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Robert A. Moffitt John Karl Scholz

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ABSTRACT

Means-tested and social insurance programs in the U.S. have been transformed over the last 25 years, with expansions in Medicare and Medicaid, the Earned Income Tax Credit, and Supplemental Security Income, and with contractions in Temporary Assistance for Needy Families. We examine the effect of these changes on benefits received by families. We find that transfer program expenditures in total rose from 1984 to 2004 but the increase was spread unevenly across different demographic groups and income classes. Very poor elderly, disabled, and childless families received greatly increased expenditures, mostly arising from Social Security, SSDI, SSI, and the health programs. Very poor single parent and two-parent households experienced declines in expenditures, driven largely by lower recipiency rates, benefit receipt, or both in the AFDC/TANF and Food Stamp programs. For example, AFDC-TANF participation for one-adult families with children and market income below 50 percent of the poverty line fell from 62 percent in 1984 to 24 percent in 2004. However, expenditures received by one- and two-parent households further up the income scale increased, largely because of expansions of the EITC. Thus there was a redistribution of income from the very poor to the near-poor and nonpoor for these one- and two-parent households, as well as an overall relative redistribution from them to the elderly, disabled, and childless.

Robert A. Moffitt Department of Economics Johns Hopkins University 3400 North Charles Street Baltimore, MD 21218 and NBER moffitt@jhu.edu

John Karl Scholz University of Wisconsin - Madison Department of Economics 1180 Observatory Drive Madison, WI 53706 and NBER jkscholz@facstaff.wisc.edu A variety of means-tested transfer and social insurance programs are available in the U.S. to families and individuals who, for one reason or another, need assistance. The first of these, means-tested programs, limit benefits to those whose incomes and assets fall below specific thresholds. Medicaid provides health care to poor families, while food stamps (recently renamed Supplemental Nutrition Assistance Program or SNAP) provide resources that can be used to purchase food. Supplemental Security Income (SSI) provides cash benefits for aged, blind, and disabled families. Medicaid, SNAP, and SSI are entitlements: all who satisfy the stipulated eligibility requirements are eligible to receive benefits, regardless of the total budgetary cost. Tax-based programs, such as the earned income tax credit (EITC) and, in recent years, the child credit, provide cash to all eligible low-income, working tax-filers. School food programs provide free or subsidized breakfasts and lunches to all eligible children from low- and moderate-income families.

Other means-tested programs are, however, constrained by Congressional or state funding limits: once program dollars are exhausted, some eligible participants may not be served.

Programs where eligible families or individuals may be denied benefits, or "rationed," include housing assistance, which provides rent subsidies or apartments to those who meet particular eligibility criteria; Temporary Assistance for Needy Families (TANF, formerly known as Aid to Families with Dependent Children, or AFDC), which provides cash benefits to families with

¹ Means-tested transfers are financed by general tax revenues rather than through dedicated financing mechanisms.

children; and the State Child Health Insurance Program (S-CHIP), which extends health care to children living in low- and moderate-income families, building off Medicaid.²

Unlike these means-tested programs, social insurance programs cover almost all employed Americans. These programs – Social Security, Medicare, unemployment insurance (UI), workers' compensation, and disability insurance (DI) – provide near-universal coverage since any individual (or their employer) who makes the required contributions to finance the programs can receive benefits when specific eligibility requirements are met.³ While the majority of benefits from these programs go to individuals or families who, in a lifetime sense, are middle and upper income, receipt is triggered by losing income through disability, involuntary unemployment, or retirement. Consequently, social insurance programs contribute significantly to overall safety net expenditures and have large poverty-reducing effects.

A consequence of this extensive, but patchwork, set of means-tested transfer and social insurance programs is that individuals and households in different circumstances receive quite different benefits. Households with children, particularly those with single parents, may receive TANF, food stamps, Medicaid, school meals, and possibly housing assistance. Disabled individuals may receive SSI or SSDI (the disability program that is part of social security) and Medicaid. Most elderly people receive social security, Medicare, and those with low income may instead receive Medicaid and SSI. Able-bodied, prime-age childless adults may receive food stamps for short time periods.

² Other smaller safety net programs that are not entitlements include WIC, which provides selected food items and nutrition information to pregnant women and to poor and middle-income families with children under 5; and head start, which provides early education to children in poor families.

³ Social insurance programs have dedicated funding mechanisms where, at least in an accounting sense, social insurance taxes are remitted to trust funds from which benefits are paid.

These differences in receipt of government income support across different groups in the population have been extensively documented in a large literature, often examining each program in the government safety net individually (see, for example, the comprehensive surveys in Moffitt, 2003). There have also been studies that examine aggregate expenditure on meanstested and social insurance programs in the U.S. overall, how those expenditures have changed over time, and how they have affected the poverty rate (e.g., Burtless, 1986, 1994; Scholz and Levine, 2002; Scholz, Moffitt, and Cowan, 2009; and Ziliak, 2005, 2008).

This paper has a related but distinct objective, for we focus not only on trends in the level of income support in the population but more directly on its distribution and how that distribution has changed over time. With so many pieces to the safety net, it is difficult to obtain a sense of the generosity and trends of antipoverty spending for different, specific population groups from aggregate data alone. This is particularly true given the substantial changes in tax and transfer programs over the past 25 years. Welfare reform has resulted in the contraction of the programs for nonworking single mothers (AFDC and TANF) while SSI, Medicaid, Medicare, and the EITC have expanded, often rapidly. Given the knowledge that these different programs cover different groups and have different distributional impacts, one can speculate that these trends must have affected the overall distribution of income support in the population. For example, Moffitt (2003, 2007) documents that, while the net effect of the contraction of some programs and expansion of others resulted in a large increase in the overall per-capita level of means-tested transfers in the U.S., it seems likely that more transfers now go to workers and fewer to nonworkers, and more to married couples and fewer to single mothers. Consequently, he speculates that there have been gainers and losers in the shifting nature of the nation's social safety net. What remains unexamined is whether these distributional effects have, in fact, been

quantitatively important, once individual data are used that allow an examination of benefit receipt, a determination of who exactly is receiving what type of benefit, and an exploration of how these patterns have changed over time.

Ziliak (2005, 2008), Meyer and Sullivan (2009), and Blank and Kovak (2009) are closely related papers. Ziliak (2005) finds, through a construction of certain types of poverty indices, an increase in the "inequality" of poverty over time. The concept of inequality of poverty is closely related to the relative incomes of the very poor and the higher-income poor that we examine. Ziliak (2008) uses the Current Population Survey to examine the impact of government programs on the poverty "gap" for different demographic groups, where the poverty gap is also related to the distribution of income within the poor population and the gap is typically larger, the more dispersed that distribution. He finds that the average poverty gap left unfilled by transfer programs has risen over time, especially for single mother families and black families, and that the latter is a result of the replacement of cash welfare by SSI, SSDI, and the EITC. Meyer and Sullivan (2009) provide a thorough discussion of trends in head-count poverty rates, poverty gaps, relative poverty, and deep poverty between 1960 and 2000, focusing on both income and consumption measures of deprivation. And Blank and Kovak (2009) find the number of "disconnected mothers" – single-mothers who have little or no market income, who receive few public transfers, and who do not live with other adults with earnings – have increased in recent years.⁴ These studies focus primarily on trends in poverty rates, often for different types of groups, whereas our focus is on a different outcome, namely, trends in public expenditures across different groups. Prior studies have given less attention to these trends.

⁴ Scholz, Moffitt, and Cowan (2009) provide an overview of the safety net and information on the antipoverty effectiveness of the tax and transfer system.

To document changes in the level and distribution of transfers to different groups in the population across time, we use data from the 1984, 1993, and 2004 panels of the Survey of Income and Program Participation (SIPP). The SIPP is a nationally-representative survey of the U.S. civilian population and is more accurate than the Current Population Survey for the study of income support programs, as this was one of the primary goals in the original establishment of the SIPP. Nevertheless, some benefits are underreported by survey respondents even in the SIPP, so we adjust the data for this underreporting. Most of our analyses stratify the population by two dimensions: demographic characteristics and "market" income (defined precisely later in the paper). For demographic groups, we focus on five (mostly) mutually exclusive sets of families: those with elderly heads, those with any disabled member, and three types of nonelderly, non-disabled families: those who are childless, those with children who are headed by a single parent, and those with children who are headed by two married adults (exact definitions of each group are given below).⁵ For market income, we focus on households with market income below 200 percent of the poverty line, and most of our analyses focus on four groups: those with market income between 0 and 50 percent of the poverty line (commonly called "deep poverty") and those with market income between 50 and 100 percent, 100 percent and 150 percent, and 150 percent and 200 percent of the poverty line. We examine how transfers have shifted across the five demographic groups and between income classes within each demographic group.

We find, consistent with prior work, that transfer program expenditures rose from 1984 to 2004 but that the increase was spread unevenly across different demographic groups and income classes. Very poor elderly and disabled families, for example, received greatly increased

⁵ We say that these groups are "mostly" mutually exclusive because, across years, 1.6 to 1.9 percent of the sample is both disabled and elderly. We allow these two groups, therefore, to overlap slightly.

expenditures, mostly arising from Social Security, SSDI, SSI, and the health programs (Medicare and Medicaid). Very poor childless families also saw increased expenditures mainly arising from housing, Food Stamps, and health programs. Those in these groups who had somewhat higher incomes also saw an increase in expenditures, but smaller in magnitude than for the very poor. In contrast, very poor single-parent and two-parent households experienced declines in expenditures, primarily due to reductions in recipiency rates or benefits in AFDC/TANF and Food Stamps. However, expenditures received by one- and two-parent families higher up in the income distribution increased, largely due to EITC expansions. Thus there was a redistribution of income from the very poor to the near-poor and nonpoor for these one- and two-parent households, as well as an overall relative redistribution from families with children to the elderly, disabled, and childless.

Our paper first examines overall developments in the distribution of expenditures and benefits by demographic group and market income level. We then provide a more detailed examination of the distribution of program participation rates and expenditures for one- and two-parent families with children, two groups that have received particularly close policy attention. We draw implications for policy at the end at the end of the paper.

Section 1: Overall Developments

In this section we show trends in three dimensions. First, we describe changes in the distribution of market incomes between 1984 and 2004. Changes in the distribution of market incomes that occur differentially across and within groups affect the distribution of income and poverty, and one should also expect both means-tested and social insurance programs to fall differentially on those with different market incomes. Second, we summarize trends in the

distribution of transfer expenditures, taken over all programs in total, focusing on differential changes in expenditures received by our five demographic groups and across income classes within each group. Third, we examine trends in average benefits received by different demographic groups and income classes, for those families who received benefits, calculated over a set of core programs that vary somewhat across groups. We examine these average "conditional" benefits in core programs to obtain a sense of whether trends in expenditures are being driven by changes in benefit levels or by changes in the number of recipients.

a. Data and definitions

We use data from the first waves of the 1984, 1993, and 2004 panels of the Survey of Income and Program Participation (SIPP), a nationally-representative survey of household conducted by the U.S. Census Bureau. Each interview elicited demographic information as of the interview date, and income and transfer receipt information for the four months prior to the interview month. These surveys were conducted at similar business cycle points – October, 1983 was 11 months; February 1993 was 23 months; and February 2004 was 27 months following the trough of the prior recession. However, because there has been a secular downward trend in the unemployment rate since the early 1980s in the U.S., the unemployment rates at these three points were trending downward slightly (7.5, 6.9, and 5.5 percent for the three successive years).⁶

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⁶ The effects we document may be slightly different if different points in the business cycle were examined, e.g., at the peak of the cycle—when unemployment is lowest—or more than two years after the trough, when unemployment is also typically lower. However, we do not think that the overall trend in the distribution of public expenditure is likely to be much affected.

As noted in the introduction, we stratify the population into five demographic groups of families. The "elderly" are those families with a head aged 65 or over. The SIPP does not have a good measure of true disability, so we simply define "disabled" families by the presence of at least one family member who received SSI or SSDI over the four months prior to interview. The rest of the population is divided into those who have children under 18 in the family and only one parent, those with children under 18 and two married parents, and those with no children under 18. The latter three groups exclude the elderly and disabled by construction.⁷

We also stratify by "market" income, which is composed of wages and salaries, self-employment income, capital income (interest, dividends and rents), and defined benefit pension income. We compute the average market income for each family over the four months prior to the SIPP interview. We do not consider the effects of the individual income tax, aside from the refundable EITC and child tax credits. In contrast, because all workers are subject to the payroll tax, we reduce reported earnings by 7.65 percent (the employee OASDHI tax rate) when measuring incomes relative to the poverty line, thus leaving with us a "market income" that is "post-tax" in this narrow sense.⁸

We explored the consequences of omitting the federal individual income tax (aside from the EITC and child credit) by using the NBER's TAXSIM program to calculate tax liabilities for

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⁷ We include unrelated individuals, as defined by the Census Bureau, in our analysis, and they constitute some portion of the elderly, disabled, and childless "families." Rather than having to always refer to our groups as "families and unrelated individuals," we simply use the term "families."

The government poverty line is intended to represent the amount of income a household needs to purchase an adequate amount of food, housing, clothing, and other consumption items. Therefore, analysts often compare purely private income—meaning pre-tax, pre-transfer income—to the poverty line, and then compare actual, post-tax, post-transfer income to the poverty line, to determine how much the tax-transfer system affects income adequacy. We therefore deviate slightly from this convention by taking payroll taxes out of "market" income, implying that our measure is of income adequacy excluding the transfer and two tax programs (the EITC and child tax credit—see below) that we consider.

families in our 3 SIPP extracts for 1984, 1993, and 2004 (Feenberg and Coutts, 1993). Federal income tax payments were negligible for all families with incomes below half the poverty line in each year, though there was a slight downward trend for two-parent and childless families by 2004. Federal tax payments fell substantially by 2004 for families with incomes above 50 percent of poverty (50-100, 100-150, and 150-200 percent of poverty). Consequently, if we had included the federal income tax in the calculations we report below, the relative redistribution from those with market income below 50 percent of the poverty line to those above it, which we find for some demographic groups, would be even larger.

The SIPP asks detailed questions about receipt of programs. Thus we are able to determine receipt of all major means-tested transfer programs in the U.S — Aid to Families with Dependent Children (AFDC) before 1996 and Temporary Assistance for Needy Families (TANF) after 1996; Food Stamps; Medicaid; the Earned Income Tax Credit (EITC); Child Tax Credit; General Assistance; public housing; WIC (a supplemental nutrition program for women, infants, and children); and Supplemental Security Income (SSI) — and all major social insurance programs — Social Security Retirement, Social Security Disability Insurance, Unemployment Insurance, Medicare, and Workers' Compensation — as well as veterans' benefits.

Survey respondents in the SIPP (and in other nationally representative household surveys) underreport some transfer payments, for often total transfers reported by all respondents fall short of government administrative totals (Meyer, Mok and Sullivan, 2007). We adjust the data where appropriate for underreporting. However, we do not adjust all benefits. For example, the number of recipients and aggregate benefits for veterans' benefits, general assistance, other welfare, foster child payment, Medicare, and OASI (the old age and survivors' portion of social security), closely match the administrative totals, or the programs are small, in cases where

administrative totals are not readily available. The match between survey aggregates and administrative totals is not as close for the EITC, but, because noncompliance biases the administrative totals for the EITC, we do not adjust our SIPP-based EITC calculations, nor do we adjust our child credit calculations in 2004. We do not have data on the number of workers' compensation recipients so we do not know whether or not our data match administrative totals. We do adjust reported benefits in the SIPP to match the cash receipts reported in Meyer, Mok and Sullivan (2007).

For programs where we believe the SIPP does not match administrative totals for recipients or benefits, we make imputations to the SIPP to match those totals. For housing and Medicaid, we impute recipiency to some non-recipients in the data on the basis of income, education, marital status, number of children, race/ethnicity, gender of the family reference person, region, age of the family reference person, age of children, and participation in other programs. In brief, we assign a propensity score to each non-recipient SIPP household, and impute average benefits of recipients to the non-recipients with the highest probability of receiving benefits, until we match the number of recipients in the administrative data. For ADFC/TANF, food stamps, disability insurance (SSDI), SSI, and UI, we do the same, and then once we match the number of recipients in the administrative data, we adjust household benefits proportionately to match the aggregate benefits reported in the administrative data. We have conducted all the calculations we report below without any adjustment for underreporting, however, and the results, while

⁹ The propensity score is obtained from a first-stage probit for the probability of recipiency.

¹⁰ WIC benefits (but not recipiency) appear to be misreported in 1993, so we assign average benefits in 2004 to 1993 WIC recipients.

somewhat different in magnitude for some years and some demographic groups and income classes, are unchanged in pattern.

b. A brief discussion of overall trends in transfers and poverty

Before describing our results on changes in the distribution of public expenditures, it is useful background to report overall trends in poverty rates and in expenditures on transfer programs. Using the traditional money income concept employed by the Census Bureau, which excludes in-kind transfers and support delivered through the tax system, the official poverty rate reported by the government has been strikingly stable: 12.3 percent in both 1975 and 2006, for example. For the three years of our SIPP data, the poverty rate post-tax and post-transfer was 14.4 percent (1984), 15.1 percent (1993), and 12.7 percent (2004), implying that poverty declined slightly.

In our prior work with the same SIPP data we use here (Scholz, Moffitt, and Cowan, 2009), we examined whether the transfer system had become more generous from 1984 to 2004 and whether the poverty rate had been affected. Consistent with the findings of Moffitt (2003, 2007), we found that total transfers increased sharply over the period. However, we also found that a disproportionate fraction of transfers went to the nonpoor and this fraction increased from 39 percent to 46 percent over the period. As a result, the average transfer to the poor increased only slightly across the years, which was the main reason for the stability of the poverty rate in the face of increased total transfers.

¹¹ These poverty rates are for all people (not families) and come from http://www/census.gov/hhes/www/poverty/histpov/hstppov2.xls (accessed on August 28, 2009). The most recent release of government poverty figures shows an increase, but this is cyclical in nature and a result of the current recession.

In addition to this apparent shift in the distribution of transfers from the poor to the nonpoor, we found indications of changes in the distribution of transfers within the poor population. Our calculations of the poverty gap—the sum of the differences between market incomes and the poverty line for each family, which is also the amount of money needed to directly eliminate all poverty, assuming no behavioral responses—showed that the average gap per poor family rose, from \$479 per month in 1983 to \$580 per month in 2004 (2007 dollars), after transfers were added into incomes, despite a slight increase in transfers to the poor as a whole. This was not because of a reduction in market incomes, which were stable as a percent of the poverty line. Instead, we speculated that this occurred because transfers went increasingly to families with incomes just below the poverty line rather than to families very far below that line, moving some of the former group out of poverty as a result of transfers. The result would be an increase in the poverty gap despite a reduction in the poverty rate. We also found that the percent of the total poverty gap filled by transfers declined from 70.9 percent of the poverty gap in 1984 to 66.2 percent of the gap in 2004, consistent with the same phenomenon. The analysis in this paper examines whether this type of distributional shift in fact occurred, making use of individual household data on incomes and transfers.

c. Market incomes

Throughout the paper we focus on families and individuals with incomes below 200 percent of the poverty line. The percentage of the total sample in this income group is roughly constant across years: 48.9 percent of the sample in 1984 (44.4 million families); 49.3 percent of the sample in 1993 (52.5 million families); and 47.7 percent of the sample in 2004 (59.4 million families). The fraction of the population with incomes below 200 percent of poverty composed

of non-elderly, non-disabled two-parent families and the fraction composed of elderly families have fallen slightly while the fraction composed of disabled and childless families has risen slightly. We do not expect these small changes in composition to affect our results.

Figure 1a shows the percent distribution of families with market income in four different income classes: with market income between 0 and 50 percent, 50 and 100 percent, 100 and 150 percent, and 150 and 200 percent of the poverty line in 1984, 1993, and 2004. Families in the first category, 0-50 percent, are commonly characterized as being in "deep" poverty. From 1984 to 2004 there was an increase of 1.2 percentage points (=22.3-21.1) in the percentage of families in that class. The percentage of families in the other 3 income groupings fell over this period. These changes across market income groups are consistent with growing family income inequality over this period, which has been extensively documented in other studies. We note that the pre-transfer poverty rate, which is the sum of the percents in the 0-50 and 50-100 categories, edged up very slightly over time but was essentially stable, although this masks an increase in those in deep poverty and a decline in those just below the poverty line. We also note that an increase in the relative number of families in deep poverty should, other things being equal, lead to an increase in means-tested transfer program expenditures on that group, holding constant participation rates and benefit levels. We examine whether this is the case below.

Figure 1b focuses on families in deep poverty, examining the composition of such families across our five demographic groups—the elderly, the disabled, one-parent families, two-parent families, and childless families. In 1984, about 43 percent (=9.0/21.1) of deep-poverty families were elderly, 22 percent (=4.6/21.1) were disabled, and 23 percent (=4.9/21.1) were childless, so

¹² Market income, as well as all other dollar figures we report in this paper, are in 2007 CPI-U dollars. Meyer and Sullivan (2009) note that trends in poverty can be sensitive to the price index used, but our results on relative trends in expenditure across groups is not affected because they are all assumed to face the same price index.

that about 78 percent of all deep-poverty families were of one of these three types (recall that some disabled families are also elderly). These families receive particular types of transfers and not others—for example, typically not AFDC/TANF—so they will not be affected by some of the policy trends over the period.

Figure 1b shows that the growth in deep poverty from 1984 to 2004 arose entirely from growth in the number of very poor disabled families and childless families—the fractions in all other three groups declined. For the disabled, this growth partly reflects growth in the SSI and SSDI caseloads (Autor and Duggan, 2003) since our definition of a disabled family is one that receives SSI or SSDI and, indeed, there was a growth in the fraction disabled at all income levels. The growth in the number of childless families in deep poverty also represents a general increase in the percent childless in the U.S. over this period more than any shift downward in the income distribution within the childless group. Our category of childless families includes many unrelated individuals, and Census Bureau figures indicate that there has been a dramatic growth in the number of unrelated individuals in poverty as well as in deep poverty: the percent of persons in families below the poverty line who were unrelated individuals rose from 20 percent in 1984 to 27 percent in 2004, and the percent of persons in families in deep poverty who were unrelated individuals rose from 18 percent in 1984 to 30 percent in 2004. Our SIPP data indicate that our non-elderly, non-disabled childless population has characteristics associated with longterm disadvantage – 25 percent are black or Hispanic, and 45 percent have a high school degree or less, for example. 13 The decline in market incomes for this group could reflect the long-term deterioration in the labor market for unskilled workers.

On the other hand, three-quarters are over age 24, so they are not disproportionately students.

There have been shifts in the market income distribution among the three other demographic groups as well. Among the elderly, the distribution has shifted upward, probably reflecting increasing employment rates among the 'young' elderly (say, 65-70). There has also been a slight upward shift in the distribution for single parents, a shift that is most often ascribed to welfare reform and to the expansion of the EITC with its associated work incentives. However, a substantial fraction of single parent families remain in deep poverty, which could have negative consequences for child well-being (see Duncan, Gennetian, and Morris, 2009, and the citations therein). In contrast to the pattern for the elderly and single-parent families, the percent of the deep poverty group accounted for by two-parent families has fallen over the 1984 to 2004 period, but this is a result of a general decline in the fraction of two-parent families in the U.S.

To summarize, we highlight three results. First, in each year across groups (and overall in the sample) there is a substantial percentage of the population with market incomes in deep poverty (that is, 0 to 50 percent of the poverty line). Thus, changes in program receipt at the very bottom of the income distribution can be consequential, in the sense that many families will bear the effects. Second, by 2004 there was a substantial reduction in the fraction of the sample composed of non-elderly, non-disabled one-parent families in deep poverty. Nevertheless, 2.9 million of these families are still represented by the 2004 SIPP data. Third, there appears to be a sharp increase in the population percentage that is non-elderly, non-disabled childless individuals in deep poverty. This demographic trend warrants further exploration.

d. Total Transfer Expenditures

Our main goal is to study how public expenditures have shifted over time across demographic groups and across income classes within demographic groups. Before we present

our results, we note several difficult valuation issues arising with in-kind transfers. Food Stamps is an in-kind transfer and hence is, in principle, not equivalent to cash. However, because the value of food stamps does not exceed the food needs of the typical family, we value them at the cost to the government. In contrast, we value in-kind housing benefits as the difference between rents paid by housing assistance recipients and the Fair Market Rent (FMR) in the state, drawn from Department of Housing and Urban Development data.¹⁴

It is not clear whether Medicare and Medicaid benefits should be included in our analysis. Medical benefits and insurance are only imperfectly fungible with other expenditures. Hence, if resources are not available for food, shelter, and clothing, it is not clear that it would be appropriate to suggest that the insurance value of health benefits is sufficient to move an otherwise poor family above the poverty line. For much of what follows we will exclude the value of Medicaid and Medicare, unless otherwise noted. When we do include these programs, we assume that, for most families, Medicaid is worth the cost of a typical HMO policy (see Gruber, 2003 for a discussion of ways in which Medicaid is more valuable than private insurance and ways in which Medicaid is less valuable); for elderly or disabled families, we increase this by a factor of 2.5 to account for greater medical needs of these groups. We value Medicare using 2.5 times the average cost of a fee-for-service plan, adjusting for regional cost differences. 15

We were unable to disaggregate the fee-for-service costs by region for the earlier years. For the 1984 figures, we use the 1988 data and then deflate it using the medical CPI.

¹⁴ The state FMRs are population-weighted averages by county (or major metropolitan area). We adjust by the number of bedrooms needed for families of different sizes, assuming that childless individuals or couples live in a one bedroom dwelling and families with one or two children live in a two-bedroom dwelling. An extra bedroom is added for each child over two.

¹⁵ The data come from the Kaiser Family Foundation, averaging figures from the 2003 and 2005 Annual Employer Health Benefits Surveys, http://www.kff.org/insurance/7315/sections/upload/7316.pdf and http://www.kff.org/insurance/upload/Kaiser-Family-Foundation-2003-Employer-Health-Benefits-Survey-Section-1.pdf and http://www.kff.org/insurance/7315/sections/upload/7315Section1.pdf (accessed on April 27, 2008). For 1984 and 1993, we used similar information from http://www.kff.org/insurance/upload/The-1999-Employer-Health-Benefits-Annual-Survey.pdf

Smeeding (1982) and Burtless and Seigel (2004) discuss issues that arise in accounting for health care spending and insurance when measuring poverty.

Figures 2a-2g show total monthly expenditures on families by income, calculated by weighting up average benefits over the four-month SIPP period over the sample (adjusted for underreporting, as noted above). Figures 2a and 2b pool the 5 subgroups: Figure 2a presents total expenditures *including* Medicaid and Medicare; Figure 2b excludes the health programs. On the horizontal axis, we classify families by their pre-transfer market income as a percentage of the poverty line. On the vertical axis, we plot total transfer program expenditures. The three bars show total expenditures (in 2007 dollars) for families in the 1984, 1993, and 2004 SIPP surveys.

The notable feature of Figure 2a is that total expenditure increased significantly from 1984 to 1993 and from 1993 to 2004 for all income classes, but particularly for those in deep poverty. The increase in expenditure is driven by two factors. First, the population is growing: the number of families in deep poverty is 19.2 million in 1984, 23.1 million in 1993, and 27.8 million in 2004. Second, the cost and value of Medicaid and Medicare, as well as the number of Medicaid recipients, has increased rapidly. In 2007 dollars, monthly Medicare expenditure increased from \$6.1 billion in 1984 to \$23.7 billion in 2004 (for families with incomes below 200 percent of the poverty line). About half of these benefits go to those (mainly elderly households) whose market incomes place them below the poverty line. Monthly Medicaid expenditure increased from \$3 billion to almost \$18 billion. In 1984, more than 89 percent of these benefits went to the pre-transfer poor. As a consequence of CHIP expansions to provide

¹⁶ The programs in Figure 2a are social security (OASI), DI, Medicare, UI, workers' compensation, veterans' benefits, Medicaid, SSI, AFDC/TANF, EITC, child tax credit, general assistance, other welfare, foster child payments, food stamps, housing assistance, and WIC.

health insurance to children in near-poor families, a smaller share of Medicaid expenditures, 77 percent, went to the pre-transfer poor in 2004. Thus much of the increase in transfer expenditure in Figure 2a represents the dramatic expansion of these two health programs.

When Medicare and Medicaid are excluded (Figure 2b), similar patterns appear but are greatly reduced in magnitude. Total expenditures for those in deep poverty in 2004 were only slightly above those in 1993 and quite a bit higher than they were in 1984, but the magnitude of the increase was much less than when the two health programs are included. The increases primarily reflects the increase in the number of families with market income in deep poverty, for, as shown below, the participation rate of families in deep poverty and benefit levels per recipient household in deep poverty fell. However, the increase in expenditure was not sufficiently large in magnitude to compensate for the rise in the number of families in deep poverty, for the percent of families in deep poverty after transfers and taxes are counted still rose from 1984 to 2004 (specifically, from 5 percent to 6.9 percent of all families).

Our main focus is on changes in distribution across and within demographic groups, however, and these are shown in Figures 2c-2g (Medicare and Medicaid excluded). Total expenditures for elderly families (Figure 2c) rose over the period, especially among those in deep poverty. Total expenditures also rose for the disabled, particularly those in deep poverty. The concentration of expenditure on the disabled with very low market incomes reflects the fact that benefit eligibility in SSI and SSDI is predicated on the recipient being unable to engage in "substantial gainful activity," meaning they have little or no earned income. Total expenditures also rose for the childless, particularly those in deep poverty (Figure 2g). However, expenditures fell for one-parent and two-parent families in deep poverty from 1984 to 2004 (Figures 2e and 2f), though they rose from 1984 to 1993 for the former. Real aggregate expenditures for one-

adult families with extremely low incomes in 2004 were sixty percent of their level in 1993 and significantly lower than their 1984 level. Thus we find that, despite the increase in overall public expenditure on families in deep poverty, there was a redistribution of that expenditure toward the elderly, disabled, and childless and away from single-parent and two-parent families in that income class.

There was also redistribution within demographic groups. The most notable redistribution occurred within single-parent and two-parent families, where expenditure on those in the 50-100 percent of poverty range, and on those with market incomes greater than the poverty line, rose rather than fell. Thus there was also redistribution within these two demographic groups toward those with somewhat higher market incomes and away from those with very low market incomes.

e. Population, Benefits and Participation

Total expenditures are determined by the level of average benefits multiplied by the number of recipients. The number of recipients is, in turn, determined by the growth in population times the participation rate of families in transfer programs. Thus the trends in expenditure we found can be a result of changes in population, changes in average benefits, or changes in participation rates in the population, in each demographic group and income class.

We examined the importance of population by constructing figures for trends in per-capita expenditure for each demographic group and income class, identical to those shown in the last section except that expenditures are divided by the relevant population (figures available upon request from the authors). Since there was positive population growth in every demographic group and income class from 1984 to 2004, the percent growth in per-capita expenditures is

necessarily smaller than for total expenditures.¹⁷ However, more important for our study is whether population growth affects trends in expenditure for different groups. When we examine this, the results show that the pattern of redistribution we found in the previous section is mostly unchanged. In particular, per capita expenditures grew from 1984 to 2004 for the elderly and disabled in deep poverty but fell for single- and two-parent families, which is the same pattern of across-group redistribution we noted before. Also, per capita expenditures for single-parent and two-parent families with market income greater than 50 percent of the poverty line grew from 1984 to 2004, which is the same redistribution from the lowest income class to the higher income classes as we noted before. However, a significant change occurred for childless families, where per capita expenditures for those in deep poverty fell from 1984 to 2004, rather than rising as indicated by the total-expenditure figures. This was a result of the extraordinary growth of the number of childless families in deep poverty that we noted earlier. But this does mean that we should not expect the growth of expenditures on that group to reflect an expansion of either benefit levels or participation rates of the programs for which they are eligible; in fact, we should look for a contraction.

Total expenditure trends will also be influenced by trends in program benefit levels and program participation rates. In the interests of space, we present figures only for benefit trends and discuss participation rate trends only in the text (participation-rate figures available upon request).

Figures 3a and 3b show average benefits for recipient families, averaged over all major programs, both including and excluding Medicare and Medicaid. While average benefits rose

To avoid confusion, we note that Figure 2b shows relative, not absolute, growth across demographic groups. That figure shows that, while there was positive population growth for all demographic groups in deep poverty, population growth for the disabled and childless was higher than for the other three groups.

for all income groups, including those in deep poverty, this is primarily because of the two health programs. When they are excluded, benefits fell modestly for those in deep poverty between 1993 and 2004, though they rose for those at higher market income levels. Participation rates among all families in deep poverty—defined as receiving a benefit from at least one program—also fell from 1984 to 2004, although they rose for families at higher income levels.

Figures 3c-3g show average benefit trends for the different demographic groups and income classes and help us interpret the expenditure trends reported in the last section. ¹⁸ Figure 3c shows that average benefits rose over time for the elderly. Because their participation rates in public programs were stable—near 100 percent because almost all the elderly receive Social Security benefits—the rise in average benefits explains the increase in per capita expenditure on the elderly, particularly among those in deep poverty. The increase in average benefit levels was almost exclusively a result of a rise in the real value of Social Security benefits and veterans' benefits over the period. Figure 3d shows similar effects for the disabled, indicating a rise in average benefit levels. In this case, the increase was a result of benefit increases across a wide range of programs supporting the disabled—Social Security, SSDI, SSI, Workers' Compensation, and Veterans benefits. Participation rates among the disabled were 100 percent, as we have defined this group to be recipients of public benefits. Consequently, the rise in expenditure for the disabled reflects increases in benefits as well. Figure 3g shows that average benefits for different income classes of childless families rose from 1984 to 2004, although the increases were larger for some of the higher income groups than for the deep poverty group. The

¹⁸ We calculate average benefits for a core set of programs for each demographic group. For one-parent families, for example, the core programs include AFDC/TANF, food stamps, the EITC, housing assistance, UI and WIC. The figures show benefits for families participating in at least one core program. The core programs for each demographic group are listed in the footnotes of the Figures.

programs for which the benefit levels rose were primarily Food Stamps, Unemployment Insurance, Veterans' benefits, and Workers' Compensation. Overall participation rates—the rate of participating in any program—also rose modestly for the childless, however. For this group, the decline in per capita expenditures noted earlier arose from a change in the participation patterns across programs—an increase in participation in low-benefit programs like the EITC and a decline in participation in high-benefit programs like food stamps and General Assistance.

The trends for single-parent and two-parent families are, again, quite different (Figures 3e and 3f). Average benefit levels fell for those in deep poverty in both demographic groups but rose for those in higher income groups. The benefit decline from 1993 to 2004 for the very poor arose primarily from reductions in average benefits received from the AFDC/TANF and WIC programs, while the increase in benefits for those at higher income levels was a combination of rising benefits from the EITC, Food Stamps, and public housing. Participation rates among the families in deep poverty also fell, reinforcing the decline in benefits, but rose for those with higher incomes, reinforcing their rise in benefits. These results are consistent with changes enacted in welfare reform and other policies that reduced spending on programs for the very poor and increased it for families with higher incomes, at least for one- and two-parent families with children.

Table 3h summarizes our findings on the trends in expenditure for our five demographic groups, for those in deep poverty and those at higher incomes, and the degree to which these trends in expenditure can be accounted for by changes in population, benefit levels, and participation rates.

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¹⁹ Food Stamp benefits also rose for the very poor, but these increases were outweighed by reductions in AFDC/TANF and WIC benefit averages.

Section 2: Changes in Transfers for Families with Children

Our examination of expenditure, participation, and benefit trends in the previous section reveals that families with children, both one- and two-parent, experienced different patterns than the other three demographic groups. For example, while their numbers in deep poverty have declined, so have expenditures, participation, and benefits. Families with children are of particular policy interest because the effects of transfer programs may have intergenerational consequences, and children should perhaps be insulated, at least to some extent, from the economic circumstances their parents might otherwise be in. The adults in these families have also been the focus of much employment policy for transfer recipients in the U.S., unlike the elderly or childless, for example. For all these reasons, we look more closely at these families in this section, although, as noted earlier, they constitute only 16 percent of families in deep poverty in 2004.

a. Participation rates in programs

Patterns of aggregate benefits will be driven by changes in participation rates – the rate at which people eligible for the program actually get benefits – and benefit amounts, conditional on receiving benefits. These, of course, will vary program by program and so, in this section, we examine specific programs rather than all programs overall, as we did in the last section.

Actual participation rates will vary with program rules, including income and asset tests and definitions of program units. For example, food stamp (or SNAP) eligibility is based on the resources and characteristics of those sharing cooking quarters, which may or may not conform to our traditional ideas of a family unit. Given the large number of programs we cover and the

fact that we would need to model program rules for three separate years, we do not model the detailed program rules. Instead we examine, for households in different income groups, how program participation varies.

Figure 4a-s shows the fraction of SIPP single-parent families in different income groups receiving AFDC benefits (in 1984 and 1993) and TANF benefits (in 2004). A striking pattern is apparent: only 23.5 percent of the population of single-parent families in deep poverty received TANF benefits in 2004. In contrast, 62.0 percent and 61.3 percent of families with similar income received benefits in 1984 and 1993. There have also been small reductions in the fraction of single-parent families with incomes 50 to 100 percent of the poverty line receiving TANF benefits, but AFDC and TANF recipiency is, on average, much lower for families with some market income, even if these incomes are below the poverty line. As we showed earlier, there are a substantial number of single-parent families with incomes between 0 and 50 percent of the poverty line.

Similar patterns hold for two-parent families (Figure 4a-t), though the likelihood that these families receive benefits, even when their incomes are very low, is lower than it is for single-parent families. For those two-parent families with incomes between 0 and 50 percent of poverty, 24.4 percent received AFDC in 1984, 26.4 percent received it in 1993, while only 9.9 percent received TANF benefits in 2004.

Our results for TANF may be surprising to some. When the President and Congress "ended welfare as we know it" in 1996, AFDC was replaced by TANF, a block grant to states equal in size to prior AFDC expenditures. With the strong economy in the 1990s, TANF caseloads fell sharply. One might have expected relatively high-income families to be more likely to exit, leaving the remaining, poorest families still on welfare. However, the evidence on welfare

reform indicates that the combination of work requirements, sanctions, and time limits often fell as well on those families with the lowest incomes, so many of the lowest-income single-parent families also left the welfare rolls. In addition, with TANF funded as a block grant, states were able to use funds in ways that differed from prior AFDC expenditures. Some states increased child care, transportation assistance, extended the availability of health insurance, or used funds for state EITCs. These expenditures tended to assist families with somewhat higher incomes, keeping them on the caseload.

Another way to see the decline in TANF participation among those in deep poverty is to compare the decline in the numbers of single parent families with the decline in the caseload. Aggregate statistics provide corroborating evidence. Figure 1b showed that single-parent families in deep poverty were 2.3 percent of the population in 2004, while they were 3 percent in 1993, implying a 23 percent decline in the number of one-parent families in deep poverty. But the aggregate number of AFDC/TANF recipients declined from 14.2 million in 1993 to 4.7 million in 2004, a 67 percent decline. Thus recipiency declined much more than population.

Food stamp participation rates are shown in Figures 4b-s and 4b-t. Like the AFDC/TANF figures, food stamp participation of single- and two-parent families in deep poverty fell substantially in 2004. These patterns are somewhat surprising, as aggregate food stamp spending and number of participants fell by less, from \$31.6 billion (27.0 million recipients) in 1993 to \$27.0 billion (23.9 million recipients) in 2004. It is likely, however, that the same factors that affect AFDC/TANF takeup affected food stamp participation (also see Currie and Grogger, 2001), so the reduction in AFDC/TANF takeup spilled over to food stamps, even when the food stamp program did not have important statutory changes.²⁰

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²⁰ Rosenbaum (2006) attributes recent increases in food stamp participation as being influenced by increases in the

Safety net participation of those in deep poverty has not fallen across all programs. Figures 4c-s and 4c-t show EITC participation across income groups. Participation for single-parent families in deep poverty increased in 2004, presumably because more of these families have modest amounts of labor market income (the EITC is \$0 for those without income). EITC claiming rates appear very high for one- and two-parent families with incomes between 50 and 150 percent of poverty.

Figures 4d-s and 4d-t show Medicaid participation. There have not been sharp participation changes for families in deep poverty. However, the expansions of child health insurance (CHIP and S-CHIP) coverage for the children (and not the adults) in poor- and near-poor families show up vividly, with sharply increasing participation rates for families with incomes between 50 to 100, 100 to 150, and 150 to 200 percent of poverty in 2004.

Figures 4e-s through 4f-t show patterns of participation for the remaining high-cost, widelyavailable transfers to low-income families: housing assistance and unemployment compensation.²¹ Fewer than one-in-four single-parent families with incomes below the poverty line receive housing assistance, and the fraction of families receiving assistance declines, but not sharply, with income. The patterns of housing receipt for two-parent poor families is more volatile, but only for one group (couples in deep poverty in 1993) did more than 10 percent of families receive assistance. Housing is rationed to households, so being poor with children in the household is not sufficient to receive support. Participation rates for unemployment

number of poor people, the use of food stamps as federal disaster aid for Hurricanes Katrina, Rita, and Wilma and other natural disasters, and changes in the 2002 farm bill that restored food stamp benefits to some legal immigrants, allowed states to provide benefits to households that own a reliable car, and simplified application procedures. See Klerman and Danielson (2009) for another examination of the causes of the recent increase in the food stamp caseload.

²¹ For lower-cost programs, receipt of general assistance or other welfare for families in deep poverty in 2004 fell sharply from its earlier levels, and is negligible for other families. Workers' compensation receipt is fairly constant or falls somewhat over time, while WIC participation increases sharply.

compensation are twice as high in 2004 as they were in 1984 and 1993 for one-parent families in deep poverty. UI participation for one- and two-parent families with incomes above 50 percent of poverty are generally trending downward. There were no major programmatic changes in the UI program over this period, so these changes reflect changes in employment and unemployment rates in the different demographic groups and income classes.

These figures make clear that there has been changes in the patterns of transfers available to low-income Americans. Participation in the two core subsistence programs for single-parent families with children, AFDC/TANF and food stamps, fell sharply by 2004 from their levels in 1984 and 1993. At the same time, significant resources were devoted to the EITC, which supports working families, and to expanding access to health care for children in some poor and near-poor families.

b. Expenditure distributions by program for one- and two-parent families with children

We discussed two factors that affect total program expenditures: the fraction of the population in given income groups and rates of program participation. These data items, along with average benefits, conditional on receiving transfers, determine aggregate program expenditure. We summarize aggregate expenditures for the largest transfer programs available for families with children in the following figures. Figures 5a-s and 5a-t show the reduction in TANF dollars going to one- and two-parent families with children with very little or no income. The dollar amounts in 1984 and 1993 are substantial, as is the reduction in benefits. Food stamp benefits, figures 5b-s and 5b-t, show a qualitatively similar pattern, though the 2004 benefit decreases are somewhat smaller than occurred with TANF.

EITC benefits, shown in figures 5c-s and 5c-t, increased sharply, as described, but, in aggregate, these changes are nowhere near as large as the reduction in AFDC/TANF and food stamp benefits received by very low income families with children.

Medicaid benefits for very low-income families are enormous, as shown in figures 5d-s and 5d-t, but as emphasized earlier, they cannot be used to acquire food, clothing, housing, and other life necessities. Public housing benefits (figures 5e-s and 5e-t) are also substantial at the bottom of the income distribution, but appear to have been scaled back somewhat for both one- and two-parent families in 2004 relative to their level in 1993. The last substantial program we examine (where benefits exceed \$100 million a month) is unemployment insurance (figures 5f-s and 5f-t). Aggregate UI expenditures increased sharply in 2004 for families with children in deep poverty, which is consistent with employment rates for these families increasing, which is a precondition for UI benefit receipt as families lose employment.

Section 3: Conclusions

Antipoverty policy has changed sharply over the past 25 years. If we look at the aggregate monthly transfers for all programs, including social insurance, they increased 130 percent between 2004 and 1984, and 55 percent between 1993 and 1984. The number of families in SIPP increased 17.3 percent between 1984 and 1993, and 37.3 percent between 1984 and 2004. Hence, the growth of transfers (including social insurance) dwarfed the growth of population. Of course, a very significant fraction of social insurance payments go to the elderly, most of whom are not poor, particularly when judged by lifetime resources. Moreover, much of the growth in total transfers is due to Medicare spending, which grew more than 300 percent between 2004 and 1984, and Medicaid, which grew 550 percent. But even if we focus on cash transfers, which

exclude Medicare, Medicaid, housing, food stamps, and WIC, the growth of spending far exceeds the growth in population. Judged from this, it would appear that society is becoming more generous, but poverty remains persistent.

But as we emphasized at the outset of the paper, U.S. income transfer programs are a patchwork, so families in different categories but with similar incomes can receive substantially different benefits. The core non-health safety net programs available to non-elderly, non-disabled families and individuals, for example, fell in real dollars between 1993 and 2004. These benefits grew by 44 percent between 1984 and 1993, far faster than the growth in the number of families. But they fell in real terms by 13.4 percent between 1993 and 2004. It is these programs that poor families with children draw on to maintain living standards.

The policy developments affecting poor families with children were purposeful. The substantial EITC expansions were made in part with the idea that they rewarded work, augmenting the incomes of low-income working families "playing by the rules." One goal of "ending welfare as we know it" was to create a safety net that better reflects the norms of broader American society. The hope was that by providing states greater flexibility and by imposing lifetime limits on TANF receipt, families would become much less reliant on welfare. In some sense the hope has been realized – TANF receipt today is much lower than past AFDC receipt. What was not known at the time changes were enacted was what fraction of the poor population was ready and able to work, what fraction of those would find jobs that could provide a ladder to self sufficiency, and what would happen to those who, for one reason or another, were unwilling and unable to work.

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²² The programs in this calculation are AFDC/TANF, the EITC, general assistance, other welfare, food stamps, and housing assistance.

The answer to these questions was unknowable at the time the safety net changes were implemented, but enough time has passed that we can address them now. After doing so there is decidedly mixed news. When focusing on market income, there are significantly fewer singleparent families in deep poverty. This was the hope and expectation of those who reformed welfare. Most states increased expectations for work, as reflected by the fact that some state welfare offices were transformed into workforce development departments, and some states sharply increased resources for programs subsidizing childcare and transportation assistance that facilitate work. By changing the culture of welfare offices and offering differing mixes of carrots and sticks across states, reformers hoped to force or incentivize those receiving welfare to begin working and achieve self sufficiency, and to alter the trajectory of those who, under AFDC, might have ended up using the program. In the legislation there was also ambitious language about reducing the number of single-parent families, though the state programs to achieve these goals were less far-reaching. Nevertheless, the goals of TANF were to reduce the number of families receiving benefits, reduce the number of families who would seek benefits in the future, both by increasing the labor market earnings of low-skilled workers, and by increasing marriage or lowering fertility rates of women with low levels of human capital. The reduction in the number of single-parent families in 2004 is consistent with TANF achieving at least part of its goals.

But there is a cost to "improving incentives" by making benefits less available to poor families with children. Those who are either unable or unwilling to work now have to get by with fewer publicly-provided resources. Our paper provides evidence on the size of the population that finds themselves in these circumstances. While there was an 11 percent reduction in the number of single-parent families with children between 1993 and 2004 with

incomes below 50 percent of poverty, this leaves 2.9 million non-elderly, non-disabled single-parent families with children in the sample with market income between 0 and 50 percent of the poverty line.

The challenges of a work-based safety net for some of these single-parent households are formidable, particularly given tight labor markets and the increasing skill requirements of many jobs. We quote at length from Ramey and Keltner (2002) to highlight one dimension of the challenges:

"As for women receiving TANF, one study estimates that approximately 30 percent are eligible for SSI under the administrative category of "mental retardation." ... In a recent large-scale study of inner-city, Medicaid-eligible pregnant women, about 25 percent received scores on standardized tests of receptive language and/or literacy skills comparable to those of individuals with mild mental retardation; in an eight-site study of 985 premature, low-birthweight infants, 31 percent of their mothers earned scores equivalent to an IQ of 70 or below. In the National Longitudinal Survey of Youth, among adolescent mothers, 38 percent had very low tested intelligence, most within the range of mental retardation." ²³

If these estimates are even roughly correct, it would seem the difficulty of achieving self-sufficiency in the paid labor market are severe for the heads of some very low-income families.²⁴ We show that average transfers received by families with children in deep poverty were lower in the 2004 SIPP than they were in the corresponding surveys in 1984 and 1993. Whether households getting by with fewer resources have the ability to acquire and maintain steady employment may influence one's views about the policy developments over the last 15 years.

At least two data patterns discussed in this paper deserve further scrutiny. First, the SIPP data suggest there has been a very striking increase in the number of childless individuals or

²³ Early in their short paper, Ramey and Keltner define mild mental retardation as "having an IQ between 55 and 70 or 75 coupled with significant deficits in adaptive behavior (e.g. social behavior, communication skills, personal responsibility, academic skills, and community living skills)."

²⁴ Other important barriers to employment include poor health, caring for a child with poor health, domestic abuse, depression or other mental health issues, and drug use or addiction.

families in deep poverty over time. Twenty-two percent of these individuals are under 25, and hence this group is not disproportionately students (moreover, there has not been a sharp increase in the fraction of the population going to college in the U.S.). Eighty-two percent of this population is single. Males are 57 percent of the group. Forty-five percent have a high school degree or less and 25 percent are black or Hispanic. There has been considerable policy interest in recent years about the economic problems faced by low-skilled single males (see, for example, Holzer, Edelman, and Offner, 2006; Berlin, 2007; Scholz, 2007). The data here suggest that the problem of low-skilled individuals, nearly fully disconnected from the formal labor market, is of rapidly growing importance.

The second is the phenomenon that we have focused on throughout the paper: transfers to families with children in deep poverty have fallen sharply. Benefits for those further up the income distribution have increased. And benefits received by the elderly, disabled, and childless families and individuals have changed relatively little over time, except to the extent that the cost of public health programs has increased rapidly.

We conclude with a note of caution. It is well-known that national surveys have difficulty accurately measuring transfer programs (Meyer, Sullivan, and Mok, 2007) and incomes, particularly at the bottom of the income distribution (Edin and Lein, 1997). As discussed earlier, we impute benefit amounts and recipients in the SIPP data, when the SIPP data fail to match national administrative counts for recipients and benefits. Despite these efforts, however, we may make errors in our imputations. And changes in patterns of income underreporting in SIPP could, perhaps, account for some of the patterns we observe (Czajka, 2009, discusses SIPP data quality). Further work with SIPP and other data sources to corroborate these patterns would likely be helpful.

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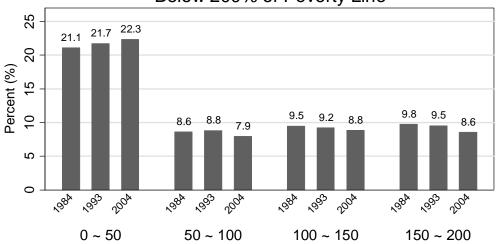
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Figure 1a: Density of All Families with Market Income Below 200% of Poverty Line

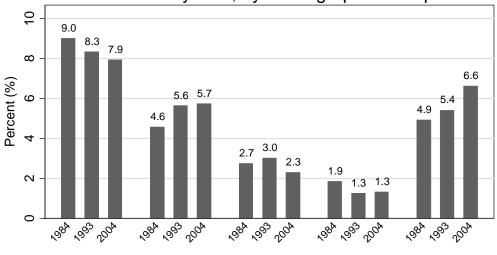


Density estimates are based on all families, including elderly, disabled, single-parent, two-parent, and childless families, across all income levels.

The densities of families that are both elderly and disabled with income below 200% of the

poverty line are 2.37%, 2.48%, and 1.96% for year 1984, 1993, and 2004, respectively.

Figure 1b: Density of Families Between 0 and 50% of Poverty Line, by Demographic Group



Single-Parent Two-Parent Elderly Disabled

Density estimates are based on all families, including elderly, disabled, single-parent, two-parent, and childless families, across all income levels.

The densities of families that are both elderly and disabled with income below 50% of the poverty line are 2%, 1.97%, and 1.61% for year 1984, 1993, and 2004, respectively.

Note: Monthly expenditures are conditional on all families.

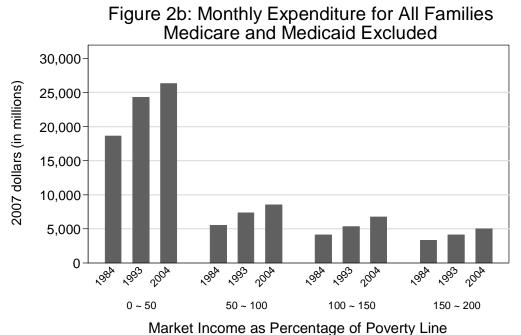


Figure 2c: Monthly Expenditure for Elderly Families Medicare and Medicaid Excluded 15,000 2007 dollars (in millions) 12,500 10,000 7,500 5,000 2,500 0 1984 2004 1984 ′∂∂y 0 ~ 50 50 ~ 100 100 ~ 150 150 ~ 200

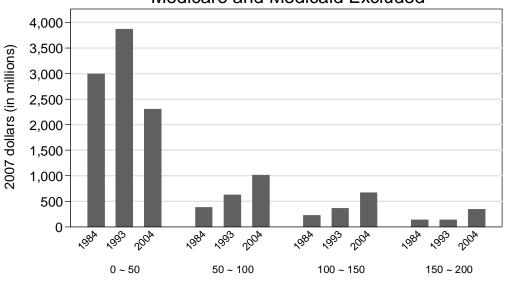
Note: Monthly expenditures are conditional on all elderly families.

12,500 2007 dollars (in millions) 10,000 7,500 5,000 2,500 0 2004 2004 ,98A '00g2 0 ~ 50 50 ~ 100 100 ~ 150 150 ~ 200 Market Income as Percentage of Poverty Line

Figure 2d: Monthly Expenditure for Disabled Families Medicare and Medicaid Excluded

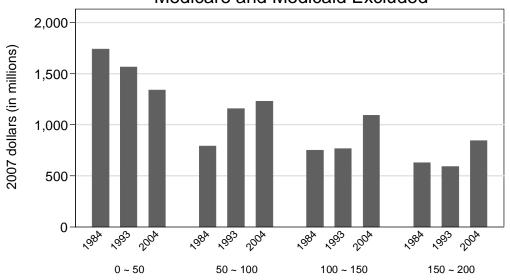
Note: Monthly expenditures are conditional on all disabled families.

Figure 2e: Monthly Expenditure for Single-Parent Families Medicare and Medicaid Excluded



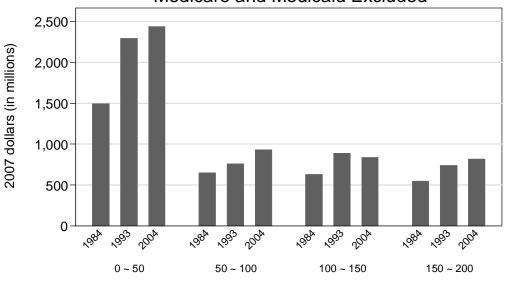
Note: Monthly expenditures are conditional on all single-parent families.

Figure 2f: Monthly Expenditure for Two-Parent Families Medicare and Medicaid Excluded



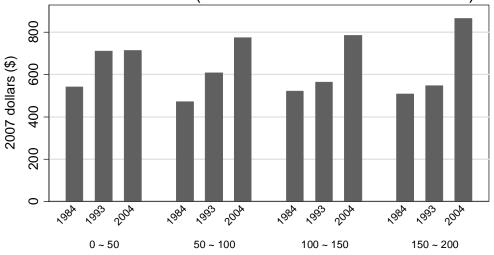
Market Income as Percentage of Poverty Line

Figure 2g: Monthly Expenditure for Childless Families Medicare and Medicaid Excluded



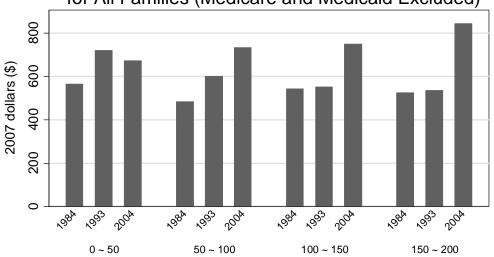
Note: Monthly expenditures are conditional on all childless families.

Figure 3a: Unweighted Average Monthly Benefits for All Families (Medicare and Medicaid Included)



Programs included in averaging are AFDC/TANF, CTC, DI, EITC, Food Stamps, Foster Family, General Assistance, Housing Assistance, Medicaid, Medicare, Other Welfare, Social Security, SSI, UI, Veterans Benefits, WC, and WIC.

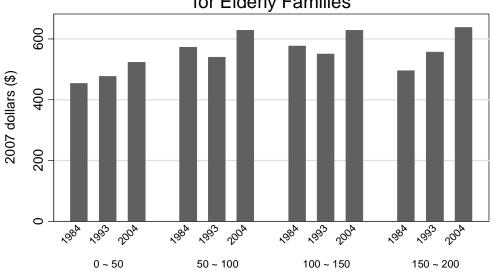
Figure 3b: Unweighted Average Monthly Benefits for All Families (Medicare and Medicaid Excluded)



Market Income as Percentage of Poverty Line

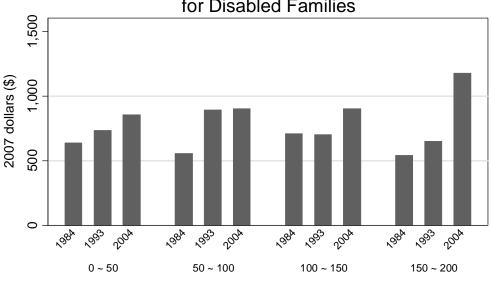
Programs included in averaging are AFDC/TANF, CTC, DI, EITC, Food Stamps, Foster Family, General Assistance, Housing Assistance, Other Welfare, Social Security, SSI, UI, Veterans Benefits, WC, and WIC.

Figure 3c: Unweighted Average Monthly Benefits for Elderly Families



Programs included in averaging are DI, EITC, Food Stamps, Housing Assistance, Social Security, SSI, and Veterans Benefits.

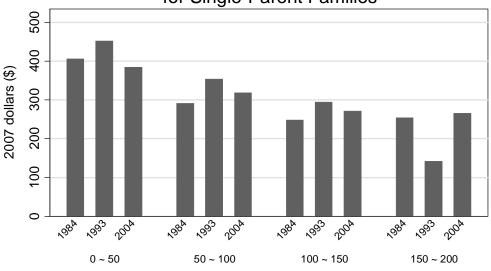
Figure 3d: Unweighted Average Monthly Benefits for Disabled Families



Market Income as Percentage of Poverty Line

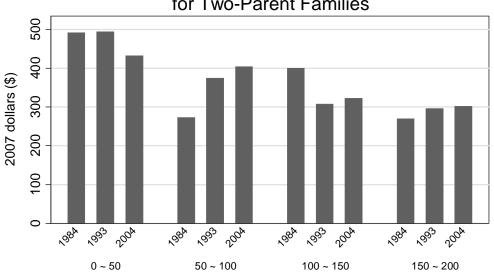
Programs included in averaging are AFDC/TANF, DI, EITC, Food Stamps, Housing Assistance, Social Security, SSI, UI, Veterans Benefits, and WC.

Figure 3e: Unweighted Average Monthly Benefits for Single-Parent Families



Programs included in averaging are AFDC/TANF, EITC, Food Stamps, Housing Assistance, UI, and WIC.

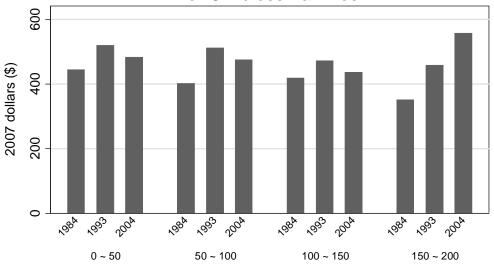
Figure 3f: Unweighted Average Monthly Benefits for Two-Parent Families



Market Income as Percentage of Poverty Line

Programs included in averaging are AFDC/TANF, EITC, Food Stamps, Housing Assistance, UI, and WIC.

Figure 3g: Unweighted Average Monthly Benefits for Childless Families



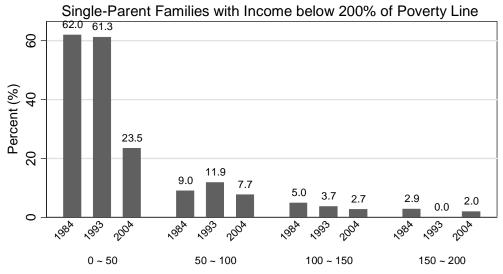
Programs included in averaging are Food Stamps, General Assistance, Housing Assistance, Social Security, and UI.

Table 3h
Summary of Results on Transfer Expenditure Changes Between 1984 and 2004

| | Expenditures | Population | Benefits | Participation |
|---------------|--------------|------------|----------|---------------|
| | | | | |
| Elderly | | | | |
| Deep Poverty | ++ | + | + | 0 |
| Higher Income | + | + | + | 0 |
| Disabled | | | | |
| Deep Poverty | ++ | + | + | 0 |
| Higher Income | + | + | + | 0 |
| One-Parent | | | | |
| Deep Poverty | | + | - | - |
| Higher Income | + | + | + | +/++ |
| Two-Parent | | | | |
| Deep Poverty | | + | - | - |
| Higher Income | ++ | + | +/- | +/++ |
| Childless | | | | _ |
| Deep Poverty | ++ | ++ | + | - |
| Higher Income | + | ++ | + | - |

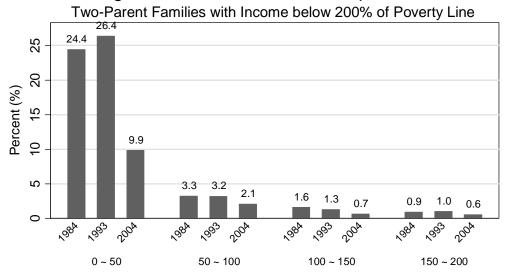
Notes: ++ denotes a large increase; + denotes a modest increase; 0 denotes no change; - denotes a modest decrease; and – denotes a large decrease.

Figure 4a-s: AFDC/TANF Participation Rate



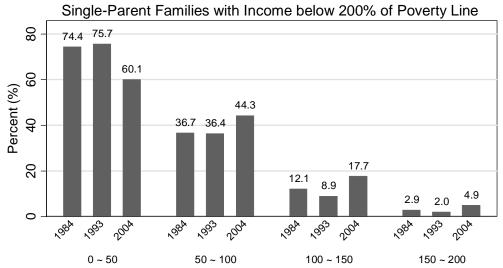
Note: Participation rate is the proportion of recipient single-parent families in all single-parent families within the same income bracket (i.e. 0~50%, 50%~100%, 100%~150%, and 150%~200%) of poverty line.

Figure 4a-t: AFDC/TANF Participation Rate



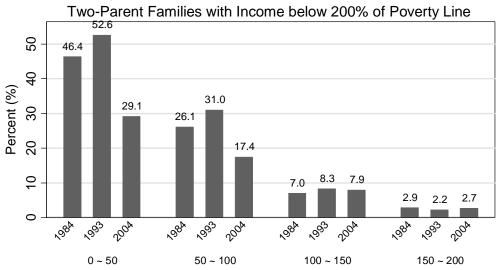
Market Income as Percentage of Poverty Line

Figure 4b-s: Food Stamps Participation Rate



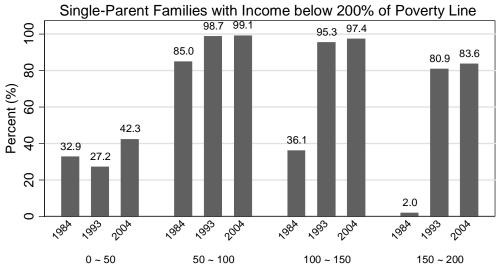
Note: Participation rate is the proportion of recipient single-parent families in all single-parent families within the same income bracket (i.e. 0~50%, 50%~100%, 100%~150%, and 150%~200%) of poverty line.

Figure 4b-t: Food Stamps Participation Rate



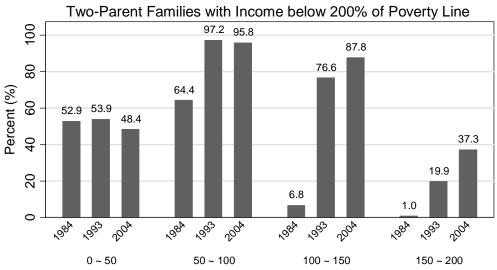
Market Income as Percentage of Poverty Line

Figure 4c-s: EITC Participation Rate



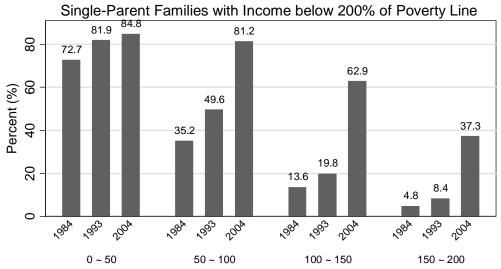
Note: Participation rate is the proportion of recipient single-parent families in all single-parent families within the same income bracket (i.e. 0~50%, 50%~100%, 100%~150%, and 150%~200%) of poverty line.

Figure 4c-t: EITC Participation Rate



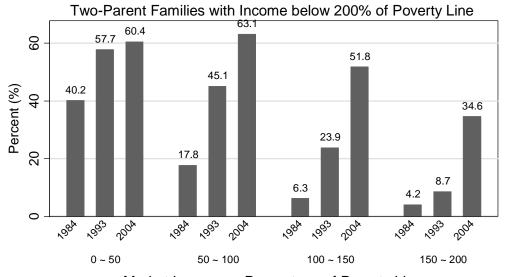
Market Income as Percentage of Poverty Line

Figure 4d-s: Medicaid Participation Rate



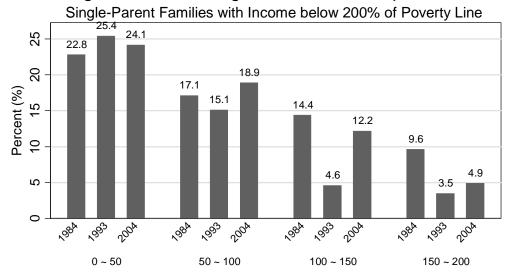
Note: Participation rate is the proportion of recipient single-parent families in all single-parent families within the same income bracket (i.e. 0~50%, 50%~100%, 100%~150%, and 150%~200%) of poverty line.

Figure 4d-t: Medicaid Participation Rate



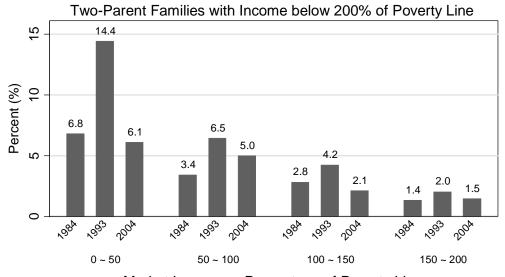
Market Income as Percentage of Poverty Line

Figure 4e-s: Housing Assistance Participation Rate



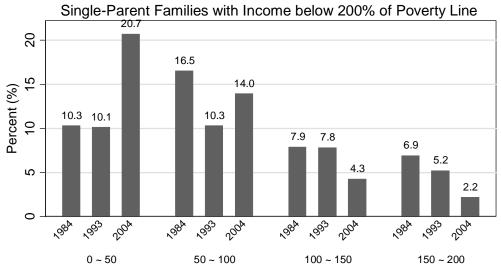
Note: Participation rate is the proportion of recipient single-parent families in all single-parent families within the same income bracket (i.e. 0~50%, 50%~100%, 100%~150%, and 150%~200%) of poverty line.

Figure 4e-t: Housing Assistance Participation Rate



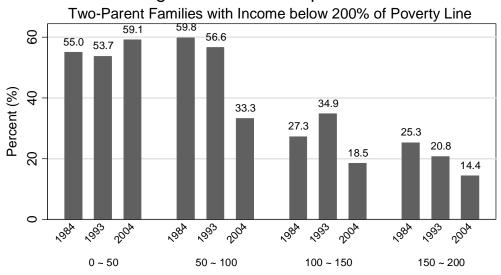
Market Income as Percentage of Poverty Line

Figure 4f-s: UI Participation Rate

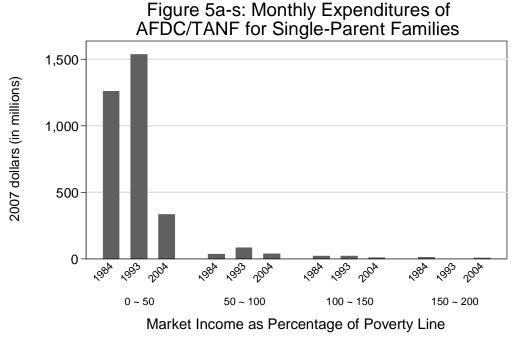


Note: Participation rate is the proportion of recipient single-parent families in all single-parent families within the same income bracket (i.e. 0~50%, 50%~100%, 100%~150%, and 150%~200%) of poverty line.

Figure 4f-t: UI Participation Rate



Market Income as Percentage of Poverty Line



Note: Monthly expenditures are conditional on all single-parent families.

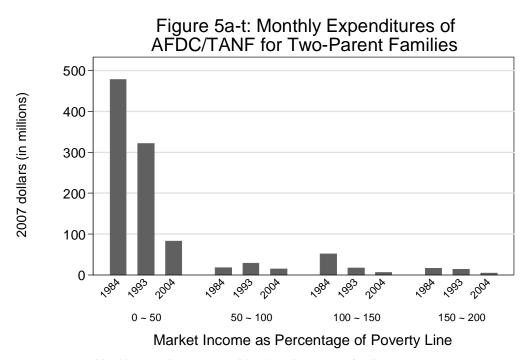
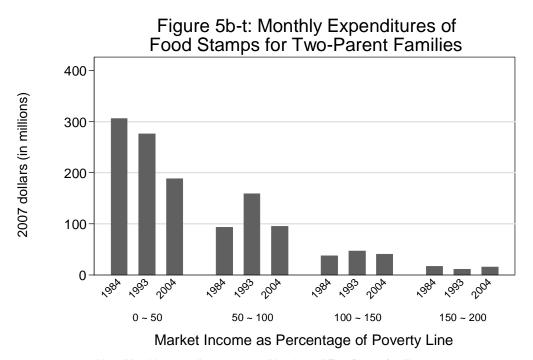


Figure 5b-s: Monthly Expenditures of Food Stamps for Single-Parent Families 1,000 2007 dollars (in millions) 750 500 250 100°S 1984 2004 ৻৹৽৽৽৾ 2004 1984 198A 0 ~ 50 50 ~ 100 100 ~ 150 150 ~ 200 Market Income as Percentage of Poverty Line

Note: Monthly expenditures are conditional on all single-parent families.



Market Income as Percentage of Poverty Line

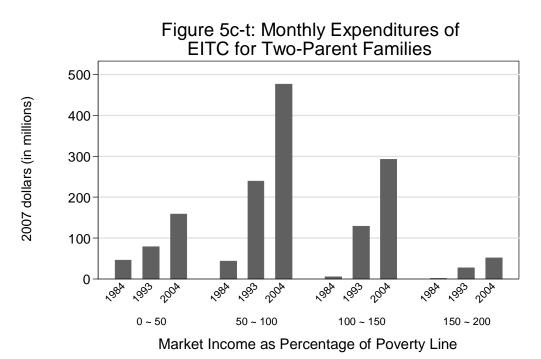
100 ~ 150

150 ~ 200

Note: Monthly expenditures are conditional on all single-parent families.

50 ~ 100

0 ~ 50



Note: Monthly expenditures are conditional on all Two-Parent families.

Figure 5d-s: Monthly Expenditures of Medicaid for Single-Parent Families 2,000 2007 dollars (in millions) 1,500 1,000 500 1000 1984 1984 2004 1993 2004 2004 ′∂∂₂ 0 ~ 50 50 ~ 100 100 ~ 150 150 ~ 200 Market Income as Percentage of Poverty Line

Note: Monthly expenditures are conditional on all single-parent families.

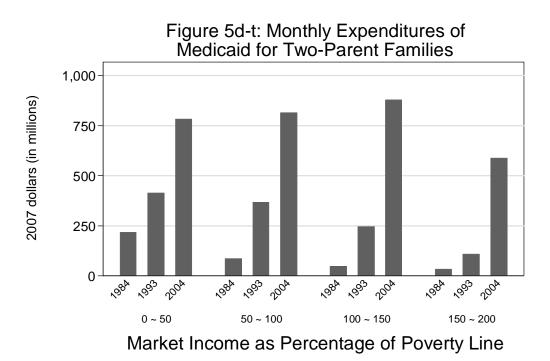


Figure 5e-s: Monthly Expenditures of Public Housing for Single-Parent Families 600 2007 dollars (in millions) 500 400 300 200 100 1984 199³ 2004 2004 ′∂∂ე 0 ~ 50 50 ~ 100 100 ~ 150 150 ~ 200 Market Income as Percentage of Poverty Line

Note: Monthly expenditures are conditional on all single-parent families.

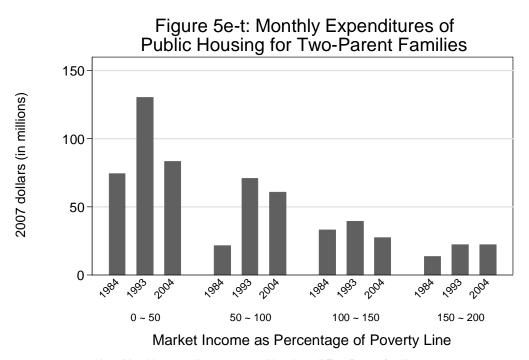
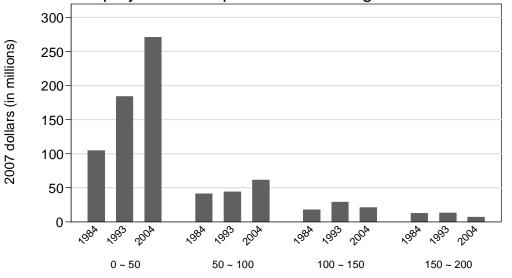
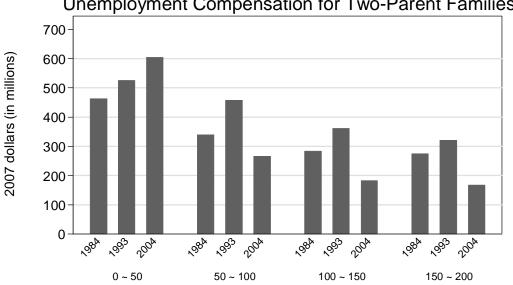


Figure 5f-s: Monthly Expenditures of Unemployment Compensation for Single-Parent Families



Note: Monthly expenditures are conditional on all single-parent families.

Figure 5f-t: Monthly Expenditures of Unemployment Compensation for Two-Parent Families



Market Income as Percentage of Poverty Line