The Effect of Globalization on Poverty in Iran: Urban And Rural Area Separately

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Abstract: This paper, examines the impact of globalization on poverty in Iran, urban and rural area separately, based on time series data during 1986-2009. The index is based on the globalization index proposed by A.T.Kearny/foreign policy magazine. The index is composed of four sub indices, namely: economic integration, personal contact, technological connection and political engagement. In this paper globalization index is used (economic integration) and poverty index is FGT. Result shows that, globalization decreases percentage of poverty and severity of urban poverty and has no significant impact on the poverty gap of urban, and decreases gap and severity and percentage of people of poverty in rural area.

Key words: Globalization, Poverty, Economic integration, FGT index.

INTRODUCTION

Globalization is distinction between yesterday and today as word. The first common realization of the economic globalization is "inter nationalization" which considers growth of international exchange and interactions. The second consideration of economic globalization is "liberalization". Some believe that liberalization leads to labor market flexibility and increases labor market transparency and increases demand for skill labor, but some believe that liberalization causes problems such as rising of unemployment, income inequality in developed countries, colonial workers in developing countries, increases poverty and causes horizontal and vertical inequality (Bardhan, Prana, 2006). Although globalization has created opportunities for growth and development, including competition rising, higher growth, larger selection, more capital mobility, efficiency of multinational companies, and technology transfer, however it has caused challenge and has created great concerns about poverty and income inequality among different classes, and under-developed countries suffer from lack of social and economic justice. With respect to cultural, social and environmental problems resulting from performance of open market and respect to national and international inequality, many policy makers of third world criticism of deal and these factors have raised a question whether real distribution and interests are done equally and whether poor people will benefit relatively less from the globalization of world economy?

2-The Impact Globalization On Poverty:

Many investigations in the world follow the impact globalization on poverty; various studies show that there are positive relationship between trade liberalization and poverty (Mujeri, M.K. and B.H. Khandaker, 2002). Whereas number other studies claim that there are negative relationship between globalization and poverty (Greenaway, D., 2002). This difference results not only from the use of different variables but also the use of different methods. One of main contributors to the debate is Word Bank In publication Globalization, Growth and Poverty (Word Bank, 2002), It is claimed globalization generally reduce poverty because more integrated economies tend to grow faster and this growth is usually widely diffused.

"As low-income countries break into global market for manufactures and services, poor people can move from the vulnerability of grinding rural poverty to better job, often in towns or cities. In addition to this structural relocation, integration raise productivity job by job, worker with the same skills, by they farmer, factory workers, are less productive and earn less in developing economies than in advanced ones integration reduce these gaps" (Dollar, D. and P. Collier, 1999).

The basis of the result from the report of word Bank is the study of Dollar and Kraay (2001). In this study they define globalization based on growth in trade relative to GDP in constant price and base on the reduction in average tariff rate, they give an answer to the common concern whether openness or globalization leading to growing inequality within countries and that therefore the poor are benefiting less or even not at all from this development. Their conclusions are twofold. The first, openness is associated with higher growth. Second, increased trade is not associated, on average, with a systematic tendency to increased inequality. The poor share in growth is proportional to their existing share of national income. Combination of higher growth and no change in income distribution translates into more rapid poverty reduction.

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Siddike (2002) reviewed trade liberalization on poverty in Pakistan. The first scenario including the reduction of tariff rate without reduction of receipts from the outside that reduces percentage of people of poor and poverty gap in household of urban and rural. The second scenario including of the reduction of tariff rate along with reduction of receipts from the outside that poverty increases in urban area but it acts neutrally in rural household.

Heshmati (2004) has used Kearny index to measure the relationship between income inequality, poverty and globalization by the use of panel data. he shows that there is an indication that relationship between globalization and income inequality, measured as the GINI coefficient, is negative, meaning that high globalization relate to low income inequality. His finding are, however, statistically insignificant, the same applies when the relationship is tested for non-linearity, indicating the absence of a Kuznets U-shaped relationship.

Wade concludes that globalization is positive force for poverty reduction. He doubts that rising quantity of trade and development benefits there of, are the consequences of trade liberalization. Finally, he questions the assumption that fast trade growth is the major cause of good economic performance (Wade, R.H., 2004).

Bhasin (2005) in African country of Ghana by means of (CGE) Model showed that removal the import tariff improves income distribution and decreases poverty and the removal of export tariff and obstacles increases income distribution and poverty.

Neutral & Heshmati (2006) survey that there is a relationship between globalization poverty and income inequality. They study in 65 developed countries during 1995-2000. Their investigation based on index of A.T Kearny, this index including: economic integration, personal contact, technological connection, political engagement they result that globalization lead to poverty reduction and it reduces income inequality.

Erik & Machiki (2006). In Conference RIO in their investigation examined that globalization through trade liberalization and FDI, capital mobility, integration of labor force, technology improvement and knowledge, can lead to economic openness and economic openness through economic growth and income inequality effects on poverty.

3-The Empirical Evidences:

One of directions that in globalization studies in Iran have been less attention is the using lake of combination index of globalization. This study is the first review combination index of globalization in Iran (A.T.kea) (Kearney, A.T., 2005), that including: economic integration, personal contact, technological connection and political engagement. Data is time series data for the period 1986-2009 and data source is the central bank of Iran and IMF and Fraser institute. Method of model estimating is OLS.

The formula that is used to calculate the economic integration index is:

\[
\text{EIt} = \frac{\left( \frac{\text{ITt}}{\text{GDPt}} \right)}{\left( \frac{\text{ITmax}}{\text{GDPmax}} \right)} + \frac{\left( \frac{\text{FDIt}}{\text{GDPt}} \right)}{\left( \frac{\text{FDImax}}{\text{GDPmax}} \right)} + \frac{\left( \frac{\text{IPRt}}{\text{GDPt}} \right)}{\left( \frac{\text{IPRmax}}{\text{GDPmax}} \right)} + \frac{\left( \frac{\text{FTTt}}{\text{FTTmax}} \right)}{\left( \frac{\text{FTTmax}}{\text{GDPmax}} \right)} / 5
\]

\(\text{IT}=\) International trade  \(\text{FDI}=\) Foreign direct investment
\(\text{PCF}=\) Portfolio capital inflow  \(\text{IPR}=\) Income payment and receipts
\(\text{FTT}=\) Freedom to trade international

Personal index is defined by:

\[
\text{Pct} = \frac{\left( \frac{\text{ITt}}{\text{POPt}} \right)}{\left( \frac{\text{ITmax}}{\text{POPmax}} \right)} + \frac{\left( \frac{\text{CBTt}}{\text{GDPt}} \right)}{\left( \frac{\text{CBTmax}}{\text{GDPmax}} \right)} + \frac{\left( \frac{\text{IUt}}{\text{POPt}} \right)}{\left( \frac{\text{IUmax}}{\text{POPmax}} \right)} / 3
\]

\(\text{ITT}=\) International travel and tourism  \(\text{CBT}=\) Cross-border transfer
\(\text{IU}=\) Internet users

And technological connection index is defined by:

\[
\text{Tct} = \frac{\left( \frac{\text{PNt}}{\text{POPt}} \right)}{\left( \frac{\text{PNmax}}{\text{POPmax}} \right)} + \frac{\left( \frac{\text{RRLt}}{\text{GDPt}} \right)}{\left( \frac{\text{RRLmax}}{\text{GDPmax}} \right)} + \frac{\left( \frac{\text{IHt}}{\text{POPt}} \right)}{\left( \frac{\text{IHmax}}{\text{POPmax}} \right)} + \frac{\left( \frac{\text{EHt}}{\text{EXPORTt}} \right)}{\left( \frac{\text{EHmax}}{\text{EXPORTmax}} \right)} / 4
\]

\(\text{PN}=\) Number patent granted to non-residents  \(\text{RRL}=\) Receipt of royalties and license fees
\(\text{IH}=\) Internet hosts  \(\text{EH}=\) Export of high technology

Finally, the political engagement index is:

\[
\text{PEt} = \frac{\left( \frac{\text{IMt}}{\text{IMmax}} \right)}{\left( \frac{\text{IMt}}{\text{IMmax}} \right)} + \frac{\left( \frac{\text{IOt}}{\text{IOmax}} \right)}{\left( \frac{\text{IOmax}}{\text{IMmax}} \right)} + \frac{\left( \frac{\text{Et}}{\text{Emax}} \right)}{\left( \frac{\text{Et}}{\text{Emax}} \right)} / 3
\]

\(\text{IM}=\) International missions  \(\text{IO}=\) International organization  \(\text{E}=\) Embassies

The overall globalization index (GI) is than calculated by adding the four index component:

\[
\text{GINDEX} = \text{EIt} + \text{Pct} + \text{Tct} + \text{PE}
\]

In this study because of the statistic limitation and lack of necessary information (data) for the mentioned period of time, only the economic aspect of globalization is taken into consideration is used and among components of Kearny index, economic integration the adjusted model of it in this research is of follow:

\[
\text{EIt} = \frac{\left( \frac{\text{ITt}}{\text{GDPt}} \right)}{\left( \frac{\text{ITmax}}{\text{GDPmax}} \right)} + \frac{\left( \frac{\text{FDIt}}{\text{GDPt}} \right)}{\left( \frac{\text{FDImax}}{\text{GDPmax}} \right)} + \frac{\left( \frac{\text{IPRt}}{\text{GDPt}} \right)}{\left( \frac{\text{IPRmax}}{\text{GDPmax}} \right)} + \frac{\left( \frac{\text{FTTt}}{\text{FTTmax}} \right)}{\left( \frac{\text{FTTmax}}{\text{GDPmax}} \right)} / 4
\]
Table1: Economic integration during 1986-2009 for in Iran.

<table>
<thead>
<tr>
<th>Year</th>
<th>Eit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>3.804308662</td>
</tr>
<tr>
<td>1987</td>
<td>4.422606284</td>
</tr>
<tr>
<td>1988</td>
<td>3.905042412</td>
</tr>
<tr>
<td>1989</td>
<td>4.35591691</td>
</tr>
<tr>
<td>1990</td>
<td>36.75267211</td>
</tr>
<tr>
<td>1991</td>
<td>6.318335239</td>
</tr>
<tr>
<td>1992</td>
<td>7.172679441</td>
</tr>
<tr>
<td>1993</td>
<td>8.783358517</td>
</tr>
<tr>
<td>1994</td>
<td>8.249453893</td>
</tr>
<tr>
<td>1995</td>
<td>8.069850112</td>
</tr>
<tr>
<td>1996</td>
<td>5.413654027</td>
</tr>
<tr>
<td>1997</td>
<td>5.000021143</td>
</tr>
<tr>
<td>1998</td>
<td>5.67706264</td>
</tr>
<tr>
<td>1999</td>
<td>5.627227399</td>
</tr>
<tr>
<td>2000</td>
<td>5.429716739</td>
</tr>
<tr>
<td>2001</td>
<td>4.77100615</td>
</tr>
<tr>
<td>2002</td>
<td>5.37328442</td>
</tr>
<tr>
<td>2003</td>
<td>6.41278001</td>
</tr>
<tr>
<td>2004</td>
<td>9.17795744</td>
</tr>
<tr>
<td>2005</td>
<td>10.5824827</td>
</tr>
<tr>
<td>2006</td>
<td>11.2128054</td>
</tr>
<tr>
<td>2007</td>
<td>11.6121556</td>
</tr>
<tr>
<td>2008</td>
<td>12.26460674</td>
</tr>
<tr>
<td>2009</td>
<td>12.26476302</td>
</tr>
</tbody>
</table>

Source: result in study

On other hand in this study index of economic freedom (FTT) is provided by Fraser institute. amount of index of FTT is between zero-ten however this amount is larger and closer to ten, shows the existence of more economic freedom.

Poverty index is used in study is FGT that this index defined by Datt (1998):

FGT (Foster-Greere-Thobeke)

\[ \alpha = \int [z-x/z] f(x)dx \quad \alpha \geq 0 \]

\[ i=q \text{ to } i=n \]

Z is poverty line X is consumption expenditure of household,

FGT index can be below shape (Minot, N. and F. Goletti, 2001):

\[ P = \frac{1}{N} \sum_{i=q}^{i=n} [z-x/z] \quad i=q \text{ to } i=n \]

N is population

If \( \alpha = 0 \) poverty percentage if \( \alpha = 1 \) poverty gap and if \( \alpha = 2 \) poverty severity

FGT INDEX is more important because it takes into consideration income distribution and poverty simultaneously, poverty line for calculate FGT is absolute poverty line because economic growth and development change absolute poverty line but it has not any effect on comparative poverty line. Absolute poverty line has been obtained in this study based on statistic central of Iran based on minimum of energy requirement (23000 calory) in this study average expenditure has been used. (food-nonfood) that through division by average share of household; this expenditure has been converted to per capita expenditure. to calculate percentage of household of under line as it is studied by Khaledy in Iran, for example if household in certain income group 1,2,3,4,5 and number of household 6 income group is below poverty line to calculate household between 5-7 income group are as follow:

1- \[ A = \frac{B - C}{D - C} \]

A= Percentage of household of below poverty line 5-6 income group
B= poverty line
C= Expenditure of 5 income group
D= Expenditure of 6 income group

2-number of household of below of poverty line between 5-6 income group=relationship 1 * total number of household 6 income group

3-total of poverty household = relationship 2 + number of poverty household 1, 2, 3, 4

4-poverty percentage = number of total household/relationship 3

Equations are used for this study:

1) Percentage of poverty \( r = a + b \) (per capita GNP)+c (per capita GNP)^2+B EIt +ct
2) Percentage of poverty \( u = a + b (\text{per capita GNP}) + c (\text{per capita GNP})^2 + B EIt + e_t \)
3) Poverty gap \( r = a + b (\text{per capita GNP}) + c (\text{per capita GNP})^2 + B EIt + e_t \)
4) Poverty gap \( u = a + b (\text{per capita GNP}) + c (\text{per capita GNP})^2 + B EIt + e_t \)
5) Poverty severity \( r = a + b (\text{per capita GNP}) + c (\text{per capita GNP})^2 + B EIt + e_t \)
6) Poverty severity \( u = a + b (\text{per capita GNP}) + c (\text{per capita GNP})^2 + B EIt + e_t \)

GNP is per capita GNP for examine Kuznets hypothesis and the Et refer to globalization index and et is random error terms.

In the study we examine stationary and non-stationary by using (ADF) test, results that obtained from most variable are stationary. Also by use of (Engle-granger) test of co integration test, remaining of equations estimation examine, the result obtained from them show that there are liner relationship between dependent and independent variable and liner combination of variables are stationary.

After equations estimated to check presence of correlation we have used test of (ARCH) to check heteroskedasticity has used (no cross white Heteroskedasticity terms) test most of equations had heteroskedasticity and for its elimination (TSLS) has been used. The results after removal of correlation and heteroskedasticity are as follow:

<table>
<thead>
<tr>
<th>Number of model</th>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>( R^2 )</th>
<th>F</th>
<th>D-W</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Percentage of poverty ( r )</td>
<td>C 0.42 (2.02) GNP -0.01 (0.75) GNP^2 2.45 (0.055) EIt -0.01 (5.56) AR</td>
<td>0.56</td>
<td>8.42</td>
<td>1.28</td>
</tr>
<tr>
<td>2</td>
<td>Percentage of poverty ( u )</td>
<td>C 1.61 (4.40) GNP -0.44 (3.40) GNP^2 5.49 (2.96) EIt -0.24 (1.30) AR</td>
<td>0.65</td>
<td>12.42</td>
<td>1.63</td>
</tr>
<tr>
<td>3</td>
<td>Poverty gap ( r )</td>
<td>C 7.49 (1.21) GNP -4.71 (0.59) GNP^2 5.84 (0.55) EIt -0.76 (5.8) AR</td>
<td>0.62</td>
<td>10.58</td>
<td>1.36</td>
</tr>
<tr>
<td>4</td>
<td>Poverty gap ( u )</td>
<td>C 1.91 (5.34) GNP -0.65 (4.58) GNP^2 6.15 (4.10) EIt -0.19 (0.99) AR</td>
<td>0.62</td>
<td>10.68</td>
<td>1.89</td>
</tr>
<tr>
<td>5</td>
<td>Poverty severity ( r )</td>
<td>C 2.03 (1.95) GNP -5.65 (1.58) GNP^2 8.18 (1.15) EIt -0.44 (4.21) AR</td>
<td>0.60</td>
<td>6.21</td>
<td>1.31</td>
</tr>
<tr>
<td>6</td>
<td>Poverty severity ( u )</td>
<td>C 5.44 (3.08) GNP -0.02 (3.09) GNP^2 2.17 (2.7) EIt -0.61 (3.22) AR</td>
<td>0.94</td>
<td>4.28</td>
<td>2.05</td>
</tr>
</tbody>
</table>

Note: t-station in parantheses — Denote: Significance at the land 5 percent level

With respect to above-mentioned table we can conclude that t–station for variable of 2, 4, 6 models (poverty percentage, poverty severity) of urban at the level %5 is significant but for gap poverty is insignificant. Also R^2 for mentioned models represent a good model, F –station shows significant of total model, D-W represent of in correlation of 3 model. on other hand, F for 1,2,3 models (poverty percentage, poverty gap and severity) of rural represent significant of total model. t for variable (GNP, GNP^2) at level %5 are significant and t for variable (EIt) at level %5 are significant. In other words, coefficient and negative sign of EIt index indicates negative impact globalization on poverty percentage, gap and severity of urban and rural this means that high globalization levels relate to low poverty and coefficient and sign of GNP,GNP^2 represent that in first stage of development, percentage, gap and severity of urban poverty will decrease and then will increase.

**Conclusion:**

Globalization is a reality that can not be escaped from, with respect to positive and negative effects of globalization that economy of any country will face, every country is duty-bound to use the advantageous and evade from disadvantages. Therefore the presence of Iran in global economy decreases percentage of poverty and severity of urban poverty and has no significant impact on the poverty gap of urban, and decreases gap and severity and percentage of poor people in rural area. Marginal effect of poverty reduction depends on effect of economic growth pattern on income distribution. If growth leads the increase of income inequality it is possible that the poor by regarding the structure of mentioned country more or less profits from globalization. According to World Bank, poverty reduction needs the combination of higher growth and improvement of income distribution, the economic openness that leads to poverty reduction and income inequality reduction simultaneously needs the planners and politicians to design plans that improve income distribution and growth simultaneously.

**REFERENCES**