

Measuring inequality

Referring to a World Bank brief, the government has claimed India is world's 'fourth most equal country'. What does this conclusion miss? What are pitfalls of relying solely on consumption-based Gini Index?

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New Delhi | July 10, 2025 06:50 IST

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 **NewsGuard**





What are pitfalls of relying solely on consumption-based Gini Index?

A government release over the weekend claimed that “India is not only the world’s fourth largest economy, it is also one of the most equal societies today”. Using data from the World Bank’s latest Poverty and Equity Brief, it said India’s Gini Index was

at 25.5, which made it the world's "fourth most equal country...after the Slovak Republic, Slovenia and Belarus", reflecting how fruits of economic progress were being shared "more evenly across its population".

The Gini Index or Gini coefficient, named after the early 20th century Italian statistician Corrado Gini, has historically been the most commonly used measure of inequality. It measures inequality on a scale from 0 to 1 (or 0% to 100%), with higher values indicating higher inequality.

The government's claim has been contested both by academics who study inequality, as well as observers who see India as a country with high and rising inequality.

An incomplete picture

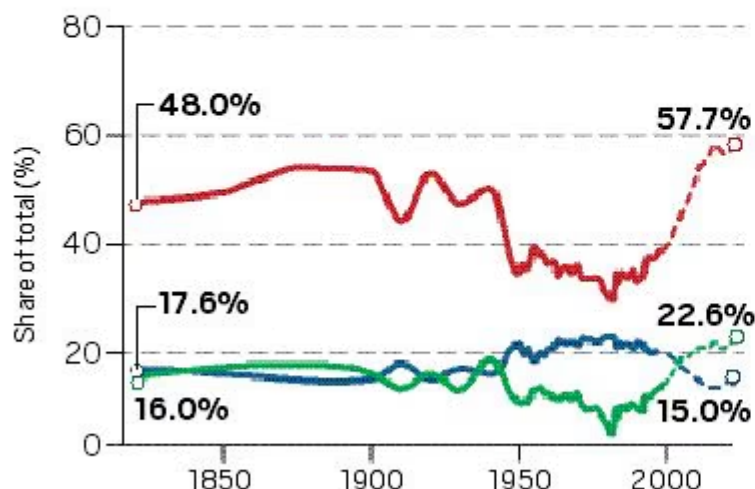
The paragraph in the World Bank's Poverty and Equity Brief referenced by the government includes important qualifiers that the release did not mention:

"India's consumption-based Gini index improved from 28.8 in 2011-12 to 25.5 in 2022-23, though inequality may be underestimated due to data limitations... The World Inequality Database shows income inequality rising from a Gini of 52 in 2004 to 62 in 2023. Wage disparity remains high, with the median earnings of the top 10 percent being 13 times higher than the bottom 10 percent in 2023-24."

The government release does not mention the "data limitations" that the World Bank itself has flagged, and does not take into account the Gini Index value calculated by the World Inequality Database, which shows a rise in the Gini Index from 2004 to 2023.

INCOME INEQUALITY, INDIA, 1820-2023

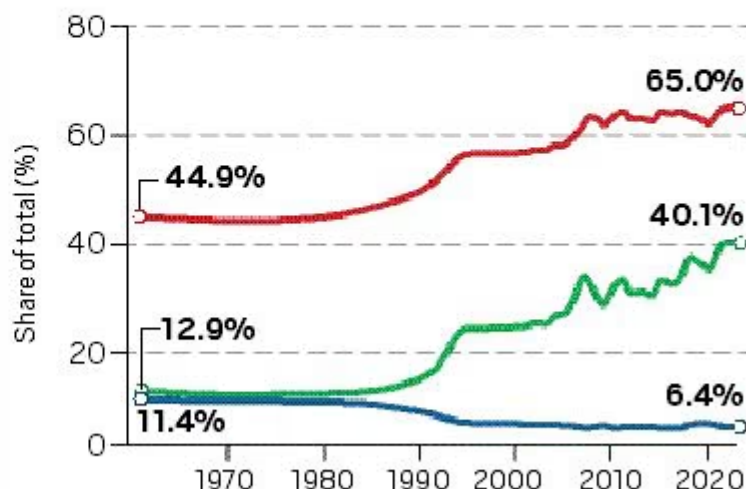
- Pre-tax national income for top 10%
- Pre-tax national income for bottom 50%
- Pre-tax national income for top 1%



Source: World Inequality Database

WEALTH INEQUALITY, INDIA, 1961-2023

- Net personal wealth for top 10%
- Net personal wealth for bottom 50%
- Net personal wealth for top 1%



Consumption-based Gini

To map income inequality, countries often conduct surveys on income data. India, however, collects data on consumption, not income.

When it comes to inequality, this makes a big difference because variation in income is far more than variation in consumption. As people earn more, the bulk of their additional income is turned into savings. As such, a Gini Index of inequality using consumption data underestimates the level of inequality in a society.

Also, economists such as Anmol Somanchi, who works at the World Inequality Lab (run by the Paris School of Economics and University of Berkeley, California), have pointed out that it is misleading to compare India's consumption-based Gini Index value with that of other countries, which use an income-based Gini.

In short, the use of consumption-based Gini underestimates inequality and undermines comparability with other countries.

Limitations of survey data

It is widely acknowledged that the gap between the bottom 10% and top 10% of the population is widening, even if it is assumed that everyone in the country is becoming better off.

However, the calculation of inequality is unlikely to capture the widening gap. This is because surveys, whether they are about consumption or income, typically falter in capturing the data of the richest. This is for two broad reasons.

One, the rich exhibit what is technically called a “differential non-response”, Somanchi said. In other words, the rich tend to decline to participate in surveys much more than the poor do.

Two, the way the sampling of these surveys works, the chances of the richest persons in the country being drawn in a random sample are pretty low. This becomes a big reason for underestimation of inequality if just a handful of the extremely rich are driving up inequality.

Thus, if 90% of the population is not “unequal” while most of the inequality is being driven by the top 1%, any survey that fails to sample the top 1% will fail to capture the real picture on inequality.

Researchers have flagged this underestimation in several other countries such as the US, the UK, and many other European countries as well.

A way to correct for this lapse in sampling is to use the survey data in conjunction with income tax data, which is uniquely accurate in capturing the incomes of the top earners in a country. Studies that did this in the UK, the US, and elsewhere found that relying solely on survey data underestimated inequality.

The World Inequality Lab Gini Index, which shows that inequality in India has increased, uses income tax data to correct for this gap.

Problems with Gini Index

The Gini Index too does not capture all aspects of the inequality picture. This is because it is not 'sensitive' to changes at the extremes of a population, but is overly sensitive to changes in the middle.

This has to do with the way the Gini Index is calculated — and experts have been urging for close to 50 years now that other measures should be considered. One option is the Palma Ratio, named after a Chilean economist who suggested looking at the shares of income (or wealth) at the extremes — the bottom 50% and the top 10%, for instance.

When such comparisons are calculated with the use of income tax data (apart from survey data), the emerging picture is grim: it shows income inequality is now worse than in the colonial period, and the top 1% earn far more than the bottom 50%.

Bigger picture on inequality

The point of studying inequality is to allow governments to tailor appropriate policies to alleviate excessive inequality. However, an inaccurate reading of inequality can lead to policies that actually exacerbate existing inequalities. If high inequality is not contained, it can create social unrest and eventually militate against sustained economic growth.

Relying solely on the Gini Index, that too with severe data limitations, can obscure the reality. As explained above, a given version of the Gini Index could be falling even when inequality between the two extremes of the population may be rising.