattsø, Jørn. 1982. 'Different macroclosures of the original Johansen model and their impact on policy evaluation,' *Journal of Policy Modeling* 4 (1): 85-97.
- Revinga, Ana. 1997. "Employment and Wage Effects of Trade Liberalization: The Case of Mexican Manufacturing." *Journal of Labor Economics* 15 (3): S20-S43.
- Robbins, Donald J. 1996. "HOS Hits Facts: Facts Win; Evidence on Trade and Wages in the Developing Countries." Development Discussion Paper 557, Harvard Institute for International Development, Cambridge, MA.
- Robbins, Donald J., and Thomas H. Gindling. 1999. "Trade Liberalization and the Relative Wages for More-Skilled Workers in Costa Rica." *Review of Development Economics* 3 (2): 140-54.
- Robinson, Sherman. 1989. 'Multisectoral Models,' in: H. Chenery and T.N. Srinivasan (eds.), *Handbook of Development Economics. Volume 2*, Amsterdam: North-Holland, pp. 886-947.
- Robinson, Sherman. 1991. 'Macroeconomics, financial variables, and computable general equilibrium models,' *World Development*, 19 (11): 1509-1525.
- Robinson, Sherman. 2003. 'Macro Models and SAM Multipliers: Leontief, Stone, Keynes and CGE Models,' Paper presented at Conference 'Poverty, Inequality and Development' in Honor of Erik Thorbecke, Ithaca: Cornell University (October).
- Rodriguez, Francisco. 2008. "Openness and growth: what have we learned?", in: José Antonio Ocampo, Jomo K.S. and Rob Vos (eds.), *Growth Divergences. Explaining Differences in Economic Performance*, New York, London, Hyderabad and Penang: Orient Longman, Zed Books and Third World Network, pp. 172-203.
- Rodriguez, Francisco and Dani Rodrik. 1999. 'Trade Policy and Economic Growth: A Skeptic's Guide to Cross-National Evidence,' NBER Working Paper No. 7081, Cambridge (MA): National Bureau of Economic Research
- Rodrik, Dani, Arvind Subramanian, and Francesco Trebbi. 2004. 'Institutions rule: The primacy of institutions over geography

- and integration in economic development,' *Journal of Economic Growth* 9 (2): 131–165.
- Ros, Jaime, and César Bouillón. 2002. "Mexico: Trade Liberalization, Growth, Inequality and Poverty." In: Rob Vos, Lance Taylor, and Ricardo Paes de Barros (eds), *Economic Liberalization, Distribution and Poverty: Latin America in the 1990s*, Cheltenham, UK: Edward Elgar, pp. 347–89.
- Sánchez, Marco V. 2007. "Liberalización comercial en el marco del DR-CAFTA: efectos en el crecimiento, la pobreza y la desigualdad en Costa Rica," Serie Estudios y Perspectivas, N° 80. Mexico City: ECLAC.
- Sánchez, Marco V. and Rob Vos. 2006. "DR CAFTA: Panacea o fatalidad para el desarrollo económico y social en Nicaragua," Serie Estudios y Perspectivas, N° 57. Mexico City: ECLAC.
- Sen, Amartya K. 1963. 'Neo-classical and neo-Keynesian theories of distribution,' *Economic Record* 39: 53-66.
- Taylor, Lance. 1983. *Structuralist Macroeconomics. Applicable Models for the Third World*, New York: Basic Books.
- Taylor, Lance. 1990. 'Structuralist CGE Models,' in: Lance Taylor (ed.) *Socially Relevant Policy Analysis*, Cambridge (MA): MIT Press.
- Taylor, Lance and Rob Vos. 2002. 'Balance of payments liberalization in Latin America: effects on growth, distribution and poverty,' in: Rob Vos, Lance Taylor and Ricardo Paes de Barros (eds.) *Economic Liberalization, Distribution and Poverty: Latin America in the 1990s*, Cheltenham UK, Northampton, MA: Edward Elgar Publishers, pp. 1-53.
- United Nations. 2006. *World Economic and Social Survey 2006: Diverging Growth and Development*, New York: United Nations.
- Van der Mensbrugge, Dominique. 2007. 'Modeling the impact of trade liberalization: a structuralist perspective?', World Bank, Washington D.C. (mimeo, May).
- Venables, Anthony. 2003. "Winners and losers from regional integration agreements,' *Economic Journal*, 130 (490): 747-761 (October).

- Von Arnim, Rudiger and Lance Taylor. 2007. 'World Bank CGE Macroeconomics and the Doha debate,' New York, New School for Economic Research (mimeo, April).
- Vos, Rob, Enrique Ganuza, Samuel Morley and Sherman Robinson (eds.). 2006. *Who Gains from Free Trade? Export-led Growth, Inequality and Poverty in Latin America*, London and New York: Routledge.
- Vos, Rob, Lance Taylor and Ricardo Paes de Barros (eds.). 2002. *Economic Liberalization, Distribution and Poverty: Latin America in the 1990s*, Cheltenham UK, Northampton, MA: Edward Elgar Publishers.
- Waldkirch, Andreas. 2006. "The 'New Regionalism': Integration as a Commitment Device for Developing Countries," *Journal of Economic Integration*, 21(2): 397-425.
- Wan, Guanghua, Ming Lu and Zhao Chen. 2007. "Globalization and regional income inequality: empirical evidence from within China," *Review of Income and Wealth*, Series 53 (1): 35-59 (March).
- Winters, Alan L., Neil McCulloch and Andrew McKay. 2004. "Trade liberalization and poverty: the evidence so far," *Journal of Economic Literature*, 42(1): 72-115 (March).
- Wood, Adrian. 1994. *North-South Trade, Employment and Inequality: Changing Fortunes in a Skill-Driven World*. Oxford, UK: Clarendon Press.
- Wood, Adrian. 1997. "Openness and Wage Inequality in Developing Countries: The Latin American Challenge to East Asian Conventional Wisdom." *World Bank Economic Review* 11 (1): 33-57.

Trade and Poverty in Latin American Countries: Conceptual and Methodological Challenges*

Renato G. Flôres Jr.

Abstract

This paper addresses topics - either relevant or confusing or needing more attention - related to measuring the trade and poverty nexus. It sheds a critical light on the existing material and suggests needed research lines. It starts with questions akin to the LAC realities; then, keeping this view, general methodological issues are also examined. In a broader perspective, further ideas for the research agenda are formulated. The main conclusion is that considerable effort has to be exerted in order to generate relevant findings. Moreover, the Information-measurement-model-evaluation paradigm is not enough, policy guidelines being usually *too* general. In LAC, it must be extended and deepened, accounting more for the heterogeneity of cases, including, whenever possible, the physical constraints and incorporating new ways of integrating both the local and global perspectives. Other aspects, like the role of specific juridical measures, should be considered. How all this can be combined into more encompassing evaluations remains open.

Keywords: CGE modelling, household surveys, Latin America, micro-simulations, physical constraints, poverty impacts.

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Introduction

In spite of the myriad studies on poverty and poverty alleviation initiatives available nowadays, with quite a sizeable number involving (usually open) trade as the driving force, there still is some confusion regarding objectives and final targets. Most of this confusion can be credited to lack of attention (or distinction) between *absolute poverty* and *relative poverty*. Trade reforms may, for instance, have an impact on absolute poverty, but by favouring other classes as well, relative poverty may remain unaltered or even worsen. Though the latter are no new statements, failure to consider both dimensions still happens many times and limits the scope of the findings.

Another point of contention is the proper identification of the income distribution mechanisms. This requires a deeper understanding of the channels through which the results of trade policies are transmitted to the domestic economy. Even in less complex economies like many of those in the Latin American (LA) regions, there is a considerable lack of such analyses. The consequence is that many modelling efforts – like the CGE approach – though touching the real issues, do so in a superficial and distorted way.

The above and many other issues have been the object of excellent reviews on the trade-poverty equation. To only cite Winters *et al.* (2004) is not to do justice to many other pieces; so numerous that someone said that a ‘review of reviews’ is already needed.¹ I shall thus not contribute to increase the existing stock, but instead address a list of topics I consider either relevant or confusing, or requiring more work and attention. Though presented as a personal set of judgements, I hope these will be helpful in shedding a critical light on the existing material and opening a few new (and sometimes urgent) lines of research.

I start with questions akin to the geographical focus of this talk. I cannot avoid though, still trying to keep a LA view, to next address

¹ Giordano and Florez (2007) is also a recent and extensive survey on the subject.

a selection of methodological issues considered important. I then move to a broader perspective, putting forward some ideas and suggestions to further the research agenda. Finally I conclude by briefly wrapping up my previous analyses.

The Latin American context

A diversity of experiences

Studies linking trade and poverty in Latin America, beyond suffering from problems inherent to such analyses in general, have also often disregarded key problems specific to the region. I say this with a proviso, as Latin America is a too vast and confusing denomination that should, at least, be separated into three domains: South America, Central America, and the Caribbean and Mexico. Geographical, political and historical arguments seem to authorize this split, the first two areas still deserving further disaggregation. But most work on the region has concentrated on a few countries, notably Mexico, Chile and Colombia, with Brazil and Argentina deserving some (though less) attention. The interest in the first three seems to derive from their ties with the US, while the size and role that Argentina and Brazil play in the Southern Cone seem to account for their attraction.

Though the above situation has been changing, as studies like Vos et al. (2006) show, and thanks to recent interest by ECLAC triggered by the new bilateral treaties with the US, there still is a lack of comprehensiveness, weakening the potential of generalisations and broader conclusions.

The different realities shall certainly provide different findings that may help in understanding the particular features of global problems. These refer to a nearly generalised situation of rising or hardly declining inequalities, where powerful exclusion mechanisms (migrants, ethnic groups and cultural differences) are still present, at the side of somewhat recent and very distressing phenomena: in many urban areas and poor land tracts of the continent, the emergence of complex networks of marginal, lawless & criminal activities with

widespread implications in the labour market and the organisation of economic activities; while in the rural areas as a whole, an ever more dependency on concentrating agribusiness practices, with debatable environmental and socio-economic consequences. It is in this setting, where democracy is struggling to consolidate itself as a viable political channel for the manifold hopes of a huge yet marginalized population, that we must face the challenge to investigate the diverse trade and poverty links.

A portfolio of trade options

Further complications do exist related to the concepts of trade opening or trade policy themselves. In some Central American countries, a few South American ones and parts of Brazil, places where poor but reasonably structured local communities can be found, there is a vision that trade must be conducted from a local perspective, progressively developing – mostly in an associative mood, with limited external intervention – indigenous skills, in a way to enable building production units that would secure a better income and, perhaps, later engage in international exchanges. Not necessarily in opposition, but with the potential of causing rather different impacts, are two other views. One, more classical, favours trade openness in a more unrestricted way, through free-trade agreements or the formation of regional blocs. Another view, not far from the first one though more modern, tries to use the agreements as a way to insert the country's trade flows into the growing phenomenon of international value chains, aiming at a more sustainable position in the world export-import flows. All these policies must be nuanced by the fact that Latin America (LA)² is roughly a set of low to intermediate technology economies, nearly all dependent – though in different degrees - on commodities and raw materials.

² From now on, LA stands both for Latin America and Latin American, with no harm to the clarity of the text, I hope. LAC, as explained earlier, stands for Latin American countries.

In spite of the fact that both views are not necessarily exclusive, adoption of one of them, particularly the last two, may have drastic consequences on the others. One example is the recent doubly unfortunate outcome of the *maíz* issue in NAFTA. With US corn producers nowadays, thanks to the government subsidies for the (very inefficient) production of ethanol, preferring to supply the local market instead of exporting to Mexican processors, the latter experienced a crisis as local production had previously strongly diminished due, exactly, to these very (cheaper) imports from the US.

If we turn to evaluations, a community-based, local-to-global strategy presents a low impact – unless conducted in a wide scale uncommon in this kind of efforts – that may not show up at a national and even regional level study, especially within a limited time frame. But such efforts may have great value in reducing poverty, and more attention should be given on how to better integrate them in the trade/poverty assessments. Moreover, ‘classical’ trade policies, as a free-trade agreement, can either enhance or destroy such initiatives, being seldom neutral to them. In countries like Guatemala or Bolivia, to name a few pungent examples, the corresponding ‘classical evaluations’ should take this into account at the risk of producing a false picture, for the better or the worse. This raises an interesting methodological problem of creating a set of harmonised local and national impact measures, something of special relevance in LA given its sharp social divides.

The modern view of the international production chains can have even harsher consequences, as it may turn out optimal to extinguish selected activities/sectors. How to evaluate, or rather compare, these different decisions?

Geography and the regional dimension

Latin America is the home of huge territories, but for the argument in this item one doesn’t even need to think of giants like Brazil, Argentina or Mexico, with areas of, respectively, 8.514, 2.780 and 1.973 thousands of km². The evil combination of a diversified and often

inhospitable geography with a decadent or non-existent infra-structure makes distance a key determinant of development, even in a small country like Ecuador, where three clearly distinct zones – the coast, the Andean range and the Amazon region – segment the territory. In moderately-sized Peru (1.285 thousands of km²), the same three broad zones subdivide into 84 different climates!

Recent research that has been conducted at the University of Antwerp on the Andean Community – where road transportation is a major problem - shows how crucial the mix trade/accessibility has been for spreading the trade impacts, Acosta Rojas et al. (2006), Benedictis Villacreses et al. (2006). In Ecuador, for example, ‘far-off’ provinces have been completely isolated from the effects of nearly all trade initiatives in the past years.

The Amazon region turns boundaries into a vapid concept, creating a continuum east of the Andes that goes from Peru to Venezuela, passing through Bolivia and Colombia, and uniting all these territories to the Brazilian side of the forest. A Brazilian soya producer in Mato Grosso, for instance, may find it easier to cross Bolivia and use a Peruvian port close to Lima than send his cargo to the port of Santos, in São Paulo. Indeed, cultures, languages, trade and migration flows, agricultural activities and all kinds of exchanges mingle in this vast area. It is hard, if not impossible, to identify where one country ends and the other begins – and, even harder, to separate the different economic systems. The same happens in parts of the Paraguayan-Brazilian border, or that of Argentina and Uruguay, to name a few among other examples.

All this bears out two important consequences. The first is, again, that these facts can be completely overlooked in a global-level evaluation. Moreover, as remote areas usually belong to low income segments, or, to put it in a more general way, as inequality is correlated with space, the corresponding remoteness effect can pass totally unnoticed even if results are by income classes. The second is that the regional dimension, with special attention to the boundary areas, becomes near mandatory in these studies.

The question of the rural area

Though not familiar with all household surveys existing in LA, this author is quite knowledgeable about the Brazilian one and is well aware of a few others. It is well-known that the reliability of these surveys decreases considerably in the rural areas, be it due to under-coverage, or to inaccuracies in total income evaluation and reporting, among other problems. In many countries, like in Argentina, the rural area is even totally left out; not to mention the fact that, nearly in all of them, the very definition of rural depends on the vagaries of the tax policy of different mayors. In Brazil, where the household survey has a long tradition, sizeable parts of the Amazon region are outside it; what to say about similar areas in Peru, Venezuela and Colombia?

In spite of this, a vast majority of trade-poverty studies has the rural zone as a main focus and no – not even a line – sensitivity analysis *on the effects of the survey data* can be found in 99 per cent of them. No errors-in-variables assumptions are incorporated in the econometric models or simulations based on the survey variables; non-sampling errors, something so hard and delicate to compute, are forgotten, and consequently never demanded. How can we trust policy guidelines that arise from these blind attempts?

Volatility

I borrow this fancy term from finance to encompass the enormous political, social and macroeconomic instability that pervades Latin American countries (LAC). Take the past twenty years in Argentina, Bolivia, Brazil, Colombia, Ecuador or Peru and anyone will be amazed by the serious macroeconomic disequilibria in the domestic and external accounts, the massive institutional changes that profoundly impact the channels linking trade and poverty reduction, the confounding effects of recent direct-assistance programmes for the poor.

In unstable economies like those in LAC, macroeconomic conditions have an enormous impact on trade and poverty-reducing policies and their possible effects. Indeed, they can be THE underlining

factor, responsible for the main changes. In Brazil, for instance, significant reductions in poverty were achieved through inflation control and direct assistance programmes, in a nearly independent way of the adopted trade policies. This considerably limits the availability of ‘pure trade policy’ experiments as, ideally, the macroeconomic background must be stable during the experiment.

Summing up, this state of flux raises questions that one may argue to lie “in the garbage box in the backyard of the modeller’s kitchen,”³ but that are crucial starting and end points: how to choose a base year for our analyses, especially in a CGE context? how to correctly frame our very results?

A few points on methodology

The counterfactual – an annoying zombie

Most poverty evaluations share a deficiency that is also common to the majority of trade evaluations: the absence of a counterfactual. The impact of Mercosul’s first years on Argentina, for instance, is blurred by the generalised opening of the country’s economy, requiring attention and finesse, as well as a lot of indirect measurements, to disentangle the various effects. Add to a situation like this one the impact of the ‘other than trade’ dynamics on poverty, and season it with the different possible outcomes related to inequality: this will suffice to put strong doubts on many studies. Moreover, the known fact that the dynamics between inequality on one hand, and the growth-poverty nexus on the other has not been fully understood yet, lends further complications to the trade/poverty context.

It may seem unfair to raise, in this paper, a point that has been surfacing for the last fifty years in the trade evaluations debate without any definite solution. However, I have two arguments in favour of calling back here this *annoying zombie*.

³ As an old CGE master, Jean Waelbroeck, liked to refer to basic, key modelling questions people usually try to avoid.

The first is that it is my view that earlier analysts, like those of the “Benelux school of trade studies,” paid much more attention to such comparisons. P. J. Verdoorn, for instance, though applying techniques that may look childish to a nowadays young PhD,⁴ always dedicated enormous care in the creation of the *anti-monde*, the counterfactual that would give sense to his evaluations. This proper attitude seems unfortunately not to have been followed in myriads of computationally-intensive, automatically-generated and totally “un-controlled” trade/poverty evaluations we see today. A strong pledge for the re-insertion of the *anti-monde* is then made.

Secondly, there are, in my view, two important methodologies that may considerably aid – I’m not saying solve – in generating counterfactuals. The first is the set of econometric models like the differences-in-differences estimator, or the contrasted treatment effects, that are based on matching and, quite often, propensity scores techniques, Heckman et al. (1997)⁵ It is true that, in principle, they are more suitable for small-area studies, given the peculiar problems raised by the matching procedure. Community-based studies in Guatemala, Nicaragua and Brazil, for instance, where an ‘equivalent, not-treated community’ can be identified, have started to pay attention to this alternative. But exactly a major and interesting challenge is to enlarge the geographical focus of such evaluations, through a careful and creative use of matching and the corresponding estimator. Household and industrial surveys data seem a rich locus where much progress along these lines can be done.⁶

The other is the interesting generalisation of Oaxaca’s (1973) idea of computing counterfactual first-order moments put forward

⁴ Though only in appearance; in reality, his methods were very shrewd and creative. An illuminating summary of them is Verdoorn and Van Bochove (1972); a substantial example – of historical and conceptual interest – is Verdoorn and Schwartz (1972).

⁵ At the root of all these econometric uses lies the seminal paper by Rubin (1974); the propensity score received formal treatment in Rosenbaum and Rubin (1983).

⁶ For an interesting attempt see Ottaviano and de Souza (2007).

by Lemieux (2002), inspired on earlier work by himself and other colleagues on the labour market. Briefly stated, he considerably broadens the possibility of constructing counterfactuals, by generating the very associated distributions. As argued by the author himself, the technique allows a wide range of applications, and I see it as particularly suited for our cases. Ferreira et al. (2007) shows an interesting application of it,⁷ and, in countries like Argentina, Brazil and Venezuela, it may help in disentangling the trade policy effects from those due to direct-assistance programmes nowadays in progress.

The counterfactual has of course less importance – and many times none – if the goal of the study is to *predict* the impact on poverty/inequality of a proposed trade policy. But even so, care must be invested in building up at least an alternative scenario for the remaining structure of the economy.

A multi-ethnic marriage: CGE and micro-simulations

I presume all development economists would be in favour of multi-ethnic marriages, but they also know that a key element to their success is a wise approach – and due respect – to the inevitable cultural differences. The combined use of CGE results with more detailed (micro-simulations) models which, by way of further assumptions, end up providing finer information on the poverty/inequality effects, too often violates this main principle.

I will not raise here a deep methodological inquiry on the matching of these techniques but I cannot resist calling attention that many times they overextend the limits of CGE findings. Nobody knows when and how the CGE results will fully take place: they can be understood as a (new) long-run equilibrium – a usual practice, but they can also come true very fast; or they may signal a direction of movement, that the economy will follow though at different sectoral speeds, and in such way that, in the process of this very movement, new shocks or conditions will lead it to a totally different outcome.

⁷ But see also the earlier Bourguignon et al (2002).

As all this is possible, static CGE falls short of giving us a clue on what will take place, and feeding its results to another model – though not forbidden – must be done with care.

But other issues plague this marriage. Different years for the CGE (calibrating) benchmark and the data for the poverty exercise may introduce further serious distortions. Moreover, the usual transmission link between the two models is Deaton (1997)'s over-used (not to say abused) first-order, linear decomposition of the welfare variation (DW) into the price variations:

$$DW = \sum_i (q_i - c_i) Dp_i \quad (1)$$

where i runs over all goods, and q_i , c_i , and p_i stand, respectively, for the quantities produced (sold) and consumed, and the respective price, all relative to a given consumer, or group of consumers of interest.

Bluntly plug the variations from the CGE exercise into the Dp_i 's, produced under a (single) representative-consumer framework, is a procedure which overlooks key transmission mechanisms related to different classes of consumers; mechanisms which, quite often, precisely lie at the heart of the poverty generating processes.

I'm afraid the above points are twice more important in LAC where, as mentioned in the previous section, the policy making environment can be extremely volatile. In many situations it would have been better not to couple the two methodologies, rather than producing a second wave of effects especially difficult to grasp, and guidelines more suitable for a Lewis Carroll book.

Cross-sections and their lack of content

Part of the evidences we have on the trade-poverty relationship comes from cross-section studies – of sectors, regions, social classes, etc – either involving different LA countries or even a broader set of world nations. Such studies usually take an inadequate account of the heterogeneity of experiences/groups. By this I am not saying that

people forget, in their panels, to introduce a random or fixed effect for the units' heterogeneity. Rather, I am implying something deeper in the sense that, in perhaps nearly half of the studies, the *very heterogeneity of experiences or reactions* would not authorise putting those units together in the panel. Behind a random effects model, for instance, lies a minimal homogeneity in the (stochastic) mechanism generating the effects, which goes beyond a different variances hypothesis, for instance. Moreover, cross-sections are often used for forecasting or other 'time extrapolation' purposes; conclusions thus being entirely senseless.⁸

Synthetic measures and what they tell

The desire of creating synthetic measures summarising the effect of the trade reform on different aspects of the income distribution is absolutely valid, and may considerably help both in the analysis of the reform itself as in communicating results and conclusions. However, to tell significant stories, synthetic indicators must have due coverage and, ideally, move according to rules clearly linked to the phenomena and/or transmissions at stake. Once again, the LA context enhances deficiencies akin to the majority of indicators. I illustrate with two widely used ones.

The first is the skill premium, defined as the ratio (by sector, or the whole manufacturing industry) between the (average) wages of skilled and unskilled workers.⁹ An increase in this ratio – supposing all other factors controlled – is usually considered as a positive poverty reducing sign of the trade policy. But in countries where many industries aren't internationally competitive, the ratio can increase simply because many "lower-paid unskilled workers have disappeared from the denominator," either due to sheer redundancies or to the

⁸ Rodríguez (2007) develops arguments which, though not identical to the ones in this text, call attention to other relevant questions, in the context of the so-called "growth regressions."

⁹ The literature on this is vast, Acemoglu (2003) being but one example.

very disappearance of their firms, both caused by the more competitive environment. In this case, the indicator must be complemented with something that tells what happened to this group. Did they remain unemployed? Was there a proper adjustment programme that took care of them? This is a serious point if one computes this measure in Argentina, Bolivia and Mexico, just to cite a few countries, and I would venture even in Chile and Brazil.

Moreover, this ratio is often used as providing evidence for the economy as a whole, though calculated for the manufacturing – and sometimes also the agricultural – sector. Such computation forgets that services play a major role in all LA economies, usually in a way different from the one through which they interact in the developed economies; their joint dynamics with the changes in manufactures and agriculture is a key element to allow a final judgement on a likely positive move of the skill premium. Notwithstanding, though sizeable and important, services are under-measured, when not *unknown*, in all LA economies. The puzzle then becomes hard to be solved.

It is also services that can disrupt, in many ways, the meaning of another aggregate measure: that computed by (1). The first is when the adopted disaggregation pools together many different (service) sectors, making an assessment of the price variation – usually then set to zero – debatable. This produces a mutilated welfare variation figure, of little value. Even when the household survey used for defining the summands in the right hand side of (1) provides a better identification of relevant services, information on the corresponding price variations is usually lacking. In the event that the latter come from a CGE exercise¹⁰ this is nearly for sure, as most of these models work with poor, artificial and usually too aggregate descriptions of the service sectors. Setting all variations to zero only brings one back to the previous case.

¹⁰ Keeping of course in mind all the provisos against this set forth under the heading ‘A multi-ethnic marriage.’

Global Issues

The trade x FDI dynamics in poorer contexts

All LA economies are in dire need of foreign direct investment (FDI), and their search for foreign money is closely linked to their trade policy. Though FDI has its own rules, motivations and requirements, it is perhaps not false to say that, at least half of the time, it is the predominant motive for the trade reform. Moreover, in a true globalisation feature, LAC themselves are engaged in an increasingly dense pattern of cross-investments, with significant feedbacks in their trade flows. Bolivia's recent occupation of a Brazilian refinery – which mainly supplied gas to Brazil – is a dramatic example, eventually well solved, of this new reality.

Bringing FDI to the discourse also adds new features of analysis. Two important ones are spill-over and agglomeration effects. As to the former, there is a reasonable consensus nowadays that they have a strong regional dimension, as shown by Flôres et al. (2007) and Crespo and Fontoura (2006). Agglomeration effects, due to spatial competition forces, also induce changes in the regional pattern. The result of both, for better or worse, is evident in areas of Brazil, Argentina, Bolivia and Mexico. Moreover, the not very clear correlation of FDI with the institutional setting, and the clearer but elusive ones with market size and natural endowments, are maybe further arguments in favour of starting to take FDI into account jointly with trade, when assessing the poverty alleviation links.

A sequence of evaluations rather than one-shot studies

All processes of interest in this essay take place along the time dimension, usually in an uncoordinated way. Rather than focus on one-shot studies, attention should be directed to a sequence of evaluations that would draw an evolutionary picture of the phenomena at stake. This poses however two additional problems. One is confounding: the desired effect mixing up with other measures or shocks that occur during the observational period, something already

emphasized as very common in the LA context. The other is an additional stress on data requirements: changes in the methodology of the survey of reference or lack in its continuity (due to budgetary constraints or administrative changes, which are two frequent events, for instance) can jeopardise the whole study. From the methodological side, dynamic CGEs, for instance, need a careful inspection of the related closures and may be too aggregate for the purposes in mind. Notwithstanding, these points should not be an excuse for not pursuing more sequential and longitudinal evaluations.

From a local to a multi-country perspective

When the regional, multi-country viewpoint is at stake, considering within – *and* between – country inequality (rather than poverty) matters. A free trade area, or a trade agreement between a regional bloc and an outside partner, may have all possible effects on each member, but these outcomes bear no definite relationship to the relative impact within the group. If poverty is reduced in each member, but the disparity (or asymmetry, to use the modern *cliché*) in the group rises, though a positive result if looked at a country-basis, the trade agreement can heighten political or integration tensions in the bloc.

Co-ordination of the agreement impacts – and of how they split themselves within the bloc – and an effort to maximise the infrastructure spill-overs that it may trigger are important dimensions for (global) poverty reduction that have been neglected in the implementations as well as the evaluations. The Mercosul and the Andean Community unfortunately provide examples of such mismanagement.

The regional bloc perspective goes down to the country and the local development levels, composing a mosaic of effects. The integration and governmental authorities, and the various community groups need information to guide their concrete actions. Local communities' economic and social recovery projects or actions must be sustainable; direct assistance programmes – valid in poorer or more unequal countries (regions) – must evolve into capacity building ones.

How do these initiatives link with trade policies? Can they have a greater impact – and stronger links with the bloc's trade policy – if conceived in a multi-country (i.e. bloc) basis? Or are they too heterogeneous to justify a combined approach?

There is certainly a need of further research to harmonise indicators and evaluation methodologies with these different spatial levels.

Energy and environmental issues

Energy and the environment see no legal boundaries and should, in principle, be unifying factors in a continent like South America, which is extremely well-endowed with both resource types. Though consciousness is growing that the several South (and Central) American nations should create a single front to integrate their resources for the benefit of all and the design of a (reasonably) common trade policy on energy goods, there is still a long road to be travelled. Meanwhile, local and regional ill-managed experiences affect both less resources-rich countries like Chile as a favoured one like Argentina. This situation represents an added, considerable burden on the poor: rising energy prices and systematic black-outs seem to affect – either directly or via their negative impacts on infrastructure and transportation – the poorer segments of the population more. Unfortunately, most countries are starting to change their energy matrices under a perspective of self-sufficiency and (future) cost minimisation, without a clear pro-poor stance.

But serious natural resources constraints are also posed by the ever concentrating agribusiness practices. Small-scale environmental disasters, which may eventually be aggravated by the present climate changes, have already taken place. Desertification and other unwelcome environmental effects are to be expected from such intensive, income-concentrating practices. Argentina and Brazil rank together as the fourth and fifth top net exporters of virtual water (through their respective agro sector practices), having exported around 45 billion cubic metres during 1997-2001. Though both –

especially Brazil – are very well endowed with water, local environmental damage and seriously increasing salinity levels of naturally salty vast tracts of earth are already becoming noticeable. Again, the largest load is due to fall on the rural poor.

Though in northern countries, particularly Canada, there is a tradition of coupling the environmental, and sometimes the energy issues, with CGE – and other formal methods as well – evaluations of trade and social policies, this practice is very incipient in LA. The importance of both subjects, which interact with the trade policy usually in the unfavourable direction, as regards poverty alleviation, calls for an urgent start of this kind of studies.

Conclusion

Reality still demands considerable efforts, if we do want to contribute to its improvement. Maybe this is the main conclusion one may draw from the previous lines. Moreover, I think us all, modellers, evaluators and/or econometricians, need a considerable degree of humility: the IMME (information-measurement-model-evaluation) paradigm is not enough, and our policy guidelines are sometimes *too* general. In the LA context, the IMME chain must be extended and deepened, *accounting more* for the heterogeneity of cases, including, whenever possible, *the physical constraints* and incorporating new ways of *integrating the local and the global*. Other aspects not treated in this paper, like the role of specific juridical measures and the rule of law, should also, ideally, be an integral part of the impact evaluations.

How and in which ways all this can be combined into more encompassing evaluations? Which, among the several needed methodological improvements, will prove more helpful to policy making?

The portfolio of challenges ahead is as huge as it is fascinating.

References

- Acemoglu, D. 2003. Patterns of skill premia. *Review of Economic Studies*, 70; 199-230.
- Acosta Rojas, G. E., G. Calfat and R. G. Flôres Jr. 2006. Trade and infrastructure in the Andean Community. *CEPAL Review* 90 (December); 43-58.
- Benedictis Villacreses, G., G. Calfat and R. G. Flôres Jr. 2006. Challenging the Development Role of Trade Agreements when Remoteness Counts: the Ecuadorian Experience. Working Paper 2006.5. Antwerp: Institute of Development Policy and Management/UA.
- Crespo, N. and M. P. Fontoura. 2006. Determinant factors of FDI spillovers – what do we really know ? *World Development*, 35 (3); 410-25.
- Deaton, A. 1997. *The Analysis of Household Surveys: A Microeconometric Approach to Development Policy*. Baltimore and London: John Hopkins University Press for the World Bank.
- Ferreira, F. H. G., P. G. Leite and M. Wai-Poi. 2007. Trade Liberalization, Employment Flows and Wage Inequality in Brazil. World Bank Policy Research Working Paper 4108. Washington, D. C.: The World Bank.
- Flôres, R. G., Jr., M. P. Fontoura and R. Guerra Santos. 2007. Foreign direct investment spillovers in Portugal: additional evidences from a country study. *European Journal of Development Research*, Vol. 19 (3); 372-90.
- Giordano, P. and V. Florez. 2007. Assessing the Trade and Poverty Nexus in Latin America. Processed. Washington, D. C.: Inter-American Development Bank.
- Heckman, J. J., H. Ichimura and P. Todd. 1997. Matching as an econometric evaluation estimator. *Review of Economic Studies* 65; 261-94.

- Lemieux, T. 2002. Decomposing changes in wage distributions: a unified approach. *Canadian Journal of Economics*, vol. 35 (4); 646-88.
- Oaxaca, R. 1973. Male-female wage differentials in urban labor markets. *International Economic Review* 14; 693-709.
- Ottaviano, G. and F. L. de Souza. 2007. The effects of BNDES loans on the productivity of Brazilian manufacturing firms. (paper prepared within UNDP's Project BRA/04/052). Processed.
- Rodríguez, F. 2007. Policymakers Beware: The Use and Misuse of Regressions in Explaining Economic Growth. *Policy Research Brief* n. 5 (Nov. 2007). Brasília (IPEA) and New York (UNDP): The International Poverty Centre.
- Rosenbaum, P. R. and D. B. Rubin. 1983. The central role of the propensity score in observational studies for causal effects. *Biometrika* 70; 41-55.
- Rubin, D. B. 1974. Estimating causal effects of treatments in randomized and nonrandomized studies. *Journal of Educational Psychology* 66; 688-701.
- Verdoorn, P. J. and A. N. R. Schwartz. 1972. Two alternative estimates of the effects of EEC and EFTA on the pattern of trade. *European Economic Review*, 3 (3); 291-336.
- Verdoorn, P. J. and C. A. Van Bochove. 1972. Measuring integration effects: a survey. *European Economic Review*, 3 (3); 337-49.
- Vos, R., E. Ganuza, S. Morley and S. Robinson, eds. 2006. *Who Gains from Free Trade? Export-led Growth, Inequality and Poverty in Latin America*. London: Routledge.
- Winters, L. A., N. McCulloch and A. McKay. 2004. Trade liberalization and poverty: the evidence so far. *Journal of Economic Literature*, XLII (March); 72-115.

Trade and Poverty: the Little We Know of the Effect in Africa and Possibly Why

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Abstract

Trade is an engine of economic growth. Africa's share of world trade has been falling, while trade liberalization has been put forward as a necessary step in the quest to increase Africa's economic growth and reduce the country's poverty. However, the structure of current trade patterns in Africa and the lack of linkages between tradable sectors and non-tradable sectors within African economies renders poverty-reducing strategies somewhat more complex. There is a need to complement the trade focus on development, which is macro in nature, to also consider a micro approach on how poor household welfare and poverty spells are determined by the trade sector in which poor households engage.

Keywords: Economic integration, household production; Human capital; informal economy.

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Introduction

The need for sustained economic growth is necessary but not sufficient for poverty reduction. Trade is an integral part of economic growth, but similar to the link between economic growth and poverty reduction, the impact of trade on poverty reduction is neither automatic nor straightforward. Africa in general, and Sub-Saharan Africa (SSA) in particular, has persistent and chronic poverty with still over 40 percent of its population living on US\$1 a day. In addition, the region's moderately good economic performance since the late nineties has not resulted in significant poverty reduction. The recently released *Economic Report on Africa 2007* attributes the improved economic performance to better macroeconomic management and increased global demand for commodities (ECA 2007). The sustainability of such growth rates depends on the degree to which commodity booms are used for diversification and the institution of new trade structures and flows.

Critically, the largely historically determined trade pattern of integration in world markets by SSA countries has not led to diversified products. In addition, the high dependence on a limited range of commodities has given rise to an 'enclave' economy wherein exported primary commodity production co-exists with large subsistence farming sectors, with barely existing forward and backward linkages between the two sectors. This in turn leads to commodity booms exacerbating current trade patterns and significantly contributing to static employment trends and stationary poverty levels.

This does not deter from the fact that trade is a vital aspect in development. The developmental approach to trade and the need for a trade focus to development are two distinct conceptual paths, with a skewed theoretical and empirical research towards the latter (UNCTAD 2004). A development approach to trade would be concerned with how the structure of production and trade affects different segments of the population and the labour market. In other words, it is necessary to focus on a micro approach on how poor

household welfare and poverty spells are determined by the trade sector in which poor households engage. On the other hand, the trade focus on development is macro in nature, and tends to leave out the details such as net household welfare effects between producer and consumer surpluses as a consequence of trade policies.

Trade and Liberalization: The Researchers' Conceptions

There is fairly extensive literature on the impact of trade liberalization on employment and income in developing countries. Recent surveys focus primarily on employment in the formal sector (Jansen & Lee 2007 and Hoekman & Winters 2005). Furthermore, the focus is generally on employment in the manufacturing sector. The impact on the non-tradables, which most of the poor people produce in Africa, is indirect occurring through changes in relative prices and employment opportunities in the formal sector. Finally, the country specificity and the heterogeneous nature of household profiles and the differentiated institutional setting makes the trade and poverty area rather complex. Initial conditions of poor households, the presence of market institutions, and organizational linkages contribute to a particularly unexplored area of investigation in trade and poverty.

At the heart of the current debate on trade policies in Africa is the static and dynamic welfare gains attributed to trade liberalization in the form of removal of tariff and non-tariff barriers. Most African countries are particularly interested to know whether greater liberalization can lead to rapid and sustained poverty reduction and how the mechanics works. The argument is that trade liberalization would open up economies and increase international transactions and hence economic growth (see Deardoff and Stern, 2000). On the domestic front open economy enterprises are forced to bring down prices through market-enforced discipline. Thus trade liberalization increases economic efficiency in developing countries through their greater ability to absorb technological advances, and has positive

effects on output and wages (see Edwards 1997 and Agenor 2000). However, the effect of trade liberalization at the household level, both in theory and on the basis of available empirical evidence, is ambiguous. The poverty reduction effects of trade liberalization have been difficult to estimate and somewhat inconclusive.

The moderate economic performance of African economies has also been explained by how high income inequality and poverty levels hamper growth (Easterly 2002). Trade liberalization has been put forward as a necessary step in increasing economic growth in Africa by pushing the economies to higher levels of productivity (Edwards 1997). There are a number of important issues that arise with regard to the welfare implications of trade liberalization in Africa. Given the difficulty of estimating direct effects of trade on poverty, the analysis has tended to be in the closely correlated areas. The questions that are analysed have therefore revolved around the following:

- Whether trade liberalization affects income distribution in Africa; and
- Whether trade liberalization is or can be pro-poor, and which are the transmission channels.

These and related questions have been a focus of active research in the development literature in the last several years. The linkages that do exist between trade policies and poverty work through several complex channels. Winters (2002, 2000) provides a comprehensive list of the transmission channels from trade policies to household welfare. Accordingly, trade policies can affect household welfare and overall economic performance by inducing changes in the following variables:

- Prices of consumption goods
- Factor prices, income, and employment
- Government revenue
- The incentives for investment and innovation, which affect long-run economic growth
- Short-run risk and adjustment costs

The effects of trade policies on prices of consumption goods and factors of production are the most researched and documented transmission channels between trade policies and poverty in developing countries, including Africa (Winters 2002). Among others, the reason is that these channels have a direct bearing on the state of income growth, wealth creation, and income distribution in the economy, thus capturing the welfare effect on poverty. Some studies, particularly those based on economy-wide models, also address the fiscal impact of trade policies and analyse the effects on household welfare through changes in public expenditure patterns (Levin 2004). The effects of trade policies on incentives for investment and the short-run adjustment costs are rarely investigated, not because they are not important, but because the data requirements are demanding.

The findings of the empirical literature on the effects of trade policies on income distribution and poverty are mixed, due as much to the diversity of country experiences as well as the approaches used to analyse the linkages. The most common approaches used in the literature are cross-country comparisons, general-equilibrium, and partial equilibrium frameworks, each with its own merits and limitations.¹ Notwithstanding their analytical differences, all of these approaches are inspired by the well-known result of Stolper and Samuelson (1941)² that simply states that trade liberalization will benefit a country's relatively abundant factor and hence reallocate resources in a more efficient manner.

In Africa, compared to the global economy, the abundant factor is unskilled labour and thus trade liberalization is expected to reduce income inequality by shifting the gains of trade in favour of the unskilled. Yet the empirical evidence documented provides mixed results on the prediction of the Stolper-Samuelson correlation. The predictions of the Stolper-Samuelson theorem were not evidenced in a study carried out

¹ See e.g. Reimer, 2002 for a comprehensive review of the approaches.

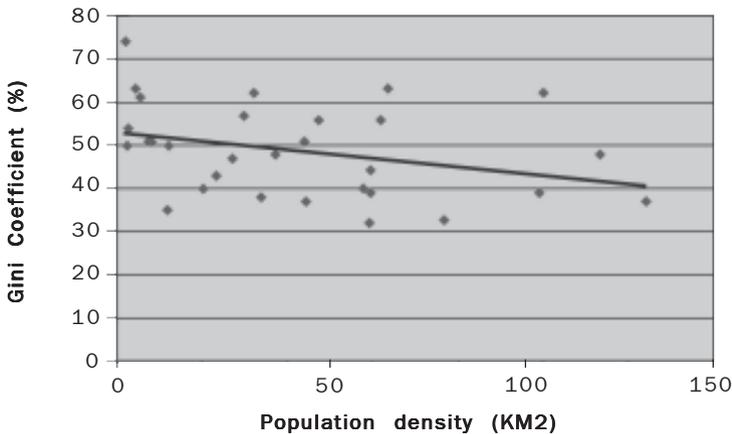
² Deardoff and Stern (1994) provide an excellent review of the vast literature inspired by the Stolper-Samuelson Theorem.

in 10 countries (Krueger 1978), while in a later study by the World Bank on 19 countries the results were the same (Choksi 1991).

There are other frameworks that try to explain the long-term and short-term effects of trade liberalization on income distribution (e.g. Fischer, 2000) which generally allow for the constancy of some factors of production, such as land or capital.³ In this regard, empirical evidence suggests that countries abundant in natural resources such as land tend to experience a rise in income inequality following trade liberalization. (e.g. Bourguignon and Morrison, 1990 and Fischer, 2000). The explanation behind this is that countries that are abundant in natural resources e.g. land are both capital and labour poor and hence raise the return to their ownership. Since these factors are owned inequitably in Africa (see Deninger and Squire, 2000), inequality thus rises. In general, the cross-country evidence so far supports these linkages between factor endowments and inequality. Thus, trade reform coupled with land abundance can lead to higher income inequality and vice versa.

Figure 1 provides a crude picture for Africa where a measure of income inequality is correlated with a measure of land abundance. Interestingly, the correlation is negative and statistically significant,

Figure 1: Endowment of land and income inequality



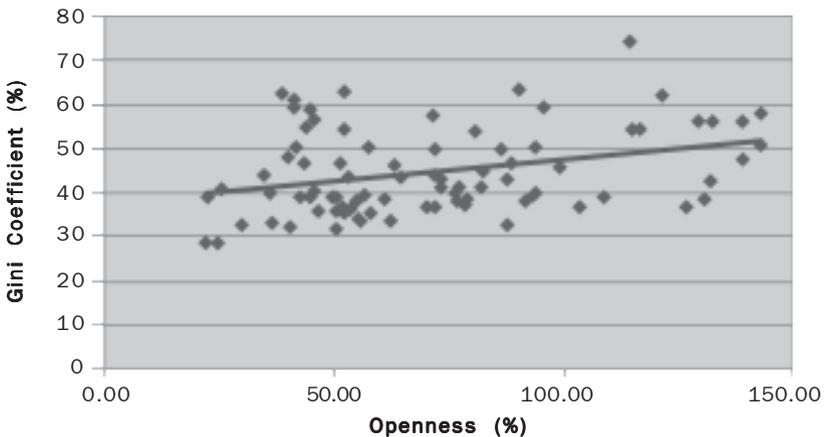
Source: ECA computations

³ These are better known as Specific Factor Models in the trade literature.

corroborating the above argument. In general, land abundant economies tend to have a high level of income inequality.

In addition, most cross-country regressions have found that openness, defined in different ways, is negatively correlated with income inequality (e.g. see Spilimbergo et al. 1999, Fischer, 2000 and Easterly, 2002)⁴ Again as figure 2 depicts, the correlation between a measure of openness and income inequality is positive and significant for selected countries of Africa. Apart from the trade theoretic explanations for this evidence, there is a political economy side of the story as argued by Easterly (2002), who states that resource-rich countries, mainly those that depend on a few products for their exports, tend to have institutions and political frameworks that favour the persistence of income inequality. That is, more open economies in Africa tend to depend on one or two major items (mineral, oil or any primary commodity), which are characterized by high initial inequality to begin with. In fact, virtuous trade effects on poverty are

Figure 2: Openness and income inequality in Africa in the 1990s



Source: ECA computations

⁴ Some disagree on the assertion that trade reform worsens income inequality on grounds that the causation is weak (e.g. Srinivasan and Wallack, 2003). An influential work also by Dollar and Kraay (2001) takes the view that greater openness is neutral with respect to income distribution.

more likely to occur if domestic demand expansion is a major component of economic growth (UNCTAD 2004).

A better scenario is provided by an economy-wide model that looks at the whole economic system and traces the effects of particular trade policies on household welfare, government budget, and the overall economy on a counterfactual basis (e.g. Bourguignon and Suwa, 1991). In general, empirical studies point to at least three channels through which trade liberalization affects household welfare and thus income distribution:

- Changes in factor income following trade liberalization affect functional distribution of income (which is different from size distribution of income). This occurs through the labour market where changes in the prices of tradable goods (exportable and importable) are transmitted into changes in demand for labour, and thus employment.
- Changes in relative prices affect consumption expenditure, thus welfare. Depending on the pattern of consumption of households belonging to different groups, changes in the prices of tradable and non-tradable goods cause changes in welfare through the income and substitution effects.
- Capital gains affect the distribution of household wealth creation (Bourguignon, 1991). The return on capital is affected directly by trade liberalization.

In a simple general equilibrium framework, the impact of trade policies such as reducing tariffs work primarily through the price mechanism that affects consumption and production decisions at the household and firm levels.

Alternatively, partial-equilibrium analysis provides a great deal of insight into the welfare effects of some measures of trade liberalization in developing countries including Africa, since it relies on extensive analysis of the behaviors of households, producers, and markets.

There are a number of approaches used in a partial equilibrium setting to analyze the impact of trade policies on the welfare of a typical household, but in a broad sense most studies either treat consumption effects alone, or earnings effects, or both. In the latter case, the framework more or less resembles Figure 3. The whole idea is to capture the welfare effects of a typical household as a result of a trade policy that changes prices of goods and wages or labor income. Naturally, to work out the welfare effect of a policy on a typical household, the starting point is the composition of the budget of the household, both on the income as well as on the expenditure sides. In a simplified framework,⁵ one can think of a household income to comprise of labor income, capital income, transfers, and other exogenous income not affected by liberalization. In a small open economy, the price of traded goods⁶ is determined by the international market and levels of tariff. For a constant international price, traded goods can be affected only by a trade policy such as reduction of tariffs. These in turn affect the wages in the traded goods sector and prices of non-traded goods, leading to changes in income and expenditure of a typical household.

The partial equilibrium approach is also useful in studying the impact of a particular trade reform on welfare and efficiency by looking at trade reforms and market structures. Along similar lines, some also studied the supply response following trade reform for key export goods, and the scale of price pass-through, particularly for producers, who are usually poor farmers. In the context of primary products e.g. coffee, it is reported that the supply response is rather weak and the price gains for producers quite small (e.g. Geda, 2003), suggesting a small welfare gain to the poor. Some of

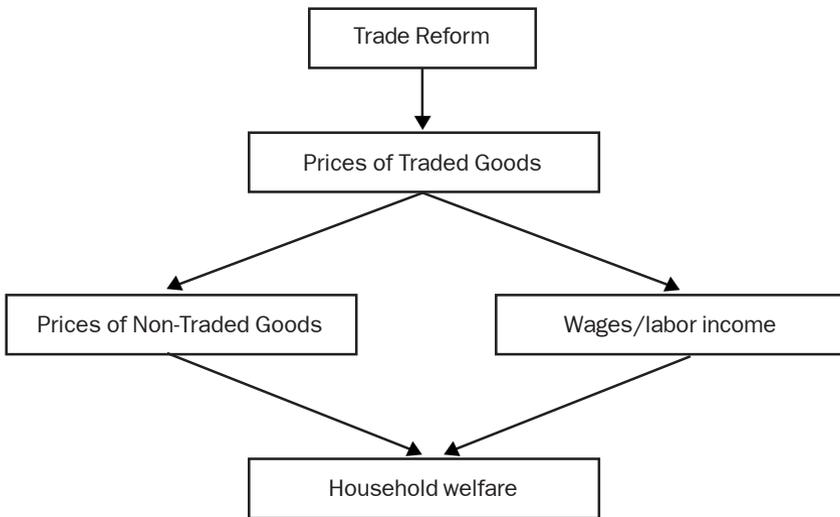
⁵ Adopted from Porto (2003)

⁶ Classifying goods into traded and non-traded is a difficult exercise in this context. While there are several definitions, we can consider a broader one where traded goods include food and beverages, clothing, household equipment and maintenance goods, and others. For non-traded goods, we can consider housing, transport and communications, health and education, and leisure related goods (theater, etc..)

the major reasons for weak supply response are the lag effect in production in the case of such cash crops as coffee and the structure of the market for exports.

In most African countries, the market structure of agricultural exports is oligopolistic, principally dominated by middlemen with substantial power in the determination of farm gate prices. As a result, they are the primary beneficiaries of any increase in the price of

Figure 3: Illustration of impact of trade reform on household welfare



exports. Thus, the pro-poor capacity of a typical trade policy in Africa depends on how the market structure functions, and the comparative role poor farmers have in price determination.

The net effect on household welfare depends on the budget shares spent on traded goods by households, the budget share spent on non-traded goods interacted with the extent to which prices of non-tradable goods respond to changes in the prices of tradable goods, and by the degree to which earnings are affected by a change in the price of tradable goods.

Detailed household survey data can be used to analyze the net impact of several types of trade reforms on overall income distribution. It is also possible to look at the pro-pooriness of a trade policy using this approach. With the availability of rich household survey data sets in most African countries, it is easy to work out how household welfare and overall income distribution is affected by trade policy. This set-up is attractive in that it is possible to trace the welfare impacts of commodity-specific tariff reforms. Tariff reduction on commodities frequently consumed by the poor (such as food) can have substantial welfare gains and improve income distribution. In a related application, Case (1998) found that in South Africa the consumption effect of trade reform alone could improve the welfare of both black and white households as measured by the cost of reaching initial level of utility, the effect for black households being larger than white households. This is more or less consistent with the findings based on the general equilibrium approach by Deverajan and Mensbrugge (2000).

In a typical agrarian economy, the impact of trade policies, such as removal of tariffs, export subsidies or export taxes affect household welfare in more than one way since such a typical household is both a producer as well as a consumer (e.g. Winters, 2002). The gains on consumption could easily be offset by the losses in production if the concerned household is a net producer of non-tradable goods or vice versa. Thus, understanding the mechanisms by which commodity prices interact with the characteristics of a typical farm household provide rich information on the welfare implication of trade reforms.

Trade and Poverty

As has been pointed out above, the general thrust of research on trade and poverty has been on trade liberalization and poverty. The assumption seems to be grounded on current trade patterns that perpetuate a low trade economic growth link in Africa; liberalizing trade regimes would thus result in higher growth. However, it indirectly affects poverty reduction through the development and utilization of

productive capacities. While the former are important for short-term poverty reduction, the latter is crucial for sustained economic growth and poverty alleviation.

The development of productive capacities involves three basic processes: accumulation of physical and human capital, structural transformation, and technological progress. As has been pointed out above, within the African continent, there has been a lack of structural transformation and primary commodity dependency remains to a large extent the main characteristic of SSA economies. The development and utilization of productive capacities is vital for sustained poverty reduction as the dynamic gains of the interaction between higher skills, better infrastructure, and the production of manufactures has a dual effect on the economy. First of all, economic diversification allows trade-induced growth volatility to be minimized; therefore, poverty reduction resulting from this growth could be higher. In fact, between 1991 and 1999, the standard deviations⁷ for oil, mineral and agricultural exports were 4.7 per cent, 3.1 per cent and 2.3 per cent respectively, while manufactures had a standard deviation of only 0.9 per cent. Indeed, the vulnerability to shocks of the major sources of economic growth in African LDCs, whether induced by terms of trade or weather, is a critical constraint to sustained growth and poverty reduction (UNCTAD 2004). Secondly, yet equally important, a focus on the supply side determinants of increased trade through better infrastructure and higher labour skills results in total factor productivity (TFP) gains that are imperative for sustained growth and poverty reduction⁸ (ECA 2007).

To illustrate this, a quick schematic glance at a Sub-Saharan economy's trade features would be useful. In a poor, predominately

⁷ Standard deviation is used as a proxy for instability for real average annual GDP growth rate (See Gedda and Weeks 2005).

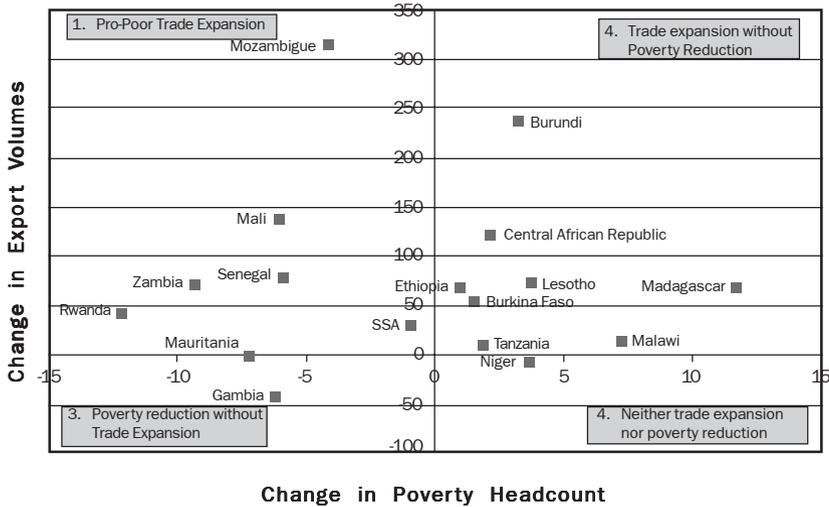
⁸ The economic report for Africa 2007, the Economic Commission for Africa flagship publication, presents a convincing case that diversification is pivotal to sustaining high economic growth to reduce volatility. Reduction in growth volatility is vital for poverty reduction.

natural resource-based or agrarian economy (which typifies most of Sub-Saharan Africa), the level of trade integration is high at 51 percent of GDP against 43 percent in OECD countries (Gibbons and Ponte 2005). Furthermore, though representing only a small fraction of global trade flows, LDC economies,⁹ representing the majority of African economies, are nonetheless highly dependent on external trade. This is reflected in the proportion of exports of goods and services as a percentage GDP, which averaged over 26 per cent of GDP in 2004, up from 24.4 per cent in 2001 (ECA 2005). It is the composition of this trade which is the discerning characteristic of its poverty reduction effects. The short range of commodities exported from African economies results in growth volatility, but equally important creates a 'trade-growth' enclave that has insignificant linkages with the majority of the population. Thus, increasing trade with the outside world will not necessarily decrease poverty. In short, the current trade structure partly contributes to the marginalization of large swathes of African societies not linked to the tradable sector. In addition, the current commodity booms exclude large parts of the population, thus insignificantly affecting poverty levels.

A clear illustration (Chart 1) is during 1996-2001. UNCTAD estimates of trade *volumes* (as opposed to trade *values*) show that some African LDCs achieved a very respectable increase in exports. Yet in many cases this expansion of exports was not accompanied by significant poverty reduction, and in some cases has actually coincided with a rise in poverty levels. For example, Madagascar and the Central African Republic expanded their exports by nearly 70 percent and 121 percent respectively over this period, yet their

⁹ There are 50 global LDCs including 34 Sub-Saharan African countries. The African LDCs are: Angola, Benin, Burkina Faso, Burundi, Cape Verde, Central African Republic, Chad, the Comoros, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, the Gambia, Guinea, Guinea-Bissau, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Somalia, the Sudan, Tanzania, Togo, Uganda and Zambia

Chart 1: Trade expansion and poverty reduction for selected African LDCs (1996-2001)



Source: Elaborated from Chen and Ravallion, 2004 and UNCTAD Handbook of Statistics 2005

dollar-a-day poverty headcount *increased* by 12 percent and 2 percent. In Burundi, a 236 percent increase in export volumes resulted in a 3 percent *increase* in the poverty headcount.

This happens because agricultural commodities (or ‘soft commodities’), the mainstay of African economies, have not generally benefited from commodity increase on the international markets (Mold 2007). Indeed, while the increase in fuel and mineral prices has had a favourable impact on some African countries, it is causing a cleavage between those countries that are exporters of hard and soft commodities.

Although country specificity is important in unraveling the link between trade and poverty, some common traits for African countries do emerge. African economies are integrated in the world economy. The type of trade from African countries creates a form of ‘enclave’

that, even if efficient and on the increase, would not have the desired effects on poverty. Trade as a driver of growth must be couched in development, if poverty reduction is the desired outcome.

Trade and Poverty: Still very little to say in Africa

It is a well-documented fact that integration of economies and societies through trade, investment, finance, information, and labor flows is more or less an inescapable feature of the world today. In many ways, African economies are not exceptions to this. The issue for African countries is whether trade reform is congruent with the overarching objective of reducing poverty rapidly and permanently. How do trade policies interact with state of income distribution and the nature of poverty prevailing in Africa? What are the involved risks to the poor and other social groups with regard to trade policies intended for greater trade integration given the attendant benefits in terms of overall growth and social progress?

The linkages among trade policies, income distribution, and poverty in Africa are growing areas of research. Though still very little is known as to how trade policies interact with state of income distribution and poverty in Africa, one can draw preliminary policy lessons from the analytical constructs discussed in the literature (e.g. Winters, 2002, Bhagwati and Srinivasan, 2002, Srinivasan and Wallack, 2003, Agenor, 2003) and some of the empirical evidence surveyed in the preceding section.

There are a number of areas on the relationship between trade and poverty that require further investigation. As pointed out in the introduction, trade and poverty is conceptually and operationally distinct from trade liberalization and poverty. This is one of the areas where more investigation is required in the African context. Looking at the evidence on the trade-poverty relationship, Ravallion (2006) observes that there is a serious mismatch between macro-level and micro-household data, and that considerable heterogeneity exists in the welfare impacts of trade reforms, with both winners and losers

among the poor. Some country studies that build scenarios of winners and losers in trade liberalization reforms could elicit common traits, wherein welfare gains are optimized. Further study using micro level data and trade patterns in selected African countries could contribute to the link between trade and poverty at the household level. Although country specificity has been a common trait of the effects of trade and poverty, clustering according to commodities and trade patterns could elicit commonalities and policy responses.

Another research area is in relation to trade patterns and poverty reduction. This is an area that has witnessed very limited analysis. Fortunately, it is now recognized that the Poverty Reduction Strategies (PRs) provide fora for such analysis, particularly given the focus on second generation PRs. In the first generation PRs there was an acknowledgement that trade was loosely tied to public priority areas and supply side constraints. The second generation PRs, recognizing the accumulation of human capital as one of the pillars of the development of utilization of productive capacities, is a step forward in terms of creating a more developmental aspect of trade. However, the analytical framework needs to be supported by more empirical work on mainstreaming trade in PRs.

Finally, integrating poverty diagnostics with trade policies can minimize the effect of trade policies on the poor. Poverty mapping, such as where the poor live, how the poor are affected by agro-climatic conditions, poverty's correlates with household demographic characteristics, earning attributes (wages, net producers of tradable and non-tradable goods) etc., assists in devising trade reforms that benefit the poor, or minimize the welfare loss on the poor. Poverty decomposition along sectoral lines also provides an analytical tool to evaluate who benefits from trade liberalization and helps to devise intervention strategies to mitigate the welfare losses (Kanbur, 1988).

Conclusion

Evidently, while a lot of work has been done on trade liberalisation and poverty, very little is known on trade and poverty in the case of Africa. But there is anecdotal evidence that can be drawn from empirical works, and this evidence indicates that to understand the poverty outcomes in relation to trade, micro-level analysis is critical. This is because income distribution and dispersion are most crucial factors in the ability of households to derive gains from trade. By extension, it is difficult to understand the relationship between trade and poverty unless the demographic characteristics — asset ownership among other attributes — are taken into account.

Current trade patterns in SSA do contribute to poverty levels. The magnitude of that poverty level is not a homogenous phenomenon; it is also dependent on access to resources, transport links, and vertical and horizontal integration of the export sector to subsistence activity. This heterogeneous, country-specific vector of underlying indicators further reinforces the need for a micro household, data-intensive approach to trade that not only complements the more macro approach, but discerns *a priori* winners and losers in any trade reform, including trade liberalization.

References

- Agenor, P-R. 2003. Does Globalization Hurt the Poor? Washington D.C. The World Bank. Mimeo
- Bahawati, J. and Srnivasan. T.N. 2002. Trade and Poverty in the Poor Countries. American Economic Review. Papers and Proceedings. May.
- Bourguignon, F and Morrison, C. 1990. Income Distribution, Development and Foreign Trade. European Economic Review. Pages 1113-32.
- Bourguignon, F., J. de Melo, and A, Suwa. 1991. Distributional Effects of Adjustment Policies: Simulations for two archetype economies. World Bank Trade Policy Working Paper, WPS 215.
- Case, Anne. 1998. Income Distribution and Expenditure Patterns in South Africa. Paper prepared for Conference on Poverty and the International Economy. Stockholm, October 20-21, 2000.
- Choksi, A., M. Michaely, and D. Papageorgiu 1991 "The Design of Successful Trade Liberalization Policies," in A. Koves and P. Marer, eds., *Foreign Economic Liberalization*, Boulder, CO: Westview Pr.
- Cogneau, D and Robilliard, A-S. 2000. Growth, Distribution and Poverty in Madagascar: Learning from a microsimulation model in a general equilibrium framework. IFPRI. Trade and Macroeconomic Division Discussion Paper No 61.
- Davis, D.R. 1996. Trade Liberalization and Income Distribution. NBER Working Paper 5693.
- Dearoff A, Stern R. 2000. What the Public Should Know about Globalization and the World Trade Organization, Paper prepared for the conference on "Globalization: Trade, Financial, and Political Economy Aspects" Delphi, Greece, May 25-27, 2000
- Declauwe, B, A. Patry, L. Savard, E. Thorbecke. 1999. Income Distribution, Poverty Measures and Trade Shocks: A Computable General Equilibrium Model of a Archetype Developing Country. Department of Economics, University of Laval. Working Paper, 99-14.

- Devarajan, S. and Mensbrugghe, D. 2000. Trade Reform in South Africa.: Impacts on households. Paper prepared for Conference on Poverty and the International Economy. Stockholm, October 20-21, 2000.
- Dollar, D and Kraay, A. 2001. Trade, Growth and Poverty. Washington, World Bank. Mimeo.
- Easterly, W. 2002. Inequality does cause Underdevelopment. Center for Global Development. Institute of International Economics.
- Economic Commission for Africa. 2006. "Challenges and opportunities for African Least developed Countries," Regional Meeting of African Least Developed Countries for the Midterm Comprehensive Global Review of the Implementation of the Programme of Action for the Least Developed Countries for the Decade 2001-2010.
- Economic Commission for Africa. 2007. "Accelerating Africa's Development through Diversification," Economic Report on Africa
- Edwards, S. 1997. Trade policy, growth, and income distribution. *American Economic Review*, 87(2), 205-210.
- Fischer, R.D. 2000. The Evolution of Inequality after Trade Liberalization. CEA-DII. Universidad de Chile. Mimeo.
- Geda, A. 2003. The Impact of Trade Liberalization on Coffee in Ethiopia. *Ethiopian Journal of Economics*. Vol. ____, No.____.
- Geda A & Weeks J. 2005. "Growth Instability and Development Assistance among African Countries," International Review of applied Economics
- Gibbons, P and S. Ponte. 2005. "Trading down: Africa, Value Chains, and the Global Economy. Philadelphia: Temple University Press.
- Hoekman B winters A 2005 Trade and Employment: Stylized facts and research Findings policy Research paper 3676, World Bank
- Jansen M, Lee E. 2007. trade and Employment: Challenges for policy research ILO/WTO, Geneva
- Kanbur, R. 1988. Structural Adjustment, Macroeconomic Adjustment and Poverty. A Methodology for Analysis. World Development.

- Krueger, A. 1978. *Liberalization Attempts and Consequences*, Cambridge: Ballinger.
- Mc Millan, D. Rordrick, and K.H. Welch. 2002. *When Economic Reform Goes Wrong: Cashews in Mozambique*. NBER Working Paper 9117.
- Mold A. 2007. "Are improving Terms of Trade helping reduce poverty in Africa?" UNDP poverty Centre
- Levin, J. 2004. *Trade Liberalization and Household Welfare in Tanzania*. Mimeo. ECA.
- Logfren, H. 2001. *External Shocks and Domestic Poverty Alleviation: Simulations with a CGE model of Malawi*. TMD Discussion Paper No. 71.
- Lofgren, H. 1999. *Trade Reform and the Poor in Morocco: A Rural-Urban General Equilibrium Analysis of Reduced Protection*. IFPRI. TMD Discussion Paper 38.
- Porto, G.G. 2003. *Using Survey Data to Assess the Distributional Effects of Trade Policy*. WPS3137. Washington, World Bank.
- Ravallion, M. 2006. "Looking Beyond Averages in the Trade and Poverty Debate," *World Development*, Vol. 34. No. ____, pp. 1374-1392.
- Reimer, J.J. 2002. *Estimating the Poverty impacts of Trade Liberalization*. Global Trade Analysis Project (GTAP) Working Paper No. 20.
- Robbins, D. 1996. *Trade, Trade Liberalization and Inequality in Latin America and East Asia-Synthesis of Seven Country Case Studies*. Mimeo. Harvard Institute of International Development, March.
- Rodrik, D. 1997. *Trade Policy and Economic Performance in Sub-Saharan Africa*. Mimeo. Paper Prepared for the Swedish Ministry of Affairs. Harvard University.
- Spilimbergo, A. Londono, L. and Skezely, M. 1999. *Income Distribution, Factor Endowments, and Trade Openness*. *Journal of Development Economics*. 59, 77-101.
- Srnivasan, T.N and Wallack. J.S. 2003. *Globalization, Growth and the Poor*. Yale University. Mimeo.

- Stolper, W. and Samuelson, P. 1941, Protection and Real Wages. Review of Economic Studies, November, IX, 58-73.
- UNCTAD. 2004. The LDSC Report, Geneva.
- Winters, A. 2002. Trade Policies for Poverty Alleviation. In Trade, Development and the WTO: a handbook, ed. By Bernard Hoekman, Aaditya Matoo, and Philip English, the World Bank.
- Winters, A. 2000. Trade, Trade Policies and Poverty: What are the links? Center for Economic Policy Research Working Paper Series, no 2382.

Does Trade Affect Women and Men Differently?

Marzia Fontana

Abstract

This note reviews recent evidence on the gender effects of trade, identifies research gaps, and suggests lessons for policy. Trade policies, like any other economic policy, are likely to have gender differentiated effects because of women's and men's different access to, and control over resources, and because of their different roles in both the market economy and the household. It is not possible to conclusively say whether trade liberalisation is good or bad for women. The effects of trade liberalisation and expansion for women, both absolutely and relative to men, have been mixed, with both positive and negative dimensions, depending on a range of factors and preconditions. Policy needs to act to reduce gender-based constraints to trade expansion. It also needs to enhance gender-equalising trends associated with trade as well as to offset any negative consequences of trade such as widening overall gender inequalities or specific losses for particular groups of women. This requires first that the gender-differentiated effects of particular trends and policy changes are well understood.

Keywords: Gender, trade, employment, wages, households.

Introduction

Does trade affect women and men differently? The answer to this question is obviously, yes. Most economic policies are gendered. On the surface a policy may appear to be gender neutral because it does not target either men or women. But the policy will be gender biased

if it fails to take into account the gender differences that permeate economies (Elson 1995).

It is not possible to conclusively say whether trade liberalisation is good or bad for women. Because trade policies and gender relations are diverse, there will always be contradictory effects. Thus, the focus of any trade impact assessment should be on understanding the many channels through which reforms may influence the well-being of both women and men. This note contributes to identifying such channels.

Trade liberalisation alters the distribution of income between different social groups, and between women and men. The main mechanism through which this operates is changes in the relative prices of goods. By modifying incentives, these induce reallocation of factors of production among sectors that use them with different intensities, and therefore lead to changes in their the employment and/or remuneration of such factors. The same variations in relative prices bring about changes in real incomes that affect groups differently, due to differences in their consumption patterns. Trade liberalisation is also likely to reduce tariff revenues, and this in turn may have group-specific effects on the size and composition of government expenditure.

Trade liberalisation can thus affect gender inequalities at the macro, meso, and micro level. For example, it might contribute to reducing gender gaps in market participation if the sectors that expand are more female-intensive than the sectors that contract (macro); it might undermine public provision of social services that favour women (such as health and education) if loss of government revenue from reduced tariffs leads to cuts in such services (meso); it can reduce or extend female control over household spending, depending on whether it destroys or creates sources of independent income for women (micro).

A proper assessment of the gender impact of trade needs to consider all these dimensions simultaneously. It should analyse changing patterns and conditions of work (including paid and unpaid

work), gender gaps in wages, patterns of ownership and control over assets, changes in consumption patterns, and gender-based power relations within households. It should examine not just whether practical gender needs are met, but also whether outcomes contribute to more egalitarian gender relations in the long-term, by reducing the basis of women's economic disadvantage and widening women's options. Some of these dimensions have been explored in the literature more fully than others. The following sections review some of the insights from this literature, identify gaps, and suggest a few lessons for policy.

Insights

Interest in the gender effects of trade policies has been growing. Since 1994, when the first comprehensive review of empirical evidence in this area was published (Joeke and Weston, 1994), several new initiatives have been promoted in the form of lobbying, awareness campaigns, creation of worldwide networks, and new research (Elson *et al*, 2007, provides a collection of recent key quantitative contributions to this field). Despite an intense debate, sound empirical evidence is sparse. Analyses are still limited by the absence of sex-disaggregated data in many areas and the difficulty of disentangling the effects of trade liberalisation from those of other simultaneous changes. Nevertheless, a few lessons have been learnt and are summarised below.

The effects of trade liberalisation on gender inequalities in a country may be either negative or positive. Many things mediate the effects and are important in determining final outcomes. They include: resource endowments, labour market institutions, systems of property rights, and other socio-economic characteristics.

The effects of trade are likely to vary among different groups of women. If new opportunities are created, women's ability to seize them will depend on their education, skills, and their age, as well as the social norms and obligations prevailing in their households and

communities. For example, mothers would be less likely to respond to new incentives than their daughters. Changes in the price of the same goods would affect women differently, depending on whether they consume or produce such goods.

Employment effects

Resource endowments and systems of property rights are key determinants of women's opportunities from trade. *Women benefit the most in countries that are abundant in unskilled labour and have a comparative advantage in the production of basic manufactures.* This is because women are disproportionately represented among unskilled workers, and because prevailing norms make their entitlements to the rewards from their own labour stronger than those of any other factor of production. Women's weaker property rights over land and other resources, and a rigid gender division of labour, have limited the trade-related gains to women in Africa. These forces are also likely to have contributed to the weak supply response of African agriculture to export opportunities (Joekes, 1999b). Evidence that farm output from a given quantity of household labour is less than the maximum that could be produced can be found in Burkina Faso (Udry, 1996 and Smith and Chavas, 1999), Tanzania (Tijabuka, 1994) and Zambia (Wold, 1997).

The varying patterns of female employment across regions and sectors support these hypotheses. *The greater the share of garments, textiles and electronics in a country's exports, the greater the employment-creating impact of trade has been for women* (Wood, 1991 and Standing, 1999). The gains in manufacturing employment appear to have been particularly strong in Asia (especially the four East Asian 'tigers,' but also Bangladesh and Sri Lanka in South Asia, and Malaysia, Indonesia, Thailand, and the Philippines in South East Asia), with limited expansion also in Latin America (most notably Mexico, but also Central America and the Caribbean).

Most recent evidence on the manufacturing sector of the African region reports declines in output and job losses due to import

displacement. There is some evidence that import competition has damaged activities in which women are involved, such as basket weaving in Kenya (Joeke 1999a), the textile industry in South Africa (Valodia, 1996) and the informal sector in urban Zimbabwe (Kanji and Jazdowska, 1995).

The sparse evidence, both from Africa and elsewhere, shows that the impact of expanding agricultural exports is generally less favourable to women. The picture is mixed, with differences between traditional export crop production and newer exports, such as horticultural products and agro-industry. Many women have recently found employment in agro-industry, but this may not have improved their status as much as manufacturing (Barrientos, 2003).

Expansion of traditional agricultural exports has created employment in some cases, both on the field and in processing and trading activities associated with increased commercialisation. But the employment gains appear to be larger for men than for women. It is often found that women work less on the more commercialised crops than do men, and are also less likely to work as hired labourers, who are also mostly men (von Braun and Kennedy, 1994). Women farmers may find it difficult to become independently involved in the production of export crops because of limited access to credit, technology and marketing channels. Even if not directly involved, women often increase their time contributions to their husbands' crops, but are not paid for this work. *The effects evidently vary with the gender intensity of the crops that expand, but this may itself be endogenous.* For example, there is evidence that even when a crop is traditionally female-intensive, commercialising it causes men to enter the sector and take over production (for example, groundnuts in Zambia (Wold, 1997) and rice in The Gambia (von Braun *et al.*, 1994)).

Non-traditional agricultural exports (NTAEs) – comprising flowers, vegetables, and fruits, often produced on a contract basis for foreign buyers and airfreighted out– are a significant growth area in African agriculture, but remain relatively small. NTAEs are

developed in Kenya, Uganda, Zimbabwe and South Africa, and, outside Africa, in Chile, Ecuador, and most of Central America. The NTAE sector includes two distinct types of production: small farm contract growers and large scale commercial farms. In the former type, women work as family labour and own-account farmers and are subject to similar constraints as in traditional agriculture. On large farms, women work as 'modern' agricultural wage labour, and their ability to participate is unrelated to land rights. Women are more likely than men to work as seasonal and part-time workers in these activities (Barrientos, 2000).

There is some evidence that the expansion of exportable services is another source of employment for women, especially in the information processing sector, ranging from simple data entry to software programming, especially in India (Mitter et al., 2005) the Caribbean and some of the Newly Industrialising Countries (NICs) (Joekes, 1995 and Mitter and Rowbotham, 1995), but this area is under-researched.

A growing body of research (for example Chen et al., 2005) is starting to shed some light on the array of informal sector employment opportunities open to women and men in the context of changes in trade policy. It is likely that this is where the negative effects of trade expansion may be concentrated, through pressure of import competition from trade liberalisation. On the other hand, small workshops supplying work for larger export concerns are expanding in line with patterns in the formal sector and amplifying the employment creating effect. Studies show that gains can be captured by women working in the informal sector, if they are able to organise (Chen et al., 2005).

Table 1: Effects of trade on gender inequality in employment

Sector	Gender employment gap
Manufacturing (particularly textiles and electronics)	Gap narrows
Agriculture	Mixed effects, with differences between the traditional crop sectors where gains greater for men and the non-traditional export sector where some gain for women but working conditions precarious
Services	Mixed effects/Not well documented

By how much



Wood (1991) uses a sample of 35 developing countries for the 1960-85 period and finds that a ten percent increase in the ratio of manufactured exports to manufacturing value added is associated with an increase of about 3 percent in the share of females in the manufacturing labour force

Busse and Spielmann (2006) use a sample of 70 developing countries for 2000 and find that a ten percent increase in the female/male labour participation ratio (i.e. less gender inequality) would be associated with a higher share of labour-intensive exports to total exports by approximately 3 percent.

For how long



The female share in EPZs total labour force is declining- selected countries

Mexico	1980	77 %
	1998	57 %
S. Korea	1987	77 %
	1990	70 %
Malaysia	1980	75 %
	1990	54 %
Mauritius	1984	79 %

Source: Fleck (2001), Kusago and Tzannatos (1998)

Constraints on female labour supply and labour mobility

A constraint that prevents women from seizing new opportunities, both in agriculture and in waged employment, is the heavy burden of household responsibilities that falls disproportionately on them. Studies from settings as different as the cut flower industry in Ecuador (Newman, 2001), export processing zones in Malaysia (Kusago, 2000), the off-farm informal sector in Guatemala (Katz, 1995) and NTAEs in Kenya (McCulloch and Ota, 2002), all point to the presence of other female members in the household as a determinant of women's participation in new opportunities created by trade. These other female household members might be mothers or elder daughters, who are available to take on household duties relinquished by women who go out to work. Very little is known about the circumstances of these other women and the impact of trade on their welfare.

Most of these newly created jobs for women do not challenge gender stereotypes, are very 'female' and do not appear to provide long lasting employment opportunities. Many studies (Standing, 1999, Barrientos and Dolan, 2003, Kabeer, 2003) emphasise growing flexibility and vulnerability in working conditions in export-oriented sectors. Working conditions generally appear to be poor, although not usually worse than in most other jobs open to women. Some evidence also suggests that young single women, often new migrants to the cities, were the preferred workforce, at least initially, in Asia (Baden and Joekes, 1993). But trends are varied and changing, with higher proportions of older, married, and better educated women in the labour force in some countries (Pearson, 1999).

Several studies (Tzannatos, 1999, Gammage and Mehra, 1999, United Nations, 1999) find *little decline in employment segregation by gender* over the last two decades. Female workers have remained confined to female jobs, with little opportunity to enter previously male-dominated sectors and occupations. *Women continue to be employed in low-pay and short-term jobs.* There is evidence of a moderate decline in horizontal segregation in some countries. In the NICs, for example, women are increasingly employed in export-

oriented services such as information processing, tourism, and financial services (UN, 1999). *But vertical segregation appears to be persistent, and within sectors hierarchies have become more pronounced.* Such is the case in Bangladesh (Paul-Majumdar and Begun, 2000), Madagascar (Nicita and Razzaz, 2003) and Mexico (Fleck, 2001), where women are increasingly occupying bottom occupations and men are taking up supervisory roles.

In Bangladesh female employment in manufacturing has remained highly concentrated in one single activity, ready-made garments, while other textile subsectors are still predominantly male. In knitwear, for example, women constitute only 14 per cent of the labour force (Bhattarchaya, 1999). In Mexico, *maquila* employment for men has risen significantly more than for women in recent years, because of the increased importance of sectors such as transportation equipment. *Women's share of the total labour force in EPZs declined from 77 per cent in 1980 to 57 per cent in 1998* (Fleck, 2001). Similar declining trends in the share of female employment in EPZs are found in Mauritius, South Korea, Malaysia, and Singapore (Kusago and Tzannatos, 1998, Gammage and Mehra, 1999).

It is not always lack of education that prevents women from benefiting from introduction of new technologies, upgrading, and reorganisation of production. For example, the number of educated female workers is significant in Sri Lanka and Singapore, but there is evidence of increasing levels of unemployment among them (Malhotra and De Graff, 1997).

Effects on earnings

Evidence on changes in female and male wages associated with trade liberalisation is even sparser than that on employment. It is limited to formal manufacturing and to a few (mainly middle-income) countries. Data exclude the informal sector and at times also small firms in the formal sector, which is where many women work, thus providing an incomplete picture even of the manufacturing sector. The information on wages is rarely comparable over time and across countries because

of problems with definitions. Often (and surprisingly) wage data for males and females are not disaggregated by skill level. *Overall, the gender wage gap remains large in most countries, even, surprisingly, where there has been rapid growth in exports that relied on female labour*, a fact for which different studies offer different interpretations.

Trade liberalisation might affect wages by altering the relative demand for various types of workers or by influencing discriminatory practices. Most of the studies available investigate this latter aspect and can be grouped in two different schools of thought.

Some researchers assert that globalisation is likely to lead to competitive pressures that will reduce the scope for employers to discriminate, including discriminating against women. Oostendorp (2004), for example, finds a negative association between openness and the size of the gender wage gap within occupational categories in a sample of both developed and developing countries between 1983 and 1999. His results, however, are rather weak and not statistically significant. Moreover, the study is not able to establish whether the narrowing of the gender gap results from men's wages declining or women's wages rising.

This distinction is of some importance. In Taiwan, Berik (2000) finds that, after controlling for employment segregation by gender and other industry characteristics, greater export orientation is associated with smaller wage differentials between women and men. This result is due to the fact that export orientation has a larger adverse absolute impact on men's wages than women's wages.

By contrast, some studies of East Asian countries explain pay discrimination as a result of the employer objective to maintain export competitiveness, predicting - and finding - that greater openness widens the gender wage gap. For example, Seguino (2000) argues that divergent trends in the unadjusted gender wage ratio in Taiwan and Korea during 1981-1992 are related to differences in the nature of foreign direct investment flows in the two countries. Greater mobility of capital in Taiwan's female labour-intensive sectors leaves women workers more vulnerable to losses of bargaining power in

wage negotiations. In Korea, an environment of lesser capital mobility encourages firms to maintain competitiveness by other strategies such as technological upgrading and improvement in product quality. Seguino (1997) finds that in Korea, despite a strong demand for women's labour, female-male wage differentials have narrowed only marginally during 1975-1990. In principle this could have been because of the existence of surplus female labour, but this seems unlikely for Korea, where unemployment rates have been low.

A more recent analysis of a sample of 22 developing countries from Asia, Africa and Latin America between 1975 and 2000 (Busse and Spielmann, 2006) finds that a larger gender gap is positively associated with a higher share of labour-intensive manufactured exports, confirming the findings of Seguino (2000). The results hold when the sample is extended to include developed countries.

Evidence from Bangladesh (Bhattachaya, 1999) and Morocco (Belghazi quoted in Joeques, 1999a) suggests that, in these countries, wage discrimination against women in the export textile industry was lower than in any other manufacturing sector in the early stages, and has declined over time more than in other sectors. In Bangladesh, trends in female/male wage differentials in garments indicate a narrowing of the gap from 1983 to 1990, but a widening from 1990 to 1997. This change is attributed to a higher proportion of men taking up high skilled jobs and an increase in the number of temporary workers among women (Zohir, 1998; Paul-Majumder and Begun, 2000). A similar trend towards a widening of the gender wage gap for similar reasons is predicted in Madagascar (Nicita and Razzaz, 2003).

A study of Mexico (Ghiara, 1999) analyses female wages in two selected industries – tradable machinery and non-tradable social services– and finds differences in impact between unskilled and skilled women. While skilled women in the non-traded service sectors have become better off, unskilled women in manufacturing have become worse off. Another study of Mexico (Fleck, 2001) finds that female/male wage ratios in the *maquila* sector vary greatly between

industries. The gender wage gap is wider the higher the concentration of women in an industry, and the greater its capital intensity.

It is difficult to draw general conclusions from these studies. *One of the factors inhibiting the narrowing of the gender wage gap might be the informalisation of labour contracts through subcontracting and outsourcing* (workers in these arrangements are mostly female). In other words, an increasing proportion of women's work in manufacturing are being shifted into the informal sector where wages

Table 2: Effects of trade on gender inequality in earnings, manufacturing sector only

	Oostendorp (2004)	Berik et al (2004)	Busse and Spielmann (2006)
Change of the gender wage gap associated with trade expansion*	It varies between -0.001 and +0.0004 depending on country sample and trade indicators used. The coefficients are not significant	Generally a positive relationship, i.e. competition from international trade widens the gender wage gap, but the strength of the results vary by indicators used and by country	+ 0.07
Sample	About 80 both developed and developing countries	Case studies of South Korea and Taiwan	22 developing countries from Latin America, Asia and Africa
Period	1983-1999	1980s-1990s	1975-200
Method	Cross-section. Sample size varies depending on indicators used. The gender wage gap is the dependent variable. Trade indicators include foreign direct investment net inflow as share of GDP and various either aggregate or sectoral trade measures. Other independent variables are also included	Explores the effect of international trade openness on the residual gender wage gap. Rich panel data analysis. Uses alternative indicators of concentration and competitiveness. Correct carefully for various biases.	The analysis is carried out both as cross-section for 2000 and as panel for 1975-2000; results are similar for both approaches. Various trade indicators are considered as dependent variables (these include either export shares only, or both exports and imports).

* A negative sign indicates a narrowing of the gap

are significantly lower than for jobs in the formal sector (Balakrishnan, 2002).

Being paid does not necessarily entail retaining significant control over income. Even in the manufacturing sector, there are accounts of women handing over a large proportion of their pay to other family members. A survey of over 800 women factory workers in Pakistan found that 48 per cent of them gave their income to their husbands (Hafez quoted in Elson, 1999). However, most of the evidence shows that women working in export-oriented industries retain some control over their earnings (Zohir, 1998; Kusago and Barham, 2001; Kabeer, 2000)

In agriculture, most studies of NTAEs in Guatemala, Kenya, and Uganda (Katz, 1995; von Braun and Immink, 1994; Dolan, 2001) find that women lose control over income and have a lesser say on household expenditures.

The type of employment matters for control as well as whether the cash is earned as a lump sum or in regular instalments. Women are likely to have greater control if they work in factories away from male relatives than if they are home-based (Kabeer, 2000). *In agriculture, a key factor affecting control is whether women participate in the marketing of what they produce* (Kiggundu, 1996).

Allocation of resources and time within households

By changing employment opportunities and earnings patterns of women and men, trade liberalisation is likely to influence the allocation of time and resources among household members. Since women and men, and younger and older people, have different needs and preferences (for example, for health care and nutrition) reallocation of both time and consumption goods will differently affect their welfare. Trade might also affect intra-household dynamics through changes in public provision of social services but no study of this seems to exist.

These dimensions are rarely included in analyses of trade

impacts, perhaps because they are more difficult to assess than income and employment effects. Most of the studies that include analysis of nutrition, health and time allocation effects are in agriculture, a sector where the domestic sphere and market production appear to be more intertwined. It seems that the attention paid by these studies to women's work is motivated mainly by concerns about their role as providers of care to other family members, especially children. This emphasis is important but women's own well-being should also be given adequate attention.

The most comprehensive study to date of the impact of cash cropping on nutrition was carried out by IFPRI (von Braun and Kennedy, 1994) using a common research methodology in several countries undergoing agricultural commercialisation: Guatemala, Kenya, Philippines, the Gambia and Rwanda and, with a more limited coverage, Papua New Guinea, Malawi, and Zambia. The main strength of these case studies is their detailed assessments of the commercialisation-production-income-consumption-nutrition chain, getting closer than most other studies to a general equilibrium approach.

Despite reallocation of land to new cash crops, staple food production per capita was maintained or even increased in all countries – a challenge to the commonly held view that agricultural export production is at the expense of food production. Net income gains in overall household income were significant.

Women's direct control over income from the new cash crops was much less than that of men. In none of the studies did women play a significant role as decision makers and managers of the more commercialised crop production, even when typical 'women's crops' were promoted (e.g. rice in The Gambia). In the Guatemala study (von Braun and Immink, 1994), *reallocation of women's labour time towards the new contract for multinational exporters was at the expense of other off-farm activities, which had been a source of independently controlled income for them.*

In all countries for which information was available, women's income had a beneficial effect on household calorie consumption.

Any tendency to spend less on food because of loss of income control by women was however generally small, with greater income from commercialisation still resulting in more food being purchased.

No effect of participation in commercialisation schemes on children's health was found, but this might be due to the relatively short time frame of the case studies. An important finding from the Kenya study of expansion of sugar cane production (Kennedy, 1994) is that increases in women's own income was associated with decreases in their body mass index. *For many women energy expenditures increase as a result of the additional work involved.* This increase in the energy intensity of activities was greater than the concurrent increase in their caloric intake.

In a study of the impact of growing broccoli and snow peas in the central Highlands of Guatemala, Katz (1995) too finds a loss of control over income by females. In this case, *women's labour contributions to the new male-controlled crops are not at the expense of their own income generating activities but, rather, are made by sacrificing domestic production, which may in part be compensated by increased activity of older daughters.* One of the many valuable contributions of this study is that of differentiating children by age and thus drawing attention to the role of older children in sharing housework. This study is also useful in highlighting factors affecting alternative choices of remunerated labour for women (for example, marketing activities that require women to be mobile are only undertaken by older women with no little children, and independent agricultural activities are only undertaken by women with sons).

A negative impact of NTAEs on young girls' use of time is found also in a study of Uganda (Elson and Evers, 1996b). *Extra demand on women's labour time due to vanilla production is transferred to their daughters.* Pollination by hand at critical stages in the growth cycle is often undertaken by girls at the expense of their schooling.

A study of the effects of employment in the flower industry on the time allocation patterns of husband and wives in Ecuador (Newman, 2001) finds that *husbands of wives working in the flower*

industry participate more in household work than either husbands of women working in other sectors or husbands of women not involved in paid employment. This positive effect on the gender distribution of household tasks appears to be stronger when men also work in the flower industry. The author suggests that this might arise because the gender gap in wages in the flower industry is smaller than in any other sector (a significant number of married women in the flower industry earn higher wages than their male counterparts), but this hypothesis is not tested directly. In households where both wife and husband work in the flower industry, overall time devoted to household tasks by both partners is less than in other households, and the share of men in total household work is 25 per cent. It should be noted however that the bulk of household work is still performed by women. This study does not consider possible reallocation of household tasks to older children.

Individual freedom and self-esteem

Fewer studies of the manufacturing sector have explored the impact of trade liberalisation on intra-household resource allocation. The studies focus more on individual lifestyles – including women’s ability to make independent choices, marriage and fertility decisions – and less on nutrition and children’s health. The characteristics and circumstances of women working in export-oriented manufacturing are rather different from those of women involved in agricultural production. Female workers in manufacturing are mostly young and single (although not all of them) who have left their families of origin in the rural areas and have not yet formed new ones. The nature of the work in manufacturing has also fewer direct linkages with food production and consumption decisions than in agriculture.

Most studies are of Bangladesh. Hewett and Amin (2000) find that *female garment workers have a higher age at marriage and at first birth than women of similar socio-economic background who do not work in the garment sector.* Some of the garment workers can even take decisions on whom to marry, and have fewer children.

They are more likely to have better quality housing conditions and access to modern infrastructure. Women working in the garment sector have a higher propensity than other women to spend their money on jewellery, entertainment, cosmetics, and gifts (controlling for income level). *Their nutritional intake appears to be quite high, but they are more likely than other women to suffer from a range of minor health problems.*

Most studies (Kabeer, 2000; Zohir, 1998; Hewett and Amin, 2000) appear to agree that women working in factories feel that their status has improved. Garment work positively affected self-esteem and decision-making with benefits extended to other family members. Kusago and Barham (2001) report that migrant daughters in Malaysia sending remittances home to their mothers have increased their capacity to express preferences.

Research and data gaps

As the previous section shows, some progress in our understanding of the gender differentiated effects of trade policies has been made in recent years, however some gaps remain. The discussion of the main problem areas is organised under three sub-headings: sectoral coverage, methodologies, and gender bias in economic research.

Sectoral coverage

There are still important gaps in the sectoral coverage of the existing research. Sound empirical analysis is lacking particularly with reference to the traditional agricultural sector where information on women's and men's (and children's) changing roles and time burdens continues to be sparse. The problem is compounded by the fact women constitute the majority of unpaid agricultural workers. Standard labour statistics or agriculture censuses should be collecting nationwide data on unpaid workers as well as other types of agricultural workers, including subsistence farmers, but this is unevenly done in practice.

There is growing evidence that the expansion of exportable services is an important source of employment for women in the modern sector. However, it is difficult to disentangle information on internationally traded services which often are not isolated in data from traditional commercial services, or social sector personal services. Sex-disaggregated data on employment in traded services are even sparser. This is an area where further research is much needed.

Significant progress has been made in the last decade in recording and documenting work in informal activities (for example Chen et al, 2005). However the mechanisms through which trade reforms affect informal labour markets need to be better understood.

Very little is still known about the impact of trade liberalisation on female consumers relative to male consumers. A participatory study in Tanzania (Booth et al, 1993) finds that the greater availability of goods at international prices was regarded as a substantial improvement compared with the past, and particularly by women. Other anecdotal evidence suggests negative effects but the data are limited. This is one of the areas most under-researched.

Methodologies

The studies reviewed in this note use a variety of approaches—from econometrics to qualitative methods—depending on the aspect examined, but most look at specific sectors or households in isolation and neglect economy-wide effects and interactions between different dimensions.

There is the need for a more integrated approach to allow consideration of net impacts and to provide an assessment of economy-wide gains or losses from greater exposure to trade. From a gender perspective, of particular importance is the consideration of interaction between market and non-market spheres as a result of women's entry into trade-related activities.

Economy-wide models, when appropriately disaggregated, would be a useful tool in assessing the advantages and disadvantages

of policy interventions which might be used to reduce gender inequalities. Simulations run with these models are instructive and should be important inputs into the policy-making process. They can effectively help to identify groups of men and women that are vulnerable, even when trade liberalisation appears to be beneficial on average. Models can only generate predictions though, and are complementary to, and not substitutes for, genuine empirical work on ex post data. Both ex-ante tools and ex-post data analysis are important for an accurate gender impact assessment of trade policies. Very few studies so far have used general equilibrium models with gender features (notable exceptions are Fontana and Wood, 2000; Fontana, 2004; Fofana et al, 2005; Siddiqui, 2005)

Gendered global value chain analysis is also a very promising methodological approach to the study of the gender differentiated effects of trade. The approach involves analysing the full range of activities— production, exchange, distribution, and consumption—that are required to bring a product from its conception to the final consumer. A recent study of six countries commissioned by the Commonwealth Secretariat (Carr, 2006) provides an excellent example of how this approach can be effectively used for gender analysis. It shows that women constitute mostly the weakest actors in the production chain.

Gender bias in economic research

Gender is not still recognised as an important analytical category in most economic research. For example, a growing number of studies use general equilibrium models to assess the poverty impact of trade reforms (most recently Hertel and Winters, 2006) but none of them include gender features. This, even when adding information on the gendered structure of the economy studied, could be done at little extra cost at the planning stage of the research. Similarly, most existing value chain analyses do not have a gender dimension.

Problems with nationwide sex-disaggregated statistics are still severe. The result is that researchers who need to undertake gender

impact assessments of trade agreements often have to patch together data of uneven quality from a myriad of sources. Specific case studies need to be commissioned. But efforts should also be put in supporting the systematic collection and analysis of basic standard sex-disaggregated statistics. The availability of adequate information on the gendered structure of the economy would greatly help, not just with trade impact assessments but with any other type of economic analysis.

Policies

Interventions aimed at promoting gender equality in a context of trade reforms will vary depending on the structure of the economy, the nature of gender employment segregation, and human capital differences. For example, the complementary policies required to enable a more equitable distribution of the gains associated with trade in a country with a large agricultural sector will be different from the policies required in a semi-industrialised country. Since there is no sufficient space in this note to elaborate on specific measures to improve trade outcomes for women, only a few broad recommendations will be attempted. Policy makers should place particular emphasis on: (1) labour market policies and on (2) policies to address women's multiple roles.

Labour market policies

Policies should be concerned at the over-concentration of women in low-wage parts of the export sector. Measures should be designed to reduce the markedly sex-segmented labour market and facilitate the insertion of women in sectors other than the traditional female sectors. Greater labour mobility should be promoted. Active labour market policies could be considered as part of a range of labour market initiatives that could benefit women. Specialised training in addition to general education should be provided—particularly to women retrenched from the contracting sectors. Efforts to promote greater

women's participation in more technical subjects which will equip them better for the market place should be encouraged. Vocational training and other forms of training need to be supported. Labour laws that protect workers' rights must be supported and compliance with such laws closely monitored.

Policies to address women's multiple roles

There is a great need to develop policies which address the combined productive and reproductive roles of women. A big gap exists between men and women in their household responsibilities. Greater investment is required to reduce women's excessive time burdens. Time- and labour-saving infrastructure could play a role, including: greater priority given to water supply and sanitation, energy for household needs, and access to appropriate means of transport. This could be especially important for women working in agriculture in rural areas. It has been shown that women who are heavily involved in water collection are also more likely to be engaged in part-time casual work (for South Africa, see proceedings of the UNDP-Levy Conference on Unpaid Work, Session Five, October 2005, New York). In cases like these, improving infrastructure would not only be an effective way to enhance competitiveness in global markets, but would also help in saving precious time for women and enabling them to participate more fully in the new employment opportunities created by trade. Child care should also be given increased public expenditure support.

References

- Balakhrisnan, R., 2002. *The hidden assembly line: gender dynamics of subcontracted work in a global economy*, Bloomfield: Kumarian Press.
- Barrientos, S. and Dolan, C., 2003. 'Labour flexibility in African horticulture,' *ID21 Insights* 47, Brighton: Institute of Development Studies.
- Becker, G.S., 1959. *The economics of discrimination*, Chicago: University of Chicago Press.
- Berik, G., 2000, 'Mature export-led growth and gender wage inequality in Taiwan,' *Feminist Economics*, Vol. 6 No. 3.
- Berik, G., van der Meulen Rodgers, Y. and Zveglic, J.E., 2004. 'International trade and gender wage discrimination: evidence from East Asia' *Review of Development Economics* 8: 237-54.
- Bhattacharya, D. and Rahman, M., 2001. 'Prospects for internalising global opportunities in the apparel sector in Bangladesh' in Sobhan, R. and Khundker, N., *Globalisation and gender: changing patterns of women's employment in Bangladesh*, Dhaka: The University Press.
- Bhattacharya, D., 1999. 'The post-MFA challenges to the Bangladesh textile and clothing sector' in UNCTAD, *Trade, sustainable development and gender*, Geneva: United Nations.
- Booth, D., F.Lugngira, P.Masanja, R.Mwaipopo, J.Mwami and A.Redmayne, 1993. *Social, Economic and Cultural Change in Contemporary Tanzania: a People Oriented Focus*, Stockholm: Swedish International Development Authority.
- Busse, M. and Spielmann, C., 2006. 'Gender inequality and trade' *Review of International Economics* 14(3).
- Carr, M., 2004. *Chains of fortune: Linking women producers and workers with global markets*, London: Commonwealth Secretariat.
- Chen, M., J.Vanek, F.Lund and J.Heintz, 2005. *Progress of the world's women: Women, Work and Poverty*, New York: UNIFEM.

- Dolan, C., 2001. 'The 'Good Wife': struggles over resources in the Kenyan horticultural sector,' *Journal of Development Studies*, Vol. 37 No. 3.
- Elson, D., Grown, C., Steveren, I. and N.Cagatay, eds. (2007) *Feminist Economics of Trade* London and New York: Routledge.
- Elson, D. and Evers, B., 1996b. 'Gender aware country economic reports: Uganda,' *GENECON Unit Working Paper 2*, University of Manchester.
- Fleck, S., 2001. 'A gender perspective on maquila employment and wages in Mexico' in Katz, E. and Correia, M., 2001, *The Economics of Gender in Mexico*, Washington D.C.: The World Bank.
- Fontana, M., 2004. 'Modelling the effects of trade on women, at work and at home: comparative perspectives', *Economie Internationale* 99.
- Fontana, M. and Wood, A., 2000. 'Modelling the effects of trade on women, at work and at home,' *World Development*, Vol 28 No 7.
- Gammage, S., Jorgensen, H. and McGill, E., 2002. 'Framework for gender assessments of trade and investment agreements,' Washington D.C.: Women's EDGE. Mimeo.
- Gammage, S. and Mehra, R., 1999. 'Trends, countertrends, and gaps in women's employment,' *World Development*, Vol. 27 No. 3.
- Ghiara, G., 1999, 'Impact of trade liberalisation on female wages in Mexico' *Development Policy Review* Vol. 17 No. 2.
- Hertel, T. and A.Winters, 2006. *Poverty and the WTO: Impacts of the Doha Development Agenda*, The World Bank and Palgrave MacMillian.
- Hewett, P. and Amin, S., 2000. 'Assessing the impact of garment work on quality of life measures.' New York: Population Council. Mimeo.
- Joekes, S., 1999a. 'A gender-analytical perspective on trade and sustainable development' in UNCTAD, *Trade, sustainable development and gender*, Geneva: UNCTAD.

- Joekes, S., 1999b. 'Gender, property rights and trade: constraints to Africa growth' in King, K. and McGrath, S., eds., *Enterprise in Africa: between poverty and growth*, Oxford: Centre of African Studies.
- Joekes, S., 1995. 'Trade-related employment for women in industry and services in developing countries,' *UNRISD Occasional Paper 5*, Geneva: UNDP.
- Joekes, S. and Weston, A., 1994. *Women and the new trade agenda*, New York: UNIFEM.
- Kabeer, N., 2003. 'The poverty impacts of female employment,' *ID21 Insights 47*, Brighton: Institute of Development Studies.
- Kabeer, N., 2000. *The power to choose: Bangladeshi women and labour market decisions in London and Dhaka*, London: Verso.
- Kabeer, N., 1995. 'Necessary, sufficient or irrelevant? Women, wages and intra-household power relations in urban Bangladesh,' *IDS working paper 25*, Brighton: Institute of Development Studies.
- Kanji, N and Jazdowska, R., 1995. 'Gender, structural adjustment and employment in urban Zimbabwe,' *Third World Political Review*, Vol. 17 No. 2.
- Kasente, D., Lockwood, M., Vivian, J. and Whitehead, A., 2002. 'Gender and the expansion of non-traditional agricultural exports in Uganda' in Razavi, S., ed., *Shifting burdens: gender and agrarian change under neoliberalism*, UNRISD: Kumarian Press.
- Katz, E., 1995. 'Gender and trade within the household: observations from rural Guatemala,' *World Development*, Vol. 23 No. 2.
- Kennedy, E., 1994. 'Effects of sugarcane production in Southwestern Kenya on income and nutrition,' in von Braun, J. and Kennedy, E., eds., 1994, *Agricultural commercialisation, economic development and nutrition*, Baltimore: The Johns Hopkins University Press for IFPRI.
- Kiggundu, R., 1996. 'Gender and diversification' in Report of the Conference on Commodities: Africa and the World Market, Amsterdam, 26 September.

- Kusago, T., 2000. 'Why did rural households permit their daughters to be urban factory workers? A case from rural Malay villages,' *Labour and Management in Development Journal*, Vol 1. No. 2, Canberra: Asia Pacific Press at Australian National University.
- Kusago, T. and Barham, B., 2001. 'Preference heterogeneity, power, and intrahousehold decision-making in rural Malaysia,' *World Development*, Vol. 29 No. 7.
- Kusago, T. and Tzannatos, T., 1998. 'Export processing zones: a review in need of update,' *HDDSP Discussion Paper 9802*, Washington D.C.: The World Bank.
- Malhotra, S. and De Graff, E., 1997. 'Entry versus success in the labor force: young women's employment in Sri Lanka,' *World Development*, Vol. 25 No. 3.
- McCulloch, N. and Ota, M., 2002. 'Export horticulture and poverty in Kenya' *IDS Working Paper 174*, Brighton: Institute of Development Studies.
- McCulloch, N., Winters, L.A. and X.Cirera, 2001. *Trade liberalisation and poverty: a handbook*, London: CEPR.
- Mitter, S. and Rowbotham, S., 1995. *Women encounter technology: changing patterns of employment in the Third World*, London and New York: Routledge.
- Newman, C., 2001. 'Gender, time use and change: impacts of agricultural export employment in Ecuador,' *Gender and Development Working Paper Series 18*, Washington D.C.: The World Bank.
- Nicita, A. and Razzaz, S., 2003. 'Who benefits and how much? How gender affects welfare impacts of a booming textile industry in Madagascar,' *World Bank Policy Research Working Paper 3029*, Washington D.C.: The World Bank.
- Oostendorp, R., 2004. 'Globalization and the gender wage gap,' *World Bank Policy Research Working Paper 3256*.
- Paul-Majumder, P. and Begum, A., 2000. 'The gender imbalances in the export oriented garment industry in Bangladesh' *Gender and Development Working Paper Series 12*, Washington D.C.: The World Bank.

- Pearson, R., 1999. 'Nimble fingers' revisited: reflections on women and Third World industrialisation in the late twentieth century' in Jackson, C. and Pearson, R., eds., *Feminist visions of development*, London: Routledge.
- Seguino, S., 2000. 'The effects of structural change and economic liberalisation on gender wage differentials in South Korea and Taiwan,' *Cambridge Journal of Economics*, Vol. 24 No. 4.
- Seguino, S., 1997. 'Gender wage inequality and export led growth in South Korea,' *Journal of Development Studies*, Vol. 34 No. 2.
- Smith, L. and Chavas, J., 1999. 'Supply response of West African agricultural households: implications of intra-household preference heterogeneity,' *Food Consumption and Nutrition Division Discussion Paper 69*, Washington D.C.: International Food Policy Research Institute.
- Sobhan, R. and Khundker, N., 2001. *Globalisation and gender: changing patterns of women's employment in Bangladesh*, Dhaka: The University Press.
- Standing, G., 1999. 'Globalization through flexible labor: a theme revisited', *World Development*, Vol. 27 No. 3
- Tibaijuka, A., 1994. 'The cost of differential gender roles in African agriculture: a case study of smallholder banana-coffee farms in the Kagera region, Tanzania,' *Journal of Agricultural Economics*, Vol. 45 No. 1.
- Tzannatos, Z., 1999. 'Women and labour market changes in the global economy: growth helps, inequalities hurt and public policy matters,' *World Development*, Vol. 27 No. 3.
- Udry, C., 1996. 'Gender, agricultural productivity and the theory of the household,' *Journal of Political Economy*, Vol. 104 No. 5.
- United Nations, 1999. *1999 World survey on the role of women in development: globalization, gender and work*, New York: United Nations.
- Valodia, I., 1996. 'Work' in Budlender, D., *The Women Budget*, Cape Town: IDASA.

- von Braun, J. and Immink, M.D.C., 1994. 'Nontraditional vegetable crops and food security among smallholder farmers in Guatemala' in von Braun, J. and Kennedy, E. eds., 1994, *Agricultural commercialisation, economic development and nutrition*, Baltimore: The Johns Hopkins University Press for IFPRI.
- von Braun, J. and Kennedy, E. eds., 1994. *Agricultural commercialisation, economic development and nutrition*, Baltimore: The Johns Hopkins University Press for IFPRI.
- von Braun, J., John, K. and Puetz, D., 1994. 'Nutritional effects of commercialisation of a woman's crop: irrigated rice in The Gambia' in von Braun, J. and Kennedy, E. eds., 1994, *Agricultural commercialisation, economic development and nutrition*, Baltimore: The Johns Hopkins University Press for IFPRI.
- Wold, B.K., 1997. *Supply response in a gender-perspective: the case of structural adjustment in Zambia*, Statistics Norway.
- Wood, A., 1991. 'North-South trade and female labour in manufacturing: an asymmetry,' *Journal of Development Studies*, Vol. 27 No. 2.
- Zohir, S.C., 1998. 'Gender implications of industrial reforms and adjustment in the manufacturing sector of Bangladesh,' Manchester: Economics and Social Studies, University of Manchester. Unpublished Ph.D. thesis.
- Zohir, S.C. and Paul-Majumdar, P., 1996. 'Garment workers in Bangladesh: economic, social and health conditions', *Bangladesh Institute of Development Studies Research Monograph 18*, Dhaka: Bangladesh Institute of Development Studies.



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Since the late eighties, developing countries have progressively integrated global markets through unilateral broad structural economic reforms, bilateral free-trade agreements, and multiparty trade negotiations. From a developmental perspective, after almost thirty years of trade reform, the degree of tariff liberalization, on average, has not coincided with proportional reductions in overall poverty as initially expected. Although several factors beyond trade policy appear to have contributed to this divergence, it is also true that the links between trade openness and poverty are not well understood, and thus trade-induced pro-poor public policies are particularly difficult to design and to implement. In this context, further research – based on new methodological approaches, improvements on existing techniques and accessibility to high-quality data – and continued dialogue with policy makers are two key conditions to ensure the political viability of trade reform and to strengthen its poverty nexus.

The papers presented in this book make a significant contribution to this effort. They are drawn from a policy forum organized by the Poverty and Economic Policy (PEP) research network and the Inter-American Development Bank (IDB) that brought together leading researchers and important stakeholders from around the World to debate the links between trade and poverty. The selected papers push back the frontiers of knowledge in the trade and poverty policy debate, while also addressing central methodological and conceptual issues.

Although they cover many different dimensions of the trade and poverty nexus, the authors concur, as a group, in drawing several broad and important lessons. First, while theory generally

suggests that trade openness is both pro-growth and pro-poor, empirical evidence shows mixed results. The impact of trade reform on poverty appears to depend on a combination of pre-existing conditions – such as geography, market size, and institutional capacity – and complementary policies designed to help the poor participate in the positive opportunities that emerge while protecting them from the most harmful consequences. The second shared lesson is that the examination of trade-poverty links requires a combination of both ex ante modeling techniques and ex post econometric analysis, where both have important advantages and disadvantages. Third, studies must place a strong focus on micro analysis. Macro analysis, although a useful tool to learn about average cross-national effects, does not allow for detailed, country-specific results, particularly when the poverty impacts caused by trade liberalization seems to be highly contextualized and contingent on multiple domestic socio and economic conditions. From a public policy perspective, all three lessons are extremely important as only robust empirical results can provide a solid foundation for recommendations on the design and implementation of sound pro-poor trade policy.

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