

Summary of Methodological Updates and New Features

Distribution of Personal Income Prototype Statistics

December 2022

The prototype statistics released on Dec. 15, 2022, incorporate changes in methodology and include new features compared with the prototype statistics that were released in December 2021. Tables and charts featured on this webpage also have been updated to reflect these improvements. A new set of internationally comparable statistics has been added (see below for details) as well as complete estimates for 2020 and provisional estimates for 2021. The technical document laying out the U.S. Bureau of Economic Analysis' (BEA's) methodology has also been updated to explain the details of the changes. The working paper, "Measuring Inequality in the National Accounts," has not been updated, as it still accurately reflects the context and background pertaining to the estimates.

New Features

1. The December 2022 release includes an additional year of provisional estimates. Where possible, calendar year 2021 data were used to calculate these estimates. In cases where these data were unavailable, an extrapolation was performed using available 2020 data. The most notable extrapolation was for income sources tied to IRS data with the help of 1040 data provided to the U.S. Census Bureau.¹ The top 1% and top 5% income shares are substantially influenced by tax data. The ranges provided reflect analysis conducted with historical data. Though changes in top shares may lead to changes in decile shares as well, analysis has shown most of the expected variation to be within the top decile. At present, we do not expect large revisions to these shares that fall outside of this interval.
2. With the December 2022 release, a new set of internationally comparable inequality research statistics has been included that follows the guidance of the OECD Expert Group on Disparities in a National Accounts framework (EG DNA). Following the same structure as the BEA distribution of personal income (PI) tables, this release includes one OECD inequality metrics summary file and 22 individual year-files with 2 tables each: table 1—a component breakout of adjusted disposable personal income (DPI) (with corresponding deciles) and table 2—inequality metrics. The calculations are based on the calculations for PI and DPI, wherever possible. The OECD methodology, including a discussion of additional imputations, is available in a separate document, titled "OECD Technical Document: An Internationally Comparable Methodology." As with the PI and DPI numbers, the 2021 estimates are provisional.

¹ For more details, please see the updated technical document.

Significant Changes in Methodology

1. Self-employment imputations have been updated. First, given the small number of CPS observations with non-zero farm income and overall volatility of this income source, farm and self-employment have been combined into one imputation. Second, the share of partnership income in the total self-employment has been updated to better reflect partnership income underreporting. Together, these changes slightly raise inequality top shares, particularly in the first half of the sample.
2. Tax imputations have been updated. A new version of TAXSIM is now available (TAXSIM 35), which allows for separate imputations for wages and self-employment, as well as some other improvements.
3. Imputations of unemployment insurance payments have been updated. A new crosswalk from Larrimore, Mortenson, and Splinter (2022)² is now utilized to correct for the underreporting of such payments in the CPS; the crosswalk is based on administrative data. This is particularly influential for 2020 estimates.
4. There are some items in the NIPA accounts for which no distributional information is available. The previous strategy had been to distribute these items equally to all households. However, as this strategy artificially lowered inequality somewhat, these items are now distributed such that their inclusion does not change the overall distribution. For example, if income consisted of wages, self-employment, and other, and the Gini of the “wages and self-employment” total were 0.5, the “other” category is now distributed according to the total of “wages and self-employment” and thus the Gini remains at 0.5. This change is particularly apparent in the distribution of “household current transfer receipts from business” in table 1 (line 9) for each year.

² Larrimore, Jeff, Jacob Mortenson, and David Splinter. 2022. "Unemployment Insurance in Survey and Administrative Data," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, July 5, 2022.

Additional Notes

1. Though the income definition and equivalization formula are slightly different, trends in the OECD adjusted disposable income are very similar to those of the BEA DPI series. The primary distributional difference stems directly from the inclusion of social transfers in kind tied to government expenditures for health, education, and income security on NIPA table 3.17.
2. The substantial drop in inequality from 2019 to 2020, and subsequently low level in 2021, is primarily due to the effects of expanded unemployment insurance (UI), the economic impact payments (EIP), and the advance child tax credit (CTC). If we were to calculate PI without UI, EIP, and the CTC (all forms), we would have the inequality distribution in column 1 below. Adding UI to that distribution would create a distribution as in column 2. Column 3 is the full PI distribution.

	Without UI, EIP, & CTC	Add UI	Add EIP+CTC (Full PI)
	(1)	(2)	(3)
2019			
0–20%	5.2%	5.3%	5.2%
20–40%	9.6%	0.7%	9.7%
40–60%	13.9%	13.9%	14.0%
60–80%	20.3%	20.3%	20.3%
80–100%	50.9%	50.9%	50.8%
Gini	0.441	0.441	0.440
2020			
0–20%	5.1%	5.4%	5.5%
20–40%	9.5%	10.0%	10.2%
40–60%	13.7%	14.0%	14.2%
60–80%	20.1%	20.1%	20.2%
80–100%	51.6%	50.6%	50.0%
Gini	0.447	0.431	0.424
2021			
0–20%	5.2%	5.3%	5.5%
20–40%	9.6%	9.7%	10.1%
40–60%	13.8%	13.9%	14.4%
60–80%	20.0%	20.1%	20.3%
80–100%	51.4%	51.0%	49.6%
Gini	0.446	0.441	0.424