Poverty Consequences of Globalization in OIC Countries: A Comparative Analysis

Dr M Tariq Majeed*

Abstract

This study examines the impact of globalization on cross-country poverty using a new comparable panel data set for developing countries over a long period 1970-2008. The main findings of the study are: First, openness to trade exerts adverse effects on poverty in all sample developing countries while FDI helps in reducing poverty only in OIC countries. Second, growth elasticity of poverty is negative and significant in all countries; however, the growth elasticity of poverty is high in the case of OIC countries. Third, inflation adversely affects poverty in all sample countries. Fourth and finally, the role of government is insignificant in OIC countries while it is robustly significant with a negative sign in Non-OIC countries. Thus, government spending helps in reducing poverty only in the Non-OIC countries. The overall results of this study indicate that globalization accentuates not ameliorates poverty.

JEL Classification: F21, F41 and J24.

Key Words: Globalization; Poverty; Inequality; FDI; OIC Countries

1. Introduction

Jeffrey Williamson (2002) points out that 'the world has seen two globalization booms over the past two centuries and one bust. The first global century ended with World War I and the second started at the end of World War II, while the years in between were ones of anti-global backlash'.

The percent of the world population living in extreme poverty ($1 a day, inflation adjusted), meanwhile, declined from 84 percent in 1820 (the beginning of the Williamson's first global century) to 66 percent in 1910 (just three years before its end). The ongoing second global century, which began in 1950, saw this portion decline, from 55 percent in 1950 to 24 percent in 1992. In the inter-war period of anti-globalization backlash, the proportion was probably stagnant on the average.

Sala-i-Martin, 2002 notes that poverty rates have declined remarkably over the last twenty years. Sala-i-Martin (2000) finds that the number of one-dollar a day poor declined by 235 million between 1976 and 1998. The number of $2/day poor declined by 450 million over the same period. However performance across regions has been far from uniform. Specifically he

*The author is a graduate from the University of Glasgow, UK and lecturer of Economics in Quiad-i-Azam University, Islamabad.

finds: Asia has undergone dramatic improvements, particularly after 1980. Latin America reduced poverty substantially in the 1970s but that effectively stopped in the 1980s and 1990s. Africa has been a disaster area with respect to poverty as poverty rates in this region have increased substantially over the last thirty years. The number of $1/day poor in Africa increased by 175 million between 1970 and 1998, and the number of $2/day poor increased by 227 million. In 1960, 11% of the world's poor lived in Africa while by 1998 that proportion had risen to 66%. Overall, Sala-i-Martin (2002) argues, there has been a substantial reduction in global income inequality during the 1980s and 1990s.

The historical association between globalization and poverty reduction, however, hides substantial variations among countries and also within countries in their experiences with international economic integration. Several decades of rising trade and capital flows, growing numbers of multinational conglomerates, and increasingly globalized cultural interchange have not silenced the public debate over the merits of globalization. The violent street demonstrations surrounding the ministerial meeting of the World Trade Organization (WTO) and similar protests at World Bank and International Monetary Fund (IMF) meetings suggest that this debate is still going strong.

Trade liberalization, or openness in trade, is now generally considered as economically beneficial because it increases the size of the pie. However, the recent anti-globalization critics have suggested that free trade accentuates, not ameliorates, and that it intensifies, not diminishes poverty and income inequality in poor countries. In order to understand the impact of trade liberalization on poverty in the literature two different strands of argumentation: static and dynamic, have been provided.

First, according to static argument, the central effect on poverty is assumed to come from the effects on real wages of the unskilled workers, endowed with labour but no human or financial capital. The natural conjecture following the Stolper-Samuelson (SS) argumentation would be that freer trade should help in the reduction of poverty in the poor countries, which use their comparative advantage to export labour-intensive goods. A rise in exports based on labour intensive production techniques leads to a rise in real wage rate of unskilled worker that is instrumental in reducing poverty and income inequality. This, in fact, is the central message of Anne Krueger's (1983) findings from a multi-country project on the subject of the effects of trade on wages and employment in developing countries. Another approach also suggests that trade is

beneficial for poverty reduction in the developing countries because consumer surplus increase in the wake of more competitive prices in an open economy.

According to dynamic argument, free trade reduces poverty following two steps: trade increases growth and growth reduces poverty. In regard to the trade promotes growth hypotheses, there are ample precedents. For instance, Dennis Robertson (1940) characterized trade as an "engine of growth." In regard to the growth reduces poverty, Adam Smith (1776) argued that when society is "advancing to the further acquisition . . . the condition of the laboring poor, of the great body of the people, seems to be the happiest."

Different theories have been put forward to analyse the effect of globalisation on inequality and poverty, which can be grouped into three categories (Wade, 2001): the neoclassical growth theory, the endogenous growth theory, and the dependency theory of sociologists. The neo-classical growth theory expects income convergence across countries in the long run due to increased international mobility of capital. In contrast, the endogenous growth theory predicts less convergence and, more likely, divergence as increasing returns to technological innovation offset the diminishing returns to capital. Finally, the dependency theory suggests that developing countries reap lesser rewards from economic integration as they have relatively limited access to international markets and a narrow export base, hence, globalisation does not lead to absolute convergence.

In the presence of such diversified theoretical predictions, estimating the actual impact of globalisation on poverty remains largely an empirical issue. The available evidence, however, does not reach a consensus and the effect of globalization on poverty remains ambiguous. Also, no previous effort has been made to quantify the relative contributions of globalisation and other fundamental variables to poverty in OIC[1] countries. According to the annual economic report on the OIC countries 2010[2], economic performance in developing OIC countries is substantially different from the rest of the developing countries. Therefore a separate regression modelling to assess the poverty consequences of globalization in OIC countries is necessary as it will capture parameter differences.

This study, therefore, attempts to fill the gaps in the existing literature and lends a fresh perspective to the globalization and poverty debate by addressing four key concerns. (1) Does

[1] The Organization of the Islamic Conference (OIC) is the second largest inter-governmental organisation after the United Nations which has membership of 57 states spread over four continents.
[2] http://www.sesric.org/publications-detail.php?id=159

economic growth benefit different economic actors equally or it comes at the cost of poverty? (2) Do high inflation rates accentuate poverty incidences? (3) Does globalization ameliorate poverty? (4) What is the role of government in all this; does government spending reduce potentially existing poverty?

Rest of the discussion is structured as follow. Section 2 provides a review of the related literature and theory on the predictors of poverty. Section 3 presents an analytical frame work for the study and section 4 provides a discussion on data and estimation procedure. Section 5 puts forward results derived from the research questions and a discussion on these results. Finally, section 6 provides conclusion and policy implications.

2. Literature Review

Heckscher-Ohlin (HO) model shows that a nation will specialize in a product which requires an intensive use of its abundant factors of production. Since developing countries are abundant in low-skilled labour and demand for the abundant labour will increase their wages thereby decreasing the wage inequality. The HO model predicts a lower inequality and poverty with the assumption of identical technologies across countries. However, if this assumption is dropped then trade effects also depend on technology diffusion from developed countries to developing countries that generates a skill premium and increases the demand and wages of high skilled labour. Thus trade makes wage distribution more unequal (see, for example, Berman et. al., 1994; Author et. al., 1998).

. It is also argued in the literature that a rise in imports allows a developing country to upgrade its technology through the imports of mature and second hand capital goods (see, for example, Barba et. al., 2002). Furthermore Perkins and Neumayer (2005) point out that a lagged developing directly jumps on relatively new technology and enjoys the benefit of last comer. Technological up grading is defined as "skill enhancing trade hypotheses" by (Robbins, 1996, 2003).

Similarly, it is also argued in the literature that a rise in exports induce a developing country to replace outdated technologies for better access in the markets of developed countries. Yeaple (2005) exhibits that adoption of new technologies by exports guarantee more profits and thereby firms demand for the skilled labour. Hanson and Harrison (1999) also provide evidence on inequality enhancing role of the exports by documenting a case study on Mexico where firms

in exporting sector employ a higher share of white-collar workers as compare to non exporting plants. Furthermore, Berman and Machine (2000, 2004) find evidence for an increased demand for skill in developing countries. These models provide evidence for skilled labour demand in the wake of increased imports of capital goods but do not link it directly with poverty. This study fills this gap.

The effects of globalization on poverty in developing countries have recently become a key concern and a policy issue for economists and practitioner. More than one sixth of the world population live under poverty line of $1 a day, half of the developing countries live on less than $2 a day (Harrison et al). These facts of sever poverty in developing world occurs at the time when most of the developing countries have embarked on liberalized trade policy and integrating into the world system. Greenway et al (2002) exhibits that during 1980-2000 more than 100 developing countries have undertaken trade liberalization reforms. Keeping in view these facts, it is easy to understand why critics of globalization blame most of the woes of globalization on trade liberalization.

Carneiro and Arbache (2003) use a computable general equilibrium model to simulate different trade liberalization policy scenario and counterfactual micro simulations to asses the impacts of greater trade openness on household income distribution and poverty ratio. They conclude for Brazil that trade liberalization alone may not be sufficient to significantly reduce poverty and inequality. Gibson (2000**)** analyse the changes in poverty in Papua New Guinea during the 1990s adjustment programme. Data from urban household surveys in 1986 and 1996 are used to calculate the change in the incidence, depth and severity of poverty. They find that there was a rise in both the depth and severity of poverty in the 1990s, with the major contributor being growth in inequality. Majeed (2010) finds that trade accentuates, not ameliorates, and that it intensifies, not diminishes, poverty in the case of Pakistan.

Winters et al (2004), Goldberg and Povcnick (2004, 2006), and Ravallion (2004) review the recent evidence on globalization and poverty. All of them acknowledge in their survey studies that one can only review the indirect evidence on the theme of globalization and poverty linkages and there is hardly any study which test for the direct linkage between globalization and poverty.[3]

[3] Winters et al (2004) point out in their comprehensive and significant survey that "there are no direct studies of the poverty effects of trade and trade liberalization". Goldberg and Povcnick (2004, 2006) write in their excellent review "while the literature on trade and inequality is voluminous, there is no work to date on the relationship between trade liberalization and poverty".

One of the most widely promoted hypotheses in the literature is that economic growth reduces poverty. While growth without distribution is not merely a theoretical possibility, but is being experienced in certain countries or regions, most researchers consider that the widespread poverty in developing countries results from slow economic accumulation. The notion of the "trickling down" effect proposes a downwards-spread of the benefits of economic growth, although this growth sequencing does not indicate the time lag that the poor must wait after the rich get richer first (see, for example, Ravallion, 1995, 1997).

There is much theoretical consensus that rapid population growth aggravates poverty. Rapid population growth necessarily redistributes the population structure in favour of the young and increases the size of families in the poor stratum, thus increasing poverty (Deaton and Paxon, 1997). This Malthusian process is more likely to affect developing countries, where a combination of poor agricultural economies, limited human capital and rudimentary technology mean that the increment of population does not translate to increasing labour forces and consequently upgrading income levels. (Becker, Glaeser and Murphy, 1999).

3. Methodology

In order to built poverty model this study follow a basic poverty-growth model suggested by Ravallion (1997), Ravallion and Chen (1997). In first step, this study estimates the elasticity of poverty with respect to economic growth for OIC and Non-OIC countries in separate regressions. In next step, this study introduces measures for inequality and level of economic development in order to estimate their effects on existing poverty incidence. The incidence of poverty in this article, for data constraints, has been measured as headcount index defined as population living below one dollar a day per capita, a standard measure used in the literature, and adjusted with PPP. The relationship for growth-poverty elasticity can be written as

$$\log P_{it} = \alpha_{it} + \beta_1 g_{it} + \varepsilon_{it} \quad \ldots\ldots(1)$$

$$(i = 1, \ldots\ldots N; t = 1, \ldots\ldots T)$$

Where P_{it} indicates poverty in country i at time t and g_{it} measures annual growth rate. The coefficient β_1 measures elasticity of poverty with respect to growth given by g and e is an error term. An estimated value of β_1 gives the average growth elasticity of poverty in OIC and Non-

OIC countries. However this average measure could be misleading because β_1 differs across countries and over time depending upon other poverty determinants that explain poverty variation. For example, Bourguignon (2003) points out the importance of income distribution and initial level of development as additional control of poverty while estimating the growth elasticity of poverty by stressing the results where β_1 is affected significantly by inequality changes during a growth spell and by initial inequality prevailing at the start of such a spell. The modified version of equation (1) that includes inequality elasticity of poverty and economic development can be written as

$$\log P_{it} = \alpha_{it} + \beta_1 g_{it} + \beta_2 \log(ineq_{it}) + \beta_3(X_{it}) + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(2)$$

P_{it} =It refers to natural logarithm of head count ratio

g_{it} =It refers to annual growth rate of GDP between two survey years.

$Ineq_{it}$ =It refers to natural logarithm of gini index

X_{it} =It refers to a vector of control variable for poverty other than economic growth and income distribution

Apart from initial distribution of income and level of economic development, poverty result from complex economic and social process. For these reasons I extend this model for some other factors. Recent studies (for example) suggest that households with better profiles of human capital are less prone to poverty incidence as compare to those with lower acquisition of human capital. This study proxy human capital with average year of schooling.

Finally, main concerned factors related to globalization enter in the model. Conventionally in the literature two measures of globalization are used that are trade and capital flows. Winter et. al., (2004) fins that trade liberalization reduces poverty in the long run. While Carneiro and Arbache (2003) do not find significant affect of openness to trade on inequality and poverty using CGE model.

$$\log P_{it} = \alpha_{it} + \beta_1 g_{it} + \beta_2 \log(ineq_{it}) + \beta_3(X_{it}) + \beta_4(Trade_{it}/Y) + \beta_5(FDI_{it}/Y) + \varepsilon_{it} \ldots(3)$$

$Trade_{it}$ =It refers to ratio of exports plus imports to GDP.

FDI_{it} =It refers to ratio of FDI inflow to GD.

4. Data and Estimation Procedure

A panel data for 22 OIC and 43 Non-OIC countries for the period 1970-2008 have been assembled with the data averaged over periods of three to nine years, depending on the availability of poverty and inequality data. To make the data more comparable, this study takes data on variables in the form of averages between two survey years. The minimum number of observations for each country is three and the maximum, nine. That is, only countries with observations for at least three consecutive periods are included.

Poverty is measure as head count ratio and data has been derived from World Bank. Gini coefficient has been used to measure income inequality, which is one of the most popular representations of income inequality. It is based on Lorenz Curve, which plots the share of population against the share of income received and has a minimum value of 0 (case of perfect equality) and maximum value of 1 (perfect inequality). Per capita real GDP growth rates are annual averages between two survey years.

Data on imports and exports are the annual averages between two survey years. Data on exports and imports are derived from IFS database. Population growth rates are taken from the World Bank development reports. The secondary school enrolment is at the beginning of the period and derived from World Bank database. Data on the ratios of government expenditure as shares of GDP are averages for the period between two survey years and come from the IFS.

Table 4.1: Description of Variables

Variable name	Definitions and Sources
Per capita real GDP	Per capita real GDP growth rates are annual averages between two survey years and are derived from the IMF, WDI and International Financial Statistics (IFS) databases.
Gini coefficient	It is a measure of income inequality based on Lorenz curve, which plots the share of population against the share of income received and has a minimum value of zero (reflecting perfect equality) and a maximum value of one (reflecting total inequality). The inequality data (Gini coefficient) are derived from World Bank data, UNDP and the IMF staff reports.
Secondary school enrolment	The secondary school enrollment as % of age group is at the beginning of the period. It is used as a proxy of investment in human capital and derived from World Bank database.
Inflation	Inflation rates, annual averages between two survey years, are calculated using the IFS's CPI data.
Credit as % of GDP	Credit as % of GDP represents Claims on the non-financial private sector/GDP and is derived from 32d line of the IFS.
M2 as % of GDP	It represents Broad money/GDP, and is derived from lines 34 plus 35 of the IFS.
Trade Openess	It is the sum of exports and imports as a share of real GDP. Data on exports, imports and real GDP are in the form of annual averages between survey years.
HFI	The level of Financial Intermediation is determined by adding M2 as a % of GDP and credit to private sector as % of GDP.
FDI	It is measured as net inflow of foreign direct investment as % of GDP and series have been derived form WDI.
Poverty	It is measure as head count ratio and data has been derived from World Bank.

Table 4.2: Descriptive Statistics in OIC Countries

Variable	Mean	Std. Dev.	Min	Max
Economic Growth	2.05	3.22	-9	9.19
Income Inequality	38.89	6.33	25.9	56
Human Capital	48.82	21.49	16	94.89
Population	2.13	0.82	-0.8	4.2
Government Spending	21.08	7.58	5.18	36.5
Inflation	16.98	25	1.43	170
GDP Per Capita	2731.48	2018.76	260	10023.17
Poverty	31.84	18.89	1	72.1
High Financial Intermediation	67.95	42.85	11	250.37
Openness to Trade	68.36	39.48	10.8	228.88

Table 4.3: Descriptive Statistics in Non-OIC Countries

Variable	Mean	Std. Dev.	Min	Max
Economic Growth	2.73	4.03	-10	13.19
Income Inequality	42.07	11	19.4	62.5
Human Capital	65.41	22.45	16	105.83
Population	1.15	1.14	-1	3.3
Government Spending	21.33	9.56	6.29	56
Inflation	25.54	43.37	-1	310
GDP Per Capita	5927.76	4524.11	412	25041.45
Poverty	25.58	19.8	0	74
High Financial Intermediation	63.58	36.43	10	211.33
Openness to Trade	72.73	38.34	13.05	174.4

Table 4.4: Simple Correlation Matrix for OIC Countries

	Grow	Ineq	HK	Pop	G	Inv	Inf	PCY	Pov	Op	HFI	FDI
Grow	1											
Ineq	-0.12	1										
HK	-0.17	0.23	1									
Pop	0.11	0.21	-0.42	1								
G	-0.03	0.11	0.3	-0.04	1							
Inv	0.18	0.33	0.39	-0.05	0.3	1						
Inf	-0.53	0.09	0.21	-0.57	-0.15	-0.06	1					
PCY	0.04	0.42	0.59	-0.05	0.34	0.7	-0.03	1				
Pov	-0.19	-0.27	-0.43	-0.12	-0.38	-0.54	0.23	-0.76	1			
Op	-0.02	0.41	0.39	0.03	0.28	0.52	-0.02	0.49	-0.18	1		
HFI	0.06	0.16	0.23	0.28	0.4	0.61	-0.33	0.67	-0.64	0.51	1	
FDI	0.01	0.18	0.21	-0.28	0.1	0.27	0.22	0.11	0.13	0.36	-0.05	1

Table 4.5: Simple Correlation Matrix for Non-OIC Countries

	Grow	Ineq	HK	Pop	G	Inv	Inf	PCY	Pov	Op	HFI
Grow	1										
Ineq	0.04	1									
HK	-0.01	-0.4	1								
Pop	0.18	0.54	-0.72	1							
G	-0.43	-0.39	0.45	-0.59	1						
Inv	0.52	-0.03	0.11	-0.04	-0.23	1					
Inf	-0.53	0.1	0.18	-0.23	0.19	-0.27	1				
PCY	-0.14	0	0.48	-0.41	0.43	-0.01	0.04	1			
Pov	-0.1	-0.05	-0.41	0.3	-0.26	-0.16	0.07	-0.73	1		
Op	-0.1	-0.01	0.17	-0.21	0.22	0.21	-0.2	0.12	-0.12	1	
HFI	0.4	0.01	0.16	-0.13	-0.02	0.56	-0.31	0.3	-0.42	0.11	1

4.1: Estimation Technique

I now discuss estimation procedure for inequality and poverty models. The use of pooled time-series and cross-section data provide large sample that is expected to yield efficient parameter estimates. Ordinary Least Squares (OLS) has a problem of omitted variable bias. If region, country or some group specific factors affect inequality and poverty, explanatory variables would capture the effects of these factors and estimates would not represent the true effect of explanatory variables. Baltagi (2001) proposes fixed effect econometric techniques to estimate panel data, which could avoid the problem of omitted variable bias. However, in case of lag independent variable this technique gives biased parameter estimates. This analysis is based on Two Stage Least Square (2SLS), technique of estimation. This technique addresses the issue of endogeniety that is covariance between independent variables and error term is not equal to zero and also addresses the problem of omitted variables bias. I also use alternative econometrics techniques like Limited Information Maximum Likelihood (LIML) and Generalized Methods of Moments (GMM).

. In this study, I mainly focus the generalized method of Moments (GMM) estimation technique that has been developed for dynamic panel data analysis. This technique has been introduced Holtz-Eakin *et al*. (1990), Arellano and Bond (1991), Arellano and Bover (1995), and Blundell and Bond (1997). GMM control for endogeneity of all the explanatory variables, allows for the inclusion of lagged dependent variables as regressors and accounts for unobserved country-specific effects. For GMM estimation sufficient instruments are required. Following the standard convention in literature, the equations are estimated by using lagged first difference as instrument.

5. Results and Discussion

Estimation procedure for this study has been proceeded in three steps. First, parameter estimates have been drawn for OIC countries and then for Non-OIC countries for a comparative analysis. Second, initially study focuses growth elasticity of poverty and then exclusively controls globalization variables. Third, following conventional wisdom of the empirical literature on cross country studies results are obtained using OLS econometric method and subsequently different econometrics techniques have been used to address the possible problem of endogeneity and to assess the robustness of results.

Table 1 provides results for poverty model for OIC countries. All columns of the Table indicate that growth elastic of poverty is negative and significant. Thus economic growth is pro poor in OIC countries. A high degree of income inequality is positively and significantly associated with poverty incidence. A high level unequal distribution of wealth is adversely affects poor as they lack opportunities. For example, a rich family have better access to human and physical capital while poor remains poor due to restricted opportunities. The effects of inflation are disproportional and normally hurt to poor. The panel regression results in Table 1 provide robust and positive influence of inflation on poor people. The role of government is insignificant in explaining poverty.

Table 1: Globalization and Poverty in OIC Countries

Independent Variables	Dependent Variable: Poverty					
	2SLS	GMM	2SLS	GMM	2SLS	GMM
Growth	-1.81 (-4.61)*	-1.42 (-3.44)*	-1.56 (-3.8)*	-0.98 (-2.55)*	-1.67 (-3.17)*	-1.42 (-2.98)*
Inequality	1.43 (2.66)*	1.60 (3.75)*	1.24 (2.26)*	1.29 (4.12)*	1.16 (1.23)	1.18 (1.28)
Inflation	0.123 (2.34)*	0.116 (3.12)*	0.109 (2.17)*	0.095 (2.93)*	0.108 (1.75)**	0.088 (1.92)**
Population	-2.00 (-1.44)	-1.49 (-1.29)	-1.45 (-1.05)	-0.68 (-0.73)	-1.85 (-1.33)	-1.68 (-1.55)
Human Capital	-0.01 (-0.27)	-.0009 (-.0002)	0.20 (0.44)	-.041 (-.97)	-.01 (-.26)	-.003 (-.09)
Government Expenditure	-0.029 (-.21)	0.024 (0.16)	-0.003 (-.02)	0.070 (0.49)	-0.037 (-0.28)	-0.02 (-0.18)
High Financial Intermediation	2.54 (1.96)**	2.38 (2.15)*	3.29 (2.43)**	3.15 (2.87)*	2.63 (2.08)*	2.74 (2.33)*
Openness to Trade			-.031 (-1.51)	-.039 (-2.94)*		
FDI					-.166 (-.40)	-0.218 (-.58)
Wald	47.64 (0.000)	63.82 (0.000)	59.49 (0.000)	160.06 (0.000)	56.06 (0.000)	70.54 (0.000)
Sargan	2.89 (0.41)		4.32 (0.23)		3.50 (.32)	
Basman	2.27 (0.52)		3.41 (0.33)		2.70 (0.40)	
J Stat		2.17 (0.54)		3.24 (0.36)		3.89 (0.27)
R	0.48	0.40	0.55	0.49	0.55	0.53
Country	22	22	22	22	22	22

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero.

The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 2: Globalization and Poverty in Non-OIC Countries

Independent Variables	Dependent Variable: Poverty					
	2SLS	GMM	2SLS	GMM	2SLS	GMM
Growth	-0.73 (-3.09)*	-0.69 (-3.25)*	0.-74 (-3.14)*	-0.69 (-3.29)*	-0.71 (-3.14)*	-0.69 (-3.34)*
Inequality	1.18 (-2.41)*	1.16 (3.16)*	1.13 (-2.26)*	1.13 (3.02)*	1.09 (2.41)	1.12 (3.02)
Inflation	0.01 (0.39)	0.01 (0.73)	-0.015 (-0.49)	-0.011 (-0.54)	-0.017 (-0.61)	-0.014 (-0.80)
Population	1.16 (1.10)	-1.49 (-1.29)	1.15 (1.10)	1.11 (1.29)	1.12 (1.08)	0.998 (1.23)
Human Capital	.064 (1.39)	0.07 (1.72)	0.06 (1.40)	.070 (1.73)	0.065 (1.42)	0.069 (1.74)***
Government Expenditure	0.028 (.24)	0.04 (0.39)	0.044 (0.035)	0.052 (0.41)	0.059 (0.51)	0.051 (0.46)
High Financial Intermediation	-0.58 (-.53)	-0.46 (-0.60)	-0.62 (-0.57)	-0.52 (-0.65)	-0.73 (-0.70)	-0.55 (-0.68)
Openness to Trade			-.01 (-0.30)	-.002 (-0.06)		
FDI					-.42 (-.75)	-0.23 (-.73)
Wald	28.86 (0.000)	47.33 (0.000)	30.39 (0.000)	49 (0.000)	31.23 (0.000)	70.54 (0.000)
Sargan	1.09 (0.77)		1.04 (0.79)		1.69 (.64)	
Basman	0.91 (0.82)		0.86 (0.83)		1.39 (0.71)	
J Stat		0.91 (0.82)		0.96 (0.81)		1.26 (0.73)
R	0.23	0.22	0.25	0.24	0.30	0.27
Country	43	43	43	24	43	43

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero.
The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 2 exhibits the replication of Table 1 for Non-OIC countries. The results in terms of sign and significance for inequality and growth are similar. However, overall, model does not fit better because rest of the control variables turn out to be insignificant. In order to overcome this problem and to obtain a more reliable comparative picture for poverty for both set of countries

this study employs a parsimonious model that includes economic growth and income distribution as key variables along with globalization variables.

Table 3: Poverty, Growth, Inequality and Globalization in Non OIC Countries

Independent Variables	Dependent Variable: Poverty			
	2SLS	GMM	2SLS	GMM
Growth	-0.96 (-4.7)*	-0.92 (-4.16)*	-1.01 (-3.45)*	-0.94 (-3.97)*
Inequality	0.68 (4.15)*	0.67 (3.21)*	0.632 (3.46)*	0.68 (3.29)*
Inflation	0.071 (3.95)*	0.072 (3.75)*	0.069 (3.63)*	0.068 (3.90)*
Government Expenditure	-0.17 (-1.97)**	-0.162 (-2.05)**	-.203 (-2.05)**	-.208 (-2.26)*
Openness to Trade	.056 (2.17)*	.053 (2.03)**		
FDI			1.87 (3.38)*	1.69 (3.04)*
Wald	150.08 (0.000)	93.16 (0.000)	125.36 (0.000)	96.51 (0.000)
Sargan	0.96 (0.32)		2.85 (0.24)	
Basman	0.90 (0.34)		2.67 (0.26)	
J Stat		0.83 (0.36)		1.99 (0.37)
R	0.62	0.62	0.53	0.53
Country	43	43	43	43

The panel regression results in Table 3 reports poverty model results for Non-OIC countries. The coefficient on growth is highly significant with correct sign and the value of coefficient fluctuates between -0.92 and 1.01. Similarly coefficient on inequality is robustly significant with expected signs. The estimated coefficient on inflation is highly significant with positive sign and the size of coefficient is also robust around 0.7. This is interesting to note that government sector appears a major factor in fighting against poverty.

The estimated coefficient for government's role is -0.2 and robustly significant. It implies that a one standard deviation increase in government spending reduces poverty by 2%. When it comes to openness to trade, results indicate that openness is harmful for poor in Non-OIC countries and leave them behind in the globalization process. The same finding has been observed on the role of FDI in Non-OIC countries. Overall results for Non-OIC countries

indicate that globalization accentuate not ameliorate poverty and among domestic factors economic growth is good for poor while both income inequality and inflation hurt poor people and increase their sufferings.

Table 4: Globalization and Poverty in OIC Countries

Independent Variables	Dependent Variable: Poverty			
	2SLS	GMM	2SLS	GMM
Growth	-1.83 (-6.08)*	-1.79 (-4.64)*	-1.73 (-5.72)*	-1.70 (-4.43)*
Inequality	0.25 (0.99)	0.24 (0.76)	0.21 (0.88)	0.34 (1.12)
Inflation	0.074 (1.69)***	0.077 (2.71)*	0.097 (2.12)*	0.094 (3.18)*
Government Expenditure	0.044 (0.29)	0.055 (0.46)	0.11 (0.75)	0.064 (0.57)
Openness to Trade	.023 (0.92)	.022 (1.08)		.
FDI			-0.56 (-1.63)***	-0.52 (-2.43)*
Wald	77.05 (0.000)	155.68 (0.000)	82.37 (0.000)	178.21 (0.000)
Sargan	0.33 (0.56)		2.12 (0.35)	
Basman	0.29 (0.59)		1.90 (0.39)	
J Stat		0.41 (0.52)		2.69 (0.26)
R	0.56	0.56	0.58	0.57
Country	23	23	23	23

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero.
The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Finally, Table 4 reports results on globalization and poverty in OIC countries. Economic growth turns out to be robust and strong poverty reducing factor. However inequalities are positively associated with poverty but not significant. Inflation is significant with positive sign. This finding is similar to Non-OIC countries. A sharp contrast has been observed on the role of government in helping poor. The estimated coefficient on government's role is insignificant. The role of openness to trade is positively associated with poverty, although it is not significant. A sharp contrast is noticeable on the role of FDI as it is inversely and significantly associated with poverty. Thus FDI inflows help in reducing poverty in Islamic countries.

6. Conclusion and Policy Implications

The purpose of this study has been to assess the poverty consequences of globalization for OIC countries in comparison with Non-OIC countries over a long period 1970 to 2008. This study is unique in the way that it disaggregates globalization consequences for two set of developing countries and uses a more comparable statistics on poverty and inequality. Furthermore it explicitly controls for high financial intermediation and endogeneity problem.

In OIC countries major findings are: First, growth elasticity of poverty is robustly significant with negative sign that implies economic growth is good for poor. Second, the impact of inflation turns out robustly adverse for poor people. Third, the role of government is insignificant in reducing poverty. Hence, it implies that government does not play a significant role in picking the poor out of poverty traps. Fourth, globalization in the form of FDI is pro poor.

The findings for economic growth and inflation in Non-OIC countries in terms of signs and level of significance are similar to OIC countries. However growth elasticity of poverty is lower in this sample of countries. For globalization, results indicate that both openness to trade and FDI are harmful for poor actors of the economy. Thus adverse poverty consequences of globalization are more pronounced in Non-OIC counties. Another contrast has been found for the role of government in reducing poverty, the estimated coefficient is robustly significant with a negative sign. The evidence indicates that one standard deviation increase in government spending reduce poverty by 2%.

This analysis purposes following policy implications: First, OIC countries may focus more on the factors that attract FDI as evidences have clearly shown that FDI inflows ameliorate poverty in this sample of countries. Second, OIC countries may increase government spending to help poor in lines Non-OIC countries where the role of government is significant in reducing poverty. Third, OIC countries need to focus more growth than trade openness as evidences suggest that growth elasticity of poverty is high in this sample of countries and trade open does not help in reducing poverty.

References

Arellano, M. & Bond, S. R. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies*, 58 (2), 277–297.

Arellano, M. and Bover, O. (1995). Another look at the instrumental variable estimation of error components models. *Journal of Econometrics*, 68 (1), 29–52.

Autor, D., Katz, L., & Krueger, A. B. (1998). Computing inequality: have computers changed the labor market? *Quarterly Journal of Economics*, 113, 1169–1214.

Barba Navaretti, G., & Solaga, I. (2002). Weightless machines and costless knowledge—An empirical analysis of trade and technology diffusion. *CEPR Discussion Paper No. 3321*, Centre for Economic Policy Research, London.

Becker, Gary S. and Edward L. Glaeser and Kevin M. Murphy. (1999). Population and economic

Berman, E., & Machin, S. (2000). Skill-biased technology transfer around the world. *Oxford Review of Economic Policy*, 16(3), 12–22.

Berman, E., & Machin, S. (2004). Globalization, skill-biased technological change and labour demand. In E. Lee, & M. Vivarelli (Eds.),Understanding Globalization, Employment and Poverty Reduction (pp. 39–66). New York: Palgrave Macmillan.

Berman, E., Bound, J., & Griliches, Z. (1994). Changes in the demand for skilled labor within U.S. manufacturing industries. *Quarterly Journal of Economics*, 109, 367–398.

Blundell, R. W. & Bond, S. R. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87,115–143.

Bourguinon, F. (2003). The growth elasticity poverty reduction: explaining heterogeneity across countries and time periods, in Inequality and Growth: Theory and Policy Implications (Eds) T. Eicher and S. Turnovsky, MIT Press, Cambridge, MA.

Carneiro, F. and Arbache, J. (2003). Assessing the impacts of trade on poverty and inequality. *Applied Economics Letter*, 10, 989–94.

Deaton, Angus S. and Christina H. P. (1997). The effect of economic and population growth on the national saving and inequality. *Demography*, 34, 97-114.

Dennis, R. (1940). Essays in Monetary Theory, London: P. S. King & Son.

Gibson, J. (2000).The impact of growth and distribution on poverty in Papua New Guinea. *Applied economics Letters*, 7, 605 - 607

Goldberg, P., Pavcnik, N. (2004). Trade, inequality, and poverty: What do we know? Evidence from recent trade liberalization episodes in developing countries. *NBER Working Paper No. 10593*. In: Collins, S., Graham, C. (eds.) Brookings Trade Forum. Brookings Institution, Washington, DC.

Goldberg, P., Pavcnik, N. (2006). The effects of the Colombia trade liberalization on urban poverty. In: Harrison, A. (ed.) Globalization and Poverty. University of Chicago Press for National Bureau of Economic Research, Chicago, IL

Greenway, D., M., Wyn. and Wright, P. (2002). Trade liberalization and economic growth in developing countries. *Journal of Development Economics*, 67 (1), 229-244.

Harrison (Ed.), Globalization and poverty. University of Chicago Press for NBER.

Holtz-Eakin, D., W. Newey and H. Rosen (1990). Estimating vector autoregressive with panel data. Econometrica, 56, 1371-1395.

Krueger, A. (1983). Trade and employment in developing countries, 3: synthesis and conclusions. University of Chicago Press, Chicago, IL.

Majeed, M Tariq (2010). "Poverty and Employment: Empirical evidence from Pakistan" The Forman Journal of Economic Studies, Vol. (6)

Perkins, R., & Neumayer, E. (2005). International technological diffusion, latecomer advantage and economic globalization: A multi-technology analysis. Annals of the American Association of Geographers, 95(4), 789–808.

Ravallion, M. (1995). Growth and poverty: Evidence for developing countries in the 1980s. *Economic Letters*, 48, 411-417.

Ravallion, M. (1997). Can high inequality developing countries escape absolute poverty? *Economics Letters*, 56, 51–7.

Ravallion, M. (2004). Pro-poor growth: a primer. *World Bank Policy Research Working Paper No. 3242*.

Robbins, D. (1996). HOS hits facts: Facts win; Evidence on trade and wages in the developing world. OECD Technical Paper No. 119, OECD, Paris.

Robbins, D. (2003). The impact of trade liberalization upon inequality in developing countries—A review of theory and evidence. ILO Working Paper, No. 13, International Labour Organization, Geneva.

Sala-i-Martin, Xavier (2002) .The World Distribution of Income (estimated from Individual Country Distributions)., mimeo Columbia University.

Smith, A. (1937). An Inquiry into the Nature and Causes of The Wealth of Nations. Edited (with an Introduction, Notes, Marginal Summary and an Enlarged Index) by Edwin Cannan, New York: The Modern Library.

Wade, R.H. (2001). Is globalisation making the world income distribution more equal? *Working Paper Series, No. 10*, Development Economics Studies Institute, London School of Economics.

Williamson, Jeffrey _2002_, 'Winners and Losers over Two Centuries of Globalization,' WIDER Annual Lecture 6, UNU/WIDER, Helsinki.

Winters, L. Alan, McCulloch, Neil and McKay, Andrew (2004). Trade liberalization and poverty: the evidence so far. Journal of Economic Literature, 42 (1), 72-115.

Yeaple, S. R. (2005). A simple model of firm heterogeneity, international trade and wages. Journal of International Economics, 65, 1–20.