The Investigation of Globalization Effect on Income Inequality

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ABSTRACT

At the heart of social and political tension, there is often rising inequality that impedes long-run growth and undermines poverty alleviation. It is one of major policy concerns and the literature has advocated active government intervention to properly handle the inequality. The paper examines how globalization affects income inequality. The seemingly unrelated regression estimation (SURE) results covering developed and developing countries over the period 1995-2005, show that GINI coefficient in developed countries is less than its amount in developing countries. Openness and liberalization lead to decreasing of income inequality in international level especially in developed countries and the Kuznets hypothesis is not valid.
KEYWORDS: Globalization, Income Inequality, GINI Coefficient, Twenties, SURE Method.

1. INTRODUCTION

An important issue that needs to be addressed at the outset is what is meant by ''inequality'' in the globalization debate. At least four different concepts (types) of income inequality can be identified. The first concept measures differences in mean incomes between countries (or regions). There is no population weighting and every country counts the same. This concept is useful in determining the extent of convergence or divergence among countries or regions. The second concept takes mean national (or regional) incomes but weights them by the population of the countries (regions). In this case, the resulting income distributions will be strongly affected by large countries (e.g., China and India) and regions. The third concept measures interpersonal inequality at the global, national or regional level, respectively. At the global level, this concept yields the world's income distribution. Fourth concept is that of vertical and horizontal inequality. While vertical inequality refers to inequality among individuals at different levels of the income pyramid, horizontal inequality refers to inequality among individuals within the same broad income or socioeconomic class (Nissanke and Thorbecke, 2006). At the heart of social and political tension, there is often rising inequality that impedes long-run growth and undermines poverty alleviation. It is one of major policy concerns and the literature has advocated active government intervention to properly handle the inequality. Review of these impacts show that globalization has different effects on countries and peoples of the world. In Overall, the gains of globalization have been sent for the developed countries and developing countries, particularly industrialized countries of East and Southeast Asia. Most underdeveloped countries have been deprived of these achievements. Also Within countries, the impact of globalization on social sectors has not been matched.

Greatest achievement has been sent to most prosperous part of society that access to markets, capital and expertise. Overall, globalization exacerbates inequality in income and wealth distribution in global and country levels. However, the overall outlook is positive picture of globalization. Over four decades, 84 countries, totaling 82% of the world's population have been enjoying in the growth rate in GDP per capita significantly. With overview on different theories about globalization, we can summary its mean as below:

- An unprecedented increase in foreign direct investment
- Improvements in international capital flows
- Expansion of trade volume and variety of international transactions
- Quick and growing technology transfer
- Formation of large multinational companies
- The international labor migration
- Development of international transport and road networks, land, sea and air in worldwide
- The emergence and spread of electronic communication and transmission
- Satellite communications, computer networks and the Internet Creations

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This study aims to assess the extent to which globalization was associated with the income distribution in world. The remainder of the paper is organized as follows. In section 2 is literature review. Section 3 presents the Data and Methodology. In section 4 the empirical findings are presented. Section 5 concludes.

2. LITERATURE REVIEW

Such an examination is warranted because theoretical considerations do not provide an unambiguous answer. Much of standard economic theory (for instance, the Heckscher–Ohlin– Samuelson approach) implies that globalization reduces inequality between countries due to the mutually beneficial movements of goods, factors and knowledge. some recent developments in trade and growth theories and economic geography (Fujita et al., 2000), and many heterodox contributions (including dependency and structuralist work) argue that interaction between nations may lead to uneven development (Dutt, 1990). For instance, it is pointed out that increased trade between rich and poor countries can cause divergent growth by increasing (reducing) the production of goods which generate technological change due to learning by doing in rich (poor) countries (see, for instance, Young, 1991), a divergence which technology transfers may be unable to reverse. Some recent empirical analysis has attempted to address the question, but this work mostly confines attention to trade interaction and liberalization within rich countries (see Ben-David, 1993, 1996; Slaughter, 2001) or takes a broad historical perspective (O'Rourke, 2002). Williamson (2002) and Bourguignon and Morrison (2002) observe that over the past two centuries, the diverging trend of world income has been mainly driven by the rise of between-country inequality rather than by the rise of within-country inequality.

Mah (2003) concluded that despite the predictions, the globalization has not affected on the Gini coefficient for South Korea. He investigated the effect of changes in per capita income, economic freedom and foreign direct investment on the Gini coefficient and applied a weak prove of the Kuznets hypothesis. Toan (2004) has investigated relationship between trade liberalization and income distribution among different household groups in Vietnam using a general equilibrium model. This work has been done using dynamic model, multipart and social accounting matrix. The test results indicate that trade liberalization has negatively effect on the national welfare, this phenomenon affected all groups of rural households, and only three of the four groups of urban households have benefited. Lee (2006) also examines the impact of globalization on income inequality in European countries. In this model the amount of foreign direct investment and trade (total exports and imports divided by GDP) have been used as indicators of globalization and the Gini coefficient is used as an indicator of income distribution. Based on these results, the increase in foreign direct investment has increased income inequality. According to this results, the entry of foreign direct investment to a country may improve conditions for skilled workers and creating high-income groups but does not reduce other income groups.

3. METHODOLOGY AND DATA

In regard to globalization-inequality literature, we can write effective factors of income distribution as below model:

$$\text{GINI}_i = \beta_0 + \beta_1 \text{PGDP}_i + \beta_2 \text{FDI/GDP}_i + \beta_3 (X+M)/\text{GDP}_i + \beta_4 \text{DPEX}_i + \beta_5 \text{DU}_i + \beta_6 \text{DIN}_i + \beta_7 \text{DPIN}_i + \beta_8 \text{DDV}_i + U_i \quad [1]$$

In equation [1], GINI denote GINI coefficient, PGDP is per capita gross domestic products, FDI is foreign direct investment, (X+M) is trade intensive index, DPEX is expenditure ratio, DU is urban region data, DIN is income ratio (arranged by households income), DPIN is income ratio (arranged by per capita) and finally DDV is countries developing index.

For investigation of this model, we use seemingly unrelated regression (SURE) set. This method was introduced by Zellner (1962) and it is appropriate to assume that all the independent variables considered are exogenous. It is important to note that under the terms of the correlation, estimating equations with simultaneous equations is more efficient than to estimate individual.

4. Empirical Findings

Table1 represent the estimations of variables effect on twenties of income share.

Table1: estimation result

	GINI	L. 20%	S. 20%	T. 20%	F. 20%	H. 20%
Constant	44.55086 (0.0000)	5.519980 (0.0000)	9.278678 (0.0000)	13.64124 (0.0000)	20.65937 (0.0000)	51.59099 (0.0000)
PGDP	-0.000158 (0.0176)	0.0000371 (0.0094)	0.0000416	0.0000362 (0.0135)	0.0000187 (0.0920)	-0.000133 (0.0164)
FDI/GDP	0.021397 (0.7963)	0.003006 (0.8668)	(0.9949)	-0.007376 (0.6885)	-0.013565 (0.3299)	0.029978 (0.6658)
(X+M)/GDP	-0.061252 (0.0002)	0.012857 (0.0002)	0.015964 (0.0001)	0.014104 (0.0001)	0.008928 (0.0008)	-0.053212 (0.0001)
DPEX	-2.151270 (0.1557)	0.373186 (0.2536)	0.552070 (0.1450)	0.554186 (0.0987)	0.074283 (0.7697)	-2.845275 (0.0247)
DU	10.20294 (0.0000)	-2.565752 (0.0000)	-2.335175 (0.0000)	-2.029939 (0.0000)	-1.310869 (0.0000)	7.626886 (0.0000)
DIN	-4.444473 (0.0715)	0.939574 (0.0770)	1.008312 (0.1014)	1.187532 (0.0295)	0.874991 (0.0340)	-3.967443 (0.0538)
DPIN	9.337544 (0.0000)	-2.706532 (0.0000)	-2.290077 (0.0000)	-1.865949 (0.0000)	-1.063341 (0.0010)	7.415920 (0.0000)
DDV	-10.00516 (0.0000)	1.808843 (0.0001)	2.481030 (0.0000)	2.478520 (0.0000)	1.725725 (0.0000)	-8.574795 (0.0000)
R^2	0.373222	0.389250	0.359758	0.370536	0.278297	0.366265

These results are presents as below equations:

$$s_1 = 5.51998 + 0.0000371 PGDP + 0.003006 FDI/GDP + 0.012857 (X+M)/GDP + 0.373186 DPEX$$
$$- 2.565752 DU + 0.939574 DIN - 2.706532 DPIN + 1.808843 DDV \quad R^2 = 0.38925$$
[2]

$$s_2 = 9.278678 + 0.0000416 PGDP - 0.001189 FDI/GDP + 0.015964 (X+M)/GDP + 0.55207 DPEX$$
$$- 2.335175 DU + 1.008312 DIN - 2.290077 DPIN + 2.48103 DDV \quad R^2 = 0.359758$$
[3]

$$s_3 = 13.64124 + 0.0000362 PGDP - 0.007376 FDI/GDP + 0.014104 (X+M)/GDP + 0.554186 DPEX$$
$$- 2.029939 DU + 1.187532 DIN - 1.865949 DPIN + 2.47852 DDV \quad R^2 = 0.370536$$
[4]

$$s_4 = 20.65937 + 0.0000187 PGDP - 0.013565 FDI/GDP + 0.008928 (X+M)/GDP + 0.074283 DPEX$$
$$- 1.310869 DU + 0.874991 DIN - 1.063341 DPIN + 1.725725 DDV \quad R^2 = 0.278297$$
[5]

$$s_5 = 51.59099 - 0.000133 PGDP + 0.029978 FDI/GDP - 0.053212 (X+M)/GDP - 2.845275 DPEX$$
$$+ 7.626886 DU - 3.967443 DIN + 7.41592 DPIN - 8.574795 DDV \quad R^2 = 0.366265$$
[6]

Based on the results of Table1, Average income per share for fifths twenties is equal to total average of the first four twenties. In regard to the estimated model, when per capita income increases with one dollar, incomes per share of first four twenties rise. FDI has not significant effect on incomes per shares. The effect of liberalization on first four incomes per shares is positive and on fifth incomes per share is negative. In reviewed countries, incomes per share in urban regions are more than non-urban regions.

5. Conclusion

Given the importance of globalization effects on income distribution and changes in incomes per share of societies twenties, this research investigate the effect of globalization on income distribution in international level. In this regard, we used intra country data for 1995-2005. For apply this aim and investigation the effect of variables on incomes per shares of twenties, seemingly unrelated regression estimation (SURE) has been established. Results of this research showed that GINI coefficient in countries is 44.55 approximately and income per share of fifth twenties is 10 times larger than first. GINI coefficient in developed countries is less than its amount in developing countries. Also in this investigation, Kuznets hypothesis is rejected. Openness and liberalization lead to decreasing of income inequality in international level especially in developed countries. As suggestion of this research, policy makers of countries could provide suitable space for linking countries to global economies that this would decrease the income inequality.

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