Globalization and Income Distribution: The Experiences of the Transition Economies

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Ⅰ. Introduction

Most of the former socialist economies have undergone transition to market economies for the past a few decades. The economic transformation has comprised privatization of state owned companies, less governmental intervention, pursuit of freer trade, and welcoming foreign direct investment (FDI) inflows, among others. Although the socialist economies were characterized by a more equal personal distribution of income partly due to much higher female participation rates (Flemming and Micklewright (2000)) as well as the prohibition of private ownership of the productive means, many of them in the transition process witnessed deterioration of income disparities within their own economies as a result of transition.

Although globalization characterized by increased trade values and

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FDI inflows together with computerization might be the cause of such deterioration of income disparities, few, if any, rigorous researches have been performed with respect to globalization as the determinant of income distribution in the transition economies. The purpose of this paper is to examine whether increased trade dependency and FDI inflows as well as progress of computerization influence the situation of income distribution in the transition economies.

The remainder of this paper is organized as follows. Section II briefly reviews the literature examining the impact of globalization comprising increased trade values, FDI inflows and progress of computerization on income distribution. In section III, the model and empirical evidences on the impact of globalization on income distribution in 23 transition economies where the relevant data are available are presented. I conclude the paper in section IV.

Ⅱ. Globalization and Income Distribution

Many factors have been considered as those influencing income distribution. Per capita income level received attention most often. Kuznets (1955) showed an inverted U-shaped relationship between income inequalities and per capita income levels. The Kuznets hypothesis has been tested by (per capita income)2 term in the right hand side of the regression equation. Papanek and Kyn (1995) argued that the level of economic development would not explain most of the variations in income inequalities across countries or over time. Meanwhile, Barro (2000) showed that the Gini coefficient rises with GDP for its values less than about US$1,600 and declines thereafter. Besides per capita income, many factors have been suggested as those influencing income distribution.

In these days of globalization ignoring the internationalization aspects would lead to misunderstand the changing situation of income

distribution. Globalization can mainly be characterized by increase of trade values and FDI flows. In addition, progress of computerization speeds up dissemination of information across countries. For the impact of increased trade values, there has been considerable debate over whether international trade contributes to the declining economic fortunes of the poorer. According to Stolper and Samuelson (1941), the people having relatively abundant production factors would benefit from freer trade, whereas those having scarce factors would suffer from it. It implies that in developing, labor abundant countries, the returns to laborers have been manifested both in lower income inequality within the workforce and in lower levels of unemployment among prospective workers.

In the ongoing debate on the impact of increased trade on income distribution in developing countries, unlike the Stolper-Samuelson theorem, the popular view is that increased international openness will benefit most the domestic residents who are already relatively well off. The idea is that the relatively sophisticated and, hence, rich groups would be most able to take advantage of the opportunities offered by global commerce (Barro (2000), p. 27).

Many authors examined the impact of increased trade on income distribution in developed countries such as the United States. Meanwhile, researches on that with respect to developing countries have been quite limited. Glewwe (1988) showed that economic liberalization policies did not lead to greater income inequalities in Sri Lanka, although Ravallion and Jayasuriya (1988) criticized Glewwe (1988) in the sense that Glewwe (1988) did not analyze the data appropriately. Paus and Robinson (1999) analyzed the correlation between real wage performance and increased trade openness in developing countries. They used real wage growth in manufacturing as the dependent variable and trade openness as one of the independent variables. They concluded that trade openness is not the main factor of real wage growth. Based on the cross-section data, Barro (2000) found a

positive and significant effect of the openness ratio on inequality. Thus, in line with the popular view rather than the Stolper-Samuelson theorem, he argued that greater openness to trade goes together with more inequalities.

Although researches on the distributive consequences of globalization have primarily dealt with trade, there appears to be a systematic relationship between FDI inflows and income distribution in developing countries as well. Meanwhile, surprisingly little attention has been devoted to that in the literature on income distribution (Mahler et. al. (1999)). For instance, Barro (2000) did not consider any variable relating to FDI in revealing the determinants of income inequalities. Assuming international capital movement from a developed to a developing country, we can say that the amount of capital existing in the latter becomes bigger than before. Wage rises in the developing country which attracted FDI, reflecting increase in the marginal productivity of labor. Therefore, Mundell (1957) and Obstfeld (1998) hypothesize that increase of FDI inflows ameliorates income distribution in developing countries, which is referred to as the Mundell-Obstfeld hypothesis hereafter.

The Mundell-Obstfeld hypothesis contrasts with the foreign capital penetration school in sociology, which emphasizes the dependence of developing countries on foreign investment. The foreign capital penetration school argues that dependence on foreign capital increases income inequality by distorting the occupational structure of developing countries, producing a highly paid elite and large number of marginalized workers. Alderson and Nielsen (1999) showed that penetration by multinational corporations, measured by the stock of foreign direct investment, has a positive impact on income inequalities. However, their analysis did not consider the role of international trade nor per capita income in determining income distribution.

The beliefs of the foreign capital penetration school were rigorously formulated by Feenstra and Hanson (1997). They argued that capital

flows from North to South, and a corresponding rise in outsourcing by Northern multinationals, are, from the North's perspective, ones that use relatively large amounts of unskilled labor, but, from the South's perspective, are ones for which the reverse is true. Therefore, capital flows into developing countries increase the demand for skilled labor, which, in turn, causes the relative wage of skilled labor to rise. They applied this reasoning called the capital accumulation-outsourcing hypothesis to Mexico. According to the empirical evidences drawn by them, outsourcing by multinational corporations tends to increase the relative demand for skilled labor.

Figini and Gorg (1999) extended Feenstra and Hanson (1997) in the sense that they argued the impact of FDI inflows on income distribution to differ depending on the stages. They assume that in the first stage of the presence of multinationals, new technologies improve the skills of white-collar workers mainly, thus increasing their productivity and wage. Blue-collar workers remain initially unskilled, while white-collar workers become skilled. However, in stage two blue-collar workers eventually become more skilled in order to be able to work with the new technology. The acquisition of skills are regarded as a process of 'learning-by-doing'. Therefore, they postulate that the group of blue-collar workers evolves over time from being 'unskilled' to being 'skilled'. Overall, according to Figini and Gorg (1999), initially, wage inequality between unskilled blue-collar and skilled white-collar workers widens, but, as blue-collar workers become more skilled, the wage gap becomes gradually reduced. This can be captured by an inverted U curve relationship between measure of income inequality and FDI inflows. Their estimation results based on the Irish manufacturing sectors pooled over the period 1979-1995 supported their expectation of an inverted U-shape.

Although the above-mentioned authors derived results that FDI inflows influence income distribution in any direction, Mahler et. al. (1999) found that FDI variables are not of statistical significance in

explaining income inequality. Thus Mahler et. al. (1999) argued globalization not to be the important factor in explaining recent trends of income distribution in developed countries. However, their results are not reliable in the sense that they used the simple regression analysis, ignoring the other variables influencing income distribution, and they did not deal with the transition economies.

We have witnessed rapid progress of computerization, which may increase demand for highly educated or computer-literate workers, but may decrease demand for less skilled workers, according to some recent studies such as DiNardo and Pischke's (1997) and Autor, Katz and Krueger's (1998) works with respect to Germany and the United States, respectively. Therefore, we can hypothesize that the situation of income inequalities would deteriorate with progress of computerization, although it has not been tested with respect to the transition economies.

As for the empirical work with respect to the transition economies, Rutkowski (1996) and Brainerd (1998) regressed wage and measure of income distribution against education, marital status, state sector and experience in Poland and Russia, respectively. Although Coricelli (1997) argued the Kuznets hypothesis to be valid in explaining the Central and Eastern European economies, he concluded this without any rigorous analysis. The impact of the differing degrees of globalization on income distribution in the transition economies have rarely, if any, been studied rigorously. Therefore, those of trade, FDI and computerization in the transition economies are examined in the current study.

Ⅲ. Empirical Evidences

To examine the impact of globalization on income distribution with respect to the transition economies, the following model of income distribution is conjectured:

$$\text{Gini coefficient} = a_0 + a_1 \text{ per capita GNP} + a_2 (\text{per capita GNP})^2 + a_3 \text{ trade dependency} + a_4 \text{ FDI inflow} + a_5 (\text{FDI inflow})^2 + a_6 \text{ computerization} + u$$

, where u is the conventionally assumed disturbance term.

The sources of the data used in estimating the above-mentioned equation are the following. Most of the data for the Gini coefficients in the period 1992 - 1995 (1996 - 1999),[1] per capita GNP for the year 1995 (1999), trade dependency ratio measured as (export + import) value/GDP in 1995 (1999) as well as the degree of computerization proxied by the number of internet hosts per 10,000 persons as of July 1996 (1999) are taken from the' World Bank, *World Development Indicators 1999 (2001)*. The value of FDI inflow is measured as the FDI stock/GDP in 1995 (1998), which is taken from the UNCTAD, *World Investment Report 1997 (2000)*.

In case that the Kuznets hypothesis is valid, a_1 and a_2 are expected to be positive and negative, respectively. Per capita income as much as $-a_1/2a_2$ can be regarded as the turning point.[2] The Gini coefficient increases until it reaches the turning point, but decreases beyond it according to the Kuznets hypothesis. As for the impact of trade dependency on the Gini coefficient, a_3 is expected to be negative for the labor abundant countries, assuming that the Stolper-Samuelson theorem is effective in explaining the impact of trade on income distribution. There are competing views on the signs of a_4 and a_5. The Mundell-Obstfeld hypothesis is equivalent to $a_4 < 0$ and $a_5 = 0$ (or < 0), since it predicts the decreasing Gini coefficients with increase in FDI inflows. The argument of Feenstra and Hanson is equivalent to a_4

1) Due to the difficulty in getting the data for the Gini coefficients of the transition economies, the data period covering those are extended to 1992-1995 and 1996-1999, unlike that for the other variables. The Gini coefficients for Turkmenistan, Ukraine and Uzbekistan as of 1992-1995 are taken from http://www.vwl.uni-muenchen.de/wirtschaftsarchiv, visited May 22, 2001. Those for Armenia and Belarus as of 1992-1995 are based on Milanovic (1998); meanwhile, those for Azerbaijan and Georgia as of 1992-1995 are taken from UNICEF/IRC TransMonee 2000 Project.

2) The first order condition applied to the inverted U curve gives per capita income of $-a_1/2a_2$ as the turning point.

> 0 and $a_5 = 0$ (or > 0), as they expect rising Gini coefficients with increase in FDI inflows. According to Figini and Gorg's (1999) two stage hypothesis, the Gini coefficients rise and then fall with increase in FDI inflows, which is equivalent to $a_4 > 0$ and $a_5 < 0$.

For income inequalities, in the year of 1989, for instance, when the transition economies were not undergoing globalization, the average Gini coefficient of thirteen of them was as low as 27. With only several years' economic transition, that of the same countries jumped to around 39. In the early-1990s, the Gini coefficients in the transition economies under consideration ranged from as low as 19.5 for Slovak to 48.0 and 53.5 in cases of Russia and Georgia, respectively. The transition of the formerly centrally planned economies into more conventional market economies have considerable implications for the distribution of income. Trading and middle-man activity is legal while private property ownership is also permitted. In the transition itself market disequilibrium is likely to prevail - generating large positive (and negative) quasi-rents. Social institutions of redistribution and support through taxation and social services may break down or need to be radically recast (Flemming and Micklewright (2000), p. 845).

Table 1 shows the basic statistics for the year around 1995 used in the current study. For instance, most literature reported that the situation of the regional income disparities deteriorated in China since open door policies and economic reform in 1978. Russia have seen startling increases in income inequality since the late 1980s. Unreformed and universally available pension and social assistance systems have increased income inequalities, and Russia has had a regressive tax system.[3] The situation of women by far deteriorated compared with that of men in the early 1990s (Sacks (1999)). The Gini coefficients of Armenia, Georgia and Ukraine increased more than 10.0

3) Morrisson (1984) showed that the Gini coefficients for Hungary and Czechoslovakia were as low as 24 and 22, respectively, in the early/mid-1970s. They increased after the transition as well.

since 1989 as well.

〈Table 1〉 Basic Statistics for the Transition Economies in 1995

Countries	Gini Coefficient	per capita GNP(US$)	trade value /GDP (%)	FDI stock /GDP (%)	Internet hostsa)
Armenia	45.7 (25)	730	85	1.2	0.28
Azerbaijan	45.0 (31)	480	66	14.6	0.02
Bulgaria	30.8	1,330	94	0.6	2.68
China	41.5	620	40	17.9	0.09
Czech	26.6	3,870	108	9.9	31.17
Estonia	35.4 (28)	2,860	160	26.5	44.42
Georgia	53.5 (28)	440	46	1.1	0.22
Hungary	27.9	4,120	67	15.6	24.58
Kazakstan	32.7 (28)	1,330	69	3.0	0.33
Kyrgyz	35.3 (27)	700	58	0.3	n.a.
Latvia	28.5 (26)	2,270	91	8.5	11.65
Lithuania	33.6 (26)	1,900	108	1.7	3.60
Poland	27.2	2,790	53	5.3	9.95
Romania	28.2	1,480	60	1.8	1.20
Slovak	19.5	2,950	124	3.2	10.24
Uzbekistan	33.3 (28)	970	125	2.5	0.03
Vietnam	35.7	240	83	1.9	n.a.
Belarus	28.0	2,070	n.a.	0.3	0.10
Ukraine	47.4 (23)	1,630	n.a.	2.5	0.87
Turkmenistan	36.0 (28)	920	n.a.	4.6	n.a.
Moldova	34.4 (25)	920	78	n.a.	0.02
Russia	48.0 (27)	2,240	44	n.a.	2.17
Slovenia	29.2	8,200	113	n.a.	49.97

n.a.: not available

a) denotes the number of internet hosts per 10,000 persons.

Note: Values within the parentheses denote the Gini coefficients in the year of 1989 (Flemming and Micklewright (2000), p. 869).

The data for the Gini coefficients covering both the early 1990s and late 1990s are available for 16 transition economies. They remained more or less stable since the first half of the 1990s. That is, the average value of the Gini coefficients was as high as 35.4 for both sub-periods.

〈Table 2〉 Basic Statistics for the Transition Economies in 1999

Countries	Gini Coefficient	per capita GNP(US$)	trade value /GDP (%)	FDI stock /GDP (%)	Internet hostsa)
Armenia	44.4	490	71	17.4	1.80
Belarus	21.7	2,620	127	3.3	0.80
Bulgaria	26.4	1,410	96	12.3	11.90
China	40.3	780	41	27.6	0.50
Croatia	29.0	4,530	89	13.1	25.90
Czech	25.4	5,020	129	26.1	85.60
Estonia	37.6	3,400	160	35.6	174.70
Georgia	37.1	620	73	3.8	1.60
Hungary	34.4	4,640	108	33.2	93.10
Kazakstan	35.4	1,250	85	35.7	1.50
Kyrgyz	40.5	300	99	20.5	4.00
Latvia	32.4	2,430	104	25.2	50.80
Lithuania	32.4	2,640	90	15.2	30.50
Moldova	40.6	410	115	17.2	2.40
Poland	31.6	4,070	59	15.1	40.90
Russia	48.7	2,250	75	5.0	13.10
Slovenia	28.4	10,000	109	14.5	99.10
Turkmenistan	40.8	670	104	33.3	0.60

n.a.: not available
a) denotes the number of internet hosts per 10,000 persons.

Per capita GNPs in the transition economies ranged from US$ 240 in Vietnam to US$ 8,200 in Slovenia in 1995. With respect to the 16 transition economies whose data are available in 1999 as well as 1995, the average per capita GNP increased from US$ 2,203 in 1995 to US$ 2,971 in 1999. Although trade dependency ratios were rather low in large countries such as China (40% in 1995 and 41% in 1999) and Russia (44% in 1995 and 75% in 1999), they were quite high in Czech (108% in 1995 and 129% in 1999), Slovak (124% in 1995), Slovenia (113% in 1995 and 109% in 1999), Uzbekistan (125% in 1995) and the Baltic states: for instance, Estonia (160% in 1995 and 1999). For the 15 transition economies whose data are available in both 1995 and 1999, the average trade dependency ratio increased from 81 per cent to 94 per cent, reflecting the progress of globalization in the 1990s.

Many transition economies have provided various types of investment

incentives to attract FDI in the 1990s (Mah and Tamulaitis (2000a, 2000b)). As a result, the FDI stock/GDP ratios increased substantially from the early 1990s to the late 1990s. For instance, the FDI stock/GDP ratios for Estonia, Hungary, Kazakstan and Turkmenistan were higher than 30% in 1998, although they were still lower than or equal to 5% in cases of Belarus, Georgia and Russia in the same year. The degrees of computerization proxied by the number of internet hosts per 10,000 persons differ substantially across countries. Looking at the data for 15 transition economies which are shown in Tables 1 and 2, the average number of internet hosts increased from 12.1 in 1995 to 40.0 in 1999, reflecting rapid progress of computerization in the latter half of the 1990s.

Table 3 shows the estimation results with respect to the year of 1995 examining the Kuznets hypothesis, the impact of trade dependency, FDI inflow and computerization on the Gini coefficient for 23 transition economies where the relevant data are available. The results can be summarized in the following manner. First, the estimated signs of the coefficients of per capita GNP and (per capita GNP)^2 are revealed to be negative and positive, respectively. Such evidences are not consistent with the Kuznets hypothesis at all. Rather, it appears that the Gini coefficients tend to fall with increase of per capita GNP until it reaches U.S.$ five to six thousands. The coefficients of per capita GNP and (per capita GNP)^2 terms are shown to be significant at 1 to 10 per cent level of significance. We cannot be sure whether the Gini coefficient is likely to rise with increased per capita GNP, as there is only one country, i.e. Slovenia, in the data set whose per capita income is higher than U.S.$ five thousands.

Second, for the impact of trade dependency ratio on income distribution, the estimated sign of the coefficient shows that the higher trade dependency ratio tends to ameliorate the situation of income inequalities, which is consistent with the Stolper-Samuelson theorem considering that the concerned transition economies are in general labor abundant countries compared with their major trade partners such as the

Western European economies. However, it is revealed to be significant in only a few out of five estimations at 5 to 10 per cent level of significance.

Third, there is a mixed evidence on the impact of FDI inflow on the Gini coefficient. Among others, the estimated sign of the coefficient is revealed to be positive in one case, but it is shown to be negative in two out of three estimations including FDI inflow variable as one of the right hand side variables. $(FDI)^2$ term is revealed not to be significant at any reasonable level of significance in any case; therefore, such estimation results are not reported here to save the space. These results discredit the Mundell-Obstfeld hypothesis, Feenstra-Hanson's capital accumulation-outsourcing hypothesis, and Figini-Gorg's two stage hypothesis concerning the impact of FDI inflow on income distribution.

Fourth, there is a strong evidence that computerization tends to increase the Gini coefficient by dividing people in terms of knowledge of information technologies. The estimated coefficients are revealed to be significant at 5 to 10 per cent level of significance.

〈Table 3〉 The Impact of Trade, FDI and ITa) on Income Inequalities in 1995

constant	per capita GNP	(per capita GNP)^2	trade	FDI	IT	adj.R^2	F
44.375** (13.240)	-6.975** (-2.804)	.627* (2.026)				.287	5.424**
48.185** (10.180)	-6.203** (-2.425)	.584* (1.894)	-.064 (-1.186)			.339	4.250**
43.750** (10.812)	-5.372** (-4.017)		-.038 (-.787)	.410* (2.004)		.532	7.063**
58.070** (9.814)	-11.062** (-3.618)	.791** (2.627)	-.124* (-2.116)		.450* (2.039)	.507	5.378**
58.448** (9.383)	-10.475** (-4.924)		-.119** (-2.301)	-.212 (-.746)	.755** (2.631)	.710	9.577**
62.419** (11.901)	-20.746** (-4.732)	2.470** (2.545)	-.067 (-1.431)	-.270 (-1.177)	.658** (2.815)	.813	13.151**

Note: The Gini coefficient is the dependent variable. In the estimation, per capita GNP/1,000 is used. Values within the parentheses below the estimated coefficients denote the t-statistics.

a) denotes computerization.

* : statistically significant at 10% level of significance

**: statistically significant at 5% level of significance

Table 4 shows the estimation results in the year of 1999 for 18 transition economies where the relevant data are available. The empirical evidences can be summarized in the following manner. First, the estimated signs of the coefficients of per capita GNP and (per capita GNP)^2 are negative and positive, respectively. Among others, the estimated signs of the coefficients are not consistent with the Kuznets hypothesis. The Gini coefficients are revealed to be likely to fall with increase of per capita GNP until it reaches U.S.$ seven to eight thousands. The coefficient of per capita GNP is revealed to be significant at 5 per cent level of significance in any case appearing in Table 4; however, that of (per capita GNP)^2 is shown to be significant in only a few cases at 5 to 10 per cent level of significance. As is the same in Table 3, we cannot be sure at all whether the Gini coefficient is likely to rise with increased per capita GNP beyond a turning point, as there is only one country in the data set whose per capita income is higher than U.S.$ seven thousands.

For the impact of trade dependency ratio on income distribution, there is a weak evidence that the higher trade dependency ratio ameliorates the situation of income inequalities, as its coefficient is revealed to be negative in all cases and significant in two out of five estimations at 10 per cent level of significance. Neither the coefficient of FDI nor that of (FDI)^2 is revealed to be significant at any reasonable level of significance. The regression results including (FDI)^2 term as one of the right hand side variables are not reported here to save the space. Such results suggest that increased FDI flows into the transition economies did not influence the situation of income inequalities. There is a weak evidence that progress of computerization put upward pressure on income inequalities, as the coefficient of computerization is revealed to be positive in all cases and statistically significant in two out of three cases at 10 per cent level of significance.

Summarizing the regression results appearing in Tables 3 and 4, we can say that increased per capita GNP and trade dependency ratio

tended to decrease the Gini coefficient; however, progress of computerization put upward pressure on it, offsetting the effect of increased per capita GNP and trade dependency ratio. Although substantial amount of FDI flew into the transition economies in the 1990s, it did not influence the situation of income inequalities significantly.

〈Table 4〉 The Impact of Trade, FDI and ITa) on Income Inequalities in 1999

constant	per capita GNP	(per capita GNP)^2	trade	FDI	IT	adj.R^2	F
42.225**	-4.454**	.305				.348	5.547**
(14.561)	(-2.649)	(1.742)					
45.871**	-4.077**	.280	-.045			.331	3.809**
(8.351)	(-2.305)	(1.555)	(-.786)				
43.394**	-1.480**		-.069	.071		.227	2.668*
(7.235)	(-2.125)		(-1.088)	(.454)			
53.272**	-5.944**	.379**	-.118*		.095*	.442	4.367**
(8.457)	(-3.162)	(2.200)	(-1.835)		(1.943)		
49.310**	-2.223**		-.114	-.029	.068	.236	2.312
(6.074)	(-2.271)		(-1.509)	(-.161)	(1.074)		
55.018**	-6.201**	.388*	-.121*	-.071	.108*	.405	3.315**
(7.209)	(-3.057)	(2.167)	(-1.811)	(-.438)	(1.833)		

Note: The Gini coefficient is the dependent variable. In the estimation, per capita GNP/1,000 is used. Values within the parentheses below the estimated coefficients denote the t-statistics.

a) denotes computerization.

* : statistically significant at 10% level of significance

**: statistically significant at 5% level of significance

Ⅳ. Conclusion

Although most of the transition economies experienced deterioration in the situation of income inequalities in their initial stage of economic transition which comprised globalization, there were few, if any, rigorous empirical works examining the impact of globalization on income distribution in those economies. Using data for up to 23

transition economies in the 1990s, this paper provides the empirical evidences on the impact of increase in trade values, FDI inflows and progress of computerization on income distribution.

The empirical evidences drawn from this paper can be summarized in the following manner. First, the increase of per capita GNP tends to ameliorate income distribution in the transition economies, which contradicts the Kuznets hypothesis. Second, there is a weak evidence supporting the Stolper-Samuelson theorem, which is evidenced by the decreasing Gini coefficient with increased trade dependency ratio. Third, although the transition economies attracted huge amount of FDI inflows, the increased FDI inflows are revealed not to have influenced the situation of income inequalities in the transition economies. Finally, rapid progress of computerization tends to divide people in terms of income inequalities.

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세계화와 소득분배

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국제무역과 해외직접투자유입의 증대라고 하는 세계화의 진전이 구사회주의경제체제국가들의 국내소득분배에 미치는 영향에 대한 연구는 거의 행해진 바가 없다. 본 연구는 1990년대 중반을 대상으로 23개 구사회주의경제체제국가들의 지니계수에 1인당국민소득, 국제무역액, 해외직접투자유입액 및 컴퓨터화의 변화가 어떻게 영향을 주는지에 대하여 분석을 행한다. 경험적 연구결과 무역액의 증대는 이 국가들의 지니계수를 감소시키며, 해외직접투자유입의 증대는 이 국가들의 지니계수에 영향을 주지 않는다는 점이 밝혀진다.