

Poverty in 2021 Corrected for Unemployment Insurance Underreporting

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Abstract

The 2021 CPS-ASEC underreports unemployment insurance benefits by approximately \$220 billion. Using newly available summary data on unemployment insurance benefits in IRS tax records from Larrimore, Mortenson, and Splinter (2022), I estimate the effects of this underreporting on income and poverty statistics. If the CPS-ASEC had properly captured unemployment insurance benefits, the official poverty rate for income-year 2021 would have been 1.5 percentage points lower. Additionally, the supplemental poverty rate would have been 1.2 percentage points lower than that originally reported by the Census Bureau.

Keywords: Unemployment insurance, Covid-19, CPS-ASEC, poverty

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In their recently released report *Poverty in the United States: 2021*, the U.S. Census Bureau (2022) reported that the official poverty rate in 2021 rose slightly to 11.6 percent and that the supplemental poverty rate fell to 7.8 percent. These findings, however, fail to reflect the full scale of unemployment benefits that people received in 2021. In 2021, IRS data show that 26 million people received a total of \$310 billion of unemployment insurance (UI) benefits, approximately \$220 billion above the \$90 billion of UI benefits reported in the CPS data.¹ Were these unemployment benefits fully captured in the CPS data, the poverty rates would have been lower than that reported by the Census Bureau.

This note incorporates missing UI benefits into the CPS by using recently released data from Larrimore, Mortenson and Splinter (2022) on unemployment benefits captured in IRS tax records. Following their approach, in 2021, the UI corrected official poverty rate was 10.1 percent and the UI corrected supplemental poverty rate was 6.6 percent.

1. Data and Methods

The primary data for this note are the public use Current Population Survey Annual Social and Economic Supplement (CPS-ASEC). These data are used by the Census Bureau (2022) to compute poverty rates and income statistics in their annual income and poverty reports.^{2,3}

Supplemental summary information on unemployment insurance benefits in IRS tax records comes from Larrimore, Mortenson, and Splinter (2022). Because unemployment insurance income is generally taxable, states provide recipients of these benefits with a Form 1099–G that states the amount of benefits received. This form is also provided to the IRS. Larrimore, Mortenson, and Splinter (2022) computed the average UI benefits and standard deviation of benefits for each centile of the income distribution in every year from 1999 through 2021.⁴ In

¹ Unemployment insurance benefits were enhanced in 2021 by provisions in the American Rescue Plan (Congressional Research Service 2021). The Bureau of Economic Analysis' National Income and Products Accounts report \$339 billion of unemployment insurance in 2021, which is slightly above the amount captured in IRS data and far above the amount reported in the CPS.

² I focus here on poverty statistics. However, UI underreporting will also affect other income statistics reported by the Census Bureau, which I will consider in future research.

³ Multiple versions of the CPS data are available, including a harmonized dataset from IPUMS (Flood et al., 2022). While the harmonized version of the data are advantageous, in order to produce timely results, here I use the original version produced by the U.S Census Bureau that is available at <https://www.census.gov/programs-surveys/cps/data/datasets.html>

⁴ These data are available in a supplemental Excel file on Splinter's website (www.davidsplinter.com).

2020, they demonstrated that the unemployment benefits in these data closely match those reported by both the Bureau of Economic Analysis and the Treasury department.

The CPS and IRS data are linked using a statistical matching approach based on the individual's income centile. Following Larrimore, Mortenson, and Splinter (2022), within each centile, I randomly impute UI recipients such that the number of recipients matches that in the IRS data. When doing so, I prioritize imputing benefits to people who had wage earnings in the prior year or who did not work but were looking for work.⁵ For those assigned imputed UI benefits, I assign a benefit value from a distribution with the same mean and standard deviation as the UI benefit distribution for recipients in the same centile of the IRS data (see Larrimore, Mortenson, and Splinter 2022 for details on this approach, which is also consistent with the CBO imputation approach in Habib (2018)). I then recompute the major income and poverty statistics reported by the Census Bureau (2022) with these data that correct for unemployment insurance underreporting.

Importantly, the only change between the original version of the CPS data and the UI-corrected data used here is the share of people who receive UI benefits and the amount of benefits. Consequently, the differences observed between these results and those seen in the original CPS data (and in Census Bureau (2022)) can be completely attributed to the CPS failing to fully capture UI benefits. Other research has observed underreporting of income in the CPS from other sources (see, e.g., Bee and Rothbaum 2019 and Meyer and Mittag 2019), but I do not attempt to address the underreporting of these other sources here.⁶

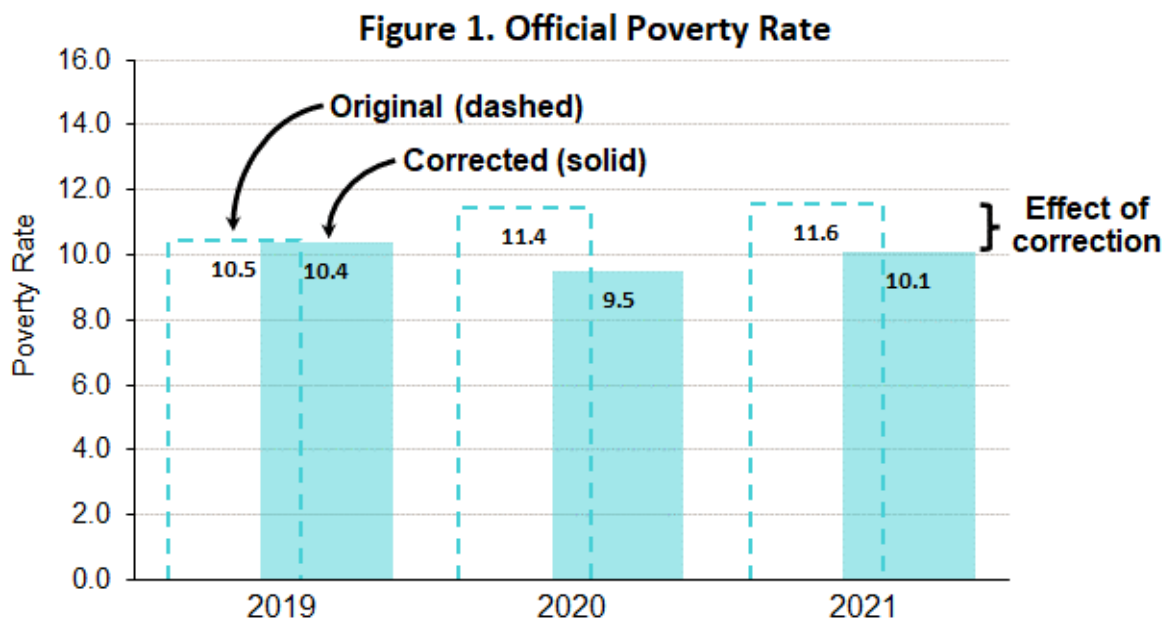
2. Results

A. Poverty

Correcting for underreporting of unemployment insurance in 2021 reduces the official poverty rate by 1.5 percentage points relative to that originally reported by the Census Bureau

⁵ Prioritizing those who had prior-year wage earnings is consistent with the fact that only those who were working prior to the unemployment spell are eligible for benefits. This will improve subgroup estimates – including by age – although for population-wide estimates the restriction has little practical effect since population-wide income and poverty estimates only requires the correct correlation between observed and imputed incomes.

⁶ Additionally, Rothbaum (2021) indicated that survey non-response during the pandemic likely affected response rates and income measurement during the pandemic. Rothbaum provides alternate weights for income years 2019 and 2020 (the 2020 and 2021 surveys). I use the original weights in this paper for consistency with the Census Bureau (2022) and because Rothbaum's adjusted weights are not yet available for income year 2021.



Source: Author's calculations using CPS-ASEC data and UI data from Larrimore, Mortenson, and Splinter (2022).

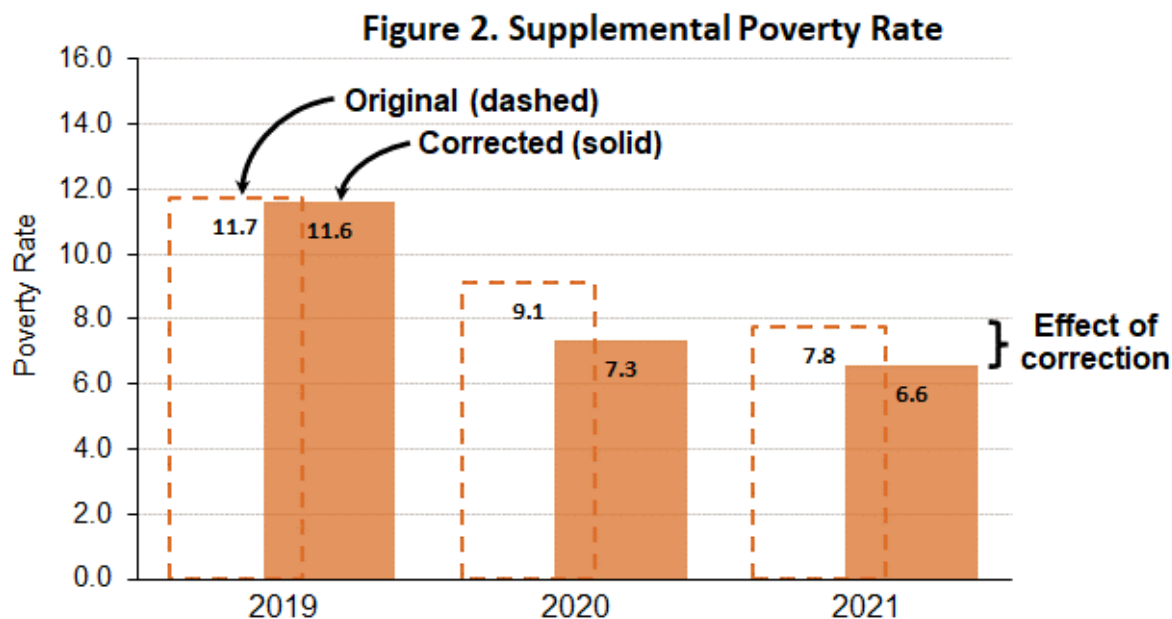
Note: Original values are from the public use CPS-ASEC data, which differ slightly from results in Census Bureau (2022).

(2022). As shown in Figure 1, the official poverty rate goes from 11.6 percent in the uncorrected data to 10.1 percent in the UI-corrected dataset.

Although the official poverty rate is lower in 2021 once correcting for UI underreporting, the year-over-year trend shows a larger rise in poverty in 2021 after making this correction. This is because the Census Bureau more substantially undercounted UI benefits in 2020 than it did in 2021 (in 2020, the CPS underestimated UI benefits by around \$350 billion). Hence, the CPS underestimated the withdrawal of these benefits in 2021. In 2021, UI benefits in the IRS data were about \$255 billion below their 2020 level, whereas the CPS data only showed a decline of \$128 billion because of underreporting in both years. Fully reflecting the withdrawal of benefits leads to the finding that poverty rose by more in 2021 than originally reported.

The Census Bureau also produces a supplemental poverty measure (SPM), which incorporates income sources beyond the pre-tax cash income definition used for the official measure.⁷ Like the official poverty measure, the SPM is based on CPS-ASEC data, which means that underreporting of UI benefits in the survey will affect the poverty rate.

⁷ The SPM also differs from the official measure by adjusting the poverty threshold based on consumption patterns each year rather than using an absolute threshold that adjusts only for inflation. Because the SPM was never calibrated to match the official poverty rate and adjusts thresholds differently, the levels of poverty in these SPM and official poverty measure should never be compared to each other. For a broader discussion of the differences between these measures, see Fox and Burns (2021) and for a discussion of long-run trends in absolute poverty using broad income definitions, see Burkhauser et al. (2019).



Source: Author's calculations using CPS-ASEC data and UI data from Larrimore, Mortenson, and Splinter (2022).
Note: Original values are from the public use CPS-ASEC data, which differ slightly from results in Census Bureau (2022).

Unlike the official poverty rate, in 2020, the uncorrected SPM poverty rate fell substantially from 11.7 percent in 2019 to 9.1 percent in 2020. This decline in poverty reflected the substantial fiscal relief programs incorporated by the SPM that are not included in the income definition for the official poverty measure. However, the supplemental poverty rate would have fallen even further in 2020, to 7.3 percent, if UI benefits were fully captured by the CPS.

Correcting for underreporting of UI benefits similarly reduces the supplemental poverty rate in 2021. While the supplemental poverty rate as reported by the Census Bureau was 7.8 percent, once correcting for the underreporting of UI benefits it is 6.6 percent, or 1.2 percentage points lower (Figure 2). As is seen in the unadjusted data, the UI-corrected supplemental poverty rate fell in 2021. However, the decline was not as substantial as in the uncorrected data because of the larger UI benefit withdrawal after the data correction.

B. Child Poverty and Poverty Rates by Age

Although the underreporting of UI benefits affects the poverty rates for all age groups, it has a greater effect on the poverty rates for working-age adults than it does for elderly adults who are more likely to be retired. Additionally, because most children live with working-age adults, it also has a notable effect on child poverty. The effects of correcting for UI underreporting by age can be seen in Table 1.

Table 1. Income and Poverty Statistics by Race and Ethnicity: 2019-2021

	Original data			Corrected for UI		
	2019	2020	2021	2019	2020	2021
<i>Official Poverty Rate</i>						
Under age 18	14.4	16.1	15.3	14.3	13.1	13.3
Aged 18 to 64	9.5	10.5	10.5	9.4	8.4	9.0
Aged 65 and older	8.9	9.0	10.3	8.8	8.5	9.7
<i>Supplemental Poverty Rate</i>						
Under age 18	12.4	9.7	5.2	12.3	7.6	4.2
Aged 18 to 64	11.2	8.8	7.9	11.1	6.8	6.5
Aged 65 and older	12.8	9.5	10.7	12.7	8.8	9.8

Source: Author's calculations using CPS-ASEC data and UI data from Larrimore, Mortenson, and Splinter (2022).

Note: Original values are from the public use CPS-ASEC data, which differ slightly from results in Census Bureau (2022).

In 2020, the UI-corrected official child poverty rate was 13.2 percent, 2.9 percentage points below that originally reported. Similarly, the UI-corrected SPM child poverty rate was 2 percentage points below that originally reported. Among working-age adults, fully incorporating UI benefits reduced both the official and SPM poverty rates by about 2 percentage points in 2020, whereas for elderly adults the effects were more muted.

In 2021, the underreporting of UI-benefits once again resulted in an overstatement of child poverty. The 2021 UI-corrected official child poverty rate was 13.3 percent, and the UI-corrected SPM child poverty rate was 4.2 percent. The UI-corrected official poverty rate is 2 percentage points below that originally reported by the Census bureau, and the UI-corrected supplemental poverty rate is 1 percentage point lower.

3. Conclusion

The CPS-ASEC is a valuable resource, providing researchers and policymakers with one of the most complete pictures of household income and poverty in the United States. However, it is still subject to reporting errors that can result in an incomplete or inaccurate picture of household incomes. Using newly available data on unemployment insurance benefits through the Covid pandemic from IRS tax records, I demonstrate that the underreporting of these benefits in the CPS-ASEC greatly changes poverty trends during the pandemic. In particular, extending the work of Larrimore, Mortenson, and Splinter (2022) who considered the effects of this underreporting in

2020, I consider its effect in 2021. In doing so, it is clear that underreporting of unemployment insurance remained a problem in 2021.

Once correcting for unemployment insurance underreporting, the 2021 official and supplemental poverty rates are lower than was reported by the Census Bureau (2022). If the Census Bureau were able to fully capture these unemployment benefits, the official poverty rate in 2021 would have been 10.1 percent (1.5 percentage points lower), the supplemental poverty measure would have been 6.6 percent (1.2 percentage points lower).

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