

The Gini Index, Pietra Ratio and Mean Division Shares

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Abstract

The mean division point (MDP) and Pietra ratio occur at the point of unit slope on a differentiable Lorenz curve. It involves the mean population share (MPS) and mean income share (MIS). The Gini index, Pietra ratio and MDP are correlated and show different properties about income inequality with TFP and human capital.

An interesting result is that an increase of human capital may not reduce income inequality if TFP is not high enough. The aggregate effects of a change in TFP or human capital on income inequality are negative only when TFP is higher than a particular level, and the minimum TFP forms a convex function of human capital. We find that the Gini index, Pietra ratio, and MPS show an inverted U-shape curve with TFP, but not with GDP. In terms of changes in MDS with GDP, TFP, capital stock and human capital, we find that the population of the low income segments has become relatively worse off as economies have become more developed in the panel data.

Keywords: Gini index, Pietra Ratio, mean division point

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