

Estimating Inequality with Grouped Data: Why Use a Parametric Model?

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Grouped data in form of income shares have been conventionally used to estimate income inequality due to the lack of availability of individual records. Several studies opted for a non-parametric approach, which computes a lower bound of inequality, in order to avoid the need to impose a parametric functional form to describe the income distribution. The aim of this paper is to compare the performance of both the parametric and the non-parametric approaches to estimate income inequality. We use the Generalized Beta of the Second Kind (GB2) and related models to fit income distributions in more than 150 countries over the period 1936-2013. Our results point out that the non-parametric approach is outperformed even by the simplest two-parameter models, which overall offer highly reliable estimates of the Gini index. Regarding the parametric approach, this analysis confirms the excellent performance of the GB2 distribution to represent income data for a heterogeneous sample of countries.