

ANNEX I

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Online meetings on measuring poverty and inequality, 30 November - 2 December 2021
I. ABSTRACT

Title	<i>Coronavirus Infects Surveys, Too: Survey Nonresponse Bias and the Coronavirus Pandemic in the Current Population Survey</i>
Author Name	<i>Jonathan Rothbaum</i>
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Topic	<i>Assessing and improving survey methods, and use of alternative data sources</i>

Nonresponse rates have been increasing in household surveys over time, increasing the potential of nonresponse bias. We make two contributions to the literature on nonresponse bias. First, we expand the set of data sources used. We use information returns filings (such as W-2's and 1099 forms) to identify individuals in respondent and nonrespondent households in the Current Population Survey Annual Social and Economic Supplement (CPS ASEC). We link those individuals to income, demographic, and socioeconomic information available in administrative data and prior surveys and the decennial census. We show that survey nonresponse was unique during the pandemic - nonresponse increased substantially and was more strongly associated with income than in prior years. Response patterns changed by education, Hispanic origin, and citizenship and nativity. Second, we adjust for nonrandom nonresponse using entropy balance weights - a computationally efficient method of adjusting weights to match to a high-dimensional vector of moment constraints. In the 2020 CPS ASEC, nonresponse biased income estimates up substantially, whereas in other years, we do not find evidence of nonresponse bias in income or poverty statistics. With the survey weights, real median household income was \$68,700 in 2019, up 6.8 percent from 2018. After adjusting for nonresponse bias during the pandemic, we estimate that real median household income in 2019 was 2.8 percent lower than the survey estimate at \$66,790.

We create and publish weights for public use that incorporate the information from the administrative records while protecting the privacy of respondents. Those weights are available at <https://www.census.gov/data/datasets/time-series/demo/income-poverty/data-extracts.html>.