Each of the reviewer's comments is addressed below:

Pareto-Lorenz coefficient

The measure used in the paper tracks the income inequality due to rising wealth and income flowing to the top of the distribution. The data obtained from the World's Top Income database (now named World Wealth and Income database) was derived using multiple sources – including survey and fiscal data, national accounts and wealth rankings. It used a methodology based on Distributional National Accounts concept (Alvaredo, 2016) to describe how the different percentiles of the income distribution changes over time. The top income shares itself was derived using Kuznet's (1953) approach using both income tax and national accounts data and Pareto interpolation to figure out the share of total income that goes to the top percentile. It is mostly accepted that that the upper tail of the income distribution is Paretian and the middle part tends to be lognormal. Since the objective of this paper is to evaluate the effect of rising income inequality arising from the top shares, the use of Pareto-Lorenz coefficient data can be deemed appropriate for this analysis. The paper has been revised to include this background section on the properties of the Pareto-Lorenz coefficient.

Estimating Equation

The effect of income inequality on mortality rates was analyzed separately for males and females and given the wide range of total population size of the countries in the sample, we have included population in the estimating equation. The analysis was also run without any controls including population and the results indicate similar statistically significant relationship.

Health capital index refers to the specific measure for capturing education attainment using census data, household surveys and extrapolation methods for missing data and it provides a proxy for the stock of human capital that can be used in empirical analysis (Barro, 2013). The choice of the name of variable in the model was driven by the Grossman (1972) theory which implied that the effect to unequal access to education can result in wider disparity in health capital formation within the country. Those with higher education will choose a higher level of optimal health stock. The greater the disparity in education, the wider the disparity in optimal health stock in the population resulting in wider disparity in health. The paper has been modified to include this additional explanation on the index.

Graph

The graph on mortality rates over time for all countries has been included and additional overall edits have been done to the manuscript.

Findings

In the paper, the authors emphasize that the findings of the paper has to be taken in context of the social welfare policies already in place in these advanced economies and not that income inequality is good for the population. These policies enabled the provision of a base level of protection for all income levels of the population including access to some form of minimum income and health services. However, the similar studies conducted in countries without such social welfare policies (e.g. developing countries) can yield the opposite result (Herzer, 2015). Similarly, when social support weakens in these advanced countries, rising income inequality arising from top incomes can have a different effect on the health of the population.

One of the novel findings of the paper is the difference in effect of slow-rising verses fast-rising income inequality on mortality rates. This is seen in the findings prior and post 1987. In the latter period, income inequality rose rapidly within a short period of time and that rapid rise seemed to have a detrimental effect on population health. Possible mechanisms whereby this can occur include increased unequal access to education and an increasing heterogeneous population that lead to varying preferences for public investments including health investments. The rapid rise in income inequality could exacerbate these effects. This explanation has been included in the revised manuscript.

The reviewer agreed with the authors that the lack of an economic theoretical model linking income inequality and health/mortality can make it challenging to define the empirical solution. However, as seen in the varied publications in this area, the current lack of a theoretical model should not preclude the empirical examination of the topic using latest available sound data. It does emphasize the eventual need for the development of such a model in the future so that empirical testing can occur in the context of a sound theory.

Sources

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Barro, R. J., & Lee, J. W. (2013). A new data set of educational attainment in the world, 1950–2010. Journal of development economics, 104, 184-198.