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Growth effects of inequality and redistribution: What are the transmission channels?

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ABSTRACT

Evidence from a large panel of harmonized data highlights a negative effect of income inequality on economic growth. Less equal societies tend to have less educated populations, higher fertility rates, and lower investment shares. These effects are particularly prevalent if credit availability is limited, while public education spending attenuates the negative effects of inequality. Public redistribution, measured as the difference between Ginis of market and net income, hampers growth via lower investment and increased fertility. Yet, combined with its positive effect through lower inequality, the impact of redistribution is insignificant. In developing countries redistribution can even be growth enhancing.

1. Introduction

In his famous book *"Equity and Efficiency: The Big Tradeoff"*, Okun (1975) points out that the trade-off between social justice and economic efficiency "plagues us in dozens of dimensions of social policy". Okun's notion led to the widespread belief that public redistribution via taxes and transfers creates disincentives and inefficiencies that Okun compares to a "leaky bucket", with money lost whenever transfers are made from the rich to the poor. However, empirical evidence for the existence of such a trade-off is rather ambiguous.

The literature at hand can be divided into two distinct groups. One branch examines the link between inequality and growth, while the other studies the growth effects of redistributive taxes and social transfers. This paper follows a novel approach by simultaneously exploring the growth effects of both income inequality and effective public redistribution, with the latter computed as the difference between market and net income Gini coefficients. We find that a high level of inequality reduces GDP growth, but its remedy—redistribution via taxes and transfers—is detrimental to growth as well. Thus, the direct negative effect of redistribution offsets its indirect positive growth effect from reduced net inequality. Taken together, this means that at a given level of market inequality, the impact of redistribution on economic growth is insignificant. However, the growth effects of both inequality and redistribution depend on the development level of the economy. Whereas redistribution—on aggregate—fosters growth in developing countries, it seems to have a rather impedimental effect in advanced economies. To study these effects in greater detail, we explore the transmission channels through which inequality and redistribution affect economic development. In fact, recent studies on the inequality-growth nexus mainly focused on reduced form evidence, neglecting the mechanisms behind the identified effects. Our results suggest that higher inequality is negatively related to education and yields an increase in the fertility rate. Both effects are particularly prevalent in the presence of limited access to capital and can be mitigated by public education spending. Meanwhile, the direct negative effects of redistribution are mainly due to a decrease in investment and an increase in fertility.

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How do these findings relate to earlier studies on the topic? Whereas cross-country analyses tend to find a negative relationship between income inequality and economic growth, the results have become ambiguous since the advent of panel data methods.[1] Particularly, Li and Zou (1998) and Forbes (2000) contradict previous findings by detecting a positive impact of inequality on economic growth. In contrast, Barro (2000) yields little indication of a uniform relationship between inequality and growth, as he finds a negative effect of inequality in developing countries and a positive effect in richer economies. Castelló-Climent (2010) confirms this interaction with the development level, but finds an overall negative growth effect of income and human capital inequality. Focusing on the use of consistently measured inequality data, Knowles (2005) finds a negative effect of Ginis from household expenditures, but not of Ginis from gross incomes. Voitchovsky (2005) enriches the debate by looking at the shape of the income distribution. The study concludes that growth is promoted by inequality at the top end of the income distribution, but weakened by inequality at the bottom end. Finally, Halter et al. (2014) emphasize the time dimension of the inequality-growth relationship by showing that higher inequality fosters growth in the short term, but hampers growth in the medium to long run. Hence, one explanation for the inconclusiveness of the literature is that estimates based on time-series variations pick up positive short-run effects of inequality, whereas methods which also exploit cross-country variations capture its negative impact in the medium to long run.

The empirical evidence for the growth effects of redistributive fiscal policy is also divided. Using specific fiscal policy instruments to proxy the extent of redistribution—such as marginal tax rates or the amount of social spending—, earlier studies tend to find a negligible or slightly positive impact on growth (see, e.g., Perotti, 1996). In light of these findings, Lindert (2004) suggests that large welfare states have come up with methods to minimize the negative incentive effects and deadweight losses from taxes and social spending. In contrast, a study by Muinelo-Gallo and Roca-Sagalés (2013), which uses panel data from 21 high-income OECD countries, shows that distributive expenditures and direct taxes produce significant reductions in inequality, but also in GDP growth.

So far, a lack of meaningful and comparable data limits the exploration of the growth effects of inequality and redistribution. First, with regard to the relationship between inequality and growth, several studies (Knowles, 2005, Atkinson and Brandolini, 2009) highlight that mixing Ginis from different income definitions or applying simple transformations to make them more comparable is inappropriate but nevertheless a common approach in the literature. Meanwhile, attempts to work with consistently measured inequality data have so far been restricted to a very narrow selection of countries and years (Knowles, 2005, Voitchovsky, 2005), imposing the risk that findings are due to sample selection rather than different income definitions.[2] Second, regarding the effect of redistribution on growth, most studies use fiscal policy variables to measure the extent of public redistribution. Yet the size of taxes and transfers tells little about their progressivity, meaning that the redistributive impact of specific fiscal policy measures is unclear and not comparable across countries.

Recent advances in data availability allow us to address these issues by employing a set of inequality data that maximizes comparability for the broadest possible sample of countries and years (Solt, 2016). Applying a flexible missing data algorithm, the Standardized World Income Inequality Database (SWIID 6.1) provides consistent Ginis of net and market incomes for roughly 5100 country-years. Covering data from 192 countries between the early 1960s and 2014, our regression sample thus enables investigation of the global relationship between inequality and growth, as well as of the effects at different development levels.

By replacing the ad-hoc fixed adjustments that have long been necessary to generate a large dataset for cross-country research, the SWIID alleviates a general trade-off between data comparability and coverage. Meanwhile, we also scrutinize our results based on a sub-sample of the most reliable observations. In addition, we are among the first to exploit the full potential of the SWIID by directly incorporating data uncertainty into our regression results via multiple estimation tools.

Above all, a clear distinction between inequality before and after taxes and transfers in the SWIID enables measurement of redistribution via calculation of the difference between market-income and net-income Gini coefficients. Thus, we regress growth on effective redistribution rather than relying on rough proxies of redistributive fiscal policies. Although it is commonly applied in sociology and public policy (see, e.g., Lupu and Pontusson, 2011; Van den Bosch and Cantillon, 2008), use of the “pre-post” approach for measuring redistribution via the difference between market and net inequality is quite novel in the empirical growth literature. Ostry et al. (2014) utilize an early version of the SWIID to acquire data on effective redistribution. While the study finds little evidence for a significant growth effect of redistribution, it suggests that inequality is an impediment to economic growth. Thewissen (2014) calculates a measure of pre-post redistribution using data from the LIS and the OECD. Based on a panel of high-income countries, the study finds no robust influence of inequality and redistribution on economic performance, but indicates a positive relationship between top income shares and growth.

While subject to some studies based on cross-country data (e.g. Perotti, 1996; Deininger and Squire, 1998; Easterly, 2007; Castells-Quintana and Royuela, 2017), the transmission channels of inequality have been rather neglected in *panel data* studies, a point which is criticized by Galor (2009).[3] Moreover, the transmission mechanisms of redistribution are also largely unexplored empirically. Hence, we are the first to simultaneously study the transmission channels of both inequality and redistribution via panel data econometrics, thereby accounting for unobserved heterogeneity in both the medium- and the long-run. Our results reveal that

[1] The empirical growth literature of the 1990s is comprehensively reviewed in Aghion et al. (1999).

[2] This problem was already noted by Knowles (2005) and highlighted in a literature survey by Neves and Silva (2014).

[3] A recent literature survey (Neves and Silva, 2014) identifies only three panel-data studies that examine the transmission channels of inequality on growth. All of these studies focus on single transmission channels. Drawing on *cross-sectional* data, Castells-Quintana and Royuela (2017) study multiple transmission mechanisms, finding that inequality may trigger both positive and negative effects. As the empirical strategy is based on a control function approach that focuses on the between-country variation, our results are not directly comparable. Yet with regard to the identified negative effect of inequality that accounts for 80% of the total effect estimated by Castells-Quintana and Royuela (2017), our results are complementary.