

## Income inequality trends: the choice of indicators matters

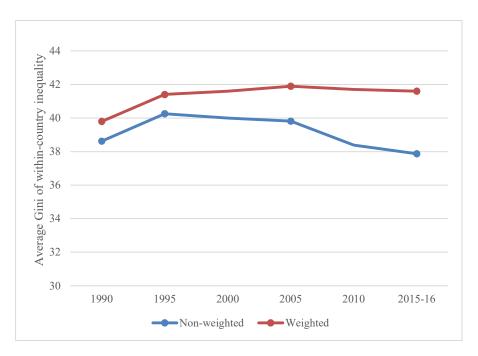
SOCIAL DEVELOPMENT BRIEF #8
DECEMBER 2019

Income inequality levels and trends vary greatly by country and depending on the indicator used. In its Poverty and Shared Prosperity Report 2016, the World Bank finds that income inequality within countries somewhat declined between the late 1990s and 2013 (World Bank, 2016). In contrast, the World Inequality Lab states that income inequality has increased in most countries in recent decades (World Inequality Lab, 2017). How can two leading sources information reach such different conclusions?

One reason for their conflicting findings is the choice of indicators. The World Bank's findings are based on the Gini coefficient of income inequality. Based on the most recent data available, figure 1 shows that the average Gini coefficient, weighted by each country's population, increased in the early 1990s but remained relatively stable between 1995 and 2015-2016. The population-weighted Gini accounts for the fact that inequality trends in countries such as China or India affect more people than trends in smaller countries. It is largely shaped by trends in these and other large countries. The non-weighted average Gini, which gives each country the same weight, declined more markedly (from over 40 to 38) between 1995 and 2015-2016.

Despite these averages, many countries have seen the Gini coefficient rise. Overall, income inequality as measured by the Gini increased in 46 out of 119 with data from 1990 to 2016 and declined in 58 of them. Countries where the Gini has increased account for over 70 per cent of the world population (United Nations, 2020).

Figure 1. Trends in the average Gini coefficient of within-country income inequality



Sources: Calculations based on data from UNU-WIDER's World Income Inequality Database (WIID), version 4 (available online at <a href="https://www.wider.unu.edu/project/wiid-world-income-inequality-database">https://www.wider.unu.edu/project/wiid-world-income-inequality-database</a>) and the World Development Indicators Databank (<a href="https://databank.worldbank.org/source/world-development-indicators">https://databank.worldbank.org/source/world-development-indicators</a>).

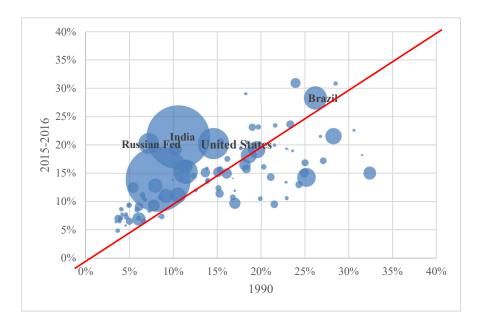
Note: Based on data for 119 countries accounting for over 90 per cent of the world's population.

The Gini coefficient is a summary measure of income distribution and therefore allows for general conclusions regarding inequality trends. However, it does not identify whether a rise (or a fall) in inequality is triggered by changes at the bottom, middle or top of the distribution. That is, it says little about what is driving inequality. The Gini itself is more responsive to changes in the middle of the distribution than other indices and less responsive to changes at the very bottom and at the very top.

The World Inequality Lab's findings rely on trends in the national shares of income earned by people at the top and at the bottom of the income distribution. The income share of the richest one per cent of the population increased in 59 out of 100 countries with data from 1990 to 2016 (see figure 2). These countries are home to 85 per cent of the world population. According to the same source, the share of income earned by the bottom 50 percent increased in 45 of 98 countries with data. Despite gains at the bottom, the global top one per cent of earners has captured twice as much of income growth as the 50 per cent poorest individuals (World Inequality Lab, 2017). Based on these measures, inequality has grown, on average, in countries with data.

The shares of income—or consumption or wealth—are better indicators of the concentration of resources at the top and bottom of the distribution than the Gini coefficient. However, each measure focuses on one part of the distribution. None of the shares, alone, provide full information on inequality trends. Combining

Figure 2. Share of income owned by the top one per cent, 1990 and 2015-16



Source: World Inequality Database. Available from: https://wid.world/data/ Notes: Estimates based on pre-tax income (that is, income before taxes and transfers). The estimates only cover part of the period in some countries, including Brazil (2001-2015).

different shares (for example, relating the share of the top 1 per cent to that of the bottom 50 per cent, as done in this brief, or that of the top 10 per cent to the bottom 40 per cent, as the "Palma ratio" does) allows for broader conclusions, but the results may be inconclusive. For instance, the share of income going to the top 1 per cent and the bottom 50 per cent have both increased in many countries.

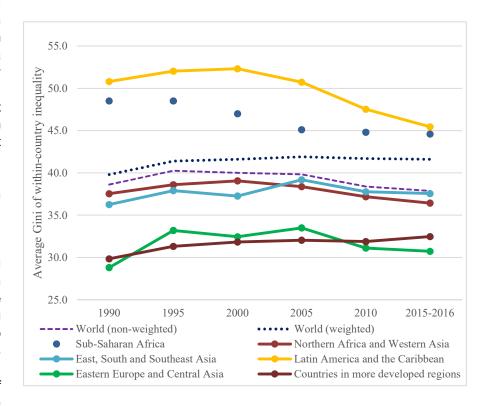
Despite discrepancies, all sources of information show that income inequality levels and trends vary significantly across countries and regions. From 1990 to 2015-2016, the income distribution as measured by the non-weighted Gini became increasingly unequal in developed regions, as shown in figure 3. On average, income inequality also rose, although more moderately, in East, South and Southeast Asia. While some countries in these regions have seen the Gini decline, inequality grew in the two giants—China and India. Latin America and sub-Saharan Africa are still the regions with the highest levels of income inequality. Yet the Gini coefficient declined in both Latin America and in African countries with data, on average, from the late 1990s to 2015-2016.

Top income shares have also risen fastest in countries of developed regions. According to the available, they have remained stable in Brazil as well as, on average, in countries of North Africa, Western Asia and sub-Saharan Africa, albeit at very high levels (World Inequality Lab, 2017). Globally, the top one per cent earned 20 per cent of all income in 2016. The share of the top one per cent was above 20 per cent in eighteen countries with data, including in Brazil, Chile, India, the Russian Federation and the United States.

In sum, both the Gini coefficient and top income shares show that the world continues to suffer from very high levels of inequality. However, income inequality trends can differ depending on the indicator and data used to monitor progress. Effective action calls for understanding these differences. Namely, the growing concentration of income at the very top of the distribution should be a cause of concern, even when some indicators fail to show growing inequality.

The Social Development Brief series is issued by the Division for Inclusive Social Development (DISD) of the United Nations Department of Economic and Social Affairs (DESA). This brief was written by Marta Roig. Contact roig@un.org for more information. The views expressed are those of the author and do not necessarily reflect those of the United Nations.

Figure 3. Trends in the Gini coefficient of income inequality by region



Sources: Calculations based on data from UNU-WIDER's World Income Inequality Database (WIID), version 4 (available online at https://www.wider.unu.edu/project/wiid-world-income-inequality-database) and the World Development Indicators Databank (https://databank.worldbank.org/source/world-development-indicators).

Note: Regional trends based on the non-weighted Gini coefficient.

## References

World Bank (2016). *Poverty and Shared Prosperity 2016: Taking on Inequality.* Washington D.C.: World Bank.

World Inequality Lab (2017). *World Inequality Report 2018*. Facundo Alvaredo, Lucas Chancel, Thomas Piketty, Emmanuel Saez and Gabriel Zucman (coordinators). Paris: World Inequality Lab.

United Nations (2020). World Social Report 2020: Inequality in a Rapidly Changing World. United Nations publication, Sales No. E.20.IV.1.