

Let Them Eat Cake: A Study of the Income Effects of Globalization on the Rich

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Abstract: There exists a substantial body of literature on the effects of Globalization on the poor populations of the world (Hall & Bass, 2010; Tran, 2010; Harrison & McMillan, 2006), but little exists on the effects of globalization on the rich. The model presented here serves to provide some insight into this other spectrum of the effects of globalization. The results indicate that, while economic and cultural globalization increase the income share held by the top twenty-percent of income earners, political globalization and restrictions to globalization decrease the income share held by this quintile.

Key words: globalization; poverty; rich; KOF

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1. Introduction

To date, the majority of the literature on income effects of globalization examines its outcomes on the poor or on income inequality in general. The results are mixed, with several studies finding that differing forms of globalization produce both winners and losers among the poor (Hall & Bass, 2010; Tran, 2010; Harrison & McMillan, 2006). However, there is a paucity of literature examining the effects of globalization on the rich populations of developing countries. While determining the effects of globalization on the poor is of utmost importance in creating a policy prescription to deal with the problem of poverty around the world, it would also be helpful to see how it impacts the rich in order to have a better idea of who actually receives the purported benefits of globalization. If the lives of poor are worsened due to globalization then, by implication, are the rich actually benefitting or are their conditions also being worsened? We seek to answer this question using panel data analysis of several countries for the years 1997-2010 with the KOF Index of Globalization providing our measurements of globalization.

2. Review of Pertinent Literature

A common argument in favor of globalization is that it allows access to world markets and trade that will ultimately benefit impoverished people around the world directly and by helping to accelerate growth (Srinivasan & Wallack, 2004). D. Dollar and A. Kraay (2002), for instance, maintain that “the best evidence available shows ... the current wave of globalization, which started around 1980, has actually promoted economic equality

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and reduced poverty.” (p. 120). However, there is evidence in the literature to suggest the opposite. Wade (2003), for example, questions the empirical bases of those researchers who assert that globalization has led to more equality and reduction in poverty. In fact, there are those who argue that globalization actually serves the interests of the richest people of the world, often to the detriment of the poorest. It is argued that quite often, the governments of developing countries are controlled by wealthy citizens. These government officials will flaunt globalization as a means to serve the country as a whole while, in reality, not only do they not help the majority of their population, but they become economic “quislings” who assist foreign corporations in exploiting their own nation, to their benefit (Ramsay, 1984).

As globalization may take different forms, some researchers have focused on studying the impact of globalization as measured by Foreign Direct Investment (FDI) on poverty and income distribution. Klein et al. (2001) for instance, maintain that FDI is a key ingredient of successful economic growth and development in developing countries. They also contend that because growth is the single most important factor in poverty reduction, FDI is critical in alleviating poverty in these countries. Others have argued that while FDI assists with the modernization of developing countries, the benefits may accrue to the population disproportionately. Foreign Direct Investment has been shown by some to have a negative relationship with the amount of wealth held by the “less-well off” and a positive relationship with the proportion of income accruing to the well-off population (Evans & Timberlake, 1980; Kentor, 2001; Jaumotte et al., 2013). Indeed, some argue that FDI would appear to increase the opportunities for those who are educated or skilled laborers, implying that FDI may contribute to income inequality (Feenstra & Hanson, 1997). FDI may also contribute to income inequality through crowding out the domestic investments and since domestic investments contribute more to economic growth than FDI, the outcome adversely affects the poor. Adams S. (2009) in his study of sub Saharan countries shows that although the flow of FDI increased for these countries in the 1990s, the increase did not lead to a proportionate positive impact of FDI on economic growth. For the same period of time Adams demonstrates that the domestic investment and institutional infrastructure had positive and significant effects on economic growth. Furthermore, he shows that FDI led to the crowding out effect of domestic investment suggesting that any positive effect of domestic investment on economic growth and consequently employment may have been negated by FDI. Similarly, Agosin and Machado (2005) studied data for the period 1971-2000 covering for 12 countries in each of three developing regions (Africa, Asia and Latin America). Their results indicate that, in all three developing regions, FDI has, at best, left domestic investment unchanged, and that there are several sub-periods for specific regions where FDI displaces domestic investment. In contrast, there are those who argue that the displacement of the domestic investment by FDI does not necessarily contribute to income inequality. They maintain that foreign direct investment is actually more efficient and contributes more to economic growth than domestic investment because of increased access to advanced technology and capital (Borensztein & Lee, 1998). There are also those studies that have found that the outcomes of globalization, measured by FDI ultimately depend on a country’s policy response to the globalization and not FDI in itself (Tran, 2010; Basu, 2006; Mold, 2004).

Globalization, as measured by “openness” to international trade, and its effects on the poor is widely studied and is also a subject of debate. According to conventional wisdom, international trade is expected to help the less skilled workers who are presumed to be the locally relatively abundant factor in developing countries, consequently reducing the income inequality. However, many researchers dispute this argument. For instance, Goldberg and Pavcnik (2007) in their extensive study of effects of globalization in income distribution in developing countries argue that “using all existing measures for inequality”, the exposure of developing countries

to international market points to an increase in inequality. Basu (2006) argues that the “openness” is likely to result in converging prices of goods and services between the developing and developed countries. That means the prices will increase in developing countries since labor is less mobile than goods and services across countries, and it is therefore logical to conclude that wages will lag behind prices. This is especially true in the case of illiterate and unskilled laborers in developing countries that are unable to take advantage of new technology. Aggarwal (2006) emphasizes that the “openness” may affect the resilience of ecosystems that adversely affect the poor. Resilience is defined as “the ability of a system to maintain its structure and pattern of behavior in the face of disturbance.” (Aggarwal, p. 1409) For instance, if international trade leads to “mono-cropping” in a developing country, the producers of these crops become more vulnerable to any shocks associated with price volatility and droughts. In contrast, Silva (2007), studying the case of Mozambique finds that export oriented cash cropping trade is associated with lower income inequality. Ligon (2006), who concentrates on the relationship between globalization and uncertainty and its effects on household consumptions, maintains that global shocks are of less importance than country specific shocks in terms of their effects on consumption growth of the poorest quintile. Cassette et al. (2012), focusing on commercial services, find that increased trade in commercial services serves to increase income inequality not only between the top and bottom income earners, but also between the top and middle income earners. However, they do qualify the statement by acknowledging that all income groups could benefit from increased trade, but the top quintile may gain slightly more. Nissanke and Thorbecke (2006) maintain that trade and financial liberalization contribute significantly to economic growth, but how such growth affects the poor depends on the underlying effects on income distribution. They emphasize that if growth leads to an increase in income inequality, in some instances the poor may be adversely affected by the process of globalization. In conclusion, there is not a general consensus in the literature on how globalization measured through international trade affects income distribution and the poor.

3. Model and Variables

This model was created using a panel data regression with fixed effects for 30 countries in the time period from 1999 to 2010. The data set originally included all countries in the world; however, that number fell sharply to our final of 30 due to severe gaps in the World Bank Databank¹. A list of the countries in this analysis is provided in Table 1. These countries are representative of several differing regions including Latin America, Europe, Africa, and Asia.

Table 1 List of Countries

Armenia	Georgia	Peru
Azerbaijan	Hungary	Poland
Bolivia	Kazakhstan	Romania
Bulgaria	Lithuania	Russian Federation
Cote d'Ivoire	Macedonia, FYR	Serbia
Croatia	Mexico	Slovak Republic
Czech Republic	Moldova	Slovenia
Ecuador	Montenegro	Thailand
El Salvador	Pakistan	Turkey
Estonia	Paraguay	Ukraine

¹ With the exception of the KOF Index of Globalization, all data was retrieved from the World Bank Databank.

The model in its functional form is given as follows:

$$\ln(\text{INCOME}) = \beta_0 + \beta_1(\text{GDP}) + \beta_2(\text{POPULATION}) + \beta_3\text{D}(\text{HEALTH}) + \beta_4(\text{ROADS}) + \beta_5(\text{INTAKE}) + \beta_6(\text{MILITARY}) + \beta_7(\text{FDI}) + \beta_8(\text{POLITICAL}) + \beta_9(\text{CULTURAL}) + \beta_{10}(\text{RESTRICTIONS}) + \varepsilon$$

The dependent variable for this study is the natural logarithm of the income share of the top twenty percent of the population for the countries examined. As mentioned earlier, there is a plethora of literature on the income effects of globalization on the lowest percentage of income earners. Tran (2010), for instance, used the natural logarithm of the percent of income accruing to the poorest forty percent of the population in his analysis and Huang et al. (2010) used the natural logarithm of the share of income held by the poorest twenty percent of the population. Evans and Timberlake (1980) used the Gini percentage of income inequality as their dependent variable in their analysis of the percent of income accruing to various income groups for 57 countries. However, their analysis considered fewer independent variables than the analysis herein. The former two studies' methods have been extrapolated to help further this research. The descriptive statistics for all variables included in the model may be seen in Table 2.

Many models include GDP as a potential factor influencing the income distribution. Ahluwalia (1976) for instance, included the rate of growth of GDP in his model. However, he did not find a significant relationship between this variable and the income share held by the top twenty percent. In our model GDP is expressed as the growth rate of per capita gross domestic product for the countries examined.

The level of infrastructure and the dissemination of information technology have been cited by many in the literature to be essential in combating poverty. Calderon and Serven (2004) found that the effect of infrastructure development on the incomes of the top 40%, while positive, was much milder than the incurring effect on the lower 40%, which served to lower overall income inequality. In our model, total kilometers of roads are included (ROADS) as a measure of infrastructure development.

Table 2 Descriptive Statistics

	Minimum	Maximum	Average	Std. Dev.
Income	29.71	69.91	45.42	8.04
FDI	-16.42	48.62	5.41	6.54
GDP	-14.57	30.34	3.83	4.69
Population	-2.10	17.48	1.42	2.04
Health	7.43	100.00	82.41	16.90
Roads	2021.00	6545326.00	252730.60	800241.90
Intake	57.19	179.38	105.25	13.52
Military	0.16	9.16	2.03	1.32
Political	20.96	96.68	73.18	17.82
Cultural	1.00	95.15	46.15	27.29
Restrictions	18.37	97.98	64.17	17.49

The relative level of human capital within countries has been cited as a potential influence on the income share held by the top twenty percent of the population. As a relative measure of human capital, the variable (INTAKE) has been included and is specified as the ratio of students that enroll in the first grade as a percentage of the total relevant age group. We expect this variable to be negatively related to the dependent variable. This conclusion is also confirmed by Ahluwalia (1976) who showed that the literacy rate of the population (used as a proxy for human capital) exhibited a negative effect on the income share held by the top twenty percent. This decrease in the income share of the top twenty percent was accompanied by an increase in the income share held

by the lowest forty percent. This finding is echoed in the research of Silva (2007), who found that increasing levels of education led to diminished levels of income inequality.

Public allocation of resources is another factor that has often been cited as having an effect on income distributions. In fact, the composition of public expenditure within developing countries has been attributed to playing a significant role in determining the effectiveness of policies aimed at alleviating poverty. A major facet of public spending that is often examined is military spending. Deger (1986) and Abell (1994) suggest that military spending tends to exacerbate income inequality by skewing income allocation disproportionately to the top income earners. In contrast to these results, Henderson (1998) found that increased defense spending created more opportunities for employment through military enlistment that would allow the lowest income earners to begin rising out of poverty. In our model, military expenditures as a percentage of GDP are included for each country (MILITARY).

It is also possible that the incomes of the top earners across the globe would be affected not only by aspects of public expenditure, but also by private expenditures such as healthcare. Several studies have shown a link between increased healthcare expenditures and increased poverty (Omotor, 2009; Wagstaff, 2002). The argument is that, when faced with catastrophic health costs, richer people will be able to cope more easily with the additional financial burden than poorer people (Xu Ke et al., 2003). To account for such a variable we included the variable (HEALTH) which is the amount of out-of-pocket private health expenditures as a share of gross domestic product. It should also be noted that the data for this variable was differenced once to rid the data of a unit root.

We have included four distinct measurements to consider the effects of different types of globalization on the income share of the wealthy. FDI is included in the analysis as a proxy for economic globalization. If globalization is benefiting the rich, then this variable is expected to positively affect the income share of the top quintile of the countries included. This positive effect would coincide with the conclusions of Kentor (1998) and Borensztein and Lee (1998). FDI in our model is expressed as the total amount of foreign direct investment as a percentage of GDP. The next three measures of globalization stem from the KOF Index of Globalization, which is comprised of several different sub-indexes.² Here we have included three of these sub-indexes: Political, Cultural, and Restrictions. The Political sub-index is composed of the number of foreign embassies in the country, membership in international organizations, and participation in U.N. Security Council missions. The Cultural sub-index is composed of the number of McDonald's restaurants per capita, which allows for some measure of the

² The KOF Index of Globalization was developed in 2006 for the purpose of determining the effect of globalization on economic growth. The Index considers economic integration, social integration, and political integration as the most important aspects of globalization for the purposes of the study. Twenty-three variables were used to construct three sub-indexes that were in turn used to generate the main index of globalization. The sub-index of economic integration was generated using two other indexes. One measured actual flows and consisted of trade, FDI, portfolio investment, and income payments to foreign nationals all as a percentage of GDP. The other measures restrictions, and consists of hidden import barriers, mean tariff rates, taxes on international trade (in percentage of current revenue), and capital account restrictions. The sub-index of political engagement consists of the number of embassies in country, membership in international organizations, and participation in UN Security council missions.

The sub-index of social globalization is generated from three other indexes. The first is an index of data on personal contact and is composed of outgoing telephone traffic, transfers (in percentage terms of GDP), international tourism, average cost of telephone calls to the U.S., and the foreign population as a percentage of the total population. The second piece was made from data on information flows and consists of telephone mainlines (per 1000 people), internet hosts per capita, internet users as a share of the population, cable television per 1000 people, daily newspapers per 1000 people, and radios per 1000 people. The final section of the social globalization index deals with cultural proximity and was generated using the number of McDonald's restaurants within a country, per capita.

The weights of the sub-indexes were determined using principal components analysis, and 2000 was used as a base year (Dreher, 2006).

dissemination of western culture. Finally, the Restrictions sub-index is a measure of openness of a country to international commerce and is composed of hidden import barriers, mean tariff rates, taxes on international trade (in percentage of current revenue), and capital account restrictions (Dreher, 2006). If globalization is benefiting the wealthy then one would expect Political globalization and Cultural globalization to exhibit a positive effect on the income share of the top twenty percent. Such results would be consistent with the results of Ramsay (1984), Evans and Timberlake (1980), and Jaumotte et al. (2013). At the same time, if the wealthy are gaining from globalization then the variable Restrictions have to exhibit a negative effect on the income share of the top twenty percent.

4. Results

The regression results are presented in Table 3. Our model was estimated with four globalization variables included, three of which stem from the KOF Globalization Index. In general, the variables displayed behavior consistent with our expectations. However, the only non-globalization variable that was found to be significant was the intake ratio of students into the first grade (INTAKE). In contrast to the findings of Ahluwalia (1976) and Silva (2007), this proxy for human capital was found to positively affect the income share held by the top twenty percent of income earners.

FDI was found to be significant and positive, implying that the increase in FDI enriches the share of income of the top twenty percent. This is consistent with the results of the studies conducted by Evans and Timberlake (1980), Jaumotte et al. (2013), and Kentor (1998). However, though statistically significant, the coefficient of the variable is quite small, so any effect that FDI may have on the income share held by the top twenty percent would be minimal. In addition to FDI, the measure for Cultural globalization is positive and significant at the one percent level, suggesting that cultural integration in the world increases the income share of the top quintile of the population in the countries studied. The variables for political globalization and restrictions to globalization were both significant at the one and ten percent levels, respectively.

Table 3 Results

Variable	Coefficient	T-Statistic
Constant	3.766	9.548***
GDP	0.001	1.140
Population	0.000	0.084
Health	0.000	0.312
Roads	0.000	0.312
Intake	0.124	2.164**
Military	0.005	0.993
FDI	0.002	1.712*
Political	-0.104	-2.695***
Cultural	0.045	3.205***
Restrictions	-0.072	-1.75*
AR(1)	0.173	2.758***
R-Squared		0.98
Adjusted R-Squared		0.97
F-Statistic		126.65
d		1.96
n		160

Note: *, **, and *** indicate significance at the 10, 5 and 1 percent levels respectively.

Both of these variables were found to negatively impact the income share held by the top quintile. That implies that when countries restrict their trade and are less open to global trade, the income share of their wealthy citizens will be negatively affected. Simultaneously, it suggests that the incorporation of countries in various international institutions negatively affect the income share of its top twenty percent. The latter implies that the more connected to worldwide organizations a country is, the harder it will be for the rich to possibly use their influences on their government to implement policies in their favor and at the expense of the poor. However, while these variables are significant, their respective coefficients are relatively small in magnitude.

5. Conclusion

Our results show that, indeed, globalization benefits the top twenty percent of income earners in the developing countries that were included in our model. The results indicate that, while there are few non-globalization factors included in the model that significantly affect the income share of the top twenty percent, there are several globalization factors that do. We see that increasing levels of economic and cultural globalization help to increase the income share held by the rich. On the other hand, increasing levels of political globalization and restrictions to globalization, or trade openness, lower the income share held by this quintile. While the number of countries included in the study is limited, its results do suggest that policy intended to decrease income inequality and redistribute income to the lower quintiles should focus on the goals of becoming more politically integrated while perhaps also enacting protectionist measures to control the degree of economic globalization.

References:

- Abell John D. (1994). "Military Spending and Income Inequality", *Journal of Peace Research*, Vol. 31, No. 1, pp. 35-43.
- Adams Samuel (2009). "Foreign direct investment, domestic investment, and economic growth in Sub-Saharan Africa", *Journal of Policy Modeling*, Vol. 31, No. 6, pp. 939-949.
- Ahluwalia Montek S. (1976). "Income distribution and development: Some stylized facts", *The American Economic Review*, Vol. 66, No. 2, pp. 128-135.
- Aggarwal Rimjhim (2006). "Globalization, local ecosystems and the rural poor", *World Development*, Vol. 34, No. 8, pp. 1405-1418.
- Agosin Manuel R. and Machad Roberto (2005). "Foreign investment in developing countries: Does it crowd in domestic investment?", *Oxford Development Studies*, Vol. 33, No. 2, pp. 149-162.
- Basu Kaushik (2006). "Globalization, poverty, and inequality: What is the relationship? What can be done?", *World Development*, Vol. 34, No. 8, pp. 1361-1373.
- Borensztein E., Gregorio J. De and Lee J. W. (1998). "How does foreign direct investment affect economic growth?", *Journal of International Economics*, Vol. 45, pp. 115-135.
- Calderan César and Serven Luis (2004). "The effects of infrastructure development on growth and income distribution", *Policy Research Working Paper Series: 3400*, World Bank.
- Cassette A., Fleury N. and Petit S. (2012). "Income inequalities and international trade in goods and services: Short and long-run evidence", *The International Trade Journal*, Vol. 26, pp. 223-254.
- Dollar D. and Kraay A. (2002). "Spreading the wealth", *Foreign Affairs*, January/February, pp. 120-133.
- Deger Saadet (1986). "Economic development and defense expenditure", *Economic Development and Cultural Change*, Vol. 35, No. 1, pp. 179-196.
- Dreher Axel (2006). "Does globalization affect growth? Evidence from a new index of globalization", *Applied Economics*, Vol. 38, No. 10, pp. 1091-1110.
- Durlauf Steven N. (1992). "A theory of persistent income inequality", *National Bureau of Economic Research Working Paper No. 4056*.
- Elmawazini Khaled and Nwankwo Sonny (2013). "Globalization and income gap between rich and poor nations", *Economic Issues*, Vol. 18, No. 2, pp. 19-40.

- Evans Peter B. and Timberlake Michael (1980). "Dependence, inequality, and the growth of the tertiary: A comparative analysis of less developed countries", *American Sociological Review*, Vol. 45, No. 4, pp. 531-552.
- Feenstra Robert and Hanson Gordon (1997). "Foreign direct investment and relative wages: Evidence from Mexico's maquiladoras", *Journal of International Economics*, Vol. 42, No. 3-4, pp. 371-393.
- Goldberg Pinelopi K. and Pavcnik Nina (2007). "Distributional effects of globalization in developing countries", Working Paper 12885, *National Bureau of Economic Research*.
- Hall Jason K. and Bass Loretta E. (2012). "The effects of global interaction on poverty in developing countries, 1991-2005", *American Sociological Association*, Vol. 18, No. 2, pp. 236-265.
- Harrison Ann and McMillan Margaret (2007). "On the links between globalization and poverty", *Journal of Economic Inequality*, Vol. 5, No. 1, pp. 123-134.
- Henderson Errol A. (1998). "Military spending and poverty", *The Journal of Politics*, Vol. 60, No. 2, pp. 503-520.
- Huang Chao-Hsi, Teng Kai-Feng and Tsai Pan-Long (2010). "Inward and outward foreign direct investment and poverty: East Asia vs. Latin America", *Review of World Economics*, Vol. 146, No. 3, pp. 763-779.
- Jaumotte Florence, Lall Subir and Papageorgiou Chris (2013). "Rising income inequality: Technology, or trade and financial globalization?", *IMF Economic Review*, Vol. 61, No. 2, pp. 271-309.
- Kentor Jeffrey (2001). "The long term effects of globalization on income inequality, population growth, and economic development", *Social Problems*, Vol. 48, No. 4, pp. 435-455.
- Kentor Jeffrey (1998). "The long term effects of foreign investment dependence on economic growth, 1940-1990", *American Journal of Sociology*, Vol. 103, No. 4, pp. 1024-1046.
- Klein Michael, Aaron Carl and Hadjimichael Bitia (2001). "Foreign direct investment and poverty reduction", *Policy Research Working Paper*, World Bank Group.
- Kletzer Lori G. (2005). "Globalization and job loss, from manufacturing to services", *Economic Perspectives: Federal Reserve Bank of Chicago*, pp. 38-46.
- Ligo Ethan (2006). "Poverty and the welfare costs of risk associated with globalization", *World Development*, Vol. 34, No. 8, pp. 1446-1457.
- Lindert Peter H. and Williamson Jeffrey G. (2003). "Does globalization make the world more unequal?", *Globalization in Historical Perspective*, pp. 227-275.
- Mold Andrew (2004). "FDI and poverty reduction: A critical reappraisal of the arguments", *Les Investissements Directs Trangers dans les Pays en Development: Les Diversit des Impacts*, Vol. 20, No. 91.
- Nissanke Machiko and Thorbecke Erik (2006). "Channels and policy debate in the globalization-inequality-poverty nexus", *World Development*, Vol. 34, No. 8, pp. 1338-1360.
- Omotor Douglasson G. (2009). "Determinants of federal government health expenditures in Nigeria", *International Journal of Economic Perspectives*, Vol. 3, No. 1, pp. 1-18.
- Ramsay Robert (1984). "UNCTAD's failures: The rich get richer", *International Organization*, Vol. 38, No. 2, pp. 387-397.
- Silva Julie A. (2007). "Trade and income inequality in a less developed country: The case of mozambique", *Economic Geography*, Vol. 83, No. 2, pp. 111-136.
- Srinivasan T. N. and Wallack Jessica S. (2004). "Globalization, growth, and the poor", *De Economist*, Vol. 152, No. 2, pp. 251-272.
- Tran Dang T. (2010). "Globalization factors in income distribution and poverty in developing countries", *Indian Journal of Economics and Business*, Vol. 9, No. 1, pp. 147-157.
- Wade Robert H. (2003). "Is globalization reducing poverty and inequality?", *World Development*, Vol. 32, No. 4, pp. 567-589.
- Wagstaff Adam (2002). "Policy and practice: Poverty and health sector inequalities", *Bull World Health Organization*, Vol. 80, No. 2, pp. 97-105.
- Xu Ke, Evans David B., Kawabata Kel, Zeram dini Rladh, Klavas Ju and Murray Christopher J. L. (2003). "Household catastrophic health expenditure: A multicountry analysis", *The Lancet*, Vol. 362, pp. 111-117.