From Welfare to Workfare: Did Increases in the Earned Income Tax Credit Reduce Long-Term Poverty Among Children?

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Abstract

We compare rates of long-term child poverty experienced for cohorts before and after 1996, when significant increases were made to the Earned Income Tax Credit (EITC). The EITC is widely credited with reducing short term (annual) poverty by supplementing the earnings of low-income workers with children; however, persistently poor children often reside with parents who face multiple barriers to employment and, therefore, may not reap the benefits of a wage supplement. Because the increased generosity of the EITC coincided with a broader social policy shift away from cash entitlements toward work supplements, long-term poverty may have been unaffected or worsened for children who lived with parents with low levels of employment. We find that long-term poverty dropped substantially for children of the post-reform cohort, resulting from increasing wages coupled with benefits obtained from the EITC. We will investigate whether this substantial drop was experienced across all levels of parental employment.

Keywords: long-term child poverty, poverty, social policy, welfare reform

1. Introduction

The most recent research tracking trends in children's long-term poverty found that the percentage of children who were persistently poor remained stable at 34 percent of all Black children and just 5 percent of all white children from the late 1960s to the early 1980s (Duncan & Rodgers, 1991; David J. Eggebeen & Daniel T. Lichter, 1991; Lichter, 1997). Duncan and Rodgers (1991) found that underlying the stability in long-term poverty were significant cross-cutting demographic and economic changes that occurred across this period.

Since the late 1980s, the U.S. social policy landscape has undergone a substantial shift from cash entitlements to wage-work subsidies. Among these policy changes include: the 1996 welfare reforms, increases in the minimum wage, and expansion of the Earned Income Tax Credit (EITC) – all intended to increase incentives for low-skilled, lowincome parents to choose work over receiving cash welfare. Among these programs, the EITC is widely touted as the most successful in terms of poverty reduction. The increased generosity of the EITC in the post-reform era lifts 4.4 million people out of poverty annually and reduced the child poverty rate by 25 percent (Holt, 2006). Although annual child poverty rates dropped during the early post-reform years, it is not known how this social policy shift has impacted rates of long-term child poverty.

While the tight labor market of the mid- to late-1990s increased the availability of jobs for low-skilled parents, permanent changes to social policy that tied social support to participation in the paid labor market meant that fewer resources were available to those who did not work. As the long-term poor are likely to experience multiple barriers to work and periods of unemployment, these work-centered policy shifts could mean that the children of the long-term poor were made worse off by reform (Hays, 2004; Seefeldt, 2008; Turner, Danziger, & Seefeldt, 2006). In this paper we analyze how a shift in the social policy landscape from cash entitlement to subsidized work affected long-term poverty for black and white children.

2. Background

2.1 The Effects of Poverty

While child poverty has fluctuated throughout the past half-century, it is well known that the rate of child poverty in the United States has been and remains substantial, particularly among African American children. Child poverty fell sharply in the 1960s, remained relatively unchanged in the 1970s and rose in the 1980s (D. J. Eggebeen & D. T. Lichter, 1991). By 1990, the child poverty rate reached nearly 20 percent. It remained high and stable throughout the 1990s, peaking at 20.2 percent in 1995 (Seccombe, 2000). In 2008, 19 percent of all US children were poor; as were a little more than one-third of African-American children (National Poverty Center 2010). Childhood poverty is important as it has long-term effects on opportunities in adulthood and throughout the life-course.

The long-term, negative implications of childhood poverty include disparities relative to non-poor peers in physical and mental health, access to nutrition and medical care, educational opportunities and resources, school achievement and attainment, cognitive development, and heightened criminality in adulthood. Poor children are twice as likely to be in poor health, to die as infants, to have a learning disability, to be hospitalized, and 3.5 times as likely to suffer from lead poisoning. Poor children obtain less education, are twice as likely to repeat a grade or be expelled from school, are 1.4 times as likely to be diagnosed with a learning disability, and are 3 times as likely as non-poor children to drop out of school (Aber, Bennett, Conley, & Li, 1997; Brooks-Gunn & Duncan, 1997; Duncan & Brooks-Gunn, 2000; Korenman, Miller, & Sjaastad, 1995; McLoyd, 1998). Poor girls are twice as likely to have a teen birth, while poor boys work fewer hours, have lower wages, and spend more time idle than the non-poor (Brooks-Gunn & Duncan, 1997; Corcoran, 2001). Children born and raised in poverty have rates of poverty in their twenties of 24 percent while those not born into poverty experience poverty rates of just 4 percent (Brooks-Gunn & Duncan, 1997; Corcoran, 2001).

Childhood poverty in the United States varies substantially between racial groups. White children are impoverished at a rate of 8.2 percent, while the same is true for 24.5 percent of African American children (National Poverty Center 2010). The black-white disparity in poverty is multi-causal and reflects both historical and contemporary factors (Bertrand & Mullainathan, 2004; Lin & Harris, 2008; Massey & Denton, 1993; Pager, 2003; Royster, 2003; Wilson, 1987). We also know that of children born in the lowest income stratum, movement out of this stratum is significantly less likely for blacks than whites (Hertz, 2005).

2.2 Long-term Poverty

While a large body of research has tracked fluctuations in and correlates of the annual poverty rate of children, (Cancian & Reed, 2001; D. J. Eggebeen & D. T. Lichter, 1991; Iceland, 2003; Lichter, 1997; Smeeding, Rainwater, & Burtless, 2001) less is known about the incidence and correlates of long-term poverty in children. While roughly one-third of children will be poor at some point during their childhood, for most, that poverty will be transitory. Analysts estimate that roughly one in twenty children will be poor for extended periods (Blank, 1997; Corcoran, 2001; Duncan & Rodgers, 1991).

Long-term poverty is distinct from the short spells of poverty that most poor individuals experience because the effects of poverty are cumulative – those in multi-year poverty are more likely to experience the sustained hardship and accumulated disadvantage for which poverty is a proxy (Duncan & Brooks-Gunn, 2000; Duncan, Yeung, Brooks-Gunn, & Smith, 1998; Korenman et al., 1995; McLoyd, 1998). The negative effects of persistent poverty have been found to be twice that of transient (yearly) poverty (Korenman et al., 1995). The depth of this poverty is also important for children's outcomes (Lichter, 1997). Children in long-term poverty experience more negative outcomes in terms of physical health, school attainment, IQ, cognitive development, verbal skills, socio-emotional functioning and early career outcomes (Duncan, Brooks-Gunn, & Klebanov, 1994; Furstenberg, 2006; McLoyd, 1998). Given the accumulated disadvantage

experienced by long-term poor children, a decline in its prevalence is likely to have important and lasting consequences.

The racial disparity present among the annually poor is only exaggerated among the longterm poor. The most recent research suggests that roughly 30 percent of African-American children but only slightly more than 3 percent of white children experienced persistent poverty. Further, almost 90 percent of children who were poor in 10 or more years over the 15-year period 1968-1982 were black (Duncan & Rodgers, 1991).

2.3 Demographic Trends and Changes in Poverty

A number of demographic factors linked to child poverty have changed over the last few decades. Non-marital childbirth is one of the strongest correlates of childhood poverty and has risen substantially since the 1970s (Carlson, Garfinkel, McLanahan, Mincy, & Primus, 2005; Primus, 2006). Due in part to declining marital fertility, single-parent births now account for one-third of new births (Cancian & Reed, 2001).

Black families are much more likely to be headed by a single parent than are white families. While the gap has narrowed, the percentage of black children in single-parent family arrangements was 51 percent in the mid-nineties, while the percentage for white children was 17 percent (Stoll, 2005).¹

Conversely, increases in maternal education and decreases in family size put downward pressure on the childhood poverty rate. The American population as a whole made great gains in high school and college completion, while blacks made substantial progress towards closing the racial gap in high school completion (Stoll, 2005).

In addition, fertility rates have been declining since the 1970s, falling from 115.4 to 70.0 births per 1000 black women and 84.1 to 65.3 births per 1000 white women aged 15-44 in 2000 (Centers for Disease Control).

Changes within the labor force and to the public policy environment also affected child poverty. Women entered the workforce in increasing numbers, while men's wages, particularly those of workers with a high school degree or less, stagnated (U.S. Department of Health and Human Services, 2003). In the late 1980s, the falling contribution of father's earnings was compensated for by an increased reliance on governmental support programs, both an increase in the proportion of income from public assistance and particularly Food Stamps (Duncan & Rodgers, 1991).

As mentioned previously, following the 1996 welfare reform, welfare usage declined sharply (Schoeni & Blank, 2000). In response, the employment rate, annual earnings, and incomes of single mothers and low-skilled women rose. Several factors may explain this

¹ Eggebeen and Lichter (1991) pose the important, and still unanswered, question: Is changing family structure a "cause" of poverty or a consequence of the deteriorating economic circumstances of individuals and families?

phenomenon: low-wage work was made more lucrative by the EITC, the labor market was strong and growing across this period, and the time limits and sanctions imposed by welfare reform drove many former welfare recipients into the labor force (Schoeni & Blank, 2000; Scholz & Levine, 2001).

The rise in employment was dramatic for single mothers and for less educated black women (Blank, 2002; Meyer & Rosenbaum, 2001; Noonan, Smith, & Corcoran, 2007).While income rose for many low-income, low-skill women and former welfare recipients during this period, research suggests that a significant minority of welfare leavers have not been able to maintain consistent employment and were thus made worse off by welfare reform (Danziger et al., 2000; Seefeldt, 2008; Turner et al., 2006).

2.4 A Shift in Social Policy: The Rise of the Earned Income Tax Credit (EITC)

Though Americans have long expressed ambivalent and even contradictory sentiments about welfare and poverty support programs, anti-welfare public opinion spiked in the early to mid-1990s culminating in President Clinton's welfare reform initative, the *Personal Responsibility and Work Opportunity Reconcilliation Act* (PRWORA). The Act replaced the entitlement program *Aid to Families with Dependent Children* (AFDC) with *Temporary Assistance to Needy Families* (TANF). Hallmarks of the TANF program include a five-year time limit on benefit recepit, mandatory employment preparation and participation for many receiving benefits, and sanctions for failure to adhere to these requirements (Grogger, 2004; Scholz & Levine, 2001). As noted, resultant from these and other changes, welfare caseloads have fallen dramatically (Pavetti, 2001).

Mirroring the transformation in the welfare system, contemporary poverty support policy has largely shifted focus to subsidizing the *working* poor, particulary those with children.² While the shift to employment-support policies are numerous (from daycare subsidies to transportation within TANF), a substantial increase in the generosity of the EITC is the most substantial element characterizing this transition. The EITC is a refundable tax credit that increases in value with higher earnings, up to a limit. Because it can only be received in conjunction with earnings from the paid labor market, the EITC creates an incentive for low-income earners to work.

The EITC was created in 1975 to off-set payroll taxes and increase after-tax income for low-income working families (Berlin, 2007). It became a significant social policy tool upon expansion in 1986, 1990 and again in 1993 (Berlin, 2000). By 1996 the EITC outpaced total federal expenditures on Aid to Families with Dependent Children (AFDC), and by 2003 the program expended \$34.4 billion to more than 20 million families (Holt, 2006). The EITC is currently the largest cash program for the poor (Berlin, 2007). Yet because the official poverty rate was defined in the 1960s prior to the passage of the EITC, these outlays are not reflected in the official census poverty rate.

² One notable exception would be food stamps, which is available to those with qualifying income, regardless of employment status.

The effect of EITC expenditure on annual rates of poverty has been substantial. Holt (2006) estimates that the EITC reduced annual poverty rates among children by one-fourth. This poverty alleviation can be attributed to fact that the EITC increased incentives for single parents to enter the workforce and/or increase their work hours, as well as the wage supplementation effect of the EITC (Berlin, 2007). In addition, studies find that a high percentage of eligible workers required to file a tax return claim the EITC; recent estimates range from 83-94% (Holt, 2006).

2.5 The Current Investigation

In this paper we examine two cohorts of black and white children: a *pre-welfare reform* cohort, which is comprised of children who grew up under the former social policy regime (characterized by cash entitlements but less generous work incentives); and a *post-welfare reform* cohort, which is comprised of children who grew up during the current social policy regime (characterized by more generous work incentives but few cash entitlements). No research that we are aware of has examined differences in long-term child poverty between these periods.

We measure long-term poverty using post-tax income, a more accurate reflection of the resources available to families. In contrast, the traditional poverty calculation uses a family income measure that does not include non-cash benefits like Food Stamps or credits administered through the tax system such as the EITC (Burtless & Smeeding, 2001). Using a more comprehensive measure of family income that includes federal taxes and credits, in our first research question we ask how a change in social policy, namely the increase in EITC generosity, impacts long-term child poverty and whether the impact differs for black and white children.

We examine this question by first comparing the long-term poverty rates by race across the two periods, secondly, by disaggregating the income composition of the long term poor in each of the periods, and third by drawing transition matrices to track movement out of long term poverty accounted for by the EITC.

In our second research question, we examine whether children in the post-welfare reform era are better off than their pre-reform counterparts at different levels of employment. To do this, we compare children's predicted probabilities of experiencing long-term poverty given low, moderate and full parental employment in each of the two periods while controlling for other observed factors.

3. Data and Methods

3.1 Data Source and Sample

To conduct our analyses, we use the Panel Study of Income Dynamics (PSID), a nationally representative study that regularly collects detailed information on sample members and their families. It consists of the self-weighting "Survey Research Center"

(SRC) sample and the "Survey of Economic Opportunity" (SEO) over-sample of lowincome and African American respondents, which together form the "core" sample. The first wave of the panel study, conducted in 1968, sampled 4,800 families, comprised of about 18,000 individuals. PSID staff sought to re-interview these individuals and their family members annually until 1997, with subsequent interviews conducted biennially. Because the PSID is a longitudinal survey, original core sample members age, form new households, have children, etc. To account for these dynamic processes, the children of PSID sample members inherit the "PSID gene" and become a part of the core sample. By 2007, the PSID included information on nearly 70,000 individuals.³ As of 1989 the children of the original 1968 PSID respondents had attrited at a rate of roughly 50%. This attrition was concentrated among those of the lowest socioeconomic stature. However, selection was moderated by reversion to the mean over time; therefore, attrition has not seriously distorted the representativeness of the PSID (Fitzgerald, Gottschalk, & Moffitt, 1998a, 1998b).

We use the PSID to investigate long-term childhood poverty for two cohorts of children: a *pre-welfare reform cohort*, consisting of children aged 0-10 years old in 1987 who were observed in the PSID biennially beginning in 1987; and a *post-welfare reform cohort*, consisting of children aged 0-10 years old in 1997 who were observed biennially beginning in 1997.⁴ We choose these cohorts to represent two different social policy regimes. The pre-reform cohort is characterized by a cash entitlement regime, in which cash safety nets, although meager, were available to those with eligible income. The postreform context is characterized by a work subsidy regime, in which access to cash safety nets and wage subsidizes is limited largely to those employed in the paid labor force and where low wage work is subsidized by a more generous EITC.

3.2 Long-term Poverty and Other Measures

To measure long-term poverty, we calculate the long-term income-to-needs ratio, which is a respondent's long-term family income divided by their long-term family "needs." We calculate long-term family income in two ways. First, to calculate the "pre-tax" longterm income, we sum together the annual family income across all five years in the observation period (after converting to constant dollars). We obtain the annual family income from the PSID data file. This variable includes wages, cash transfers, and income from social safety net programs like Food Stamps and cash welfare.

³ For more information on the study design of the PSID, visit

http://psidonline.isr.umich.edu/Guide/Overview.html.

⁴ We choose these years because in 1997 the PSID went to biennial interviewing. For the sake of comparison, we use information from every other year beginning in 1987 for the pre-reform cohort. We conduct each analysis in duplicate to assure that our use of information from every other year does not produce biased estimates (analyses not shown but available from authors by request). Finally, respondents are eligible for our analytic sample only if they have non-missing values on our measures of interest, which are described below in greater detail.

To construct a second measure, the "post-tax" long-term income, we add federal tax liability, which includes the refundable EITC, to the annual family income and sum across all five years in the observation period (after converting to constant dollars).⁵ We calculate federal tax liabilities/credits using the National Bureau of Economic Research Internet Taxsim version 8.0 software (Feenberg & Coutts, 2007).

The official census poverty threshold determines a respondent's annual needs. To calculate long-term needs, we sum the respondent's official census poverty threshold across all five years in the observation period (after converting to constant dollars).⁶ A respondent is considered long-term poor if their ratio of long-term income to long-term needs is less than 1.0.

A respondent's demographic and socioeconomic characteristics are measured using information from the PSID. We measure race using a binary variable, which indicates whether a respondent is black or white.⁷ Unfortunately, small sample sizes prevent us from analyzing long-term poverty among non-black and non-white respondents.⁸

Family structure is measured using a three-category variable that indicates the number of years a respondent lived in a two-parent household (all years, some years, and no years). Respondents were considered to be living in a two-parent household in a year if the household had a head and "spouse" present. In the PSID, a "spouse" could be a married or cohabiting partner of the household head. Education of the head of household is measured using a three-category variable that indicates the number of years a respondent

⁵ Although the value of the EITC received is not reported directly by respondents, previous research suggests that low-income families are knowledgeable about the credit and that take-up rates are substantial (Scholz, 1994).

⁶ Income and poverty thresholds are converted to constant dollars using the CPI-U-RS prior to summing. The census poverty threshold for a family in a given year is determined by family size. Prior to 1980, the census poverty threshold was determined by family size, gender, age, and farm/non-farm status. After 1980, the poverty threshold was determined by family size, age, and farm/non-farm status. We simplify this determination by using the average weighted threshold by family size for non-farm families in all years. Annual poverty rates derived from the PSID using the Census Bureau poverty thresholds are consistent with the CPS, although PSID estimates of poverty are lower than the CPS because the PSID uses a broader measure of income (Grieger et. al., 2009).

⁷ Although a respondent's race is time-invariant, it is possible for the responses to vary from wave-to-wave depending on which household member responds to the survey, especially if the respondent is of mixed-race background. In cases where the reported race varies over time, we use the modal race category.

⁸ Until the 1990s, when an immigrant sub-sample was added, the PSID was only representative of the non-immigrant population. We do not include sub-sample members for whom data are available for only a few years. PSID documentation is available at: http://www.psidonline.psc.isr.umich.edu.

lived with a household head who earned a high school degree (all years, some years, and no years).

We measure parental employment using a three-category variable that indicates the number of years a respondent lived with a household head/spouse who was employed during the five year observation period (0-2 years, 3-4 years, and all years). We count a head/spouse as employed if they reported positive income from wages during a given year.

Age of the household head is measured using the youngest age reported by the household head during the five-year observation period. The number of children in the household is measured using the average of the number of respondents under the age of 18 in a household over the five-year observation period.

Finally, we measure the respondent's place of residence using a variable that divides the U.S. into four regions (Northeast, West, South, and Midwest). It is possible that a respondent may move from one region to another during the observation period, and in these cases, we assign the mode.

3.3 Hypotheses

We are specifically interested in analyzing how a shift in the social policy landscape from a cash entitlement to subsidized work approach affected long-term poverty for black and white children. Two major aspects of this shift, the welfare reforms of 1996 and the increased generosity of the EITC, were designed to incentivize participation in the labor force. These policy changes along with increased labor force participation could substantially affect the rate of long-term child poverty.

As federal tax structures and the EITC are more generous for members of the post-reform cohort, and because of the tight labor market of the mid- to late-1990s, *we anticipate that post-reform children will have a lower long-term poverty rate than members of the pre-reform cohort.*

Unlike cash welfare and Food Stamp income, which are usually included in the computation of family income, federal taxes/credits, including the EITC, often are not. Thus, we combine family income with tax credits/liabilities to measure the effect they have on the long-term child poverty rate. Because of the increases in the EITC, we anticipate that the inclusion of federal taxes in the calculation of income will have a greater impact (in terms of reduction) on the long-term child poverty rate of post-reform cohort members.

As we documented above, concurrent with changes in federal social policy were changes in the demographic characteristics of children's families. The substantial gains in employment during the economic boom of the mid- to late-1990s, especially for blacks, reduced annual poverty rates. With the increasing importance of employment as a factor for determining eligibility for social support in the post-reform era, *we anticipate that* employment, net of other observed factors, will be a much stronger predictor of longterm poverty status for post-reformers than for pre-reformers.

Finally, because social support in the post-reform era is more strongly linked to participation in the paid labor force, we expect that post-reform children who reside with parents employed in all years will experience the largest reduction in long-term poverty compared to pre-reform counterparts. Conversely, post-reformers whose parents are not fully employed (especially those with very low levels of employment) will be worse-off than similar pre-reformers because they have fewer resources to draw upon for financial support.

3.4 Empirical Strategy

Because of the very different experiences of black and white respondents with respect to issues of poverty and employment (which we documented in the introduction), we conduct separate analyses for black and white children and compare the results.

To test our hypotheses, we first compute and compare the average long-term income-toneeds by race and cohort using pre- and post-tax income. These averages allow us to make three important comparisons: 1) black-white differences in pre- and post-tax income-to-needs within cohort, which we expect to be substantial, 2) cohort differences in pre- and post-tax income-to-needs by race, and 3) pre- and post-tax differences within race and cohort. We also examine the distribution of long-term income-to-needs using pre- and post-tax income separately by race and cohort. This allows us to go beyond the averages we just calculated by documenting the effect of including tax liabilities and credits on the entire distribution of long-term income-to-needs.

Then, using post-tax long-term income-to-needs and the definition for long-term poverty we described above (long-term income-to-needs less than 1.0), we calculate the proportion of children who are long-term poor by race and cohort. Because we are interested in examining the resources that are actually available to a respondent's family, we use the post-tax long-term income-to-needs for this and the remainder of our analyses.

To better understand the sources from which long-term poor children's families obtain their income, we calculate the proportion of a respondent's long-term income that comes from wages, Food Stamps, cash welfare (ADFC or TANF, depending on cohort), and the EITC. For the purposes of comparison and because they are the most susceptible to experiencing long-term poverty, we also do this calculation for the long-term near-poor, which we define as having long-term income-to-needs between 1.0 and 1.5.

Next, we examine the effect of the EITC on long-term poverty status. We construct raceand cohort-specific transition matrices indicating the proportion of children long-term severely poor (long-term income-to-needs below 0.5), long-term poor, and non-poor before the EITC is included who subsequently move to another income category after the EITC is included. Finally, we document how demographic and employment characteristics are associated with the likelihood of experiencing long-term child poverty using standard logistic regression techniques, stratified by race and cohort. To illustrate the impact of employment on the likelihood of experiencing long-term child poverty, we illustrate how predicted probabilities change when varying parent's level of employment, holding other factors constant, separately by race and cohort.

In each of our analyses we correct for sample attrition and over-sampling of low-income and black respondents by using the individual core weights.⁹

4. Results

Table 1 shows the average long-term income-to-needs for each cohort using pre- and post-tax income, separately by race. Pre-tax income includes wages, Food Stamps, and welfare. Post-tax income adds tax liabilities and/or credits which lowers the income to needs ratio for most families. Table 1 also shows that the households of black children are not as affluent as the households of their white counterparts – white children live in households with about twice the income-to-needs as black children, on average.

[Table 1 here]

Examining only pre-tax income-to-needs, children from the post-reform cohort reside in households that are not as well off as their pre-reform counterparts. For example, the average pre-tax, long-term income-to-needs for pre-reform white children was 4.46 compared to 4.20 for post-reform counterparts; and 2.35 for pre-reform black children vs. 2.10 for post-reform black children.

However, when considering post-tax income, post-reform children have *higher* average long-term income-to-needs than their pre-reform counterparts (3.17 vs. 3.61 for pre- and post-reform whites and 1.76 vs. 1.99 for pre- and post-reform blacks, respectively). This means that while the average income to needs ratio for all children appears to fall across cohorts, when tax credits are factored in, the average income to needs ratio for all children appears to fall across of tax owed by low-income families and to the increase in availability and generosity of the EITC.

⁹ Because each of our sample members is observed in all five years of the observation period, we use the core weight associated with the first year in the observation period for each cohort (the 1987 and 1997 core weights, depending on cohort membership). The core sample weights in the PSID reflect the addition of immigrants in the mid 1990s. There are no members of the immigrant sample in our analyses, since respondents must have been observed in all years during the observation period and immigrants didn't become a part of the sample until 1997. For more information on PSID sample weights, visit http://psidonline.isr.umich.edu/Data/weights/.

Next, we examine how considering post-tax income changes the distribution or spread of long-term income-to-needs differentially for our categories of children (black and white, pre and post-reform). Figure 1 illustrates the long-term income-to-needs distributions for white children and Figure 2 does the same for black children. When we compare the distributions of pre- and post-tax income-to-needs within cohort, including federal taxes shifts the entire distribution toward zero for white and black children in the pre-reform cohorts. However, for children of the post-reform cohort, including federal taxes compresses the distribution toward the average. This means that income inequality is reduced by including federal taxes in the calculation of income to needs for our post-reform cohort. Lower federal tax rates for low-income households and increases in the generosity and eligibility of the EITC in the 1990s explain why this compression is not observed in the pre-reform cohort. This compression is most noticeable among the households of black children and is due to black children's much lower income-to-needs than that of their white counterparts, on average.

[Figure 1 here]

[Figure 2 here]

The pre- and post-tax comparisons demonstrate that it is important to consider federal taxes in a calculation of income because the refundable EITC is a substantial income supplement for the working poor. For example, Figure 2 demonstrates that among post-reformers, a portion of the middle 50% of black children fall below the long-term poverty line (income-to-needs equal to 1) before including taxes, but not after including them. Thus, for the remainder of our analyses we rely on the post-tax income measure.

In Figure 3, we show long-term poverty rates by race and cohort, calculated using posttax income. Recall, we consider a child to be long-term poor if the long-term income-toneeds ratio falls below 1.0.

[Figure 3 here]

Most evidently, Figure 3 documents the overall lower long-term poverty rate among white children compared to black children. Black children have about six times the long-term poverty rate as white children of the same cohort. For example, about 1 in 3 pre-reform black children are long-term poor compared to just 5.8 percent of pre-reform white children. Further we find that long-term poverty drops substantially and proportionally for both black and white children of the post-reform cohort, with about 1 in 5 black children and 3.6 percent of white children classified as long-term poor. In other words, while 1/3 of black children were poor across all five years of the pre-reform period (1987-1995), this was true for 1/5 black children in the post-reform period (1997-2005). Although this number remains high, it represents a substantial decline in long-term child poverty. This decline coincides with the increase in employment in the late 1990s, coupled with the increase in the generosity and eligibility of the EITC, both of which increased income for the average low-income household.

To show how the income packages of pre- and post-reform cohorts differ, Table 2 shows the components of post-tax income by race and cohort for long-term poor and near-poor children.

[Table 2 here]

Table 2 documents the differences between the household income packages of white and black children, between pre- and post-reform children, and between the long-term poor and near poor. We classify children as long-term near poor if their long-term income-to-needs is between 1.0 and 1.5. According to Table 2, pre-reform long-term poor white children lived in households that received most of their income from wages (59.3 percent). The rest of their household income was derived from a combination of Food Stamps (22.5 percent), welfare (14.7 percent), and a very small portion from the EITC (3.5 percent).

In comparison, post-reform white children lived in households that derived slightly less income from wages (54.1 percent vs. 59.3 percent) and welfare (12.6 percent vs. 14.7 percent) and slightly more income from Food Stamps (23.5 percent vs. 22.5 percent). White children of the post-reform cohort received almost three times as much income (proportionally) from the EITC as pre-reform counterparts (9.8 percent vs. 3.5 percent).

Pre-reform long-term poor black children lived in households with very different income packages than their white counterparts. These households derived most of their income from Food Stamps (39.7 percent – nearly twice as much as long-term poor whites of the same cohort) rather than wages (32.9 percent) and also relied heavily on income from welfare (24.3 percent – about twice that of long-term poor whites of the same cohort). Similar to pre-reform white children, the EITC accounted for a very small portion of the household income of pre-reform blacks (3.1 percent).

In contrast, post-reform long-term poor blacks received much more of their income from wages (53.6 percent vs. 32.9 percent) and drew less income from Food Stamps (24.4 percent vs. 39.7 percent) and welfare (10.5 percent vs. 24.3 percent). Like long-term poor white children, post-reform long-term poor black children received substantially more income from EITC than their pre-reform counterparts (11.5 percent vs. 3.1 percent). So, we find that while pre-reform long-term poor whites and blacks lived in households with very different income packages, post-reform long-term poor whites and blacks had very similar income packages, on average.

For the purposes of comparison, Table 2 also decomposes the income packages of longterm near-poor children, or those with a long-term income-to-needs above 1.0 but less than 1.5. Long-term near-poor children, regardless of race and cohort, lived in households that received the majority of their income from wages and only small amounts from Food Stamps and welfare. Like their long-term poor counterparts, longterm near-poor children of the post-reform cohort received about 3-4 times more income (proportionally) from the EITC than pre-reform counterparts (8.8 vs. 2.2 percent for whites and 9.3 vs. 2.8 percent for blacks). Again, post-reform long-term near-poor black children lived in households with income packages similar to their white counterparts (although they relied slightly more on non-wage income).

Table 2 shows that the increases in the generosity and eligibility for the EITC made it a substantial part of post-reform long-term poor and near-poor children's household resources. This increased income from the EITC, especially in the post-reform cohort, could have the effect of moving children out of long-term poverty. Table 3 contains transition matrices showing how increased household income as a result of the EITC changed children's long-term poverty status by race and cohort.

[Table 3 here]

For pre-reform cohorts, additional income from the EITC moved a small portion of black and white children out of long-term poverty. Income from the EITC lifted about 4.1 percent of pre-reform black children and 10.6 percent of pre-reform white children who would have otherwise been long-term poor out of long-term poverty. The EITC moved 3.4 percent of otherwise severely long-term poor blacks and 18.8 percent of similar whites out of long-term severe poverty (defined as having a long-term income-to-needs less than 0.5). This large difference could be due to the income distribution of whites being higher than blacks, i.e. long-term poor black children are poorer than long-term poor white children on average. It could also be due to a race differential in employment, the critical factor in determining eligibility for the EITC.

For post-reform children, the affects of the EITC on long-term poverty status are much more pronounced compared to pre-reform children. For post-reform children, the EITC alone was responsible for moving about a quarter of otherwise long-term poor children out of long-term poverty – 28.8 percent of otherwise long-term poor blacks and 24.2 percent of similar whites moved out of long-term poverty because of increases to household income from the EITC. About 8 percent of otherwise long-term severely poor black and white children moved out of severe long-term poverty because of income from the EITC. This portion is relatively small because the EITC is a wage supplement, and the severely long-term poor are more likely to be unemployed and, thus, ineligible for the credit.

In addition to considering how policy changes affected the incidence of LTP, it is also important to consider how changes in demographic factors affecting family income (number of children in household, single parenthood, education level of head) and changes in levels of employment independently affected poverty rates. Changing patterns of employment are crucial to consider as post-reform receipt of the EITC and welfare is contingent upon employment.

Table 4 shows descriptive statistics on demographic and employment variables for black and white children by cohort. The top portion of the figure shows descriptive statistics for all children and the bottom portion is dedicated to long-term poor children only.

[Table 4 here]

According to the top portion of Table 4, post-reform white children spent less time in two-parent households, had older household heads, and lived in households with fewer children under 18 than pre-reform counterparts, on average. Post-reform black children spent more time with a parent with a high school diploma, had older household heads, lived in households with fewer children under 18, and had parents that worked more than pre-reform cohorts, on average. With the exception of the reduced time post-reform white children spent in two-parent households, we expect all these cohort differences to be associated with lower long-term child poverty rates for post-reform cohort members.

For the sake of comparison, the bottom portion of Table 4 documents the demographic and employment characteristics of long-term poor children's households. Overall, longterm poor children spent less time in households with two-parents, less time in households with a parent with a high school diploma, had younger household heads, lived in households with a greater number of children under 18, and had parents who spent less time in the labor force than the average child. These differences persist across cohort and racial group membership.

Long-term poor white children of the post-reform cohort spent less time in two-parent households (1.83 versus 2.67 years), less time in households with a parent with a high school degree (1.56 versus 2.31 years), and lived in households with a greater number of children under 18 than long-term poor white children of the pre-reform cohort (3.24 versus 2.83 children). Thus, the demographic profiles of white long-term poor children of the post reform cohort were worse than those of pre-reformers (in terms of the known correlates of annual poverty). This could potentially indicate that white children had to be living in households that were comparatively worse-off in order to classify as long-term poor in the post-reform era than in the pre-reform era.

Black long-term poor children of the post-reform cohort had parents who worked *more* years than parents of pre-reformers on average (3.43 versus 2.29 years). Thus, unlike whites, post-reform black long-term poor children lived in households that were comparatively better-off than pre-reformers (in terms of the correlates of annual poverty).

To test whether employment status became a more important predictor of long-term poverty status because of the social policy shift, we examine the unconditional long-term child poverty rate at differing levels of parental employment by cohort (Figure 3) and the predicted probability of being long-term poor at differing levels of parental employment while holding all other characteristics constant (Figure 4).

Figure 4 documents the proportion of children who experience long-term poverty at differing levels of parental employment, conditional only on race and cohort. As we would expect, Figure 3 shows that more years of parental employment is associated with lower long-term child poverty, regardless of race and cohort membership.

[Figure 4 here]

Overall, Figure 4 shows that post-reform children at lower levels of employment are better off than their pre-reform counterparts, but this advantage diminishes as parental employment increases. Although the advantage diminishes, long-term poverty among children with fully-employed parents is uncommon. This indicates that post-reformers are no worse than pre-reformers at high levels of parental employment but better off than pre-reformers at lower levels of parental employment, on average. This may suggest that post-reform changes in social policy, characterized by a shift from cash entitlements to subsidized work, were generally favorable for children in averting long-term poverty, at least given the robust economic climate of the late 20th and early 21st century. However, these conditional proportions do not adjust for other observed factors.

Figure 5 documents the predicted probability of being long-term poor by cohort and race as a function of parental employment controlling for other observed factors. This analysis allows us to examine how long-term poverty would change for black pre-reform, black post-reform, white pre-reform, and white post-reform children under differing parental employment scenarios, adjusting for changes in the demographic profile from one cohort to the next. Predicted probabilities are derived using estimates from stratified logistic regressions by race and cohort of long-term poverty status on demographic and employment variables. Complete results can be viewed in the appendix.

[Figure 5 here]

As we would expect, Figure 5 shows that more years of parental employment is associated with a lower probability of being long-term poor, regardless of race and cohort membership. The figure also documents the generally lower probability post-reform children have of experiencing long-term poverty compared to similar pre-reform children regardless of race.

However, Figure 5 also documents important differences between white and black children in the predicted probabilities of experiencing long-term poverty. For white children, there is a large difference in pre- and post-reform predicted probabilities at low levels of employment. This indicates that the average post-reform white child with a parent who worked only 0-2 years during the five-year observation period fared better than similar pre-reform counterparts on average. The cohort difference narrows with increasing parental employment, with pre-and post-reform white children with a parent employed all five years having similarly low probabilities of experiencing long-term poverty.

For black children, there is no difference in pre- and post-reform predicted probabilities at the lowest levels of employment. However, this difference widens for black children with parents who were employed 3 or 4 (of 5) years, with post-reform black children having a substantially lower probability of experiencing long-term poverty than their similar pre-reform counterparts. The difference in long-term poverty converges at full parental employment, with both pre- and post-reform children having similarly (low) probabilities of being long-term poor.

This could be due to an increase in wages (either directly or indirectly via the EITC) or because post-reformers of the same employment category worked longer than similar pre-reformers (i.e. there was less turnover and fewer employment gaps among post-reform parents in the 0-2 years category than pre-reform parents of the same employment category).

5. Discussion

In this paper, we examine several hypotheses related to the effect of shifting federal social policies on long-term child poverty in the U.S. at the turn of the twentieth century. This shift, characterized by a move away from cash entitlements toward subsidized work, was intended to create incentives for low-income parents to choose work over welfare. Our primary focus is understanding how increases in the generosity of the EITC, a wage subsidy for low-income earners touted as the major anti-poverty program of the post-welfare reform era, impacted long-term poverty rates, and whether this impact differed for black and white children. We are also interested in understanding whether the shift in social policy left post-reform children with parents who have low levels of employment at greater risk of experiencing long-term poverty than similar pre-reformers.

First, we hypothesized that post-reform children would have lower long-term poverty rates than their pre-reform counterparts. We also hypothesized that the inclusion of federal taxes in the calculation of income would reduce long-term poverty more for post-reform than pre-reform children. Although long-term child poverty (using pre-tax income) increased over time, when tax liabilities and credits were included, long-term poverty dropped, supporting both of our hypotheses.

The EITC played an important role in this poverty alleviation. Because of the large increase in EITC generosity, the EITC was more effective in moving post-reform children out of long-term poverty than was the case for pre-reform children. In addition, the substantial racial difference in the poverty alleviation effect of the EITC pre-reform disappeared post-reform. For pre-reform whites, the EITC was responsible for moving roughly 1 in 10 white children who would otherwise have been long-term poor out of poverty. For pre-reform black children, the EITC moved just under 5% of the long-term poor out of poverty. In contrast, in the post-reform era, the EITC moved the same proportion of long-term poor white and black children out of poverty.

The explanation for this racial difference lies in the distribution of long-term income-toneeds. On average, long-term poor white children had higher income-to-needs ratios than long-term poor black children. This means that long-term poor white children needed a smaller increase in income than did their black counterparts to escape long-term poverty. In the pre-reform era, the EITC was not as generous, and thus, disproportionally benefitted long-term poor white children who needed a smaller boost to escape poverty.

We also found that race differences in the long-term income packages of black and white children diminished substantially across the two periods. Unlike their pre-reform counterparts, the long-term income packages of post-reform whites and blacks were very

similar, each obtaining just over half their long-term income from wages and about 10 percent from the EITC. This can be attributed to the increase in generosity of the EITC along with the significant gains in employment experienced by the parents of post-reform of black children. Despite this encouraging finding, it is important to note that although the effects of the EITC are proportionally similar for whites and blacks, far more black children experience long-term poverty than do white children. Additionally, the EITC moved more whites than blacks out of long-term severe poverty, indicating either that the parents of severely poor black children are not as fully employed as similar whites, or that their household resources, on average, were much lower than similar whites. We believe that both of these factors likely play a role in explaining this race differential.

Second, we hypothesized that employment, net of other observed factors, would be a much stronger predictor of long-term poverty status for post-reformers than for prereformers. Our multivariate regression analysis does find some support for this hypothesis, but not necessarily in ways we expected. Rather, we found employment was as important for predicting long-term poverty status for children in the pre-reform cohort as for children in the post-reform cohort.

We hypothesized that post-reform children who reside with parents who are employed in all years would experience the largest reduction in long-term poverty over their prereform counterparts. Conversely, we hypothesized that post-reformers whose parents are not fully employed for all years in our observation period (especially those with very low levels of employment) would be worse off than similar pre-reform counterparts.

We note that parents of post-reform long-term poor black children worked more years than similar pre-reformers on average – indicating that increased employment does not automatically guarantee mobility out of long-term poverty. However, we do not find that post-reform black children in low-employment households (parent employed for 0-2 years of the five year observation period) fare *worse* than their pre-reform counterparts, although they are not helped either. Post-reform black children in households with midlevels of employment (parent employed for 3 or 4 years of the five year observation period), fare better than pre-reform counterparts on average and holding other observed factors constant.

Conversely, post-reform white children in low-employment households fare much better than pre-reform counterparts, though this benefit diminishes as parental employment increases. Children of both race groups and cohorts are very unlikely to experience longterm poverty if they have a parent who worked during all five years of the observation period. Thus, we do not find evidence that post-reform policies make children at various levels of parental employment worse off, rather, we find evidence that overall children are helped, although some children are helped less (or not at all).

We believe the racial disparity in the effect of employment on long-term poverty status can be explained by racial variation in the employment variable. For example, among parents with low levels of employment (0-2 years employed out of five), blacks may be sporadically employed throughout the year while whites are employed for the full year. Such an interpretation is supported by previous research documenting the significant black-white gap in labor force participation (Bound & Freeman, 1992; Bound & Holzer, 1993; Browne, 1999; Reid, 2002)

Our findings indicating that children residing with fully employed parents face the same extremely low likelihood of experiencing long-term poverty regardless of race are encouraging. However, they should not obscure the fact that black children are more likely to live in households with parents who are not fully employed and thus, as a group, are less able to benefit from the EITC than whites.

Because black employment levels are more sensitive to shifts in the macro economy, and because blacks are more likely to experience low-levels of employment, as a group they benefit less from shifts in social policy that tie social support to work. This should be especially evident during times of economic contraction. The economic boom of the mid-to-late 1990s was crucial in narrowing the black-white gap in long-term poverty. However, it remains to be seen how children will fare under the current social policy regime given the job scarcity of a recessionary economy like that which characterized the first decade of the 21st century.

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Figure 1: Distribution of long-term income-to-needs for white children. The end points of the distribution represent the bottom and top 1 percentile. The ends of the solid box in the center of the distribution represent the 25th and 75th percentile. The line in the middle of the solid box is the median. For each cohort, the distribution is shown separately by whether pre-tax or post-tax income was used in the calculation of long-term income-to-needs. Post-tax income includes federal tax liabilities and credits, such as the Earned Income Tax Credit.



Figure 2: Distribution of long-term income-to-needs for black children. The end points of the distribution represent the bottom and top 1 percentile. The ends of the solid box in the center of the distribution represent the 25th and 75th percentile. The line in the middle of the solid box is the median. For each cohort, the distribution is shown separately by whether pre-tax or post-tax income was used in the calculation of long-term income-to-needs. Post-tax income includes federal tax liabilities and credits, such as the Earned Income Tax Credit.



Figure 3: Long-term child poverty rates by race and cohort, calculated using post-tax income. The darkened columns represent the long-term child poverty rate for children of the pre-reform cohort and the lighter columns are for the children of the post-reform cohort. Cohort differences within race are statistically significant at the 95% level of confidence.



Figure 4: Long-term child poverty rate depending on parental employment by cohort and race. The darker lines represent the long-term poverty rates of black children and the lighter lines are for white children. Dotted lines represent pre-reform children, while solid lines represent pre-reform children.



Figure 5: Predicted probability associated with experiencing long-term poverty as a function of parental employment, net of other observed characteristics and separate by race and cohort. The darker lines represent the long-term poverty rates of black children and the lighter lines are for white children. Dotted lines represent pre-reform children, while solid lines represent pre-reform children.



	W	hite	Black		
	Pre-Reform	Post-Reform	Pre-Reform	Post-Reform	
Unweighted n	1740	1342	1286	1236	
weighted %	81.96	80.29	18.04	19.71	
Average Long-Term Income-to-Needs					
Pre-tax	4.46	4.20	2.35	2.10	
Post-tax	3.17	3.61	1.76	1.99	

Table 1: Average Long-Term Income-to-Needs by Race and Cohort, PSID 1987-2005*

*Note: Pre-tax income-to-needs includes wages, food stamps, and welfare. Post-tax income-to-needs adds tax liabilities and credits.

	White		Bl	ick					
Component	Pre-Reform	Post-Reform	Pre-Reform	Post-Reform					
		Long-Term Poor							
Wages	0.593	0.541	0.329	0.536					
EITC	0.035	0.098	0.031	0.115					
Food Stamps	0.225	0.235	0.397	0.244					
Welfare	0.147	0.126	0.243	0.105					
	Long-Term Near Poor								
Wages	0.916	0.844	0.821	0.794					
EITC	0.022	0.088	0.028	0.093					
Food Stamps	0.042	0.047	0.079	0.077					
Welfare	0.020	0.022	0.072	0.036					

Table 2: Post-Tax Income Components by Race and Cohort, PSID 1987-2005

Before FITC	Pre-Reform, After EITC			Post-Reform, After EITC			
Delote LITC	Not LTP	LTP	Severe LTP	Not LTP	LTP	Severe LTP	
Not LTP	1.000	0.000	0.000	1.000	0.000	0.000	
LTP	0.041	0.959	0.000	0.282	0.718	0.000	
Severe LTP	0.000	0.034	0.966	0.000	0.082	0.918	
White Children							
Defere FITC	Pre-Reform, After EITC		Post-Reform, After EITC				
Before EITC	Not LTP	LTP	Severe LTP	Not LTP	LTP	Severe LTP	
Not LTP	1.000	0.000	0.000	1.000	0.000	0.000	
LTP	0.106	0.894	0.000	0.242	0.758	0.000	
Severe LTP	0.000	0.188	0.812	0.000	0.089	0.911	

Table 3: Changes in Long-Term Poverty Associated with EITC Receipt by Race and Cohort

Black Children

Reform		
Reform		
Reform		
.15		
.83		
2.82		
.49		
.37		
Black		
Reform		
.71		
2.07		
1.20		
.01		
.43		

Table 4: Demographic and Employment Characteristics for Black and White Children by Cohort

*Note: Bolded values indicate that pre- and post-reform differences are statistically significant at p < 0.05.

	White 1987-1995			White 1997-2005		
	est	std err	sig	est	std err	sig
Years in a Two Parent Household						
No Years	0.719	0.571		1.305	0.872	
Some Years	-0.166	0.453		-0.560	0.793	
All Years (omitted)						
Years Residing with a HS Grad Parent						
No Years	2.090	0.335	***	2.102	0.643	***
Some Years	1.496	0.654	*	1.641	0.642	*
All Years (omitted)						
Number of Years At Least One Parent was Er	nployed					
0-2 Years	5.606	0.755	***	5.555	1.053	***
3-4 Years	2.601	0.389	***	2.917	0.517	***
All Years (omitted)						
Age of Household Head	-0.056	0.023	*	-0.106	0.052	*
Number of Children Under 18 in HH	0.699	0.149	***	1.117	0.251	***
Constant	-5.121	0.900	***	-4.933	1.520	***
p > chi-squared	0.000			0.000		
Pseudo R-Squared	0.476			0.570		

Appendix A: Selected Coefficients from Logistic Regression on Long-Term Poverty Status for Black Children by Cohort, PSID: 1987-2005*

*Note: *** = p<0.001; ** = p<0.01; * = p<0.05; includes a control for region (not shown)

	Black 1987-1995			Black 1997-2005			
	est	std err	sig	est	std err	sig	
Years in a Two Parent Household							
No Years	3.442	0.484	***	1.313	0.601	*	
Some Years	1.717	0.495	***	0.716	0.666		
All Years (omitted)							
Years Residing with a HS Grad Parent							
No Years	1.980	0.392	***	2.242	0.469	***	
Some Years	-0.402	0.510		0.912	0.418	*	
All Years (omitted)							
Number of Years At Least One Parent was E	Employed						
0-2 Years	2.538	0.447	***	2.863	0.715	***	
3-4 Years	2.143	0.364	***	1.341	0.385	***	
All Years (omitted)							
Age of Household Head	-0.068	0.019	***	-0.048	0.021	*	
Number of Children Under 18 in HH	1.171	0.187	***	0.696	0.137	***	
Constant	-6.402	1.041	***	-5.949	1.443	***	
p > chi-squared	0.0	0.000			0.000		
Pseudo R-Squared	0.5	0.583			0.410		

Appendix B: Selected Coefficients from Logistic Regression on Long-Term Poverty Status for White Children by Cohort, PSID: 1987-2005*

*Note: *** = p<0.001; ** = p<0.01; * = p<0.05; includes a control for region (not shown)