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ABSTRACT

We examine how the well-being of those with few resources changed, amidst economic disruption and large, transitory government transfers. We find that in the years leading up to the pandemic and in 2020, the patterns for income and consumption poverty were very similar. In 2021 and 2022, however, changes in income and consumption poverty were quite different—consumption poverty fell less than income poverty in 2021, and then income poverty rose sharply in 2022 while consumption poverty continued to decline. Reports of hardships rose in 2022 for both families with and without children, suggesting increased concern about financial well-being as COVID-era transfer programs expired. A key difference between income and consumption measures appears to be saving during the pandemic followed by dissaving, even among those near the poverty line. This finding indicates that permanent income models can even be relevant when low-income households, that typically have very limited saving, receive very large transitory payments. Unlike past academic studies and numerous politicians and pundits that have attributed most of the decline in income poverty in 2021, and its subsequent rise in 2022, to the Child Tax Credit, we show that expanded Unemployment Insurance and stimulus payments played a larger role.

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I. Introduction

The years 2020 and 2021 saw unprecedented changes in policies in response to the COVID-19 pandemic and worsening economic conditions including a large spike in unemployment. Economic Impact Payments (EIPs) and Unemployment Insurance (UI) payments during these years each totaled nearly one trillion dollars. At the same time there were changes to the Child Tax Credit (CTC), SNAP and other policies that increased the availability of government benefits. While there is a well-developed literature for earlier periods that examines changes in poverty over time and compares patterns for income- and consumption-based measures of poverty, it is particularly interesting to examine these patterns and differences across these measures in periods when there are dramatic changes in transfer policy, heightened uncertainty about the economy, as well as disruptions in access to retail stores and widespread health shocks. Moreover, understanding the short-run impact of these COVID era policies is critical for informing current debates about whether to re-enact these policies.[1]

In this paper, we examine how the economic well-being of the poor has changed before and after the pandemic, relying on established datasets with income, expenditure, asset and hardship measures. We estimate income- and consumption-based poverty rates for the period from 2015 to 2022, which precedes the start of pandemic and extends beyond the expiration of the major transfer policies. We typically report results for both a full sample as well as for a sample of children, or for families with and without children, because one of the major pandemic-era policies,

[1] The availability of a child allowance and the design of the Child Tax Credit are major policy issues that have been recently debated and are likely to continue to be. A 2019 NASEM report featured a child allowance proposal that was very similar to the 2021 pandemic CTC. Both 2024 presidential campaigns feature versions of the credit. Kamala Harris called for re-introducing and expanding the pandemic-era expanded Child Tax Credit (McBride et al., 2024). The Trump campaign also spoke in favor of expanding the child tax credit (Cruz-Martínez, 2024), and the Tax Relief for American Families and Workers Act of 2024, which passed the house, proposed expanding the refundable portion of the tax credit (U.S. Ways and Means, 2024).

the CTC, targeted families with children. We also provide static estimates of the relative effects of the major policy changes on income poverty—the expanded CTC, expanded UI, and the three rounds of EIPs. In addition, we report changes in financial and food hardships to obtain a broader sense of changes in economic well-being during this period.

There are key reasons to re-examine the income-based statistics and examine expenditure and consumption-based poverty statistics. The income measures include large flows of stimulus payments, tax credits, and unemployment insurance payments that are all either imputed or very badly reported in this period. For example, the CPS captured only 38 percent of aggregate UI benefits that were distributed in 2020, thus missing $363 billion in government transfers. Expenditure and consumption measures provide a natural and direct alternative that is especially useful when the income measures have more pronounced drawbacks than is typical. In addition, the large flows of temporary stimulus funding raise the likelihood of government transfers being saved, even by those with the lowest incomes, implying that economic well-being may deviate from current income.

We find that that in the years leading up to the pandemic and in 2020, the patterns for income and consumption poverty were very similar. In 2021 and 2022, however, changes in income and consumption poverty were quite different—consumption poverty fell less than income poverty in 2021, and then income poverty rose sharply in 2022 while consumption poverty continued to decline. Reports of hardships rose in 2022, suggesting increased concern about financial well-being as several COVID-era transfer programs expired, but for most measures the increase was not unique to households with children. A key part of the difference between income and consumption measures appears to be saving during the pandemic followed by dissaving, even among those near the poverty line. This finding indicates that permanent income models can even

be relevant when low-income households, that typically have very limited saving, receive very large transitory payments. Unlike, past studies that have attributed most of the decline in income poverty in 2021, and its subsequent rise in 2022, to the CTC, we show that expanded UI and EIPs played a larger role.

II. Background on Policy Changes

Three acts passed between March 2020 and March 2021 expanded cash transfers by over 2.7 trillion dollars. The $1.7 trillion CARES Act, passed in March 2020, included stimulus payments, or EIPs, of up to $1,200 per adult and $500 per child. In addition, the CARES Act expanded UI benefits by $600 per week under the Pandemic Unemployment Compensation (PUC) program and broadened eligibility for UI benefits under the Pandemic Unemployment Assistance (PUA) program and extended benefits under the Pandemic Emergency Unemployment Compensation (PEUC) program (Stone 2020). These higher UI payments were partially extended (at a lower amount of $300) through the Consolidated Appropriations Act of December 2020, which also added additional EIPs of up to $600 per eligible individual. Finally, the American Rescue Plan Act of March 2021 provided additional EIPs of up to $1,400 for eligible individuals and extended UI. The act also temporarily expanded the CTC, increasing the credit for most families from $2,000 to $3,600 for children under 6, and to $3,000 for children 6 and over. This expanded CTC also did not have an earning requirement.

Figure 1 provides a timeline of the main pandemic cash transfer policy expansions of 2020 and 2021. At the end of March and beginning of April 2020 families began receiving their first stimulus checks (EIP1) and more generous and widely available UI payments began (FPUC and PUA/PEUC), though many states took a long time to extend UI benefits to those traditionally

uncovered. New rounds of stimulus payments were sent out in January of 2021 (EIP2) and again in March of 2021 (EIP3). Roughly half of the expanded CTC payments were distributed in the latter part of 2021, with the remaining balance of the credit distributed when families filed their taxes in 2022.

The $2.7 trillion of spending was spread across many programs, with households receiving just over $800 billion in EIPs across the three bills. Spending on UI jumped from $28 billion in 2019 to $581 in 2020 and $323 billion in 2021. The expansion of the Child Tax Credit cost about $90 billion in 2021 (Appendix Table 1). These direct payments to households were part of the broader governmental response that also included expanded SNAP payments and other transfers. Appendix Table 1 provides dollar expenditures on these programs by year as well as those of other programs including Housing Subsidies, School Meals, WIC and LIHEAP. Besides the large spending on EIPs, UI and the CTC, there were substantial increase in SNAP that took place in 2021 and School Meals in 2022.

III. Prior Work on Economic Well-being during the Pandemic

Prior studies have provided evidence of how economic well-being changed during the pandemic, including studies that examine versions of some of the indicators we consider such as income or consumption poverty or material hardship. In this section we summarize this recent work and highlight how our study extends and revises this literature.

Income is the most commonly reported indicator of well-being, often measured for low percentiles of the distribution or as the share below certain cutoffs to give poverty rates. Some studies utilized data from the monthly Current Population Survey (CPS) to examine changes in poverty in the very early stages of the pandemic, because these data became available much more

quickly than the annual data. Using annual income data from the monthly CPS, Han, Meyer, and Sullivan (2020) showed that income poverty declined in the early months of the pandemic, a drop that can be entirely explained by stimulus and expanded UI payments. However, they acknowledged that measuring income poverty using monthly income data has important limitations as it is based on a global income question that is designed to capture only money income.[2]

Consistent with this evidence, Larrimore, Mortenson, and Splinter (2023) examined a panel of individual tax records, finding that while earnings losses in the short recession were very regressive, EIPs and UI payments were so progressive as to offset the earnings losses at the bottom. This work does not extend through 2022 and does not examine the role of the later EIPs or the CTC expansions.

Annual data on poverty are available from the official poverty measure (OPM), which reached an all-time low in 2019, rose slightly in 2020 and then was roughly flat in recent years (Shrider and Creamer, 2023). The OPM, however, is based on pre-tax money income, so it does not capture many of the most substantive government transfers during the pandemic including the three rounds of EIPs and the Advance CTC. The Supplemental Poverty Measure (SPM) relies on a more expanded measure of income that incorporates measures of non-medical, in-kind transfers, taxes, and tax credits, but the SPM does not account for under-reported transfers, which as we discuss below, were significantly under-reported during the pandemic. The SPM showed a very similar pattern to the OPM through 2019 and then diverged. The SPM continued downward

[2] Some updated results are available in Han, Meyer, and Sullivan (2022). Parolin et al. (2022) also use the monthly CPS to estimate income poverty rates during the pandemic. Rather than using income information in the monthly survey, however, they impute income poverty on a monthly basis using demographic and employment variables.

sharply in 2020 and 2021 reaching its all-time low in 2021. Then in 2022 the overall SPM poverty rate rose by a third and the child poverty rate more than doubled (Shrider and Creamer, 2023).

While income data tend to be readily available, consumption is often preferred to income as a measure of economic well-being for several reasons. Because families can borrow and save, consumption better reflects long-run resources and is more likely to capture differences in economic well-being that result from differences in the accumulation of wealth or access to credit. Unlike income, consumption will also reflect tighter budgets that might result from a growing debt burden. Consumption also reflects changes in uncertainty about future income streams, which is particularly important during periods of crisis, when a household might reign in spending due to greater uncertainty about employment or health shocks. In addition to these conceptual advantages, consumption may better reflect economic well-being because of measurement issues—several studies have shown that income is substantially under-reported and increasingly so in surveys, especially for those with few resources. Consumption is also under-reported, but less than income at the bottom (Meyer and Sullivan 2003, 2011; Meyer, Mok, and Sullivan 2015; Corinth, Meyer, and Wu 2022).

A few recent studies have examined how consumption changed during the pandemic for families with few resources, or how pandemic-era policies affected spending. Meyer, Murphy, and Sullivan (2022) was the first to examine the impact of the pandemic on the distribution of expenditures and consumption using nationally representative consumption data for families from the Consumer Expenditure Survey (CE). They found differences across the distribution early in the pandemic as low percentiles of consumption changed little with the pandemic, while higher percentiles fell in 2020. These patterns for consumption were different than those for income, particularly in the upper part of the distribution. The Bureau of Labor Statistics has developed a

consumption measure that builds on earlier measures used in the literature. A recent study used this measure, which is based on the CE data, to construct measures of consumption poverty and inequality from 2019 through 2021 (Garner et al. 2023). It found that consumption and expenditure measures of poverty fell slightly in 2021 overall and more noticeably for children. An alternative expenditure-based measure comes from Ganong et al. (2022), who used account-level data from JP Morgan Chase to examine how the expanded UI program early in the pandemic affected spending. They showed that UI helped sustain consumer spending during this period when unemployment was high.

The evidence from several studies examining trends in material hardship and the effect of government transfer policies during the pandemic is mixed. Studies using different data sources to measure hardship before and after the start of the pandemic have reported sharp increases in food insecurity and food pantry use (Bitler, Hoynes, and Schanzenbach, 2020). However, Winship and Rachidi (2020) contended that much of this measured change is due to the different data sources used before and after the start of the pandemic. Consistent with this interpretation, Waxman, Gupta, and Gonzalez (2020), using data from the Urban Institute's Coronavirus Tracking Survey, found a decrease in food insecurity between March and May and a subsequent increase measured in September, coinciding with a short-term retreat in government support. Data from the CPS Food Security Supplement from before and after the start of the pandemic, suggest that food insecurity did not change between December 2019 and December 2020 overall, although it rose for households with children (Rachidi and Winship 2021, Rabbitt et al. 2023). For the latter phases of the pandemic, they reported that food insecurity fell in 2021 before increasing in 2022. Using data from the Well-Being and Basic Needs Survey, Karpman and Zuckerman (2021) found a decline in material hardship between December 2019 and December 2020 across all six measures of

material hardship that they report, including food insecurity. This decline was statistically significant for five of the six measures. Dhongde and Glassman (2023) examined job insecurity, food insufficiency, housing insecurity and mental health from April 2020 through March 2022, using data from the Census Bureau Household Pulse Survey. They found that all of their hardship measures showed little change between April of 2021 and March of 2022, except for a transitory rise in January and February of 2022. Although this last study does not report results over time separately for children or families with children, these results suggest that any changes in hardship over the Advance CTC period were small. Gonzalez, Maag, and Karpman (2024) reported that families with children, especially young children have higher hardships than other families. However, because this study does not examine comparisons over time, it does not shed light on the time pattern of hardships or their relation to policies.

Our study adds to this body of work in several ways. First, we focus on multiple measures of poverty, including both income and consumption-based measures, using data from multiple sources for nationally representative samples that span the pre and post-pandemic years. The prior work on poverty during the pandemic has typically focused on one of these measures, most often income poverty, and often concentrated on the overall population. In contrast, we provide estimates for children as well, which is an important group given that many of the expanded transfers targeted families with children.

Second, we examine potential explanations for the differences between these measures, presenting evidence that savings plays a particularly important role during periods when government transfer benefits are changing substantially. While there is a well-developed literature that compares patterns for income- and consumption-based measures of poverty for earlier periods, it is particularly interesting to examine the differences across these measures in periods when there

are dramatic changes in transfer policy, heightened uncertainty about the economy, as well as disruptions in access to retail stores and widespread health shocks.

Third, we also examine patterns for material hardship during this period to provide a broader sense of changes in economic well-being. Understanding how these patterns differ from changes in income and consumption poverty is particularly interesting at a time of sharp fluctuations in government transfers as well as other changes. Fourth, we consider the relationship between major changes in transfer policy and poverty, providing static estimates of the relative effects of these policy changes on income poverty. Most of the earlier literature has focused on a single policy, particularly the Advance Child Tax Credit (CTC), attributing much or all of the changes in poverty to this expansion.[3] In addition to the CTC, we examine the impact on poverty of other large expansions in government transfers, including expanded UI and the three rounds of EIPs, showing that these programs had an even bigger effect on changes in income poverty than the CTC. Finally, we extend our analysis through 2022 so that our analysis covers not only the period when there was a dramatic expansion in transfer policies, but also the period when these transfers expired.

[3] For example, Koutavas et al. (2023) stated that "The historic low in the child poverty rate in 2021 was largely the result of a major one-year expansion to the federal Child Tax Credit in the American Rescue Plan. The increase in child poverty in 2022, in turn, is largely the result of the expanded Child Tax Credit's expiration." Many policymakers and pundits have echoed these claims. For example, see https://www.whitehouse.gov/briefing-room/statements-releases/2023/09/12/statement-from-president-joe-biden-on-census-income-poverty-and-health-insurance-coverage-reports/, https://www.npr.org/2023/09/12/1198923453/child-poverty-child-tax-credi-pandemic-aid-census-data, or https://www.newyorker.com/news/q-and-a/how-the-us-lifted-children-out-of-poverty-and-then-threw-them-back-into-it.

IV. Data and Methods

Our analysis of changes in income and consumption poverty relies primarily on two nationally representative surveys: the Consumer Expenditure Survey (CE) and the Current Population Survey Annual Social and Economic Supplement (CPS). The CE is a quarterly survey of households that collects information about expenditures, income, and demographics of respondents. Roughly 5,500 households were interviewed each quarter, yielding about 22,000 interviews over a calendar year.[4] From the CE, we use spending data, as well as information on vehicle ownership and the rental equivalent of owned homes, to construct our measure of consumption. We also use data on saving and assets. The CPS is an annual survey that collects demographic and socioeconomic information for about 92,000 households. The CPS is the source of official statistics on income and poverty. We rely on this survey for our income-based measures of poverty.

Measures of Consumption and Income

Our measure of consumption includes total expenditures less spending on out-of-pocket health care expenses, education, and payments to retirement accounts, pension plans, social security, miscellaneous expenditures, and cash contributions. In addition, we convert housing and vehicle expenditures to service flows. For homeowners we subtract spending on mortgage interest, property taxes, maintenance, repairs, insurance, and other expenses, and add the reported rental equivalent of the home. For those in public or subsidized housing, we impute a rental equivalent using reported information on their living unit, state of residence, and the presence of appliances. For vehicle owners, we subtract spending on recent purchases of new and used vehicles as well as

[4] The number of households interviewed has declined in recent years. Information for about 27,000 households were available in 2015 (about 6,800 per quarter), but this decreased to about 20,000 (5,000 per quarter) in 2022.

vehicle finance charges, and add the service flow value from all owned vehicles. See the Methods Appendix for details on the procedure for estimating rental value and vehicle service flows.

We construct a measure of after-tax income plus noncash benefits, or "disposable income," which adds to money income the value of in-kind benefits, including the cash value of SNAP, WIC, home energy assistance, housing and school lunch subsidies, as well as tax credits such as the EITC, CTC, and EIPs, and subtracts state and federal income taxes and payroll taxes. We use the value of SNAP, school lunch, and energy assistance benefits reported in the CPS, but we impute the value of housing subsidies for households that report living in public or subsidized housing and the value of WIC for those reporting receipt of WIC.[5] We do not include medical in-kind transfers despite their magnitude given their nonfungibility and that it would complicate comparisons with income measures that also exclude them. For details on how we impute the value of in-kind benefits and tax credits, see the Methods Appendix.

The federal and state tax liabilities and credits and FICA taxes are calculated using TAXSIM (Feenberg and Coutts 1993), although we implement our own imputation procedure to calculate the first two rounds of the EIPs.[6] For the major COVID era tax credits—the EIPs and the

[5] We construct our own imputed value of housing subsidies, because the CPS stopped including an imputed value after the 2015 survey year. As shown in Appendix Table 1, the total dollar amount of housing subsidies that we impute is very close to the total amount of benefits reported in administrative data. We impute a value of WIC benefits, rather than using the imputed value included in the CPS files, because the value included in the CPS is for the SPM unit. As noted below, our living unit differs slightly from the SPM living unit. The total dollar value of our imputed WIC benefits is somewhat higher than the total for the value provided in the CPS, and closer to USDA totals. For example, in 2022, our imputed WIC dollar amount is $3.1 billion, compared to SPM's imputed WIC dollar amount of $2.4 billion.

[6] Our approach implicitly assumes complete takeup of the CTC. For the expanded CTC of 2021, we assume a randomly selected 10 million children received the full credit payments in 2022, receiving no payments in 2021. This approach ensures that our total imputed Advance CTC recipients match the administrative total of 61 million recipients in 2021 (U.S. Department of the Treasury 2021) and that the total dollars of CTC we impute aligns closely with what the IRS reports were distributed in both 2021 and 2022 (Appendix Table 1). We do not impute the third round of EIPs, because our imputed values match exactly those generated by the TAXSIM model. However, we impute the first two rounds of EIPs, because some of the imputed values from TAXSIM did not match the amount the individual was eligible for based on observable characteristics. For the first and second rounds of the EIPs, we cap the number of tax units (selected at random) to which we impute benefits so that the total dollars of benefits we impute matches administrative totals (see Appendix Table 1). See the Methods Appendix for more details.

CTC—these imputed values match well with administrative aggregates. As shown in Appendix Table 1, the weighted total imputed value of the first round of EIPs in 2020 was 99.5 percent of the administrative total. In 2021, the second and third rounds of the EIPs (96.5 percent) and the CTC (93.2 percent) also compare favorably to administrative totals.

To calculate after-tax measures of income for official poverty and the SPM, the Census assigns tax credits to the year they were accrued, rather than the year they were paid. Consequently, even though the second round of EIPs were paid out in early 2021, the IRS treated them as refundable tax credits for 2020, resulting in the Census counting these payments as after-tax income in 2020. Similarly, part of the expanded CTC payments, which were received after taxes were filed in 2022, were counted as after-tax income for 2021. Distinguishing between when tax credits were accrued versus paid, is typically not a substantive distinction when tax credits are not varying sharply from year to year. During COVID, however, tax credits did vary sharply due to the EIPs and expanded CTC. Thus, to more closely align the reference period for our measures of poverty with the actual receipt of resources, we reallocate these tax credits to the year they were received rather than the year they were accrued. Specifically, we assign the second round of EIPs to the year 2021, instead of 2020. Moreover, for the CTC, we assign to the year 2021 the CTC accrued in 2020 and half of the expanded CTC accrued in 2021, reflecting their actual disbursement in 2021.[7]

Our measure of disposable income is similar to the income measure used to calculate the SPM. Some of the differences include that, unlike our measure, the SPM resource measure deducts from income certain expenses such as work-related expenses, child care expenses, medical

[7] See the Methods Appendix for more details.

expenses, and child support paid to another household.[8] Our measure of disposable income poverty also differs from the SPM in how we define the resource sharing unit and the thresholds. Despite these differences, both measures follow a very similar pattern from 2015 to 2022 (see Appendix Figure 1a and 1b), although the SPM shows a slightly larger decline in poverty between 2019 and 2020. In levels, the SPM poverty rate is slightly higher than the rate for our measure of disposable income for all individuals (Appendix Figure 1a), but for children, these two series are mostly on top of each other (Appendix Figure 1b).[9]

Adjusting for Under-reporting of UI benefits

Income in the CPS is substantially under-reported, especially for categories of income important for families with few resources. Furthermore, the extent of under-reporting has increased over time (Meyer, Mok and Sullivan, 2015). During the pandemic, this under-reporting grew sharply, particularly for programs that expanded. For example, administrative records indicate that $580 billion of UI benefits were distributed in 2020. The weighted total reported in the CPS was $218 billion (38 percent of the administrative total), as shown in Appendix Table 1. In 2021, $323 billion in UI benefits were distributed, but the CPS only reports $90 billion (28 percent of the administrative total).[10] To better reflect the total value of UI benefits distributed, we impute receipt

[8] Other key differences include that we account for understatement of UI benefits and we allocate the EIPs and expanded CTC to income in the year these benefits were received rather than the year they accrued. For details on how the SPM is constructed and how it differs from the official poverty measure, see https://www.census.gov/newsroom/blogs/random-samplings/2022/09/difference-supplemental-and-official-poverty-measures.html.

[9] These series line up even though we allocate the EIPs and expanded CTC to income in the year these benefits were received, while the SPM allocates them in the year they accrued. Our adjustment does not significantly alter the trends because they partially offset each other—moving the second round of EIPs from 2020 to 2021, raised income in 2021, but then moving half of the expanded CTC from 2021 to 2022, lowered income in 2021. As we discuss below, our approach of allocating benefits based on when they are received does matter when considering the isolated effect of these benefits on income poverty (Section V).

[10] Some sources have emphasized UI fraud during the Pandemic, but we have not found credible estimates of its magnitude, and much of what has been alleged would involve receipt by U.S. individuals who abused the system and whose benefit receipt should be included in CPS UI received (GAO 2022).

of UI for a random subset of nonemployed adults who did not report receipt of UI, allocating benefits until our imputed UI total matched administrative aggregates. SNAP dollars are also significantly under-reported—weighted totals of SNAP dollars in the CPS account for only 40-50% of the actual amount paid out between 2020-2022 (see Appendix Table 1). We do not adjust for these under-reported SNAP benefits.[11]

Measuring Poverty

The official U.S. poverty measure (OPM) determines an individual's poverty status by comparing pre-tax money income for the family in which the individual resides to the OPM poverty thresholds, which vary by family size and number of children, and are adjusted for inflation using the Consumer Price Index for all Urban Consumers (CPI-U). For our measures relying on disposable income and consumption, we calculate poverty by comparing the resource measures to poverty thresholds determined by anchoring the poverty rates for each measure to the official poverty rate of 13.5% in 2015. In other words, we set the 2015 poverty thresholds for the disposable income and consumption measures at the level that results in a poverty rate equal to 13.5%. This ensures that in our baseline year of 2015, we examine the same point in the distribution across different measures of resources. These thresholds for 2015 are then adjusted annually using the Bias-Corrected CPI-U-RS, which subtracts 0.8 percentage points from the growth of the CPI-U-RS each year.[12]

[11]Accounting for under-reported SNAP would likely increase the divergence between income and consumption poverty in 2021, but narrow it divergence in 2022 given the time pattern of aggregate payments.

[12] The bias in the CPI-U can lead to significant bias in estimates of changes in absolute poverty over long time periods (Meyer and Sullivan, 2012). However, since our study spans only eight years, the choice of price index has a relatively modest impact on the overall changes. For instance, our bias-corrected CPI-U-RS grew by 17.3 percent between 2015 and 2022, compared to 19.2 percent for the PCE price index, and 23.5 percent for the CPI-U. Appendix Figure 2 displays the real value of the 2015 official poverty threshold for a two-adult, two-child family over time, using five different price indexes: CPI-U, CPI-U-RS, Chained-CPI-U, PCE, and biased-corrected CPI-U-RS.

Data on Hardship

To complement the evidence on changes in income and consumption poverty, we also examine changes in reported financial and food hardships before and after the pandemic. For financial hardship we rely on the Survey of Household Economics and Decisionmaking (SHED), which is a nationally representative survey of about 12,000 US adults implemented by the Federal Reserve Board and primarily used to examine the economic well-being of US households. The SHED has been conducted annually since 2013 in the late months of the calendar year (typically between October and December). We use the SHED data to construct four binary financial hardship measures: 1) not doing well financially these days, 2) no emergency fund to cover 3 months of expenses, 3) no means to cover 3 months of expenses in an emergency, and 4) can't pay all bills this month (see notes to Figure 8a for the definitions of these hardship measures).

For food insecurity we use data from the food security supplement to the December CPS. In this supplement, the household reference persons were asked a series of questions about their food situation in the last 12 months since December of last year (10 questions to households without children, and 18 questions to households with children). Households are classified as food insecure if they respond affirmatively to three or more food insecurity questions.

V. Results

Changes in Poverty

To determine how economic well-being for those with few resources changed before and after the pandemic, we examine our main measures of income and consumption poverty for the period from 2015 through 2022. In Figures 2a and 2b, we report these estimates for the full sample

and for children, respectively (also see Appendix Table 2). For the full sample, all measures indicate that poverty was falling steadily in the years leading up to the pandemic. Between 2015 and 2019, official poverty fell by 3 percentage points, disposable income poverty fell by 3.6 percentage points, and consumption poverty fell by 3.7 percentage points. With the onset of the pandemic in 2020, consumption and disposable income poverty continued to fall, while official poverty rose. This divergence occurred because official poverty does not include the EIPs, which were a major reason why disposable income poverty fell (Han, Meyer, and Sullivan 2020, 2022), and, unlike our disposable income measure, the official measure is not adjusted for under-reporting of unemployment insurance, an adjustment that added $363 billion to income in 2020 alone (see Appendix Table 1).[13]

Consumption poverty continued to fall in 2021 (by 0.7 percentage points or 9 percent) and in 2022 (by 1.4 percentage points or 19 percent). The pattern for disposable income poverty was quite different—it fell more than consumption poverty in 2021 and then rose sharply in 2022. Disposable income poverty rose by 2.0 percentage points between 2020 and 2022—falling by 2.0 percentage points (25 percent) in 2021 and then rising by 4.0 percentage points (64 percent) in 2022. Poverty based on the Supplemental Poverty Measure (SPM) indicates patterns very similar to those we report here for disposable income poverty, for both the full sample (Appendix Figure 1a) and for children (Appendix Figure 1b) the pattern for SPM poverty is nearly identical to that for our measure of disposable income.

In Figure 2b we report changes in child poverty rates before and after the pandemic for the same measures of poverty and the same thresholds as those in Figure 2a. Although the level of poverty is significantly higher for children than for the full sample, the patterns over time are

[13] Other differences between the two measures, such as the use of different price indices to adjust thresholds, or the use of a different equivalence scale, do little to explain the differences in the patterns for this short time period.

similar to those for the full sample. The most noticeable difference is that the decline in income poverty in 2021 and subsequent rise in 2022 was more pronounced for children than for the full sample. For this group, disposable income poverty fell by 41 percent in 2021 and then rose by 85 percent in 2022. Again, we see that the pattern of consumption poverty over these two years was very different. In 2021, consumption poverty for children fell by only 5 percent, and it continued to fall in 2022, by 23 percent. Appendix Table 2 also reports poverty rates for two other age groups: those 18-64 and those 65 and over. The sharp divergence between disposable income poverty and consumption poverty in 2022 is also evident for these older age groups, but the differences are not quite as sharp as they are for children.

We also consider changes in income and consumption poverty at other points in the distribution by looking at deep poverty (the fraction below 0.5 times the original thresholds) and near poverty (the fraction below 1.5 times the original thresholds). For both the full sample (Figure 3a) and children (Figure 3b), the level of consumption deep poverty was much lower than that for income deep poverty (Figures 3a and 3b), which is not surprising given that the consumption distribution is much less dispersed. The changes over time for these measures were generally similar to those for 100 percent of the poverty line. Deep poverty fell for both measures in the years leading up to the pandemic. However, we again see that the income-based measure fell sharply in 2021 and then rose in 2022, while the consumption-based measure remained fairly flat. For near poverty, the rates for consumption poverty exceeded those for disposable income poverty in all years except in 2022 (Figures 4a and 4b). Both measures declined steadily from 2015 through 2021. In 2022, however, these measures of near poverty diverged, with the income-based measure rising sharply, while the consumption-based measure fell.

Understanding the Differences between Changes in Income and Consumption Poverty

There are several potential explanations for why the change in income poverty differs so sharply from the change in consumption poverty during and shortly after the height of the COVID pandemic. We consider three potential explanations. First, there are some conceptual differences between the resource measures because our measure of consumption includes service flows from durable goods and excludes some spending that is typically thought of as an investment. Second, changes in measurement error that differ across measures might lead to different trends. And finally, these two measures might diverge if there are changes in saving or borrowing behavior.

In the absence of saving and borrowing, the primary conceptual difference between our measures of income and consumption is that the latter includes services flows from major durables, in particular vehicles and owned homes. Families can consume flows from these durables in periods long after they purchased them. In addition, our measure of consumption excludes some spending that is typically treated as an investment such as spending on education. These spending categories, however, tend to be a small share of total spending on average, particularly for families with few resources.[14] Overall, it is unlikely that these conceptual differences can explain the sharp differences in the patterns for income and consumption poverty in 2021 and 2022. When we examine a measure of poverty based on expenditures, which conceptually aligns more closely with disposable income in the absence of saving and borrowing, we find patterns that mirror those for consumption poverty very closely (Appendix Figure 3a and 3b).

Measurement error is another potential explanation for the differences between the changes in income and consumption poverty. To explain any divergence we observe, the measurement error would have to change differently across measures. There is considerable evidence that

[14] For example, during our sample period education spending is about 1.8 percent of total spending for families with expenditures below 150 percent of the poverty line.

changes in measurement error can substantially impact estimates of income for those at the bottom of the distribution, because transfer income is significantly under-reported in surveys and the extent of under-reporting has grown over time. Meyer, Mok and Sullivan (2015) found that nearly half of food stamp benefits and TANF dollars, and nearly a third of UI dollars are not reported in the CPS. That study also documented a sharp increase in the under-reporting of transfers since the early 1990s. While past research has argued that increasing measurement error in income measured in surveys is likely to be a primary reason for differences in consumption and income poverty over long periods of time (Meyer and Sullivan 2012), measurement error in income is less likely to explain differences for the small window we examine here. Also, we adjust for under-reporting of unemployment insurance, which expanded tremendously during the pandemic, and we impute the dollar values of the EIPs and CTC so that the total amounts match those reported in administrative records.

One might also be concerned with changes in measurement error in consumption. Past work has shown that while consumption is under-reported in the CE and that this under-reporting has increased over time, many of the most important components of consumption, such as food at home, housing, and transportation, are consistently reported fairly well (Bee, Meyer and Sullivan, 2015). Such work has not been updated to examine changes in measurement error in consumption during and after the height of the pandemic. However, we can examine information on spending from other data sources to understand the robustness of our main findings. For this reason, we also examine spending data from the SHED, which asks households about how monthly spending has changed: "Compared to a year ago, have total monthly spending [for you and your spouse or partner] increased, decreased or stayed about the same?" We report the patterns for changes in

spending from 2020 through 2022 for low-educated families in Figure 5.[15] An important limitation with using these data is that it is unclear the role that inflation plays in these responses. Respondents are not asked to report changes in spending in real terms. While inflation may not factor in substantively in year-to-year changes in periods of low inflation, prices rose more noticeably in 2021 and 2022—the CPI-U rose 4.7 percent in 2021 and 8.0 percent in 2022—and the rise was more pronounced for goods purchased on a regular basis—prices for food and beverages rose by 9.6 percent in 2021 and 13.8 percent in 2022.

The results reinforce the patterns reported for consumption poverty. In particular, the data on changes in spending from the SHED also indicate that spending increased between 2021 and 2022. In 2021, 23 percent of families with a low-educated head reported that their spending had increased from the prior year, a much higher percentage than the 13 percent that reported that spending fell in that year. In 2022, the rate reporting that spending increased grew sharply to 36 percent, as compared to 12 percent reporting that spending fell. For this same period, we see a noticeable decline in the fraction reporting that spending was about the same as the prior year. Unlike for spending, we see only a modest rise in the fraction reporting that their income had risen between 2021 and 2022. That the rise in the fraction of families reporting increased spending is much more noticeable than the rise in the fraction reporting increased income is worth noting because concerns about respondents reporting nominal changes is relevant for both spending and income. So, this evidence from the SHED supports our results that consumption poverty fell more (or rose less) than income poverty, particularly in 2022. Both of these latter measures account for inflation.

[15] These data from the SHED are not available before 2020. We report these results for a low-educated subsample to capture spending behavior for families that are more likely to be near the poverty line. We report results for the full sample as well as for families with children in Appendix Figures 4a and 4b.

Past research has not emphasized saving and borrowing as a potential explanation for differences in changes in income and consumption for those at the bottom of the distribution, because families with few resources have limited assets and debts (Meyer and Sullivan 2012, 2023). However, given the sudden provision and subsequent termination of significant income transfers and considerable uncertainty about future income streams during COVID, saving and dissaving may play a more substantive role.

Data on assets for low-consumption families in the CE provide some evidence of consumption smoothing. In Figure 6 we report the 75th and 90th percentiles of assets for families with consumption between 50 percent and 150 percent of the poverty line.[16] We report the 75th and 90th percentiles because the majority of these low consumption families have little-to-no assets. We examine those with consumption between 50 and 150 percent of the poverty line to focus on those at risk to be moved above or below the poverty line. Assets rose sharply for low consumption families in the second quarter of 2021, a month or two after the second round of EIPs were sent out, and around the same time that the third round EIPs were sent out, but before the advance CTC payments, and returned to pre-pandemic levels by the end of 2022.[17] This pattern is also evident for families with children.

The pattern for assets that we find suggests that income rose more than consumption in 2021, because families saved some of the transfer income they received in that year, which may partly explain why we find that income poverty fell more than consumption poverty in 2021. These patterns for asset holdings may also, in part, account for why income and consumption poverty

[16] Total asset is calculated as the sum of the value of all checking, savings, money market accounts, and certificates of deposit, directly-held stocks, bonds, and mutual funds. Error in measures of assets is also a concern. While we are not aware of studies that validate asset measures in the CE, mis-reporting of assets are less of a concern for our analyses of changes in assets over time if this error is not changing significantly during our time period.

[17] For these analyses, the quarter reported in the figure reflects the interview quarter, because respondents are asked to report asset information at the time of the interview.

sharply diverge in 2022. We see that the 75th and 90th percentiles of assets for this low-consumption group fell in 2022, although the most noticeable decline in assets occurred in late 2021.

This indication of consumption smoothing behavior is reinforced by other information on asset holdings in the CE. The survey asks a separate set of questions about current asset holdings relative to assets a year ago. In particular, respondents are asked whether assets increased, stayed the same, or decreased relative to last year. We report the share of families with consumption between 50 and 150 percent of the poverty line who fall into each of these three categories. As shown in Figures 7a (all families) and 7b (families with children), the fraction of families that reported that assets increased shot up in the second quarter of 2021, and then the fraction of families that reported that assets had decreased rose in 2022. These changes are even more noticeable for families with children (Figure 7b). These patterns are consistent with the idea that low-consumption families saved some of the COVID benefits transferred in 2021, allowing income poverty to fall more than consumption poverty, and then dissaved in 2022, leading income poverty to rise more than consumption poverty.[18]

Other research has also indicated that families saved substantial shares of the EIPs. JPMorgan Chase Institute data provide evidence on cash balances in checking and savings accounts. These data record saving for those in the first (bottom) income quartile of their sample, which we should note comes from a sample of those who have checking or savings accounts, so under-represents those with the lowest income and savings. Using these Chase data, Bachas et al. (2020) found an increase in saving that outpaced income gains, yielding falling expenditures early in the pandemic. More recently, Wheat and Deadman (2023) summarized the patterns through early 2023, finding sharp increases in saving by the bottom quartile coinciding with each of the

[18] Similarly, Gindelsky and Martin (2024) show that median net personal savings increased in 2020 and 2021 and then fell in 2022 for households in the bottom quintile of personal income (see their Figure 4b).

three EIPs. There was falling savings generally during the period of Advance CTC Payments with a small uptick during tax refund season in 2022 followed by a steady, slow decline, followed by another small uptick during the 2023 refund season.[19] Our results add to this previous work by providing evidence on changes in saving for a nationally representative sample of families who are close to the poverty line.

We also considered whether families borrowed in order to maintain a level of consumption that exceeds income. If families increased borrowing in 2022, this could contribute to the explanation for why consumption poverty fell while income poverty rose in 2022. Figures 8a and 8b report the 75th and 90th percentiles of unsecured debt for families with consumption between 50 percent and 150 percent of the poverty line. This measure of debt includes the total amount owed on all credit cards as well as other unsecured debt such as medical loans or personal loans, but does not include student loans. The pattern for the 75th percentile is very noisy in part because most low-consumption families have very little debt—in many quarters, the 75th percentile is zero. Nevertheless, we see an increase in the 75th percentile of unsecured debt in the second half of 2022, and this increased is even more pronounced at the 90th percentile.

An additional, but likely only partial, explanation for the differences in the 2021-2022 period between income and consumption poverty measures is household transfers. Changes in transfers from family members, friends, and non-custodial parents could fall and expected transfers to the network could rise with the receipt of publicized and salient tax credits. These transfers are unlikely to be recorded in survey income measures. A substantial literature has found changes in private transfers from family members in response to changes in income or public transfers (see

[19] Related studies that examined the spending out of EIPs (Karger and Rajan 2020; Baker et al. 2020) found marginal propensities to consume under 0.5, often considerably so, suggesting that individuals (at least temporarily) allocated some of their EIPs to savings, and a higher propensity among those with low levels of material advantage.

Rosenzweig and Wolpin, 1994; Cox and Jakubson, 1995; Altonji, Hayashi, and Kotlikoff 1997; and Schoeni 2002). Estimates indicate that private transfers are reduced by 10 to 40 cents for every dollar of income received. Ethnographic research has indicated that these transfers can account for a large fraction of income for very disadvantaged groups (Edin and Lein, 1997). More recent ethnographic research has indicated that low-income recipients of unexpected benefits do not advertise their good fortune, when possible, to avoid "implicit taxation" by family and friend networks (Halpern-Meekin et al. 2024).

Changes in Hardship

To complement the evidence on changes in income and consumption poverty and obtain a broader sense of changes in economic well-being, we also examine financial and food hardships before and after the pandemic. We present our results for financial hardship for all low-educated adults (those with high school degree or less) in Figure 9a, and for low-educated parents with children in Figure 9b.[20] We present results for food insecurity in Figure 10. Across all of these measures, we see hardship declining or remaining flat during the period leading up to the pandemic, consistent with the declines in both income and consumption poverty. However, in 2020 many of these hardships rose, particularly for households with children present (Figures 9b and 10). Between 2019 and 2020, the fraction of families with children that reported that they were not doing well financially rose by 4.4 percentage points (11 percent), and the fraction of families with children that were classified as food insecure rose by 1.2 percentage points (9 percent). This rise

[20] We focus on families with low-educated adults to make it more likely that we are examining changes in hardship for families near the poverty line. For the full sample, the fraction of households reporting financial hardships is well over 25 percent for all hardship measures we consider except "Can't pay bills this month." The patterns for financial hardships for all adults (Appendix Figure 5a and 5b) are similar to those for low-educated adults reported in Figure 8a and 8b.

in hardship contrasts with our evidence on changes in poverty—in 2020 income and consumption poverty fell for households with children. The rise in hardships in 2020 despite the decline in poverty might reflect a sharp rise in uncertainty about future income streams and concerns about economic well-being during the height of the pandemic.

In 2021, we see a noticeable decline in financial hardship across all four indicators of hardship and for both families with and without children (Figures 9a-9b). Food insecurity also fell sharply in 2021, but this decline is only evident for households with children (Figure 10). Across all of our measures, we see evidence of increased hardship in 2022. This rise was evident for all families and those with children, and the increase was comparable in magnitude across these groups, although food insecurity rose slightly more for families with children as compared to all families. The rise in reported hardships is consistent with the increase in income poverty in 2022, but contrasts with the decline in consumption poverty. Here, again, growing uncertainty as families spent down savings and as the social safety net contracted with the end of many COVID era policies may have led to increased reported hardship even though consumption poverty fell.

A series of recent studies have documented a disconnect between economic conditions and consumer sentiment. Bolhuis et al. (2024) documented how consumer sentiment remained low despite low unemployment and falling inflation rates. They attribute much of this disconnect to high borrowing costs. Hsu (2024) pointed to inflation as a potential explanation for this puzzle. She noted that concerns about inflation remained high in 2022 even though overall inflation had leveled off and inflation for particularly salient components such as food and gasoline declined noticeably. Hsu (2024) also showed that the fraction of households citing inflation as a reason for poor personal finances grew through much of 2022. Rachidi and Gundersen (2024) argued that

rising food prices played a much more important role in the rise in food insecurity in 2022 than did the decline in government transfers.

The Effects of COVID Era Policies on Poverty

As noted above, several COVID era policies resulted in sizable income transfers. Previous work has shown that the first round of EIPs and expanded UI significantly reduced income poverty in 2020 (Han, Meyer, and Sullivan, 2020). The sharp decline in income poverty in 2021, followed by an even sharper increase in 2022, is not surprising given the large expansion of cash transfers in 2021—including the second and third rounds of EIPs and the extended CTC—followed by a significant decline in transfers as these programs ended. In this section, we consider the extent to which each of the three major income transfer programs—expanded UI, the EIPs and the CTC—affected income poverty. We assess the relative impacts of these programs by calculating changes in income poverty both including and excluding each policy. Our static estimates do not adjust for behavioral labor supply responses. While evidence from prior research indicates that labor supply responds to policies that change the return to work (Corinth, Meyer, and Wu, 2022, Schanzenbach and Strain, 2021, Chetty et al. 2012), it is not clear how such results generalize to policies implemented in the context of a global pandemic. Recent studies examining the labor supply in response to the Advance CTC suggest that the response was modest (Han, Meyer and Sullivan, 2022; Pac and Berger, 2024, Schanzenbach and Strain, 2024), but these are very short-run responses to a policy that was implemented with little notice, lasted only a few months, and was explicitly temporary.

To determine the impact of the two major income transfer policies in 2020—expanded UI and the first round of EIPs—on poverty, we calculate counterfactual measures of income poverty by excluding the benefits from these programs from our measure of poverty.[21] We report our baseline poverty rates as well as the rates under different policy scenarios for all individuals and for children in Appendix Table 3, and we report the year-to-year changes in these poverty measures and how these changes differ from the change in baseline poverty in Figures 10, 11, and 12. As shown in Figure 10a, both of these programs had a sizable effect on poverty in 2020.[22] Our main measure of income poverty fell by 1.7 percentage points between 2019 and 2020 for all individuals and for children. If we exclude the first round of EIPs, poverty would have fallen by only 0.3 percentage points for both groups, indicating that the first round of EIPs accounts for 1.4 percentage points of the decline in poverty for both groups (Figure 11b). The impact of UI on the reduction in poverty in 2020 is even larger. In the absence of any UI benefits in 2020, poverty would have *risen* by 0.5 percentage points for all individuals and by 1 percentage point for children (Figure 11a). This reflects a difference in the change in poverty relative to baseline of 2.2 percentage points for all individuals and 2.7 percentage points for children (Figure 11b).

In 2021, the most significant COVID era policies that transferred income to low-income individuals and families included two more rounds of EIPs, continuation of the expanded UI programs, and the expanded CTC. To assess the impact of these policies on changes in poverty between 2020 and 2021, we calculate counterfactual poverty estimates under scenarios where these policies were not implemented. In particular, we consider, in isolation, what would have happened

[21] For UI, we consider counterfactual scenarios where all of UI is excluded, not just the COVID era expansions. To exclude just the expanded part of UI would require a number of decisions such as whether to include, and how to impute, federal-state extended duration UI. The expansions dwarfed traditional UI. In the years leading up to COVID (2015-2019), about $31 billion in UI benefits were paid out each year. In 2020, total benefits exceeded $580 billion, and in 2021 they exceeded $320 billion (See Appendix Table 1).

[22] See Appendix Tables 3a and 3b for the specific numbers behind these figures.

to poverty if the CTC were not expanded, but instead the original CTC were left in place; if the second and third rounds of EIPs were never implemented; and if no UI benefits were provided in 2021.

Using our baseline measure of income, poverty fell between 2020 and 2021 by 2.0 percentage points for all individuals and by 3.9 percentage points for children (Figure 12a). In the scenario where the expanded CTC is not implemented, poverty would have fallen between 2020 and 2021 by 1.6 percentage points while child poverty would have fallen by 2.9 percentage points. If, instead, we exclude from income the second and third rounds of EIPs received in 2021, but leave the expanded CTC and UI in place, poverty would have *increased* by 0.6 percentage points, and child poverty would have only fallen by only 0.8 percentage points. Finally, if we exclude UI, but leave the EIPs and expanded CTC in place, poverty would have fallen by 0.9 percentage point, and child poverty would have fallen by 2.7 percentage points. Differencing these declines from the decline in our baseline measure of income (Figure 12b) suggests that the expanded CTC accounts for 1.0 percentage points (26 percent) of the decline in child poverty in 2021, while the second and third rounds of the EIPs account for 3 percentage points (80 percent) of the decline, and UI accounts for 1.2 percentage points (30 percent) of the decline. Because these policies, by themselves, can lift an individual above the poverty line, the sum of the impacts of excluding these programs one at a time exceeds the impact of excluding all three programs simultaneously, so summing all of these simulated effects suggests that they explain more than 100 percent of the decline in poverty.

To assess the impact of the absence of the expanded CTC and EIPs on the rise in income poverty in 2022, we consider what would have been the change in poverty if each of these programs were extended. Income poverty rose by 4.0 percentage points (64 percent) in 2022 for

all individuals and by 4.8 percentage points (85 percent) for children (Figure 13a). If the expanded CTC were extended into 2022, poverty would have risen by 3.3 percentage points (53 percent). If, instead, the EIPs paid in 2021 were also paid in 2022, then poverty would have risen by only 1.0 percentage point (17 percent). Thus, as shown in Figure 13b, not extending the expanded CTC accounts for 0.7 percentage points (18 percent) of the rise in poverty in 2022, while not extending the EIPs explains 3 percentage points (74 percent) of the rise. The impact of not extending the expanded CTC is somewhat larger for child poverty, but remains much smaller than the impact of the EIPs. Not extending the expanded CTC accounts for 2.0 percentage points (41 percent) of the rise in child poverty in 2022, while not extending the EIPs accounts for 4.2 percentage points (87 percent) of the rise.

In Appendix Table 4, we report the same results but we count the CTC and the EIPs as income in the year they are accrued (which is how they are treated for official statistics including the SPM) rather than the year they are received (our approach). When using the year-accrued approach, the relative impact of the expanded CTC in reducing poverty in 2021 becomes much larger, and the impact of the EIPs becomes much smaller—the expanded CTC now accounts for 77 percent of the decline in overall poverty and 69 percent of the decline in child poverty, while the EIPs explain 158 percent of the decline in overall poverty and 62 percent of the decline in child poverty. For 2022, we also see that, under the year-accrued approach, the relative impact of the expiration of the CTC in increasing poverty becomes much larger and the impact of the expiration of EIPs becomes much smaller. These changes in the relative impacts of these policies when using the year-accrued approach is not surprising given that a large fraction (more than half) of the expanded CTC that was accrued in 2021 was not received until 2022. Likewise, the second round of EIPs, which accrued in 2020, was actually received in 2021.

In summary, these simulations indicate several key takeaways. First, all three of these COVID era programs had important effects on reducing poverty in the first two years of the pandemic. Second, both UI and the first round of EIPs resulted in significant declines in poverty in 2020, with the impact of UI being somewhat larger. Third, when counting EIPs and the CTC as income in the year they were received, the impact of the second and third rounds of EIPs had, by far, the largest impact on reducing income poverty in 2021, followed by UI, with a relatively more modest impact of the expanded CTC. Finally, when counting EIPs and the CTC as income in the year they were received, the sharp rise in income poverty in 2022 is primarily due to the termination of the EIPs, with the expanded CTC playing a smaller role. That the implementation and then expiration of the EIPs had the largest effect on changes in poverty in both 2021 and 2022 contrasts with the claims of many pundits and policymakers who attributed these changes primarily to the implementation and then expiration of the extended CTC.

VI. Discussion and Conclusions

Our analyses of consumption and income poverty before and after the Pandemic reveal a puzzling contrast in trends. Poverty calculated using CPS income data with imputed taxes and tax credits indicate a large poverty decline in 2021 and a large increase in 2022. In contrast, consumption-based poverty calculated using data from the Consumer Expenditure Survey indicate a steady decline in poverty over recent years. Spending data from the Federal Reserve's SHED also suggests consumption grew more than income, particularly in 2022, for those with the lowest human capital. This contrast is surprising given the similarity of the prior changes in these series and the common belief and prior evidence that those near the poverty line save little and do not have assets to draw on in downturns. The puzzle is at least partially resolved by a pronounced

increase in saving in 2021 followed by dissaving in 2022 by those with low income or consumption that we and others have documented, and an increase in borrowing in 2022. This consumption smoothing behavior sharply contrasts with past evidence of hand to mouth consumption at the bottom of the income distribution and shows that the permanent income model has surprising applicability to the poor in certain circumstances. This applicability is potentially explained by the large magnitude of the transitory transfers provided by Economic Income Payments and pandemic unemployment insurance. Another possible contributing explanation is changes in private transfers.

We also examine the relative impact of major policy changes on poverty by estimating income poverty under counterfactual policy scenarios that exclude the enacted programs or the extension of discontinued programs. These simulations indicate that while the expanded Child Tax Credit led to a significant decline in poverty, other policies including the stimulus payments and Pandemic unemployment benefits, played a similar or even larger role. These results challenge the commonly touted claim, or suggestion, that income poverty changes were due primarily to changes in the Child Tax Credit.

Finally, our analyses of financial and food hardships from the SHED and CPS Food Security Supplement indicate that there were some increases in reports of hardship in 2022. This rise was evident for families both with and without children, suggesting that the expiration of the expanded CTC, a policy that was only available to families with children, cannot explain this rise in hardship. This rise in hardship during periods when consumption poverty is falling is consistent with recent research documenting a disconnect between economic conditions and consumer sentiment as consumers became increasingly concerned with high borrowing costs and inflation.

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Methods Appendix

This section provides a detailed description of the imputation procedure used to determine the value of tax credits, UI, and in-kind benefits in our measure of disposable income, as well as the vehicle service flows and the rental equivalent of public or subsidized housing in our measure of consumption.

EIP: We first assign individuals in the CPS ASEC to tax filing units using three rules:

1) Each family unit within a household is treated as a separate tax unit. Additionally, for a household with multiple subfamilies, each subfamily is considered a separate tax unit.

2) Married couples file taxes jointly.

3) Children under age 19, a full-time students under 24, or children of any age receiving disability benefits (qualifying children), as well as relatives meeting the gross income test for a qualifying relative or receiving disability benefits (qualifying relatives), are considered dependents in the tax unit of the family head.

Next, we calculate Economic Impact Payments (EIPs) for each tax filing unit based on eligibility and benefit rules.

EIP1 assigns $1,200 to a single tax unit or $2,400 for married couples, plus $500 for each qualifying dependent.

EIP2 assigns $600 to a single tax unit or $1,200 for married couples, plus $600 for each qualifying dependent.

EIP3 assigns $1,400 to a single tax unit or $2,800 for married couples, plus $1,400 for each qualifying dependent.

All EIPs are subject to a benefit reduction rate of 5% for each dollar of adjusted gross income exceeding $75,000 ($150,000 for married couples).

Finally, we calculate the family-level EIP as the sum of EIPs across all tax filing units of a family. We find that for EIPs 1&2, the total imputed slightly exceeds the actual dollars distributed. To align our imputed amount with the actual distribution, we exclude EIPs 1&2 from a random sample of families so that our total imputed benefits match the total reported by the IRS.

CTC: For each tax filing unit, we estimate CTC amounts using the TAXSIM model (https://taxsim.nber.org/taxsim35/). TAXSIM assigns the CTC to the year it was accrued rather than year it was paid. Therefore, we reassign the CTC to the year it was actually paid using the following steps:

1. For a given income and demographics of a family in year *t*, we calculate the CTC accrued in both year *t* and year *t-1*, assuming that the characteristics of a family did not change across the two years.

2. We then assign the CTC accrued in year *t-1* to year *t*, except for years 2021-2022.

3. For year 2021, we assign the CTC accrued in 2020 plus half of the expanded CTC accrued in 2021. This adjustment accounts for the fact that half of the expanded CTC accrued in 2021 was paid in 2021.

4. For year 2022, we assign half of the expanded CTC accrued in 2021.

UI: The Coronavirus Aid, Relief, and Economic Security Act (CARES Act) of 2020 established three key pandemic UI programs: The Federal Pandemic Unemployment Compensation (FPUC) program provided an extra $600 per week in unemployment benefits, later reduced to $300 per week in 2021. The Pandemic Unemployment Assistance (PUA) extended benefits to groups that are not eligible for the traditional UI program, such as the self-employed, part-time workers, those with insufficient work history, and those who were unable to work for COVID-related reasons. The Pandemic Emergency Unemployment Compensation (PEUC) extended benefits to individuals who had exhausted their regular UI benefits. All three programs expired on September 6, 2021.

To estimate UI benefits, we use two unemployment duration variables from the CPS ASEC. For individuals who reported unemployment in the previous calendar year, we use the reported weeks unemployed (WKSUNEM1). For those who are currently unemployed at the time of the survey (typically March), we calculate the weeks unemployed in the past year as max(DURUNEMP-13, 0) from the current unemployment spell duration (DURUNEMP). If both WKSUNEM1 and DURUNEMP-13 are positive, we assign the higher value for weeks unemployed.

We then calculate the amount of regular UI benefits as the product of 1) weeks unemployed in the past year and 2) the weekly UI benefit amount determined by pre-separation earnings and the state's UI benefit formula.

We allocate PUA benefits to a broad set of individuals who are eligible for PUA, including 1) the unemployed who were self-employed or who worked less than 13 weeks in the past year, 2) those who worked part time due to slack work, and 3) those who didn't look for work due to health/family reasons, a lack of work available, and other reasons.

FPUC and PEUC benefits are then added to UI benefits. Finally, to align with administrative totals, we cap the number of individuals to who we impute UI benefits (selected randomly).

In 2020 and 2021, total UI payments amounted to $581 million and $323 million, respectively. However, the weighted sum of reported UI dollars in the CPS ASEC for 2020 and 2021 was only $217 million and $89.5 billion, respectively. Therefore, our imputed UI benefits, which align with the actual disbursement, exceeded reported UI benefits by $363 in 2020 and $234 billion in 2021.

SNAP: We use the Census-imputed value of SNAP benefits for each family within a household. This value is determined based on reported information on the number of persons receiving SNAP and the reported total value of SNAP received in the household. Although the weighted sum of these payments is much lower than administrative totals, we do not adjust these data to account for under-reporting of SNAP in the CPS.

Energy subsidy: We use the reported total value of energy subsidy at the household level. This amount is assigned to the family of the reference person in the household.

School lunch: We use the Census-imputed value of school lunch for each family. This is determined based on reported information on the number of children who usually ate a hot lunch at school, and the number of children who received a free or reduced-price lunch at school.

WIC: We impute the value of WIC benefits for each family based on reported WIC receipt in the household and the family composition. Specifically, for households reporting WIC receipt, we identify likely WIC recipients for each family based on family composition using the following rules:

a) All children aged less than 6 years at the time of the CPS ASEC survey are assumed to receive WIC

b) For families with children aged 0 and 1, the female family member aged 15-45 is also assumed to receive WIC

c) for families without children, the female member aged 15-45 is assumed to receive WIC

We then multiply the estimated number of WIC recipients in each family by the national average monthly WIC food package cost per person, as reported by the USDA, to calculate the value of WIC benefits for each family. Our estimates show that the aggregate value of WIC is approximately 30% higher than those reported by the SPM. This disparity is primarily due to the fact that, unlike our assumption in rule b), a majority of female members aged 15-45 in SPM units with children aged 0 or 1 are not considered WIC recipients.

Housing Subsidies: We calculate the value of housing subsidies as the difference between Fair Market Rent (FMR), which varies across metropolitan areas and the number of bedrooms, and the required rent payment.[23] Since the CPS does not contain information about the number of bedrooms, we assign the number of bedrooms based on the household size following the HUD guidelines. For instance, we assign one bedroom to two-person households and two bedrooms to three- or four-person households. For households with two children of both sexes, we assign one more bedroom. We then merge observations from the CPS data with the FMR data using the Metropolitan Statistical Area (MSA) or county code. For observations with missing MSA/county code, we assign the state average FMR. We estimate rent payment as 30% adjusted income (income after deductions). To determine the adjusted income, we subtract dependent deduction

[23] We obtained the FMR data from the U.S. Department of Housing and Urban Development (HUD) website (https://www.huduser.gov/portal/datasets/fmr.html#history)

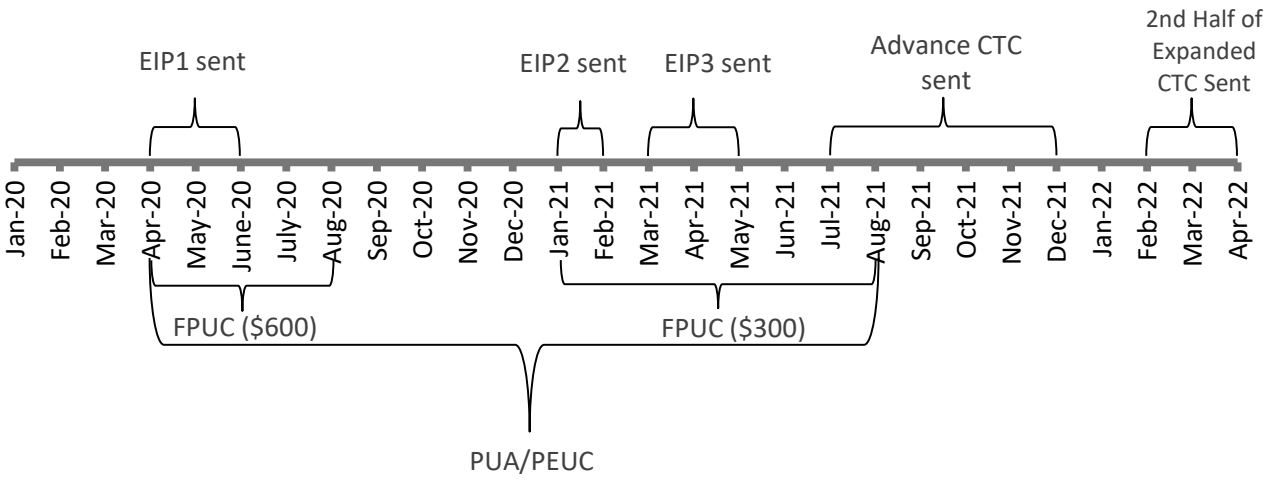
and elderly/disabled household deduction from the gross income. We find that our estimates on the average value of housing subsidies per unit-month are comparable to the average HUD expenditure per unit-month.

Vehicle Service Flows: Our measure of consumption replaces the purchase price of vehicles and vehicle maintenance costs with the service flow value from owned vehicles. We determine a current market price for each of the vehicles in the CE data in one of three ways. First, for vehicles that were purchased within twelve months of the interview and that have a reported purchase price (the estimation sample), we take the current market price to be the reported purchase price. Second, for vehicles that were purchased more than twelve months prior to the interview and that have a reported purchase price, we specify the current market price as a function of the reported purchase price and an estimated depreciation rate, as explained below. For the remaining vehicles, we impute a current market price because the purchase price is not reported. Specifically, using the estimation sample, we regress the log real purchase price, log y_i, on a cubic in vehicle age, vehicle characteristics, family characteristics, and make-model-year fixed effects. The vehicle characteristics include indicators for whether the vehicle has automatic transmission, power brakes, power steering, air conditioning, a diesel engine, a sunroof, four-wheel drive, or is turbo charged. Family characteristics include log real expenditures (excluding vehicles and health), family size, region, and the age and education of the family head. Coefficient estimates from this regression are then used to calculate a predicted log real purchase price for the vehicle $x_i\hat{\beta}$. The predicted current market value for each vehicle without a reported purchase price is then equal to $\hat{\alpha} * \exp(x_i\hat{\beta})$, where $\hat{\alpha}$ is the coefficient on $\exp(x_i\hat{\beta})$ in a regression of y_i, on $\exp(x_i\hat{\beta})$ without a constant term.

To estimate a depreciation rate for vehicles, we compare prices across vehicles of different ages, but with the same make, model, and year. Specifically, we construct a subsample from the estimation sample, focusing on vehicles that are in a make-model-year cell with at least two vehicles that are not the same age. Using this sample, we regress the log real purchase price on vehicle age and make-model-year fixed effects. The coefficient on vehicle age, β, is used to calculate the depreciation rate δ using the formula $\delta = 1 - \exp(\beta)$. The service flow is then determined by multiplying this depreciation rate by the current market price. For vehicles with a reported purchase price but purchased more than 12 months prior to the interview, we calculate the service flow as: $(\text{Real Reported Purchase Price}) * \delta * (1 - \delta)^t$, where t is the number of years since the car was purchased.

Rental Equivalent of Public or Subsidized Housing: To impute a rental equivalent for families living in government or subsidized housing, we use reported information on their living unit including the number of rooms, bedrooms, and bathrooms and the presence of appliances such as a microwave, disposal, refrigerator, washer, and dryer. Specifically, for renters not in public or subsidized housing we regress log rent on these housing characteristics, as well geographic identifiers such as state, region, urbanicity, and SMSA status. We also include interactions of a nonlinear time trend with appliance variables to account for changes over time in their price and quality. Using the estimated coefficients from this regression, we predict the rent for families who do not report full rent because they reside in public or subsidized housing. We do not adjust for the lower quality of public housing in dimensions we do not directly observe.

Figure 1: Timeline of Major COVID-19 Cash Transfer Policies



Notes: This figure shows key dates for the COVID-19 pandemic-related transfer policies, including stimulus payments (EIPs), tax credits (Advance CTC), and unemployment programs (FPUC/PUA/PEUC). Although some EIP1s were paid out after May 2020, the vast majority were distributed in April and May 2020. Similarly, the majority of EIP3s were paid out in March and April 2021 (Parker et al., 2022). In 2022, tax filers could receive the expanded CTC no earlier than February 15, and the deadline for filing tax returns was April 18.

Figure 2a: Consumption and Income Poverty Rates, 2015-2022, Thresholds Anchored in 2015

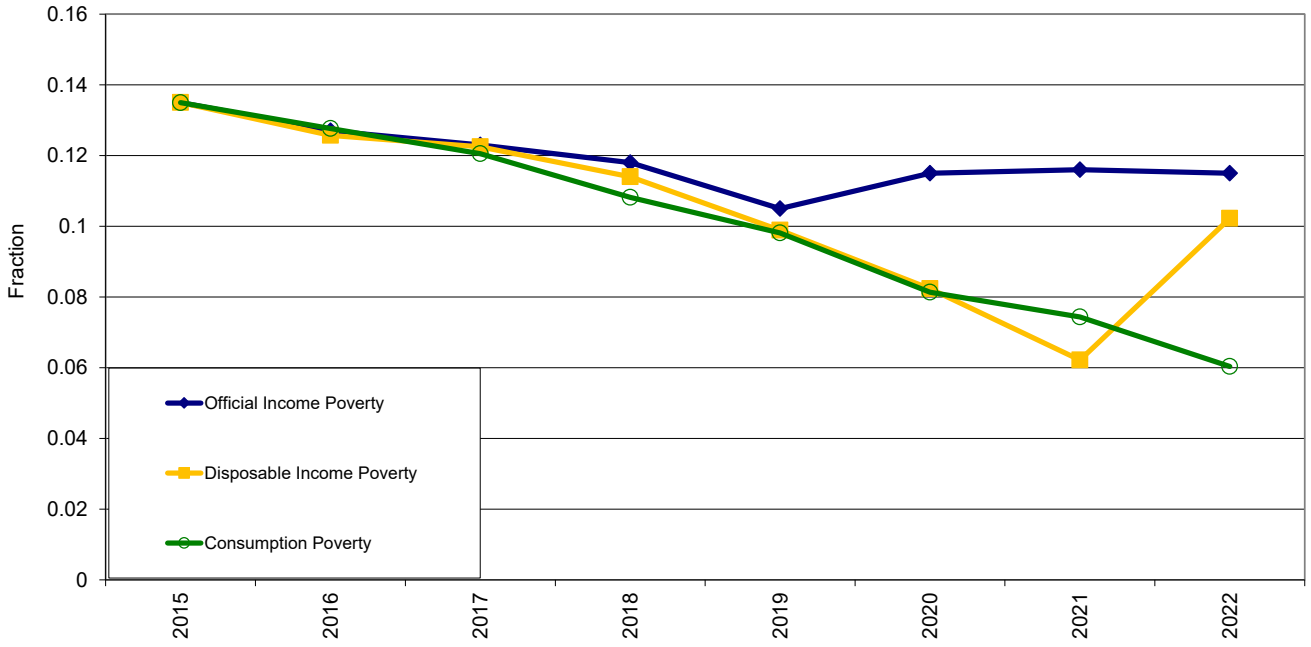
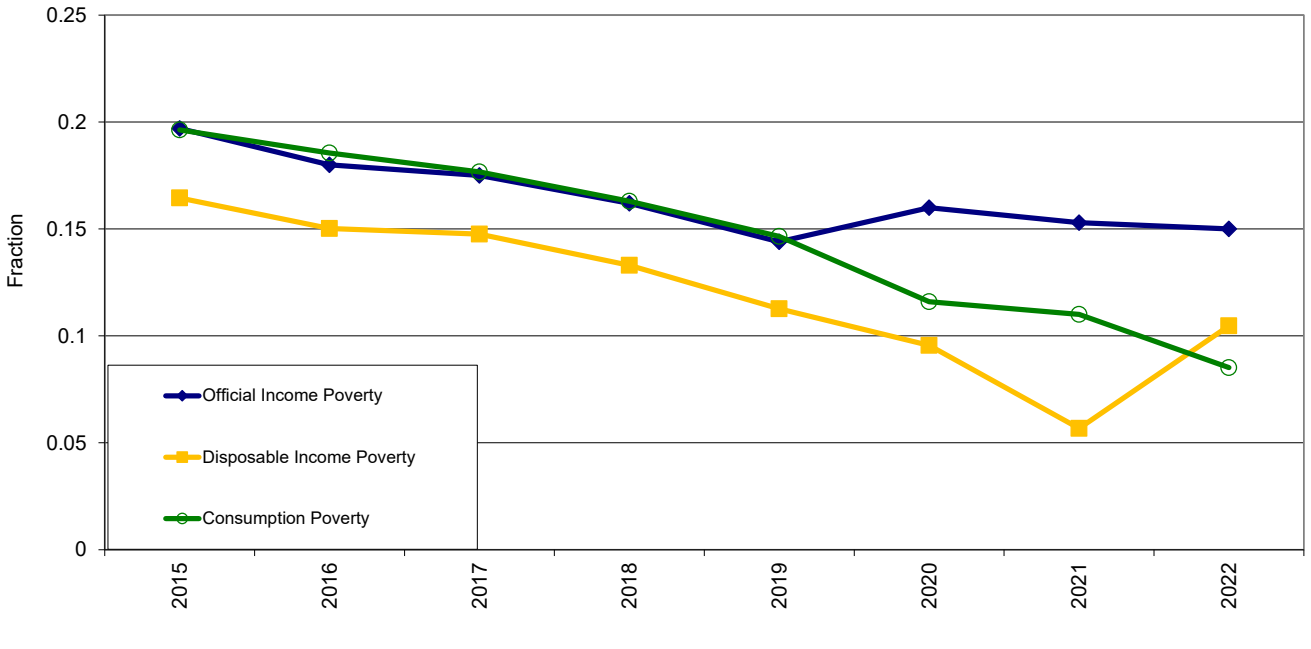


Figure 2b: Consumption and Income Child Poverty Rates, 2015-2022, Thresholds Anchored in 2015



Notes: Official Income Poverty follows the U.S. Census definition of income poverty using official thresholds. For measures other than the official one, the 2015 threshold is set to the value that produces a poverty rate equal to the official 2015 poverty rate of 13.5 percent for the full sample. These thresholds are then adjusted over time using the Bias-Corrected CPI-U-RS, which subtracts 0.8 percentage points from the growth in the CPI-U-RS each year from 2015 to 2022. Poverty status is determined at the family level and then person-weighted. Disposable income includes taxes and credits (calculated using TAXSIM) as well as the value of noncash benefits such as SNAP, WIC, school lunch, energy assistance, and housing subsidies. Consumption data are from the CE, and income data are from the CPS-ASEC.

Figure 3a: Consumption and Income Deep Poverty Rates, 2015-2022, Thresholds Anchored in 2015

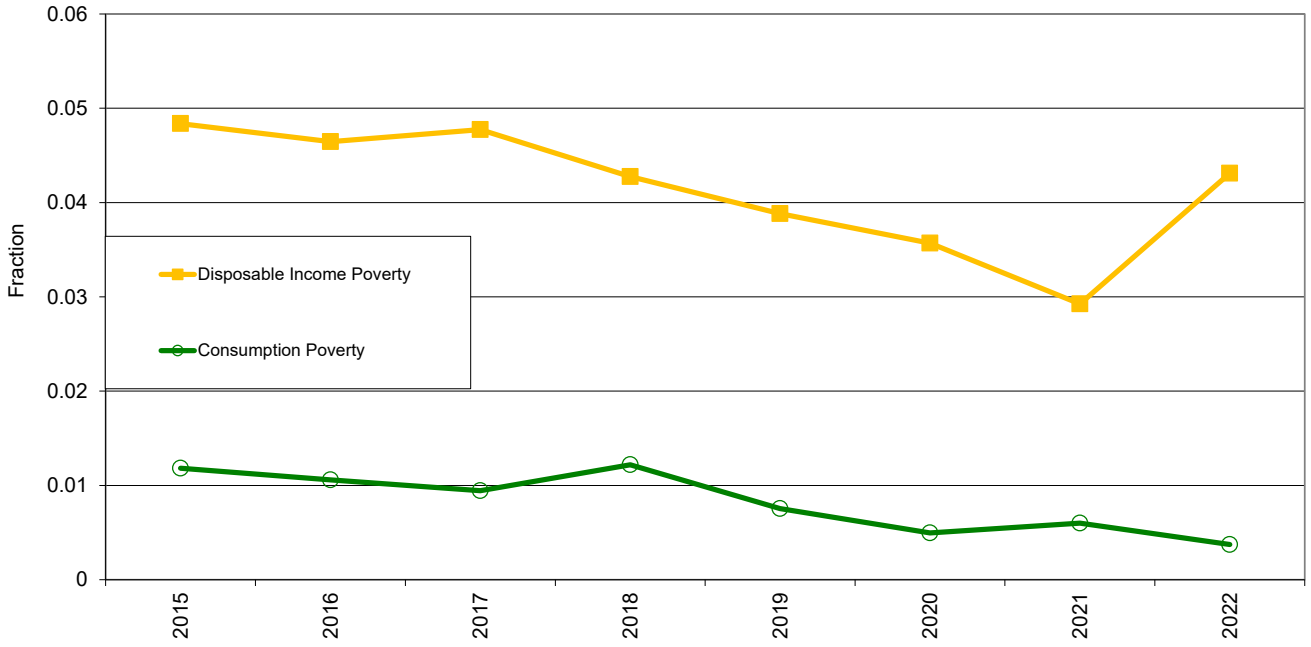
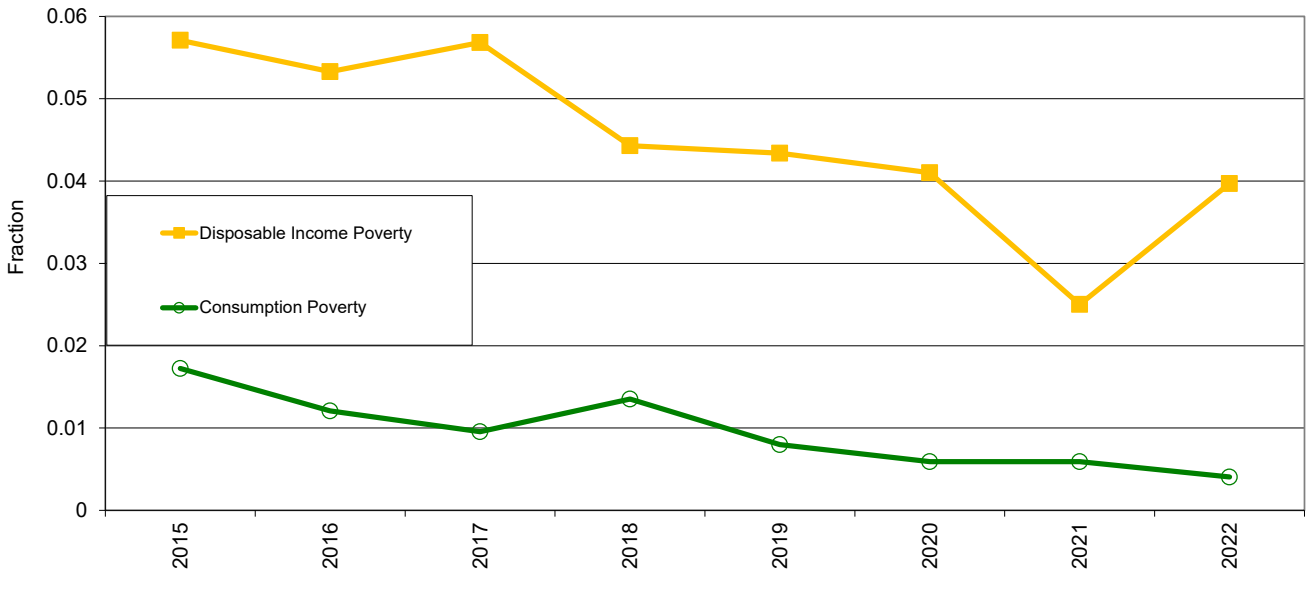


Figure 3b: Consumption and Income Child Deep Poverty Rates, 2015-2022, Thresholds Anchored in 2015



Notes: Deep poverty is defined as having resources below 50 percent of the poverty threshold. The 2015 poverty threshold is set to the value that produces a poverty rate equal to the official poverty rate of 13.5 percent for the full sample. These thresholds are then adjusted over time using the Bias-Corrected CPI-U-RS. See notes to Figure 2 for additional details.

Figure 4a: Consumption and Income Near Poverty Rates, 2015-2022, Thresholds Anchored in 2015

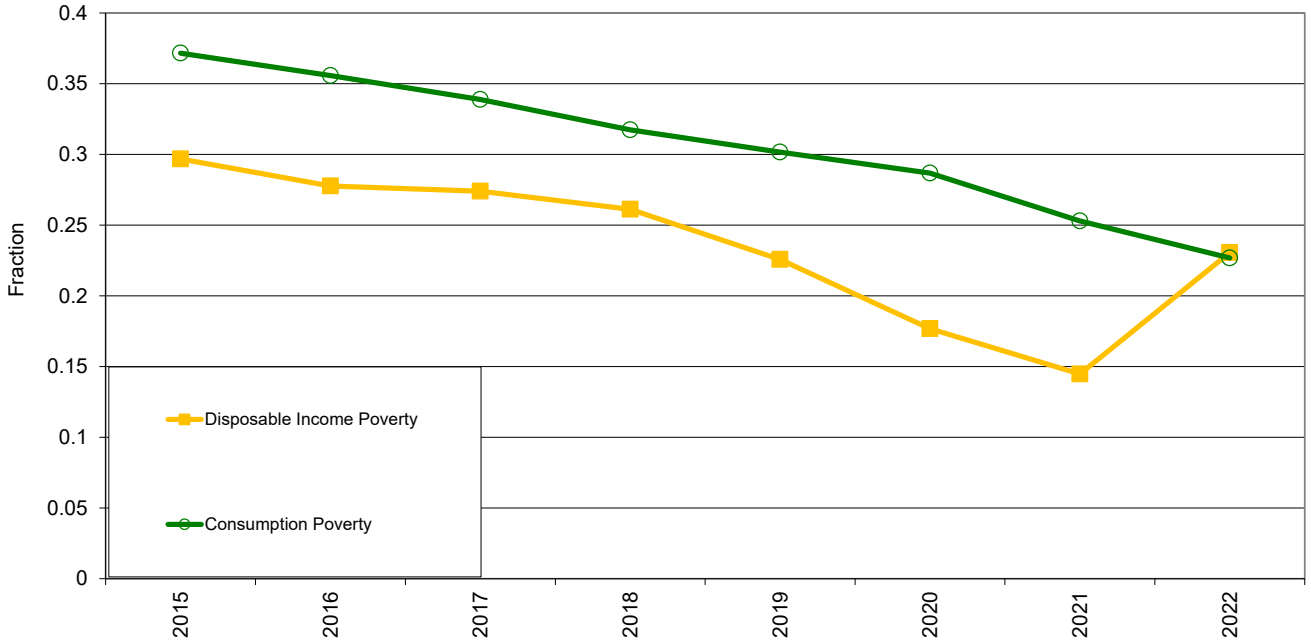
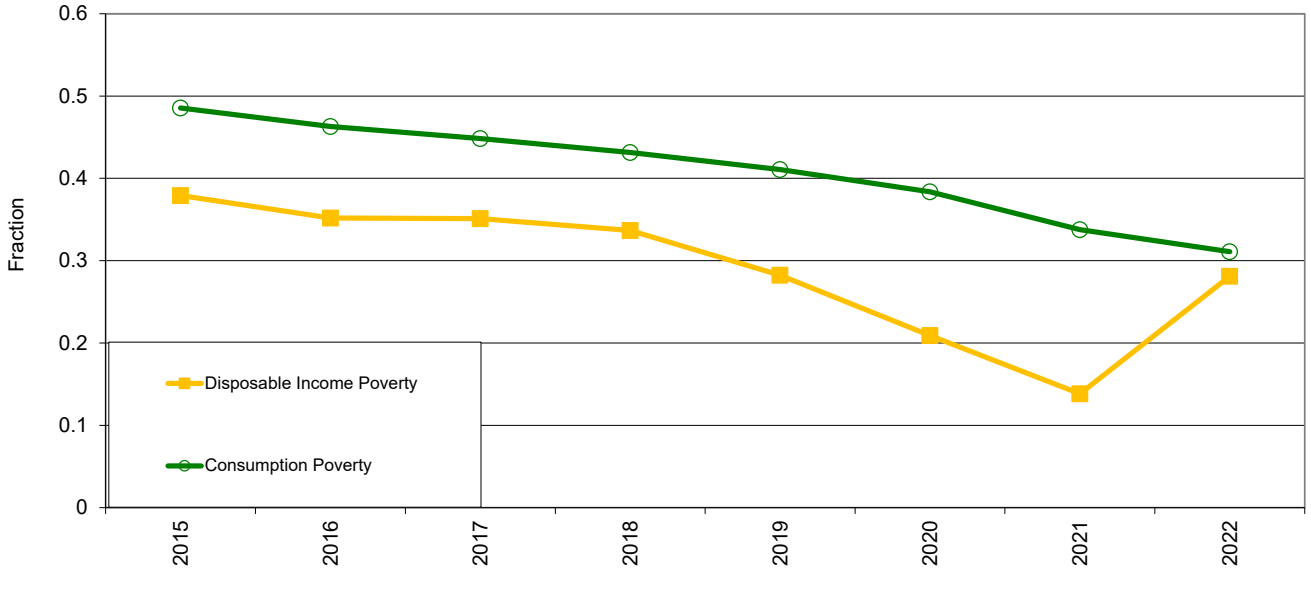
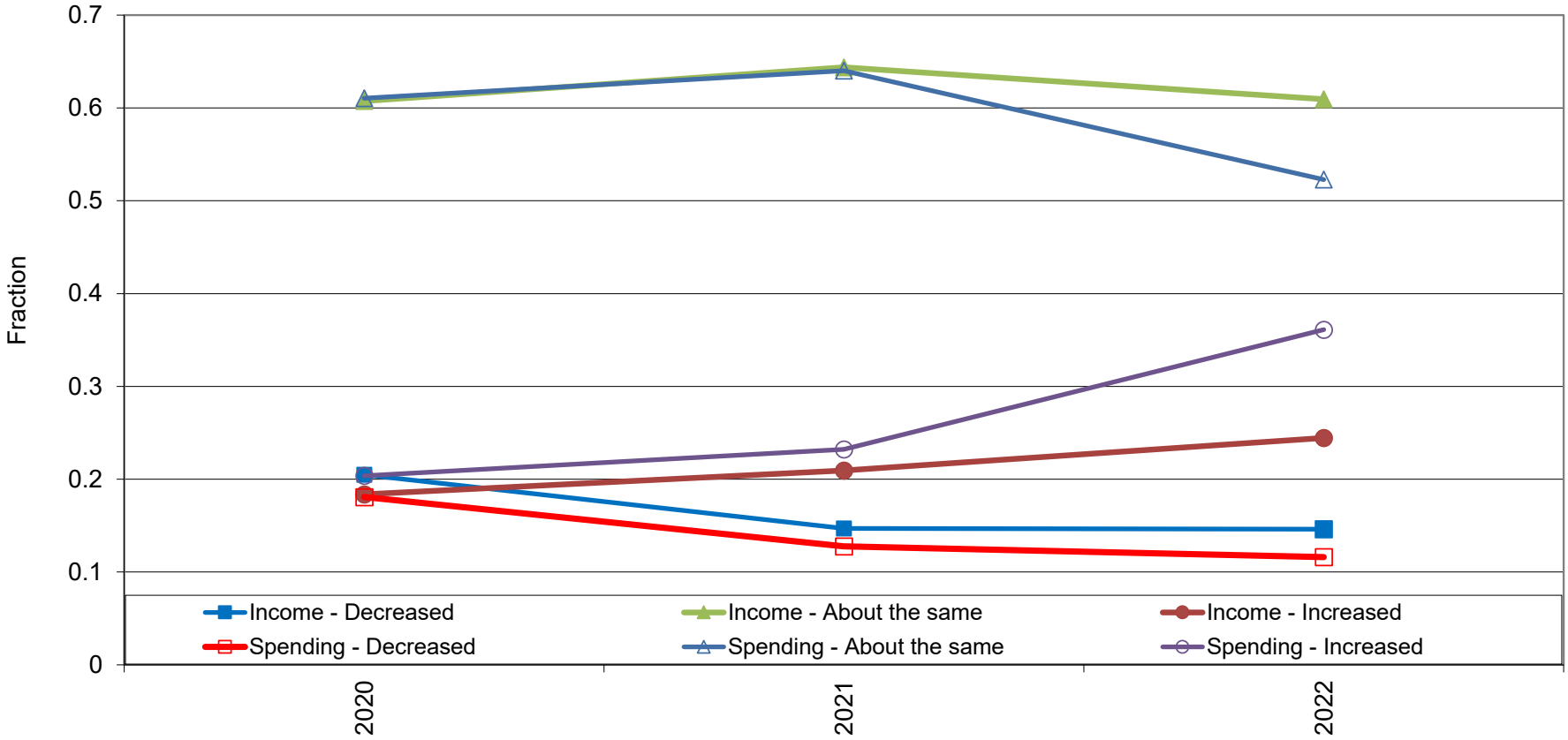


Figure 4b: Consumption and Income Child Near Poverty Rates, 2015-2022, Thresholds Anchored in 2015



Notes: Near poverty is defined as having resources below 150 percent of the poverty threshold. The 2015 poverty threshold is set to the value that produces a poverty rate equal to the official poverty rate of 13.5 percent for the full sample. These thresholds are then adjusted over time using the Bias-Corrected CPI-U-RS. See notes to Figure 2 for additional details.

Figure 5: Family Monthly Income & Spending Relative to a Year Ago, SHED Survey 2020-2022, HS Degree or Less



Notes: This figure shows the fraction of adults with a high school diploma or less who reported that their monthly income or spending had decreased, increased, or stayed about the same compared to the previous year. The data are from the SHED.

Figure 6a. 75th Percentile of Assets for Families with Total Consumption between 50-150% Poverty Threshold, 2015:Q1-2022:Q4

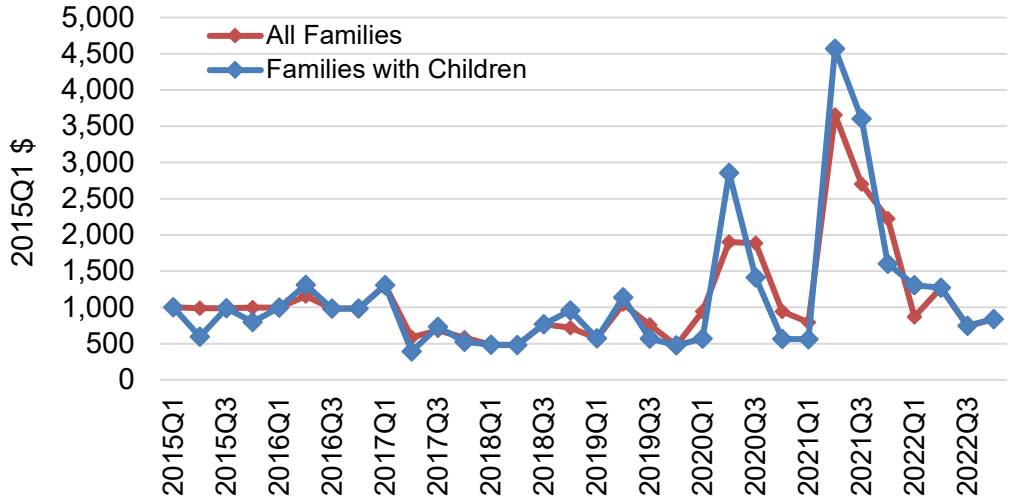
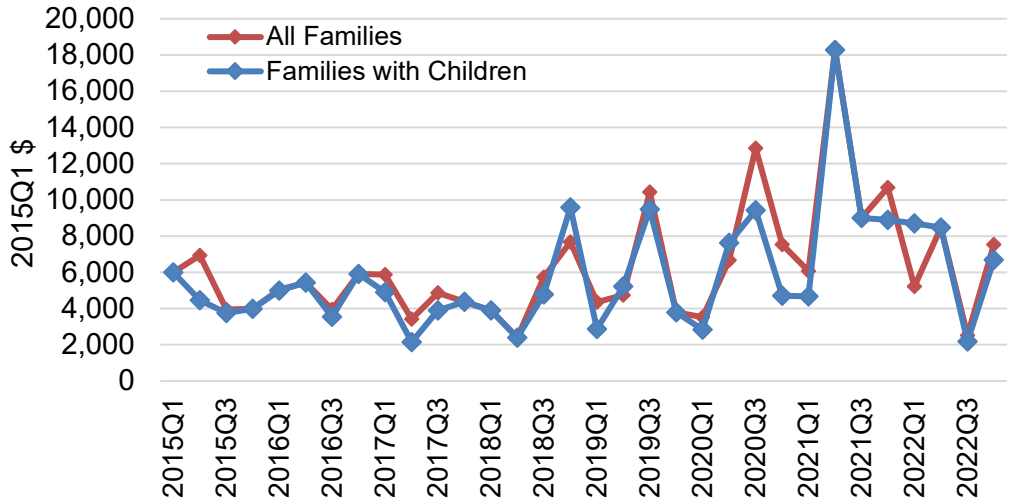
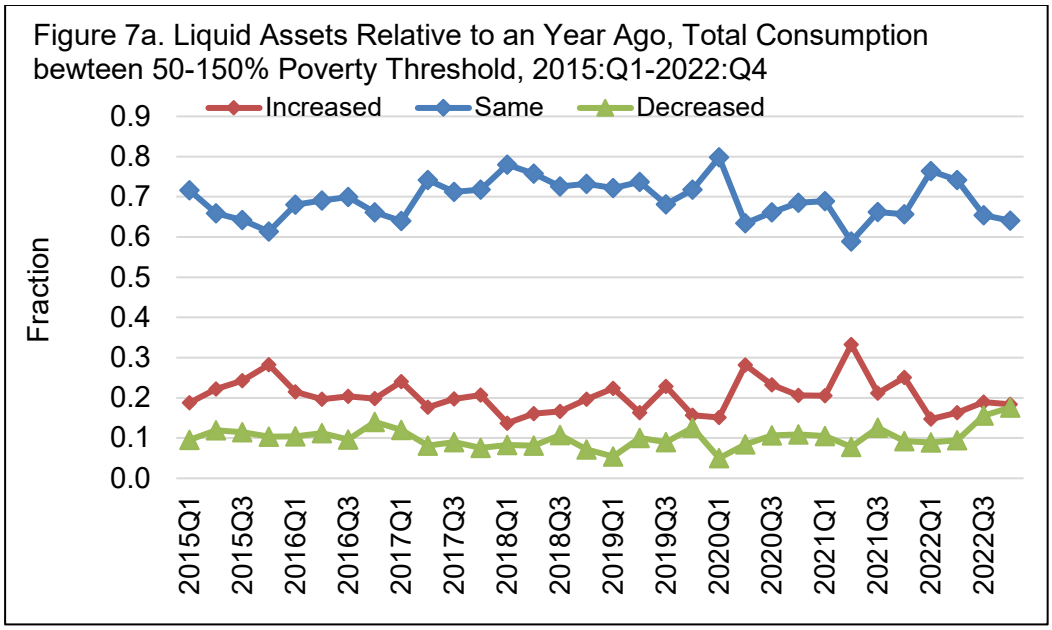
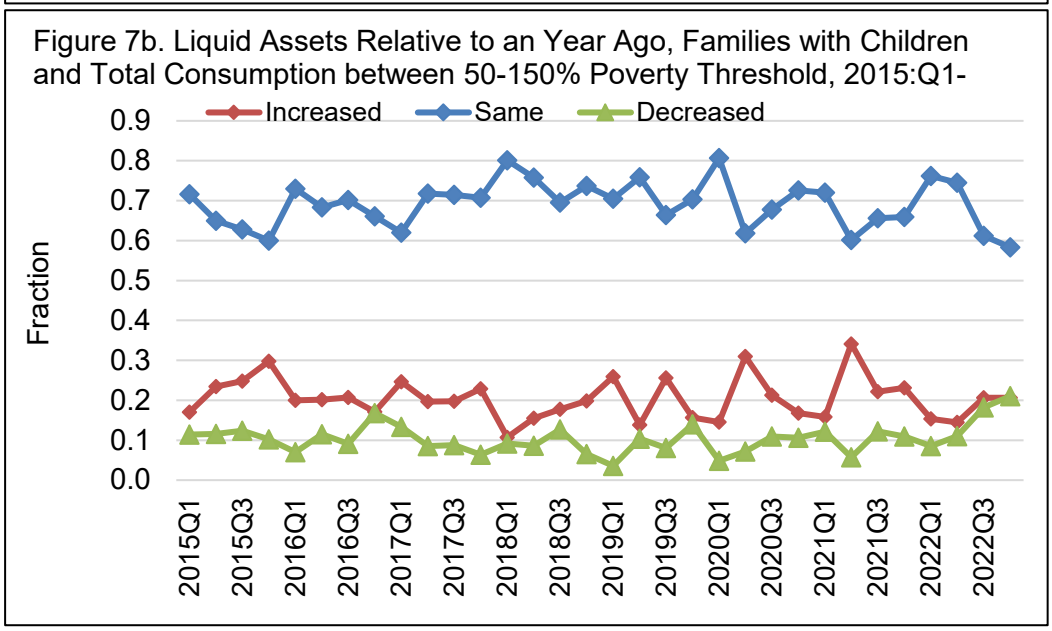


Figure 6b. 90th Percentile of Assets for Families with Total Consumption between 50-150% Poverty Threshold, 2015:Q1-2022:Q4



Notes: This figure shows the 75th percentile (Panel A) and the 90th percentile (Panel B)of assets for families with consumption between 50 and 150 percent of the poverty threshold, with the 2015Q1 poverty threshold set to the value that produces a poverty rate equal to the official 2015 poverty rate of 13.5 percent for the full sample. These thresholds are then adjusted over time using the Bias-Corrected CPI-U-RS. Total assets are calculated as the sum of the values of all checking, savings, and money market accounts, certificates of deposit (CDs), directly-held stocks, bonds, and mutual funds. The data are from the CE. Asset information is collected only in the fifth interview of the CE. The quarter reflects the survey month for the data.





Notes: This figure shows the fraction of families with consumption between 50 and 150 percent of the poverty threshold who reported that their current liquid assets increased, stayed the same, or decreased relative to the previous year. The poverty thresholds are set to the value used in Figure 6. The data are from the CE.

Figure 8a. 75th Percentile of Unsecured Debts for Families with Total Consumption between 50-150% Poverty Threshold, 2015:Q1-2022:Q4

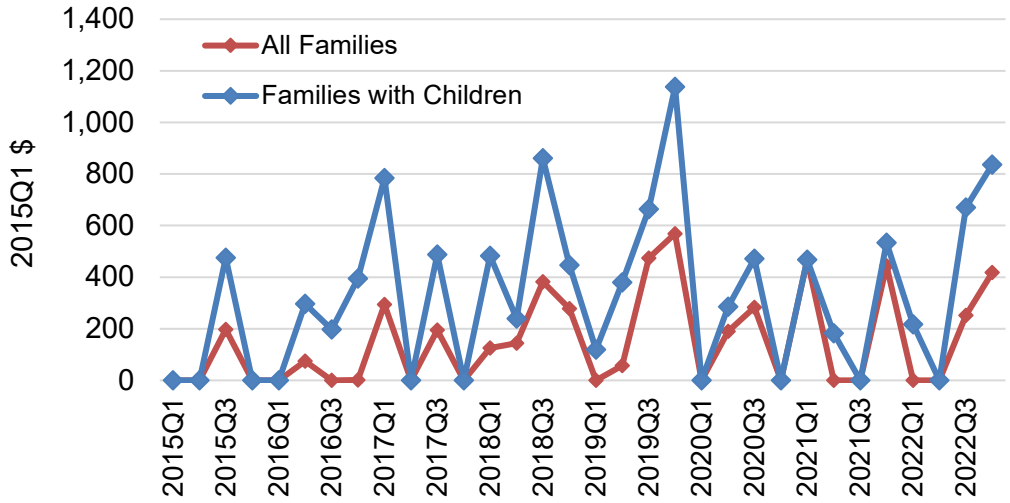
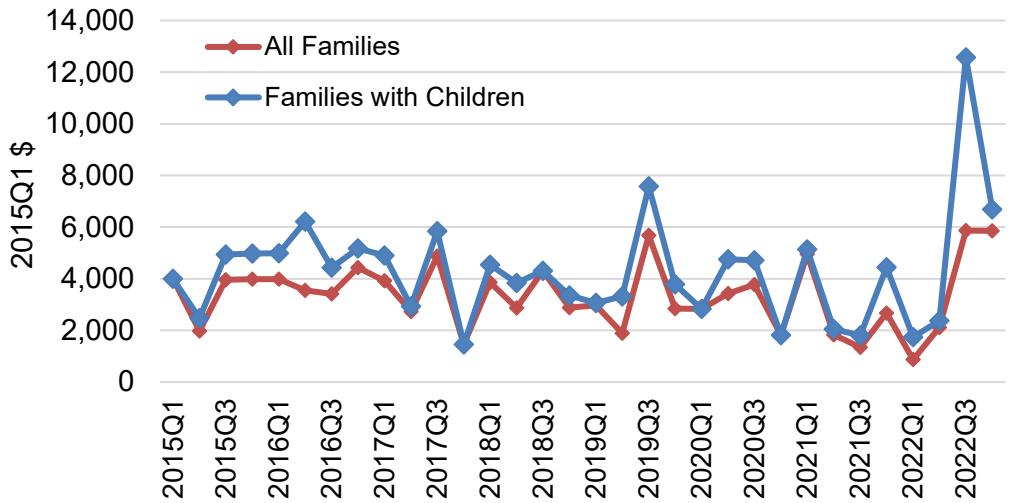


Figure 8b. 90th Percentile of Unsecured Debts for Families with Total Consumption between 50-150% Poverty Threshold, 2015:Q1-2022:Q4



Notes: This figure shows the 75th percentile (Panel A) and the 90th percentile (Panel B)of unsecured debts for families with consumption between 50 and 150 percent of the poverty threshold. The poverty thresholds are set to the value used in Figure 6. The debt includes the total amount owed on all credit cards as well as other unsecured debt such as medical loans or personal loan, but does not include student loans. The data are from the CE.

Figure 9a: Financial Hardships, SHED Survey 2015-2022, Low-Educated Adults

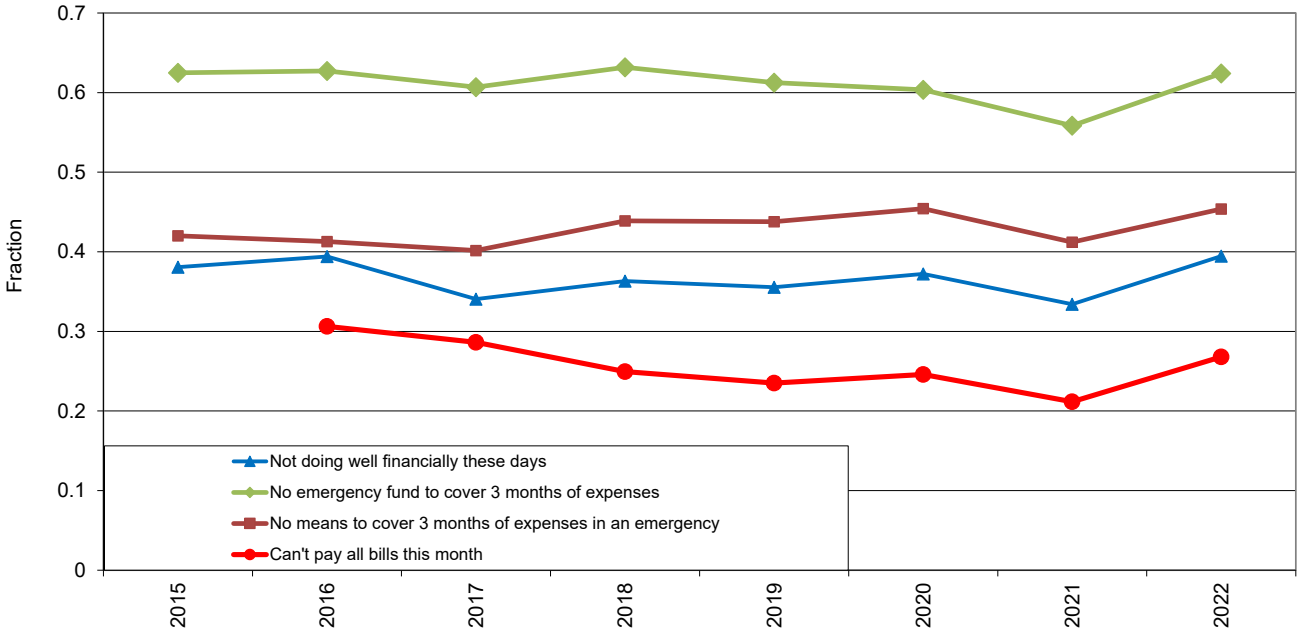
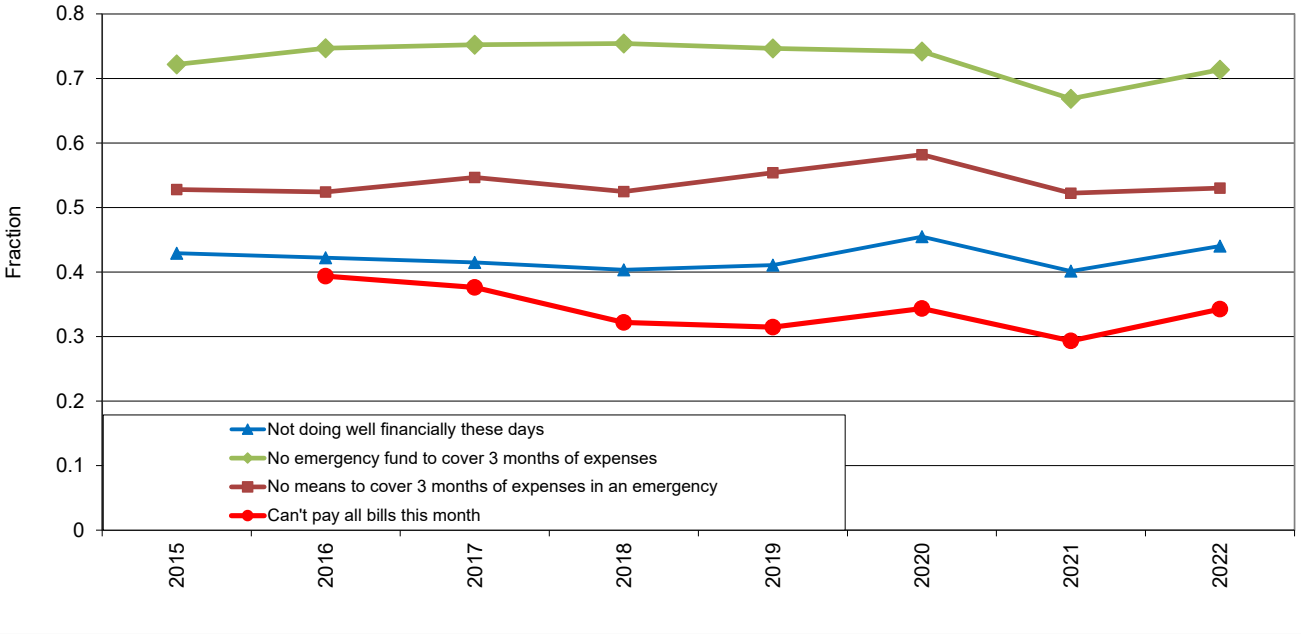
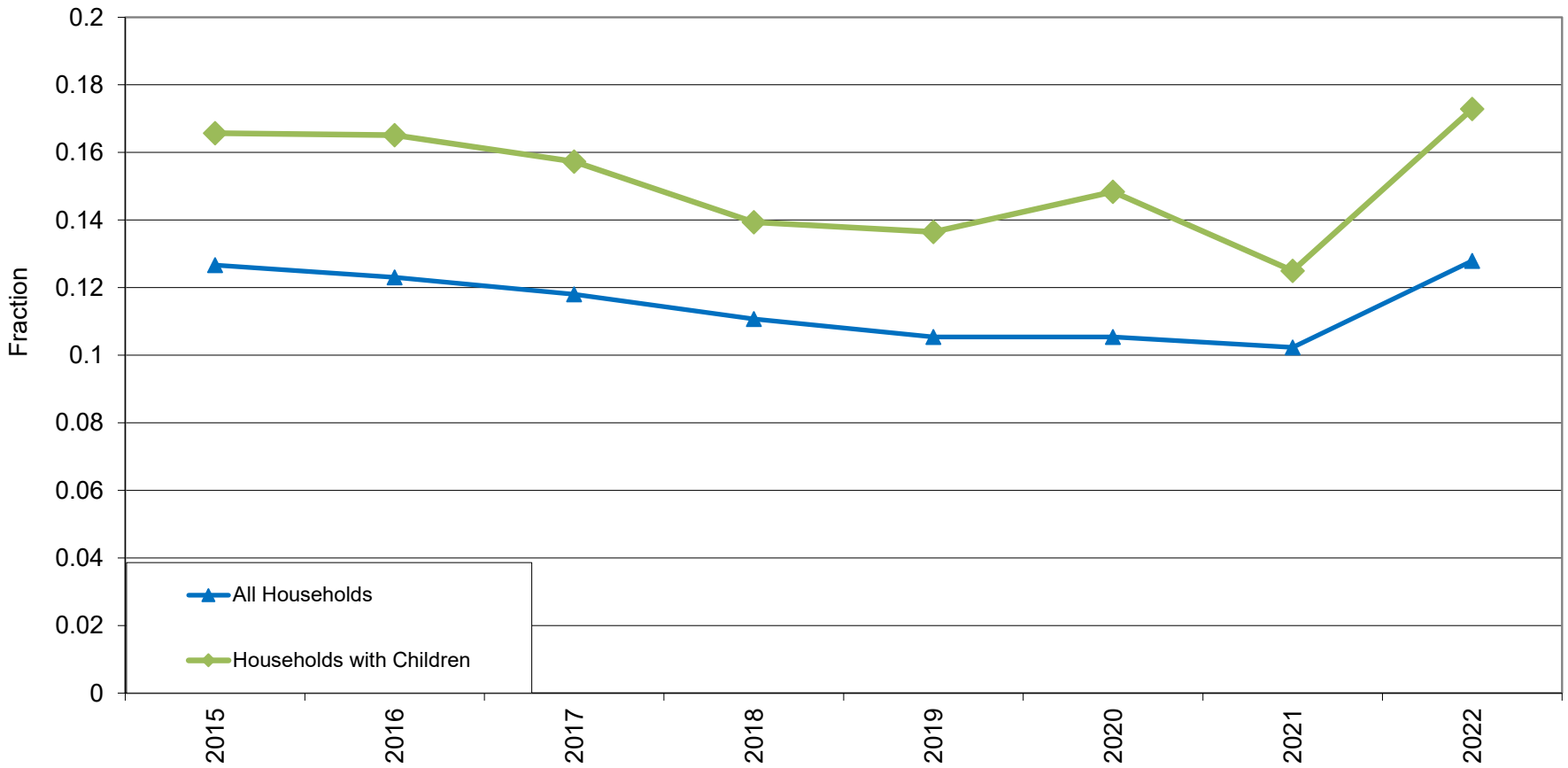


Figure 9b: Financial Hardships, SHED Survey 2015-2022, Low-Educated Parents with Children

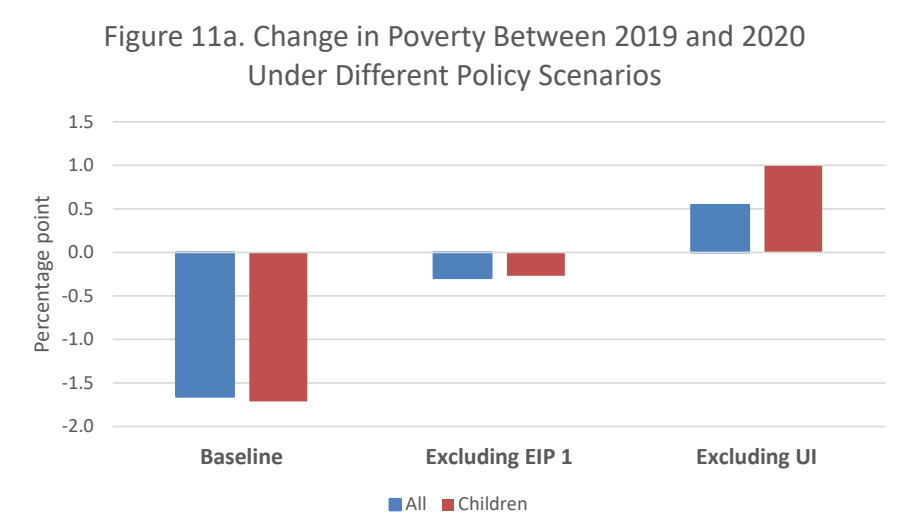


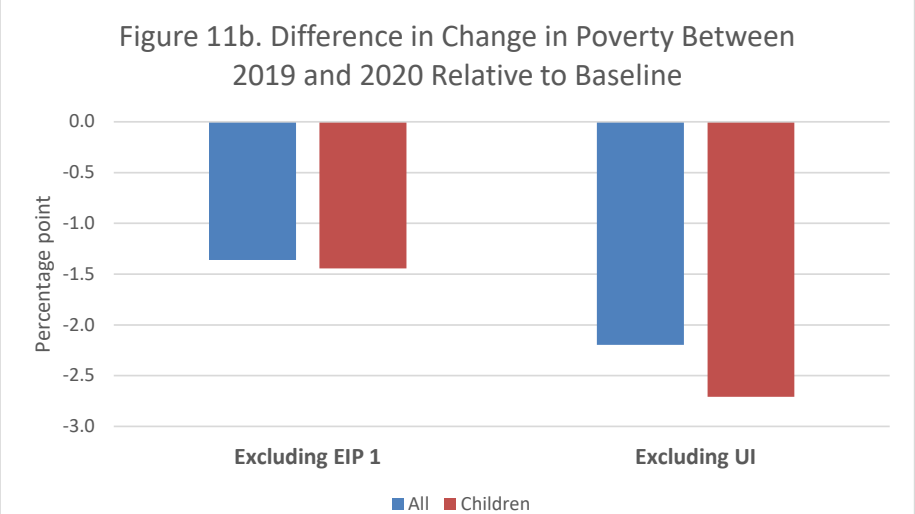
Notes: This figure shows the fraction of adults with a high school degree or less (Panel A) and parents with children who have a high school degree or less (Panel B) who experienced financial hardships. Individuals are classified as "not doing well financially" if they responded with 1) "Finding it difficult to get by" or 2) "Just getting by" to the question, "Overall, which one of the following best describes how well you are managing financially these days?" Individuals are classified as "No emergency fund to cover 3 months of expenses" if they answered "No" to the question, "Have you set aside emergency or rainy day funds that would cover your expenses for 3 months in case of sickness, job loss, economic downturn, or other emergencies?" Individuals are classified as "No means to cover 3 months of expenses in an emergency" if they answered "No" to the question, "If you were to lose your main source of income (e.g., job, government benefits), could you cover your expenses for 3 months by borrowing money, using savings, selling assets, or borrowing from friends/family?" Individuals are classified as "Can't pay all bills this month" if they answered "Can't pay some bills" to the question, "Which best describes your ability to pay all of your bills in full this month?"

Figure 10: Food Insecurity, CPS Food Security Supplement. 2015-2022

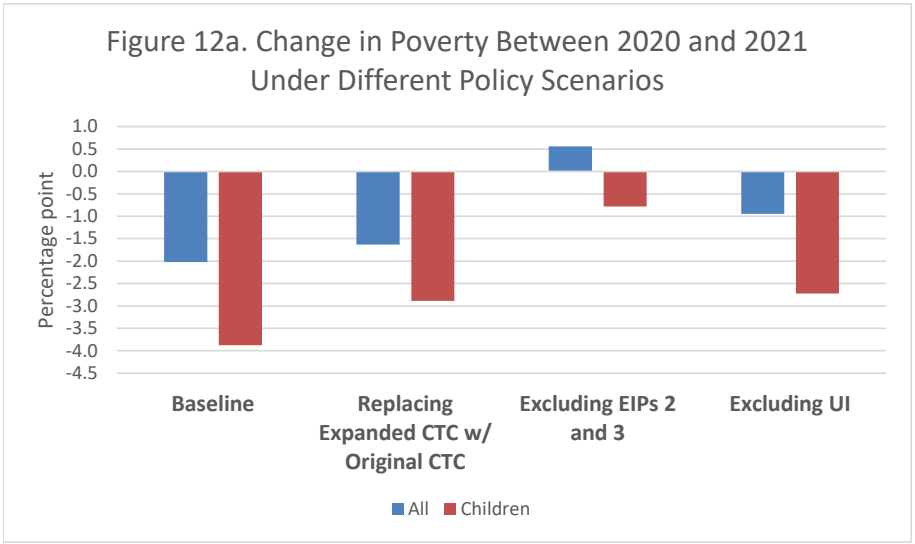


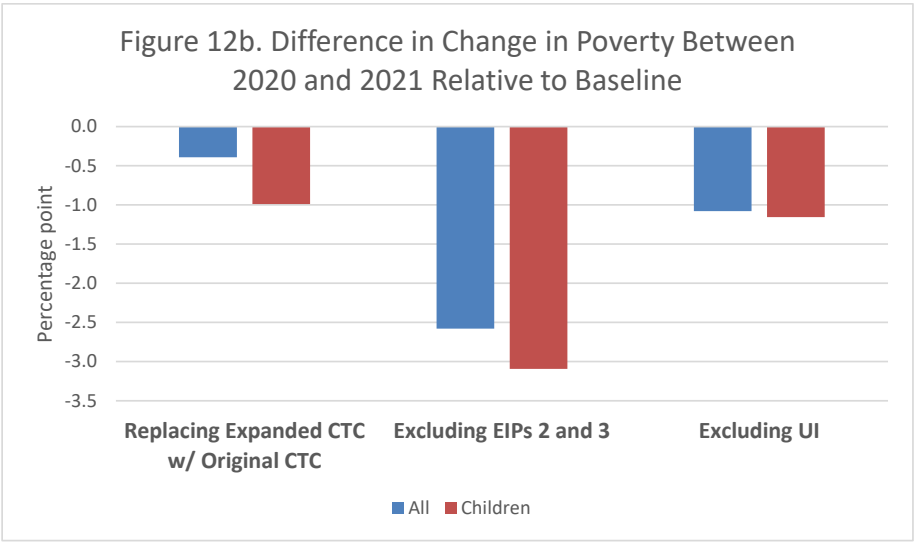
Notes: This figure shows the fraction of households that are food insecure. Households with children are classified as food insecure if they respond affirmatively to 3 or more of 18 food insecurity questions, while households without children are classified as food insecure if they respond affirmatively to 3 or more of 10 food questions. The data are from the CPS Food Security Supplement.



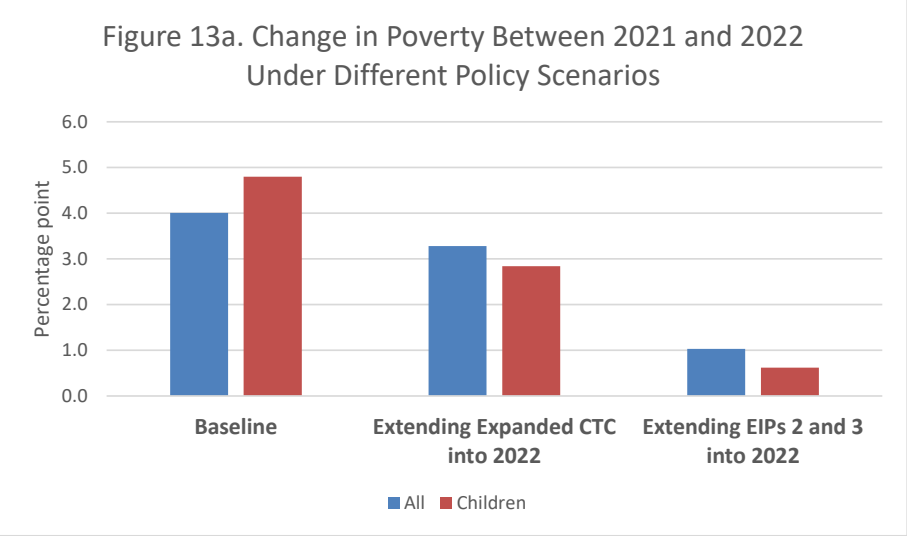


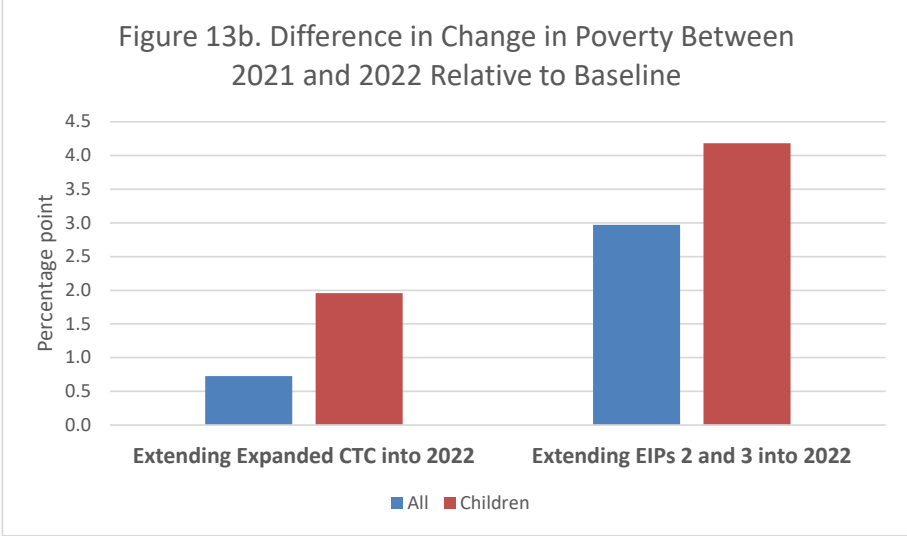
Notes: Panel A shows the actual change in income poverty (left bars) and the counterfactual change in income poverty if the first EIP (middle bars) were excluded, or if UI (right bars) were excluded. Panel B shows the relative changes in income poverty under these counterfactual policies compared to the actual policies.





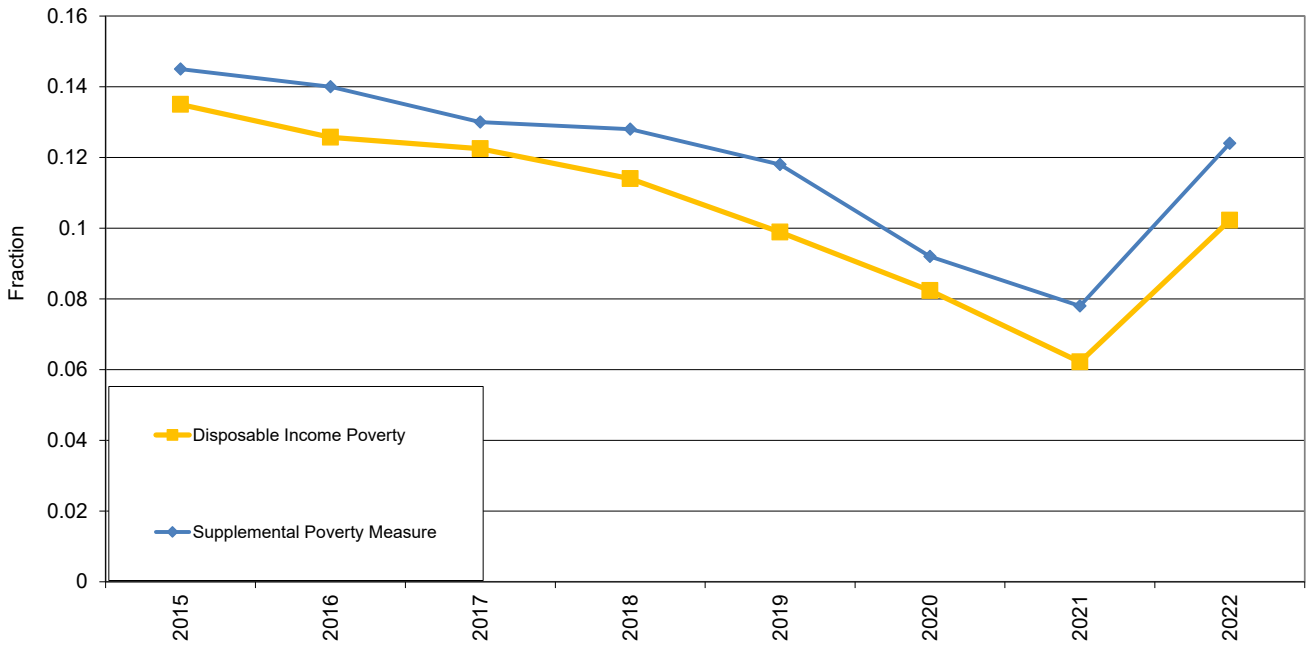
Notes: Panel A shows the actual change in income poverty (1st and 2nd bars) and the counterfactual change in income poverty if the expanded CTC were replaced with the original CTC (3rd and 4th bars), if EIPs 2 and 3 were excluded (5th and 6th bars), or if UI were excluded (7th and 8th bars). Panel B shows the relative changes in income poverty under these counterfactual policies compared to the actual policies.



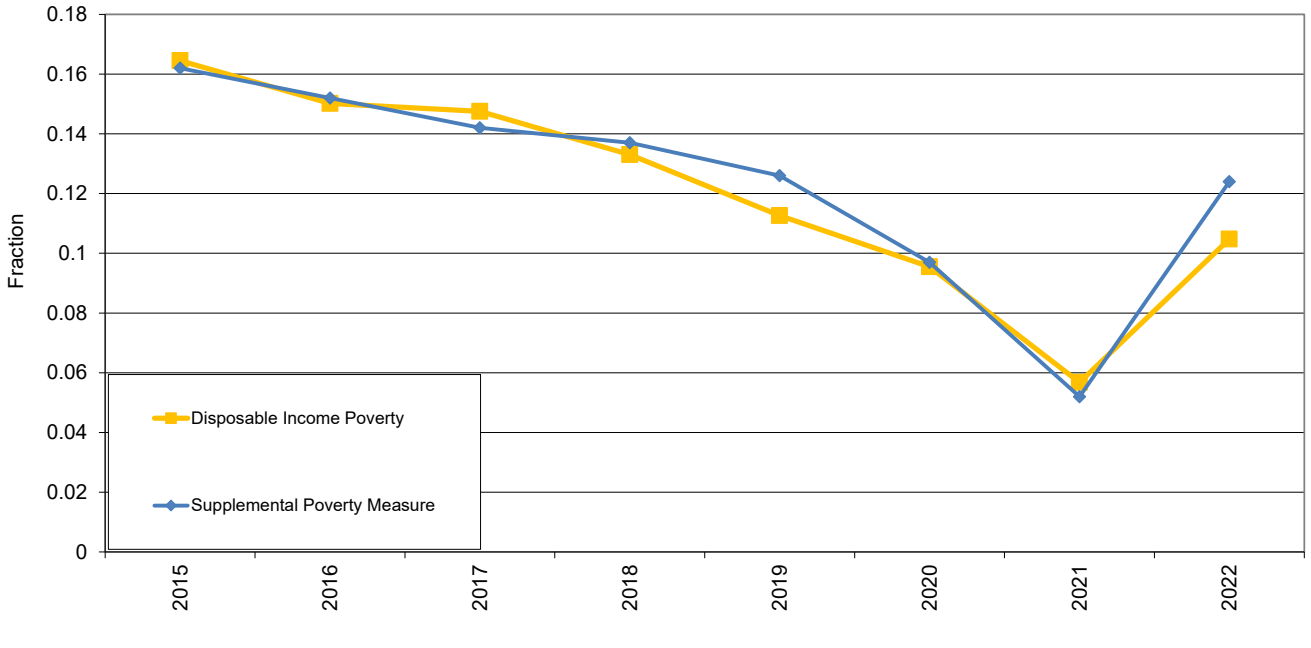


Notes: Panel A shows the actual change in income poverty (left bars) and the counterfactual change in income poverty if the expanded CTC (middle bars) or EIPs 2 and 3 (right bars) had been extended into 2022. Panel B shows the relative changes in income poverty under these counterfactual policies compared to the actual policies.

Appendix Figure 1a: Disposable Income and SPM Poverty Rates, 2015-2022

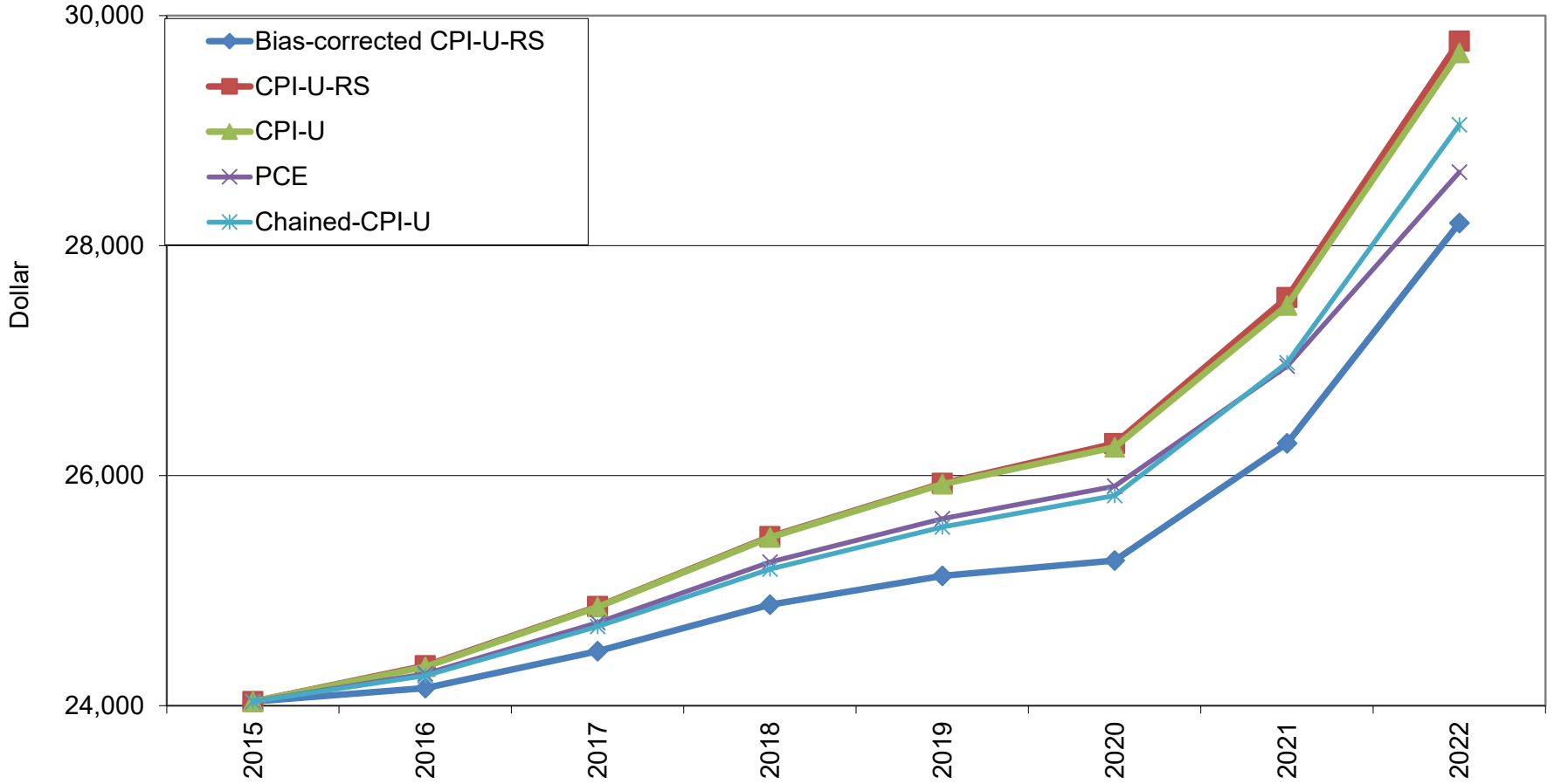


Appendix Figure 1b: Disposable Income and SPM Child Poverty Rates, 2015-2022



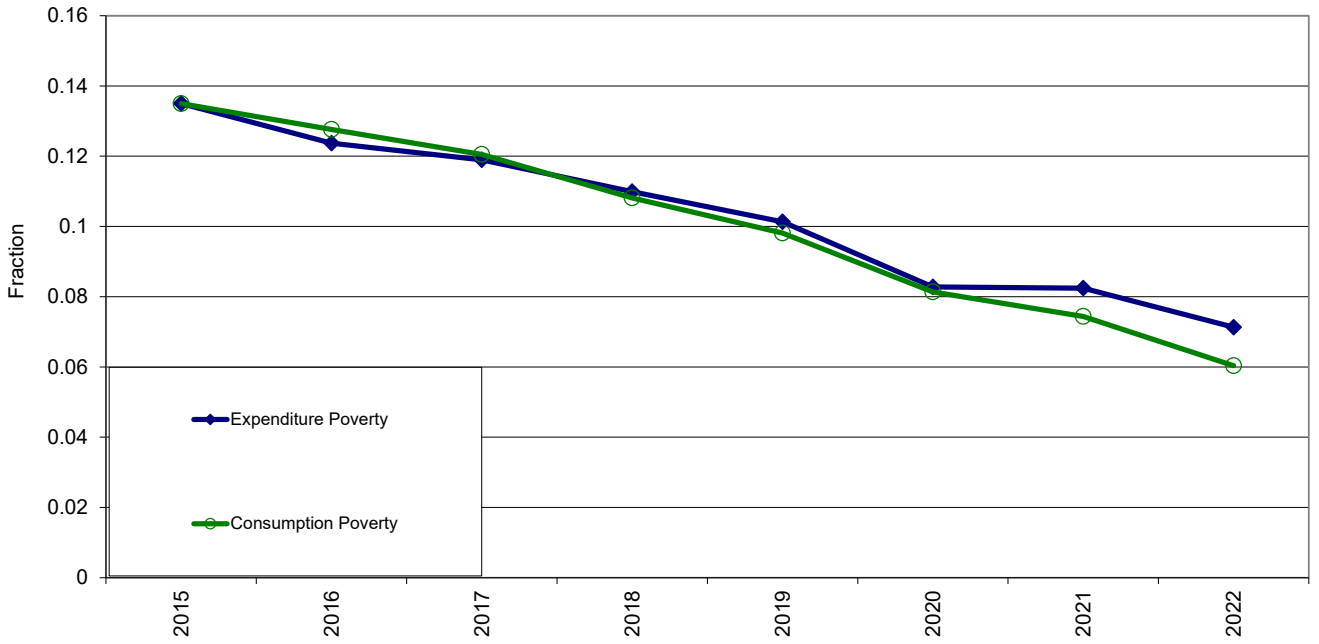
Notes: This figure shows disposable income poverty rates and the SPM rates for all individuals (Panel A) and for children (Panel B). For the disposable income poverty measure, the 2015 poverty threshold is set to the value that produces a poverty rate equal to the official poverty rate of 13.5 percent for the full sample. These thresholds are then adjusted over time using the Bias-Corrected CPI-U-RS. See notes to Figure 2 for additional details. SPM rates can be found in Table B-2 of https://www.census.gov/library/publications/2023/demo/p60-280.html.

Appendix Figure 2: 2015 Official Poverty Thresholds for Families of Two Adults and Two Children Adjusted Using Different Price Indices

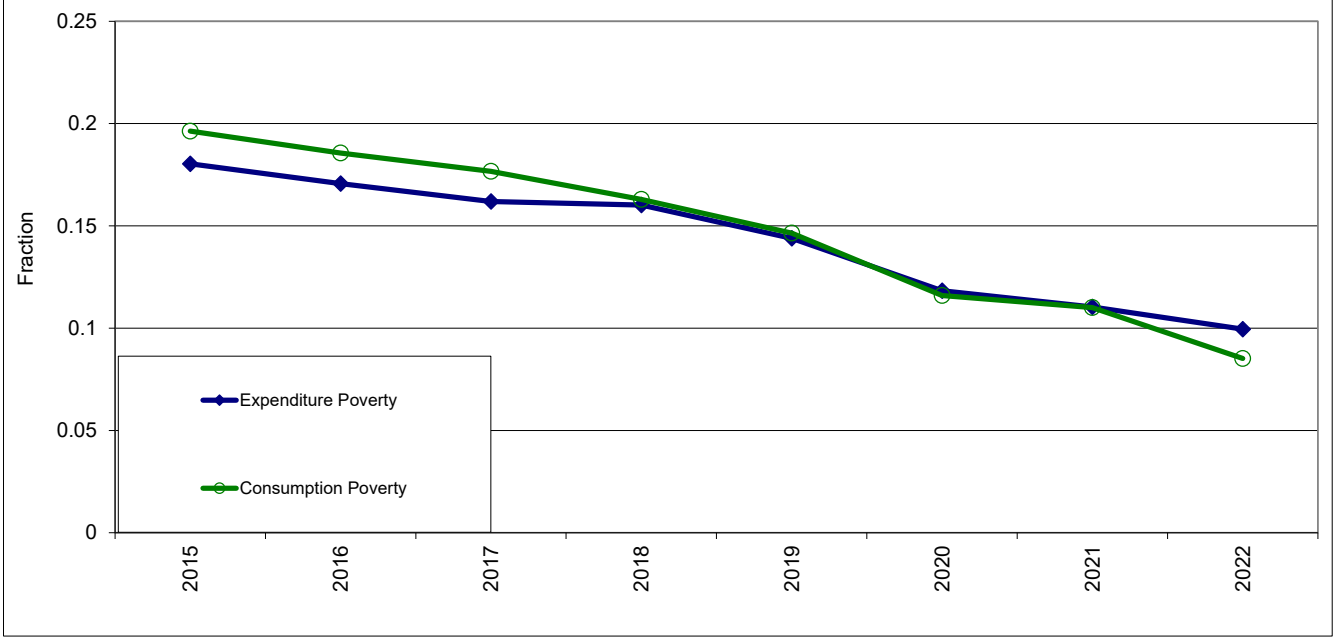


Notes: This figure shows the 2015 official poverty threshold for a family of two adults and two children, which is then adjusted over time using various price indices. Historical official poverty thresholds by family size and number of children are available at https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html.

Appendix Figure 3a: Expenditure and Consumption Poverty Rates, 2015-2022, Thresholds Anchored in 2015

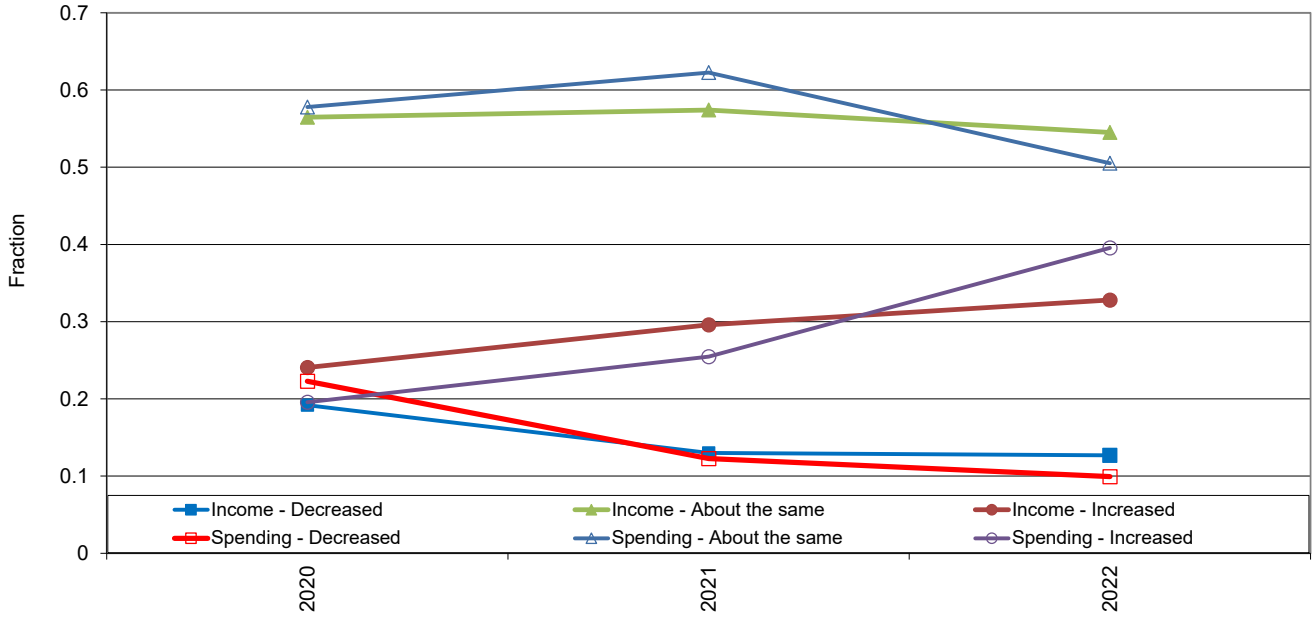


Appendix Figure 3b: Expenditure and Consumption Child Poverty Rates, 2015-2022, Thresholds Anchored in 2015

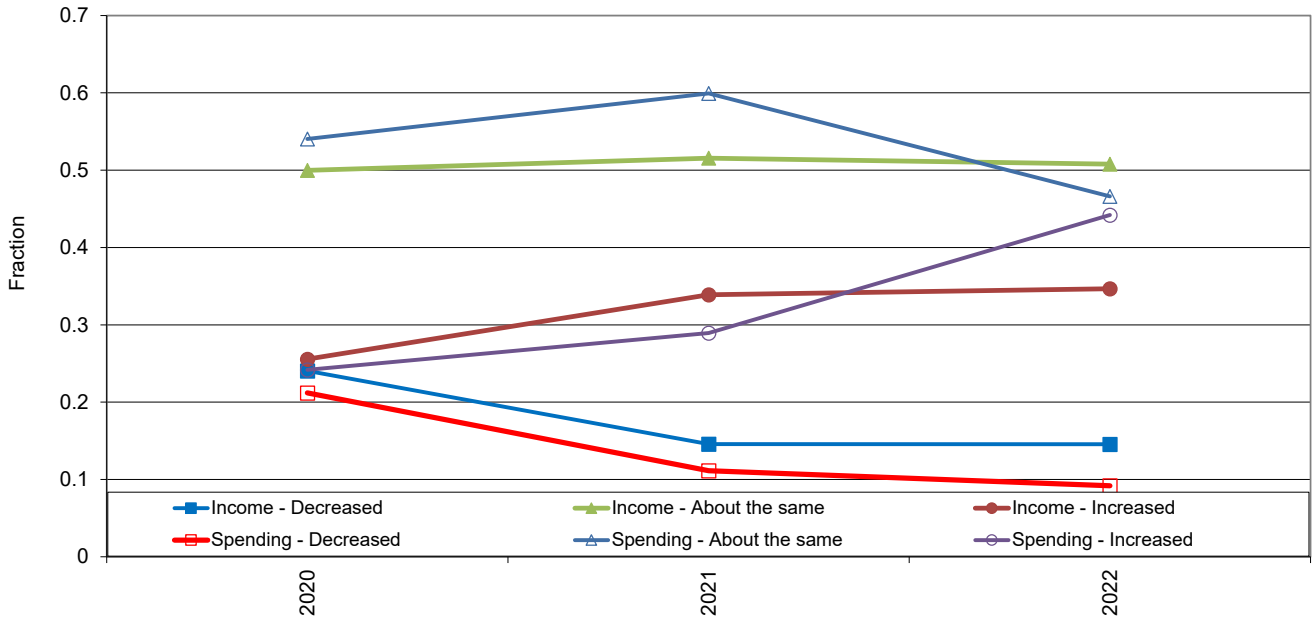


Notes: This figure shows expenditure and consumption poverty rates for all individuals (Panel A) and for children (Panel B). The 2015 poverty threshold is set to the value that produces a poverty rate equal to the official poverty rate of 13.5 percent for the full sample. These thresholds are then adjusted over time using the Bias-Corrected CPI-U-RS. See notes to Figure 2 for additional details.

Appendix Figure 4a: Family Monthly Income & Spending Relative to a Year Ago, SHED Survey 2020-2022, All Adults

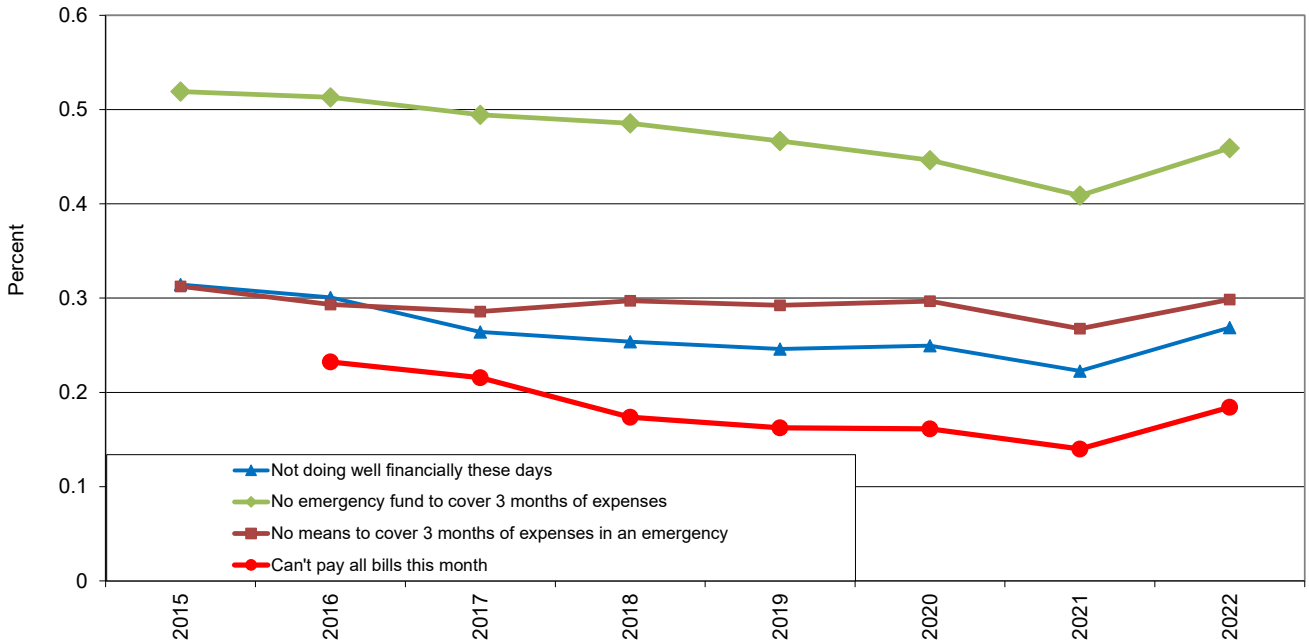


Appendix Figure 4b: Family Monthly Income & Spending Relative to a Year Ago, SHED Survey 2020-2022, Parents with Children

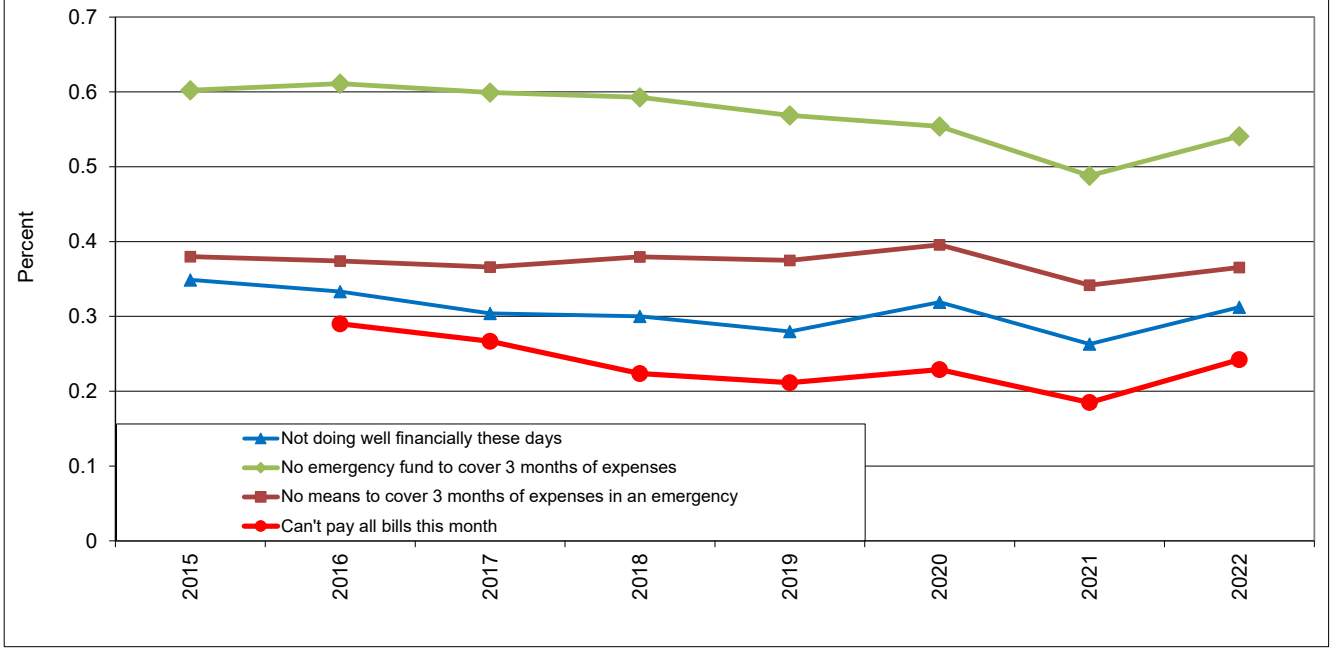


Notes: This figure shows the fraction of all adults (Panel A) and parents living with their own children (Panel B) who reported that their monthly income or spending had decreased, increased, or stayed about the same compared to the previous year. The data are from the SHED.

Appendix Figure 5a: Financial Hardships, SHED Survey 2015-2022, All Adults



Appendix Figure 5b: Financial Hardships, SHED Survey 2015-2022, Parents with Children



Notes: This figure shows the fraction of all adults (Panel A) and parents living with their own children (Panel B) who experienced financial hardships. See notes to Figure 9 for additional details.

Appendix Table 1. Reported, Administrative and Imputed Transfer Amounts

Year	Program	CPS Reported Amount	Payments from Administrative Data	Imputed Amount if Imputed	Imputed as % of Administrative Total
2020					
	EIP 1		271.4	270.1	99.5%
	CTC		118.1	109.5	92.7%
	UI	220.0	580.8	580.0	99.9%
	SNAP	37.3	74.2		
	Housing Subsidy		44.7	41.8	93.6%
	School Meal	14.7	13.9		
	WIC		5.0	2.5	50.9%
	LIHEAP	2.0	4.6		
2021					
	EIPs 2&3		531.4	512.6	96.5%
	CTC		210.4	196.0	93.2%
	UI	89.5	323.3	323.1	99.9%
	SNAP	44.9	107.9		
	Housing Subsidy		46.0	48.4	105.3%
	School Meal	20.7	12.4		
	WIC		5.1	2.3	44.5%
	LIHEAP	2.9	8.2		
2022					
	CTC		122.9	112.8	91.8%
	UI	16.3	27.7	27.7	100.0%
	SNAP	45.3	114.0		
	Housing Subsidy		49.0	50.1	102.3%
	School Meal	20.9	29.5		
	WIC		5.8	3.1	53.7%
	LIHEAP	3.0	3.9		

Notes: This table reports the total nominal value of major cash and non-cash transfer benefits for 2020–2022, including those reported in the CPS, those from administrative data, and those we impute in our measure of disposable income. See Method Appendix for details on how we impute benefits. CTC in 2021 includes the advance CTC payment. Sources of Administrative Data: EIP: https://www.irs.gov/statistics/soi-tax-stats-coronavirus-aid-relief-and-economic-security-act-cares-act-statistics#EIP3. CTC: 1) 2020-2021 data: https://www.irs.gov/statistics/soi-tax-stats-historic-table-2, 2) Advance CTC payments in 2021: https://www.irs.gov/statistics/soi-tax-stats-advance-child-tax-credit-payments-in-2021, 3) 2022 data: https://www.irs.gov/statistics/filing-season-statistics (Mid-November Filing Season Statistics by AGI). UI: Daily Treasury Statement, https://www.pandemicoversight.gov/news/articles/how-much-money-did-pandemic-unemployment-programs-pay-out. SNAP: https://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap. Housing Subsidy: https://www.huduser.gov/portal/datasets/assthsg.html (#units*Average HUD Expenditure per month*12). School Meal: https://www.fns.usda.gov/pd/child-nutrition-tables. WIC: https://www.fns.usda.gov/pd/wic-program. LIHEAP: https://www.acf.hhs.gov/ocs/fact-sheet/liheap-fact-sheet

Appendix Table 2: Consumption and Income Poverty Rates, 2015-2022, Thresholds Anchored in 2015

	All Individauls		Under 18		18-64		65+	
	Disposable Income	Consumption	Disposable Income	Consumption	Disposable Income	Consumption	Disposable Income	Consumption
Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2015	13.5	13.5	16.5	19.6	12.8	12.4	11.7	8.1
2016	12.6	12.8	15.0	18.6	11.8	11.7	11.9	7.9
2017	12.2	12.1	14.8	17.7	11.5	11.1	11.5	7.1
2018	11.4	10.8	13.3	16.3	10.8	10.0	11.1	5.8
2019	9.9	9.8	11.3	14.6	9.3	9.0	10.2	5.7
2020	8.2	8.1	9.6	11.6	7.7	7.6	8.4	5.4
2021	6.2	7.4	5.7	11.0	6.0	6.8	7.7	5.0
2022	10.2	6.0	10.5	8.5	9.9	5.6	11.1	4.3

Notes: This table reports consumption and disposable income poverty rates for the full sample and by age group between 2015 and 2022. The poverty thresholds are anchored in 2015 for the full sample. See notes to Figure 2 for additional details.

Appendix Table 3a. Income Poverty Rates Under Different Policy Scenarios

Year	2019	2020	2021	2022	2020-2019	2021-2020	2022-2021
Disposable Income Poverty	9.9%	8.2%	6.2%	10.2%	-1.7%	-2.0%	4.0%
Exclude all UI	9.8%	10.4%	7.3%	10.2%	0.6%	-3.1%	2.9%
Excluding all EIPs	9.9%	9.6%	8.8%	10.2%	-0.3%	-0.8%	1.4%
Replace the expanded CTC w/ the original CTC	9.9%	8.2%	6.6%	10.7%	-1.7%	-1.6%	4.1%
Extend expanded CTC to 2022	9.9%	8.2%	6.2%	9.5%	-1.7%	-2.0%	3.3%
Extend EIPs 2 and 3 to 2022	9.9%	8.2%	6.2%	7.3%	-1.7%	-2.0%	1.0%

Notes: This table reports the underlying numbers behind Figures 10a-12a. The disposable income poverty rate (row 1) is used as the baseline for policy simulations in rows 2-6.

Appendix Table 3b. Income Child Poverty Rates Under Different Policy Scenarios

Year	2019	2020	2021	2022	2020-2019	2021-2020	2022-2021
Disposable Income Poverty	11.3%	9.6%	5.7%	10.5%	-1.7%	-3.9%	4.8%
Exclude all UI	11.2%	12.3%	6.8%	10.4%	1.1%	-5.4%	3.6%
Excluding all EIPs	11.3%	11.0%	8.8%	10.5%	-0.3%	-2.2%	1.7%
Replace the expanded CTC w/ the original CTC	11.3%	9.6%	6.7%	11.7%	-1.7%	-2.9%	5.0%
Extend expanded CTC to 2022	11.3%	9.6%	5.7%	8.5%	-1.7%	-3.9%	2.8%
Extend EIPs 2 and 3 to 2022	11.3%	9.6%	5.7%	6.3%	-1.7%	-3.9%	0.6%

Notes: This table reports the underlying numbers behind Figures 10b-12b. The disposable income poverty rate (row 1) is used as the baseline for policy simulations in rows 2-6.

Appendix Table 4a. Income Poverty Rates Under Different Policy Scenarios, Using Year Accrued

Year	2019	2020	2021	2022	2020-2019	2021-2020	2022-2021
Disposable Income Poverty	9.9%	7.6%	6.4%	10.7%	-2.3%	-1.2%	4.3%
Exclude all UI	9.8%	9.5%	7.5%	10.6%	-0.3%	-2.0%	3.1%
Excluding all EIPs	9.9%	9.6%	8.3%	10.7%	-0.3%	-1.4%	2.4%
Replace the expanded CTC w/ the original CTC	9.9%	7.6%	7.3%	10.7%	-2.3%	-0.3%	3.4%
Extend expanded CTC to 2022	9.9%	7.6%	6.8%	9.5%	-2.3%	-0.7%	2.7%
Extend EIPs 2 and 3 to 2022	9.9%	7.6%	6.4%	7.6%	-2.3%	-1.2%	1.2%

Notes: This table replicates Appendix Table 3a but using year accrued for CTC and EIP2, instead year received.

Appendix Table 4b. Income Child Poverty Rates Under Different Policy Scenarios, Using Year Accrued

Year	2019	2020	2021	2022	2020-2019	2021-2020	2022-2021
Disposable Income Poverty	11.3%	8.6%	5.2%	11.7%	-2.7%	-3.4%	6.5%
Exclude all UI	11.2%	11.0%	6.4%	11.7%	-0.2%	-4.6%	5.3%
Excluding all EIPs	11.3%	11.0%	7.3%	11.7%	-0.3%	-3.7%	4.4%
Replace the expanded CTC w/ the original CTC	11.3%	8.6%	7.5%	11.7%	-2.7%	-1.1%	4.2%
Extend expanded CTC to 2022	11.3%	8.6%	6.4%	8.5%	-2.7%	-2.2%	2.2%
Extend EIPs 2 and 3 to 2022	11.3%	8.6%	5.2%	7.3%	-2.7%	-3.4%	2.1%

Notes: This table replicates Appendix Table 3b but using year accrued for CTC and EIP2, instead year received.