

Economic grwt

Economics



Using comparable data on disposable income from the Luxembourg Income Study, results suggest that inequality at the top end of the distribution is positively associated with growth, while inequality lower down the distribution is negatively related to subsequent growth. These findings highlight potential limitations of an exploration of the impact of income distribution on growth using a single inequality statistic. Such specifications may capture an average effect of inequality on growth, and mask the underlying complexity of the relationship.

Keywords: growth, inequality, income distribution, Gin coefficient JEL classification: O4, D0 Introduction The recently increasing availability of income distribution data has led to a growing empirical literature regarding the influence of income inequality on economic performance. Traditionally, the empirical analysis of this relationship has entailed estimating a coefficient on a single inequality statistic in a growth regression, alongside other explanatory variables. Theoretical models, however, suggest that inequality can both facilitate and retard growth.

An examination of this literature (see Section 2) further reveals that most of the positive mechanisms can be linked to inequality at the top end of the distribution while many of the detrimental effects can be traced to bottom end inequality, or relative poverty. The current study therefore suggests a new way of taking into account the complex influence of inequality on economic growth that accounts separately for inequality in different parts of the income distribution, namely at the top and bottom end of the distribution. The empirical results support the main hypothesis that inequality at the top and bottom ends of the distribution have different

effects on growth, and implies that inference based on a single Although more general specifications could also be considered, the basic distinction between top end and bottom end inequality should be seen as a starting point in the discussion regarding the empirical evidence on the profile of the income distribution and growth.

SARAH PITCHFORKS summary statistic, such as the Gin coefficient, could be misleading as it might reflect an average of these two offsetting effects. Early empirical studies tended to support the conjecture that overall income inequality and growth are inversely related; see B' nabob (1996) for a review of these e studies. Yet these observations, based on cross- section data, appeared to be quite sensitive to the inclusion of regional dummies, and to sample selection (e. G. Operator, 1996).

With the increasing availability of panel datasets, and the Dingier and Squire (1996) dataset in particular, it has become possible to reduce the measurement error in inequality statistics, to control for unobserved time-invariant heterogeneity between countries, and to use panel techniques to mitigate nonentity concerns. Based on the Dingier and Squire (1996) dataset, some papers report a positive effect of overall income inequality on bequest economic growth, using a diverse sample of developed and developing countries (see Lie and Zoo, 1998; Forbes, 2000).

In the analysis of Barron (2000), however, inequality appears to encourage growth only within rich countries, and to slow it down in poorer countries. Moreover, allowing for non-linearity of the effect of inequality suggests that a change in inequality in any direction may be detrimental to growth

(Bannered and Duffel, 2003). Although none of the papers mentioned have specifically focused on the shape of the distribution, the importance of the middle class emerges from several papers using the middle quintile share (e.g. Lasing and Operator, 1996; Easterly, 2001).

Furthermore, in response to concerns regarding data quality and comparability, some studies have focused on US data for individual states. With a cross-sectional approach, Partridge (1997) finds, simultaneously, a positive coefficient for the Gin index and a positive coefficient for the middle quintile share. Paining (2002), in contrast, uses panel data techniques and only reports a negative impact of inequality on growth. 2 The debate continues in the empirical literature as to whether the ultimate effect of overall income inequality on growth is costive, negative, or not significant.

Nevertheless, it seems that studies' conclusions depend notably on the econometric method employed, and the data considered. This study looks at a broader question and investigates whether inequality in different parts of the distribution have different influences on subsequent economic growth, following the implications of theoretical literature. The central hypothesis? that top end inequality encourages growth while bottom end inequality retards growth? is explored using a standard growth model and a set of explanatory variables to control or inequality at the top and the bottom ends of the income distribution simultaneously.

A system GUM estimation undertaken on a sample of industrialized countries, using data from the Luxembourg Income Study, indicates that inequality at different parts of the distribution does have different

implications for growth, i. e. That the profile of inequality is also an important determinant of economic growth. Top end inequality appears to have a positive effect on growth while inequality further down the income distribution appears to be inversely related to growth. Several studies have also looked at the reverse causation: now growth attests inequality specific parts of the distribution in particular, e. g. Dollar and Kraal (2002). DOES THE PROFILE OF INEQUALITY MATTER FOR GROWTH? 275 The paper is organized as follows: Section 2 examines why we could expect the shape of the income distribution to matter for growth, according to the theoretical literature. Section 3 presents the data on income distribution. The model used for the estimations, the econometric method and the regression results are discussed in Section 4.

Section 5 assesses the findings of the analysis and concludes. . Theoretical Reasons Why the Profile of the Income Distribution Should Matter As is already well established by the theoretical literature, the income distribution exhibits a complex multi-dimensional relationship with economic growth. Although this paper focuses on one direction of the interaction? the impact of income inequality on growth? the various transmission channels that have been identified reveal an intricate picture.

The story can be summarized by saying that inequality has both an inhibiting and a stimulating influence on economic performance, and that different heretical mechanisms tend to focus on different aspects of the distribution. This section consequently considers how several mechanisms can be linked to specific parts of the income distribution, to better understand how the shape of the distribution might matter. 2. 1 . Budget Constraint, Savings and <https://assignbuster.com/economic-grwt/>

Investment At the top of the distribution, individuals are wealthy enough to implement their investment plans, or have access to capital markets if they wish to borrow.

Access to private funds is especially relevant in the presence of market imperfections or initial set-up costs. These individuals might also represent the main source of savings in the economy especially if, as in some of the Keynesian literature, the marginal savings rate is increasing with income, or if the propensity to save is higher on income from capital than on income from wages. Larger investors might also be more able to spread the risk of their investments and could receive a higher rate of return.

These factors imply that higher inequality at the top end of the distribution may promote economic growth, as it boosts funds available and investment. Nevertheless, this process associated with the better off could be offset, or the economy could end up in a sub-optimal equilibrium, if not enough wealth trickles down the distribution ? that is, if some agents are left behind in the growth process, leading to high bottom end inequality (see e. G. Gallo and Zaire, 1993; Action and Bolton, 1997).

Even in the presence of trickle down, bottom end inequality remains a relevant concept so long as credit constraints apply. As a result of limited funds, some individuals will not be able to exploit their skills and talents, and fewer productive investments will be undertaken, or at a sub-optimal level (for example in education, see Gallo and Move, 2004). This positive dynamic is reinforced if rich people's investments create a positive external TTY in the economy that increases the productivity to subsequent investments, e. G.

Operator (1993), Gallo and Outside (1996). 76 2. 2. Incentives, Effort and Innovation In an economic structure where ability is rewarded, effort, productivity and irrigating will also be encouraged, generating higher growth rates as well as income inequality as a result. In such an environment, we can expect a higher level of income mobility as talented individuals have incentives to seize the higher returns of their skills. A concentration of talented and skilled individuals in the upper income ranks (in advanced technology sectors) is also conducive to technological progress, and therefore to growth (e. . Gallo and Outside, 1997; Hassles and Moral, 2000). Positive incentives can induce greater effort in all parts of the distribution. Thus, a greater level of inequality at the bottom end of the distribution might reflect such an incentive structure or a downwardly flexible wage system. However, at lower wages in particular, these productive effects are likely to be counterbalanced by workers' feelings of frustration and unfairness, see e. G. Croaker and Yelled (1990) on the fair wage-effort hypothesis. 2. 3.

Crime, Rent Seeking, and the Balance of Power In many theoretical and empirical papers, income or wage inequality and poverty appear to be recurrent explanatory factors, among other explanations, for crime, for factorization and for homicide (e. G. Kelly, 2000; Effaceable et al. , 2002). The increased risk due to insecurity, in turn, unfavorable affects investment decisions, and growth as a result (e. G. Lasing and Operator, 1996). Anti-social behavior is usually linked to poverty and thus to bottom end inequality, it may, however, also arise due to top end inequality.

When income inequality is reflected by political popularization, the rich or ruling elite might prevent the implementation of pro-poor and other

productive policies, like spending on human capital or infrastructure, appropriate the country's resources and subvert the legal and political institutions by rent-seeking and corruption (e. G. Easterly, 2001; Glasser et al. , 2003). Furthermore, high overall inequality might result in social unrest and political instability, when both ends of the distribution are tempted to expropriate the opposing end (e. . B' nabob, 1996). The link between political instability, unequal income and growth appears in numerous empirical studies, e. G. Lasing and Ostry (1996), Easterly (2001).

2. 4. Taxation and Redistribution
 Redistribution, via a median voter mechanism for example, is likely to have an ambiguous effect on growth. 5 Assuming more inequality means increased taxation, 4 Note that the standard median voter redistribution model focuses on the difference between the median and mean income.

This is a measure of skewness rather than inequality per se. 5 See for example, Persson and Tabellini empirical support. 277 the negative incentive effect on taxed agents at the top can be compensated by the productive impact of poor agents' relaxed credit constraints, of government public spending (e. G. Ostry, 1993; B' nabob, 1996; Acemoglu and Bolton, 1997) or of reduced instability (Lasing and Ostry, 1996). 7 2. 5.

Overall Inequality and the Shape of the Income Distribution
 The review presented above emphasizes how inequality at different parts of the income distribution can affect growth differently, with top end inequality more relevant for some of the mechanisms considered by the theoretical literature and bottom end inequality more relevant for others. These alternative mechanisms suggest that controlling for the effect of inequality on growth

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with a single distributional statistic may be unduly restrictive. Hence, the importance of looking at the shape of the income distribution more generally.

This paper proposes a first step to allow for the diversity of pathways through which inequality can affect growth? one that takes into consideration the fact that many of the positive effects from inequality can be associated with the upper end of the distribution, while the reverse is true of inequality at the bottom end. The ultimate effect of inequality on the economy, as considered by the current study, will consequently depend on the relative strengths of the positive and negative influences that are identified. In theory, this balance is unlikely to be independent of the overall level of inequality, see e. . Bannered and Duffel (2003). For example, at high disparity levels, the negative influence of inequality on growth might dominate due to a greater prevalence of social unrest, break down of law and order, rent-seeking and corruption. 8 Additionally, several theoretical papers have discussed how different levels of inequality may be conducive to growth at different levels of development. 9 From this perspective, the current paper attempts to identify aspects of the shape of the income distribution that are most beneficial to growth, in a linear way, and in countries where average income is relatively high.

The question of how the profile of inequality might be linked empirically to growth in poorer countries is related, though potentially quite different, and remains a subject for further research. Another documented outcome of high inequality, especially top end inequality, is reduced social solidarity with the rich trying to pull out of publicly funded programmer, likehealthcare and <https://assignbuster.com/economic-grwt/>

education, in favor of private provision, see Schwab, Sending and Sobers (2003).

They find that top end inequality, measured by the 90/50 percentile ratio, has a strong negative impact on social expenditures while bottom end inequality, measured by the 50/10 ratio, has a small positive effect. 7 As discussed in Barron (2000), in a country where high levels of redistribution are aging place, however, top and bottom end inequality will tend to be lower than in a country where there is no active redistribution policy. High top end inequality could consequently reflect low redistribution levels, which might be accompanied by fewer distortions on investment incentives. Other factors might be considered here, e. G. National preferences for inequality, perceived inequality levels, or the strength of political institutions. 9 For theoretical papers that consider this issue see e. G. Operator (1993), Gallo and Move (2004), also Barron (2000) for related empirical evidence. 78 3. Income Distribution Data The consequences of measurement and poor comparability of inequality statistics, across countries and over time, have been a serious concern in this empirical literature. Researchers have, however, also been constrained by data scarcity.

In this context, the introduction of the Dingier and Squire (1996) dataset was an important improvement in the quantity and quality of income distribution data available. Nonetheless, as pointed out by Atkinson and Branding (2001), and even for the COED countries, differences in data coverage, income definition and instruction methods could raise serious comparability issues, not only across countries but also over time. In order to reduce

measurement error further, this study considers income distribution data from the Luxembourg Income Study (LIST).

Opting for this dataset means a significant improvement in data quality and comparability, as described below, but at the expense of sample size. 3. 1.

Description of the Dataset The LIST dataset offers several advantages as compared to other datasets. First, it provides income information coming from household surveys, 10 with a high degree of cross-national and over time comparability. 1 Second, the household income variable reflects a large coverage of different income sources: to each household's wage and salary income is added gross self-employment income, which gives total earnings.

Then is also included cash property income, 12 private and public sector pensions as well as public transfers, I. E. Social retirement pensions, familyallowances, unemployment compensation, sick pay, etc. And other cash income. Finally, deducting personal income tax and mandatory social security contribution yields disposable income, see Atkinson, Rainwater and Sending (1995), or the LIST beset. Although the reporting of income sources is becoming more and more comprehensive over time, several components of income are still excluded from the household disposable income on which the inequality measures are based.

For example, non-cash benefits from housing, medical care or education, the imputed value of 10 Most surveys were conducted through interviews. In some surveys however household income data was collected trot administrative records or trot a combination of both sources. Surveys for the US before 1991 comprise a 10% random sample from the full household

survey. For Germany in the SEEP years (from 1985 onwards) 90% of the sample is included, but the correcting household weights provided should mitigate a potential resulting sample bias.

The other surveys consist of the full sample. 11 These surveys conducted in different countries for different purposes are made comparable through a "electrification" process. In other words, the original datasets are reorganized, if necessary, to correspond to the LIST coding and variable structures. For more information see: www.lisper.etc.org. 12 Cash property income includes cash interest, rent, dividends, annuities, etc. But excludes capital gains, lottery winnings, inheritances, insurance settlements, and all other forms of lump sum payments. 13 realized capital gains/losses and indirect and property taxes are not included. Finally, this dataset allows direct access to raw income data on individual households. Access to raw data gives the advantage of increased precision in the calculation of inequality measures since they are based on a larger number of data points. In addition, it provides a greater flexibility in the choice of inequality measures and, importantly, uniformity and comparability in the amputation of inequality indices across countries and over time. . 2. Computation of Inequality Measures This paper follows the standardization proposed by LIST for the computation of inequality measures as follows: inequality indices are based on the individual equivalencies income defined as the household annual net disposable income divided by an equivalence scale $S E$, where S is the number of persons in the household and E is the equivalence elasticity set to 0. 5. 15 All households surveyed

and all their members are included. The inequality measures also include a correction for the sample bias using person weights.

The extreme bottom of the distribution is recoded at 1 % of equivalencies mean income and the extreme top at 10 times the median of non-equivalencies income. Missing values and zero incomes have been excluded. The point dividing the top and bottom of the income distribution is arbitrarily set at the median. Thus, ratios of income percentiles on either side of the median are used to measure top and bottom end inequality. More precisely, bottom end inequality is measured by income percentile ratios such as the 50/10 ratio, which is the ratio of the equivalencies individual median income to the 10th percentile equivalencies individual income.

Other bottom end inequality indices that have been considered include the 50/20 and 40/10 ratios, and similarly the 90/75, 95/80 and 90/50 ratios for top end inequality. These measures give an indication of the relative distance between the two points considered, at the top or bottom end of the distribution. They are easy to compute but are obviously not perfect and the top or bottom inequality ranking to countries might change depending on which ratio is considered.

As these indices are sensitive to measurement at the percentiles considered, though they do avoid the more common problem of measurement at both extremes of the distribution. As a crosscheck, top and bottom quintile 13 In-kind earnings are included in the household disposable income of Mexico as this information is available in these surveys, and is likely to be an important source of income in that case. 14 See Atkinson, Rainwater and Sending

(1995) for detailed discussion on LIST methodology and procedures, and notably how LIST data compare with national studies. 5 The square root of the number of persons in the household is a commonly used equivalence scale. However, the equivalence elasticity E can be chosen to vary between 0 (perfect economies of scale) and 1 (no economies of scale). Inequality statistics are sensitive to the choice of the equivalence scale as discussed in several papers, e. G. Coulter, Jewell and Jenkins (1992), see also Bunyan et al. (1988) for sensitivity analysis based on LIST data. The sensitivity of the current findings to the value judgment implicit in the equivalence scale used remains an issue for further research. 80 share ratios have been used instead: SQ/SQ for top end inequality and SQ/SQ for bottom end inequality.

3. 3. Selection of Household Surveys This study considers a 5-year growth model in a selection of countries where the availability of this detailed income distribution data is the sample size limiting factor. Consequently, the sample comprises observations for an unbalanced panel of 25 countries for which inequality data are available at the beginning of a 5-year growth period. In general, if data were not available for the exact year needed, the survey from the nearest year was used instead; see Table 5 for details.

For France, Germany, Switzerland, Ireland and the Netherlands, different types of household surveys were employed over the period covered. This change of survey may cause some discontinuity in the data. 16 When multiple choices were available, the datasets were chosen as a compromise between getting the closest year possible and minimizing survey discontinuity. Furthermore, inequality measures for Switzerland in 1985,

Spain in 1985, Ireland in 1990 and Austria in 1990 were obtained by linear interpolation based on immediately adjacent observations.

It should also be noted that data for Germany refers to West Germany until 1990 and to reunited Germany thereafter; data for Austria in 1995 does not include solemnity's income. . 4. Some Summary Statistics The Gin coefficients of the surveys included in the analysis are reported in Table 1 . Behind all dramatic as well as more modest movements in the Gin coefficients over time appears a wide range of shifts at both ends of the distributions. 18 For example, the ASK, a compression at the top end and a widening to inequality at the bottom end, between 1970 and 1975, resulted in a stable Gin coefficient over this period.

The subsequent increase in overall inequality from 1975 to 1995 is due to both ends of the distribution diverging, and to a top end increase more than offsetting a deduction in bottom end inequality over the last five year period. In Canada, the sustained reduction in bottom end inequality over the entire period is responsible for the steady decrease in the Gin coefficient up to 1990, while from 1990 to 1995 the continued reduction in the bottom ratio was more than compensated for by an increase in the top ratio. A more in-depth description of the 16 For example, for France in 1985 two household surveys are available, both dated 1984.

One comes from the French Survey of Income from Income Tax and the other from the Family Budget Survey. Although both surveys report roughly the same level of overall inequality measured by Gin coefficients of 0. 292 and 0. 298 respectively, the levels of top and bottom inequality appear to be

quite different in each case. These differences can partly be explained by the usual lower response rate of richer households in budget surveys and by the imputation of benefits in tax records. 18 This discussion refers to the 90/50 ratio for top end inequality, and 50/10 ratio for bottom inequality. 281 Table 1. Gin coefficients.