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Federal Means-Tested Transfer Programs**

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Rising Extreme Poverty in the United States and the Response of Federal Means-Tested

Transfer Programs

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Abstract

This study documents an increase in the prevalence of extreme poverty among U.S. households with children between 1996 and 2011, and assesses the response of major federal means-tested transfer programs. “Extreme poverty” is defined using a World Bank metric of global poverty: \$2 or less, per person, per day. Using the 1996-2008 panels of the Survey of Income and Program Participation (SIPP), we estimate that in mid-2011, 1.65 million households with 3.55 million children were living in extreme poverty in a given month, based on cash income. This constituted 4.3 percent of all non-elderly households with children. The prevalence of extreme poverty has risen sharply since 1996, particularly among those most impacted by the 1996 welfare reform. Adding SNAP benefits to household income reduces the number of extremely poor households with children by 48.0 percent in mid-2011. Adding SNAP, refundable tax credits, and housing subsidies reduces the number 62.8 percent.

Introduction

The 1996 welfare reform ended the only cash entitlement program for poor families with children, replacing it with a program that offers time-limited cash assistance and requires able-bodied recipients to participate in work-related activities. This reform, combined with changes to other public programs that have raised the benefits of work for low-income households, has been followed by a dramatic decline in cash assistance caseloads and a dramatic increase in work-conditioned benefits for the working poor (Ben-Shalom, Moffit & Scholz, in press). That is, total public means-tested transfers have fallen for the non-working poor, but increased for the working poor.

In the midst of the slow recovery following the Great Recession, millions of parents are experiencing long spells of unemployment, but they have little immediate access to means-tested cash income support. Have these changes coincided with the growth of a new group of American poor: households with children living on virtually no income? We refer to this group as the “extreme poor”, and adopt one of the World Bank’s measures of global poverty to define it: \$2 or less, per person, per day.

This article presents estimates of the descriptive prevalence of extreme poverty among households with children in the United States between 1996 and 2011. We expect that extreme poverty increased between 1996 and 2011, at least in part because of the 1996 welfare reform and the Great Recession. While this investigation is motivated by these two key factors, estimates presented here do not fully assess the casual mechanisms of any such rise in extreme poverty. However, this descriptive documentation is an important first step to understanding extreme poverty in the U.S., which to our knowledge has never been measured in this way. Since 1996, cash assistance receipt has declined precipitously. In contrast, the percentage of low-

income households that receive means-tested benefits from the Supplemental Nutrition Assistance Program (SNAP) and means-tested refundable tax credits (particularly the Earned Income Tax Credit) has increased. We hypothesize that these means-tested benefits expansions, particularly of SNAP, have partially offset the increase extreme poverty since 1996.

Background

Several factors may be related to recent changes in the incidence of extreme poverty in the U.S. First is the 1996 welfare reform, which replaced a need-based entitlement program, Aid to Families with Dependent Children (AFDC), with a more restrictive federal block grant program called Temporary Assistance for Needy Families (TANF). Subsequently, cash assistance caseloads have fallen from 12.3 million recipients per month in 1996 to 4.5 million in December 2011, and only 1.1 million of these beneficiaries are adults. Even during the current period of continued high unemployment, the cash assistance rolls have increased only slightly. 'Welfare,' in the form of cash assistance, is a shell of its former self.

Other means-tested income support programs have grown considerably, most notably the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program), and the Earned Income Tax Credit (EITC), along with other refundable tax credits for low-income families.¹ Relaxed eligibility requirements combined with increased need during the Great Recession has led SNAP caseloads to increase from an average of 25.5 million recipients per month in 1996 to 47.5 million in October 2012. The number of recipient families claiming the EITC rose from 19.5 million in 1996 to 27.8 million in tax year 2010 (Tax Policy Center, 2010). While the EITC is restricted to wage earners, there is some evidence that many recipients save part of it throughout the year to protect themselves during short periods with no income

¹ Another example of in-kind benefits expansions is increased accessibility of public health insurance for low-income children and, in some states, their parents.

(Mendenhall, Edin, Crowley, Sykes, Tach, Kriz & Kling, 2012). Housing subsidies also are accessed by a moderate percentage of low-income families.

The 2009 American Recovery and Reinvestment Act (ARRA) temporarily increased SNAP benefits by about 15 percent per household. At the same time, the EITC was expanded considerably for households with three or more children and the child tax credit was expanded and extended to families with lower earnings levels. These major expansions in means-tested aid were responses to the greatest economic contraction in modern times, which may have had its own effect on extreme poverty in the U.S. While the Great Recession era has ushered in a prolonged period of high unemployment, its real legacy may prove to be the unprecedented duration of unemployment spells: the average spell was 38.1 weeks as of December 2012.

This period has also seen an unprecedented expansion of Unemployment Insurance (UI) eligibility durations, up to 99 weeks for some workers. However, recent studies find that low-earning workers continue to experience significant difficulty accessing UI benefits, largely as a result of ineligibility related to the reason for employment separation, as well as possibly confusion about eligibility (Gould-Werth & Shaefer, 2012; O’Leary & Kline, 2008; Shaefer, 2010). Thus, a rise in the number of households experiencing prolonged periods of unemployment may have also led to a rise in the number of households surviving on virtually nothing.

In addition to reporting the official poverty rate, the Census Bureau also reports the “deep poverty” rate. Those in deep poverty have incomes below 50 percent of the official poverty threshold. Over the past two decades, deeply poor families have seen a substantial decline in the amount of aid they receive from public programs, while low-income families between 50 and 150 percent of poverty have actually realized an increase in assistance from public programs, on

average (Ben-Shalom, Moffitt & Scholz, in press). But even deeply poor families may have been affected by changes to public programs and the economy in the last 15 years in heterogeneous ways. A single mother with a regular minimum wage job working an average of 25 hours a week would still be in deep poverty but could receive significant EITC and child tax credit benefits, may access child care subsidies, and could remain on SNAP. In contrast, a family in which the head has multiple barriers to work and is unable to maintain regular employment will receive no or at most a small EITC and child tax credit, likely will not be able to access unemployment insurance benefits because of inadequate labor force attachment, could not access child care subsidies, and is much less likely to access cash assistance than before the 1996 reform. Thus, alternative metrics may be necessary to capture the changing circumstances of the poorest of the poor in the U.S.

Several studies have documented that an increasing proportion of single-mothers are “disconnected,” with neither earnings nor welfare (Blank, 2007; Loprest, 2011; Turner, Danziger & Seefeldt, 2006). As much as one-quarter of all single mothers were disconnected for at least a four-month period in 2009 (Loprest, 2011). Turner et al. (2006) find that these disconnected mothers often face multiple barriers to work such as learning disabilities, physical limitations, few work skills, and mental health problems. While these studies offer critical information about single mother families, other poor families with children also may have been impacted by the retrenchment of cash assistance and the current period of sustained high unemployment.

To better capture the full extent of a household’s resources, it is important to account not just for a family’s household earnings and cash welfare, but also other sources of unearned and in-kind income, such as loans or gifts from family and friends, SNAP, public housing, and EITC benefits accrued during previous spells of work, even among the jobless.

The current article offers an alternative metric designed to measure the prevalence of extreme destitution among households with children between 1996 and 2011, attempting to account for most sources of income as comprehensively as possible, including cash and in-kind income from public programs, informal work, and gifts and loans from family and friends inside and outside the household. To our knowledge, no previous study has examined U.S. poverty at such an extreme level.

The primary goal of this analysis is to identify whether there has been an increase in the number and proportion of households with children living on virtually no income that has coincided with the implementation of the 1996 welfare reform, particularly in the context of Great Recession period. This descriptive analysis is motivated by the major retrenchment of cash assistance and the current period of prolonged economic hardship, but the estimates presented here are not sufficient to make causal claims about the impact of these factors in particular. More advanced analyses would be required to make such causal claims.

The measure of “extreme poverty” used here is based on one of the World Bank’s key indicators of global poverty: \$2 per person, per day.² Tellingly, the World Bank does not release official estimates for the United States for this metric because it is meant to capture poverty based on “the standards of the poorest countries” (Ravallion, Chen & Sangraula, 2008, p. 3). Living below this metric is widely considered to be a marker of extreme destitution, which is assumed to be very uncommon among wealthy nations. Thus, this metric is conceptually appropriate for the current paper because the goal is to examine the incidence of extreme destitution in the U.S., and how it has changed over the study period. Because the current analysis examines a sub-population (of households with children), and because our estimates and methodology are only modeled after but are not identical to what is used by the World Bank,

² <http://data.worldbank.org/indicator/SI.POV.GAP2>.

direct comparison of the estimates presented here with the World Bank's estimates from developing countries is not the focus of the current article.

Households are counted as being in extreme poverty if they report \$2 dollars or less per person, per day in total household income in a given month (approximated as \$60 per person, per month in 2011 dollars). In sensitivity analyses, we examine our estimates using a few other income thresholds. These are reported in table 3 and discussed later on. The official poverty line for a family of three would equate to roughly \$17.00 per person, per day, averaged over a year, so our measure is roughly 13 percent of the official poverty line. The threshold for deep poverty (half the poverty line) would equate to an average of approximately \$8.50, per person, per day, over four times the cut-off we use for extreme poverty. We hypothesize that the prevalence of extreme poverty has risen since 1996, but that this increase has been mitigated by the expansions of the means-tested aid, particularly of SNAP and the EITC.

Data and Method

We analyze data from the Survey of Income and Program Participation (SIPP), collected by the U.S. Census Bureau. Our study period starts in 1996, before states were required to implement the 1996 welfare reform, and before the national unemployment rate fell to a low of 4.0 percent in 2000. The period ends with the most recent available SIPP data, from the middle of 2011, when the national unemployment rate was roughly 9 percent.

We use a comprehensive household-level total monthly income measure that includes the resources of all individuals living in a housing unit. This income variable includes labor market earnings, pension and retirement benefits, cash income from public programs such as AFDC/TANF (but not in-kind transfers), asset income (dividends, interest and rents) and reported income from friends and family members outside the household (including child

support), and from informal sources (such as odd jobs). We restrict our sample to households with children under 18 and with household heads under 65. We also drop observations in which households report negative income values (which may be related to investments). These tend to be from households with higher incomes in other months. We adjust income values to 2011 dollars using the Consumer Price Index for urban customers. We utilize household-level sample weights to produce nationally-representative estimates.³

Our baseline estimates use monthly cash income values (which includes cash assistance) and reported family size. Table 1 also reports alternative estimates using quarterly income and an equivalence scale.⁴ Ideally we would also report annual estimates. Unfortunately, to produce annual estimates, the SIPP requires the use of calendar year weights, which have not yet been made available for the final year of our study period (They are also not available for some years in the study period because of breaks between SIPP panels). Also, monthly estimates better protect against biasing from non-random attrition throughout SIPP panels. Still, this represents an important limitation of the current analysis. It is possible that households could experience a month or even a calendar quarter in extreme poverty, but have larger incomes over a full year.

For monthly estimates, we keep only SIPP reporting month (4th reference month) observations in each wave, because these are known to be the most accurate (Moore, 2007).⁵ We replicate results with all SIPP months (see table 3), and findings are substantively similar. As is commonly done, reporting-month observations within each wave are stacked to generate cross-sectional estimates. For our quarterly estimates, we use reporting month observations and average months across two waves (reference month 3 wave t + reference month 4 wave t +

³ Our full sample consists of 12,244 unweighted household observations reporting extreme poverty using the baseline definition, starting with 256 household observations in wave 1 of the 1996 panel, and ending with 392 household observations in wave 9 of the 2008 panel.

⁴ The square root of household size.

⁵ Sensitivity analyses reported in table 3 show that results are consistent when using all SIPP months.

reference month 1 wave t+1). To minimize bias caused by non-random attrition, we do not want to drop cases not present in wave t+1. In those cases we use reference months 2, 3, and 4 of wave t.

There are concerns that survey respondents may under-report income, both from work and public program participation. However, when compared to other large nationally representative peer surveys, studies find that the SIPP is generally superior at measuring income among the poor and public program participation (Czajka & Denmead, 2008; Meyer, Mok, & Sullivan, 2008). Czajka & Denmead (2008) estimate aggregate household income in the U.S. across a number of major household surveys. The SIPP generates an estimate of \$391 billion in income among families in the lowest income quintile, while the Current Population Survey (CPS) estimate is \$371 billion and the American Community Survey estimate is \$369 billion. Further, administrative earnings data (such as from unemployment insurance records or IRS tax records) are insufficient for capturing informal income among the poor. Thus, the SIPP is the source of nationally representative data that records the largest amount of income among the poor, making it the most appropriate choice for the current study.

In terms of capturing program participation, the SIPP also performs better, on average, than CPS and other major household surveys, although it is far from perfect. Meyer et al. compare reports of public program participation in a number of major household surveys to administrative caseload totals. The SIPP's reporting rate for SNAP was 84.2 percent in 1996 and remained relatively stable through 2005, the final year Meyer et al. report on. In contrast, the CPS's reporting rate for SNAP was 66.3 in 1996 and fell to 56.5 percent in 2005. For AFDC/TANF, the SIPP reporting rate started at 79.5 percent in 1996, fell to 65.5 percent in 2002, but increased to 80.9 percent by 2005. For CPS, the AFDC/TANF reporting rate started at 67.0

percent in 1996, fell below 60 percent in a number of years, and ended at 63.0 percent in 2005 (and even down to 52.7 in 2007). It is worth noting that the SIPP reporting rates do not consistently worsen across the study period, at least up to 2005. Thus, falling reporting rates over time cannot explain an increase in the prevalence of extreme poverty over the study period.

We report three estimates of extreme poverty, using three different definitions of household income. The first considers only reported household cash income from all sources, as described above. This definition most closely aligns with the official U.S. poverty measure. The second adds SNAP benefits, (assuming \$1 SNAP = \$1 cash). The third accounts for SNAP and also adds the estimated average monthly value of the household's net refundable tax credits, specifically, the EITC and Child Tax Credit, the value of which is often greater than the income tax liability incurred by recipients, and government housing subsidies (section 8; public housing). Definitions 2 and 3 more closely align with the new supplemental poverty measure by taking into account major public programs.

Any household reporting a housing subsidy is considered to be above the cut-off for extreme poverty.⁶ To estimate the total value of refundable federal tax credits, we estimate the average monthly household earned and unearned income reported by the household head for the full calendar year of the observation, and then scale these monthly estimates up to equivalent annual earned and unearned household income estimates. This allows us to include observations that are in the sample for less than 12 months, which is important because of non-random attrition and panel breaks. We use TAXSIM to generate federal income and FICA (payroll) tax liabilities. Among low-income working households with children, annual federal income tax

⁶ Halfway through 2011, roughly one-in-five households in extreme poverty utilized a housing subsidy such as section 8 vouchers or public housing units (comparable to the proportion of all households in poverty). Additionally, about two thirds of these households had at least one child covered by public health insurance, somewhat less than the same proportion for all households in poverty.

liabilities will be a net negative (indicating a transfer from the government to the household) because the value of refundable credits will exceed income tax liability. However, FICA taxes are regressive and for the same family will result in a transfer from the household to the government). Thus, we take each household's refunded income tax liability, less FICA, (censoring at zero because we do not want to code someone as being in extreme poverty as a result of annual FICA liabilities), and divide this value by 12 to create a monthly amount. This value is added to each respondent's total monthly household income value by year.

Results

Figure 1 plots the number of households with non-elderly heads and minor children living in extreme poverty between 1996 and 2011. Breaks in the lines represent breaks between SIPP panels. We estimate that the number of households living on \$2 or less in cash income per person, per day in a given month increased from about 636,000 in 1996 to about 1.65 million in mid-2011, a percentage growth of 159.1 percent. According to these estimates, in mid-2011 about 3.55 million children lived in extreme poverty each month (see Table 2).

Figure 1 shows that counting means-tested benefits as income reduces—but does not eliminate—this rise in extreme poverty. With SNAP included as income, the number of extreme-poor households increases by 80.4 percent, from roughly 475,000 to 857,000. When federal refundable tax credits and housing subsidies are accounted for, in addition to SNAP, the increase is about 50 percent, from 409,000 to 613,000 households, which included 1.17 million children (see table 2). Virtually all of the difference between the SNAP-only trend line and this final one is attributable to refundable tax credits.

The beneficial effects of these means-tested public programs appear especially notable after the passage of the ARRA. As figure 1 demonstrates, extreme poverty based only on cash

income increased by about 35 percent between late 2007 and early 2011. But when SNAP benefits and refundable tax credits and housing subsidies are added, the rise in extreme poverty was less than 10 percent over this period, in fact falling slightly in some months.

A final trend line presented in figure 1 subtracts income from cash assistance provided through AFDC/TANF from the cash income only estimate. So this line presents the number of households with children living on less than \$2 in cash income, per person, per day in a given month, not accounting for cash assistance. In 1996, cash assistance had a substantial effect on extreme poverty, bringing the incomes of 1.15 million households above the extreme poverty threshold. Throughout the 1990s, the impact of cash assistance in reducing extreme poverty declined substantially, and flattened out in the early 2000s. By mid-2011, cash assistance was lifting the incomes of only about 291,000 families above the extreme poverty threshold.

Figure 2 examines the trend in extreme poverty as a proportion of all households with children. Extreme poverty grew steadily as a proportion of all households over the study period, spiking during the Great Recession. In 1996, households in extreme poverty represented about 1.7 percent of all households. Between 1997 and 2000—a period of low unemployment—this proportion grew to about 2.0 percent. Between 2001 and 2010, this incidence grew from 2.3 percent to about 3.0 percent, and hovered between 4.0 and 4.3 percent through mid-2011.

When SNAP is included, households in extreme poverty rise from about 1.3 percent of all households with children in 1996 to 2.2 percent in 2011, an increase of 70.5 percent. Adding refundable tax credits and housing subsidies reduces the percentage increase to about 44.1 percent. Finally, the trend line omitting cash assistance from AFDC/TANF follows a similar pattern as the corresponding trend line in figure 1. In 1996, cash assistance was lifting between

2.5 and 3.1 percent of all households with children out of extreme poverty every month. By mid-2011, it was lifting only about 0.75 percent of families out of extreme poverty.

Table 1 presents some alternative estimates of extreme poverty. First, instead of dividing income by the number of persons in the household, we used an equivalence scale (the square root of household size). This reduces the extreme poverty count in mid-2011, from 1.65 to 1.40 million, but the rate of growth is consistent with our baseline estimates.

We also averaged each household's income over three months, a quarterly estimate. Fewer households experience extreme poverty for a calendar quarter, when compared to a month. However, the percentage growth in extreme poverty based on quarterly income is consistent with the monthly estimates. After adjusting for means-tested programs, the growth in the number of households experiencing extreme poverty was 49.9 percent using our monthly measure. In contrast, it was 97.4 percent using quarterly income, and even higher when an equivalence scale is used. These higher growth rates are likely a function of lower starting values in 1996. Still, it appears that the proportion of households with children exposed to extreme poverty has grown most dramatically, even when longer rather than shorter spells are considered.

The bottom row of Table 1 reports a final specification for our baseline definition (using cash income only). The number of households with children who reported at least 1 month of extreme poverty over a calendar quarter increased from about 1.30 million in 1996 to 2.41 million households in mid-2011, consisting of 6.3 percent of all households with children in mid-2011.

Table 2 looks at the characteristics of the households living in extreme poverty using first cash income only, and then adjusting for means-tested program participation. These estimates, particularly, should be treated with caution because different sub-groups may have different rates

of under-reporting of program participation and income, which are averaged out in the population-level estimates. Such variable rates of under-reporting could bias estimates of relative trends across groups. Still, these estimates may prove insightful for understanding which sub-groups have been most impacted by the rise in extreme poverty, and whether these findings are consistent with the possibility that at least part of this rise is related to changes stemming from the 1996 welfare reform. Using the cash only definition, in 2011 about 36.5 percent of the households in extreme poverty were headed by a married couple, and 50.8 percent were headed by a single female. After adjusting for means-tested programs, just over half of the extreme poverty households are married, and less than one-third are single female headed, reflecting greater reliance on public programs among single female headed households.

In mid-2011, using the cash only definition, about 47.5 percent of households in extreme poverty were headed by white non-Hispanics, and 46.0 percent were headed by African Americans or Hispanics (reported together because of small sample sizes). After adjusting for means-tested program participation, the proportion headed by white non-Hispanics increases to about 61.2 percent. Thus, extreme poverty is not limited to households headed by single mothers or disadvantaged minorities. Still, it is clear that the percentage growth in extreme poverty over our study period was greatest among vulnerable groups who were most likely to be impacted by the 1996 welfare reform. The percentage growth in extreme poverty for households headed by single females was 229.9 percent using cash only, and 67.9 percent after adjusting for means-tested programs. Racial minorities saw a larger growth in extreme poverty under the cash only definition, although they may have been better buffered against the rise in extreme poverty by major means-tested income programs, when compared to non-Hispanic whites.

One concern is that these results are being driven by rising rates of imputed values for income and program participation variables in the SIPP, over time (Meyer et al., 2008). Imputation rates are consistently low in the first wave of each panel, rise throughout waves within panels, and are typically at their highest level in the final waves of a panel. Thus, if rising rates of imputation are driving the substantive findings presented here, this should generate significant declines in extreme poverty between the final wave of one panel (with high rates of imputation), and the first wave of the next (with low imputation). This can be directly examined by looking at the estimates across the breaks between panels in figures 1 and 2. In most cases, the estimate for extreme poverty increases in the first wave of a new panel (when imputation is low), relative to the last wave of the previous one (when imputation is high). Thus, it appears unlikely that rising rates of imputation are driving the rise in extreme poverty over the study period.

Another concern is that the rise in extreme poverty is being driven by other factors besides the 1996 welfare reform. It is beyond the scope of the current study to fully assess the casual mechanisms of rising extreme poverty in the U.S. Still, some analyses may strengthen the case that the retrenchments enacted through the 1996 reform are at least partially to blame for this trend. One compelling piece of evidence that this is the case is provided in the final trend lines in figures 1 and 2 (cash income – AFDC/TANF), which have been previously discussed. It is obvious that cash assistance was having a substantial impact in reducing extreme poverty in early 1996, and having a much smaller effect in reducing extreme poverty by mid-2011.

Another test examines the trends of a comparison group. If the increase in extreme poverty is equally as large for households without children—who, as a group, have never been eligible for cash assistance—as it is for households with children, this would call into question

the extent to which the 1996 welfare reform has driven the rise in extreme poverty. Table 3 presents the starting points and ending points for the proportion of households without children in extreme poverty during our study period. While this group does experience an increase in extreme poverty over the study period, the growth is less than half of the percentage growth in extreme poverty experienced by households with children.⁷ This is consistent with a hypothesis that some part of the rise in extreme poverty can be attributed to the welfare reform, and some portion of the rise is related to other causes, such as rising unemployment during the Great Recession. As expected, table 3 further shows that means-tested programs are having a much greater impact in reducing extreme poverty among households with children. In mid-2011, means-tested programs reduced the proportion of households with children in extreme poverty from 4.3 percent to 1.6 percent. But for households without children, means-tested programs reduced the proportion in extreme poverty from 5.1 percent to 4.3 percent (and virtually all of this reduction was due to SNAP).

Finally, it is important to consider how the estimates presented here are impacted by the exact threshold used for the extreme poverty measure. If the substantive finding of rising extreme poverty is being driven by the retrenchment of cash assistance at the very bottom of the income distribution, than we would expect this trend of rising extreme poverty—based on cash income—to dissipate gradually as the threshold is increased from \$2 a day to higher levels, and labor market participation becomes more common. That is to say, as the threshold, by definition, includes more individuals with other sources of income, the impact of the retrenchment of cash assistance will be more muted. Table 3 reports on estimates using three alternative thresholds: $\leq \$4.00$ per person, per day; $\leq \$6.00$; $\leq \$8.00$. When looking at the cash only definition, the

⁷ In addition, examining the full trend line for households without children shows that there was no increase in extreme poverty for this group during the 1990s, whereas households with children saw a substantial increase.

estimates presented in table 3 follow the pattern as expected. As the threshold is increased, the rise over time in the proportion of families below that threshold gradually declines, as compared to the baseline estimate of \$2.00 per person, per day.⁸

Conclusion

As of mid-2011, about 1.65 million households with about 3.55 million children were surviving on \$2 or less in cash income per person per day in a given month. These estimates account for income received from TANF and other direct cash income transfer programs. Households in extreme poverty constituted 4.3 percent of all non-elderly households with children. The prevalence of extreme poverty rose sharply between 1996 and 2011, with the highest growth rates found among groups most affected by the 1996 welfare reform. When income over the quarter is used rather than income from a single month, the proportional increase in extreme poverty over the study period is comparable the monthly estimates (and in some cases larger), although the overall incidence is lower.

When we consider SNAP benefits as equivalent to dollars, this reduces the number of extremely poor households with children in mid-2011 by 48.0 percent, and when refundable tax credits and housing subsidies are subsequently added, the number falls by 62.8 percent. We estimate that these major means-tested aid programs currently save roughly 2.38 million children from extreme poverty each month, but leave 1.17 million children behind. These estimates come from a household survey and thus fluctuate somewhat from month-to-month, as is made obvious in figures 1 and 2. Therefore, the exact point estimates should be treated with caution. Of more interest is the trend over time, which is quite clear, substantial, and robust to a number of sensitivity tests.

⁸ In fact, the growth in the proportion of households with children living at or below \$8.00 per person per day is quite comparable to official estimates of the growth in the number and proportion of families with children in deep poverty between 1995 and 2011.

Our estimates may be biased by under-reporting of income by SIPP respondents. While this is a limitation of our work, the SIPP does comparatively well relative to other major surveys in terms of reporting rates (Meyer, Mok & Sullivan, 2009), and reporting rates for most programs have not fallen steadily over our study period in a way that would explain the dramatic and steady increase in extreme poverty we report. Further, under-reporting of income itself suggests adverse outcomes, such as engagement in the underground economy (Edin & Lein, 1997). For example, 8 percent of Edin & Lein's sample of welfare-reliant mothers in their study *Making Ends Meet* reported engaging in underground work, most commonly selling sex. If under-reporting of income explains the rising prevalence of extreme poverty in the U.S., then this may be a cause of serious concern. Another possibility is that, in some cases workers at a job who are "off the books" may report income in the SIPP, but may not be able to use it to claim refundable tax credits. This may lead to an upward bias of the estimated impact of the EITC and other refundable tax credits on extreme poverty.

The descriptive analyses presented here cannot clarify the exact causal mechanisms that have led to such a sharp uptick in extreme poverty in the U.S. We hypothesize that the virtual disappearance of a cash safety net for non-workers has played an important role, combined with overall slow economic growth during the 2000s, culminating in the major job losses of the Great Recession. However, the primary purpose of the current descriptive analyses is to document the rise in extreme poverty over the past 15 years, show the impact that means-tested income transfer programs are having on this trend, and to call for more research. According to our estimates, a growing population of children experience spells with virtually no income, and more research, both quantitative and qualitative, is needed to examine this. Future research should more fully account for the causal mechanisms that have led to this uptick in extreme poverty, and further

build knowledge regarding what circumstances at the household level tend to precipitate a spell of extreme poverty, and how households survive during such spells.

It is clear that our current major safety-net programs are playing a vital role at the very bottom, especially in the aftermath of the Great Recession, and are blunting some of the hardship that these households would otherwise face. However, it would be wrong to conclude that the U.S. safety net is strong, or even adequate, when the number and proportion of households with children surviving on less than \$2 per day has risen so dramatically over the past 15 years, even after accounting for means-tested transfers.

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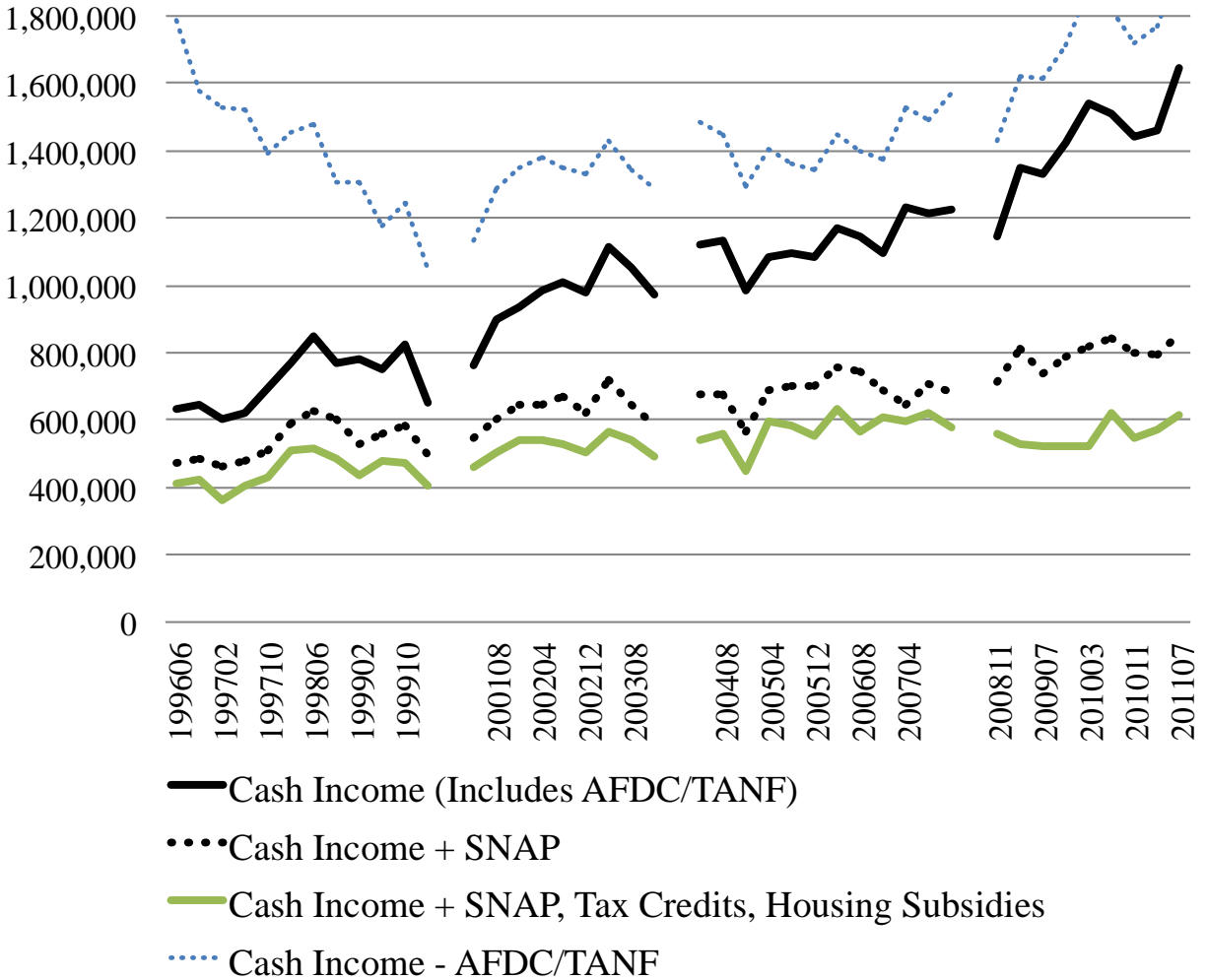
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Figure 1: Households with Children in Extreme Poverty in the United States

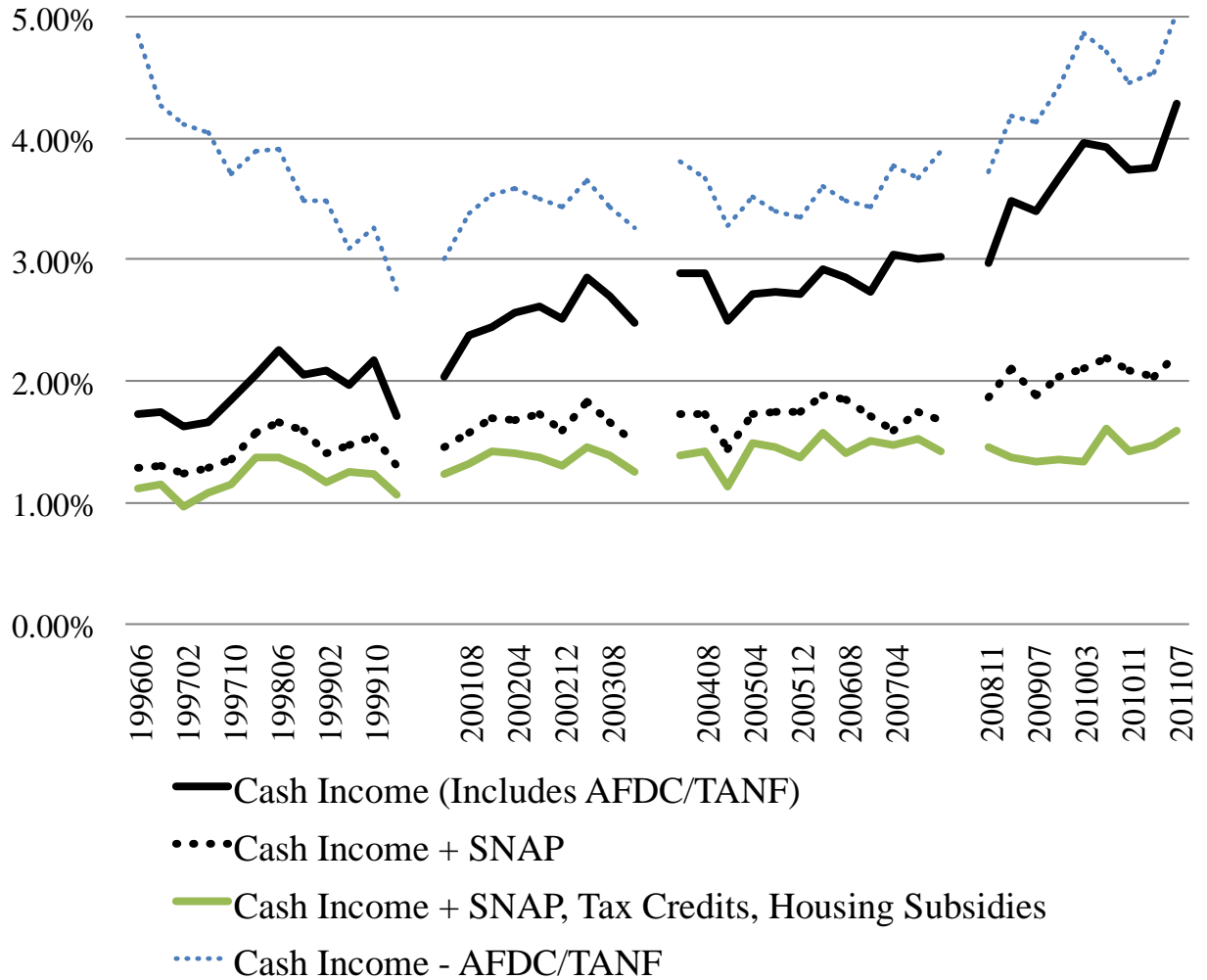
(<=\$2 per person, per day)



Source: Authors' analyses of the 1996 through 2008 Panels of the SIPP. The horizontal axis represents approximate years and months of SIPP 4th reference month estimates. The vertical axis represents the number of non-elderly households with children. Breaks in the trend lines represent breaks in the SIPP panels.

Figure 2: Proportion of Households with Children in Extreme Poverty

(\leq \$2 per person, per day)



Source: Authors' analyses of the 1996 through 2008 Panels of the SIPP. The horizontal axis represents approximate years and months of SIPP 4th reference month estimates. The vertical axis represents the proportion of non-elderly households with children. Breaks in the trend lines represent breaks in the SIPP panels.

TABLE 1: ALTERNATIVE ESTIMATES OF EXTREME POVERTY OF HOUSEHOLDS WITH CHILDREN

| | Number of households with children (Rounded in thousands) | | | Percent of households with children | | |
|---|--|-----------|----------|--|------|----------|
| | 1996 | 2011 | % Growth | 1996 | 2011 | % Growth |
| Baseline monthly estimates (Figs. 1 and 2) | | | | | | |
| Cash only | 636,000 | 1,648,000 | 159.1% | 1.7% | 4.3% | 151.8% |
| Add SNAP | 475,000 | 857,000 | 80.4% | 1.3% | 2.2% | 69.2% |
| Add SNAP, tax credits, housing subsidies | 409,000 | 613,000 | 49.9% | 1.1% | 1.6% | 45.5% |
| Monthly with equivalence scale | | | | | | |
| Cash only | 507,000 | 1,401,000 | 176.3% | 1.4% | 3.6% | 157.1% |
| Add SNAP | 408,000 | 732,000 | 79.4% | 1.1% | 1.9% | 72.7% |
| Add SNAP, tax credits, housing subsidies | 293,000 | 476,000 | 62.5% | 0.8% | 1.2% | 50.0% |
| Quarterly estimates | | | | | | |
| Cash only | 307,000 | 1,039,000 | 238.4% | 0.8% | 2.7% | 237.5% |
| Add SNAP | 209,000 | 478,000 | 128.7% | 0.6% | 1.2% | 100.0% |
| Add SNAP, tax credits, housing subsidies | 189,000 | 373,000 | 97.4% | 0.5% | 1.0% | 100.0% |
| Quarterly with equivalence scale | | | | | | |
| Cash only | 212,000 | 797,000 | 275.9% | 0.6% | 2.1% | 250.0% |
| Add SNAP | 167,000 | 360,000 | 115.6% | 0.5% | 0.9% | 80.0% |
| Add SNAP, tax credits, housing subsidies | 136,000 | 273,000 | 100.7% | 0.4% | 0.7% | 75.0% |
| 1 or more months per quarter (cash only) | 1,295,000 | 2,407,000 | 85.9% | 3.5% | 6.3% | 80.0% |

Source: Authors' Analyses of the 1996 and 2008 Panels of the SIPP

TABLE 2: CHARACTERISTICS OF HOUSEHOLDS WITH CHILDREN IN EXTREME POVERTY

Number in extreme poverty, monthly

| | Cash Only | | | Adjusted for Means-tested Programs | | |
|-----------------------------|-----------|-----------|----------|------------------------------------|-----------|----------|
| | 1996 | 2011 | % Growth | 1996 | 2011 | % Growth |
| Total households | 636,000 | 1,648,000 | 159.1% | 409,000 | 613,000 | 49.9% |
| Married households | 323,000 | 602,000 | 86.4% | 255,000 | 330,000 | 29.4% |
| Single female households | 254,000 | 838,000 | 229.9% | 112,000 | 188,000 | 67.9% |
| Race of household head | | | | | | |
| White, Non-Hispanic | 334,000 | 782,000 | 134.1% | 243,000 | 375,000 | 54.3% |
| African American & Hispanic | 265,000 | 758,000 | 186.0% | 130,000 | 182,000 | 40.0% |
| Children | 1,383,000 | 3,547,000 | 156.5% | 788,000 | 1,166,000 | 48.0% |

Source: Authors' Analyses of the 1996 and 2008 Panels of the SIPP

TABLE 3: HOUSEHOLDS IN EXTREME POVERTY: SENSITIVITY ANALYSES

Percent of Households

| | Cash Only | | | Adjusted for Means-tested Programs | | |
|-------------------------------------|-----------|------|----------|------------------------------------|------|----------|
| | 1996 | 2011 | % Growth | 1996 | 2011 | % Growth |
| Households with children (Baseline) | 1.7% | 4.3% | 152.9% | 1.1% | 1.6% | 45.5% |
| Using all months of data | 1.9% | 4.0% | 110.5% | 1.0% | 1.7% | 70.0% |
| Households without children | 3.0% | 5.1% | 70.0% | 2.6% | 4.3% | 65.4% |
| Households with children | | | | | | |
| Using <=\$4 threshold | 3.1% | 5.7% | 83.9% | 1.5% | 2.6% | 73.3% |
| Using <=6 threshold | 5.2% | 7.5% | 44.2% | 2.2% | 3.8% | 72.7% |
| Using <=\$8 threshold | 7.3% | 9.6% | 31.5% | 3.3% | 4.9% | 48.5% |

Source: Authors' Analyses of the 1996 and 2008 Panels of the SIPP