Global Inequality: where do we stand?

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Introduction

• Broad literature on global inequality – i.e. *inequality among world citizens* - already surveyed 15 years ago by Anand and Segal (2008) but which keeps expanding, most notably through the work of Milanovic.

• Various objectives:
  – Global social justice, e.g. UN's millenium declaration (MDGs, SDGs)
  – Analytic (growth convergence/divergence, effects of globalization, ..)

• Various concepts of global inequality: global vs. between/within, population weighted vs. 'one flag one observation', relative vs. absolute inequality, global poverty, ...

• Major methodological hurdles:
  – availability of income distribution data, comparability across countries (and over time), PPP-correction of exchange rates, representativeness of survey samples, under-sampling/reporting ...

• Conflicting views about the evolution of global inequality, although the dominant view in the opinion seems to be that *global inequality has ever been increasing and keeps increasing*
Two recent papers attempt to describe the historical evolution of the global inequality of incomes with more emphasis on the last 40 years:

- L. Chancel and T. Piketty (2021), Global income inequality: 1820-2020: the persistence and mutation of extreme inequality
- B. Milanovic (2022), The three eras of global inequality, 1820-2020, with the focus on the past thirty years

As they are based on different data sets, particularly interesting to see whether they show the same evolution:

- In the 'historical' period – 1820-1980, i.e. before distribution data became available in a majority of countries
- In the last 30-40 years 1980/90 - 2020

Over the recent period, the comparison is complemented by own estimates based on the Poverty and Inequality Platform (PIP) database of the World Bank (ex-Povcalnet)
Outline

2. Recent evolution of global inequality (last three/four decades)
   – Inequality measures
   – Growth incidence curves
3. Some methodological issues in global inequality estimation
4. What's next?
1 Historical evolution of global inequality

• Source of mean income by country: Maddison-Project series of PPP-2017 GDP per capita (GGDC)

• Source of data on decile/quintile shares:
  – Chancel and Piketty (C&P): relies on more distribution estimates based on tax data (after 1910) and wealth distribution for a few countries + extrapolation over time and across countries. When needed, percentile shares parametrized by top income (10%) and bottom (50%) shares.
  – Van Zanden et al. (2013), estimates based on a few direct estimates, wage/GDP per capita ratios, and height inequality + extrapolation over time and across countries + Log-normal assumption

• Results:
  • Convergence on ascending trend in 19th century although at higher level for C & P
  • Divergence after WWI: stability in C & P vs. continuing rise in BM
  • Both features easily explained by data sources, with some uncertainty over the post-WWI period
Historical estimates of global inequality

Historical evolution of income inequality among world citizens according to various sources: Gini coefficient 1820-1980

- Chancel & Piketty (2021)
- Milanovic (2021)
- Bourguignon & Morrisson (2002)
- van Zanden et al. (2013)
Historical evolution of national inequality: USA, UK France

a) WID data

b) B&M/BM data
2. Recent evolution of global inequality:

Data sources on recent period:

• Chancel and Piketty: World Inequality Database (WID), national g-percentile (adult), DINA distribution of gross income (combining Household Surveys – national sources for advanced and big emerging countries, Povcalnet for other developing, Tax data and National Accounts); around 160 countries – with the same regional grouping as for the historical period; PPP exchange rate; 1980-2020

• Milanovic: Povcalnet (for developing countries), LIS for advanced countries (+ SILC + SEDLAC); percentile distribution of household income/consumption per capita from (unadjusted) Household Surveys; variable sample of between 130 and 140 countries, PPP exchange rate, 1990-2018

• PIP Benchmark (2023): Poverty and Inequality Platform (updated version of Povcalnet with global coverage, around 160 countries), 1980-2021
Global inequality in the 2000s: a trend reversal?

Gini coefficient 1980-2021

Chancel & Piketty (2021)
Milanovic (2022)
A trend reversal?

Income inequality among world citizens according to various sources:
Gini coefficient 1980-2021

- Chancel & Piketty (2021)
- Milanovic (2022)
- PIP Benchmark
Recent evolution of global inequality: agreement on trend reversal but divergence on date and intensity

• Chancel & Piketty:
  – Slight increase between 1980 and 2000
  – Steep fall since 2000 (5 Gini pp drop)
  – Clear stagnation effect of the pandemic
  – Gini in 2020 at the same level as in 1880!

• Milanovic (BM)
  – Fall started before 2000
  – Very steep decrease after an upward blip in 2003 (6/7 Gini pp drop)
  – Gini in 2018 at the same level as in 1870 or before

• PIP benchmark
  – Similar to BM except for the 2003 blip
  – Slowdown of the decline in 2015-2019 and minor reversal in 2020
... but fundamentally different structural components

Decomposition of the Theil coefficient of total inequality into:

- **Between inequality**: global inequality if all income were identical within countries
- **Within inequality**: global inequality if mean incomes were identical across countries
Sources of convergence and divergence

Convergence: the fall in between country inequality as the dominant global economy feature of the period – possibly a historical trend reversal

Divergence: the size and rising pace of national inequality in advanced and big emerging countries in the 1980s and 1990s differ between the two sets of estimates (see next slide)

• Higher inequality and steeper rise in C&P + magnifying effect of the extension of distribution data to National Accounts

• Together these factors over-compensate the drop in global inequality due to the between country component in C&P... unlike in the BM or PIP benchmark estimates

• These factors lessen after 2000, and the fall in the between-country inequality becoming the dominant force in the evolution of global inequality

Note: discrepancy between BM and PIP in within-country inequality after 2010 to be clarified
Recent evolution of national inequality: USA, UK, China

a) WID data

b) PIP data
Delving deeper into the dynamics of global inequality: growth incidence curves

- 'Elephant curve' in C&P
- Almost fully downward sloping GIC in PIP suggesting unambiguous increase in social welfare
- Difference on top incomes is expected
- Surprising difference in bottom
  - Growth of mean income in household surveys in PIP below GNI per capita growth in C&P
  - Effect of the major reranking due to Chinese growth seems absent in C&P (2020 Brazil's decile 1 /1980 China's Decile 4)
Change in the shape of Growth Incidence Curves

- Original 'elephant curve' in Lakner-Milanovic (2013) (NA corrected ?)
- The shape is radically modified in later period (almost fully downward sloping)
- Elephant's trump in the 1988-208 GIC is due to the steep increase in inequality during the 1980s and 1990s
- It disappears in the 2000s because inequality rose more slowly or stagnated, the between-country component becoming dominant

The changing shape of the GIC in PIP/benchmark data

• Differences with BM suggests that time period matters for the shape of the GIC

• Effect of the inequality rise of the 1980s/90S quite clear and strong – even without top income correction.

• At first sight, GIC 80-00/00-19 suggest there was no unambiguous change in inequality in those periods as GIC are non-monotonic – but this is not necessarily the case and require further checking.
3. About some methodological issues in the measurement of global inequality

Three methodological dimensions:

1. **National mean economic welfare concept**: from pre-tax household income to GNI per capita. With population data and appropriate exchange rate this determines the between-country inequality
   - Main source = National Accounts (NA)
   - Some approximation needed to use 'per adult equivalent' or 'equivalized' income concept

2. **National sources of distribution data** consistent with mean welfare concept: from household survey to linkages between surveys, administrative data and NA extension.
   - Distribution feature depends on the welfare concept and data source
   - Household income survey as the most practical observation tool of 'equivalized disposable income', but there are biases
   - Other concepts can be observed through surveys (wealth, consumption) but exhibit biases
   - Correcting biases or moving to other welfare concepts ('full income') requires using ancillary data (typically tax data, National Accounts) in a not-so-obvious way
   - *Issue of transparency and replicability* (WID vs LIS)
.. methodological issues in the measurement of
global inequality

3. Representation of the distribution and measure of inequality

- Relative vs. Absolute
- Population weight in global distribution
- Decomposition (income, earnings, capital incomes)
- Horizontal inequality (gender, age, education, family composition) ...
4. What's next

Will the equalizing of global distribution continue?

1. The changing role of China
2. Will India replace China?
3. The key role of Sub-Saharan Africa
4. The climate change factor