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Trabelsi, Mohamed Ali and Liouane, Naoufel

Faculty of Economics and Management of Tunis, University of Tunis
El Manar, High Institute of Finance and Taxation, University of
Sousse

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Abstract

The struggle against poverty and social inequality is one of the biggest challenges for developing countries. These countries should adapt themselves to a new economic world order characterized by trade liberalization and based on a desire to make globalization work for poorer people. Most empirical studies on the relationship between trade, inequality and poverty assume that trade contributes to increasing wage inequality in developing countries. In this paper, we studied the impact of trade liberalization on poverty on a sample of 106 developing countries during the period 1980-2010. The results indicate that trade is not the main factor affecting inequality and poverty persistence.

Keywords: social inequality, trade liberalization, globalization, poverty.

JEL Classification: A13, F43, I32, O57.

Introduction

The impact of trade liberalization on poverty is an issue which has opposed pros and cons of globalization. While some authors support the view that trade liberalization generates growth and therefore reduces poverty (Abarche et al., 2004), others show that it is the rich who benefit from the increase in trade volume, while the poor remains poor (Cling et al., 2004 & Milanovic, 2005). Indeed, these authors rely on the fact that no study could establish a significant correlation between trade liberalization and poverty reduction. In this context, we can mention the case of Latin America where the rapid growth of exports triggered massive unemployment and stagnating incomes. The results show also that poor people in rural areas hardly make ends meet.

Facing this controversy, it is useful to consider the real impact of trade liberalization on poverty. In this paper we will proceed as follows. Section 1 examines poverty rates in the world. The second section focuses on trade policy and protectionism. Trade liberalization and fight against poverty will be the subject of Section 3. In Section 4, we estimate the impact of trade liberalization on poverty, through an empirical study on a sample of 106 developing countries during the period 1980-2010.

1. Global poverty

Over the last thirty years, according to estimates by the World Bank presented in its Global Economic Prospects 2005, GDP per capita growth in developing countries has remained very low compared with industrial countries. According to Pritchett (Pritchett, 1997), income gap between the richest and the poorest countries became considerable. He noted that income per capita ratio between the richest and the poorest countries multiplied by 6 during the last five decades. In the same context and according to the report of the World Bank (2002), it is estimated that among 6 billion people worldwide, 2.8 billion live on less than \$ 2 per day and 1.2 billion on less than \$ 1 per day.

For two decades, the World Bank has been establishing international poverty statistics from surveys based on the calculation of an international poverty threshold applicable to all countries. The poverty rate is measured according to a real poverty ratio (Poverty Headcount Ratio) set at \$ 1.25 or at \$ 2 per day / per capita, in constant 1993 dollars. National currencies are converted not to the current exchange rate but to the rate of the purchasing power parity. Table 1 shows percentage of population living on less than \$ 1.25 per day compared to 2005 international prices (source: World Development Indicators (WDI)). Table 2 shows percentage of population living on less than \$ 2 per day compared to 2005 international prices (source: WDI).

	Population %
East Asia & Pacific	16.8%
Europe & Central Asia	3.7%
Latin America & Caribbean	8.1%
Middle East & North Africa	3.6%
South Asia	40.3%
Sub-Saharan Africa	50.9%

Table1: Poverty Headcount Ratio at \$1.25 per day (source: WDI)

The analysis of these two tables shows that almost half of the population of South Asia and Sub-Saharan Africa live on less than \$ 1.25 per day and only 27% living with more than \$ 2 per day. These statistics point to the seriousness of the situation in the two most populated regions of the world.

	Population %
East Asia & Pacific	38.7%
Europe & Central Asia	8.8%
Latin America & Caribbean	17.2%
Middle East & North Africa	17.2%
South Asia	73.9%
Sub-Saharan Africa	72.9%

Table 2: Poverty Headcount Ratio at \$2 per day (source : WDI)

2. Trade Policy and Protectionism

At first glance, trade policy does not seem to be the ideal weapon against poverty. The fight against poverty through trade depends on poor countries’ ability to reach wealthy countries’ markets. Unfortunately, northern countries leverage the most prohibitive trade barriers against the world’s poorest countries. According to Bairoch (1999), during the nineteenth century protectionism has been an engine of growth in Europe and America. According to Pedregal (2007) study, these barriers cost twice the aid received by developing countries. But the elimination of costly protectionist barriers may be one of the best ways to meet the food needs of poor countries. The world produces more than enough food to feed everyone. Paradoxically, there is almost one sixth of the world’s population who suffer from malnutrition (World summit on food safety, Rome: November 16th-18th, 2009).

Liberalization of world trade is only one weapon in store against poverty. As it reduces the cost of food in protectionist countries and stimulates global economy, it helps thus millions of people out of poverty (Nash and Mitchell, 2005 & Winters et al., 2004).

3. Trade liberalization and fighting poverty

Trade liberalization may have a significant impact as it would open markets for producers in developing countries (Stiglitz and Charlton, 2005) not because they can only sell their products at higher prices but also buy the most modern production equipments and increase their productivity and income. To this end, developing countries, like developed ones, should accelerate the pace of trade negotiations in favour of a broad liberalization. The success of these negotiations could significantly benefit the developing world and help millions of people out of poverty (World Bank, 2003).

Trade development and liberalization may contribute to development and growth and lead to poverty reduction (Winters et al., 2004). Studies by the World Bank show that weak growth rates are reasons for increasing poverty. However, the works of Datt and Ravallion (1992), Ravallion and Chen (2003) and Dollar and Kraay (2004) indicate that trade is good for growth, necessary, yet not sufficient, for poverty reduction. For them, if trade liberalization leads to faster growth, it implies in no way improvement in conditions of the poor. Indeed, UNCTAD (2004) shows that trade did not contribute to poverty reduction.

Finally, Dollar and Kraay (2004) highlighted also the importance of customs duties and openness rates (exports + imports / GDP) to growth. Examining a sample of developing countries, they pointed out to a rapid growth of openness rates and significant liberalization which doubled over the period 1985-2002.

4. The Empirical Study: Assessing the impact of trade liberalization on poverty

The aim of this study is to examine the impact of trade policy on income distribution and poverty in developing countries.

4.1 Sample and variable selection

The sample of our study includes a set of 106 developing countries over the 1980 to 2010 period.

Our goal is to examine the following relationship:

$$Y = f(\text{Ocom, Gini, Chum, LPibt})$$

where

Y: poverty rate explained by trade openness, inequality, human capital and GDP level.

OCOM: Level of trade openness, measured by the sum of export revenues and expenditures of annual imports of goods and services in GDP terms (WDI, 2010).

Gini: The Gini index. It is a measure of the degree of inequality of income distribution within countries, measured as a percentage. A Gini index of zero represents perfect equality, while an index of 100 implies perfect inequality.

Chum: Human capital is defined as number of education years of population aged over 15 years.

LPibt: GDP per capita measured by log of GDP per capita (2000 constant prices).

The choice of these four variables results from their great impact on liberalization and poverty according to the various studies carried out.

4.2 Descriptive analysis

First, the following descriptive statistical analysis reports the main features of the impact of trade liberalization on poverty. Table 3 presents the descriptive statistics for the entire sample.

	Observations	Mean	Std. dev	Minimum	Maximum
Pauv-\$2	437	15.97242	16.53483	0	75.64
Pauv-\$1,25	437	8.152654	10.97551	0	63.34
Gini	416	43,06983	9,288346	25,82	74,33
Ocom	452	80,81515	41,22226	13,644	254,6058
LPibt	459	8,1522	0,9104492	5,857872	9,908389
Chum	113	6,458389	2,22829	1,545	11,394

Table 3: Descriptive Statistics

We notice that the average percentage of those who live on less than \$ 2 per day is about 16%, but in some countries it can reach 75%. This percentage is reduced by half (8%) when looking at those who live on less than \$ 1.25. The Gini index stands at an average of 43% indicating that there are noticeable inequalities in developing countries. In some countries this rate reaches 74%, a figure considered huge compared to that defined by the OECD which stands at 30%.

In this same group, one may notice the huge trade gap. Indeed, trade openness level varies from one country to another; between 13.644% to 254.605% with an average rate of 80.815%.

4.3 The Econometric Analysis

As mentioned above, the purpose of this study is to examine the impact of trade policy on income distribution and poverty in developing countries. According to the World Bank, poverty is measured by two headcounts: the percentage of population with income less than \$ 1.25 per day and those with income less than \$ 2 per day.

To this effect, we propose the following panel data-based multiple linear regression model:

$$Y_{it} = \alpha + \beta_1 Ocom_{it} + \beta_2 Gini_{it} + \beta_3 Chum_{it} + \beta_4 LPibt_{it} + \varepsilon_{it} \quad [1]$$

In this model, the index i denotes the country ($i = 1, \dots, 106$) while the index t indicates the year ($t = 1980, \dots, 2010$).

4.3.1 The case of a poverty headcount ratio of \$ 1.25 a day

Before estimating the model, it is necessary to define the type of model: a fixed effects or random effects model. To this end, we will use the Hausman test. In the case of our sample, the Hausman P-value is equal to 46.66% which is well above 5%. This result allows us to conclude that random effects model estimation is adequate.

Estimation of the model gives us the following result (values in parentheses represent the

P-values: * represents significance at 10%, ** denotes significance at 5% and *** represents significance at 1%):

$$Y_{it} = 145,9393 - 0,001275Ocom_{it} + 0,322948Gini_{it} - 0,719337Chum_{it} - 17,72544LPibt_{it} \quad [2]$$

(0,000)*** (0,971) (0,000)*** (0,678) (0,000)***

With a $\chi^2(4) = 102,81$ and $R^2 = 0,6276$.

4.3.2 The case of a poverty headcount ratio of \$ 2 a day

In this case the Hausman P-value is equal to 51.56%, greater than 5%. This result also indicates that the estimate should be made by a random effects model.

Estimation of the model gives us the following result:

$$Y_{it} = 228,14 - 0,00774Ocom_{it} + 0,300679Gini_{it} - 0,766931Chum_{it} - 24,45134LPibt_{it} \quad [3]$$

(0,000)***
(0,860)
(0,067)*
(0,432)
(0,000)***

With a $\chi^2(4) = 133,66$ and $R^2 = 0,7030$.

P-value of the estimated parameters shows that the variables Ocom and Chum are the most insignificant in this model. However, from Table 3 indicates the small number of observations collected (113) by the World Bank concerning the variable Chum. This limitation leads us to ignore this variable.

The model thus becomes:

$$Y_{it} = \alpha + \beta_1 Ocom_{it} + \beta_2 Gini_{it} + \beta_3 LPibt_{it} + \varepsilon_{it} \quad [4]$$

By analogy to paragraphs 4.3.1 and 4.3.2, estimation of the fixed effects model leads us to the following results:

4.3.3 The case of a poverty headcount ratio of \$ 1.25 a day

The Hausman test gave a P-value equal to 0.0018 which is well below 5%. This shows that the fixed effects model is most appropriate. Estimation of the model gives us the following result (* values between parentheses represent P-values):

$$Y_{it} = 98,35886 - 0,069354Ocom_{it} + 0,658462Gini_{it} - 12,2718LPibt_{it} \quad [5]$$

(0,000)***
(0,013)**
(0,000)***
(0,000)***

With an $F(3,299) = 30,08$ and $R^2 = 0,2319$.

4.3.4 The case of a poverty headcount ratio of \$ 2 a day

For this case, the results of the Hausman test yield a P-value equal to 0.0159, a value well below 5%, indicating that the fixed effects model is most appropriate. Estimation of the model gives us the following result:

$$Y_{it} = 185,2278 - 0,0369577Ocom_{it} + 0,3774387Gini_{it} - 19,94796LPibt_{it} \quad [6]$$

(0,000)***
(0,198)
(0,001)***
(0,000)***

With an $F(3,299) = 36,53$ and $R^2 = 0,2682$.

The regression analysis revealed the following results. There is a negative and statistically significant relationship between trade liberalization and poverty. This indicates that trade liberalization may reduce extreme poverty (a poverty headcount ratio of 1.25 U.S Dollars) in developing countries. However, it should be noted that in the case of a poverty headcount ratio of \$ 2, the variable representing trade openness is not significant. Similarly, increase in GDP leads to poverty reduction. On the other hand, there is an increase in inequality which results in an increase in poverty. This is consistent with several empirical studies (Cling, 2006) that highlight the fact that trade tends to raise income inequality. This can be explained by the fact that it is the rich who benefit more than the poor from GDP growth and that this may further raise inequalities and ultimately poverty.

These results led us to further deepen our analysis on the effect of liberalization on poverty and inequality. To this end, we relied on the results of Table 3 which gives an average Gini index of 43%. We formed two groups of countries. The first consists of countries with an index below 43% and represents the least unequal. The second group consists of countries where inequalities are remarkable with a Gini index greater than 43%. The results obtained by estimating the two models (with a poverty headcount ratio of \$ 1.25 and a poverty headcount ratio of \$ 2) are consistent with those of sections 4.3.3 and 4.3.4. In other words, whatever degree of inequality, we can not ignore the beneficial effect of trade liberalization on poverty. However, the risk of increased inequality due to growth can be mitigated by the intervention of the state to preserve a minimum of social equality between rich and poor.

5. Conclusion

While some authors (Bourguignon, 2002 & Cling et al., 2005) show that trade liberalization offers opportunities for growth, it does not play the expected role to reduce poverty. Indeed, the expansion of world trade in the context of globalization produced disappointing results in reducing poverty because trade liberalization often leads to an increase in inequality.

Governments which commit themselves to this process of liberalization should create the necessary conditions for the poor to have their share. Indeed, trade liberalization could be beneficial to the poor. It may contribute to reducing inequalities between rich and poor in some countries. However, the poor

who have no means and are ill-equipped can not seize these new opportunities offered by the market, which can further widen the gap between different social strata.

Finally, we propose a synthesis of recommendations derived from the various studies on this subject:

- A fair redistribution of income generated by trade liberalization.
- Social policy that favours the poor by creating projects in areas of greatest need.
- The state should take responsibility by considering a change of institutions, rules and policies that marginalize the poor.
- Duty and quota-free access to all low-income countries.
- A general reduction of tariffs in favour of exports from developing countries.
- A recognition of the right of developing countries to adopt measures necessary to ensure their food security and their fight against poverty, including grants and measures to protect their domestic agricultural market where justified.

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