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Income Inequality, Welfare Spending, and Globalization

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Abstract

This paper examines the relationship between government redistributive spending, globalization, and inequality measures. Does government social spending help to maintain equality within nations? Does this social spending affect less developed nations differently than developed nations? What role does globalization play in this relationship? This paper will examine these questions. The study will be investigated using a cross-sectional panel data set for 12 advanced industrialized and 35 less developed nations. The study finds that in industrialized nations, trade can benefit an economy, while portfolio flows may hurt it. All aspects of governmental spending in OECD nations, including health care spending, education spending, and social security spending, seem to be redistributive and benefit the nation's development. In less developed nations, the effect of globalization does not seem to have a consistent pattern. Trade and portfolio flows seem to be beneficial in some areas, while harmful in others. Also, government spending is redistributive in some areas and counterproductive in others.

JEL H23, O11, I38

Keywords: Income inequality, social and welfare spending, globalization

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Introduction

The question of how to end poverty has always been at the forefront of government agendas, but in recent years, it has become increasingly prominent in developed nations. A year after the start of the Great Recession in 2008, the unemployment rate in the United States had risen to a peak of 10 percent according to the Bureau of Labor Statistics website. Household net worth dropped nearly 18 percent, mainly caused by a decline in housing values. This recession has not hurt everyone equally. Those who were low to middle income earners were hit the hardest because of this loss in housing value, where most of their net worth lays, the high unemployment, and nearly stagnant wages. According to the US Census Bureau website, the amount of people living below the poverty line increased from around 35 million in 2008 to 44 million by 2009. The top income earners, on the other hand, have remained virtually untouched, which caused an increase in the income inequality of the nation.

In a speech titled, "The Rise and Consequences of Inequality in the United States," Alan Krueger explained the inequality increase in the US has caused an "unhealthy division in opportunities," and that it poses an enormous threat to the nation's well-being and economic growth. He explained that since the 1970's, with the exception of the Clinton years, the income of the wealthy had increased dramatically, while the income of the middle class had stayed relatively constant, and the income of the poor had actually decreased. Prior to this period, income in each quintile had grown together. He attributed much of this widening disparity to changes in technology that had replaced traditional factory workers, changes in tax policies which mainly favor the

wealthy, and an increase in globalization which caused workers in the US to compete with international workers who required much less pay.

Because of this increase in globalization, this recession has not been contained to the industrialized world. Markets around the world are becoming progressively linked. So in the current era of globalization, can government social spending help improve the inequalities of a nation?

While many still believe that globalization has potential to benefit developing nations by expanding knowledge and opportunity, it also cannot be ignored that it may come with costs. Along with globalization, come volatile financial markets. Markets are increasingly linked to one another, and therefore a financial crisis in one nation can be expected to spread throughout the globe, as was seen with the collapse of the banking industry in the United States. Globalization also helps spread developments in technology. Although technological advances are traditionally thought of as a benefit, it must be remembered that in developing nations, these technologies are confined to a few large cities, and therefore tend to increase inequality, leaving those living in rural areas left out of the development (Rudra 2004). Lastly, as mentioned in the 2011 United Nations Human Development Report, globalization has brought about environmental degradation from increased carbon monoxide emissions and the destruction of various landscapes, which provide resources such as oil and lumber. Poor nations have been left to deal with more than their share of this environmental degradation. With this said, can social spending help maintain income equality in less developed nations despite the constraints placed on each country due to globalization?

Income inequality is not the only factor that must be examined when thinking about the overall equality of a nation. According to the United Nations Human Development Report 2011, people today are living longer, are more educated, and have better access to goods and services. Even the poorest nations in the world have seen improvement. The Human Development Index (HDI), which is a composite measure of various health, education, and income variables released by the United Nations, has steadily increased in nearly all nations since 1970. It also shows a decrease in inequality between nations, meaning that the poor countries are now catching up to the wealthier nations. Examining this aspect of equality paints a far prettier picture than examining income inequality alone. Have these increases come about due to an increase in globalization or government social spending or a combination of both?

This paper investigates the question of how government social spending affects inequality, and what role globalization plays in that relationship. It also examines the effect of social spending on other factors of development and equality including infant mortality, and absolute poverty. Industrialized countries and less developed countries will be examined independently in order to determine if globalization affects them differently. First, this paper will examine the relationship between globalization, welfare spending, and inequality in 12 high-income Organization for Economic Cooperation and Development, or OECD nations. A list of countries used is included in the appendix. Next, the question of whether international market expansion has a negative effect on the income distribution in 35 less-developed countries, or LDC's, will

be examined. Finally, the other factors of development will be examined. Data is used for these countries from the years 1960-2010. The analysis uses all data that is available.

In order to determine the best method of analyzing the data, a few tests are run. First an F test for individual effects is run to determine if the best method is a fixed or pooled effects method. An F value of 11.9641 and a p-value of 8.046e-15 suggest that the fixed effects method is appropriate. In order to confirm this, a Hausman Test is run in order to test if the random effects model may be a better fit. A chi-squared value of 16.9173 and p-value of 0.05003 suggest that the fixed effects model is in fact the correct model. This model adds country and year dummy variables that control for distinct differences across countries and years. Decadal dummies are also included in order to determine changes that have occurred across different decades.

Literature review

The question of whether social spending helps improve income distribution in this era of expanding markets is very important. In the developed world, it is important to maintain the welfare of the nation in order to allow countries to compete globally. Until recently, it had been thought that globalization would force countries to abandon welfare spending because it can be costly and prevent growth and efficiency efforts. Recent research suggests, however, that welfare spending can benefit globalization by increasing productivity and attracting new capital, if in fact, that spending proves to be redistributive (Rudra 2004).

Many argue that social spending protects the disadvantaged and can in turn, be an asset to the economy by providing greater stability (Katzenstein 1985). Also, since the politics of advanced nations are insulated from the larger international political and economic pressures, the politics of social spending in those developed countries are less likely to be affected by globalization (Garret 2001).

The question of whether social spending helps improve the income distribution in less developed nations is equally important. In the developing world, welfare politics are much more vulnerable to international market conditions. Many have argued that welfare spending in LDC's tends to be regressive, and that openness from globalization diminishes the ability for collective action and worsens the ability for workers to demand more redistributive spending. This is because it is thought that globalization increase inequality and allows the power of a nation to fall in the hands of the political elite, preventing the poor and middle class from having a role in the decision making process (Huber 1996).

In a study by Nita Rudra (2004), she examines the relationship between globalization and welfare spending and finds that social and welfare spending, government spending on education, and government spending on health help to improve income inequality in developed nations, but that only educational spending helps to improve inequality in less developed countries. She argues that this is due to the effect of globalization in these nations. These developing nations face increasing global competition and influences, which encourages redistributive spending in education in order to make the country more productive, which then benefits the policy

makers and political elites, as well as society as a whole. Social spending and health care spending on the other hand, do not benefit the political elites, and are therefore subject to greater political lobbying and clientalism on behalf of the middle class and the wealthy.

Estimating Equation

The baseline equation used in this study is as follows:

$$Development\ Variables_{it} = \beta_1 welfare_{it-1} + \beta_2 openness_{it-1} + \beta_3 X_{it-1} + \beta_4 decade_t + \beta_5 country_i + \beta_6 year_t + \mu_t$$

This equation was first used in the study by Nita Rudra (2004) and directly tests the effects of openness and welfare spending on inequality. In the Rudra study Gini is the dependent variable and represents inequality. This paper also examines absolute poverty, percent of income held by the lowest 10 percent, and infant mortality as the dependent variables. Welfare represents the welfare spending variables, education, health, and social security. Openness represents the trade variable and the portfolio variable, which represents foreign direct investment. X is a vector of control variables including democracy, populations, and GDP per capita. The country and year dummy variables account for the effect of regional conditions. The variables are lagged to ascertain that causality occurs from the exogenous variables to the dependent variable.

Data

Dependent Variables

The first dependent variable used for this study is the Gini coefficient. This is used to measure inequality. A higher Gini coefficient represents higher inequality with 0 meaning perfect equality, and 100 meaning perfect inequality. Perfect inequality would mean that one person holds all the income leaving everyone else with nothing, while perfect equality would suggest that everyone in the society holds an equal share of the wealth. The coefficients were obtained from the World Bank and from Deninger and Squire's (1996) dataset. They diligently formulate this data and in the end, accept very few of the final observations, so their dataset is of very high quality. Table H and Table I contain a summary of statistics for both OECD nations and LDC's, respectively. The average Gini coefficient for OECD nations is significantly lower at 30.26, compared to the average in LDC's of 44.08.

The next dependent variable used is the percent of income held by the lowest quintile. The final variable used is absolute poverty. Since the baseline poverty level of $1.25 a day does not apply to the developed world, the regression using absolute poverty is only performed using data obtained for the LDC's. The data for these variables was obtained from the World Bank.

Independent Variables

The first independent variables used are the welfare spending variables. These variables were obtained from the IMF's Global Finance Statistics Database(GFS). They include government spending on social security and welfare, as well as education and health. If this spending is redistributive as expected, then coefficients are expected to be

negative when regressed on inequality, poverty, and infant mortality and positive when regressed on the lowest quintile. This would indicate that these variables decrease inequality and encourage development. If the coefficients have the opposite values, then it shows that welfare spending is not redistributive, and that it either has an adverse effect on equality and development or has no effect at all.

The next independent variables used represent openness. The conventional measurement for this is trade, which is exports plus imports as a percentage of to GDP. Also used is the portfolio variable, which represents foreign direct investment as a percent of GDP. This data was obtained from the World Bank Database. If globalization has a negative effect on inequality, as some critics expect, this would result in a positive coefficient. If globalization decreases inequality it is expected to have a negative coefficient.

Democracy is one of the independent variables represented by the control vector X in the estimating equations. As suggested by Rodriguez (1999), countries with healthier political systems with less corruption tend to have less income inequality. Democracy is used because it is expected that a democratic nation will have a more favorable distribution of income. The Polity IV data set is used for this measure. In this dataset, democracy is scored on a scale of 0 to 10, with 10 being the highest. This score is based on (1) regulation, competitiveness, and openness of executive recruitment, (2) executive constraints, and (3) regulation and competitiveness of political competition. Any country rated at 7 or above was labeled democratic and given a score of 1. Any country below 7 was labeled autocratic and given a score of 0. This shows if non-

democratic nations perform differently than democratic nations with respect to the development variables. It is expected that non-democratic countries will have higher income inequality, poverty, and infant mortality, and lower percentage of income held by the lowest quintile. Because all of the 11 OECD nations were democratic, this variable is left out of those regressions.

Just because a nation is considered democratic does not necessarily mean that it is without corruption. Because of this, a corruption variable is added to the model. Transparency International releases the corruption perceptions index annually. The CPI ranks countries according to how corrupt their public sector is thought to be. It is a composite index, which uses corruption related data, and reflects the views from people around the world, who live and work in the evaluated countries. The countries are given a score of 1 through 10, with 10 being considered very clean, and 0 being completely corrupt. As with the democracy variable, any country scoring above 7 was considered non-corrupt and given a value of 0, and any country scoring 6 or below was considered corrupt and given a value of 1. It is expected that corrupt countries will have higher inequality, infant mortality, and poverty, and a lower share of income to the lowest quintile than non-corrupt countries.

The next independent variable used to estimate the equation represents economic development. It is expected that as economic development increases, equality will increase, but at a decreasing rate. In a paper by Kuznets (1995), he hypothesized that as a country grows wealthier, it is expected that inequality will then begin to rise. This implies that the relationship between economic development and

inequality can be represented with a U-shape. This economic development will be represented by GDP per capita. GDP per capita will then be squared to confirm the hypothesis stated above.

Population growth is expected to increase inequality because a fast growing population is thought to put stress on the resources of a country and decrease its productivity. Also, the larger the population, the smaller share of wealth each individual can claim. For this model, the share of the population over age 65 is also used along with a growth variable. It is expected to increase inequality because a large elderly population is thought to lower productivity and the savings rate, and also to lower the transfer of income (Deaton and Paxson 1997).

Atkinson, Piketty, and Saez (2011), study the time series of the share of income earned by top-income earners. This study shows that throughout most of the twentieth century, top income shares throughout the world fluctuated with the rest of their societies, through depressions, wars and booms. Over the past three decades however, the top income shares have increase substantially, especially in English speaking countries. One possible explanation, they argue, were the tax cuts put in place by Ronald Reagan and Margaret Thatcher in the US and the UK, as an attempt to privatize and liberalize the capital markets. These tax cuts could have allowed top income earners to grow their wealth, while cutting redistributive programs. This study goes on further to find a negative correlation between marginal tax rate and top income shares. This effect will be tested in this paper, by analyzing the decadal dummy variables.

The last independent variable used represents urbanization. A larger urban population implies a larger middle class, more employment, better healthcare, and greater technology. It is thought to increase the productivity of a country through higher skilled workers, increased education, and higher literacy rates (Boschi 1987). Therefore, it is expected that the coefficient share of population that is urban will have a negative coefficient when regressed on inequality, infant mortality and poverty, and a positive coefficient when regressed on the lowest quintile.

Results

The results that follow reveal an interesting pattern. Globalization seems to have a mixed effect in OECD nations. With the exception of infant mortality, trade seems to benefit a nation, while portfolio flows seem to hurt it. In most cases, government spending seems to reduce inequality and benefit society as expected. In the LDC's, globalization seems to have a different effect. Trade and portfolio flows tend to have the same signs on the coefficient for each regression, although the regressions for each dependent variable show conflicting results. Only when examining healthcare spending are the coefficients for these openness variables negative as expected. Coefficients for government spending are mixed, depending on the dependent variable used, which indicates that it is not redistributive in all cases. A detailed explanation of each regression follows.

OECD Nations

The model, using the Gini Index as the dependent variable was first applied to the OECD nations. If critics of globalization are correct, then the coefficients for Trade and Portfolio flow are expected to be positive and significant. In table A, the coefficients for trade are negative, but not statistically significant, suggesting that it has no effect on inequality. The Portfolio flows variable however, is positive and statistically significant, indicating that the globalization critics may be correct that globalization my increase inequality, although its effect is very small.

Next, the coefficients for the spending variables are examined. The coefficients for all the government spending variables are negative and statistically significant, indicating that all types of spending may decrease inequality. As expected, the percent of the population over 65 variable is positive and statistically significant indicating that having a larger elderly population may increase inequality. The corruption variable also indicates that a corrupt country will increase its Gini index by about five points, which means it has significantly higher inequality. The results also show that inequality has increased in the OECD nations over the past decades, but seems to have decreased in the 2000's.

Next, the model was regressed using the percent of income held by the lowest quintile as the dependent variable. In table B, the coefficients for trade are mostly positive and statistically significant, with the exception of the equation using education spending, while the coefficients for portfolio flows are positive and significant. This suggests that globalization may increase the share of income held by the poorest of a nation, which is conflicting with the results from table A. The coefficients for the

spending variables are all positive and significant, which supports the finding in Table A, that social spending is redistributive and can decrease inequality. When examining the decade variables, it appears that the low quintile held a larger percent of income throughout the 1980's and 1990's than in earlier times and in the 2000's.

Finally, the model was regressed using infant mortality as the dependent variable. In Table C, the coefficients for trade are positive, but not significant. The coefficients for the portfolio flows are negative, and only significant when using Education spending, suggesting that an increase in portfolio flows decreases the amount of infants that die. The coefficients for the spending variables are all negative and significant, indicating that government of all types will decrease infant mortality. The Pop65 variable is negative and significant. Oddly, the Y90 variables are positive and significant, indicating that infant mortality increase dramatically in the 1990's and then decreased in the 2000's.

LDC results

The next step is to examine the models using data from the LDC's. It is unknown if openness and globalization will have the same effect on less developed nations as they have on developed nations. The model was used with the Gini Index as the dependent variable, as with the OECD nations. The results listed in Table D are somewhat conflicting. The coefficients for the trade variables are mixed, as with the coefficients for Portfolio flows. In both cases, they are negative when examined with health care spending, but are not significant in any case, which suggests that they have no effect. The social and health spending variables are significant, but the education

variable is not significant. The coefficient for social spending is positive, indicating that it increases inequality, instead of decreasing it like with the OECD nations. The coefficient for healthcare spending shows that it decreases inequality, as does the education spending variable, but it is not statistically significant. The coefficient for the corruption variable is positive and significant. This indicates that a corrupt country has a Gini Index of six or more points higher than nations without corruption. This is a significant difference in terms of inequality.

The coefficient for democracy is negative, but is not significant, indicating that is has no effect in this model. The coefficients for GDP per Capita and GDP Capita squared are mostly significant, and have opposite signs. This confirms the argument by Kuznets, that it can be represented by a U-shape, which means that as an economy develops, equality will increase, but at a decreasing rate. The year variables also show a negative coefficient through the 1980's and 1990's, but none were statistically significant, so they cannot be interpreted.

Next, the model is examined using the percent of income held by the lowest quintile as the dependent variable. The pattern of results in Table E, shows similar findings as that of Table D. The results however should show opposite results. The coefficients for the trade variables and the portfolio flows variables are positive, indicating that openness increases the share of wealth held by the poorest of the nation. The social security spending variable and the education spending variable increase the wealth held by the low quintile, but the health care spending variable decreases the share of wealth. The GDP per capita and GDP per capita squared variables

show the U-shaped relationship from table E, showing that development increases the wealth of the poor, but at a decreasing rate. The coefficients are not statistically significant however. The variable for the population over 65 is negative and statistically significant, as expected from analyzing table E. The variables for corruption and democracy, show opposite signs as expected, although few are significant.
As with the OECD nations, the share of income held by the lowest quintile seems to have been larger in the 1980's and 1990's than in earlier years and after 2000.

Some of the coefficients were as expected, while others showed conflicting results from the comparison with table D. When analyzing data from the developing world, it must be remembered that the data is not always reliable or accurate, and the results from such analysis must be interpreted with caution.

The Model was then regressed using infant mortality as the dependent variable. In table F, the coefficients for both the trade variables and the portfolio flows variables are negative and statistically significant, indicating that globalization has decreased infant mortality. When examining the government spending variables, the coefficient for the health care variable is negative and significant, while the variables for social spending and education spending are positive and insignificant. It is expected that healthcare spending will decrease infant mortality while the effect of social spending and education spending on it will be arbitrary. This confirms that expectation. Corruption seems to increase infant deaths by slightly over 1 child per one thousand, while democracy decreases the amount of deaths by 2 when using the education spending variable, and by over 7 when using the health and social spending variables.

The coefficient for the urban population variable, which has not been very significant before, is negative, which means that as more people move to urban areas, infant mortality decreases. The year variables show a significantly higher infant mortality in the earlier decades than the most recent years, and are mostly significant.

The final regression that was analyzed used absolute poverty as the dependent variable. This was not used in the OECD nations because there was not adequate data available for most of the nations. In Table G, the coefficients for the majority of the trade variables and the portfolio flows variables are negative, but only significant when using health care spending. The spending variables for health care and social spending have positive coefficients while only the coefficient of educations spending shows a decrease in poverty. None of these coefficients are significant however, which suggests that welfare spending has no effect on poverty in LDC's. The variable for urban population was significant and negative, indicating that as the urban population increases, poverty decreases. The year variables show that poverty was lowest in the 1980's and highest in the 2000's.

Conclusion

So in the current era of globalization, does government social spending help improve the inequality and development of a nation? The findings suggest that in many cases, the answer could be yes. The studies using the OECD nations suggest that in most cases, government spending seems to be redistributive because it reduces inequality and infant mortality.

The findings from the analysis of the LDC's show that in some cases, government spending is beneficial as well, although the results are more conflicting. The study shows that Healthcare spending and Education spending decrease inequality, while social spending seems to exacerbate it. When examining the effect of spending on absolute poverty in LDC's, only education spending is seen to reduce it. This seems to support the claim by Rudra, that education spending is likely to have a greater effect on development and equality, because it is encouraged due to the fact that it makes a country more competitive in a global market. Social security spending and healthcare spending tend to only benefit the individuals, and therefore are less likely to be encouraged by policy makers and the political elite, specifically in nations showing greater corruption.

This paper also shows an interesting, yet conflicting relationship between globalization, development, and equality. In OECD nations, the openness variables show different effects. When examining inequality, trade seemed to decrease it, while portfolio flows seemed to increase inequality. This seems to contradict the statement by Alan Krueger, that globalization has taken jobs away from industrialized countries and thus, increased inequality. Portfolio flows have a much more negative effect than trade, which includes manufacturing products. When examining infant mortality however, portfolio flows appears to be beneficial, while trade seems to be harmful.

In the LDC's the openness variables seem to show that while openness may increase inequality, it may also decrease infant mortality and poverty, and increase literacy. As with most aspects of life, things come with costs. So if the cost of an

improved standard of living means a widening gap between the rich and poor, is that a negative trade-off? If it makes a nation better overall, many would argue no.

This paper shows that globalization and government spending affects developed and developing countries differently. Further research could be done to show differences between specific countries in each group. Country specific studies will allow a more detailed assessment of the policy decisions and consequences made by each government, and the effect it has on its people.

Tables

Table A: GINI Index as the dependent variable in OECD Countries

Variables	*Results*		
Trade	-0.005472	-0.005234	-0.047418
	(0.00346)	(0.002325)	(0.023518)
Portfolio	9.5194e-11 ***	1.067e-10***	9.498e-11***
	(2.0258e-11)	(1.8711e-11)	(2.0157e-11)
SocialCap	-0.00015434 *		
	(0.000050468)		
HealthCap		-0.004415***	
		(0.000101)	
EducCap			-0.0032776 ^
			(0.0001729)
Corruption	5.1966 *	2.3752	5.1192 *
	(2.4282)	(2.3496)	(2.4614)
Growth	0.010989	0.00015	0.009964
	(0.013163)	(0.1215)	(0.012948)
Pop65	1.0526 **	0.9553**	1.0029 **
	0.034028	(0.3201)	(0.3471)
Y60	2.3857 ^	3.2678***	2.2457 *
	(1.5498)	(0.2342)	(1.08783)
Y70	3.9529 ^	4.255**	2.7394 ^
	(2.875)	(1.6767)	(2.1934)
Y80	3.2744 ^	4.2526**	2.1433 ^
	(1.7551)	(1.3609)	(1.7640)
Y90	3.5774*	4.4836**	3.0118 ^
	(1.4743)	(1.3116)	(1.5395)
R-squared	0.36963	0.46369	0.36868
Adjusted R-squared	0.30078	0.37815	0.30067

Fixed effects regression estimates. Figures in parentheses are standard errors.
Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘^’

Table B: Percent of Income held by the lowest quintile as the dependent variable in OECD Countries

Variables	*Results*		
Trade	0.0003837*	-0.003948	0.0-19384*
	(0.000284)	(0.83833)	(0.008391)
Portfolio	2.3948e-11 *	9.39382e-11 **	8.93873e-12 *
	(1.39483e-12)	(2.39483e-13)	(2.39384e-13)
SocialCap	0.000083729 ***		
	(0.000012212)		
HealthCap		0.00009338374 ^	
		(0.00019203)	
EducCap			0.000283749 *
			(0.00093847)
Corruption	-0.329384***	-0.129384 ^	-0.329482 ^
	(0.028374)	(0.02923)	(0.0173844)
Growth	-0.029847	-0.0029847	0.0938487
	(0.0883028)	(0.009384)	(0.019383)
Pop65	0.098373	0.0193837	-0.019383
	(0.393847)	(0.889383)	(0.293837)
Y60	-0.0029383	-0.77363	-0.1938
	(1.000383)	(0.15938)	(0.9383)
Y70	-0.938272	-0.29484	-0.19384
	(2.3048)	(3.0928)	(1.9384)
Y80	0.08298373	0.0700938	-0.34546 ***
	(0.21094)	(0.039874)	(0.0095738)
Y90	0.3847 **	0.39383 **	0.329483 ***
	(0.293837)	(0.0139485)	(0.0488293)
R-Squared	0.48373	0.4593	0.61942
Adjusted R-Squared	0.47293	0.42038	0.59382

Fixed effects regression estimates. Figures in parentheses are standard errors.
Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘^’

Table C: Infant Mortality as the dependent variable in OECD Countries

Variables	*Results*		
Trade	0.019549	0.016925	0.0072175
	(0.0013233)	(0.014347)	(0.0015709)
Portfolio	-3.3495e-12	-3.5106e-12	-1.1350e-11 ^
	(2.6159e-12)	(4.0547e-12)	(6.3331e-12)
SocialCap	-0.00019147 *		
	(0.00016709)		
HealthCap		-0.00045033 *	
		(0.00019187)	
EducCap			-0.0016492 *
			(0.000815)
Corruption	4.8126	3.1449	1.5612
	(0.18993)	(2.1388)	(0.21705)
Growth	-0.072448	-0.066146	-0.083264
	(0.052866)	(2.1388)	(0.075967)
Pop65	-1.1867 ***	-1.3701 ***	-1.347***
	(0.11539)	(0.12032)	(0.13788)
Y60	1.9383 ^	0.29385 ***	2.39483 **
	(0.029384)	(0.0209384)	(0.78493)
Y70	6.2959 ***	5.9432 ***	4.8045 ***
	(0.07568)	(0.12032)	(1.0511)
Y80	2.8818 ***	2.2395 ***	1.4936 ^
	(0.57899)	(0.53674)	(0.79363)
Y90	8.8533*	3.8242 ***	5.2944 ^
	(0.40269)	(0.04326)	(0.54849)
R-squared	0.80004	0.7954	0.80399
Adjusted R-squared	0.73729	0.74273	0.73392

Fixed effects regression estimates. Figures in parentheses are standard errors.
Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘^’

Table D: GINI Index as the dependent variable in LDC's

Variables	*Results*		
Trade	0.0034599	-0.0023509	0.0011506
	(0.014334)	(0.014326)	(0.014498)
Portfolio	2.8730e-11	-1.8894e-11	3.5390e-11
	(9.5073e-11)	(8.1529e-11)	9.6636e-11
SocialCap	0.0013766 *		
	(0.0010565)		
HealthCap		-0.006874 *	
		(0.0029137)	
EducCap			-0.00057706
			(0.0016416)
Corruption	7.0343 **	6.4511 **	6.0349 **
	(2.1579)	(2.1607)	(2.2042)
Democracy	-0.15166	-0.31583	-0.14925
	(0.7023)	(0.70489)	(0.7382)
GDPCap	-0.001777 *	-0.0011469	0.0015196 *
	(0.00069867)	(0.00072429)	(0.0007071)
GDPCap2	6.6010e-08 *	4.2849e-08	5.7583e-08 *
	(2.7075e-08)	(2.8039e-08)	(2.7306e-08)
Growth	0.095279 ^	0.095759 ^	0.076628
	(0.055643)	(0.055046)	(0.059996)
Pop65	0.38324	0.06451	0.25945
	(0.53299)	(0.05322)	(0.54998)
Urban	0.012711	0.084984	0.023437
	(0.063273)	(0.0060111)	(0.064819)
Y60	1.4649	2.5807	1.4583
	(1.6959)	(1.6659)	(1.7318)
Y70	-0.49757	0.4317	-0.56444
	(1.4479)	(1.429)	1.4903
780	0.95469	-0.30465	-1.0133
	(1.1107)	(1.0847)	(1.1387)
Y90	0.0041213	0.32991	0.0030257
	(0.077607)	(0.76127)	(0.80746)
R-squared	0.1443	0.15672	0.13059
Adjusted R-squared	0.11581	0.12603	0.10459

Fixed effects regression estimates. Figures in parentheses are standard errors.
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '^'

Table E: Share of income held by the lowest quintile as the dependent variable in LDC's

Variables	*Results*		
Trade	0.0012969 ^	0.00014499 ^	0.00013526 ^
	(0.000075012)	(0.000073905)	(0.000073024)
Portfolio	6.5847e-12	7.8474e-11	8.39384e-12
	(1.29485e-12)	(8.93857e-12)	(9.394840e-12)
SocialCap	0.000050002 ^		
	(0.00000439)		
HealthCap		-0.000003308	
		(0.000022902)	
EducCap			0.0000056258 ^
			(0.0000032771)
Corruption	0.0080573 ^	0.081999 ^	0.043651
	(0.0044865)	(0.044574)	(0.047610)
Democracy	-0.0029975	0.0032816	-0.0033424
	(0.0027331)	(0.002713)	(0.0026594)
GDPcap	5.1506e-06	4.585e-06	5.2009e-06
	(3.7974e-06)	(3.7457e-06)	(4.43003e-06)
GDPcap2	-1.70106e-10	-1.4896e-10	-1.7177e-10
	(2.1549e-10)	(2.1469e-10)	(2.3178e-10)
Growth	0.000094756	8.1268e-05	0.000012867
	(0.00019586)	(1.9321e-04)	(0.000129325)
Pop65	-0.010242 **	-0.010091 **	-0.010264 **
	(0.0037020)	(0.0036389)	(-0.003603)
Urban	9.1163e-06	0.000077192	0.000037772
	(3.2097e-04)	(0.00031257)	(0.00030531)
Y60	0.0008474	0.0007484	0.008374 *
	(0.003948)	(0.009838)	(0.0001029)
Y70	0.0031895	0.0029721	0.0029715
	(0.0027333)	(0.002689)	(0.0026598)
Y80	0.0076251 *	0.0069119 ^	0.0069529 ^
	(0.0038241)	(0.0037507)	(0.0037011)
Y90	0.011867 *	0.011443 *	0.011647 *
	(0.0051565)	(0.0050533)	(0.0049988)
R-squared	0.13604	0.12957	0.11374
Adjusted R-squared	0.10085	0.096996	0.084823

Fixed effects regression estimates. Figures in parentheses are standard errors.
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '^'

Table F: Infant Mortality as the dependent variable in LDC's

Variables	*Results*		
Trade	-0.09829 *	-0.085348 *	-0.092632
	(0.048848)	(0.040895)	(0.057946)
Portfolio	-1.1214e-09 **	-6.0816e-10 **	-1.4788e-09 **
	(3.8746e-10)	(1.9024e-10)	(5.0782e-10)
SocialCap	0.00198364		
	(0.035508)		
HealthCap		-0.00109066 *	
		(0.00047654)	
EducCap			0.0043188
			(0.089435)
Corruption	1.1363 *	1.2363 *	1.2696
	(0.57192)	(0.56074)	(0.3910)
Democracy	-7.6046 **	-7.4926 **	-2.0539
	2.5775	(2.3729)	(3.1480)
GDPCap	0.002.1467	0.0011960	-0.0018067
	(0.0018684)	(0.001591)	(0.0022146)
GDPCap2	-5.7089e-08	-4.4593e-08	3.8027e-08
	(4.9342e-08)	(4.2842e-08)	(5.7370e-08)
Growth	-0.26813	0.26610	-6.4349
	(0.20735)	(0.18412)	(0.25514)
Pop65	-0.57162	-1.5604	-2.7544
	(1.6368)	(1.4762)	(1.9609)
Urban	-0.80774***	-0.87029 ***	-0.66750 *
	(0.022759)	(0.19652)	(0.26494)
Y60	4.41350 ***	4.3456 ***	4.2981 ***
	(0.62833)	(0.56487)	(0.071488)
Y70	0.30106	2.9232	1.3516 *
	(5.0678)	(4.3697)	(0.58717)
Y80	-7.7041 *	5.9287 ^	1.5185
	(3.8425)	(3.2717)	(4.4410)
Y90	-6.5346 **	-5.8790 **	-3.0182
	(2.3663)	(2.0985)	(2.9598)
R-squared	0.32526	0.31542	0.24326
Adjusted R-squared	0.29629	0.29006	0.21678

Fixed effects regression estimates. Figures in parentheses are standard errors.
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '^'

Table G: Absolute Poverty as the dependent variable in LDC's

Variables	*Results*		
Trade	-0.0082802	-0.018602	0.00059044
	(0.035548)	(0.02637)	(0.002749)
Portfolio	-1.2229e-10	-2.6728e-10 ***	-1.8829e-11
	(9.9861e-11)	(7.2399e-11)	9.5146e-11
SocialCap	0.0010792		
	(0.0013000)		
HealthCap		0.0013567	
		(0.0039136)	
EducCap			-0.00014525
			(0.0014760)
Corruption	4.0695	1.1752	5.2666 *
	(1.8827)	(1.9523)	(2.5409)
Democracy	-2.6648 ^	-2.7328 ^	-2.1307
	(1.5819)	(1.4207)	(1.4419)
GDPCap	-0.0034621	-0.0015018	-0.0031036 ^
	(0.0025744)	(0.0021241)	(0.0016914)
GDPCap2	2.8667e-07	2.2258e-08	1.6947e-07
	(2.5248e-07)	(1.6451e-07)	(1.3470e-07)
Growth	0.14362	0.17035 ^	0.11584
	(0.10158)	(0.094952)	(0.083124)
Pop65	1.0720	1.2533	1.2470
	(1.2265)	(1.2689)	(0.99144)
Urban	-0.63835 ***	-0.52152 ***	-0.31754 *
	(0.16740)	(0.15138)	(0.12243)
Y60	-1.3517 ***	-1.1973 ***	-1.0901 ***
	(0.27219)	(0.26715)	(2.2187)
Y70	-1.1907 **	-1.2651 *	-2.38833
	(0.40844)	(3.58887)	(2.3785)
Y80	-4.5347 *	-3.5119 ^	-1.9115
	(2.0052)	(1.8319)	(1.6147)
Y90	-1.6070	-1.1647	-0.98242
	(1.1430)	(1.0695)	(0.98392)
R-squared	0.35151	0.33414	0.31171
Adjusted R-squared	0.25212	0.24743	0.21796

Fixed effects regression estimates. Figures in parentheses are standard errors.
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '^'

Table H: Summary of Data for OECD Nations

Variable	*Median*	*Mean*	*Standard Deviation*	*Minimum*	*Maximum*
Gini	30.71	30.26	4.38	22.9	41
LowQuin	0.082	0.079	0.015	0.042	0.11
InfantMort	8.6	12.47	11.7	2.1	82
Trade	83.47	69.20	51.27	15.27	324.33
Portfolio	73.28	80.02	8.39	2.3	524.7
SocialCap	6,143	5,967	2,565	1,298	16,424
HealthCap	2,034	2,326	1,332	877	8,183
EducCap	964	1,107	593	59	2,971
Growth	3.22	3.249	2.79	-8.2	8.49
Pop65	13.42	13.47	2.62	7.2	20.3

Table I: Summary of Data for LCD's

Variable	*Median*	*Mean*	*Standard Deviation*	*Minimum*	*Maximum*
Gini	44.4	44.08	8.093	25.70	61.88
LowQuin	0.06	0.0588	0.02	0.018	0.108
InfantMort	51.2	61.27	41.32	2.1	183.7
Poverty	14.34	17.32	3.498	2.65	41.63
Trade	49.79	65.14	58.64	5.31	445.91
Portfolio	23.29	34.29	7.483	2.3	76.39
SocialCap	28.11	273.16	708.39	0	5,255.36
HealthCap	113.61	197.88	304.87	2.39	3,109.99
EducCap	74.28	106.80	131.4	0.92	1,984
Growth	4.987	4.743	4.5	-27.12	25.1
GDPcap	1,547.58	2,476.6	1,336.7	72.32	31,990
Pop65	3.819	4.422	2.09	1.361	18.554
Urban	43.4	46.09	21.66	5.1	99.3

Appendix A

Table J: List of Nations

OECD Nations	***Less Developed Nations***
Belgium	Bangladesh
Finland	Brazil
Ireland	Chile
Italy	China
Luxemburg	Colombia
Netherlands	Costa Rica
Norway	Dominican Republic
Portugal	Egypt
Spain	Ghana
Sweden	Greece
United Kingdom	Guatemala
United States	Honduras
	India
	Indonesia
	Iran
	Jordan
	Korea
	Malaysia
	Mauritius
	Mexico
	Morocco
	Nigeria
	Pakistan
	Panama
	Peru
	Philippines
	Singapore
	Sri Lanka
	Tanzania
	Thailand
	Trinidad and Tobago
	Tunisia
	Turkey
	Venezuela
	Zambia

Appendix B:

Table K: Description of Variables

Variables	*Description*	*Source*
Gini	Represents inequality, Gini coefficients of household income distribution	Deninger and Squires, World Bank
LowQuin	Concentration of income held by the lowest quintile	Deninger and Squires, World Bank
Infant Mortality	Amount of infant deaths per 1,000	World Bank
Poverty	Poverty headcount ratio at $1.25 a day (PPP) (% of population)	World Bank
Trade	The amount of total trade (exports plus imports) as a percent of GDP	World Bank
Portfolio	Foreign Direct Investment (% of GDP)	World Bank
Welfare Spending per capita	Spending on social security and welfare, healthcare, and education per capita	International Monetary Fund, *Global Finance Statistics*
Pop65	Percent of population over the age of 65	World Bank
Growth	GDP growth (annual %)	World Bank
Urban	Urban population (% of total)	World Bank
GDPcap	GDP per capita (constant 2000 US$$)	World Bank
Democracy	Scale 0-10, 10=Highly Democratic, Countries rated 7 or above are deemed a democracy.	Polity IV Project
Corruption	Corruption Perception Index, Scale 0-10, 10=Highly corrupt, Countries rated 7 or above are deemed corrupt.	Transparency International: Corruption Perception Index

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