

Relationship between income inequality and growth economics essay



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Introduction

The purpose of this paper is to clarify the issue surrounding the relationship that exists between income inequality and growth within a country because some are of the view that income inequality is a necessary part of the growth process, that it is generally unavoidable and that policy should focus on ensuring that everyone is doing better rather than focusing on narrowing the income gap. Other analysts argue that income inequality undermines growth and that policies aimed at reducing inequality will support growth too.

Early in the 50's and 60's, a couple of economists argued that there is a relationship between reducing income inequality and encouraging economic growth. After the second world war however, many East Asian economies had low levels of inequality as compared to countries with similar income levels and grew at rates never experienced before. On the other hand, a majority of Latin American countries had relatively high levels of inequality and grew at rates close to those of East Asia. Subsequently there was a rise in the interest in the relationship between economic growth and income inequality. In particular, a reassessment of how a country's level of income inequality affects or determines its subsequent rate of economic growth.

There exists empirical results in support of each of the two assertions and as will be evident, both statements are correct in their own right and this is because the conclusion we reach depends on the theoretical framework as well as the estimation techniques and time period over which we are looking at (World Bank, Economic Letter).

The first section will aim at explaining the economic concepts behind the two statements followed by empirical evidence in support of each. The last section will, based on the theory and empirical evidence, draw conclusions about the statement.

The theoretical effects of inequality on economic growth

In support of the view that inequality is bad for growth, (Torsten Persson and Guido Tabellini, 1991) argue that economic growth is to a large extent determined by the accumulation of capital, human capital, and knowledge usable in production. The motivating factors for such productivity depend on the ability of people to use privately the results of their efforts, which in turn depends on the tax policies and regulatory policies that are put in place. In a society where distributional conflict is very prevalent, there is a high likelihood that important political decisions will result in policies that allow less private use and therefore less accumulation and less growth. However the economic growth rate also depends on political institutions in a given society. This is so because it is through the political process that conflicting interests are aggregated into public-policy decisions which affect the entire society.

Inequality will also reduce growth by increasing political instability or by leading to need to delay needed adjustment efforts. It can to some extent hinder productive expenditure by the poor people given capital market imperfections. The result is that public expenditures that better the human capital of low-income people, can encourage growth (Tanzi, Vito and Chu, Ke-Young (eds.) 1998).

Also on the issue of political instability, inequality of a society's wealth and income encourages the less privileged to be involved in criminal activities, riots, and other activities that anti development. The effective functioning of political institutions may even be jeopardised by a revolution. This means that any laws and rules put in place will have shorter expected duration and greater uncertainty since there won't be time to implement them. The involvement of the poor in criminal activities and other anti-social activities represents a direct waste of resources which would have been used to increase productivity. Those likely to be victims also spend a great deal of their efforts representing a further loss of resources. To add on to that, the threats to property rights and ownership have adverse effects on investment. Through these forms of political instability, more inequality tends to reduce the productivity any given economy. Economic growth reduces as a result as they slowly progress to the stable position. (Barro, Robert J. 2000).

Looking at the economic dimension of this relationship (Christophe EHRHART), there exists three types of economic mechanisms that can be put forward: First, if there is a capital market that is less than perfect, a less equal allocation of assets means that a more individuals do not have credit available to them and so they cannot get involved in productive investments. The effect of this is that there is a reduction in the long-term economic growth rate. The second of the three, a rise in the inequality of wealth results in an increase in the fertility rate and a fall in the rate of investment in human capital of many people who are poor and less educated.

Consequently there is a reduction in the future rate of growth. Finally, a less

equal distribution of incomes results in a smaller domestic markets. By extension, they are not able to reap the benefits of the economies of scale.

To add on to the three economic arguments that have already been discussed in the above paragraph, two other main politico-economic explanations which support the occurrence of a negative relationship between income inequality and economic growth in the long-run, have been proposed. Firstly, unequal income distribution increases the pressure associated with distribution of tax. This then discourages private investment and reduces the economic growth rate. Lastly, a worsening in income inequality has a negative affect on the long-term economic growth rate by resulting in a less stable socio-political environment which is not conducive to investment by the private sector. (Christophe EHRHART).

On the other hand, several recent papers have developed models that predict a positive relationship between inequality and growth. An example is that (Gilles Saint-Paul and Thierry Verdier 1993) have put forward an argument that, in societies that are less equal, the median voter will elect a higher taxation rate to finance public education and infrastructure which will total human capital and spur economic growth.

(Oded Galor and Daniel Tsiddon, 1997) have come up with two explanations of why income inequality and economic growth could be positively related to one another. They argue that, a domestic environment externality could aid in the determination of an person's level of human capital, and if this externality is very strong, a high level of income inequality may be required for economic growth to be spurred in an undeveloped economy.

In their second model, Galor and Tsiddon, (1997) say that there is a rise in inequality during periods when there is major technological advancement, which, by encouraging mobility and the concentration of highly skilled workers in advanced sectors, will result in higher rates of technological advancement and economic growth.

(Benabou, 1996) has developed a model based on differing individuals and explains that if the level of complementarity between peoples' human capital is much stronger in domestic than global societies, then more less equal societies can have higher rates of economic growth at least in the short-run.

Based on the arguments put forward, there is evidence to suggest that the negative

effect of inequality on economic growth is prevalent in poor countries. In contrast, the relationship for rich countries is positive. This can be explained the Kuznet's curve (Barro, Robert J. 2000).

The empirical effects of Inequality on growth

Positive relationship between income inequality and economic growth.

In a bid to disagree with the argument that inequality has a negative relationship with economic growth, (Kristin J. Forbes, 2000) has used an improved data set on income inequality. The data set reduces measurement error as well as allowing estimation through the panel technique. The use of panel estimation is so that it possible to control for time-invariant and

country-specific effects, thereby removing a source of omitted-variable bias. The outcome indicated that in the short term and medium term, a rise in a country's level of inequality has a positive relationship with economic growth.

The model used in that investigation (Kristin J. Forbes, 2000) was:

$$\text{Growth}_{it} = \hat{\beta}^1 \text{Inequality}_{i, t-1} + \hat{\beta}^2 \text{Income}_{i, t-1} + \hat{\beta}^3 \text{MaleEducation}_{i, t-1} + \hat{\beta}^4 \text{FemaleEducation}_{i, t-1} + \hat{\beta}^5 \text{PPPI}_{i, t-1} + \hat{\mu}_i + \hat{\gamma}_t + \hat{\epsilon}_{it}$$

where i represents each country and t represents each time period (with $t = 1, 2 \dots T$);

Growth_{it} represents the average annual growth for country i during period t ; $\text{Inequality}_{i, t-1}$, $\text{Income}_{i, t-1}$, $\text{MaleEducation}_{i, t-1}$, $\text{FemaleEducation}_{i, t-1}$, and $\text{PPPI}_{i, t-1}$ are, respectively, income inequality, income, male and female education, and market distortions for country i during period $t-1$; $\hat{\mu}_i$ are country dummies; $\hat{\gamma}_t$ are period dummies; and $\hat{\epsilon}_{it}$ is the error term. See figure 1 & 2 for data.

The techniques used for estimation was that of generalized method of moments developed by Arellano and Bond.

The outcome was that, in the short and medium term, an increase in a country's level of inequality has a positive relationship with economic growth. This relationship is very high across large samples, the variable definitions that are used and the model specification. However, it has been suggested that the model may not apply to very poor countries.

The coefficient on inequality that results from the above model can then be understood as measuring the relationship of how a change in income inequality is related to changes in economic growth in a given country.

The difference between this result and that of empirical analysis that shows a negative relationship, is the time period under consideration. The growth regression predicts how initial inequality is related to growth over the next many years, thereby testing a long-run rather than a short-run relationship. Since this analysis uses five-year panels, the coefficients in columns 1-4 show a short or medium run relationship. To informally test if this short-term, positive relationship between inequality and growth tends to vanish over time, column 5 estimates the equation based on ten-year panels. The coefficient on inequality remains positive, though it reduces a lot and lacks any significance. These results must be interpreted with great caution because of the limited degrees of freedom available in the model. As such, until income inequality data becomes available for a longer time periods, it is hard to make any conclusions about the long-term relationship between inequality and growth in a given country.

The negative relationship between Income inequality and growth.

To support the view that growth and income inequality are negatively correlated, (Deininger, Klaus and Lyn Squire 1998) suggest the following model:

$$\text{Growth}_{it} = A + B \text{IGDP}_{it} + C \text{IGINI}_{it} + D \text{INV}_{it} + E \text{BMP}_{it} + F \text{EDU}_{it} + \text{error},$$

where i denotes countries, t denotes time, $IGDP$ denotes initial GDP, $IGINI$ is a measure of initial income inequality, INV indicates investment, BMP represents the black market premium, and EDU is education as measured by either average attainment in the population or enrolment rates.

We run the above regression using averages of high-quality observations on income inequality. The base result (Table 3, column 1) indicates that the main finding of the existing empirical research is not affected by the use of our high-quality data-initial income inequality indeed does affect future growth negatively. Although the quantitative effect of initial inequality is not unimportant, it is far from sufficient to explain the large differences in growth rates observed across countries. A difference in the initial Gini coefficient of about one standard deviation (nine points) would, according to the regression results, be associated with a difference in growth rates of about 0.4 percentage points. A point to note is that the coefficient on initial inequality stops to be significant once regional dummies are incorporated (Table 3, column 2). This holds for all the specifications and data sources used above and leads us to question the robustness and validity of the negative association between inequality and growth. It suggests that region-specific characteristics which may, but need not, include income inequality, could be at the root of the relationship observed in much of the theoretical analysis.

Given that measures of inequality for income and land are only moderately correlated—a correlation of 0.39 for the 57 countries where both are available—it is possible to introduce them together as potential determinants of subsequent growth.

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Thus, our data (Appendix) suggest that initial inequality of the asset/income distribution tends to reduce long-term growth

Conclusion

The relationship between inequality still remains a thorny issue because of questionable data used and conclusions drawn from the various theories backed by empirical evidence, are all subject to further and careful reassessment.

One reason is because of the data used as well as the duration for which the data is collected as the relationship changes with time as well as with the type of data used, cross-sectional or panel data.

It is in my opinion therefore, that both statements are correct in their own right and what is required is a continuous reassessment of the relationship with time and improvement is data.

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