The Distribution of National Accounts

CNSTAT

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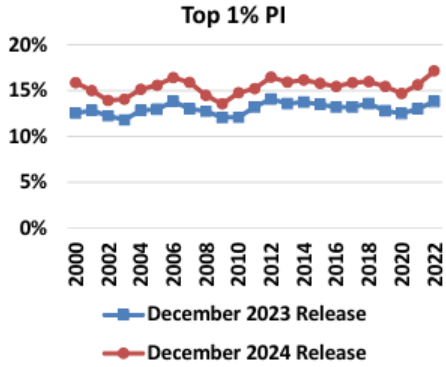
What are Distributional National Accounts?

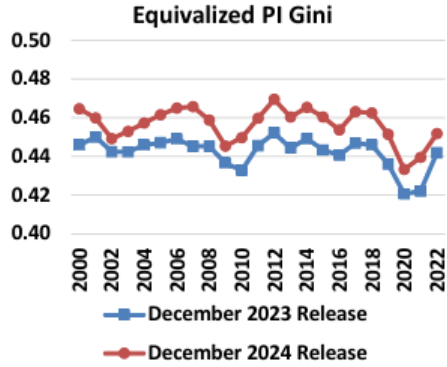
- Objective of distributional national accounts: Understand how macroeconomic growth is experienced by households (micro)
  - Macro data: comes from National Income and Product Accounts (NIPA) produced by BEA
    - NIPA total for this exercise: **Personal Income (PI)**
    - PI is the income received by persons from participation in production, government and business transfers, service flows from homeownership, and holding interest-bearing securities and corporate stock
  - Microdata: Primary data source is Current Population Survey, Annual Socioeconomic Supplement "CPS"), supplemented by other administrative and survey data

- Distribute PI to households in augmented CPS by component (i.e., wages, business income, interest, dividends, imputed interest, health insurance, social security, other in-kind transfers) [see Gindelsky 2024 Technical Document]
- Each household is allocated a value for PI $\rightarrow$ Equivalize (divide by $\sqrt{householdsize}$) and rank households to compare households of different sizes to each other
- **Construct a series of inequality statistics**
  - Currently available at **national (2000-2023)** and state (2012-2021) level on BEA website
  - Statistics for PI and disposable PI are published annually and include disaggregated series such as compensation, proprietor's income, government social benefits, etc.

December 2024 update

- Added provisional results for 2023
- Updated methodology to better represent administrative tax data (SOI)
- Impact on series: slight increase in inequality

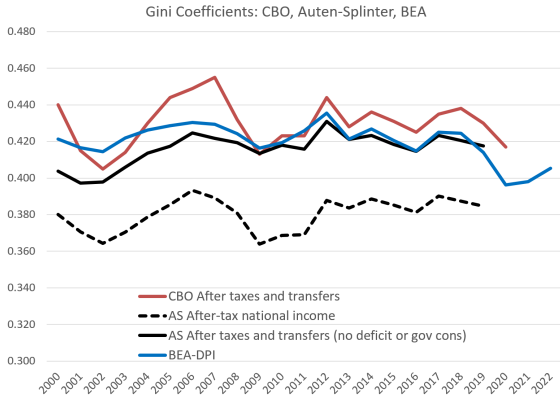


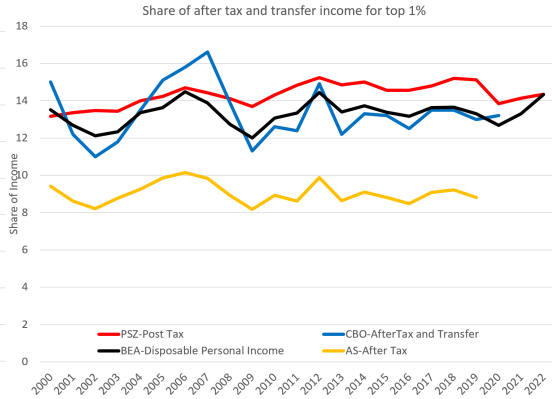


These figures show the impact of the methodology update on the distribution of PI for the top 1% share and the Gini index for 2000-2022.

Current Release Results: Comparison

Thanks to David Johnson for graphs! (updated with December 2024 release)





Extensions: Currently Available and Forthcoming

Currently available: Additional Series[1]

- Distribution of Personal Saving (BLS WP-575), based on joint distribution of DPI & PCE (joint work with Robert Martin (BLS))
- Internationally Comparable distribution of Adjusted Disposable Income (OECD EGDNA group)

Forthcoming: Nowcasting distributional accounts (BEA WP 2024-6)

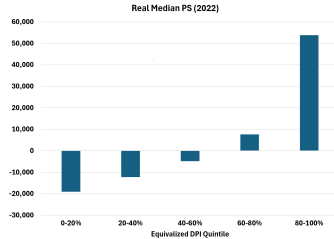
Work in Progress (pending resource availability):

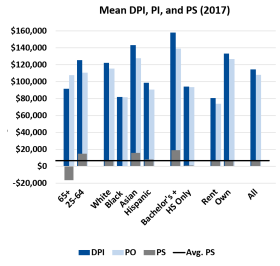
- Cash-measure of income in National Accounts
- BEA/BLS/Federal Reserve project to integrate distribution of wealth into joint distribution of DPI & PCE

[1]Estimates do not reflect December 2024 methodological update or NIPA data revisions.

Distribution of Personal Saving (joint work with BLS)[2]

- In 2017 (base year of analysis), average PS was $6,596, which is 5.8% of average DPI
- Outlays > income for bottom half of the distribution
- All groups had average PS>0, except age 65+ (likely due to exclusion of retirement income)
- Highest average PS for Asian reference persons and those with at least Bachelor's degree

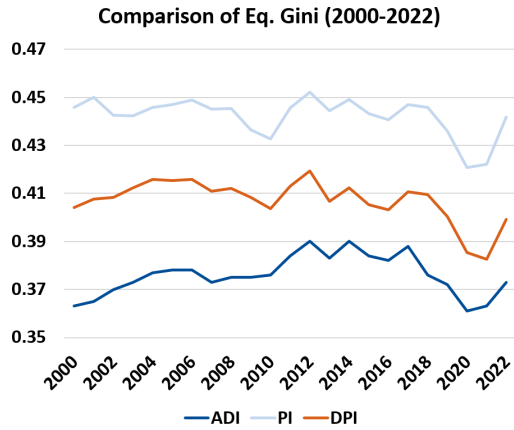




[2] Series update pending.

Internationally Comparable Estimates (OECD)[3]

- BEA produced a distribution of Adjusted Disposable Income in keeping with the aims of the Expert Group of Disparities in National Accounts (EG DNA)
- Construction of ADI by members of the OECD group allows for direct comparability across countries
- ADI includes more sources of income, trends similarly to PI & DPI over time, despite lower levels of inequality
- For 2022, mean ADI ($170,102) mean PI ($165,887) and significantly higher than mean DPI ($142,05).

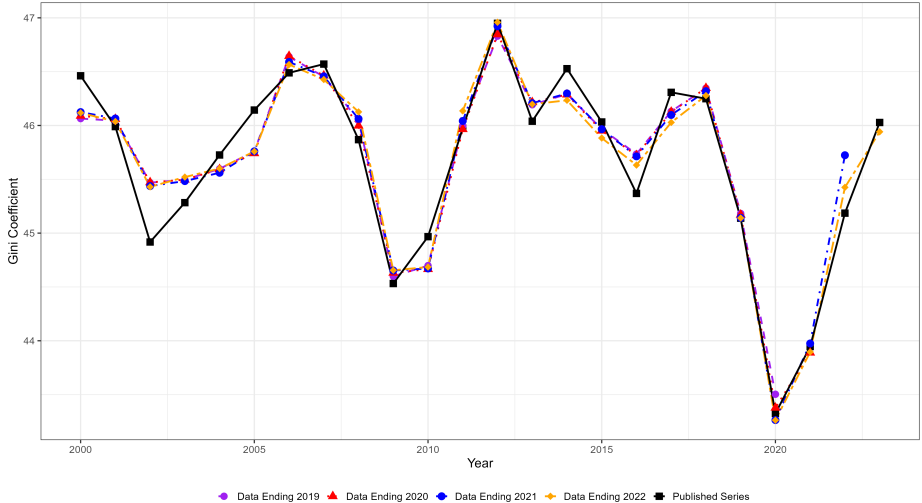


[3]Estimates have not been updated to reflect December 2024 update due to unavailiabilty of NIPA Tables 3.17 and 7.12.

Can BEA publish reasonably accurate income inequality statistics for the previous CY before final annual microdata and macrodata are available?

- Current lag from CY is 11 months for "provisional" estimates, and 23 months for official
- What techniques or data sources are necessary?
- How much can the lag be reduced, while maintaining quality?
- Is the method robust to business cycle changes, policy changes, and shocks?

Nowcasting: Main Specification



Note: This figure shows four models estimated for each metric with 1-year nowcasts from observed series for 2000–2019 (purple), 2000–2020 (red), 2000–2021 (blue), 2000-2022 (orange) lines. The black line denotes the observed series of metrics for PI, as published by BEA in December 2024.

Nowcasting: Conclusions

- "Advance estimate" of distributional accounts is feasible, one month after CY, before any microdata is available
- Elastic net approach using NIPA totals produces fast, highly accurate nowcasts, equal to or exceeding naïve approaches
  - Consistent results using DPI
  - Models are flexible and capture variation very well during turbulent periods, including COVID and Great Recession
  - The main specification correctly identifies turning points at least 90% of the time
- Approach exploits relationships between NIPA components
  - Appropriate since BEA inequality series based on micro data scaled to macro totals
  - Robust to NIPA revisions