Poverty among Foster Children: Estimates Using the Supplemental Poverty Measure

Jessica Pac,
Graduate Student, Columbia University School of Social Work, 1255 Amsterdam Avenue, New York, NY 10027, 303-562-4517

Jane Waldfogel, and
Compton Foundation Centennial Professor, Columbia University School of Social Work

Christopher Wimer
Co-director, Center on Poverty and Social Policy, Columbia University School of Social Work

Abstract

We use data from the Current Population Survey and the new Supplemental Poverty Measure (SPM) to provide estimates for poverty among foster children over the period 1992 to 2013. These are the first large-scale national estimates for foster children who are not included in official poverty statistics. Holding child and family demographics constant, foster children have a lower risk of poverty than other children. Analyzing income in detail suggests that foster care payments likely play an important role in reducing the risk of poverty in this group. In contrast, we find that children living with grandparents have a higher risk of poverty than other children, even after taking demographics into account. Our estimates suggest that this excess risk is likely linked to their lower likelihood of receiving foster care or other income supports.

It is well-known that children in the child welfare system are disproportionately drawn from families living in poverty. However, the poverty status of children *in* foster care is largely unknown, because official poverty statistics do not include foster children. Recently, the Census Bureau has begun releasing additional poverty statistics using the supplemental poverty measure (SPM). Unlike the official measure, the SPM includes foster children in its universe, making it possible for the first time to estimate poverty for this group.

The present paper has two main aims. First, we provide – for the first time – estimates of poverty for foster children, using the supplemental poverty measure (SPM). These estimates allow us to compare the living standards of foster children with those of children living with grandparents or other relatives and children living with their parents. Second, we provide counterfactual estimates of what poverty rates for foster children would be in the absence of reported "other income" (which includes foster care and severance payments) and transfers such as welfare and food stamps. These estimates highlight the important role of both foster care payments and the wider safety net in alleviating poverty among foster children.

Our findings indicate that foster children have higher odds of living in poverty than other children, but that this is entirely accounted for by their and their caregivers' demographic characteristics. Indeed, after accounting for these demographic characteristics, foster children actually have *lower* odds of poverty than children living with their parents, in large part due to the other income (which we argue is likely to primarily consist of foster care payments) that their foster families receive. In contrast, children living with grandparents (but not parents or other relatives) face the highest odds of poverty, a situation that would be even worse in the absence of transfers. These findings reiterate the importance of safety net programs in the fight against childhood poverty, and particularly highlight the important role played by foster care payments to families with foster children.

Background & Literature

A broad literature suggests that the families most likely to be involved in the child protective services system (CPS) are poor, minority, and often single-parent families who live in low-income neighborhoods (Barth, Wildfire, & Green, 2006; Berger & Waldfogel, 2004; Berger, 2006; Berger, Font, Slack, & Waldfogel, 2013; Brandon, 2000; Courtney & Barth, 1996; Drake, Lee, & Jonson-Reid, 2009; Paxson & Waldfogel, 1999; Pelton, 1987). Such families are at greater risk of involvement with CPS and entry into foster care due to many factors, including substance abuse (Cunningham and Finlay 2013; McGuinness and Schneider 2007) and family structure instability (Berger, Paxson, & Waldfogel, 2009; Berger & Waldfogel, 2004; Paxson & Waldfogel, 2003). Together, this research confirms that foster children in general come from more disadvantaged environments. However, until now, relatively little is known about the living standards of children once they enter foster care.

Previous research on the economic status of foster children has focused on two main (and related) topics – the role of foster care maintenance payments in family budgets, and how incomes of foster families compare to those of relative caregiver families. The latter topic is important because a sizeable share of children removed from their parents and placed into out-of-home care are placed with relatives. Some of these relatives are approved and paid as foster parents (an arrangement known as kinship foster care) while others receive some assistance from programs such as welfare and Food Stamps, and still others receive no financial support from the state at all. Studies comparing income and resources across placement types have found that the mean income of foster families is greater than that of relative caretakers (for extensive reviews, see Ehrle & Geen, 2002a; Orme & Buehler, 2001). A limitation of this literature is that it primarily relies on measures of pre-tax/pre-transfer income (i.e. excluding transfers, benefits, and taxes). One study -- an exception to this rule -- found that foster care maintenance payments mattered greatly to the net income of non-relative foster and relative caregivers, generating an additional $10,000 to $15,000 per family per year (Berrick, Barth, and Needell 1994). This study also found that on the whole, relative caregivers were more reliant on Supplemental Security Income than wages and investments. Several subsequent studies echoed these findings using data from the National Survey of America's Families (NSAF), which included small samples of children in non-relative foster care and children living with relative caregivers. The first found that 13 percent of foster children lived in homes below the poverty line under the official measure, compared to 31–39 percent of those living with relative caregivers (Ehrle & Geen, 2002a).

The second (Ehrle & Geen, 2002b) disaggregated the income of relative caretakers, finding that 31 percent of children in homes of relatives were in poverty; as many as 42 percent received Food Stamps, and 39 percent reported financial hardship related to housing. However, these studies had small samples of foster children and children living with relatives, used pre-tax/pre-transfer measures of income, and relied on either the official poverty rate to measure poverty or poverty-related measures such as food insecurity and material hardship.

National level official poverty statistics cannot shed any further light on the economic status of foster children, because the definition of the family under the official poverty measure excludes foster children. Hence, foster children are missing from official poverty statistics.

Starting in 2011, the Census Bureau began releasing additional statistics on income poverty through the supplemental poverty measure (SPM) (see (Short, 2011)). The SPM differs from the official poverty measure (OPM) in several ways. Most important for this paper, the SPM includes foster children, who are simply excluded from analysis under official statistics. Thus, for the first time we can estimate poverty rates of foster children in comparison to other children. The SPM also includes a more comprehensive measure of income than the OPM including both cash and non-cash transfers. For this reason, it is very well-suited to assess poverty and also the role of the safety net in reducing poverty (see e.g. Fox et al. 2015, Wimer et al. 2016). Accordingly, we use the SPM in this paper to estimate poverty rates for foster children and also to assess the role of various components of the safety net in reducing poverty for this group. To provide context for our results, we consider the status of foster children as compared to children living with grandparents, children living with other relatives, and children living with their parents.

Data

We draw our sample of foster children, children living with grandparents, children living with other relatives, and children living with parents from the Current Population Survey's Annual Social and Economic Supplement (CPS ASEC).[1] The CPS ASEC is an annual household survey that contains detailed information on the income sources and other characteristics of approximately 100,000–200,000 individuals depending on the year (the sample has grown in size over time). When weighted, the CPS ASEC is nationally representative. The CPS ASEC is the data source used to calculate both official and supplemental poverty statistics. Researchers at Columbia University have used the CPS ASEC to calculate a historical version of the SPM back to 1967 (Fox et al., 2015), allowing us to calculate foster child poverty rates across many years in the CPS for the first time.

Prior to 1992, foster children are not directly identified in the CPS, so our analysis focuses on measuring the poverty of children from 1992 – 2013. We pool all the available years of data to increase the sample size (since the number of foster children in any one year is relatively small).

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[1]We obtain the CPS ASEC data from the National Bureau of Economic Research (NBER): http://www.nber.org/data/current-population-survey-data.html

We compare foster children to three groups: children living with grandparents, children living with other relatives (but not grandparents), and children living with parents. Children are defined as those under the age of 18.[2] To identify foster children, we rely on the CPS ASEC's household roster, which enumerates each household member's relationship to the so-called "reference person," sometimes called the household head, who most often is the person or a person listed on the household's lease or mortgage. The reference person is asked "how is (name) related to you"? Response categories include: spouse (husband/wife), unmarried partner, child, grandchild, parent (mother/father), brother/sister, other relative (aunt, cousin, nephew, mother-in-law, etc.), foster child, housemate/roommate, roomer/ boarder, or other nonrelative. We identify foster children as those for whom the reference person replied "foster child." We identify grandparents as those for whom the respondent replied "grandchild", and we identify relative children as those for whom the reference person replied "other relative" or "brother/sister." The CPS does not ask whether the foster child is related to the reference person. So, if for example a child is living with her/his grandparent in "kinship foster care", the grandparent might select "grandchild" or might select "foster child"; we think the former might be more commonly selected since it is offered first and since it might be considered the primary relationship, though this is ultimately unknown. Some children may be placed with their grandparents or relatives through a formal "kinship foster care" arrangement through the child welfare system (and some of these may be supported with kinship foster care payments), while others may be informally living with their relatives without the involvement of the child welfare system - we are not able to distinguish between these groups in the CPS.[3] It is also important to note that because it is a household survey, the CPS does not include children living in group quarters or institutions. The count of foster children lines up fairly well with administrative data, but with some variation by year.[4] In spite of these limitations, the CPS provides the best data source available with which to identify both foster child status and detailed income and poverty statistics.

Foster children make up about 0.3 percent of all children in any given year, while children living with grandparents comprise 1.9 percent, and children living with relatives comprise about 1.0 percent. Dependent children age 0–17 residing at home with their parent(s) constitute the vast majority of children - approximately 96.8 percent on average.

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[2]Although under federal law children may now remain in foster care up to the age of 21, this was not the case historically in most states, so we focus the analyses here on children under 18. An additional reason for excluding older foster children is that sample sizes for foster children 18 and above are very limited in the CPS.

[3]Formal foster care arrangements are those managed by a local or state child welfare agency. Informal foster care arrangements are not managed by an outside authority and so are not subject to the rules and advantages offered through a state-managed care relationship.

[4]In supplemental analyses (not shown), we compare the weighted frequency counts of non-relative foster children in our sample to administrative data in the same years. We find that the annual samples come fairly close to the administrative data, slightly undercounting the actual number of children in foster care in some years, and over counting in other years. For instance, when comparing our CPS sample of foster children age 0–20 to AFCARS reports in 2012, AFCARS has 198,648 children in foster care, and the CPS reports 220,201. From 1998 – 2013, foster children are over-represented in the CPS in seven years (by 35,000 on average), and under-represented in the remainder (by about 32,000). This difference could be due to subsidized guardianship or pre-adoption placements, both of which may be considered 'foster care' by the reporting parent, but categorized otherwise by the state. It is not possible to carry out the same exercise for children placed with relatives, because AFCARS only includes children in formal kinship care while the CPS includes both children in formal kinship care and those living informally with relatives without the involvement of the child welfare system.

Our final sample consisted of 1,141,821 children. (see Table 1 for details). All analyses were weighted using person-level weights provided in the CPS ASEC (marsupwt).

Defining poverty

As noted earlier, we use the Supplemental Poverty Measure as a framework for understanding foster children's poverty rate. In addition to the inclusion of foster children in the so-called "poverty universe," the SPM offers a number of advantages over official poverty statistics. First, the SPM treats cohabiting families in an equivalent way to married families, reflecting the secular increase in cohabitation in the US in recent decades. Second, unlike the official poverty thresholds, the SPM poverty thresholds more accurately reflect the composition of necessary expenditures faced by American families, as they are based off of expenditures on a core set necessities: food, clothing, shelter, and utilities, plus a multiplier for other necessary expenditures. Third, and perhaps most importantly, the SPM's definition of resources includes a fuller array of resources available to low-income families, including in-kind benefits and after-tax income (e.g., refundable tax credits). The SPM also subtracts some non-universal but non-discretionary expenses like medical, work and child care expenses from total resources before calculation of poverty rates. We use a historical version of the SPM constructed in a consistent manner over time using the Current Population Survey (see also Fox et al., 2015, for further details).

To start, our unit of analysis is the child. An SPM poverty unit includes all of the individuals who contribute to and are thought to share resources, such as those related by blood, marriage, or adoption, in addition to unmarried partners and their family, foster children under age 22, and unrelated children under age 16.[5] Poverty thresholds are set between the thirtieth to thirty-sixth percentiles of five-year rolling averages of fundamental consumer expenditures[6] for families with two children from the Consumer Expenditure Survey (CEX). The thresholds are then adjusted based on two factors; 1) an equivalence scale[7], which adjusts for family size and composition; and 2) the type of housing in which the child resides[8] – rented, owned with a mortgage, and owned without a mortgage. A critical difference between the SPM we calculate and the Census' SPM is that our SPM poverty thresholds are not adjusted for geographic differences in the cost of housing.

SPM resources include all cash income plus noncash benefits, which include SNAP (Supplemental Nutritional Assistance Program), the National School Lunch Program, WIC (Supplementary Nutrition Program for Women Infants and Children), housing subsidies, and LIHEAP (Low-Income Home Energy Assistance), as well as tax credits such as the EITC

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[5]The Census Bureau excludes unrelated children age 16 and older from the SPM unit because they can earn income and be potentially independent.

[6]Food, clothing, shelter and utilities (FCSU), including an additional 20 percent for necessities, such as household supplies, personal care, transportation, etc.

[7]The so-called Betson three-parameter equivalence scale (Betson & Michael, 1993) is as follows:

Families without children: Equivalence scale = (#adults)^0.5

Single parents: Equivalence scale = (#adults + 0.8 ×first child + 0.5 × #other children)^0.7

All other families: Equivalence scale = (#adults + 0.5 × #children)^0.7.

[8]Imputed from the CEX to CPS based on "poverty status, age, race, education, and marital status of household head, family size, and region as well as interactions between race and education and interactions between race and age" (Fox et al. 2015).

(Earned Income Tax Credit) and Child Tax Credit. Any taxes paid are subtracted from resources. From this sum, work- and child care expenses, and medical out of pocket expenses are also subtracted. As not all of these resource measures are captured explicitly in the CPS ASEC before 2009, some of these variables had to be imputed, including: WIC (from 1992 – 2000), MOOP, and (capped) work and child care expenses. For specific imputation routines, please see Fox et al. (2015). \

We determine a child to be living in poverty if the SPM resources of their poverty unit fall below the SPM threshold. We then calculate two counterfactual poverty rates. First, we subtract from total SPM resources "foster care, severance, or other income" which as we detail below is defined as any reported other income that is not specified as being one of 18 different sources of income: social security, private pensions, AFDC/TANF, other public assistance, interest, dividends, rents or royalties, estates or trusts, state disability payments (worker's comp), disability payments (own insurance), unemployment compensation, strike benefits, annuities or paid up insurance policies, not income, longest job, wages or salary, nonfarm self-employment, and farm self-employment. We are interested in foster care, severance, or other income because this is the category in which a family would report income from foster care payments (or severance payments or other types not specified). As detailed below, because we exclude from foster care, severance, or other income any amount that the respondent says pertains to one of 18 detailed other categories, we are fairly confident that this variable primarily measures foster care payments (in addition to severance payments or other unspecified sources, which are the only other possible sources reported here and which should be a relatively rare source of income).

Foster care payments are monthly stipends paid to substitute caregivers of children who have been removed from their home due to abuse or neglect, and are intended to fund the child's food, shelter, clothing and (some) incidentals. Under Title IV-E of the Social Security Act, states can request federal reimbursement for the costs of foster care payments for children who meet a set of eligibility criteria – namely, that they come from an impoverished home. State and local governments supplement the federal allocation so that all foster caregivers (and in some states, relative caregivers) receive payments; as states are responsible for rate-setting policy, and because there is no set period for review, there is great variation in payment level across states.[9] Additionally, in some states, relative caregivers are ineligible to receive foster care payments unless they are trained and certified as foster families. In these states, families who are unable to meet the eligibility criteria or who cannot fulfill certification requirements may be eligible to receive a TANF child-only grant, however the amount is substantially lower.[10]

The survey question for "other income" reads as follows: "During [year], did (you/ anyone in this household) receive income from: Any severance pay, welfare, emergency assistance, other short-term cash assistance, foster child care payments, or any other money income not already covered?" Respondents who answered 'yes' to this question then were prompted to

[9]One survey report indicated a range of $226 in Nebraska to $869 in the District of Columbia in 2007 (DePanfilis et al. 2007).
[10]One report compared TANF child only grants to minimum foster care maintenance payments: http://www.gao.gov/assets/590/585649.pdf (p 50)

give a dollar amount of other income they received in the previous year, and the source of that income. Captured in the "source of other income variable" are 18 different sources of other income, such as welfare payments, rent and interest received, and disability payments and so on; anything not captured by those categories is then categorized under a 19th category; "anything else". By using this "source of other income variable", we are able to eliminate all of the other sources of income mentioned in the original "other income" question apart from foster care and severance payments. Thus, the remaining amount captured under "anything else" primarily reflects foster care payments and severance payments. For clarity, we refer to this as foster care, severance, or other income.

Descriptive data suggest that this foster care, severance, or other income variable is indeed capturing foster care payments. Families with foster children report on average $4,379 in foster care, severance, or other income annually, while families without foster children report only an average of $56 in foster care, severance, or other income each year.[11] When this variable is further disaggregated by the number of foster children in the home, we see that foster care, severance, or other income increases with the number of foster children, consistent with the idea that this variable is capturing foster payments.[12] These descriptive patterns suggest that this variable is picking up income that is going to foster parents and not to other types of families. Moreover, the average amounts reported are close to the average for foster care payments in other data sources such as the Survey of Income and Program Participation (SIPP). The distribution of foster care, severance, or other income in the CPS is remarkably similar to that of the foster care payments reported in the 2008 SIPP. In addition, previous research estimated mean foster care maintenance payments at around $4,700 per year, per child depending upon the age and level of need of the child, as well as state and local generosity.[13]

However, it is important to note that this variable refers to income in the past calendar year, while the household roster refers to the individuals in the household at the time of the survey (March of the current calendar year). Given that foster children move in and out of households, some children may have been newly placed after the past year for which income was reported, while other households may have had foster children in the prior year who are no longer present at the time of the survey. To explore this possibility using the rotation group structure of the March CPS between 2009 and 2014, we matched respondents who were interviewed twice over the course of a year to create a two-period panel. Of the 38 percent of families who were present in the survey for both years (out of a possible 50 percent given the rotating structure of the CPS panel), we found that 68.5 percent of families with a foster child in their home in a given March had a foster child in their home in the prior March, and that this was the same child 54.5 percent of the time. The number of foster

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[11]See Appendix Table 1. The low average value for families without foster children reflects the fact that most such families do not report any foster care, severance, or other income.
[12]See Appendix Table 2
[13]For instance, Duncan & Argys (2007) estimated $394 per month ($4,728 annually) in a 1998 nationally representative sample. The 2004 Green Book estimated a national average of $392 per month ($4,704 annually) based on a national survey 1994 – 2000 ("Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means (Green Book), Section 11" 2004). Doyle *& Peters (2007) estimated $258 per month ($3,096 annually) in a sample of children from 1987 – 1995. Although the amount of the foster care maintenance payment is determined differently across states and localities, most use a combination of the child's age and degree of need in rate determination.

children in the home was the same for 71.5 percent of these families; 31.5 percent of the families with a foster child in their home did not have a foster child the prior March. Of course, this analysis may still miss some changes in household composition that occurred between March and March (e.g. a child who was placed between March of the prior year and March of this year). From these findings, we can conclude that although the same foster child may not be in the home over the course of a year, the majority of families with foster children in one year have the same number of foster children the following year. We use this matched sample to test the sensitivity of our results in a later section below.

To create our second counterfactual measure, we subtract from the family's total SPM resources not just foster care, severance, or other income, but also the value of all taxes and transfers. This counterfactual estimate tells us what a family's income would be absent all resources stemming from government policies and programs. We include here the full range of safety net programs, because different groups of children may benefit from resources stemming from various government policies and programs. We use the SPM framework to define these resources. Our definition of resources includes those stemming from: (a) the tax system, including the EITC and CTC; (b) SNAP; (c) the National School Lunch Program; (d) WIC; (e) LIHEAP; (f) government housing subsidies; (g) TANF/cash assistance; (h) Unemployment Insurance; (i) SSI; and (j) Social Security benefits. We expect such resources will reduce poverty among the most disadvantaged children in our sample and may be particularly important for children living with grandparents or other relatives who are not receiving foster care payments.

Methods

Our analyses consist of a series of logistic regression models in which we estimate the effect of being a foster child, grandchild, or other relative child on SPM poverty, controlling for a set of child, caregiver, and family demographic characteristics that might be correlated with both foster or relative child status and risk of poverty. These models allow us to determine whether children are at elevated risk of poverty based on their foster or caregiver status, holding other characteristics constant. The models contain the following covariates.

Child race/ethnicity

The child's race/ethnicity is coded as with a series of dummy variables for white/non-Hispanic, black/non-Hispanic, Asian/PI /non-Hispanic, Hispanic, and other/non-Hispanic. White/non-Hispanic is the reference category.

Caregiver characteristics

Caregiver characteristics include: the employment status of the working-age adults in the household, and the age and education of the reference person. Employment status is operationalized through a series of variables indicating the employment, frequency of employment (weeks worked per year), and part time/full time status (hours per week) of all adults in the household over the reporting period, resulting in a dummy variable reflecting whether all adults in the household were employed at least part time/part year versus the reference category of at least one adult not employed. The age in years of the reference

person at the time of the survey is treated continuously. The education of the reference person is categorized as less than high school, high school, some college, and completed college or more (the reference category is less than high school).

Family characteristics

Two family-related covariates are included: the number of children in the household and family structure. We count the number of children in the household in each of four age groups; 0–5 year olds, 6–11 year olds, and 12–17 year olds. Finally, family structure indicates one of three family structures as drawn from the household roster and relationship questions of the reference person: single, cohabiting, and married.

Analytic Strategy

The first aim of this paper is to predict the SPM poverty status of children in foster care, compared to those living with grandparents, other relatives, or parents. Thus, our analytic strategy includes estimating a series of logistic regressions, where the outcome is a binary indicator of poverty status. For instance, if the total value of an SPM unit's resources falls below the SPM threshold, they are defined as being in poverty for a given year and their poverty status indicator is coded with "1" – all others are coded "0". We first regress our key independent categorical variable (type of child living arrangement) on SPM poverty status yielding the odds ratio (the odds of being in poverty, compared to the odds of not being in poverty) for each child type: foster child, grandchild, and relative child, with all other children (children living with parents) as the reference category. Then, in model two we include our set of covariates, and in model three we include state and year fixed effects. The state fixed effects control for fixed differences across states in factors that would affect child poverty; the year fixed effects control for differences by year (given that our data are drawn from multiple years of the CPS). Our second aim is to illustrate the role of the safety net for these children. We therefore repeat the models replacing our SPM child poverty outcome with two counterfactual outcome variables – poverty after removing foster care, severance, or other income, and poverty after removing other income and taxes and transfers. We estimate all our models for poverty (income below 100 percent of the SPM poverty line) and for deep poverty (income below 50 percent of the SPM poverty line) (see Fox et al. 2015b for further detail on this measure and long-term trends in children's deep poverty). All descriptive statistics and regressions are run with the appropriate person-level weights provided in the CPS ASEC (marsupwt) so that our results are interpretable as being nationally representative.

Results

We begin by showing descriptive statistics on our pooled sample of children. Table 1 summarizes the demographic characteristics of children and their caregivers in each of our four living arrangement groups. While the average child age is around 8.5 years old among children living with parents (column 1) and foster children (column 2), the mean age of children living with grandparents and children living with relatives is a slightly older (9.05 and 10.48, columns 3 and 4). The racial/ethnic distributions of children across the four groups differ as well. Children living with parents are predominantly white (61.2 percent),

with 18.1 percent Hispanic, and 14.3 percent African-American and very small percentages of Asians/Pacific Islanders (4.2%) and other, non-Hispanic (2.3 percent) ethnicities. In contrast, foster children are more likely to be African-American (29.7 percent) or other race (4.9 percent). Children living with grandparents and children living with other relatives have similar demographics: both have lower shares of white children (39.8 percent and 31.7 percent, columns 3 and 4) and the highest shares of African-American children (38.3 and 32.3 percent, respectively).

Children living with grandparents and other relatives were much more likely to be in single adult households, and concomitantly less likely to be in married households. Differences between foster children and children living with parents were less stark. The average householder age is highest among children living with grandparents (57.2, column 3). The average age of householders of foster children is younger, at 45.6. Children living with parents had the youngest householders, at 38.6. Children living with grandparents and other relatives were in much less educated households, as defined by the education of the reference person. Fully 71 percent of children living with grandparents and 65 percent of children living with other relatives had a householder with a high school education or less, as opposed to roughly 49 percent of foster children and 46 percent of children living with parents. Foster children have more children in the household than the three other groups (column 2) – over one per age category, on average.

Children living with parents were most likely to have all adults in their household employed. Fully 63.7 percent of children living with parents had all adults working at least part-time/ part year. In contrast, this was true of 48 percent of foster children, 37 percent of children living with grandparents, and 52 percent of children living with other relatives. Children living with grandparents and children living with other relatives were more likely to have non-employed adults in their households.

Descriptive Results for Poverty Rates

Figure 1 shows the SPM poverty rates of the four groups of children: 20.1 percent of foster children are in SPM poverty, as are 32.3 percent of children living with grandparents, 29.5 percent of children living with other relatives, and 17.5 percent of children living with parents. Thus, foster children have higher poverty rates than children living with their parents, though these differences are not large – the highest poverty rates are found for children living with grandparents and with relatives.

In Figure 2, we show the poverty rates of children using three different income definitions: SPM poverty, SPM absent foster care, severance, or other income, and SPM with all other income and all taxes and transfers removed. Absent all taxes and transfers, we see that children living with parents have the lowest SPM poverty rates (24.5 percent) in comparison to foster children (33.7 percent), children living with grandparents (51.8 percent) and children living with other relatives (41.3 percent). Taxes and transfers reduce poverty the most among children living with grandparents, from 51.8 percent to 32.3 percent. The poverty reduction for children living with parents is in the 7 percentage point range, and that of foster children is a reduction of nearly 14 percentage points. Another notable finding from Figure 2 is the difference that foster care, severance, or other income, which we argue likely

captures foster care payments fairly well, plays in reducing the poverty rates of foster children. Above and beyond other taxes and transfers, foster care, severance, or other income reduces foster children's SPM poverty rates by 5 percentage points.

Multivariate Results for Poverty Rates

Table 2 shows foster children's poverty rates in a multivariate context. We see similar patterns in SPM poverty across our four groups of children in our uncontrolled model (column 1) to what we saw in Figure 1. However, with the addition of controls for child, caregiver, and family demographic characteristics (column 2) and state and year fixed effects (column 3), we find that the odds of poverty are actually *lower* for foster children than for children living with parents. Table 2 also displays test statistics for the models. As with all of our multivariate models, the increase in our goodness of fit statistic, McFadden's r-squared, suggest that each specification is an improvement on the last, with the final model within the range required to deem a model "well-fit." Our second statistic, deviance, deceases with each specification, as we would also expect for a well-specified model.

Specifically, our uncontrolled model (column 1) suggests that compared to children living with parents, foster children are 19 percent more likely to be in SPM poverty than children living with parents, while grandchildren and relative children are 126 percent more likely and 98 percent more likely to be in poverty than children living with parents, respectively. The addition of our set of controls for child, caregiver, and family characteristics reverses the relationship for foster children (column 2), indicating 11 percent (not significant) lower odds of poverty compared to children living with parents, suggesting that demographic differences largely explain the higher SPM poverty rates of foster children compared to children living with parents seen in the raw data.

Turning to children living with grandparents, the increased likelihood that children living with grandparents are in poverty is reduced considerably in magnitude but remains significant after controlling for demographics, and after controlling for state and year fixed effects – suggesting that much, but not all of the disadvantage associated with living with relatives is accounted for by demographic differences. We can draw the same conclusion for children living with other relatives, for whom the addition of demographics and state and year fixed effects reverses the sign of the effect, indicating a significantly lower likelihood of poverty than children living with parents.

The Role of the Safety Net

In Table 3, we show the results of estimating our fully controlled model (Model 3 from Table 2) but using alternative definitions of resources in defining poverty status. These counterfactual definitions are total SPM resources without foster care, severance, or other income (column 2), and without all other income, taxes, and transfers (column 3). The odds of poverty for foster children are 24.6 percent higher than for children living with parents if we exclude foster care, severance, or other income, which as we argued earlier likely captures foster payments fairly well. Thus, our finding that controlling for demographics reverses the relationship between foster status and the likelihood of poverty is no longer true if we do not include the value of foster care, severance, or other income in the definition of

resources. In other words, foster children are still more likely to be poor relative to children living with parents if we don't consider foster care, severance, or other income, even after accounting for demographics and other factors. This suggests that foster payments are critical in reducing the SPM poverty rates of foster children net of other demographic characteristics. Finally, when all other income, taxes, and transfers are removed from income (column 3), the foster children appear no different than children living with parents in terms of their poverty rates, while the likelihood of poverty decreases among children living with other relatives, from 8.5 percentage points in column 1 to 12.7 percentage points in column 3. Notably, grandchildren are 74 percent more likely than children living with parents to be in SPM poverty absent resources from government policies and programs, reflecting the important role of government policies and programs for that group. Again, based on our results from Model 1 (column 1), we see that adding all other income and all taxes and transfers to the definition of income fails to eliminate the disparity between children living with grandparents and children living with parents, but the results from Model 3 suggest that children living with grandparents would be even poorer without such transfers.

Results for Deep Poverty

Table 4 presents our findings for SPM deep poverty -- defined as having resources that are below half the SPM threshold (again, details on test statistics for the models are shown in the Table). Under this definition, our uncontrolled logistic regression results follow the same pattern as in Table 2, with foster children evincing a 29 percent increase in the odds of facing deep poverty without controlling for any other factors. Children living with grandparents and those living with other relatives have much higher odds (108 and 107 percent higher, respectively) of living in deep poverty compared to children living with parents. The addition of covariates (column 2) decreases the size of all of these relationships, with only children living with grandparents still demonstrating significantly higher odds (24.2 percent) of living in SPM deep poverty. This same pattern of findings exists in our final specification, where we add state and year fixed effects, suggesting that on the whole, children living with grandparents face a 21.3 percent increase in the odds of deep poverty (column 3). Thus, as with overall poverty it appears that foster children's elevated odds of experiencing deep poverty is largely accounted for by demographic and other factors. These same factors also explain much of the difference between children living with grandparents and those living with parents, though even after accounting for such characteristics the former group of children still evince higher deep poverty levels.

The Role of Resources and Government Benefits

Before concluding, we briefly examine the resources and benefits received by our four groups of children. In so doing, we show that foster children and children living with grandparents or other relatives are more likely than children living with parents to receive many government benefits, which we earlier hypothesized explained much, but not always all, of the differences in poverty rates estimated for each group. Table 5 shows that children living with grandparents have the lowest cash resources, followed by children living with other relatives, foster children and then children living with parents. Foster children and children living with grandparents and children living with other relatives generally have higher rates of benefit receipt than children living with parents, though this is not true for

certain programs like SNAP and housing assistance for foster children. Foster children, however, benefit much more from the presence of foster care, severance, or other income than other children. The key takeaway from Table 5 is to reinforce that both foster children and children living with grandparents and relatives benefit from government programs, which reduce disparities between them and children living with their parents.

Sensitivity Analysis

In the following sections, we address two potential sources of bias in our primary analyses: measurement error in other income; and measurement error with regard to foster children. If our measure of foster care payments, in the form of foster care, severance, or other income, is overstated (which could occur for several reasons), our estimates of their effect may be overstated as well, and therefore may provide too large an estimate of the effect of foster care payments in reducing poverty. For example, as we detail below, reports of "other income" could include various sources of income not explicitly asked about in the CPS, such as "off the books" income. Alternatively, if foster care payments are underreported (which likewise could occur for several reasons), the resulting bias would lead us to underestimate their effect. Second, as mentioned earlier, there could be measurement error in the reporting of foster children, due to a mismatch between the timing of a foster child residing in the home at the time of the survey and the reporting period for income during the past year, or due to grandparent or other relative caregivers choosing a category other than foster child even though their child is receiving some foster care payments, which could also lead to biased estimates. In the sections below, we assess these potential sources of bias.

Measurement error in other income

The first threat to the validity of our results is the potential for measurement error in our measure of foster care, severance, or other income. Although we have used the detailed data in the CPS to effectively eliminate 18 other sources of income to create our variable for foster care, severance, or other income, there remains the possibility that income sources other than foster care payments are captured in this variable. First, as indicated in its name, this variable could include the value of severance payments, although we think these are rare. Second, it could include any other type of income not otherwise specified (although this too would be rare given the detailed categories available in the CPS). To give additional support to our claim that foster care payments are the majority of the income captured in our foster care, severance, or other income variable, we conducted a supplementary analysis using the 2008 Survey of Income and Program Participation (SIPP) – a four-year individual-level nationally-representative panel tracking income and program participation dynamics. Critically, the SIPP tracks foster care payments separately from all other income. We can therefore use the SIPP data to analyze the value of foster care payments compared to the value of foster care, severance, or other income as reported in the CPS. Of the families with foster children identified in SIPP, we find that among those who reported receiving foster care payments, the average monthly payment reported is $462 per child ($5,544 per year), representing 12.0 percent of total family income for those families vs. 0.0 percent for children living with parents. In our CPS sample, we find a similar pattern (albeit with a smaller magnitude). Using the preferred definition used in our primary analysis, among those who reported receiving foster care, severance, or other income, the amount reported

averages $443 per month per child ($5,319 per year) and represents 7.7 percent of the total annual income of foster families, vs. 0.1 percent of that for children living with parents. The fact that other income represents a larger portion of total income in SIPP is unsurprising, as the family unit definition follows that of the official poverty measure, so total family income is aggregated over fewer people, and the SIPP tends to oversample the low-income population. These parallel results from the SIPP support our assertion that our foster care, severance, or other income variable in the CPS captures foster care payments well.

A second potential source of measurement error in our foster care, severance, or other income variable, the presence of outliers, is easily tested by repetition of our primary analysis absent the respondents with extreme values of foster care, severance, or other income in our analytic sample. Of those in our sample who reported receiving foster care, severance, or other income, the distribution is left-skewed with a mean of $5,319, a standard deviation of $ 10,175 and a wide variance due to the larger weight assigned to extreme values. Among children living with parents who reported this type of income, the distribution is similar, with the lowest mean of the four groups of children ($4,581) and the widest range (up to $120,744) (Figure 1, in the appendix). The distribution of other income among children in the three other living arrangements, however, have higher means and standard deviations and lower variance, with the exception of children living with grandparents whose variance is similar to that of the pooled sample. Children living with foster families have by far the largest mean ($13,285) and the flattest distribution, with 75 percent of respondents reporting values less than $16,645. To test whether our results are driven by those with extreme values, we remove those with other incomes above the 99th percentile (around $50,000) from the pooled sample; this group consists of 212 children, 77 percent of whom do not live in homes with foster children, or are not foster children themselves. Our results are highly robust to this specification, with the significance among children with foster families improving slightly, indicating that outliers are at most a trivial source of bias in our analysis.

A third concern is that the foster care, severance, or other income reported by foster parents may reflect other types of income associated not with foster care payments but rather with unobservable differences between foster parents and others. It may be that those who select into foster care are more entrepreneurial or may have other sources of income that pre-dated or indeed influenced their decision to become foster parents. This could be tested by seeing if there are systematic differences among families that predict the amount of foster care, severance, or other income reported. Alternatively, if the only factors that predict the amount of other income reported are the type of child/ family, rather than demographic factors, that pattern of results would support the idea that any differences are random. To test this possibility, we run OLS regressions of the amount of foster care, severance, or other income on the same set of demographic characteristics used in our primary analysis (as well as state and year fixed effects) on two subsamples of children whose families reported receiving foster care, severance, or other income: foster children, and all other children.

In the regression for foster children, we include demographic controls and two indicators: one for the number of foster children in the home, and another for the number of other children in the home. All else equal, one additional foster child in the home is significantly

associated with an increase in foster care, severance, or other income of $3,077 (significant at .01 percent), while one additional non-foster child is associated with an increase of $1,976 (significant at .01 percent). The only demographic variable that is marginally significant (at 5 percent) is one of the education controls; those with a high school education report $3,248 less in other income than those without a GED, but higher education is not associated with more other income. As the other demographic variables are uniformly insignificant, these results suggest that among foster families, the differences among foster families who report receiving different amounts of foster care, severance, or other income may be random.

In the regression for all other children, we include an indicator for the number of children in the home (and the same set of demographic controls). Here, one additional child is associated with a significant but small increase in other income of $695 (significant at .01 percent). Many of the demographic factors are significant in this regression, as we would expect, given the heterogeneity of this much larger sample.

Measurement error with regard to foster children

Finally, there may be measurement error with regard to the reporting of foster children. One clear source of error stems from differences in timing with regard to the placement of foster children. There are two possible scenarios for this type of measurement error: current foster families fail to report receiving foster care maintenance payments during the past year for one or more foster children currently in their home (but not there during the past year), or former foster families report payments they received in the past year but for a child or children no longer in the home at the time of the survey. If the pattern of missing values is random, or uncorrelated with the error term, misreporting is less of a concern. To determine the odds of this type of error, we return to the small sample we matched from CPS rotation groups that we introduced in the "defining poverty" section. We first construct a child-level sample of families with foster children in March of either year who reported receiving foster care, severance, or other income in the second year. To test whether the present year's foster care, severance, or other income is predicted by the present or previous year's number of foster children in the home, we run OLS regressions of foster care, severance, or other income on the number of foster children in the home at year one, the number of foster children in the home at year two, and the number of other children in the home at year two. The results from a model with full controls and state and year fixed effects indicates that only the number of foster children in the present year is significant in predicting foster care, severance, or other income, with a highly significant $8,042 increase in other income per foster child. This result holds when we restrict the sample to include families for whom the number of foster children was the same in both years, where one foster child is associated with an $8,423 increase in other income (again significant at .01 percent). Together, these results suggest that among families who report receiving foster care, severance, or other income, the other income reported is more likely correlated with current foster placements, rather than previous foster placements. Again, the potential for measurement error here is not completely eliminated, but these results are consistent with our primary results.

A final source of potential measurement error derives from the fact that some children placed with grandparents or other relatives may also be foster children, in that they receive

some foster care payments. Because respondents must choose just one category, the status of these children as "kinship care" children cannot be discerned in the CPS. There is not much we can do to test or correct for this type of reporting error. We can however assess what share of children living with grandparents or living with other relatives have any reported income in the foster care, severance, or other income category, as an indicator of what share might be receiving foster care payments. We find that this share amounts to 2.8 percent among children living with grandparents and 2.5 percent among children living with other relatives, indicating that this type of reporting error is not too extensive.

Conclusion

This analysis represents the first attempt, to the authors' knowledge, to assess the poverty status of children in foster care, as compared to children living with grandparents, other relatives, or parents. Our pattern of findings suggests that all else equal, foster children face lower odds of poverty than all other children. As this effect is reversed when a variable that reflects foster care, severance, or other income is removed from the total SPM resource calculation, we posit that the payments made to foster families – which we argue are the main component captured in that variable – are integral in reducing the odds of poverty for children in foster care.

For children living with grandparents, many of whom do not receive foster care payments, the story is different. For these children, it is taxes and transfers that mitigate the odds of poverty – much more so than for foster children and all other children – indicating the importance of safety net programs to this particularly vulnerable population, which remains the poorest even after taking into account such programs.

Our analysis does have some important limitations. The primary limitation rests in the relatively small samples of foster children in the CPS. Thus, we are unable to draw state- and year-specific conclusions, which could give further insight into the differences in poverty status among foster children associated with specific policies. Secondly, the best variable we can create to measure foster care payments in the CPS also captures severance payments and other types of income not otherwise specified, although values of this variable compare pretty well to those found in other datasets that capture foster care payments more precisely. Moreover, the foster care maintenance payments captured in the foster care, severance, and other income variable reflect the previous year's income – if a family reported having a foster care maintenance payment for a foster child in the previous year who had since moved out and was not replaced, these children are not identifiable. Similarly, a family might not report foster care maintenance payments for the previous year, but at the time of the survey may have a foster child in the home who wasn't there in the previous year. This family then would not report receiving foster care, severance, or other income, driving up the poverty estimates for these foster children. Finally, our data are limited in that we cannot separate the informal and formal arrangements for children living with grandparents or other relatives, nor can we specifically identify children living in subsidized guardianship or adoption arrangements.

In spite of these limitations, this analysis provides some important findings. First, we find that without the estimated value of foster care payments, foster children would face a 24.6 percent increase in the odds of poverty compared to similar children living with their parents; but with these payments included, foster children's odds of poverty are statistically indistinguishable from those of children living with their parents. These findings are robust to state and year fixed effects, suggesting that in spite of historical state-level adjustments to foster care maintenance payments, the effect of these foster care payments is substantial and significant.

We note that foster care payments have not traditionally been viewed as part of antipoverty policy; their purpose is to reimburse foster families for the costs associated with caring for foster children. If foster families were not reimbursed, the child welfare system would have to pay for other more costly forms of care such as group home care, residential treatment centers, or therapeutic foster care. Our results point to another important role of foster care payments, showing that such payments significantly reduce potential poverty among foster children. As such, our findings will be relevant when legislators consider the impact and usefulness of these payments and appropriate payment levels.

Second, we find that taxes and transfers are crucial in helping children living with grandparents to avoid poverty; without them, children face 74 percent higher odds of poverty, vs. 37 percent higher odds with them. But even with taxes and transfers, these children are at elevated risk of poverty, and deep poverty. Without a compensatory payment – like that received by foster families – these children are at elevated risk of financial hardship, and there could be other negative spillover effects within the household that cannot be detected with this type of analysis. Many states extend foster care payments to the caregivers of related children who are identified and certified like non-relative foster caregivers, offering some compensation, which is likely to help tremendously for the families willing to sacrifice intervention for payment. For the families caring for related children outside of the formal auspices of a state-managed child welfare case, financial support is limited to a TANF child-only grant, a TANF family grant, or other benefits such as Food Stamps or Supplemental Security Income. Thus, for these families not receiving assistance through the child welfare system, other safety net programs are of utmost importance.

Future research might aim to estimate SPM poverty rates among a larger sample of children and youth in foster care over a longer period of time. While the present estimates are useful for broad-brush trends, state-level annual estimates of SPM poverty could provide insight into the peaks and valleys that may be masked in national-level estimates. Second, in recent years, alternate forms of permanency for children with relative caregivers have emerged, most of which are accompanied by substantial financial support – such as subsidized guardianship. Little is known about the importance of these programs in poverty alleviation for children living with relatives. Finally, an SPM analysis focused on formal and informal relative caregivers could inform the debate on the disparity of foster care maintenance and other payments between non-relative and relative caregivers.

Acknowledgments

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APPENDIX

Appendix Table 1

Reported foster care, severance, or other income by living arrangement

	Total children in each group	# with foster Care, severance, or other income > 0	% with foster care, severance, or other income > 0	Mean foster care, severance, or other income ($)	Mean foster care, severance, or other income (>0) ($)
Children Living with Parents	1,105,809	18,864	1.7	56.70	4581.25
Foster Children	3,208	1,047	32.6	4379.12	13285.28
Children Living with Grandparents	21,343	595	2.8	170.52	7374.28
Children Living with Other Relatives	11,461	290	2.5	178.83	8634.54
Total	1,141,821	20,796		72.17	5319.90

Note: Estimates from March 1991 to March 2012 CPS. All estimates weighted using person-level weights provided in the CPS ASEC (marsupwt).

Appendix Table 2

Reported foster care, severance, or other income by the number of foster children in the home

| Number of foster children in the home	Total children in each group	# with foster care, severance, or other income > 0	Mean foster care, severance, or other income ($)	Mean foster care, severance, or other income (>0) ($)
0	1,138,613	19,749	60.35	4,752.13
1	1,118	298	1,944.77	7,374.27
2+	2,090	749	5,607.77	15,453.43
Total	1,141,821	20,796	72.17	5,319.90

Note: Estimates from March 1991 to March 2012 CPS. All estimates weighted using person-level weights provided in the CPS ASEC (marsupwt).
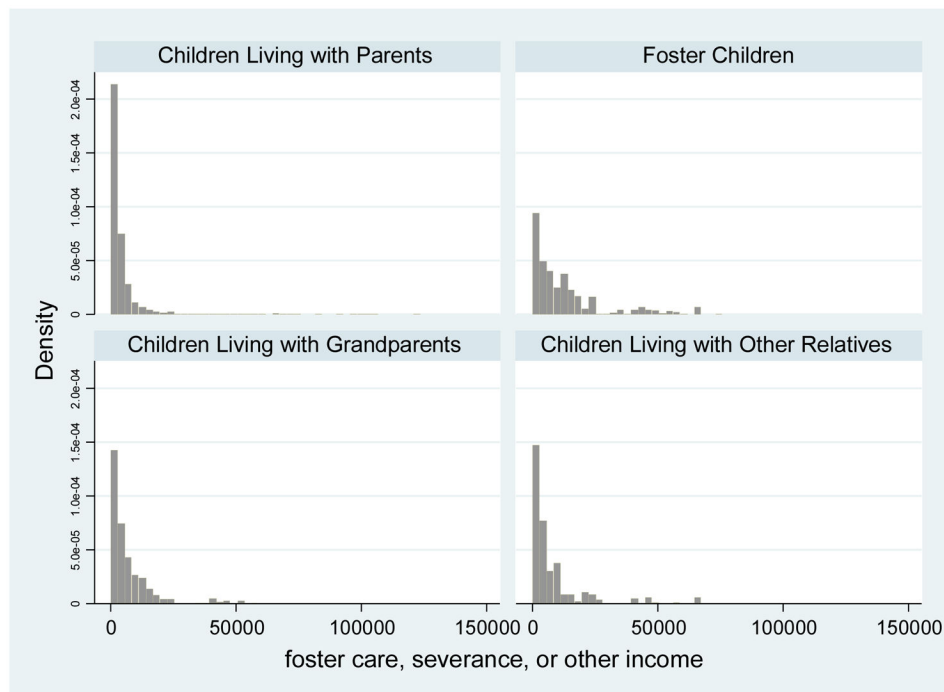
Appendix Figure 1.
Distribution of foster care, severance, or other income variable by child living arrangement
Note: Estimates from March 1991 to March 2012 CPS. All estimates weighted using person-level weights provided in the CPS ASEC (marsupwt).

Technical Appendix

This appendix, adapted from "Waging War on Poverty: Poverty Trends Using a Historical Supplemental Poverty Measure" by Fox et al. (2015), provides more detail about the methods used to construct our historical SPM series that is used in the present analysis. Please see Fox et al. (2015) for further details.

Poverty Units

After 2007, detailed relationship codes make it possible to identify both biological parents of a child in a household even if these individuals do not claim to be unmarried partners. However, prior to 2007, these detailed relationship codes are not available, so we must rely on relationship codes of individuals in reference to household head or family reference person. Prior to 1975, only relationship to household head exists, not relationship to family head.

Thresholds

Following the BLS' SPM methodology in constructing poverty thresholds, we use five-year rolling averages of fundamental consumer expenditures for families with two children from the Consumer Expenditure Survey (CEX) adjusted by the equivalence scales described below. We multiply the average FCSU for the thirtieth to thirty-sixth percentiles of FCSU

expenditures by 1.2 to account for additional basic needs, and again apply the equivalence scales to set the poverty threshold for each family type. See the appendix in Fox et al. (2015) for additional details.

Equivalence Scale

We follow the Census Bureau in using a three-parameter equivalence scale to adjust poverty thresholds for poverty-unit size and composition. This equivalence scale is as follows:

Families without children: *Equivalence scale=(adults)$^{0.5}$*

Single parents: *Equivalence scale=(adults+0.8*first child+0.5*other children)$^{0.7}$*

All other families: *Equivalence scale=(adults+0.5* children)$^{0.7}$*

Geographic Adjustment

The SPM adjusts poverty thresholds for geographic differences in the cost of housing. Specifically, they use five-year American Community Survey data on rental payments in metropolitan areas to adjust the shelter and utilities component of the SPM poverty thresholds. In contrast, our historical-SPM estimates do not yet adjust poverty thresholds for geographic differences in cost-of-living, given the paucity of consistent data back to 1967 necessary to implement geographic adjustments.

Mortgage Status

Data for constructing thresholds by housing status are not consistently available for all years. From 1976 to 2008, the CPS asks respondents whether they owned or rented their dwelling, but not about their mortgage status; since 2009, a question on this item has been included.

To follow the Census SPM methodology, which requires thresholds based on three housing status groups, we imputed mortgage status from the CEX to the CPS in 1980 to 2012. This imputation included poverty status, age, race, education and marital status of household head, family size and region as well as interactions between race and education and interactions between race and age. See the appendix in Fox et al. (2015) for details on our imputation scheme.

SNAP

The CPS routinely collects information on SNAP / Food stamp receipt for the entire period of our study, from 1992 – 2013.

School Lunch Program

The National School Lunch Act of 1946 provides free or low-cost lunches to children in public and non-profit schools. The CPS routinely collects School Lunch Program participation for the entire period of our study.

WIC

The WIC program has provided subsidized food and formula to women, infants, and children since the mid-1970's and since 2001, only the number of WIC recipients in the

household has been collected, so our procedure for imputing WIC benefits into the CPS is a two-step procedure. First, for years prior to 2001, we imputed WIC incidence at the household level. Second, we calculate the benefit value for all years using administrative data on average per person WIC expenditures (see: http://www.fns.usda.gov/pd/wisummary.htm).

WIC Incidence—From 2001 onwards, the number of WIC recipients per household was reported in the CPS. However, as nearly all families (>95 percent) who reported receiving WIC, only reported receiving it for a single family member, we only impute a yes/no incidence instead of the number of recipients per household. See the Fox et al. (2015) appendix for details on our imputation methods for WIC incidence.

WIC Value—We calculate WIC value by multiplying the average annual WIC food costs per person (based on monthly USDA administrative costs*12 from http://www.fns.usda.gov/pd/wisummary.htm) by the number of recipients per household (which is 0 to 4 from 2001 to 2012 and 0 to 1 prior to 2001). This value is then divided evenly among household members and summed for SPM family units.

Housing Assistance

Since the New Deal, federal housing programs have provided either reduced-price rentals, or vouchers for low-income housing assistance. The CPS has collected information on the receipt of these two types of housing programs for the entire time series of the data used in this study. For additional details, see Fox et al. (2015).

Taxes

The CPS routinely measured after-tax income and tax credits, such as the Earned Income Tax Credit and Child Tax Credit for the entire time series used in the present study.

MOOP

Medical out-of-pocket expenses (MOOP) are imputed from the CEX to the CPS for all years. Based on work by Hutto et al., (2011), New York City CEO (2008) and Betson (2009), we use a hot-deck imputation strategy to calculate deciles of MOOP expenditures for consumer units in the CEX for 10 imputation groups, based on: number of elderly individuals in family (0,1,2), an indicator for families of 1, and poverty level (below 200 percent and >=200 percent FPL). The distribution of MOOP expenditures in each imputation group is preserved by randomly assigning deciles of expenditures to the same imputation groups in the CPS. Finally, total MOOP expenditures are then capped at $6,700 per person (adjusted to nominal dollars using CPI-U), which is the 2011 Medicare Advantage Part D non-premium cap, per recommendations in Korenman and Remler (2012). This method indirectly imputes incidence for various demographic groups since deciles of $0 in expenditures would remain in both datasets, but it does not force an exact percentage. For additional details on our imputation methodology, see Fox et al. (2015).

Child Care and Work Expenses

Child care expenditures are imputed from the CEX to the CPS for all years. We utilize a two-step procedure to estimate child care expenditures based on earlier work in Hutto et al. (2011). We first use the CEX to predict the likelihood of using paid child care using the following covariates: number of children (1, 2, 3+), number of adults in household (1, 2, 3+), poverty dummies (<100 percent, 100 to 200 percent, and >200 percent FPL), head-of-family age (<25, 25 to 34, 35 to 44, 45 to 54, 55 to 64, 65+), race (white, black, other), education of head (LTHS, HS, SC, BA-plus), family size, married, race*education interactions, race*age interaction, and a region indicator (Northeast, Midwest, South, West). We then apply these regression coefficients to the relevant CPS year and predict the likelihood of paid child care for each household. We constrain paid child care incidence in the CPS to match paid child care incidence in the CEX by number of adults present in the household (1, 2, 3+).

After determining incidence, we used a hot-deck imputation strategy to assign deciles of child care expenditures to heads in the CPS based on: poverty level (<100 percent, 100 to 200 percent, and >200 percent FPL), number of children (1, 2 and >=3) and family status (married, unmarried, 3+ adults). We use the same CEX sample and interpolation strategy as in the MOOP estimates (see Fox et al. (2015)).

Work Expenses

Work expenses (e.g., commuting costs, uniforms, etc.) are estimated based on analyses of the Survey of Income and Program Participation (SIPP) provided by the Census Bureau. Using the SIPP, they estimate a median weekly value of work expenses from 1997 to 2012. We fix this value historically adjusting for CPI-U. Total work expenses for the consumer unit are then calculated as 85 percent of median work expense multiplied by the number of weeks worked, and summed for all workers above age 17 in the unit as per NAS panel recommendations. Child care expenditures and work expenses are combined and then capped so that their total does not exceed the reported earnings of the lowest earning spouse/partner in the family.
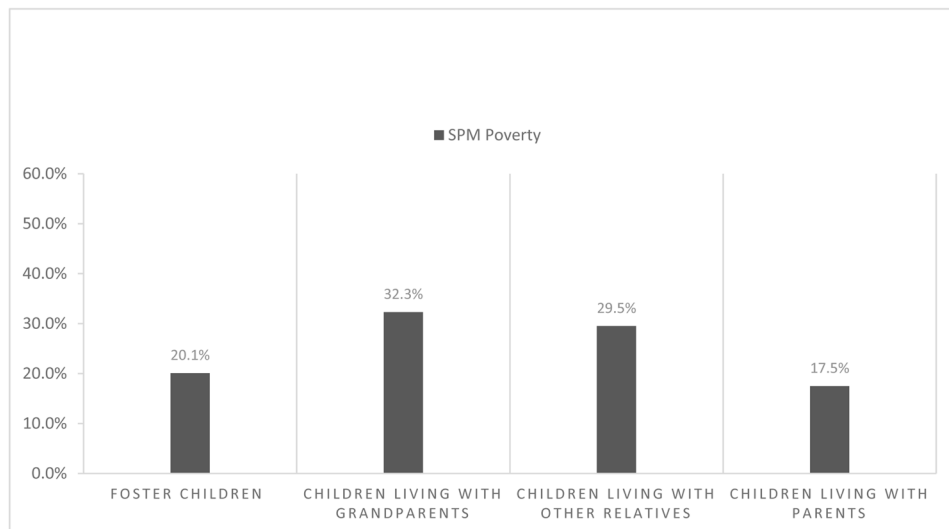
FIGURE 1.
SPM POVERTY RATES FOR FOSTER CHILDREN, CHILDREN LIVING WITH
GRANDPARENTS, CHILDREN LIVING WITH OTHER RELATIVES & CHILDREN
LIVING WITH PARENTS
Source: Authors' calculations of SPM poverty rates, using data from 1991 to 2012 March
Current Population Surveys. All estimates weighted using person-level weights provided in
the CPS ASEC (marsupwt).
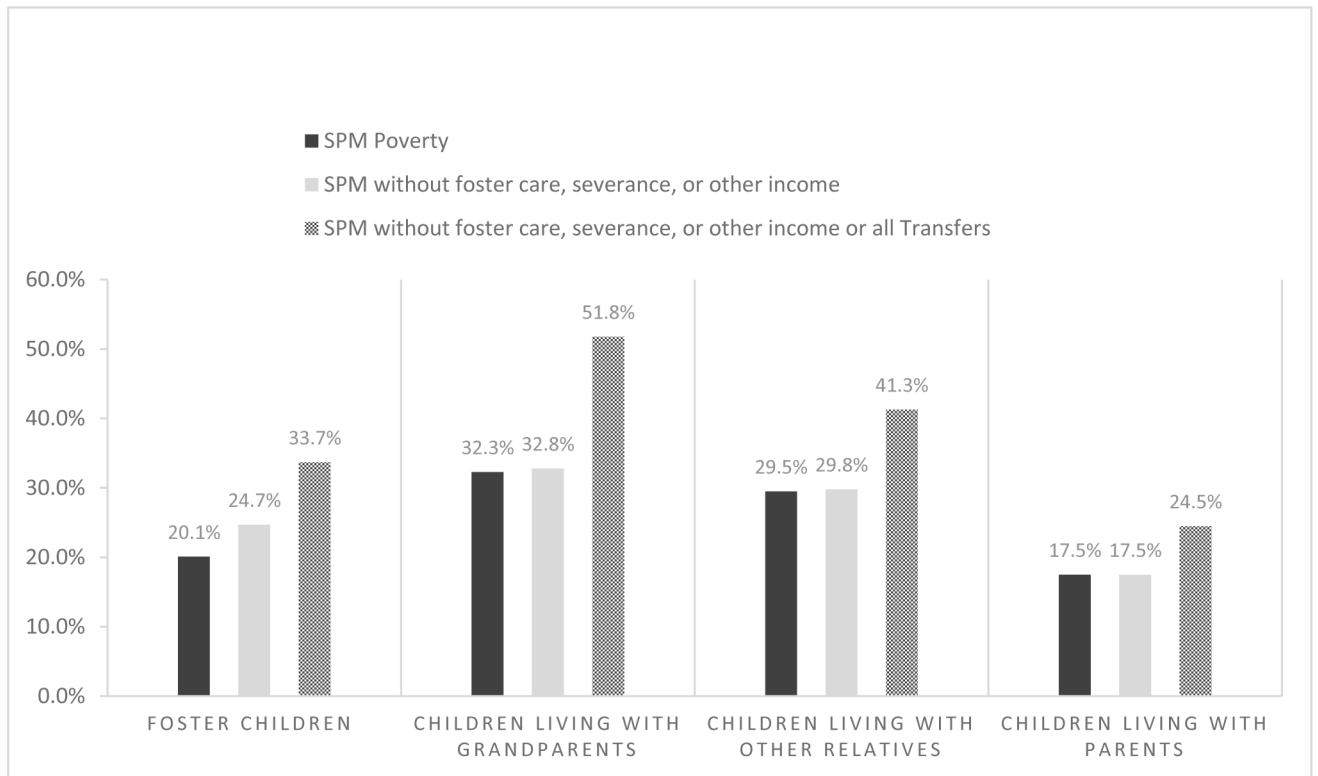
FIGURE 2.
SPM POVERTY RATES UNDER ALTERNATIVE COUNTERFACTUAL SCENARIOS
Source: Authors' calculations of SPM poverty rates, using data from 1991 to 2012 March
Current Population Surveys. All estimates weighted using person-level weights provided in
the CPS ASEC (marsupwt).

Table 1

Descriptive Statistics

	Children Living with Parents		Foster Children		Children Living with Grandparents		Children Living with Other Relatives	
	mean	%	mean	%	mean	%	mean	%
Child Characteristics								
Child Age	8.5		8.5		9.1		10.5	
Child Race								
White, non-Hispanic		61.2		46.6		39.8		31.7
Black, non-Hispanic		14.3		29.7		38.3		32.3
Asian/PI, non-Hispanic		4.2		1.2		1.6		4.5
Hispanic		18.1		17.6		16.1		28.4
Other, non-Hispanic		2.3		4.9		4.2		3.1
Household Characteristics								
Family Structure								
Single		22.9		21.1		47.6		45.6
Cohab		4.3		4.5		2.2		6.0
Married		72.8		74.4		50.1		48.4
Age of Householder	38.6		45.9		57.2		40.9	
Education of Householder								
Less than HS		16.1		17.2		38.4		32.7
HS		29.5		31.6		32.9		32.7
Some College		27.7		34.0		20.7		23.8
BA+		26.7		17.2		8.1		10.8
Other Children in the HH								
0–5 year olds	0.7		1.1		0.5		0.7	
6–11 year olds	0.8		1.1		0.7		0.8	
12–17 year olds	0.7		1.3		0.8		1.0	
Employment Status								
At least one adult not employed		36.3		51.7		63.4		48.1
All adults employed at least Ptpy		63.7		48.3		36.6		51.9

	Children Living with Parents		Foster Children		Children Living with Grandparents		Children Living with Other Relatives	
	mean	%	mean	%	mean	%	mean	%
Observations(n=1,141,821)	1,105,809		3,208		21,343		11,461	

Note: Estimates from March 1991 to March 2012 CPS. All estimates weighted using person-level weights provided in the CPS ASEC (marsupwt).

Table 2

SPM Poverty of Foster Children, Children Living with Grandparents, Children Living with Other Relatives, and Children Living with Parents: Estimates from Logistic Regression Model

	1	2	3
		SPM Poverty	
Type of Child			
Foster children	1.188 **	0.891	0.879
	−0.063	−0.062	−0.061
Grandchildren	2.259 ***	1.409 ***	1.370 ***
	−0.04	−0.034	−0.033
Relative children	1.980 ***	0.913 **	0.915 **
	−0.048	−0.029	−0.029
Race / Ethnicity of Child			
Black, non-Hispanic		1.460 ***	1.468 ***
		−0.015	−0.016
Asian/PI, non-Hispanic		1.479 ***	1.766 ***
		−0.031	−0.038
Hispanic		1.563 ***	1.781 ***
		−0.014	−0.018
Other, non-Hispanic		1.343 ***	1.400 ***
		−0.027	−0.029
Empl status			
All adults employed at least PTPY		0.215 ***	0.213 ***
		−0.002	−0.002
Number of children in the household			
# Children 0–5 in the household		1.385 ***	1.396 ***
		−0.006	−0.006
# Children 6–11 in the household		1.230 ***	1.237 ***
		−0.005	−0.005
# Children 12–17 in the household		1.149 ***	1.154 ***
		−0.005	−0.005
Age of Reference Person		0.972 ***	0.973 ***
		0.000	0.000
Education of Reference Person			
High School		0.511 ***	0.521 ***
		−0.005	−0.005
Some College		0.318 ***	0.331 ***
		−0.003	−0.003

	1	2	3
		SPM Poverty	
BA or higher		0.143 ***	0.152 ***
		−0.002	−0.002
Family Structure			
Cohab Family		0.297 ***	0.300 ***
		−0.005	−0.005
Married Family		0.152 ***	0.148 ***
		−0.001	−0.001
Year FE			x
State FE			x
Observations	1,141,821	1,141,821	1,141,821
Deviance	1.46E+09	1.06E+09	1.05E+09
McFadden's R2	0.004	0.279	0.286

Note: Estimates from March 1991 to March 2012 CPS. Odds Ratio shown (with standard errors in parentheses).

Significance:

*
significant at 0.05,

**
significant at 0.01,

***
significant at 0.001

All estimates weighted using person-level weights provided in the CPS ASEC (marsupwt). Reference categories include: child living with parents (type of child), white (race/ethnicity of child), at least one adult unemployed (employment status), less than HS (education of reference person), and single (family structure).

Table 3

Counterfactual Estimates of SPM Poverty: Estimates from Logistic Regression Models

	1	2	3
	SPM Poverty	*SPM without Other Income*	*SPM without all Transfers and Other Income*
Type of Child			
Foster children	0.879	1.246 ***	1.024
	−0.061	−0.082	−0.064
Grandchildren	1.370 ***	1.389 ***	1.742 ***
	−0.033	−0.034	−0.042
Relative children	0.915 **	0.924 *	0.873 ***
	−0.029	−0.029	−0.027
Year FE	x	x	x
State FE	x	x	x
Observations	1,141,821	1,141,821	1,141,821
Deviance	1.05E+09	1.05E+09	1.14E+09
McFadden's R2	0.286	0.287	0.353

Note: Estimates from March 1991 to March 2012 CPS. Odds Ratio shown (with standard errors in parentheses)

Significance:

*
significant at 0.05,

**
significant at 0.01,

***
significant at 0.001

All estimates weighted using person-level weights provided in the CPS ASEC (marsupwt). Reference category for type of child is 'children living with parents'.

Table 4

SPM Deep Poverty: Estimates from Logistic Regression Models

	1	2	3
	SPM Deep Poverty		
Type of Child			
Foster children	1.294 **	1.14	1.178
	−0.116	−0.112	−0.116
Grandchildren	2.081 ***	1.242 ***	1.213 ***
	−0.059	−0.043	−0.042
Relative children	2.065 ***	1.078 †	1.072
	−0.081	−0.047	−0.047
Race / Ethnicity of Child			
Black, non-Hispanic		1.062 ***	1.029
		−0.018	−0.018
Asian/PI, non-Hispanic		1.407 ***	1.542 ***
		−0.046	−0.052
Hispanic		1.252 ***	1.236 ***
		−0.018	−0.02
Other, non-Hispanic		1.203 ***	1.137 ***
		−0.04	−0.039
Empl status			
All adults employed at least PTPY		0.199 ***	0.198 ***
		−0.003	−0.003
Number of children in the household			
# Children 0–5 in the household		1.192 ***	1.199 ***
		−0.008	−0.008
# Children 6–11 in the household		1.078 ***	1.084 ***
		−0.006	−0.006
# Children 12–17 in the household		1.011 †	1.015 *
		−0.007	−0.007
Age of Reference Person		0.979 ***	0.979 ***
		−0.001	−0.001
Education of Reference Person			
High School		0.734 ***	0.737 ***
		−0.011	−0.011
Some College		0.544 ***	0.544 ***
		−0.009	−0.009
BA or higher		0.365 ***	0.370 ***

	1	2	3
		SPM Deep Poverty	
		−0.008	−0.008
Family Structure			
Cohab Family		0.322 ***	0.317 ***
		−0.009	−0.008
Married Family		0.170 ***	0.167 ***
		−0.002	−0.002
Year FE			x
State FE			x
Observations	1,141,821	1,141,821	1,141,821
Deviance	6.08E+08	4.94E+08	4.92E+08
McFadden's R2	0.003	0.19	0.193

Note: Estimates from March 1991 to March 2012 CPS. Odds Ratio shown (with standard errors in parentheses)

Significance:

*
significant at 0.05,

**
significant at 0.01,

***
significant at 0.001

All estimates weighted using person-level weights provided in the CPS ASEC (marsupwt). Reference categories include: child living with parents (type of child), white (race/ethnicity of child), at least one adult unemployed (employment status), less than HS (education of reference person), and single (family structure).

Table 5

Resources and Receipt of Government Programs by Living Arrangement

	Children Living with Parents		Foster Children		Children Living with Grandparents		Children Living with Other Relatives	
	dollar value ($)	freq (%)	dollar value ($)	freq (%)	dollar value ($)	freq (%)	dollar value ($)	freq (%)
SPM cash resources	65,245.77		55,460.95		41,918.75		46,823.95	
Welfare (TANF / AFDC)		6.1		8.4		17.3		13.1
Food Stamps (SNAP)		14.5		11.9		26.1		21.9
Housing Assistance		4.8		3.3		8.5		5.9
Supplemental Security Income		3.1		5.6		14.1		8.1
Social Security		6.8		17.9		40.2		21.5
WIC		11.3		19.5		13.2		16.0
Foster care, severance, or other income		1.7		32.6		2.8		2.5
Observations(n=1,141,821)	1,105,809		3,208		21,343		11,461	

Note: Estimates from March 1991 to March 2012 CPS. Percentages of caregivers reporting non-missing values greater than $0. All estimates weighted using person-level weights provided in the CPS ASEC (marsupwt).