

Referee's report on MS 2134: "Does rising income inequality affect mortality rates in advanced economies?"

This paper proposes to extend the literature on the socioeconomic determinants of health by investigating the relation between the Pareto-Lorenz measure of income inequality and mortality. While this is in principle an interesting question, I regret that I cannot recommend this paper for publication.

The primary problem on the theoretical side is the lack of explanation for why the inverse Pareto-Lorenz coefficient might be an improvement over other measures of inequality in this application. As is illustrated by work by Gravelle, and also work by Laporte, one of the major problems with the inequality and health strand of the socioeconomic determinants literature is the inability of many empirical implementations to distinguish between changes in inequality and changes in absolute poverty. In other words, in much of the literature, the structure of the equations being estimated means that increases in inequality are almost always accompanied by increases in absolute poverty, so that it is not possible to distinguish inequality effects from the income effects of the poor getting poorer. Unfortunately, in this application, we have no discussion of whether the Pareto-Lorenz coefficient resolves that issue – indeed, we have no discussion of the properties of the coefficient itself. It seems to have been adopted simply because it was available. Because it is not one of the better-known measures (although Pareto-Lorenz seems to be Atkinson's nomenclature for a transformation of the Pareto distribution's shape parameter), some discussion of the properties of the measure would be useful.

We also need a much better explanation of the estimating equation. For example, if the health measure is a five year mortality rate for the 65 year old population, why is what appears to be total population an explanatory variable? Also, there is reference to a Health Capital index, but the source given for that variable seems to be education data.

There is considerable editorial sloppiness which needs to be cleaned up: on page 10, for example, we are told that "A graphical plot of income inequality and mortality for all countries shows the downward trend of mortality probability over the time period." The problem is that the only figure that was included in the MS which I have shows income inequality but does not show mortality.

Finally, the discussion of the results begins: "The key findings of this study show that there exists a long-run negative relationship between income inequality and mortality rates for OECD countries. Rising income inequality does not appear to negatively impact life-expectancy over the six decades." In fact, it seems fair to say that, taking the authors' results as a whole, increasing income inequality reduced mortality – inequality is good for population health, at least among the 65 year old population. The authors suggest that there may have been a different relation after 1987, when inequality began to rise, but they give no reasons why the causal relation between inequality and mortality might have changed at that point.

The authors note that one weakness of their paper is that it lacks a comprehensive theoretical framework. I must agree with them on that point, and that, combined with the weaknesses of the empirical section, means that I cannot recommend their paper for publication.