

## Measuring income inequality

Summary measures of inequality differ from one another and give different pictures of the evolution of economic inequality over time

Keywords: inequality, Gini coefficient, interdecile ratios

### ELEVATOR PITCH

Economists use various metrics for measuring income inequality. Here, the most commonly used measures—the Lorenz curve, the Gini coefficient, decile ratios, the Palma ratio, and the Theil index—are discussed in relation to their benefits and limitations. Equally important is the choice of what to measure: pre-tax and after-tax income, consumption, and wealth are useful indicators; and different sources of income such as wages, capital gains, taxes, and benefits can be examined. Understanding the dimensions of economic inequality is a key first step toward choosing the right policies to address it.

### KEY FINDINGS

#### Pros

- + The Lorenz curve is a commonly used metric that allows for the quick and visual comparison of inequality across countries.
- + The Gini coefficient uses information from the entire income distribution and is independent of the size of a country's economy and population.
- + Percentile ratios are easy to calculate and focus on a specific region of the distribution.
- + The Theil index can decompose inequality into within- and between-group inequality.
- + These commonly used measures are generally in agreement when comparing inequality across countries.

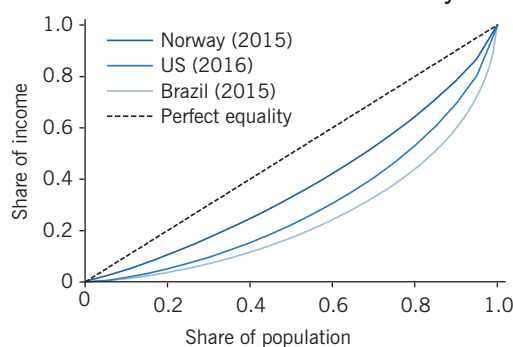
#### Cons

- If Lorenz curves cross they cannot provide a conclusive ranking between distributions.
- The Gini coefficient values change depending on what is measured—wages, before- or after-tax income, wealth, or consumption.
- Percentile ratios fail to use all information since they ignore incomes between percentiles.
- The Theil index is less intuitive and not directly comparable across populations with different sizes or group structures.
- The evolution of inequality within a country can appear different depending on the metric used.

### AUTHOR'S MAIN MESSAGE

Despite the relative strengths and weaknesses of the available measures, empirical studies show that they are mainly in agreement when comparing inequality differences across countries. However, the evolution of inequality within a country or the effectiveness of a specific policy can be perceived differently depending on the specific metric under consideration, as well as what variable is being measured. For instance, if policymakers care more about what happens to the poor they should use the Palma ratio instead of the Gini coefficient as their inequality measure and focus on consumption instead of income data.

Lorenz curves show income inequality is higher in Brazil than the US and Norway



Source: Author's own compilation based on data from PovcalNet. Online at: <http://iresearch.worldbank.org/PovcalNet/home.aspx>

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