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# Why the IMF and OECD are Wrong about Inequality and Growth

*by Clemens Fuest, Florian Neumeier and Daniel Stöhlker**

## Abstract

In recent studies the IMF and the OECD claim that inequality has a negative impact on economic growth and conclude that redistribution policies have no adverse growth effects. We argue that this claim is misleading. We show that, for developed countries, the correlation between inequality and growth is positive, not negative. But this correlation cannot be given a causal interpretation.

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# 1 The Policy Debate over Inequality and its Links to Economic Growth

Income and wealth inequality are currently attracting a lot of attention both in the public debate and in economic research. Over the past three decades, global income inequality and poverty have declined, mainly as a result of strong economic growth in emerging economies like China and India. At the same time, however, inequality within many countries has increased. The most extreme case of this phenomenon is the US, but income inequality has also increased in many other developed and emerging countries.

In the debate over appropriate policy responses, the traditional view is that governments may redistribute income to achieve greater equality, but that this often comes at the cost of lower efficiency and less economic growth. Recently, however, both the OECD and the IMF have challenged this view, arguing that the opposite is true: they claim that inequality reduces economic growth (Cingano, 2014; Ostry et al., 2014) and draw striking policy conclusions. According to Cingano (2014, p.28) "[…] income inequality has a sizeable and statistically significant negative impact on growth, and […] redistributive policies achieving greater equality in disposable income has no adverse growth consequences." In a press briefing the OECD makes the following claim:

"Rising inequality is estimated to have knocked more than 10 percentage points off growth in Mexico and New Zealand over the past two decades up to the Great Recession. In Italy, the United Kingdom and the United States, the cumulative growth rate would have been six to nine percentage points higher had income disparities not widened, but also in Sweden, Finland and Norway, although from low levels. On the other hand, greater equality helped increase GDP per capita in Spain, France and Ireland prior to the crisis."[1]

In this paper we argue that these conclusions are misleading. Firstly, our empirical analysis shows that there is no robust negative correlation between inequality and growth. It is negative only for low income countries. Above a per capita income of roughly 5,000 US dollars, the correlation in the data is positive. For OECD countries, higher inequality therefore coincides with higher, not lower economic growth. Secondly, giving the observed correlation between inequality and economic growth a causal interpretation is inappropriate. Both inequality and economic growth are influenced by many policy variables, including education and redistributive taxation. But portraying one of these outcomes as being 'caused' by the other is unconvincing.

[1] http://www.oecd.org/newsroom/inequality-hurts-economic-growth.htm.

## 2 IMF and OECD Studies on Inequality and Growth

Both Cingano (2014) and Ostry et al. (2014) empirically analyse the relationship between income inequality and GDP growth based on panel data covering various countries over the period from 1960 to 2010 and 1970 to 2010, respectively. Although the sample countries differ, the findings by OECD and IMF are qualitatively and quantitatively very similar: the higher the degree of net income inequality, i.e., income after taxes and cash transfers (measured by the Gini coefficient), the lower the growth rate of GDP per capita. The estimated effects appear to be sizeable: according to the OECD, a one-point decrease in the Gini coefficient would lead to an increase in the annual GDP growth rate of 0.15 percentage points. The effect reported by the IMF is only slightly smaller. Here, a one-point decrease in the Gini coefficient is found to increase the GDP growth rate by 0.1 percentage points per annum. These results are remarkable since they seem to reject the common notion in economics that there is a trade-off between redistribution and growth or, more generally, equality and efficiency. Both studies attracted a great deal of attention and widespread media coverage.

## 3 Other Economic Research on the Link between Inequality and Growth

It should be noted that the findings documented in the academic literature on this topic are less clear than those reported by OECD and IMF. Neves et al. (2016) review 28 studies published over the last two decades investigating the association between inequality and growth and conduct a meta-analysis. Their results show that estimated coefficient of the effect of inequality on growth varies between −0.14 and +0.16. Thus, there are studies documenting a negative correlation between inequality and growth, as well as others finding positive signs.

## 4 Reassessing the Relationship between Inequality and Growth

The OECD and IMF provide similar explanations to rationalise their findings. On the one hand, it is argued that a high degree of inequality may imply lower levels of physical and human capital accumulation as the share of low-income earners is larger. This could have an adverse impact on production capacities, labour productivity and, thus, economic growth. On the other hand, a high degree of inequality may fuel conflicts in society and impose a threat to political stability which, in turn, would reduce private investment.

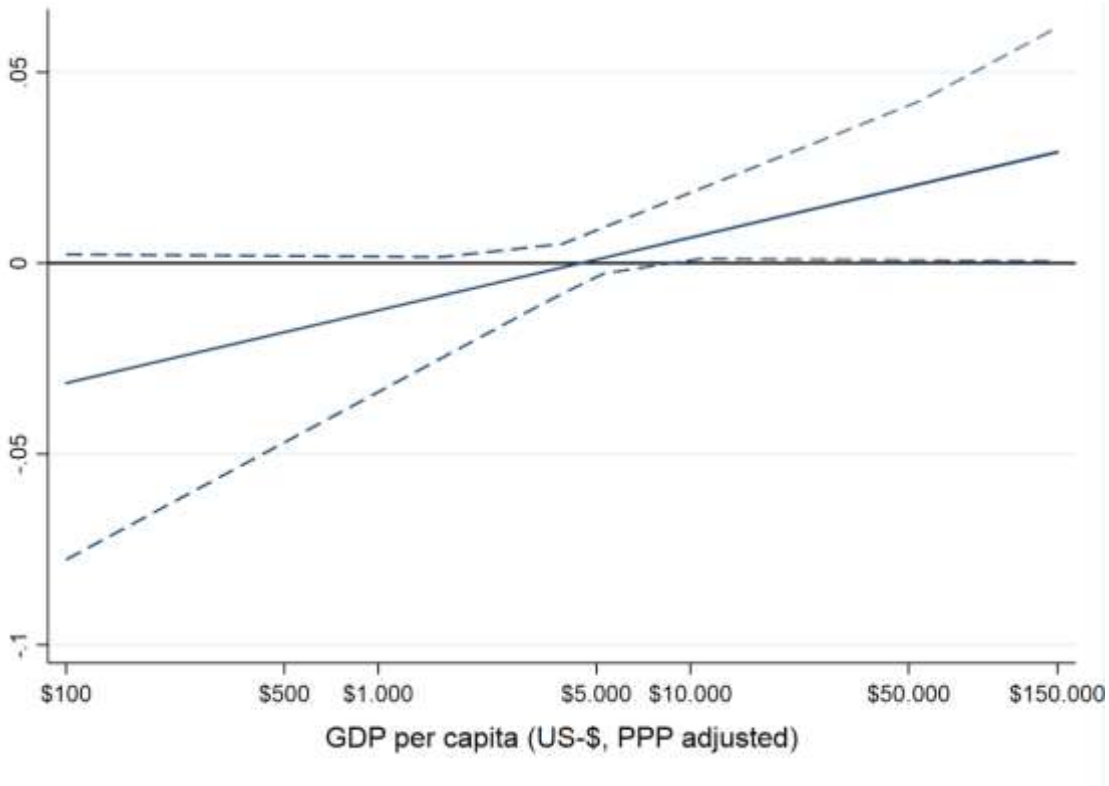
However, it is far from obvious that these explanations are valid in general. They primarily seem relevant for less developed countries, where the political and economic environments tend to be fragile. In these countries access to education is restricted and people at the lower and of the income distribution scale often live in (absolute) poverty. It is questionable whether these arguments are equally relevant for high-income countries. Such countries are typically characterised by stable political and economic environments, high levels of educational enrolment and an absence (or, at least, a negligibly low level) of absolute poverty.

Taking these concerns seriously, we re-examine the relationship between inequality and growth, taking the (potentially) mediating role of a country's stage of development into account. To this end, we compile a dataset covering 110 countries over the years from 1970 to2010 and run multivariate regressions. The dependent variable in our regression equation is the annualised growth rate of GDP per capita (in US-$, PPP adjusted) over a five-year interval, which is taken from the Penn World Table (Feenstra et al., 2013). Our main independent variable is the Gini coefficient of net incomes at the beginning of that five-year interval and our data source is the Standardized World Income Inequality Database (Solt, 2016). We also add several control variables to our empirical model depicting the sample countries' political and economic situation. We estimate two specifications of the empirical model that vary with regard to the control variables included. In the first specification, we include the log of per capita GDP at the beginning of the five-year period, private investment over GDP, the average number of years of schooling attained, population growth, as well as the value of imports plus exports over GDP as an indicator for a country's degree of openness to international trade. In the second specification, we also add public expenditure over GDP, as well as a variable that indicates, on a scale from −10 to +10, whether a country's political regime can be characterised as autocratic (score of −10) or democratic (score of +10). To evaluate the importance of a country's stage of development with regard to the association between inequality and growth, we interact the log of per capita GDP with the Gini coefficient. This allows us to estimate the effect inequality has on growth at different stages of development. In both specifications of our empirical model, we apply different estimation techniques to test the robustness of our findings. We use four different modifications of both the Arellano and Bond (1991) GMM as well as the Blundell and Bond (1998) System-GMM estimator, yielding 16 estimations in total. The results are graphically illustrated in Figure 1. The solid line indicates the average marginal effect of inequality as a function of a country's per capita GDP, while the upper (lower) dashed line traces the maximum (minimum) estimated marginal effect.

Figure 1 highlights that a negative association between inequality and growth can only be detected if per capita GDP remains below a certain threshold. The exact position of this threshold varies depending on the estimation technique that is used. On average, however, it lies below 5,000 US dollars. According to the World Bank's World Development Indicator database, only 49 out of 175 listed countries fall below this threshold (as of 2016). So the claim that redistributive

measures aimed at reducing inequality can boost economic growth holds true, at best, for countries that are particularly poor. As soon as the level of GDP per capita exceeds that threshold, the association between inequality and growth tends to be positive.

**Figure 1: Marginal Effect of Inequality on Growth as a Function of per capita GDP**




Notes: The solid line indicates the average marginal effect based on 16 different estimations, the upper (lower) dashed line the maximum (minimum) marginal effect. The data cover 110 countries and the years from 1970 to 2010, which are pooled to five-year periods. The abscissa has a logarithmic scale.

It is straightforward to come up with examples of developed countries that may drive the positive correlation between inequality and growth found in the data. The UK in the 1980s or Sweden in the 1990 are examples of countries where the welfare state had expanded for a long time, to the point where the economy became sclerotic and growth declined. Both countries reacted by changing their economic policies. The welfare state was rolled back and inequality increased, but economic growth increased too.

Of course, in neither of these cases it is appropriate to claim that changes in inequality 'cause' changes in growth. This also applies to the results of the panel regressions discussed here. Both variables are outcomes that are potentially influenced by a wide range of policy variables, including human capital investment, taxation and regulation.

# 5 Conclusions

For economic policy achieving inclusive economic growth is an important objective. Economic policies that increase growth at the price of permanently growing inequality are unsustainable, as are redistributive policies that undermine growth. It is plausible that there are circumstances whereby well-designed policy reforms, particularly in education and human capital investment, can achieve both higher economic growth and more income equality. However, the claim that there is a mechanic relationship between inequality and growth has no basis in either theoretical or empirical economic research and it certainly cannot be a guideline for economic policy.

# References

Arellano, M., Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. The Review of Economic Studies, 87(1), 277-297.

Blundell, R., Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. Journal of Econometrics, 87(1), 115-143.

Cingano, F. (2014). Trends in income inequality and its impact on economic growth. OECD Working Paper 163.

Feenstra, R. C., Inklaar, R., Timmer, M. (2013). The next generation of the Penn World Table. NBER Working Paper 19255.

Neves, P. C., Afonso, Ó., Tavares Silva, S. (2016). A meta-analytic reassessment of the effects of inequality on growth. World Development, 78, 386-400.

Ostry, J., Berg, A., Tsangarides, C. G. (2014). Redistribution, inequality, and growth. IMF Staff Discussion Note.

Solt, F. (2016). The Standardized World Income Inequality Database. Social Science Quarterly, 97(5), 1267-1281.

## EconPol Europe

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The mission of EconPol Europe is to contribute its research findings to help solve the pressing economic and fiscal policy issues facing the European Union, and thus to anchor more deeply the European idea in the member states. Its tasks consist of joint interdisciplinary research in the following areas

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2) reform of EU policies and the EU budget,

3) capital markets and the regulation of the financial sector and

4) governance and macroeconomic policy in the European Monetary Union.

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