How Does Trade Liberalization Affect the Poor?

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1. Introduction

Since about the 1980s (often referred to as the third wave of globalization) a large group of developing countries started to participate intensively in world markets for the first time. Globalization has lead to rapid growth and poverty reduction in most of the economies of East Asia (for example, China, Thailand, and Malaysia). Trade reforms have had negative effects, however, on the well-being of the poor in some other countries (Vasquez, 2002). In Zambia, for example, the liberalization of maize production resulted in the disappearance of rural markets for com, leaving small farmers in even worse poverty and disadvantage (Winters, 2000). It is interesting to notice that advocates of trade liberalization often argue that the rise in prices for agricultural products will increase rural incomes, thereby reducing poverty in developing countries; that, however, did not happen in Zambia's economy. Questions that arise from the controversy are whether trade liberalization indeed benefits the poor and, if it does, then why Zambia and similar countries were unsuccessful. Studying those issues is challenging, because trade openness creates as many thresholds as traps for the poor, as we will see, but it is important to ensure that no one will be left behind by the growth in global interdependence.

Consequently, this paper will examine the influence of trade liberalization on poverty by focusing on and trying to find the answers to the following questions: How trade openness may affect the poor; what empirical evidence and regional experience tell us; and what conclusions can be drawn from the analysis. I will explore the links between trade liberalization and poverty through the effect of changes in prices of tradable goods, domestic factor prices, wages and employment, domestic competition, and growth on consumption and income patterns of the poor that sum up to their total welfare. Figure 1 arranges these schematically. Then I will turn to research papers that examine the same links empirically. By comparing theoretical inferences with empirical evidence, I will be able to see how greater trade openness affects the poor and whether there are constraints to results obtained.

2. The Links Between Trade Liberalization and the Poor

Figure 1

Analytical Scheme
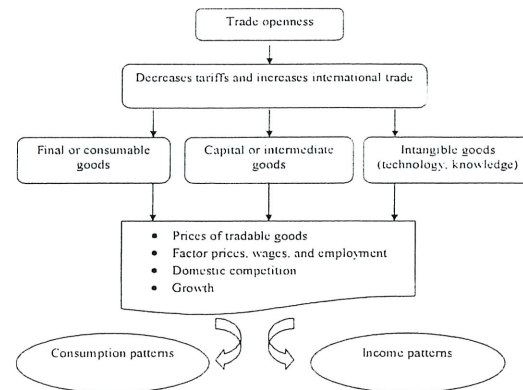
Definitions and policy issues

First, let us be clear about what trade openness (or liberalization) means. According to the definition of the International Monetary Fund (Berg, Krueger, 2003), "the openness of an economy is the degree to which nationals and foreigners can transact without artificial (that is, governmentally imposed) costs (including delays and uncertainty) that are not imposed on transactions among domestic citizens" (Berg and Krueger, 2003, p.5). Domestic citizens do not have restrictions on the amount of goods that they can sell and buy, nor do they pay high tariffs on produced goods. It follows, then, that to increase trade openness, policymakers should address the issues of non-trade and trade barrier reduction. The reduction of "artificial costs" will stimulate not only change in terms of trade, but also increase imports of new tradable goods, foreign direct investment, imports of capital and new technologies, change domestic markets, and allow labor imports and exports.

It is easy to realize that change in prices of tradable goods have a direct impact on the poor who are, due to their financial situation, very vulnerable to price changes (McCulloch, Winters,

Cirera, 2001). However, the effects of other changes on the poor are not so obvious and depend on the structure of poverty, amount of income sources, consumption-income ratio of the poor, and economic situation in a country in general, creating both opportunities and risks for the poor.

Change in prices of exports and imports

The immediate effect of trade liberalization is decrease in prices of imported final goods and an increase in prices of exports (Lucas, 2000). These price changes have a direct impact on the consumption and income patterns of the poor. A simple microeconomic theory predicts that a decrease in price will increase a feasible set of affordable bundles. Thus, the more imported goods are in a consumption bundle of the poor the better off they will be, because after buying goods at a lower price they will have income left. In addition, the low prices of the imported goods will keep the prices of domestic substitutes low as well, benefiting the poor on the consumption side. As Reimer (2002) noted, however, the income effect is not so simple, because the poor are more diverse with respect to factor earnings than with respect to consumption. In other words, it is possible to find two households with identical commodity budget shares but with completely different sources of income. The income of employed workers depends on the factor price changes.

Factor prices change (skilled/unskilled labor wages)

The increased amount of intermediate and capital goods directly affects the employment and wages of the poor by changing factor prices. The benefits can be seen using a Stolper-Samuelson (SS) theorem, on which traditional trade theory relies (Markusen, Melvin, Kaempfer, and Maskus, 1995). The theorem predicts that a relative increase in the price of a commodity will increase the real return to the factor used intensively in that industry. In a developing country, trade liberalization leads to an increase in relative prices of unskilled-labor-intensive products and, according to the theorem, real wages for unskilled workers. As the market for labor-intensive products expands, the demand for unskilled workers increases, thus the poor's employment and real wages increase.

That is a very encouraging and powerful result of a general trade theory; however, the SS theorem is based on the assumptions of constant returns to scale, perfect labor mobility, and no market or policy distortions, which are almost always violated in developing countries. Moreover, Agenor (2002) showed that trade liberalization can *reduce* the demand for unskilled labor. The basis for his argument is the assumption that trade openness usually associates with the introduction of high-level technology that only skilled workers can deploy. Given that there is a high degree of substitutability between unskilled labor and capital, a high degree of complementarity between skilled labor and capital, and an increased demand for capital that has become relatively cheaper, the demand for unskilled labor will decline. That may lead to higher unemployment rates and increased poverty, caused by job losses. If the poor do not have financial recourse to education, or there are no government support programs, or credit markets are imperfect, the short run-effect of decreased unemployment may translate into a long-run poverty trap.

The total effect on the welfare of the poor consists of the consumption and income effects, which seem to work in opposite directions so that the final result is ambiguous. The Global Poverty Report (2001) argues that the two can offset each other, but that conclusion is very vague and cannot be fully justified by theory.

Effects on competition

It is important to clarify that when we talk about people as a factor of production (low- or high-skilled labor) we usually mean those working in the industrial sector and as hired labor. The self-employed poor, however, often own portions of such sectors as agriculture. One would think that opening an economy benefits self-employed workers by making it possible to export more goods at a higher price, thus realizing increased profits and incomes for the poor. On the other hand, if such sector were protected before the trade liberalization, the poor might be hurt very badly by the impact of foreign firms on the competition within domestic markets. Agenor (2002) argues that increasing competition will reduce the market power of domestic firms and could eventually force some of them out of business. Those who cannot handle the competition are usually poor producers and, thus,

functioning before markets for them will disappear. Bannister and Thugge (2001) call such a situation a "corner solution", which is possible because of the lost government protection (in the form of subsidies, for example) or inefficient local production. The profits of the informal sector will decline: the firms will not stay competitive and will shut down. In the short run, unemployment and poverty will increase substantially. Thus, the effect on self-employed workers is not much different from the effect on employed workers. The former would be able to survive in the short term only with government subsidies or functioning credit markets. If those are not available, a sector will eventually recover because, in the longer run, a country will become more efficient in using its productive resources, but that takes time.

Growth

As conventional trade theory emphasizes, greater trade liberalization leads to reallocation of productive resources where they are used with comparatively greater efficiency. Efficiency increases productivity, which increases the growth rate of an economy. Thus, in the long run, trade openness has a beneficial influence on the growth rate. Moreover, the reallocation of domestic resources is not the only one source of economic growth. Trade liberalization promotes higher growth in a number of other ways. The Global Poverty Report (2001) argues that trade openness lowers the cost of capital, making investment more efficient and, thus, increases inflows of foreign direct investment (FDI). FDI simplifies the process of the adaptation of new innovative technologies, attracting and implementing new business practices. This will establish new businesses and industries within a country, creating employment opportunities for the poor and increasing the overall level of productivity and growth. In addition, a simple macroeconomic model predicts that growth increases output (or income) per capita. It follows then that, by stimulating growth, trade liberalization can increase the employment and welfare of the poor.

To sustain the flow of FDI, however, trade reforms are not enough. They should be accompanied by structural and institutional reforms that would create a good environment for the investment (improving infrastructure, increasing education, providing macroeconomic stability, and appropriate exchange-rate regime).

Summary

In summary, the effect of trade liberalization on the poor depends on the change in consumption and income patterns of the poor. The decrease in prices of imported goods increases a set of affordable bundles of households and thus increases their welfare on the consumption side. On the income side, a change in the prices of goods will change factor prices. There are opposing views on the change in wages for employed unskilled labor, and the total effect on the welfare of the poor is ambiguous. The situation for self-employed workers is no better, because a change in a trade regime will affect competition in domestic markets and, in the short run, could lead to the disappearance of functioning markets for the poor. The speed of a recovery will depend on the availability of governmental support programs and the credibility of markets. Over the long term, the market will become more efficient in using recourses; moreover, the growth stimulated by reallocation of resources, inflows of FDI, and established new businesses will increase employment and the average welfare of the poor.

3. Empirical Evidence

As we have seen, the links between trade liberalization and poverty are very diverse and complex. There is no definite answer from a theoretical perspective, and the influence of any trade reform or policy will depend on the situation in any given country. That is why empirical works on poverty and trade liberalization in developing countries are very diverse and case specific; moreover, different researchers use different methodologies in their analyses, depending on which issues they seek to address. The purpose of this paper is to find out whether the poor benefit or lose from greater trade openness. In the discussion above, I have explored possible links between trade liberalization, its effects, and the poor. In proceeding with data evidence, it would be logical to find out how empirical studies address the same links. Of the research done in this concern, most looks at specific countries and uses detailed household-survey information and a computable general equilibrium framework or general-equilibrium simulation model.

The first two links discussed earlier were changes in prices of tradable goods and factors of production. Porto examines those in *"Using Survey Data to Assess the Distributional effects of*

Trade Policy." He studies the distributional effect that Mercosur[1] had on Argentine families by eliminating tariff barriers among the members of an agreement and imposing tariffs on the rest of the world, which are the main reforms introduced by the regional trade agreement. The tariff structure and changes in tradable goods' (the author adopts four main categories listed in the table) prices are listed in Table 1.

As we can see, the greater trade openness among the Mercosur's countries has raised the price of agricultural products (food and beverages) whereas the prices of all other tradable goods have decreased. According to the theory, the change in prices for tradable goods affects the consumption patterns of the poor. The decrease in the prices of imports, and thus the decrease in prices of domestic substitutes, must necessarily make the poor better off. The change in food prices might have a dual effect, however, benefiting those who are net producers of the food. Porto finds that, because of those changes in prices, the welfare of the poorest households in Argentina suffers significant erosion, whereas for middle- and high-income households the average consumption effect is positive. That result may be explained by the tendency of the poor to spend most of their money on food, and the decrease in prices for other goods cannot compensate the increase in prices for food. For the rich, however, the opposite is true.

We have examined only one of two effects on the welfare of the poor. The change in trade policy will also affect factor prices, and thus the income patterns of the poor. The effects on wages are presented in Table 2.

When discussing factor price changes, it is more important to look at signs of corresponding coefficients than the absolute values. As we can see, an increase in prices for food and beverages will increase the wages of unskilled workers (the coefficient is statistically significant) and decrease wages of skilled workers (statistically significant). The SS theorem would suggest that a food production uses low-skilled intensive techniques, and thus that the production of food involves substantially unskilled labor. The evidence presented in Table 3 supports that claim: 76.40% of the labor involved in food and beverages production is unskilled. The SS theorem also works for other sectors, as discussed below.

The increase in the price of clothing increases the wages of low-skilled labor (statistically significant) and decreases wages of semiskilled and skilled labor. This finding supports the idea that textile production uses low-skilled labor intensively (73.60% of labor used in a production process is unskilled).

The price of house equipment relates positively to the wages of skilled (statistically significant) and semiskilled workers. For unskilled labor, Porto finds a negative and significant relationship. The SS theorem would suggest that housing is a skilled intensive production. When we look at the data in Table 3, we see that, among the others, the proportion of skilled labor used in a production process is the highest (5.40%) in the house equipment sector.

Now, with it clear as to what happens to the prices of factors of production, we can make an inference about trade liberalization's income effects on the poor. Porto finds that the labor income effect of Mercosur benefits the poor, and has a negative effect on the average labor income of the rich. That result is explained by an increase in the relative prices of unskilled labor (primarily due to an increase in prices of food and beverages and decrease in prices of housing equipment), bringing down the wages for more educated households.

It follows that the income and consumption effects work in opposite directions and, theoretically, the total effect is ambiguous. Porto determines the total welfare gain for every household across almost the entire income distribution. The results are positive and statistically significant for the poor and middle-income families and negative but insignificant for the high-income households.

Porto notes, however, that poverty was increasing in Argentina during the 1990s, which finding is inconsistent with the obtained results. Porto addresses this confusion in his paper, observing that the study examines the change in the welfare of the poor due to the changes in tariffs on consumption goods only. From that perspective, the poverty should decline. However, in the Argentinean economy many other policies (deregulation, privatization, social security reform, monetary stabilization, and industrial policy) were adopted at the same time and had a negative effect on the poverty. It is important to notice that without trade liberalization the poverty rates would have been much higher.

Connection between the empirical evidence and the theory

Although Porto's paper focuses on a single country, it carries many important results.

First, trade openness leads to an increase in agricultural prices and a decrease in industrial prices, which is consistent with the theory but requires some explanation. A decrease in prices for imported goods should keep the prices of domestic substitutes low. Empirically speaking, the prices are not just staying low but are also declining. As for the prices of exported goods, those should increase, according to the theory, given that agricultural products are one of the major exports of Argentina. As we can see from Table 4, that is a reasonable belief: in the mid-1990s over a half of exports consisted of agricultural products, food, beverages, and tobacco. Not surprisingly, the prices for food and beverages increased.

Second, the change in prices of tradable goods should change consumption and income patterns of the poor, and we can observe such changes from the empirical work. The theory says that the more imported goods there are in a consumption bundle, the better off the poor will be. Empirically, however, the poor's welfare declines due to a consumption effect. We can infer that the poor do not consume a great deal of imported (or domestic substitutes for imported) goods, which is explainable by the fact that the poor tend to spend most of their income on food. It is not surprising then that savings from a decline in nonfood prices do not outweigh increased expenditures on food, and the poor lose on a consumption side.

Third, the important part of a change in the welfare of the poor falls on an income effect of a factor price change. In the case of Argentina, there is evidence in favor of the SS theorem. In the sectors where unskilled labor is used intensively and the price of produced goods increase, wages for unskilled labor increase (food and beverages). The theorem also says that the wages for a factor that is not used intensively should fall with the increase in the price of a produced good. The change in price for house equipment (a sector that does not used unskilled labor intensively) supports that statement.

Finally, we can answer the most important question: Do the poor benefit from greater trade openness? An empirical analysis of Mercosur's impact on Argentina's economy shows that the overall welfare of the poor increases from a change in a trade regime. It also raises the important question of the effect of other reforms and conditions on the poor. Given that the poverty tends to increase in Argentina, trade openness is not the only influence that matters. Government's policies, macroeconomic stabilization, external and internal shocks, exchange rate regime, and other factors have a great impact on the well-being of the poor. It is important to realize, however, that without trade openness the poor could have been in an even worse situation.

Market competition and growth: empirical evidence

There is not much empirical work done analyzing how trade openness effects competition in the domestic markets. Moreover, such analysis would be based on case studies. However, Winters (2002) has done good work that presents two case studies of the liberalization of the maize market in Zambia and the cotton market in Zimbabwe. The effects were opposite in the two countries. The poor were worse off in Zambia, whereas their welfare increased in the other country.

It is important to notice that the Zambia example is consistent with the theory. Winters says that, before the trade reform, impoverished maize producers received subsidies from the mining sector and the monopsony buyer; thus, the sector was protected. After the reform, the poor stopped receiving that money, which resulted in declining revenue for producers. Winters also emphasizes a sharp deterioration in transformational infrastructure that could have affected the final result: the functioning markets for the poor disappeared. It is important to keep in mind that if the sector had not been protected the results would have been more beneficial for the poor.

In Zimbabwe the reforms resulted in more efficient markets, in which the poor could participate. The major difference from Zambia's experience was the absence of government protection and the existence of the monopsony buyer, who kept prices low. The trade liberalization eliminated the price control and favored liberalization, creating more opportunities for the poor. Bannister and Thugge (2001) say that, in Zimbabwe, since the reform the employment in the agricultural sector rose by 40 percent from 1988 to 1997.

The essential result of the Winters paper is the importance of a country's initial conditions. Trade liberalization can stimulate market competition and improve the welfare of the poor in situations where there are forced restrictions on the producers, but it can also worsen the situation in the case of protection that disappears after the reforms.

The final link between trade liberalization and the poor shows in the changes of growth rates. In the economic literature there is little disagreement on this issue. In a recent study, Dollar and Kraay (2001a, 2001b) have found that trade liberalization benefits the poor. Using a sample of the most globalized countries,[2] the researchers perform a regression of selected countries' growth rates against the measures of trade openness (tariff rates, exports plus imports to GDP ratios, and other control and instrumental variables) and find that "changes in trade volumes have a strong positive relationship to changes in growth rates" (Dollar and Kraay, 2001b, p.27). They then proceed by evaluating the relationship between growth and the incomes of the poor by focusing on the growth of average incomes and growth in incomes of the poorest fifth quintile. They notice that the share of income of the poorest fifth "does not vary systematically with average incomes" (Dollar and Kraay, 2001b, p.23) and, after performing several regressions,[3] find that average incomes of the poorest fifth grow proportionally with average incomes. Thus, two studies conclude that trade openness stimulates growth; growth increases incomes of the poor; thus, trade also must reduce poverty. It is important to notice that those conclusions are consistent with the theoretical analysis above, which also predicts reduction in poverty because of greater trade openness.

4. Conclusion

In this paper the main question has been whether trade liberalization benefits the poor. When theoretical analysis cannot give a definite answer, the empirical evidence suggests that trade openness improves the welfare of the poor, which was seen in Argentina's example. The total effect of a change in prices increased the wages of the poor. In addition, cross-country analysis supports the idea that sustained growth increases incomes of the poor proportionally to an average income increase. These results are very encouraging, and would suggest that trade reforms are a step towards decreasing poverty in developing countries. Unfortunately, there are issues to consider before making such a conclusion.

Both approaches (theoretical and empirical) emphasize the importance of polices that were implemented at the same time as was liberalization, the situation in a country before the reforms, macroeconomic stability, and appropriate regimes. According to the empirical study, trade openness should have increased the welfare of the poor in Argentina, but actual poverty was increasing during the 1990s, which is explained by external shocks and other reforms that were made at the same time. Thus, it is not trade openness, but other economic changes, that is responsible for poverty increase.

One further important implication for policymakers is that it is not appropriate to design an open trade policy based on the successful performances of other countries. When Zimbabwe's economy shows a potential for welfare gains for the poor because of a corn market liberalization, Zambia's economy shows how a different market functioning can reverse the results.

The impact of trade liberalization on poverty will continue to be a heatedly discussed topic among economists and policymakers. Undoubtedly, the design of an appropriate trade policy is not an easy problem to solve and many issues needed to be considered, but this paper suggests that if everything is done properly, the poor will not be left behind as integration with the world economy increases.

Table 1
Tariff Structure and Price Changes
Mercosur

	Tariff (1992)	Intrazone Tariff (1996)	Common External Tariff (1996)	Price change[4]
Food and Beverages	6.9	0.05	13.7	1.4
Clothing	20.4	3.3	17.9	-6.4
House Equipment and Maintenance Goods	16.1	0.05	14.2	-5.4
Other traded goods	12.7	0.05	11.7	-3.2

Source: Porto, p. 35

Table 2
Wage Responses to Changes in Prices of Traded Goods Educational Categories of Labor[5]
Argentina

	Food and Beverages	Clothing	House Equipment	Other Goods
Unskilled labor (Primary education)	20.6 (7.22)	1.19 (2.08)	-2.02 (-2.99)	-0.22 (-0.98)
Semiskilled labor (Secondary education)	0.12 (0.44)	-1.80 (-3.26)	1.92 (2.91)	0.76 (3.43)
Skilled labor (College education)	-1.42 (-3.77)	-5.05 (-6.25)	6.04 (6.99)	1.42 (4.42)
R^2 of the regression is 0.34				

Source: Porto, p.37.

Table 3
Factor Intensities by Skills
Argentina, 1996[6]

	Food and Beverages	Clothing	House equipment
Unskilled labor (primary education)	76.40	73.60	67.90
Semiskilled labor (secondary education)	19.20	24.20	26.70
Skilled labor (college education)	4.40	2.20	5.40

Source: Porto, p.38.

Table 4
Exports by Industrial Origin (As a Percentage of Total Value of Exports)
Argentina

Description	1995	1996	1997	1998	1999	2000	2001
Agriculture	24.3	25.5	22.2	24.1	21.3	19.9	22.4
Food, beverages, tobacco	28.5	29.1	28.2	27.8	29.3	24.3	22.6
Total	52.8	54.6	50.4	51.9	50.6	44.2	44.8

Source: International Trade Statistics Yearbook, 2001.

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Endnotes

1.Mercosur (from Spanish, shortening of *Mercado comun sur* - "southern common market") - "South American trading group: a free trading area developed in the 1990s consisting of Argentina, Brazil, Paraguay, and Uruguay." (source: MSN learning and research dictionary. Available online at http://encarta.msn.com/dictionary_/Mercosur.html)

2.The authors identify the countries as "the top one-third of developing countries in terms of increases in trade to GDP over the past 20 years," p. 1 (Dollar and Kraay, 2001).

3.For detailed model specifications and regressions refer to Dollar, D. and Kraay, A., "Growth Is Good For the Poor," World Bank Policy Research, Department Working Paper No.2587, 2001 [http://econ.worldbank.org/files/1696_wps2587.pdf]

4.The estimates of the price changes are obtained from regressing price index of a given traded good over intrazone tariff and other external tariffs. See Porto (2003) for precise formulas. I will pay attention to the regression results only which are more important in the context of this paper.

5. The results in the table are wage price-elasticities. Assuming that there exist three types of labor, the results are obtained by regressing logarithm of wages of person j over a set of exogenous variables (age, age squared, gender, marital status), dummy variables for educational attainments (primary, secondary, college), the log of prices of traded goods, interaction of the log of prices with dummies, and a time trend to control for the role of technical change. For more precise explanations and formulas see Porto, 2003. Numbers in parenthesis are corresponding t-statistics.

6. The numbers are the proportion of each type of labor (unskilled, semiskilled, skilled) on total labor employment in the different sectors.