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Metrics Matter: Examining Chronic and Transient Poverty in the United States
Using the Supplemental Poverty Measure

By

Sara Elizabeth Kimberlin

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Social Welfare

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Jill Duerr Berrick, Chair

Professor Neil Gilbert

Professor Nicholas Jewell

Spring 2013

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Abstract

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Sara Elizabeth Kimberlin

Doctor of Philosophy in Social Welfare

University of California, Berkeley

Professor Jill Duerr Berrick, Chair

The way poverty is measured shapes the types of policy solutions perceived to be possible and appropriate to address poverty, as poverty measurement produces information about who is poor, how many people are poor, and why they are poor. The traditional approach to measuring poverty in the United States suffers from two serious shortcomings, which limit the usefulness of the data produced to inform poverty policy. First, the official federal poverty measure (OPM) traditionally used to determine who qualifies as poor is based on consumption data from the 1960s and does not reflect current living patterns or costs of basic needs. Second, poverty in the United States is typically measured on an annual basis, using a cross-sectional analysis approach, which fails to capture information about the duration of poverty, though short-term poverty and long-term poverty have been shown to have different demographics, and long-term poverty is associated with more severe impacts on life outcomes.

This study addresses these two shortcomings, by using an alternative poverty measure recently developed by the U.S. Census Bureau and U.S. Bureau of Labor Statistics, the Supplemental Poverty Measure (SPM), in place of the OPM to determine who qualifies as poor, and by analyzing poverty from a longitudinal rather than cross-sectional perspective, examining chronic or long-term poverty and transient or short-term poverty as distinct phenomena. Prior research has examined poverty in the U.S. using alternative poverty measures including the SPM, but only from a cross-sectional perspective. Other research has examined U.S. poverty from a longitudinal perspective, but using the OPM or a closely derived poverty measure. This study thus fills a gap in the existing research on poverty in the United States, by measuring poverty longitudinally using the better-grounded Supplemental Poverty Measure.

Data for this study were drawn from the Panel Study of Income Dynamics (PSID), a comprehensive nationally representative longitudinal dataset. Data included detailed household income, benefit, housing, and expense information used to construct annual poverty status using the SPM, as well as individual and household demographic variables, collected biennially from 1998 to 2008, thus representing six data years. Descriptive analysis was conducted using individuals as the unit of analysis ($n=8,375$) while multivariate regression analysis was conducted using households as the unit of analysis ($n=4,188$). Complex survey weights were

used in all analyses to adjust for differential sampling and attrition. Multiple imputation was used to impute missing values for one of the components used to construct SPM poverty status and for one of the demographic covariates. Chronic poverty was defined as poor under the SPM in more than half of the years examined (i.e. 4 or more of 6 years), while transient poverty was defined as poor under the SPM in at least one year but not more than half of the years (i.e. 1 to 3 of 6 years). Nonpoor was defined as not poor under the SPM in any year.

Descriptive analysis was used to examine the prevalence and demographics of chronic and transient poverty, to compare the demographics of chronic and transient poverty using the Supplemental Poverty Measure versus using the official federal poverty measure, and to examine the impact of existing government benefits, private resources, and household expenses on chronic and transient poverty rates. Results showed that chronic poverty was a rare phenomenon, affecting only 2.1% of the sample or approximately 1 in 50 individuals, while transient poverty was fairly common, affecting 18.9% of the sample or approximately 1 in 20 individuals. The demographics of chronic and transient poverty were somewhat different, with groups that experienced high rates of transient poverty generally demonstrating even more disproportionately high rates of chronic poverty. Thus chronic poverty was more concentrated among particularly disadvantaged groups, while the population affected by transient poverty was still disadvantaged but more similar to the overall sample. The rates of chronic and transient poverty calculated using the SPM were statistically significantly different from the rates calculated using the official federal poverty measure, for both the overall sample and for many demographic subgroups. In general, chronic poverty rates were lower, and transient poverty rates were higher, when using the SPM versus using the OPM. Finally, government benefits were shown to have a substantial impact on both chronic and transient poverty rates, reducing the overall transient poverty rate from 23.9% to 18.9%, a difference of 5.0 percentage points, and reducing the overall chronic poverty rate from 10.8% to 2.1%, a reduction of 8.7 percentage points. One observed effect of government benefits was to increase household resources just enough to shift some individuals out of chronic poverty into transient poverty. The impact of government benefits on chronic and transient poverty rates was different for different demographic subgroups. Seniors experienced the greatest reduction in transient and especially chronic poverty rates, essentially due to Social Security, while children experienced less of a reduction. For immigrants, the dominant effect of government benefits was to shift individuals out of chronic into transient poverty.

Multivariate regression, specifically multinomial logistic regression, was used to examine the predictors of transient and chronic poverty. Analysis specifically examined whether the predictors of each type of poverty, versus nonpoor status, corresponded to economic theory which posits that transient poverty is driven by temporary reductions in income (e.g. job layoff), while chronic poverty is driven by an inadequate long-term base of human and material assets needed to generate income (e.g. lack of education or presence of disability). Results showed that chronic poverty was significantly associated with asset limitations, including particularly non-high school graduate status, immigrant status, and long-term disability in a high housing cost area. Transient poverty was significantly associated with one variable linked to short-term income disruption, namely short-term unemployment. However, transient poverty was also significantly predicted by variables representing asset limitations, though most of these covariates had a stronger association with chronic poverty than transient poverty. The

association of asset limitations with transient poverty appeared to be partly explained by the fact that government benefits shifted some asset-limited households, who would be expected to be chronically poor, out of chronic poverty and into transient poverty.

Results of this study suggest implications for both research and policy. The finding that rates of chronic and transient poverty differ depending on whether the Supplemental Poverty Measure or official federal poverty measure is used suggests that researchers and policy analysts should consider using the SPM when analyzing longitudinal poverty, as the SPM has a stronger conceptual and empirical grounding than the OPM and did not simply function as a proxy for the OPM when examining poverty longitudinally in this study. Results related to the impact of government benefits on chronic and transient poverty rates suggest that policymakers should consider not just short-term policy impacts, but also the longitudinal impact of specific policies and of the overall package of government benefits on poverty. In addition, the differential impact of policies on chronic versus transient poverty, and on chronic and transient poverty among different demographic subgroups, should be considered. Findings related to the predictors of chronic versus transient poverty suggest that policies to address chronic poverty should target individuals with limited bases of human assets needed to generate income; such policies could function either through asset building or through long-term income supplementation or subsidies. Transient poverty could be addressed by enhancing short-term unemployment support, while policies targeted to asset-limited individuals would be likely to impact transient as well as chronic poverty. Further research to more clearly distinguish predictors of chronic poverty over and above transient poverty would be helpful for policy targeting purposes. Finally, prior research on the impact of chronic and transient poverty on life outcomes suggests that two types of poverty could be considered as priorities for policy interventions, due to greater impact on health and other outcomes, namely chronic poverty (as exposure to longer duration of poverty is associated with worse outcomes) and transient poverty occurring during the sensitive developmental period of childhood (as exposure to even short-term poverty during this sensitive period is associated with serious long-term health and developmental impacts). Results from this study show that addressing either of these two types of poverty could be feasible, if somewhat ambitious policy goals in terms of the number of individuals affected and the cumulative gap between their resources and needs.

Dedicated to all of the families and individuals
who struggle to make ends meet in America

and to the citizens and policymakers whose ideas and choices
shape what America does about poverty,
and thereby determine the kind of country in which we all live.

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Chapter 1

INTRODUCTION

Why Poverty Measurement Matters

As of 2011, 46.2 million Americans, including 16.1 million children, were living in poverty, as defined by the official United States poverty measure. These figures represent more than one in seven Americans, and more than one in five American children. Moreover, though the U.S. economy is now continuing to rebound from the Great Recession, the official poverty rate increased for three consecutive years between 2007 and 2010, rising to the highest rate of the prior 27 years. This high poverty rate combined with population growth means that the poor population is now the largest, in terms of the number of poor individuals, that it has been since the official poverty estimates were first published in the 1960s (DeNavas-Walt, Proctor, & Smith, 2010 & 2012). Clearly poverty is a problem that affects a significant proportion of Americans.

A substantial body of research has examined the impact of poverty in the United States, using the official federal poverty measure. Thus it is well-documented that poverty is associated with detrimental effects at the individual, family, and community levels, affecting the health and mental health of individuals, family well-being, and neighborhood-level functioning (Aber & Bennett, 1997; Lynch, Kaplan, & Shema, 1997; Kawachi & Berkman, 2000). Poverty is hypothesized to affect individual life outcomes via a variety of direct and indirect mechanisms, including biological pathways (e.g. malnutrition), psychological pathways (e.g. stress), social pathways (e.g. social networks), and environmental pathways (e.g. substandard housing, low-quality child care, or neighborhoods with poor social control) (Braveman, Egerter, & Williams, 2011; Hertzman & Boyce, 2010; Matthews & Gallo, 2011; Bradley & Corwyn, 2002; McLoyd, 1998; Evans, 2004; Kawachi & Berkman, 2000; Wilson, 1987).

Poverty is associated with negative outcomes for adults across multiple facets of well-being. Evidence of the association of poverty with poor health outcomes is particularly strong, as low income and low socioeconomic status have been shown to be associated with significantly higher rates of diverse health problems, ranging from minor illnesses (such as headaches), to serious diseases and chronic conditions (such as coronary heart disease and diabetes), to early mortality (Aber & Bennett, 1997; Adler, et al., 1994; Braveman, Egerter, & Williams, 2011). Poverty is associated with poor mental health among adults, as well, including depression, anxiety disorders, and serious mental illness (Lynch, Kaplan, & Shema, 1997; Pratt, Dey, & Cohen, 2007; Kessler, et al., 1994; Lorant, et al., 2003). Poverty is also a marker of neighborhood-level disadvantage that is linked to poor physical and mental health (Kawachi & Berkman, 2003; Silver, Mulvey, & Swanson, 2002).

Children are more likely than adults to be poor, and may be more sensitive to the effects of poverty than adults (Duncan & Brooks-Gunn, 1997; Duncan, et al., 1998; Braveman, Egerter, & Williams, 2011; Elo, 2009; Matthews & Gallo, 2011; Duncan, Ziol-Guest, & Kalil, 2010). Indeed, poverty is associated with diverse negative outcomes for children. In terms of health, low-income children have higher rates of infant mortality and are more likely to be born prematurely and with low birthweights than higher-income children (Aber, et al., 1997; Bradley & Corwyn, 2002). They are also more likely to experience childhood illnesses and injuries, and to experience more serious complications from health problems (Bradley & Corwyn, 2002). Poor children have higher rates of emotional and behavioral problems than higher-income children, as well, though the association between poverty and childhood mental health problems is weaker than that for other domains (McLeod & Shanahan, 1993 & 1996; McLoyd, 1998;

Bradley & Corwyn, 2002). Childhood poverty is also consistently associated with developmental problems and lower levels of cognitive performance, including lower IQs (Bradley & Corwyn, 2002; Aber, et al., 1997; McLoyd, 1998). Poor children may also enter kindergarten with lower levels of school readiness (McLoyd, 1998), and they are likely to exhibit lower levels of academic achievement over time (Bradley & Corwyn, 2002; McLoyd, 1998; Duncan, et al., 1998).

The negative impact of poverty during childhood may have long-term repercussions, affecting adult opportunities and outcomes and shaping life trajectories (Braveman, Egerter, & Williams, 2011; Elo, 2009; Matthews & Gallo, 2011; Duncan, Ziol-Guest, & Kalil, 2010). Very young children may experience the most serious effects of poverty. At a basic biological level, the negative physical and psychosocial environments associated with poverty during the prenatal period and in early childhood may even become “biologically embedded,” shaping the development and long-term functioning of key physiological systems (e.g., systems related to stress response, or executive brain functions like memory or attention), and even influencing the pattern of gene expression (Hertzman & Boyce, 2010).

Given the substantial size of the poor population, and the serious negative outcomes associated with poverty, alleviating poverty and addressing the needs of poor individuals are primary objectives of social welfare policy in the United States. However, precisely how policy can and should address the problem of poverty is a question that has generated much debate, with Americans and their policymakers offering a variety of answers over time.

Constructivists argue that such debate is inherent in the nature of a social phenomenon like poverty, whose meaning is not objective and fixed but rather contested and socially constructed (Guba & Lincoln, 1994). Thus the meanings of social problems, such as poverty, in the policy context are created and reproduced by the human actors who are involved in the policy arena, including elected officials, government bureaucrats, academics, advocates, media representatives, and the general public (Kingdon, 2003; Stone, 2002). Consequently, the ways that Americans and their policymakers understand the nature of the problem of poverty tomorrow may differ from the ways that they understand poverty today. Prevailing beliefs and definitions of who is poor, why they are poor, and what the government should do about poverty may shift over time based on emerging information and ideas about poverty that resonate within the contemporary historical and political context.

Shifting understandings of a problem like poverty matter for public policy, because the way a problem is framed and understood determines the types of solutions that are perceived to be appropriate to address it (Benford & Snow, 2000). Thus different definitions and interpretations of a social problem like poverty imply different policy solutions to that problem (Stone, 2002).

Poverty measurement is a key factor that influences understanding of the nature of poverty, and thus shapes ideas about appropriate policy solutions for poverty. Quantitative measures and statistical analyses provide data about the size and characteristics of the poor population that are particularly valued by policymakers and the general public, as information perceived to be authoritative and reliable, backed by the legitimacy of official government statistics and/or academic research. Thus ideas about poverty and its policy solutions are importantly shaped by the official federal measure of poverty produced by the U.S. Census Bureau that defines who is poor, along with official Census reports and academic research that use the official measure in particular ways to describe the extent of poverty and the demographics of the poor population.

However, the official method used to measure poverty in the United States is not the only possible way to define and analyze poverty quantitatively. Alternative definitions of who qualifies as poor can be implemented as quantitative measures, and alternative statistical analysis approaches can be used to describe the size and characteristics of the poor population in quantitative terms. Using such alternative definitions and analysis approaches produces a different picture of poverty in the United States, with the potential to alter our understanding of the problem of poverty and motivate different policy approaches to addressing poverty.

This study offers one such alternative approach to quantifying poverty in the United States. Using a recently developed alternative measure to define who is poor, and adopting a longitudinal approach to analyzing the characteristics of the poor population, instead of the traditional cross-sectional approach, this study produces a new quantitative description of poverty in the United States. The picture it paints suggests a different way of thinking about who is poor and why, how many people are poor, what types of policies are likely to be effective in addressing poverty, and where policy interventions might be most important. By offering an alternative approach to understanding the problem of poverty, this study seeks to spark new ideas in the ongoing debate about what we can and should do to address poverty in America.

Chapter 2 PROBLEM Measuring Poverty in the United States

Substantial empirical research demonstrates that poverty is associated with negative outcomes across a wide spectrum of life domains, particularly among children, and is hypothesized to affect well-being via a variety of biological, psychological, and social mechanisms. The pervasive negative effects of poverty, at the individual, family, and community levels, are an important motivation for social welfare policies designed to reduce the extent and impact of poverty. In order to develop and implement policies that are effective in reducing the extent of poverty and meeting the needs of poor individuals, policy makers require information about the characteristics of the poor population, leading to the impetus for poverty measurement.

Accurately measuring the extent of poverty and the characteristics of households experiencing poverty is key to designing effective policies for poverty alleviation. Currently, however, the standard method used to measure poverty in the United States, and thus to inform policy design and the allocation of public resources, provides only a limited picture of the poor population, and arguably fails to accurately identify which households actually have insufficient financial resources to meet their needs. This study proposes an alternative approach to measuring poverty that has the potential to provide a more accurate, comprehensive, and useful profile of poverty in the United States.

General Approaches to Poverty Measurement

Poverty can be broadly conceptualized as the inability to secure the resources needed to meet basic needs or achieve a minimally acceptable standard of living. There are four basic approaches to determining how many and which households within a population are poor at a given point in time (Citro & Michael, 1995; Iceland, 2005b). Each uses a distinct strategy to establish the poverty threshold, or the minimum level of resources (or capabilities) that is considered adequate for a household and below which a household is considered to be poor:

- 1) *Absolute or expert budget measure*: With this approach, the amount of money required to meet a household's basic needs is calculated based on expert input on needs and standard costs of specific budget components such as housing and food. Typically these thresholds are adjusted regularly to reflect cost changes due to inflation (Citro & Michael, 1995; Iceland, 2005b).
- 2) *Relative measure*: Relative poverty thresholds are determined through comparison to the overall population distribution of income. Usually the threshold comprises a specific percentage of the population median income, often 50% of the median. This approach to defining poverty is prevalent in European policymaking (Citro & Michael, 1995; Iceland, 2005b).
- 3) *Subjective measure*: A third approach to determining poverty thresholds involves surveying the population to identify the level of income that is popularly perceived to provide the minimum necessary to meet a household's needs (Citro & Michael, 1995; Iceland, 2005b).
- 4) *Deprivation index or multidimensional measure*: Finally, non-income-based poverty thresholds can be developed that directly assess whether individuals are unable to

meet specific needs (e.g., lack of food) or achieve specific outcomes (e.g., failure to complete secondary education) that are viewed as necessary for individuals to achieve a minimally-adequate quality of life or participate fully in society. Often these measures incorporate assessments across multiple dimensions of deprivation (e.g., health, education, and income). (Citro & Michael, 1995; Iceland, 2005b).

Each of these approaches to defining and measuring poverty has benefits and drawbacks. Absolute thresholds attempt to reflect an objective measure of insufficient resources to meet basic needs (though some subjectivity is inherent in deciding on the specific components of such a measure), but these thresholds can become outdated as consumption patterns change, and they may not capture the social aspects of poverty. Relative thresholds are always up-to-date, but they have little direct connection to material hardship; they may largely measure, instead, relative social hardship. Subjective thresholds, similarly, may serve better as measures of social exclusion than as measures of material hardship. Finally, though multidimensional measures provide a more holistic view of deprivation, they present serious operationalization challenges, particularly when they include non-material measures of well-being (Citro & Michael, 1995; Iceland, 2005b).

In the United States, the explicit focus of many poverty alleviation policies (such as food stamps, Social Security, Medicaid, housing subsidies, and the National School Lunch Program) has historically been addressing the material hardship associated with poverty¹. For the practical purposes of determining which households should be eligible for public assistance to meet their basic material needs, in order to then design and implement policies and allocate public resources, the expert budget approach to poverty measurement has been considered both appropriate and feasible, as this approach focuses explicitly on measuring the gap between financial resources and basic expenses (Iceland, 2005b). Thus the dominant, official approach to poverty measurement in the United States uses an expert budget methodology.

The Official United States Poverty Measure

The official U.S. poverty thresholds were originally developed by Mollie Orshansky of the Social Security Administration in 1963. Tasked with developing a way to measure the extent of poverty in the U.S. as part of Lyndon Johnson's War on Poverty, Orshansky developed poverty thresholds, or minimum adequate income levels, based on data from the U.S. Department of Agriculture (Fisher, 1997; Dalaker, 2005). USDA dieticians had determined the cost of four different nutritionally-adequate household food plans, the cheapest of which was the "Economy Food Plan," designed to reflect the minimum budget for nutritionally adequate food for a household with an extremely restricted income. Separately, the USDA had determined through a 1955 Household Food Consumption Survey that households of three or more persons typically spent about one third of their after-tax income on food. Orshansky combined these two pieces of data to develop poverty thresholds by multiplying the cost of the Economy Food Plan by a factor of three. The thresholds were then adjusted for various differences in household size, composition, and characteristics, including number of children, sex of household head, farm versus non-farm, and elderly versus non-elderly.

¹ Other important poverty-related policies in the U.S., however, arguably focus more on the social aspects of poverty. TANF, for example, emphasizes connecting participants to the workforce more than meeting participants' material needs (though eligibility for TANF is still determined based on insufficient material resources as measured by the official federal poverty measure). However, this social orientation for welfare policy emerged relatively recently, in the 1980s and 1990s (Gilbert, 2004), many years after the development of the official poverty measure.

Next, total household cash income was compared to the adjusted household threshold. Individuals in households with cash incomes below the poverty thresholds were categorized as poor, while those in households with incomes at or above the thresholds were categorized as nonpoor.

Indexing these thresholds to the Consumer Price Index (CPI) allowed for annual adjustment for inflation. In 1969, the CPI-indexed Orshansky thresholds were adopted as the official definition of poverty for the federal government. With minor adjustments, these thresholds have continued to function as the official measure of poverty in the United States (Fisher, 1997; Dalaker, 2005).

Poverty Demographics Using the Official Poverty Measure

Using the official federal poverty measure (OPM), often referred to as the “federal poverty line” or FPL, 46.2 million people in the United States were poor in 2011. The official poverty rate in 2011 was 15.0% of the total population (DeNavas-Walt, Proctor, & Smith, 2012). This rate was not statistically different from the rate in 2010, but after increases in the three consecutive years prior, it represents the highest official poverty rate since 1994 (DeNavas-Walt, Proctor, & Smith, 2010 & 2012).

Poverty, defined using the official OPM measure, affects certain populations disproportionately. Individuals of minority race or ethnicity are more likely to be poor than non-Hispanic whites. In 2011, the OPM poverty rate for minority race/ethnicity individuals was 24.1%, while the poverty rate for non-Hispanic whites was 9.8%. Black and Hispanic individuals are particularly likely to experience poverty, with poverty rates of 27.6% and 25.3%, respectively, in 2011. Asians overall are less likely to be poor, with a poverty rate of 12.3% in 2011 (DeNavas-Walt, Proctor, & Smith, 2012). Overall poverty rates by race and ethnicity, however, can mask differences in rates of poverty among different subgroups within broad race/ethnicity categories. Foreign-born individuals are also disproportionately likely to be poor according to the official poverty measure, with a 19.0% poverty rate in 2011 (DeNavas-Walt, Proctor, & Smith, 2012).

According to the OPM, seniors are less likely to be poor than younger adults. In 2011, the OPM poverty rate for seniors was 8.7%, substantially less than the 15.0% rate for the total population (DeNavas-Walt, Proctor, & Smith, 2012).

Families, in general, have lower official poverty rates than individuals not living in families. The OPM poverty rate for families overall was 13.1% in 2011, lower than the rate for the population as a whole. However, some types of families are much more likely to experience poverty. In particular, female-headed households with children are highly likely to be poor. In 2011, the poverty rate for these households was 31.2%; they comprised only 19.5% of families, but 51.5% of poor families (DeNavas-Walt, Proctor, & Smith, 2012).

The high official poverty rate for female-headed families contributes to a high poverty rate for children, who are much more likely to be poor than adults. In 2011, 16.1 million children in the United States were officially poor. The child poverty rate was 21.9%; children represented 23.9% of the total population, but 34.9% of the population in poverty. Children ages zero to five have particularly high rates of poverty. In 2011, 24.5% of children under age six living in families, or 5.8 million young children, were officially categorized as poor (DeNavas-Walt, Proctor, & Smith, 2012).

Critique of the Official Poverty Measure

The official federal approach to measuring poverty has many limitations as a poverty measurement tool for research and policy. From the beginning, the official poverty measure was criticized for inconsistencies in the way it accounted for household costs and resources. Over the following decades, as the U.S. economy, family characteristics, and government policies changed substantially, the adequacy of the official poverty definition was repeatedly questioned. On the most fundamental level, the base food costs and multiplier used to generate the original OPM thresholds no longer reflect the typical amount or proportion of income that modern households spend on food, so that the threshold amounts, though annually adjusted for inflation, are now arguably essentially arbitrary (Blank, 2008; Citro & Michael, 1995). Moreover, the official thresholds continued to be used as originally formulated without consideration of factors such as the increase in the prevalence of working mothers and concomitant increase in work-related child care costs; the reduction in the average family size over time; and changes in government tax and benefit policies, such as the increase in Social Security payroll taxes and the expansion of the food stamp benefit (Blank, 2008; Besharov, 2007; Citro & Michael, 1995).

In 1990, Congress requested a full review of the official method for defining poverty by the National Academy of Sciences (NAS)/National Research Council, the most thorough examination of the poverty measure to date. The NAS findings were published in 1995, with recommendations that the official poverty measure be changed in a number of ways (Citro & Michael, 1995; Fisher, 1997; Dalaker, 2005). Further refinement of the NAS recommendations was completed in 2004 (Iceland, 2005a). Most recently, in 2010, the Obama administration directed the Census Bureau and Bureau of Labor Statistics to produce an official Supplemental Poverty Measure that largely follows the methods recommended by the NAS (ITWG, 2010). The NAS recommendations were not used to formally replace the official approach to poverty measurement. However, these recommendations, as operationalized in the Supplemental Poverty Measure (SPM), provide a more conceptually sound, empirically grounded approach to operationalizing an expert budget threshold and household resources² in order to more accurately measure U.S. poverty in terms of insufficient financial resources to meet basic needs.

The Supplemental Poverty Measure: An Improved Expert Budget Measure

Households are used as the basic unit for determining poverty status under both the official and SPM measures, and the SPM adopts a different approach to defining households than the OPM. While the official poverty measure defines households as individuals who are related by birth or marriage, the SPM defines households more broadly to include co-habiting adults and children as well. Thus the SPM better reflects contemporary household compositions and resource sharing among unmarried co-habiting individuals (Short 2011a, 2011b, & 2012; Citro & Michael, 1995).

² While the Supplemental Poverty Measure is generally accepted as a substantial conceptual improvement over the official federal poverty measure, it should be noted that the SPM is not without its critics. One of the 13 members of the NAS panel that issued the recommendations forming the basis for the SPM dissented from the published panel findings, arguing that the choices of which basic needs to include in the thresholds and non-discretionary expenses, and how to establish the range and update the thresholds, were based on subjective rather than scientific judgments (Citro & Michael, 1995, pp.385-390). Other poverty scholars argue that income-based poverty measures like the SPM provide a less accurate view of poverty than consumption-based poverty measures, pointing to data from the U.S. Bureau of Labor Statistics Consumption Expenditure Survey that show that low-income households report purchases that substantially exceed their reported incomes before taxes (Eberstadt, 2006).

Like the official poverty measure, the Supplemental Poverty Measure designates poverty thresholds as minimum adequate income levels. However, unlike the OPM poverty thresholds, the poverty thresholds under the SPM are grounded in up-to-date patterns of household spending on basic needs. The SPM calculates the threshold of minimum needed resources using a categorical basic needs budget (with primary components of food, clothing, shelter, and utilities) based on data from the Consumer Expenditure Survey, in order to adjust annually for changes in typical household consumption patterns. Because the basic needs budget amounts in the SPM are linked to current expenditure patterns as reflected in the Consumer Expenditure Survey, the SPM and its NAS-based precursors have been described as “quasi-relative” poverty measures (Iceland, 2005b). This baseline threshold is adjusted annually for inflation using the CPI-U-RS (Consumer Price Index Research Series Using Current Methods), a more methodologically sound inflation adjustment method than that used to adjust the official poverty measure thresholds. In addition, unlike the OPM thresholds, SPM poverty thresholds are adjusted to account for geographic differences in cost of living, by using geographically-specific rent amounts to adjust the shelter portion of the threshold (Short 2011a, 2011b, & 2012; Citro & Michael, 1995).

Household income is then compared to the SPM threshold to categorize individuals as poor or nonpoor, as with the OPM. However, several adjustments are made to household incomes before determining whether incomes meet the threshold amounts. In terms of calculating the financial resources available to a household to meet basic needs, the SPM counts not only cash income as in the OPM, but also the value of a range of non-cash resources. In particular, the SPM adds to family income the value of cash-equivalent in-kind government benefits used to meet basic needs, such as food stamps (SNAP), heating subsidies (LIHEAP), and housing subsidies. Also, unlike the official poverty measure, before determining whether family resources meet or exceed poverty thresholds, the SPM also subtracts non-discretionary expenses from resources, to ensure that thresholds are compared to the resources actually available to families to pay for the basic needs included in the poverty threshold. Thus work-related expenses like child care and commute costs are subtracted from resources, as well as out-of-pocket medical expenses (Short 2011a, 2011b, & 2012; Citro & Michael, 1995).

The SPM also accounts for taxes as household expenses and tax credits as financial resources, unlike the official poverty measure. Thus the SPM subtracts from family resources money spent on federal and state income taxes and federal payroll taxes as non-discretionary expenses, while adding to family resources money received through refundable tax credits such as the EITC (Short 2011a, 2011b, & 2012; Citro & Michael, 1995).

Overall, the SPM method for calculating family resources and expenses more accurately accounts for the current structure of government policies designed to address poverty, a system which emphasizes near-cash in-kind benefits, and indirect payments such as tax credits, over unrestricted direct cash payments (Blank, 2008; Besharov, 2007; Citro & Michael, 1995). Because the SPM accounts for many more types of public benefits than the OPM, it presents a more accurate picture of who is *still* poor after considering the effects of most of the existing government policies designed to prevent or ameliorate poverty.

Poverty Demographics Using the SPM

The Census Bureau published estimated poverty counts and rates for multiple years using “experimental” poverty measures that followed the NAS recommendations and were precursors to the Supplemental Poverty Measure (Short, et al., 1999; Short, 2001a; Garner & Short, 2008),

and since 2011 has begun publishing estimated poverty rates and counts using the SPM (Short, 2011a & 2012). Using these measures produces a somewhat different demographic picture of the poor population of the United States.

Different components of the SPM and other NAS-based poverty measures have different effects on the poverty rates for specific demographic groups, compared to the rates calculated using the official federal poverty measure. In general, using the SPM or similar measure that follows the NAS recommendations for poverty thresholds and financial resources results in poverty rates that are higher than the official rates (Garner & Short, 2008 & 2010). However, applying the broader definition of household used in the SPM and other NAS-based measures (particularly including co-habiting adults and children) tends to produce lower rates of poverty overall (Short, 2011b). Adjusting the poverty thresholds for geographic differences in costs of living leads to increased poverty rates for individuals in higher-cost-of-living areas and decreased rates where living expenses are lower (Short, 2001b).

The most recent available estimates using the NAS-based poverty measurement approach report poverty rates for 2011 calculated using the SPM (Short, 2012), selectively listed in Table 1 below. Under the SPM, the poverty rate in 2011 was 16.1% overall, compared to the official poverty rate of 15.1%. With this measurement approach, the child poverty rate was actually lower in 2011, at 18.1% compared to the 22.3% official rate. The rate for nonelderly adults was slightly higher than the official rate, at 15.5% compared to 13.7%. For seniors, the research SPM poverty rate was substantially higher than the official rate, at 15.1% versus 8.7%, largely due to out-of-pocket medical expenses. Poverty rates for Hispanics and non-Hispanic whites were somewhat higher than the official rates, at 28.0 versus 25.4% and 14.3 versus 12.9%, respectively, while the rate for blacks was slightly lower, at 25.7% compared to 27.8%. The research SPM poverty rate for foreign-born individuals was also significantly higher, at 25.8% versus the official rate of 19.0%³ (Short, 2012).

Overall, measuring poverty using the SPM “results in a population classified as poor that has characteristics more similar to the total population” (Short, 2011b, p.14). Specifically, the demographics of the poor population using the SPM are more similar to the general population in terms of age, family composition, and geography, due to increases in the proportion of poor individuals who are seniors, living in married-couple families, residing in suburban areas, and living in the West and Northeast versus the Midwest and South (Short 2011a, 2011b, & 2012).

Using the SPM also facilitates analysis of the impact of various poverty alleviation and welfare policies on poverty rates (as calculated using this measure), by re-calculating the rates after excluding income transfers (from programs like the EITC or housing subsidies) from household financial resources. For example, excluding refundable tax credits (including the EITC) leads to an increase in the overall 2011 SPM poverty rate from 16.1% to 18.9%, and an even larger increase in the child poverty rate, from 18.1% to 24.4%. Removing the value of food stamps causes the overall research SPM poverty rate to grow from 16.1% to 17.6%, and increases the child poverty rate from 18.1% to 21.0%. Excluding the value of housing subsidies leads to a relatively small increase in the overall poverty rate, from 16.1% to 17.0%, and somewhat larger increases in the poverty rates for children (from 18.1 to 19.5%) as well as seniors (from 15.1% to 16.3%) (Short, 2012). The small impact of housing subsidies may be

³ Short (2012) did not discuss the reasons for the higher rate for foreign-born individuals, but some factors that could have contributed might include relatively high rates of residence in higher cost-of-living areas such as cities and coastal regions (leading to higher poverty thresholds) as well as relatively low rates of receipt of public benefits due to limited eligibility (leading to lower household resources).

attributable to the fact that relatively few eligible individuals actually receive them; wait lists for federally subsidized housing vouchers and units are years long in most areas due to funding limitations (Center on Budget and Policy Priorities, 2013).

Table 1. U.S. poverty rates using the official federal poverty measure and SPM for 2011, from Short (2012).

Characteristic	Total (in thousands)	Official Federal Poverty Measure (OPM) *		Supplemental Poverty Measure (SPM)	
		Number	Percent	Number	Percent
All people	308,827	46,618	15.1	49,695	16.1
Children	74,108	16,506	22.3	13,429	18.1
Non-elderly adults	193,213	26,492	13.7	30,020	15.5
Seniors	41,507	3,620	8.7	6,247	15.1
In female-headed household	63,347	18,773	29.6	18,996	30.0
Race/ethnicity					
White	241,586	31,101	12.9	34,427	14.3
White, not Hispanic	195,148	19,358	9.9	21,427	11.0
Black	39,696	11,016	27.8	10,214	25.7
Asian	16,094	1,981	12.3	2,719	16.9
Hispanic (any race)	52,358	13,323	25.4	14,670	28.0
Foreign-born	39,976	7,596	19.0	10,327	25.8
Northeast region	55,035	7,266	13.2	8,262	15.0
Midwest region	66,115	9,313	14.1	8,454	12.8
South region	115,068	18,512	16.1	18,432	16.0
West region	72,610	11,527	15.9	14,547	20.0

* Note that these rates were calculated using the Census Current Population Survey (CPS) sample used to calculate Supplemental Poverty Measure rates, as noted in Short (2012). This sample is slightly different from the CPS sample typically used to calculate official poverty measure (OPM) rates, as it includes unrelated individuals under age 15. Thus OPM rates listed above are slightly different from those listed in other Census Bureau publications also cited in the text, e.g. DeNavas-Walt, Proctor, & Smith (2012).

Addressing the Time Dimension of Poverty

The Supplemental Poverty Measure represents an important improvement in U.S. poverty measurement, as it offers a more rationally operationalized expert budget measure, that better reflects the range of resources available to families and whether those resources are sufficient to meet families' basic needs. However, the SPM alone does not address all of the shortcomings of the standard approach to measuring poverty in the U.S. Another important problem is that the usual approach to U.S. poverty measurement does not account for the time dimension of poverty.

Official U.S. poverty statistics are based on cross-sectional data, reporting the number and characteristics of households who qualify as poor by comparing annual income to an annual poverty threshold amount. This measurement approach does not capture information about the duration of poverty across multiple years. However, empirical research shows that the duration of poverty is relevant to understanding both the demographics of the poor population and the impact of poverty on life outcomes.

Studies examining the time dimension of poverty in the United States (using the official federal poverty measure or a closely related construct) reveal that a substantial proportion of the population experiences poverty at some point during their lifetimes (Rank & Hirschl, 1999; Duncan, 1984; Bane & Elwood, 1986). An analysis of data from the national Panel Study of Income Dynamics (PSID) for the years 1968 through 1992 found that 51.4% of adults had an annual income below the poverty line for at least one year between the ages of 20 and 65. Among African Americans, 84.4% of those reaching age 65 had experienced at least one year of poverty since the age of 20 (Rank & Hirschl, 1999).

However, studies of poverty duration in the United States also show that most individuals who enter poverty remain poor for only a short period, then see their incomes rise again above the poverty line (Bane & Elwood, 1986; Rank & Hirschl, 1999; Anderson, 2011). The likelihood of subsequently re-entering poverty varies by household demographics (Stevens, 1999). Overall, research consistently shows that short-term or transient poverty is much more common than long-term or chronic poverty. For example, Duncan (1984), analyzing PSID data from 1969 through 1978, reported a 24.4% rate of experiencing poverty in at least one year of ten years, but only a 2.6% rate of being poor in eight or more of ten years. A similar pattern has been found over shorter and more recent time frames as well. For example, an analysis of monthly income data from the Survey of Income and Program Participation (SIPP) for the three years from 2004 through 2006 found that 28.9% of individuals experienced poverty for at least two months during the study period, but only 2.8% of individuals were poor during the entire 36 months (Anderson, 2011).

Though the number of individuals experiencing chronic poverty is relatively small as a proportion of the total population that experiences poverty, these individuals represent a disproportionately large share of the poor population at any given point in time, because of their slow exits from poverty (Corcoran, et al., 1985; Bane & Elwood, 1986). For example, in the SIPP study described above, 23.1% of the individuals who were poor during the first two months of the study period were categorized as chronically poor (poor for the full 36-month period), though these persistently poor individuals represented only 9.7% of the people who experienced poverty for two months or more during the study (Anderson, 2011).

Demographics of Transient Versus Chronic Poverty

Studies that partition the U.S. poor population into those experiencing transient versus chronic poverty have found that these groups have somewhat different demographic profiles.

Various studies use different timeframes and different approaches to measure chronic poverty. Nonetheless, a general pattern across studies is that demographic groups that are disproportionately likely to experience any poverty (such as children, African Americans, and female-headed households) tend to be even more overrepresented among the chronically poor.

Thus Duncan (1984), analyzing data from the PSID for the years 1969 through 1978, found that African Americans represented 12% of the U.S. population, 19% of the transient poor (income below the federal poverty line for one or two of ten years), and 62% of the chronically poor (income below the poverty line for eight or more of ten years). Households headed by a person with a disability represented 11% of the U.S. population, 17% of the transiently poor, and 39% of the chronically poor. In another analysis of PSID data from 1968 through 1989, Stevens (1999) examined the average stay in poverty (across multiple spells), after entering poverty, for different demographic groups. Groups with the longest stays included individuals in female-headed households, particularly children in female-headed households, as well as households headed by African Americans and by individuals without high school diplomas.

More recently, the analysis of SIPP data from 2004 to 2006 found significant demographic differences between the chronically poor (defined as income below the federal poverty line during all 36 months of the study) and the episodically poor population (defined as income below the poverty line for at least two consecutive months during the study⁴). Within the episodically poor population, overrepresented demographic groups included children, African Americans, and female-headed households, all of whom experienced even more disproportionate chronic poverty. Female-headed families with children were much more common among the chronically poor (49.9%) than the episodically poor (25.8%). Children also comprised a much larger proportion of the chronically poor (44.9%) than the episodically poor (32.8%). African Americans were also overrepresented among the chronically poor (37.6%) compared to their representation among the episodically poor (19.6%) (Anderson, 2011).

Impact of Transient Versus Chronic Poverty on Life Outcomes

Empirical research also shows that the individual impact of experiencing chronic or long-term poverty may be different from the impact of transient or short-term poverty on health and other life outcomes, though the approach and rigor used to measure poverty duration in these studies has been variable.

One study, using data from the Panel Study on Income Dynamics (PSID), found that persistently low income (four to five years) over a period of five years was associated with a much higher risk of death in the subsequent five years than transitory low income (one to three years) (McDonough, et al., 1997). Another study, also using data from the PSID, found that compared to individuals with no history of poverty, self-rated health was 17% lower for those who had experienced transient poverty (one to seven of sixteen years) and 32% lower for those who had experienced persistent poverty (eight to sixteen years) – though average health self-ratings for all groups were classified as “good” (McDonough & Berglund, 2003). Studies using less rigorous measures of chronic poverty also suggest that a longer duration of poverty is associated with worse outcomes in terms of functional activity limitations, minor illnesses, and

⁴ Note that this definition of “episodically poor” is not equivalent to the definition of “poor” in the official federal poverty measure, most importantly in that the official measure is based on annual income rather than monthly income. Because of substantial variation in monthly incomes, rates of “episodic poverty” in this study were roughly twice the official annual poverty rates (Anderson, 2011).

chronic health conditions, as well as mental health problems including depression and cognitive limitations (Kahn & Pearlin, 2006; Lynch, Kaplan, & Shema, 1997).

Among children, research using a variety of reasonably high-quality measures of poverty duration consistently shows that longer-term poverty has more adverse consequences than short-term poverty, across multiple domains of well-being. In terms of health, a study using data from the National Longitudinal Survey of Youth (NLSY) found that lower cumulative family income from birth to age 10 or 11 was associated with greater odds of having a health condition that limited childhood activities, in addition to greater odds of having a health condition that required medical treatment, at age 10 or 11, with results replicated for a sample of children ages 14 to 15 (Chen, Martin, & Matthews, 2007). With respect to mental and behavioral health, another NLSY study found that the percentage of years of life spent in poverty was a stronger predictor than current-year poverty for several types of mental health problems in children, specifically internalizing symptoms related to anxiety, depression, and dependency (McLeod & Shanahan, 1993). Other studies have similarly found that chronic poverty is more strongly associated than transient poverty with internalizing symptoms among children (Duncan, Brooks-Gunn, & Klebanov, 1994; Hanson, McLanahan, & Thomson, 1997; Pagani, Boulerice, & Tremblay, 1997; McLeod & Shanahan, 1996), and some have found similar associations with externalizing symptoms as well (Duncan, Brooks-Gunn, & Klebanov, 1994; Hanson, McLanahan, & Thomson, 1997; Korenman, Miller, & Sjaastad, 1995; McLeod & Shanahan, 1996).

Other research shows that chronic poverty among children is associated with worse educational outcomes than transient poverty, including deficits in reading, math, and verbal skills (Korenman, Miller, & Sjaastad, 1995), and increased likelihood of grade retention and placement in special education classes (Pagani, Boulerice, & Tremblay, 1997; Zill, et al., 1995). Chronic poverty has also been shown to be associated with greater childhood cognitive and developmental deficits than transient poverty. A study of a sample of low-birthweight, preterm infants, followed over five years, showed that children experiencing chronic poverty (income below the federal poverty line in all four years of data) had significantly lower IQs at age 5 than children experiencing transient poverty (income below the poverty line in one to three years). In fact, the effect of chronic poverty on IQ was approximately twice the effect of transient poverty (Duncan, Brooks-Gunn, & Klebanov, 1994). Other studies provide further evidence of increased developmental deficits associated with chronic versus transient poverty in childhood (Korenman, Miller, & Sjaastad, 1995; Smith, Brooks-Gunn, & Klebanov, 1997; Zill, et al., 1995).

Theoretical Distinctions Between Chronic and Transient Poverty

Prior empirical research thus shows that the characteristics of households experiencing chronic poverty are somewhat different from the characteristics of those experiencing only transient poverty, and that long-term poverty has a greater impact on life outcomes than short-term poverty. There are also theoretical reasons to believe that chronic poverty is different from transient poverty.

From the perspective of economic theory, the causes of short-term or transient poverty are posited to be different from the causes of long-term or chronic poverty. Transient poverty can be conceptualized as reflecting a temporary income shortfall due to a particular shock (e.g., a job loss), where the individual is expected to return to a non-poverty income once he or she recovers from the shock (e.g., finds a new job). Chronic poverty, in contrast, can be conceptualized as reflecting an ongoing income shortfall due to lack of sufficient financial or human assets necessary for an individual to predictably secure income above the poverty

threshold (e.g., lack of the education required to qualify for a job with sufficiently high wages) (Jalan & Ravallion, 1998; Morduch, 1994; Carter & Barrett, 2006). This conceptualization of the different causes of chronic and transient poverty implies different policy solutions for each type of poverty (Lipton & Ravallion, 1995, Carter & Barrett, 2006).

Conceptual frameworks from epidemiology are useful for understanding the differential impact of transient versus chronic poverty on life outcomes. Researchers in epidemiology and public health increasingly call for adopting a life course perspective that pays attention to the duration and timing of the social and biological influences on health that occur throughout the life span (Lynch & Davey Smith, 2005; Ben-Shlomo & Kuh, 2002). This conceptual approach suggests that poverty of long duration, or occurring during particularly important developmental periods, would be expected to have greater negative impact on health and development.

These conceptual frameworks from economics and epidemiology are useful for developing strategies to examine the characteristics of chronic and transient poverty in the United States and to prioritize policy solutions, as described in Chapter 3 below.

Objectives and Contribution of the Current Study

Two major shortcomings of the standard approach to measuring poverty in the United States are the use of the poorly-grounded official federal poverty measure to designate individuals as poor or nonpoor, and the use of a cross-sectional measurement approach that does not capture information about poverty duration across multiple years. The current study addresses both of these shortcomings.

Prior research has examined poverty in the United States using alternative expert budget measures that are more rationally operationalized, including the Supplemental Poverty Measure (Short, 2011a & 2012) and precursor measures similarly based on recommendations of the National Academy of Sciences (Garner & Short, 2008 & 2010). However, these studies have not distinguished between poor individuals experiencing transient versus chronic poverty.

Other research has examined poverty in the United States using longitudinal measures that distinguish transient from chronic poverty (Wagmiller, et al., 2006; Ziliak, 2003; Stevens, 1994, 1999; Rodgers & Rodgers, 1993). However, these studies have used the official federal poverty measure, or a closely related measure (e.g., a threshold based on a multiplier of the OPM), to define which households qualify as poor in a given year, and are thus subject to the criticisms of the federal poverty measure as a poorly operationalized expert budget approach. In addition, most of these studies of chronic and transient poverty have used older data (pre-1990s). Given the significant changes in the macroeconomic environment, welfare policy, and population demographics in the United States since the 1990s, there is a need to examine chronic and transient poverty in the U.S. using more recent and representative data.

The current study aims to address this gap in the existing research by examining poverty in the United States using both a more comprehensively operationalized expert budget measure – the Supplemental Poverty Measure – and a longitudinal approach, partitioning the poor population into those who are chronic versus transient poor. This poverty measurement approach is applied to income data from the late 1990s to the late 2000s for a nationally representative sample of households. This approach to measuring poverty allows for a more useful, accurate, and current description of the populations of individuals experiencing transient and chronic poverty in the United States, thus providing important data for designing effective poverty alleviation policies.

The specific research questions addressed by this study are as follows:

- 1) What is the prevalence of chronic poverty and transient poverty in the United States, when measuring poverty using the Supplemental Poverty Measure?
- 2) What are the demographics of chronic and transient poverty in the United States, when measuring poverty using the Supplemental Poverty Measure?
- 3) Are the prevalence and demographics of chronic and transient poverty different when measuring poverty using the Supplemental Poverty Measure versus using the official federal poverty measure (OPM)?
- 4) What are the impacts of current government supports in reducing the rates of chronic and transient poverty? What are the impacts of private supports? How much do taxes and other specific household expenses contribute to chronic and transient poverty?
- 5) Economic theory posits that transient poverty is associated with short-term income disruption, while chronic poverty is associated with a long-term inadequate base of assets to generate income. Do the predictors of chronic and transient poverty in the United States correspond to this conceptualization of different types of poverty?

Overview of Chapters

The chapters that follow answer the research questions above by describing the study background, research results, and implications. Chapter 3 describes the conceptual frameworks from economics and epidemiology that inform the study design and the analysis of implications. Chapter 4 describes the data and methods used, while Chapters 5, 6, and 7 describe the research results corresponding to research questions 1 through 3, 4, and 5, respectively. Finally, Chapter 8 outlines the implications of these results for research and for policy.

Chapter 3

THEORY

Economic and Epidemiological Frameworks for Understanding Chronic and Transient Poverty

Prior empirical research demonstrates that the demographics of chronic and transient poverty are somewhat different, and that the impact of chronic and transient poverty on life outcomes is also different. Conceptual frameworks from the fields of economics and epidemiology are useful for proposing explanations for these differences, guiding the research questions explored in this study, and prioritizing resulting policy recommendations.

Economic Framework: The Concept of Permanent Income

A longstanding conceptual framework from the field of economics – Milton Friedman’s permanent income hypothesis (PIH) (Friedman, 1957) – offers a useful approach for conceptualizing the distinction between chronic poverty and transient poverty as economic phenomena. Friedman developed the theory in order to explain consumption patterns, not poverty patterns, but the foundational concept on which the theory is based is directly relevant to conceptualizing poverty over time.

The foundation of the permanent income hypothesis is the proposition that an individual’s measured income over a certain period (for example, a year) is comprised of two distinct components: a permanent component and a transitory component (Friedman, 1957; Friedman & Kuznets, 1945). In other words,

$$i_{\text{measured}} = i_{\text{permanent}} + i_{\text{transitory}}$$

The permanent component of income represents the individual’s predictable level of annual (or other period) income, and is determined by the long-term assets or “human” and “nonhuman wealth” that affect the individual’s ability to generate income. These assets include not just financial assets (“nonhuman wealth”) but also the personal attributes, skills, and experience – such as educational credentials, job experience, eligibility for certain benefits, or family connections (“human wealth”) – that influence the amount of income an individual can expect to generate over time, e.g. through employment, government benefits, private transfers, or financial investments (Friedman, 1957).

The transitory component of income, on the other hand, represents random or unexpected short-term variation in income. Examples include both windfall income, such as a one-time pay bonus, and income shocks, such as a layoff resulting in short-term unemployment. Transitory income is determined not by an individual’s long-term asset base, but by one-time or unpredictably episodic events such as illness, macroeconomic cycles, or lucky investment decisions. This transitory component of income can be calculated by subtracting permanent income from measured income (Friedman, 1957).

Over time, an individual’s permanent income remains relatively stable, as it is determined by the individual’s long-term asset base, while transitory income may fluctuate. Measured income averaged over the long-term, therefore, tends to track the permanent component of income (especially when examined across a population), but measured income in any given short-term period is more variable, shifting below or above the level of permanent income depending on the unpredictable size of transitory income shocks or windfalls (Friedman, 1957).

This concept of the permanent and transitory components of income was used by Friedman as the basis for a theory of consumption, which posited that individuals choose their

level of consumption in any given period not based on their current level of income, but rather based on their expected long-term or permanent level of income. Thus the theory predicts that when current income temporarily drops below the expected permanent income level, individuals will use credit or borrow to maintain consumption at the permanent income level⁵, and when current income temporarily rises above the level of permanent income, individuals will save the extra amount rather than consuming more⁶ (Friedman, 1957).

Some of the consumption predictions tied to the permanent income hypothesis have been questioned by empirical research. Research from the perspective of traditional economics has particularly focused on the role of liquidity constraints and limited access to credit markets (particularly for low-income individuals) as drivers of consumption patterns that do not match predictions (Zeldes, 1989; Jappelli & Pistaferri, 2010), while research from the perspective of behavioral economics has highlighted psychological factors that inhibit rational saving behavior, leading to higher-than-predicted consumption (Shea, 1995; Laibson, 2011; Camerer, Loewenstein, & Rabin, 2011)⁷.

However, the foundational concept of PIH on which this study draws – that income includes a permanent component determined by an individual’s asset base, plus a transitory component determined by random or one-time events – has not been discounted. In fact, empirical research demonstrates that income is substantially more variable over the short-term than the long-term, so that annual income is a poor proxy for long-term or permanent income (Mazumder, 2001; Haider & Solon, 2006), providing support for the underlying concept of permanent income. This underlying concept (and not the associated theory of consumption) forms the basis of the conceptualization of poverty duration as determined by the combination of asset-based long-term income modified by random short-term income shocks and windfalls.

Implications of Permanent Income for Understanding Poverty Over Time

The concept of permanent income has been usefully applied to conceptualize chronic poverty versus transient poverty in economic terms (Jalan & Ravallion, 1998; Morduch, 1994; Lipton & Ravallion, 1995, Carter & Barrett, 2006). If an individual’s base of income-generating assets is too low, the individual’s long-term income will be at a level below the poverty threshold,

⁵ This component of the permanent income hypothesis can be used to justify arguments that over the short-term, at least, consumption is a more accurate measure of poverty than income, as some poverty scholars have argued (Meyer & Sullivan 2003 & 2012; Slesnick, 2001). Per PIH, consumption levels will remain constant even if income temporarily drops, and thus using consumption to measure the ability of households to meet basic needs avoids categorizing as “poor” those individuals who have adequate income over the long-term but are experiencing an unusual short-term income deficit expected to have little impact on their longer-term ability to meet basic needs.

⁶ PIH is often discussed in conjunction with another longstanding economic framework, the life-cycle hypothesis of consumption (LCH) developed by Frank Modigliani and Richard Brumberg (1954), which is less relevant to conceptualizing chronic versus transient poverty. Like PIH, LCH also seeks to explain consumption smoothing over time. The basic premise is that individuals deliberately plan to accumulate a specific level of wealth during their working years (through personal savings, pension contributions, and/or Social Security payroll deductions), so that they will be able to maintain a constant level of consumption after they stop working and their income flow ceases. In other words, LCH proposes that individuals plan in order to maintain their working-age standard of living post-retirement by saving during their working years, and then spending down their accumulated savings in retirement. This theory has applications for analyzing poverty among seniors. Specifically, LCH can be used to caution against categorizing seniors as “poor” on the basis of low incomes alone, without considering wealth, as the theory posits that many seniors will meet expense needs not through current income, but rather by spending down assets they have deliberately saved in advance to fund a secure retirement (Meyer & Sullivan 2003 & 2012).

⁷ These critiques by behavioral economists apply as well to the life-cycle hypothesis of consumption.

and thus the individual will usually be poor, though she or he may experience occasional short periods out of poverty due to random windfall income. This situation represents chronic poverty. In contrast, if an individual has an adequate asset base to generate a predictable long-term income above the poverty threshold, then the individual will usually be nonpoor, though she or he may experience short-term episodes of poverty due to temporary income shocks. This situation represents transient poverty.⁸

This approach to conceptualizing chronic versus transient poverty has been used fairly extensively in research on poverty in developing countries (e.g. Jalan & Ravallion, 1998; Morduch, 1994; Carter & Barrett, 2006), but has not usually been applied to the developed country context, perhaps largely because there has been stronger research interest in general in the phenomenon of chronic poverty in developing countries. The specific components of the income-generating asset base are different in the two contexts – assets typically comprise land or livestock required for self-sufficient agriculture in a developing country context, versus human capital (e.g. skills or educational credentials) required to participate in the wage labor market in a developed country context – but the basic conceptualization of the differing determinants of short-term versus long-term income, and therefore short-term versus long-term poverty, apply similarly in both contexts.

This conceptualization of the distinction between transient and chronic poverty has implications for poverty measurement. If poverty is measured at a single point in time, and an individual is discovered to be poor, there are therefore two possible explanations:

- 1) The individual has an insufficient asset base (e.g. lack of the education required to qualify for a job with sufficiently high wages) and consequently predictably failed to generate an income above the poverty threshold in the period examined. The individual is chronically poor; or
- 2) The individual has an adequate asset base that usually results in an income above the poverty threshold, but he or she has experienced a temporary income shock (e.g. layoff temporarily reducing employment income). As a result, the individual's income has been pushed below the poverty threshold for the particular period examined, but can be expected to return to a non-poverty income once he or she recovers from the shock (e.g. finds a new job). The individual is transiently poor.

Cross-sectional poverty measurement is unable to distinguish between these two situations. Only longitudinal measurement of poverty can differentiate chronically poor individuals from transiently poor individuals.

⁸ Note that if the “long-term” timeframe examined is shorter than the full lifecycle, an individual may have a different asset base – and thus a different level of expected “long-term income” – at different times. For example, an individual's asset base from age 18 to 28, when he or she has yet to accumulate substantial education or work experience to facilitate income generation, may be relatively weak compared to his or her income-generating asset base from age 38 to 48, leading to a relatively lower level of “long-term income” during the early adulthood decade. Similarly, an individual's asset base from age 70 to 80, when he or she may no longer be able to work for wages, is likely to be weaker than his or her asset base in middle age, leading to a relatively lower level of “long-term income” for the retirement decade.

Policy Implications of the Permanent Income Conceptualization of Poverty Over Time

The immediate needs of individuals who are chronic versus transient poor may be similar, as both have insufficient current resources to meet current basic needs.⁹ However, the causes of poverty and the prognosis for individuals in these two situations are different. Because chronic poverty is caused by an inadequate long-term asset base, the chronically poor individual can be expected to continue to be poor in the future, absent some type of intervention. In contrast, transient poverty is caused by short-term income disruption, and so the transiently poor individual can be expected to emerge from poverty soon, without major intervention, once his or her income returns to its usual level.

These differences in cause and prognosis imply different policy approaches for addressing chronic poverty versus transient poverty (Lipton & Ravallion, 1995, Carter & Barrett, 2006). Policies to address transient poverty should be short-term, and should aim to reduce the impact of temporary income shocks and to smooth income fluctuations over time; examples include unemployment insurance and one-time emergency rental assistance. In contrast, policies to address chronic poverty should function in one of two ways. Chronic poverty policies can aim to build human or financial capital in order to permanently increase the potential for income generation; examples include vocational training or loans for microenterprise (Lipton & Ravallion, 1995, Carter & Barrett, 2006). Alternatively, policies to address chronic poverty can function through income substitution or expense subsidy, thus directly increasing long-term incomes or reducing long-term expenses so that permanent income matches the level required to meet basic needs. Examples would include long-term ongoing income supplements, or long-term in-kind subsidies such as non-time-limited subsidized housing.

Targeting these different types of poverty policies to the inappropriate population, whether transient or chronic poor, is inefficient. Thus short-term insurance or one-time cash assistance will not address the asset problems of the chronic poor; once the short-term benefits end, these individuals will predictably return to poverty. On the other hand, asset-building interventions and long-term subsidies are unnecessary to address the needs of the transient poor; they already have adequate assets to generate sufficient income over the long-term, and can be expected to see their incomes rise above the poverty threshold again without intensive or long-term intervention.

Application in the Current Study

The economic concept of permanent income serves as the basis for a conceptualization of chronic versus transient poverty that has important implications for designing and targeting policies to address poverty efficiently and effectively. This framework motivates the longitudinal approach to poverty measurement in this study, as well as the focus on describing the size and characteristics of the transient versus chronic poor populations (reported in Chapter 5) and the differential impact of current poverty policies on transient versus chronic poverty rates (described in Chapter 6). An important question is the degree to which the predictors of chronic and transient poverty in the United States correspond to factors expected to predict these two types of poverty based on the permanent income conceptualization of poverty over time. Is

⁹ Arguably transiently poor individuals may be more likely than chronically poor individuals to have savings or other accumulated wealth that can be spent down to meet basic needs during a period of current income reduction, and thus may be less impacted by insufficient current resources. Consideration of such differences in wealth, as a buffer against income shortfalls, is beyond the scope of this study, but could be a worthy area for further research.

chronic poverty in the U.S. predicted by a limited base of income-generating assets? Is transient poverty predicted by short-term income disruption? These questions are explored in Chapter 7.

Epidemiological Framework: The Life Course Approach to Health

While the concept of permanent income is useful for understanding chronic and transient poverty as economic phenomena, other frameworks are needed to conceptualize the impact of chronic and transient poverty on life outcomes. For this purpose, a framework from the field of epidemiology – the life course approach to epidemiology – is useful.

Scholars in epidemiology and public health have recently called attention to the need to consider health risks and outcomes from a life course perspective. This approach entails attending to time as a factor in the development of disease and other negative health outcomes over the lifespan, specifically focusing on the duration and timing of exposures that lead to later health problems (Lynch & Davey Smith, 2005; Ben-Shlomo & Kuh, 2002; Kuh, et al., 2003). Many of the documented negative impacts of poverty on individual life outcomes relate to health, mental health, and development; thus this epidemiological framework is useful for conceptualizing the impact of poverty as an “exposure” that can lead to problematic health and well-being outcomes.

The life course perspective has been adopted sporadically in the study of health for many years, but has gained recent momentum as an important approach in epidemiology only since the late 1990s (Lynch & Davey Smith, 2005; Kuh, et al., 2003). It has been used predominantly to study the development of chronic diseases (e.g. Hallqvist, et al., 2004; Loucks, et al., 2009), but has also been applied to infectious disease (Hall, Yee, & Thomas, 2002), behavioral health (Melchior, et al., 2007), and more broadly defined health outcomes (Kuh & Hardy, 2002).

There are two primary conceptual life course models in epidemiology, both of which are useful for conceptualizing the impact of chronic and transient poverty. The first, the accumulation of risk model, focuses on the duration of exposure. This model proposes that the effects of exposure to negative health influences accumulate over time, with more exposure potentially leading to greater impact on health. In its simplest form, the accumulation of risk may be conceptualized as a “dose-response” model, where a longer duration or greater number of detrimental exposures over time results in more health damage (Lynch & Davey Smith, 2005; Kuh, et al., 2003).

The second model prevalent in the life course approach to epidemiology is the critical or sensitive period model. This model focuses on the timing of exposure, positing that exposures during certain windows of development have a greater impact on health. These time windows of greater impact of exposure may be critical periods of development, when exposure has the potential to dramatically and irreversibly modify the structure of tissues or body systems in ways that lead to health problems later in life (e.g. malnutrition during the prenatal period), or less-extreme sensitive periods of development, when exposure has a particularly strong impact on later development of health problems but with more potential for reversing the changes that lead to problematic outcomes (e.g. obesity just before puberty) (Lynch & Davey Smith, 2005; Kuh, et al., 2003).

Implications of Life Course Models for Understanding the Impact of Poverty

Both the accumulation of risk model and the critical/sensitive periods model have direct implications for conceptualizing the impact of poverty on individual health and well-being over the lifespan. The accumulation of risk model is particularly useful for conceptualizing the

impact of chronic poverty, while the critical/sensitive periods model is more applicable to transient poverty.

Chronic poverty can be understood as a long duration of exposure to a negative health influence. Thus the accumulation of risk model suggests that chronic poverty is likely to result in greater damage to health and well-being than transient poverty. Indeed, empirical research provides evidence that longer-term poverty is associated with worse outcomes than shorter-term poverty in a variety of domains, including chronic health conditions, minor illnesses, self-rated health, depression, and mortality risk (McDonough, et al., 1997; McDonough & Berglund, 2003; Kahn & Pearlin, 2006; Lynch, Kaplan, & Shema, 1997), and particularly with respect to general health conditions, mental health problems, and developmental deficits among children (Chen, Martin, & Matthews, 2007; Duncan, Brooks-Gunn, & Klebanov, 1994; Hanson, McLanahan, & Thomson, 1997; Pagani, Boulerice, & Tremblay, 1997; Korenman, Miller, & Sjaastad, 1995; Smith, Brooks-Gunn, & Klebanov, 1997; Zill, et al., 1995; McLeod & Shanahan, 1993 & 1996; Duncan, Ziol-Guest, & Kalil, 2010)¹⁰.

Transient poverty may generally lead to less health damage than chronic poverty, as it involves a shorter duration of exposure to a negative health influence. However, the critical/sensitive periods model suggests that transient poverty occurring during particularly important developmental windows may have an especially strong or even irreversible influence on later health and well-being, even if this exposure to poverty is relatively brief. Childhood is the most obvious sensitive period during which short-term poverty might be expected to have a disproportionate impact on later health and well-being. Empirical research provides some support for this proposition, in that poverty during childhood is associated with poor health outcomes in adulthood (Melchior et al., 2007; Elo, 2009; Braveman, Egerter, & Williams, 2011; Hertzman & Boyce, 2010; Duncan, Ziol-Guest, & Kalil, 2010) as well as cognitive and developmental deficits that have lifelong consequences (Bradley & Corwyn, 2002; Aber, et al., 1997; McLoyd, 1998). Studies that have explicitly examined the impact of short- versus long-term poverty in childhood on cognitive and developmental problems have found stronger effects for long-term poverty, but significant effects for short-term poverty as well (Duncan, Brooks-Gunn, & Klebanov, 1994; Korenman, Miller, & Sjaastad, 1995; Smith, Brooks-Gunn, & Klebanov, 1997; Zill, et al., 1995).

Policy Implications of Life Course Models of Poverty Impact

Together, the accumulation of risk and critical/sensitive period life course models suggest two types of poverty across the lifespan that may be particularly damaging to health and well-being: 1) chronic poverty, because longer duration of exposure to poverty is likely to result in greater damage to health and well-being; and 2) transient poverty that occurs during a sensitive developmental period, such as childhood or the prenatal period, when even short-term exposure to poverty may have particularly intense or irreversible consequences for health and well-being. These two types of poverty, therefore, are logical priorities for policy interventions to prevent or mitigate poverty.

¹⁰ Note that some evidence of worse health and well-being among chronically poor adults might be explained by reverse causality; i.e. adults who are more ill or disabled may find it more difficult to generate ongoing income and therefore may become chronically poor, so that their chronic poverty may be the result rather than the cause of their worse health and mental health. However, the same explanation is unlikely to hold true for children, as they typically do not independently generate household income. And among children, research consistently shows that longer-term poverty is linked to more adverse health and well-being consequences than short-term poverty.

The current study does not directly investigate the relationship between duration or timing of poverty and health or well-being outcomes, relying instead on prior research documenting the more severe impact of chronic versus transient poverty, as well as the lifelong consequences of poverty (including short-term poverty) experienced during the sensitive period of childhood. The policy implications of this life course framework for explaining the impact of poverty, however, are considered in Chapter 8.

Chapter 4 METHODS

Dataset: The Panel Study of Income Dynamics

This study aimed to examine transient and chronic poverty in the United States, in the post-welfare reform policy environment, using the Supplemental Poverty Measure (SPM). Doing so requires a long-term nationally representative longitudinal dataset with sufficiently detailed household income and expense information to be able to construct the SPM. The Panel Study of Income Dynamics (PSID), administered by the Survey Research Center at the Institute for Social Research at the University of Michigan, is the only publicly available secondary dataset that meets all of these criteria.¹¹

The PSID is a large secondary dataset that focuses on longitudinal household income and expense data (Hofferth, et al., 2007). PSID data are publicly available and were downloaded from the PSID website for this study. The PSID is an ongoing study that began in 1968, following a panel of approximately 5,000 households comprising approximately 18,000 individuals. The original sample included both a nationally representative core sample and an additional oversample of low-income families, with the combined sample weighted to be nationally representative overall. These households were surveyed annually through 1996, and subsequently have been surveyed biennially. As children from these households enter adulthood and form their own households, these new households are added to the sample as well (McGonagle & Schoeni, 2006).

A major limitation of the PSID over time was that it failed to represent the immigrant population of the United States, as the long-term panel design meant that the sample excluded individuals who had immigrated to the U.S. after 1968. This problem was addressed by adding a “refresher” sample of post-1968 immigrant families in the 1997 and 1999 waves of the survey. The original core sample was also significantly reduced (for budgetary reasons) in 1996, at the same time that the survey frequency was reduced from annually to biennially. Survey weights were adjusted so that the overall sample, using the weights, is still designed to be representative of the national population, now including the immigrant population. As of 2009, the sample includes more than 9,000 households that include more than 70,000 individuals (McGonagle & Schoeni, 2006; Institute for Social Research, 2011).

With any long-term panel study, attrition is a concern as it may bias the sample. However, multiple studies have examined the representativeness of the PSID and have found minimal bias due to selective attrition (Fitzgerald, Gottschalk, & Moffit, 1998; Grieger, Danziger & Schoeni, 2009). Thus with use of proper sampling weights, the PSID remains reasonably representative of the U.S. population.

¹¹ The PSID is one of three publicly available large national longitudinal datasets (Cellini, McKernan, & Ratcliffe, 2008). However, neither of the other two datasets includes all of the features necessary to conduct this study. The National Longitudinal Survey of Youth (NLSY), administered by the U.S. Bureau of Labor Statistics, includes long-term longitudinal data for a relatively large nationally representative cohort sample, but does not have sufficiently detailed financial information to be able to calculate the SPM. The Survey of Income and Program Participation (SIPP), administered by the Census Bureau, has a very large sample and detailed household income and expense information, and the Census Bureau is currently working to calculate SPM poverty status in this dataset (Short & Garner, 2012). However, the SIPP currently follows survey participants for a maximum of four years only, which is not a sufficient timeframe to examine chronic versus transient poverty.

PSID data are collected every two years through computer-assisted telephone interviews. Data collected include highly detailed income and expenditure information for the prior calendar year, as well as a variety of measures of health, mental health, wealth, and household composition and dynamics (McGonagle & Shoeni, 2006; Institute for Social Research, 2011).

Sample

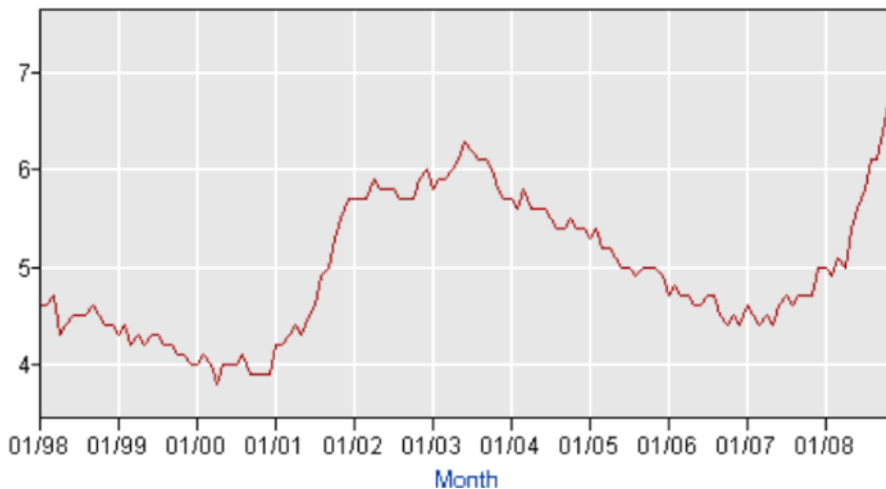
This study utilized PSID data collected in 1999, 2001, 2003, 2005, 2007, and 2009, representing household income, expense, and other measures for the calendar year prior to each survey year. Thus these data represent biennial income, expenses, and other individual and household characteristics over the 11-year timeframe from 1998 through 2008. This particular timespan was selected for several reasons.

First, one of the goals of this study was to examine transient and chronic poverty during a recent timeframe that reflects the current poverty policy environment, as most prior research on longitudinal poverty has used older data, generally pre-1990s. Poverty policy in the United States underwent an important shift in the late 1990s as a result of welfare reform, which ended the Aid to Families with Dependent Children (AFDC) entitlement program, replacing it with the time-limited, work-first Temporary Aid to Needy Families (TANF) program (Danziger & Haveman, 2001; Pavetti, 2002). Welfare reform was enacted in 1996 through the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), but was not fully implemented until 1997. Thus 1998, the first year of data within the study timeframe, was the first full calendar year with welfare reform implemented nationally.

The timeframe from 1998 through 2008 also incorporates diverse macroeconomic and labor market conditions, including the booming economy and low unemployment of 1998 through 2000, the recession and slow recovery of 2001 through 2004, a generally strong economy and return to lower unemployment from 2005 through 2007, and the beginning of the Great Recession in 2008. These changing macroeconomic conditions are reflected in the dynamics of the national unemployment rate over this period, as illustrated in Figure 1 below. Selecting a timeframe that includes both strong and weak labor market conditions allows for better examination of short-term poverty, which may be more strongly linked to labor market conditions, versus long-term poverty, which is more likely to be independent of general employment conditions.

Figure 1. Seasonally adjusted U.S. unemployment rate, 1998-2008.

Retrieved March 28, 2013 from Bureau of Labor Statistics website, <http://data.bls.gov/>.



Practical considerations also played a role in the selection of the timeframe. An 11-year timeframe, with 6 data points per household, is sufficiently lengthy for a meaningful measurement of transient versus chronic poverty. In addition, PSID survey year 1999 was the first year that included the full PSID immigrant sample, and the first year that the survey included all data elements required to calculate the Supplemental Poverty Measure, while PSID survey year 2009 is the most recent year for which data are currently available.

The sample for descriptive analysis included individuals who were valid survey respondents in all six survey years of the study timeframe, and for whom SPM poverty status could be calculated in each year and other variables of interest were non-missing. Individuals who were institutionalized or not living with the household during the calendar year for which income data was collected were excluded. This resulted in an analytic sample of 8,375 individuals.

For regression analysis, the household rather than the individual was used as the unit of analysis (for reasons described below). Households were defined by selecting one individual per family unit at baseline who met the criteria described above. Individuals who split off from the baseline family during the study timeframe to form new households (e.g. children leaving the parental home during the transition to adulthood, or subfamilies moving out of extended family households) were excluded; thus the regression results are not representative of these household types. This resulted in a sample of 4,188 households.

To account for differential sampling and attrition, longitudinal sample weights were used in all analyses. Following the typical practice in longitudinal analysis of PSID data (Gouskova, Heeringa, McGonagle, & Schoeni, 2008), the PSID weights from the final year of the study timeframe were utilized: the PSID 2009 individual longitudinal weights for the descriptive analysis, and the PSID 2009 family longitudinal weights for the regression analysis.

Stata/MP 12 statistical software was used for all analyses. Thus `-svy-` commands were used to incorporate appropriate survey weights in all analyses, and the `-svy (subpop)-` command was used as needed to designate subpopulations for analysis.

Outcome Variable: Longitudinal Poverty Status

Methodological Approach to Measuring Longitudinal Poverty

The objective of this study was to examine longitudinal poverty, specifically transient (or short-term) versus chronic (or long-term) poverty, using the Supplemental Poverty Measure. Two basic methodological approaches have been developed to measure poverty over time and distinguish chronic from transient poverty: the components approach, and the spell-based approach (Yaqub, 2000; Hulme, Moore, & Shepherd, 2001).

The components approach to longitudinal poverty measurement involves modeling an individual's long-term income over a specified timeframe, and comparing this income to a specified long-term poverty line (Yaqub, 2000). One version of this approach is simply averaging income over a set number of years, then comparing the mean income to an averaged annual poverty threshold over the same years. This approach requires a sufficient number of data points over time to model income, and thus cannot be used with some datasets (Yaqub, 2000). Conceptually, the components approach assumes that income is perfectly transferable between time periods throughout the study timeframe (Foster, 2009).

The spell-based approach, in contrast, involves counting the number of discrete periods (such as years) that an individual has an income below a specified poverty line. The number of periods in poverty can then be aggregated through simple tabulation over a set timeframe (e.g. poor for eight of ten years) or analyzed in terms of poverty spells, defined as consecutive years with income below the poverty line (Bane & Ellwood, 1986; Duncan & Rodgers, 1991). From a conceptual perspective, the spell-based approach assumes that income is not at all transferable between time periods; an income surplus above the poverty line in one year does not compensate for an income gap below the poverty line in another year (Foster, 2009).

This study included a relatively small number of data points (six). In addition, it seemed more plausible to assume that income was not transferable across the full 11 years of the study timeframe, than to assume that surplus income in Year 1, for example, could compensate for an income shortfall in Year 11. Therefore the spell-based approach to measuring longitudinal poverty was employed.

Individual annual SPM poverty status was calculated for each data year separately, and then tabulation was used to categorize individuals as chronic poor, transient poor, or nonpoor based on the number of years in annual poverty. Tabulation requires designating a cut-off for the number of years in poverty that qualify an individual as transient poor versus chronic poor; this decision process for this study is described below, following the description of how annual poverty status was constructed.

Calculating Annual SPM Poverty Status

The Supplemental Poverty Measure was initially implemented in the Census Current Population Survey (CPS). Researchers at the Census Bureau and Bureau of Labor Statistics (BLS) and in academia have also worked to implement the SPM in the American Community Survey (ACS) and more recently in the Survey of Income and Program Participation (SIPP) (Short & Garner, 2012). However, the SPM has not previously been implemented in the Panel Study of Income Dynamics; thus developing a method to construct annual SPM status in this dataset is a contribution of this study.

Poverty status under the Supplemental Poverty Measure is calculated by summing a specified set of cash and in-kind family resources, subtracting specified necessary expenses, and comparing the resulting amount to a specified threshold amount designed to reflect necessary basic expenditures for food, clothing, shelter, and utilities, adjusted for family composition as well as for housing status and geographic location (Short, 2011a).

Until recently, SPM thresholds were only available from the Census and Bureau of Labor Statistics for the years 2005 forward. However, a forthcoming paper from the BLS includes SPM thresholds back to 2002 (Garner & Gudrais, forthcoming), and an independent team of researchers at Columbia University is currently working to estimate historical SPM thresholds for prior years (Fox et al., forthcoming). Thus this study made use of the BLS-produced thresholds for 2008, 2006, 2004, and 2002, plus the thresholds produced by the Columbia team for 2000 and 1998, in order to construct SPM poverty status and rates in the PSID across the 11-year study timeframe.

Thresholds were adjusted and family resources were calculated using a broad set of variables from the PSID. Though it is widely known that the PSID contains detailed information about cash income and benefits, it is perhaps less widely known that the PSID also contains reasonably detailed information about a variety of near-cash and in-kind benefits such as food stamps and WIC, household expenses such as child care and medical spending, as well as housing status. Thus the PSID contains directly reported values for many of the resource inputs to the SPM, reported receipt and/or sufficient information to directly estimate values for the remaining inputs, as well as data on housing tenure, location of residence, and family composition needed to assign and adjust SPM thresholds. It is therefore feasible to construct the SPM in the PSID with minimal imputation of input variables. Full data needed to calculate SPM poverty status are available in the PSID beginning with survey year 1999 (corresponding to family income for calendar year 1998).

The basic method for calculating SPM poverty status was modeled on the procedures described in a recent comprehensive Census Bureau publication on the SPM (Short, 2011a), with exceptions as described below.

To calculate SPM poverty status, one of three thresholds is first assigned to each family based on housing tenure, or whether the family owns their home with a mortgage, owns without a mortgage, or rents. PSID variables for housing tenure and mortgage were used to assign the appropriate threshold.

The portion of the threshold allocated to housing expenditures is then adjusted to account for geographic differences in cost of living. Census/BLS SPM procedures make this adjustment through matches to rent estimates from the American Community Survey for specific Metropolitan Statistical Areas, but the PSID public-use data file does not contain MSA-level geographic data. Thus an alternative method was used for geographic adjustment based on the average Fair Market Rents published by the U.S. Dept. of Housing and Urban Development (U.S. HUD, 2012), for each year for metro and non-metro areas by state, modeled on a method used in prior Census Bureau experimental poverty measures (Short, 2001b).

Thresholds are next adjusted for family composition, specifically the number of adults and children in the family unit. The SPM defines the family unit to include all co-resident individuals related by blood or marriage as well as non-married cohabiting partners and their children; this represents a significant departure from the definition of family used for the official federal poverty measure, which excludes cohabitators. The PSID uses a basic definition of family

that is very similar to that of the SPM, with cohabitators and their relatives included as part of the family unit.

SPM threshold amounts are adjusted using a three-parameter equivalence scale to account for different economies of scale for families without children, single-parent families, and two-parent families with children. In adjusting the thresholds in the PSID, it is important to consider differences in the way income data for the family unit is reported in the PSID compared to the Current Population Survey (CPS), which was used in designing the SPM. The CPS collects data on prior-year income for all individuals who are part of the family at the time of the survey in March of the following year; thus poverty thresholds are adjusted to correspond to the number of family members at the time of the March survey. The PSID, in contrast, collects data on prior-year income for all family members who were part of the family unit for any part of the prior year, regardless of whether they are still in the family at the time of the survey interview. Income amounts for family members besides the head and wife or cohabiting partner are prorated to match the time that they were present during the year. For consistency with this method of income reporting in the PSID, the SPM thresholds for this study were adjusted to reflect the prorated number of family members for the year, including part-year family members.

To calculate poverty status, thresholds are compared to family resources, which in the SPM include cash income, minus payroll taxes and income taxes, plus tax credits such as the EITC, plus the value of food stamps (SNAP), WIC, school lunch, heating subsidy (LIHEAP), and housing subsidy. Other expenses subtracted from family resources comprise childcare, an amount for other work-related expenses, child support paid, and medical out-of-pocket expenses.

Alimony paid was also subtracted from family resources for this study to maintain consistency with the fact that alimony received is counted as family income. Alimony paid is not subtracted from family resources in Census/BLS procedures for calculating the SPM in the Current Population Survey due to lack of data on alimony paid in the CPS. In this study, a very small proportion of the sample paid any alimony and it had no significant impact on poverty status.

These subtractions and additions to family resources are listed in Table 2 below, with a description of how each was derived from PSID data.

Table 2. Additions and subtractions from SPM family resources, with PSID derivation.

Resources / Additions	Derivation from PSID data
Cash income	Reported in PSID.
Federal + state tax credits (e.g. EITC, Child Tax Credit)	Calculated through external TAXSIM tax calculator, using income using income and household composition reported in PSID. EITC amount then subtracted for ineligible immigrants.
SNAP (food stamps)	Value reported in PSID.
WIC	Receipt but not value reported in PSID. Value estimated using average national per capita amount for each year for WIC recipients from Dept. of Agriculture administrative data, multiplied by number of eligible family members.
School lunch	Receipt but not value reported in PSID. Value estimated using value per lunch each year from Dept. of Agriculture administrative data, multiplied by number of eligible children.
Low Income Home Energy Assistance Program (LIHEAP)	Value reported in PSID.
Housing subsidy	Receipt but not value reported in PSID. To calculate value, first household rent payment amount was calculated per Dept. of Housing and Urban Development tenant rent rules based on income and household characteristics reported in PSID. Then rent amount was subtracted from portion of SPM threshold representing geographically-adjusted shelter costs, to obtain estimated value of housing subsidy.
Expenses / Subtractions	
FICA (federal payroll tax)	Calculated through external TAXSIM tax calculator, using wages reported in PSID.
Federal + state income tax	Calculated through external TAXSIM tax calculator, using income and household composition reported in PSID.
Childcare expenses	Value reported in PSID. Capped at wages of lowest earner.
Other work-related expenses	Number of weeks worked by head and wife reported in PSID. Value of work-related expenses calculated by multiplying weeks worked by weekly average expense amount for each year used in Census SPM methodology. Capped at wages of lowest earner.
Child support paid	Value reported in PSID.
Alimony paid	Value reported in PSID.
Medical out-of-pocket expenses (MOOP)	Value reported in PSID for two-year period prior to survey date. Divided by two to obtain estimated value for year prior. Imputed using multiple imputation for cases with missing values.

Values for several of these items are directly reported in the PSID, namely cash income, food stamps, heating subsidy, childcare, and medical out-of-pocket spending. Receipt but not amounts are reported for WIC and school lunch; for both, amounts were estimated based on average national benefits from administrative data (USDA, 2012; USDA, 1997-2007), paralleling Census/BLS SPM procedures. Work-related expenses were estimated based on reported number of weeks worked multiplied by a set weekly expense amount derived from the Work-Related Expenses topical module in the Survey of Income and Program Participation (SIPP) (L. Mykyta, U.S. Census Bureau, personal communication, December 13, 2010 & April 10, 2012), again directly following Census/BLS SPM procedures.

Housing subsidy receipt is reported in the PSID, but the Census/BLS SPM method for estimating subsidy value could not be implemented with PSID public-use data. Thus housing subsidy value was instead estimated as the difference between the housing portion of the threshold and the family rent contribution as calculated from HUD tenant payment rules (U.S. HUD, 2010). This method of estimating the value of housing subsidies does not necessarily capture the market-rate value of the subsidy, but rather reflects the degree to which the subsidy allowed households to meet their shelter expenses.

Taxes are not directly reported in the PSID, so an external tax calculator – the NBER's TAXSIM calculator (Feenberg & Coutts, 1993) – was used to estimate income taxes and credits and payroll taxes, largely following the procedure for using TAXSIM with PSID data outlined in Butrica and Burkhauser (1997). Census/BLS SPM procedures also use a tax calculator to estimate taxes.

Included in TAXSIM calculations are estimates for the Earned Income Tax Credit (EITC), an important income source for many households at risk of poverty. The EITC is only available to individuals with legal employment income, and thus is not available to immigrants who are undocumented or lack work permits. Consequently, the relevant calculated value of the EITC produced by TAXSIM was removed from family resources for households where the head and/or wife or cohabitor were immigrants ineligible for legal employment. Note that because a tax calculator was used to estimate EITC values, without directly reported information about receipt of the EITC, this study implicitly assumed that all other eligible individuals claimed the credit. Uptake of the EITC is widespread among eligible households (Sholz, 1994), but nonetheless some households do not claim the credit despite being eligible. Thus this study may overstate the degree to which the EITC (and other tax credits such as the Child Tax Credit) increases household resources and thus reduces the incidence of transient and/or chronic poverty.

Missing Data in SPM Poverty Status

A methodological challenge inherent in utilizing the Supplemental Poverty Measure for statistical research is that computing the SPM requires three threshold inputs (family composition, housing tenure, and geography of residence), plus seven items summed for family resources, and seven items subtracted from family resources, for a total of 17 parameters.¹² If data is missing in any one of these components, SPM status cannot be calculated, resulting in an unusually high risk of missingness for this key variable. This issue is compounded when examining SPM status over multiple years, as in this study.

¹² In this study, alimony paid was an additional item subtracted from family resources, so the total number of parameters used to calculate SPM status was 17. In Census Bureau/BLS procedures for calculating the SPM in the Current Population Survey, alimony paid is not subtracted, resulting in a total of 16 parameters.

After initial computation of annual SPM poverty status following the procedures described above, a substantial proportion of cases were missing SPM status in each year. Examination of rates of missing data for each component of the SPM revealed that missing SPM status was driven by missingness in a single component, medical out-of-pocket expenses (MOOP). MOOP values were missing for 6-16% of households in the analytic sample (after weighting) across the six data years of the study, whereas missingness for all other components was less than 1% in each year. To address this problem, missing values of MOOP were imputed.

Imputation of Missing Values for MOOP

Medical out-of-pocket expenses had an unusually large rate of missing data. At the same time, several variables appropriate for predicting MOOP expenses were available, such as presence of family members in poor health and health insurance status, making it feasible to impute MOOP values for most cases.

Multiple imputation is recognized as a preferred imputation technique with a strong theoretical foundation, as it allows for an appropriate adjustment of inference to account for the increased uncertainty inherent in estimates generated using imputed data. Multiple imputation generates multiple sets of plausible values for missing observations, using a different random seed for each iteration, based on correlations among specified variables within the original dataset. The result is multiple separate datasets that include observed values for nonmissing observations and imputed values for missing observations. To calculate parameter estimates, values across the imputations are averaged. The calculated variance for these parameter estimates accounts for both variability within each imputed dataset as well as variability across the different sets of imputed values, thus better representing the loss of precision due to imputation than single imputation techniques (Little & Rubin, 2002).

Thus multiple imputation was used to impute MOOP¹³, using the multivariate normal regression imputation method, following the procedures outlined in Little & Rubin (2002) and using Stata's `-mi-` commands.

MOOP values were first log-transformed in order to obtain an approximately normal distribution. Next the imputation regression model was developed. First, all available variables reasonably expected to predict MOOP were incorporated as covariates, including family size, whether the family included any seniors, whether any family members were in poor health, and type of health insurance (private insurance, public insurance, or no insurance) for all survey years. Variables to be used in later analysis were also included as regression covariates, as were survey weight variables, as recommended for imputation in datasets that utilize complex survey weights (Little & Rubin, 2002; StataCorp, 2011b). The dependent variable for subsequent analysis, longitudinal poverty status, could not be included as a covariate because MOOP is a component required to calculate longitudinal poverty status. An additional variable to be used in subsequent analysis that had a relatively large proportion of missing values – high school

¹³ An alternative method for directly estimating missing MOOP values was also explored, modeled on a method developed in research on Census Bureau experimental poverty measures and described in Short & Garner (2002) and Banthin, Garner, & Short (2001). This technique uses Consumer Expenditure Survey data on MOOP spending patterns combined with a medical risk index derived from Medical Expenditure Panel Survey data to calculate estimated annual MOOP amounts for households with different health, insurance, and family composition characteristics. Ultimately this approach to estimating MOOP was abandoned in favor of multiple imputation, due to the stronger theoretical statistical justification for multiple imputation.

graduate status of head and/or wife – was simultaneously imputed, by including additional covariates expected to predict these values, as described in more detail below.

Five imputed datasets were created, as efficiency gains are relatively small with more than five imputations (Schafer and Olsen 1998). MOOP values were then transformed back to their original scale for use in analysis. As a basic test for possible bias due to imputation, longitudinal poverty status with and without MOOP excluded from family resources was calculated for complete cases only versus complete-plus-imputed cases, and point estimates were substantially the same.

All subsequent analysis utilized Stata's –mi- commands in order to incorporate the multiple imputed datasets. Specifically, –mi passive- was used to generate all subsequent variables that incorporated imputed variables (including the outcome variable of longitudinal poverty status), and –mi est- was used for all estimations.

Impact on Missing SPM Status

Before imputation of MOOP, values of MOOP were missing for 6-16% of the households in the analytic sample (after weighting) with PSID interview data in all six years of the study. Multiple imputation substantially improved the rate of missing MOOP data, reducing missingness in this variable by 75-85% in each year. Thus after imputation, MOOP values were missing for only 1- 3% of households in the sample (after weighting) in each data year. Remaining cases with missing MOOP values were those with missing data in the variables required to predict MOOP, e.g. poor health of family members or type of health insurance.

Thus after imputation of MOOP, SPM status was now missing for less than 5% of households (after weighting) in each year. These rates of missingness in each year are reasonably low, and further reducing these rates substantially does not seem feasible. Even after imputation, MOOP was still the SPM item with the highest rate of missing data, and cases where MOOP remained missing were those missing the data required to estimate MOOP values via imputation¹⁴. Other individual SPM components had less than 1% (in most cases, less than 0.5%) of values missing in each year.

While the rates of missing data for SPM status in each year were low, the research questions asked by this study required that cases have SPM status data for all six years of the study. The rate of missing SPM status across all six years was higher, totaling 12.1% of households in the analytic sample (after weighting) with PSID interview data in all six years. This rate of missingness is higher than ideal, and the possibility that the missing data may bias the study results cannot be excluded. However, a higher-than-desired rate of observations with missing data may be inherent in longitudinal research using a poverty measure as complex as the SPM.

Defining Chronic Versus Transient Poverty Status

As described above, this study used the spell-based approach and tabulation method to measure longitudinal poverty status. Thus first annual SPM poverty status for each individual was calculated for each data year separately, as described above. Next, the cumulative number of years of annual poverty for each individual was tabulated. The distribution of number of years of annual poverty is shown below in Figures 2 and 3. Finally, a cut-off point was

¹⁴ The same data would be required to directly estimate MOOP values using the alternative method, modeled on procedures outlined in Short & Garner (2002) and Banthin, Garner, & Short (2001), described in the footnote above.

designated to specify the number of years in poverty that qualified an individual as transient poor versus chronic poor.

The determination of the cut-off point for transient poverty versus chronic poverty is somewhat subjective, as there is no single standard definition of transient/short-term versus chronic/long-term poverty (Yaqub, 2000). Different studies employing the spell-based approach to longitudinal poverty measurement have used different cut-off points for short-term versus long-term poverty across different study timeframes (e.g. Duncan, 1984; Anderson, 2011). However, a generally accepted broad definition is that “chronically poor” describes individuals who are poor all or most of the time, while “transiently poor” describes those who are poor some but not most of the time (Hulme & Shepard, 2003; Hulme, Moore, & Shepard, 2001; Islam, 2012).

Applying this broad definition of chronic poverty, as being poor “most of the time,” to the current study, two possible cut-off points for chronic poverty emerge. Chronic poverty could be defined as poor in three or more of the six data years (at least half the time), or as poor in four or more of the six data years (more than half the time).

Those in poverty for three years of the six, or exactly half the time, are most difficult to definitively classify as chronic versus transient poor. Examining the distribution of number of years in annual poverty, these individuals represent 2.5% of the sample, as shown in Figures 2 and 3. Using a cut-off of three or more years to designate chronic poverty would mean that these three-years-poor individuals would comprise more than half of the chronic poor sample, and thus would have a large influence on the aggregate characteristics of the chronic poor group. In contrast, using a cut-off of four or more years for chronic poverty has the effect of grouping the three-years-poor individuals with the one- and two-years-poor individuals, where they comprise less than one seventh of the transient poor sample, and thus do not have an overly large influence on the aggregate characteristics of the group. Using four or more years as the cut-off thus minimizes the influence of the three-years-poor subsample, the individuals for whom correct classification as transient versus chronic poor is least certain.¹⁵ Therefore four years was selected as the cut-off point for chronic versus transient poverty.

Thus individuals who were classified as poor under the SPM in four or more years were categorized as chronic poor, while those who qualified as SPM poor for one to three years were categorized as transient poor. Individuals who were not classified as SPM poor in any years were categorized as nonpoor. The resulting distribution of individuals classified as nonpoor, transient poor, and chronic poor is illustrated below in Figure 4.

¹⁵ Another alternative would be to exclude the subgroup of individuals who were poor for three years from the analysis. However, this study aimed to present a description of the total poor population, partitioned into transient versus chronic poor, attending to the relative proportion of the total population impacted by each type of poverty. Excluding a subgroup of poor individuals would preclude this type of holistic description of the poor population.

Figure 2. Distribution of years in annual SPM poverty, for individuals.

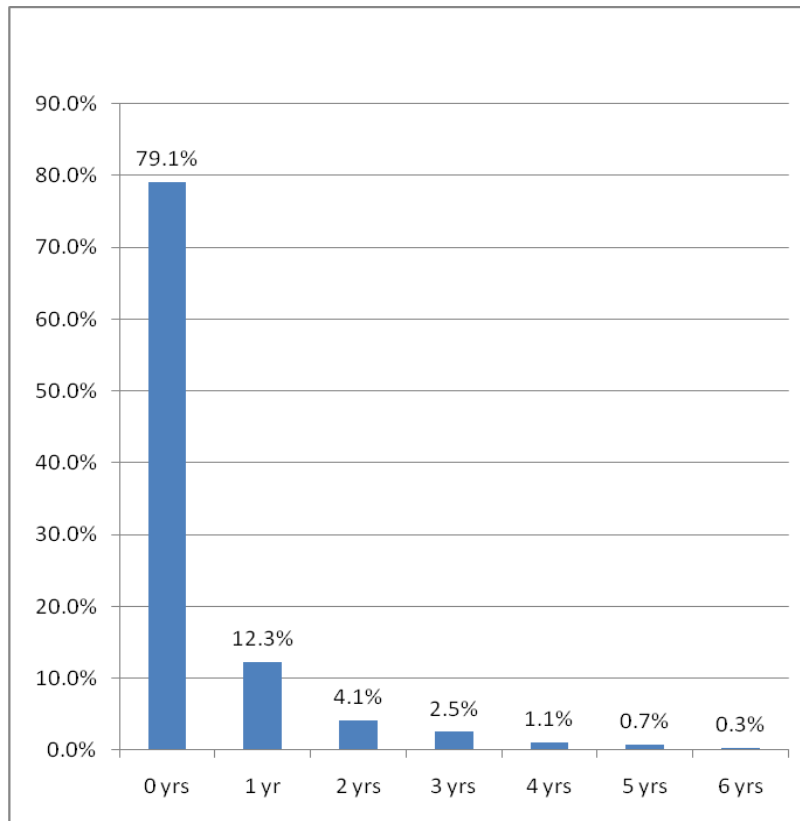


Figure 3. Distribution of years in annual SPM poverty, with nonpoor excluded, for individuals.

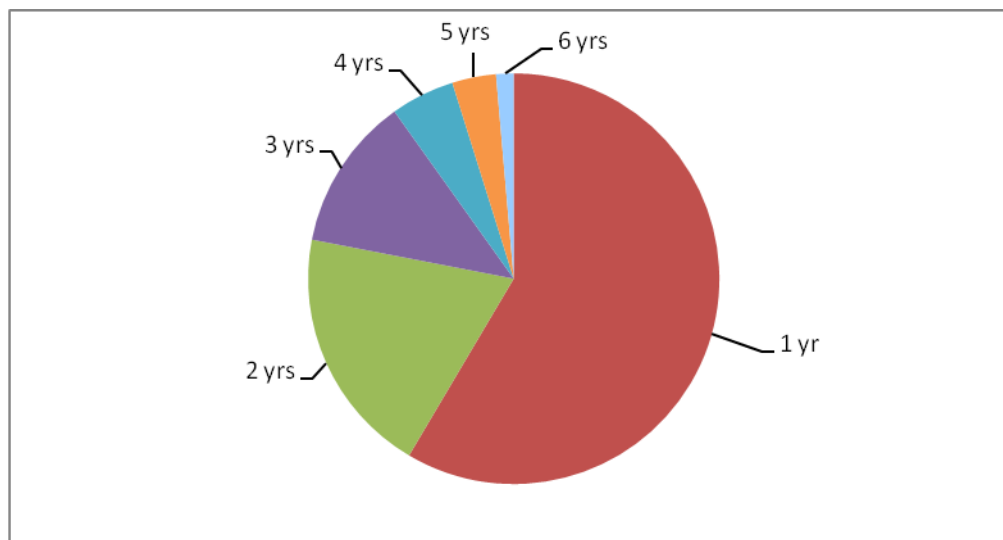
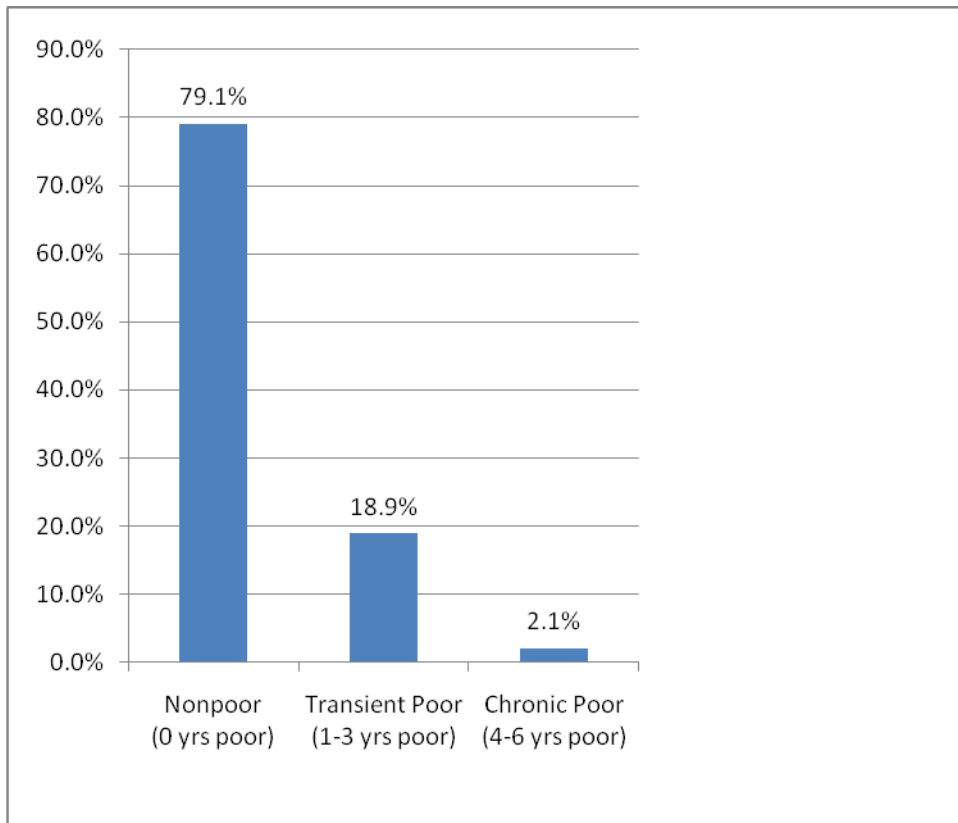


Figure 4. Distribution of longitudinal poverty status, for individuals.



Descriptive Analysis

Descriptive analysis was used for three main purposes: 1) to examine the demographics of transient versus chronic poverty using the Supplemental Poverty Measure; 2) to examine differences in transient and chronic poverty rates measured using the Supplemental Poverty Measure versus the official federal poverty measure; and 3) to examine transient versus chronic poverty rates using the Supplemental Poverty Measure with specific resource and expense items excluded from family resources, in order to assess the impact of government policies, private resources, and specific expenses on longitudinal poverty rates. As noted above, individuals were the unit of analysis for all descriptive analyses, though most of the variables used related to characteristics of the households in which individuals were living. Individual-level analysis was adopted to enhance comparability to prior research, as most research and official government statistics relating to poverty rates use individuals as the unit of analysis.

Variables

A number of variables were used in descriptive analysis. Specific demographic variables were included because they have been examined in prior research and Census Bureau publications on annual poverty measured using the Supplemental Poverty Measure or the official federal poverty measure, and/or because they correspond to household characteristics particularly relevant to components of the SPM.

Most of these variables are self-explanatory, with uncomplicated derivation from PSID data, as described in Table 3 below. A few merit special mention due to more complex definitions or derivations from the data.

Longitudinal poverty status using the official federal poverty measure was based on annual OPM poverty thresholds as reported in the PSID, compared to total cash income. Number of years in OPM poverty was then summed, and individuals were classified into longitudinal poverty status according to the same procedure used to generate longitudinal SPM poverty status: i.e. nonpoor for no years in OPM poverty, transient poor for one to three years in OPM poverty, and chronic poor for four to six years in OPM poverty.

Official Census Bureau OPM poverty thresholds are used as the basis for the OPM thresholds assigned in the PSID, with modification to account for the inclusion of prorated income from part-year family members in the PSID. A more important difference in OPM poverty as calculated in the PSID versus as calculated in official Census Bureau procedures, however, is that the PSID uses a broader definition of family. An unmarried cohabiting partner and his or her co-resident children or other relatives are included as family members in the PSID, but counted as a separate family in Census OPM procedures (Grieger, Danziger, & Schoeni, 2009). (In this way the PSID definition of family corresponds closely to the Census Bureau SPM definition of family.) Despite this difference, OPM poverty rates in the PSID have a high correlation with Census Bureau OPM rates from the Current Population Survey (Grieger, Danziger, & Schoeni, 2009).

Immigrant household was defined as living in a household during the baseline year of the study timeframe in which the head had immigrated to the United States after 1968 (as well as the wife or cohabitor if present). This variable was based on household identifiers for survey years 1997 and 1999 for families in the PSID Immigrant Sample, a sample of 511 families with immigrant heads of household, representative of the post-1968 immigrant population of the United States, that was added to the PSID from 1997-1999 in order to improve the representativeness of the overall PSID sample. As mentioned above, prior to 1997 the PSID

sample included very few post-1968 immigrants due to the longitudinal panel structure of the study, which follows individuals surveyed in the original 1968 survey year plus their offspring and offspring's families, so that post-1968 immigrants could only join the study if they married or cohabited with an individual related to one of the original 1968 families.

Single mother household in one or more years was based on PSID data on household composition for each year, and defined as living in a household with children with a single female household head, and with no other adults or related families. Note that this is a fairly restrictive definition of single motherhood, as it excludes single mother households living with any other adults that share household expenses and income, such as cohabiting partners or the mother's parents, other relatives, or friends. This restrictive definition focuses on single motherhood as an economic (not social) household characteristic, defined by a single income-generating adult supporting a household of dependents. This definition also avoids criticism applied to earlier PSID research of imprecise identification of single mother households (Rendall, 1997).

High cost housing area was calculated based on PSID data for state of residence and whether the household was living in a metropolitan area (within a Metropolitan Statistical Area as defined by the U.S. Office of Management and Budget) or in a non-metropolitan area (not within an MSA). Households were then assigned a geographically-specific rent value, corresponding to the mean Fair Market Rent for a two-bedroom apartment within metro and non-metro areas of each state for each year as defined by the U.S. Department of Housing and Urban Development.¹⁶ Households with assigned rent values that were in the top quartile of national Fair Market Rent values were categorized as living in a high cost housing area for that year. *Non-high school graduate* was defined as living in a household where the highest education obtained by the head, wife, and/or cohabitor was less than a high school diploma or GED. This variable was based on educational achievement of the head, wife, and/or cohabitor reported in the PSID during the final year of the study timeframe (survey year 2009). All households were asked about educational achievement in that year, versus prior years when only new heads/wives/cohabitators reported on current education level, and thus that year had accurate and complete data for the largest proportion of households.

Even after using the year with the most complete data for educational achievement, high school graduate status was still missing for more than 5% of the sample, thus the decision was made to impute the missing values. Non-high school graduate was imputed simultaneously with medical out-of-pocket expenses (MOOP) through multiple imputation, as described above. Additional covariates included in the imputation regression model as expected predictors of high school graduate status included ages of head and wife or cohabitor, and total household cash income for the year in which the high school graduate status data was collected (survey year 2009).

It is relevant to note that this imputed variable is binary, and thus does not have a normal distribution as assumed by the multivariate normal regression method used to generate the imputed values. However, multiple imputation using multivariate normal regression is generally robust to such departures from normality, and is frequently used to impute binary variables in

¹⁶ These calculations were initially done as part of the method for constructing annual SPM poverty status, in order to create the geographically-adjusted shelter portion of the SPM poverty threshold for each household.

combination with continuous variables (Little & Rubin, 2002).¹⁷ As a basic check for bias due to imputation, point estimates for transient and chronic poverty rates were compared for complete cases versus complete-plus-imputed cases for non-high school graduate status, and were substantially the same.

¹⁷ An alternative multiple imputation technique – imputation by chained equations (ICE) – allows for separate imputation of binary and continuous variables and thus avoids assuming a normal distribution for binary variables. However this technique has limited theoretical justification compared to multivariate normal regression, and the multivariate normal regression approach has been shown to be robust to deviations from normality; thus mvn regression is the more recommended approach (Little & Rubin, 2002; StataCorp, 2011b).

Table 3. Variables used in descriptive analysis, with derivation from PSID data.

Variable	Derivation from PSID data
Longitudinal poverty status using official poverty measure (OPM): Nonpoor Transient OPM poor Chronic OPM poor	Calculated from OPM thresholds reported in PSID compared to cash income reported in PSID for each year. Years of annual OPM poverty summed to categorize as nonpoor (0 years poor), transient poor (1-3 years poor), chronic poor (4-6 years poor). (See text for more detail.)
Age of individual at baseline: Age 18 to 54 (working-age adult for entire study period) Age 0 to 7 (child for entire study period) Age 65+ (senior for entire study period)	Calculated from individual year of birth reported in PSID.
Race/ethnicity of household head: Hispanic Black White Other	Derived from race/ethnicity of household head as reported in PSID, restructured into four categories of Black (alone or with any other race/ethnicity), White (alone, non-Hispanic), Hispanic (alone or with white or other race), and Other (Asian, Pacific Islander, American Indian, or other). Individuals were assigned the modal value across the six years of data.
Immigrant household	Member of PSID Immigrant Sample household in baseline year of study, comprising families with household head (and wife/cohabitor if present) who had immigrated to the U.S. after 1968. (See text for more detail.)
Child age 0 to 17 in household more than half of years	Based on household composition for each year reported in PSID. Calculated separately for each year then summed.
Non-high school graduate head/wife/cohabitor in household	Based on highest educational achievement of head/wife/cohabitor as reported in PSID in final year of study timeframe. Imputed for cases with missing values. (See text for more detail.)
Work status of head/wife/cohabitor in household: No working head/wife/cohabitor at least one year Working head/wife/cohabitor all years	Based on reported employment income for head/wife/cohabitor for each year reported in PSID.
Unemployed head/wife/cohabitor in household for some period of year during at least one year	Based on reported months of unemployment (not working but seeking work) for head/wife/cohabitor for each year reported in PSID.
Disabled head/wife/cohabitor in household at least one year	Based on whether head/wife/cohabitor reported as having a disability that prevented work “a lot” (versus “somewhat,” “a little,” or “none,” or no disability reported) for each year.
Single mother household at least one year	Derived from household composition for each year reported in PSID, counting only households with children headed by single females not living with any other adults. (See text for more detail.)

Table 3 (cont'd).

Variable	Derivation from PSID data
High cost housing area more than half of years	Derived from geographically-specific Fair Market Rent compared to national distribution of Fair Market Rents. Assigned based on state of residence and whether living in a metropolitan or non-metropolitan area. Calculated separately for each year then summed. (See text for more detail.)
Residential urbanicity: Urban/suburban (inside MSA) Rural (outside MSA)	Based on urbanicity codes reported in PSID, categorized into urban/suburban (living inside a Metropolitan Statistical Area) versus rural (living outside of a Metropolitan Statistical Area), as reported in PSID in baseline year of study timeframe.
Region: West South Midwest Northeast	Based on region of residence reported in PSID in baseline year of study timeframe, derived from state of residence.
Housing tenure: Renter household Homeowner household without mortgage Homeowner household with mortgage	Based on PSID report of whether housing owned or rented, and for owners whether mortgage held or not. Individuals were assigned the modal value across the six years of data.
Household health insurance type: Uninsured Public health insurance Private health insurance	Based on type of insurance reported in PSID for each family member. Household insurance type for each year then constructed as follows: private (any family member with private insurance), public (any family member with public insurance and none with private insurance), uninsured (no family members with public or private insurance). Individuals were assigned the modal value across the six years of data.

Analysis Methods

All descriptive analyses were conducted using the Stata svy and mi commands to incorporate survey weights and account for multiple imputation. First, rates of transient and chronic poverty, based on Supplemental Poverty Measure longitudinal poverty status, were calculated for the analytic sample overall and for subpopulations defined by specific demographic variables, using the svy: proportion and svy (subpop) commands. These results are described in Chapter 5.

Next, rates of transient and chronic poverty based on official federal poverty measure longitudinal poverty status were calculated for the analytic sample overall and for specific demographic subpopulations, as above. These OPM poverty rates were compared to the SPM poverty rates using the mi testtransform command to determine whether the difference between the two estimated proportions (e.g proportion of children transient poor under the SPM minus proportion of children transient poor under the OPM) was significantly different from zero. Because the purpose of analyzing OPM poverty rates was to compare them to SPM rates, the sample for this analysis was individuals for whom both SPM and OPM longitudinal poverty status were available. These results are also described in Chapter 5.

Finally, transient and chronic poverty rates based on SPM longitudinal poverty status were recalculated after excluding specific resource and expense items from family resources, in order to assess the impact of government policies, private resources, and specific household expenses on decreasing or increasing the proportion of individuals in transient and chronic poverty. For example, the value of the EITC was subtracted from family resources for each year, longitudinal poverty status was recalculated with EITC excluded, and then the transient and chronic poverty rates were recalculated based on this revised longitudinal poverty status. The difference between the original transient and chronic poverty rates and the recalculated poverty rates thus indicates the proportion of individuals who would have been transient or chronic poor if they had never received the EITC during the study timeframe. This analysis was conducted for the analytic sample overall and for three particularly vulnerable demographic subgroups, using the svy (subpop) command, namely children, seniors, and immigrants. These results are described in Chapter 6.

Multivariate Regression Analysis

One of the objectives of this study was to assess the degree to which household characteristics corresponding to expected predictors of transient and chronic poverty, per economic theory, actually predicted transient and chronic poverty status during the study timeframe for the PSID-derived sample. Multinomial logistic regression was used for this analysis.

Multinomial (or polytomous) logistic regression is appropriate when the outcome of interest is a categorical variable with more than two possible values which are not ordered (Hosmer & Lemeshow, 2000). An advantage of multinomial regression over a series of individual binary logistic regression analyses in this situation is that multinomial logit allows for analysis using a single sample, while serial binary logits necessitate different samples for each analysis.

For an outcome with three possible values (as with longitudinal poverty status in this study), multinomial logistic regression involves designating one of the outcome values as the referent or baseline outcome, and then utilizing a pair of logit functions to simultaneously compare each of the other outcome values to the referent value. In this study, nonpoor was

designated as the referent outcome value, so that the dual output of the multinomial logit model indicated the risk of transient poor status versus nonpoor status, and the risk of chronic poor status versus nonpoor status, conditional on a single set of covariates considered in both logit functions as predictors of longitudinal poverty status.

As noted above in the description of the sample for this study, this multinomial regression analysis used households as the unit of analysis. The possibility of using individuals as the unit of analysis was explored, but ultimately not adopted. Individuals in the PSID are clustered within households, and this clustering should be accounted for in regression analysis. Members of the same household do not represent independent observations but rather correlated observations, and therefore multiple members of the same household do not contribute as much unique information to the model as unclustered individuals would contribute. Clustering thus impacts the estimated variance of the model; a model that does not account for clustering will generally have underestimated standard errors, making significance tests invalid (Analyzing Correlated Data, 2013). In the current study, this is particularly true as the covariates of interest are all household-level characteristics.

A preferred method for accounting for this clustering of individuals within households would be to use a multilevel (hierarchical) model for data analysis. However, it is not possible with currently available standard statistical software to implement a multilevel model using multinomial logistic regression that incorporates complex survey weights as well as multiple imputation.¹⁸ Because the covariates and outcome of interest in this study were all household-level characteristics, an alternative available approach was to analyze the data using the household as the unit of analysis, thus avoiding the necessity of accounting for the correlation of individuals within households. Thus one individual was selected to represent each household, by selecting an individual who began in the household at baseline and remained for the entire study period, and family-level survey weights were used in the analysis. Individuals who moved out of the household at some point before the end of the study period to form independent households were excluded from selection, as they would have a different set of household-level covariates than the individuals who stayed in the original family. As a result, the sample used for the regression analysis is not representative of these “split-off” household types, e.g. children moving out of the parental household during the transition to adulthood, or subfamilies moving out of larger extended family households. Such “split-off” households comprise approximately 5% of the sample for each year.

Variables

The dependent variable for the multinomial logit analysis was longitudinal SPM poverty status, with nonpoor as the reference value. Eight primary independent variables were examined: two expected to predict transient poor status, and six expected to predict chronic poor status. In addition, three control variables were included. All of the variables are described in Table 4 below. The rationale for including each variable is explained in more detail in Chapter 7. Most of these variables are identical to variables used for the descriptive analysis, or are self-explanatory extensions of those variables. Four require further explanation.

¹⁸ Stata/ME 12 was the software package used for this analysis. Standard Stata commands do not allow for multilevel models with multinomial logistic regression and complex survey weights. The add-on Stata program gllamm (Rabe-Hesketh, Skrondal, & Pickles, 2004) does allow for multilevel modeling with multinomial logit and survey weights, but is not designed to incorporate multiple imputation.

Short-term unemployment and short-term disability were both examined as expected predictors of transient poverty, while long-term unemployment and long-term disability were examined as expected predictors of chronic poverty. The short- and long-term indicators of unemployment and disability were operationalized as different levels of categorical variables for unemployment and disability.

Thus short-term unemployment was defined as household head, wife, or cohabitor unemployed in 1-3 of the 6 data years, while long-term unemployment was defined as head, wife, or cohabitor unemployed in 4-6 of the 6 years. No unemployment was defined as head, wife, or cohabitor unemployed in none of the years. Similarly, short-term disability was defined as household head, wife or cohabitor disabled in 1-3 of the 6 data years, while long-term disability was defined as head, wife or cohabitor disabled in 4-6 of the 6 years. No disability was defined as head, wife, or cohabitor disabled in none of the years.

In the analysis, short- and long-term unemployment and short- and long-term disability were coded as dummy variables, with reference categories of no unemployment and no disability. The effect of this approach is that the reported coefficients for short- and long-term unemployment and short- and long-term disability correspond to the associated risk of transient or chronic poverty relative to households categorized as not unemployed or not disabled. Additional coefficients were also calculated for long-term unemployment and disability using short-term unemployment and disability as the reference category.

Table 4. Variables used in multinomial logistic regression analysis.

Variable	Operationalization
Outcome	
Longitudinal SPM poverty status	Annual SPM thresholds assigned based on family composition, housing tenure, and geography of residence reported in PSID, then compared to annual family resources minus expenses based on multiple items reported in PSID for each year. Years of annual SPM poverty summed to categorize as nonpoor (0 years poor – reference category), transient poor (1-3 years poor), chronic poor (4-6 years poor).
Transient poverty predictors	
Short-term unemployment (1-3 of 6 yrs)	Based on reported months of unemployment (not working but seeking work) for head/wife/cohabitor for each year reported in PSID. Unemployment coded as a categorical variable with three levels: short-term unemployment (1-3 years with head/wife/cohabitor reporting unemployment), long-term unemployment (4-6 years with head/wife/cohabitor reporting unemployment), and no unemployment (0 years with head/wife/cohabitor reporting unemployment). Dummy variables used in analysis, with no unemployment as the reference category.
Short-term disability (1-3 of 6 yrs)	Based on whether head/wife/cohabitor reported as having a disability that prevented work “a lot” (versus “somewhat,” “a little,” or “none,” or no disability reported) for each year. Disability coded as a categorical variable with three levels: short-term disability (1-3 years with head/wife/cohabitor reporting disability), long-term disability (4-6 years with head/wife/cohabitor reporting disability), and no disability (0 years with head/wife/cohabitor reporting disability). Dummy variables used in analysis, with no disability as the reference category.
Chronic poverty predictors	
Long-term unemployment (4-6 of 6 yrs)	See short-term unemployment above.
Long-term disability (4-6 of 6 yrs)	See short-term disability above.
Non-high school graduate	Based on highest educational achievement of head/wife/cohabitor as reported in PSID in final year of study timeframe. Imputed for cases with missing values.
Immigrant household	Based on household identifier coding as member of PSID Immigrant Sample household in baseline year, comprising families with household head (and wife/cohabitor if present) who had immigrated to the U.S. after 1968.
Single mother household (more than half of years)	Derived from household composition for each year reported in PSID, counting only households with children headed by single females not living with any other adults. Calculated separately for each year then summed.
Senior household (more than half of years)	Defined as household where head, wife, or cohabitor was age 65 or older, derived from ages of family members reported in PSID for each year. Calculated separately for each year then summed.

Table 4 (cont'd).

Control variables	
Race/ethnicity of head of household	Derived from race/ethnicity of household head as reported in PSID, restructured into four categories of Black (alone or with any other race/ethnicity), White (alone, non-Hispanic), Hispanic (alone or with white or other race), and Other (Asian, Pacific Islander, American Indian, or other). Individuals were assigned the modal value across the six years of data. Dummy variables used in analysis, with White as the reference category.
Children in household (more than half of years)	Based on household composition for each year reported in PSID. Calculated separately for each year then summed.
High housing cost area (more than half of years)	Derived from geographically-specific Fair Market Rent compared to national distribution of Fair Market Rents. Assigned based on state of residence and whether living in a metropolitan or non-metropolitan area. Calculated separately for each year then summed.

Analysis Methods

Analysis was conducted using the Stata `mlogit` command, together with the `svy` and `mi` commands to incorporate survey weights and account for multiple imputation. Note that exponentiated coefficients from the output of Stata's `mlogit` program are in the form of relative risks (RR)¹⁹, not odds ratios as with binary logistic regression (StataCorp, 2011a).

The multinomial logit model was built following the procedures outlined in Hosmer & Lemeshow (2000). First, univariate multinomial logit analysis was conducted with each covariate in turn. All primary covariates were found to be significant at the $p < 0.10$ level in univariate analysis, so all were retained in the multivariate model. All control variables were also retained, though one of the categories for race/ethnicity of head of household was collapsed into the reference category as its RR coefficients in both the transient poor and chronic poor logit equations were not significantly different from one. Next, the multivariate model was run. All primary covariates were significant at the $p < 0.05$ level as predictors for one or both of the outcome values (transient poor and/or chronic poor). Because different covariates were expected to predict transient versus chronic poor status, variables were not excluded if they were significant in only one of the two logit equations. Thus all covariates were retained in the model. Several plausible interaction terms were then constructed and tested in the model; only one was significant at the $p < 0.10$ level, thus it was the only one retained in the final model.

Options were limited for testing goodness-of-fit of the model due to the use of complex survey weights. Most standard measures of goodness-of-fit (e.g. likelihood ratio test, Hosmer-Lemeshow test) are based on maximum likelihood estimation procedures, which are not valid with weighted survey data. However, Wald tests can be used to ascertain whether coefficients for covariates are significantly different from zero (and thus can be removed from the model without reducing goodness of fit) (Heeringa, West, & Berglund, 2010).

Hosmer and Lemeshow (2000) advise testing goodness of fit for multinomial logit models by examining the fit for separate binary logit models for each outcome value. Thus separate binary logit models were run for transient poverty and chronic poverty, using the `-svy (subpop)-` command to select the relevant subpopulation. Wald tests were used to ascertain whether coefficients for covariates in these separate models were significantly different from zero using Stata's `mi test` command. All final covariates were found to improve the fit of the models for transient poverty and/or chronic poverty, with the exception of senior household. This variable was nonsignificant in the chronic poverty model, and only borderline significant ($p = 0.053$) in the transient poverty model. However, this result is not substantially different from the multinomial `mlogit` model, in which senior household was nonsignificant as a predictor of chronic poverty and significant as a predictor of transient poverty with a p -value of 0.042. Thus senior household was retained in the multinomial model based on the multinomial model p -value of less than 0.05.

For the final step of analysis, Wald tests were conducted for each primary covariate to determine whether coefficients associated with the outcome chronic poor were significantly different from those associated with the outcome transient poor. Stata's `mi testtransform` command was used for this analysis to test whether the difference between the two coefficients was significantly different from zero.

¹⁹ Taking the form, for example: $\frac{P(\text{chronic poor, versus nonpoor}) | \text{single mother household}}{P(\text{chronic poor, versus nonpoor}) | \text{not single mother household}}$

To further and more directly explore which covariates were more strongly linked to chronic than transient poverty, an additional analysis was conducted. A binary logit model was run for the subsample of transient plus chronic poor households only, using the `-svy (subpop)-` command, with chronic poverty as the outcome variable. This analysis was used to determine which of the covariates from the original multinomial model significantly predicted chronic poverty over and above transient poverty in multivariate analysis, among households that were poor.

Finally, to explore a possible explanation for some of the observed results, the final multivariate multinomial regression model was run again using a different longitudinal poverty outcome variable, namely longitudinal poverty status after excluding government benefits. As in the original analysis, Wald tests were conducted for primary covariates to determine whether coefficients associated with chronic poor were significantly different from those associated with transient poor, using the `mi testtransform` command. In addition, as above, a binary logit model was run for the subsample of poor households only, with the outcome of chronic poverty status after excluding government benefits, to identify covariates that predicted chronic poverty over and above transient poverty, among poor households, with government benefits excluded.

Results from the multinomial logistic regression analysis are described in Chapter 7 below.

Chapter 5

RESULTS

Prevalence and Demographics of Chronic and Transient Poverty

Prior research on poverty duration in the United States has largely examined only data from the 1960s to the 1980s, and has excluded some key demographic groups due to data limitations, particularly Hispanics and immigrants in general. Thus a primary goal of this study was to identify the prevalence and demographics of short-term versus long-term poverty in the United States during a more recent timeframe that is representative of the current post-welfare-reform policy environment, while using a sample that better reflects the U.S. population, including Hispanics and other recent immigrants.

Furthermore, no prior research has examined poverty duration using the Supplemental Poverty Measure (SPM); all earlier studies have used the official federal poverty measure (OPM) or a measure closely derived from the OPM. Thus this study sought to measure the rates of transient versus chronic poverty using the SPM, and to compare those rates to transient and chronic poverty rates calculated using the official poverty measure, in order to assess whether longitudinal poverty rates differ substantially depending on which measure is used.

Research Question 1: What is the prevalence of chronic poverty and transient poverty in the United States, when measuring poverty using the Supplemental Poverty Measure?

Chronic poverty was defined as meeting the criteria for annual poverty using the Supplemental Poverty Measure in more than half of the years examined during the 11-year study timeframe from 1998 to 2008, with biennial data collection, or poor in at least four of the six years for which data was collected. Transient poverty was defined as meeting the criteria for annual poverty using the Supplemental Poverty Measure for at least one but no more than half of the years examined during the 11-year study timeframe, or poor in one to three of the six years for which data was collected.

Chronic poverty was experienced by a very small proportion of the overall sample during the study timeframe. The overall chronic poverty rate was 2.1% (CI 1.4%, 2.8%), equivalent to approximately one in 50 individuals. Transient poverty, in contrast, was fairly common across the overall sample. The overall transient poverty rate was 18.9% (CI 17.3%, 20.4%); thus transient poverty affected nearly one in five individuals during the study timeframe.

These results are broadly similar to the findings of earlier research on chronic versus transient poverty in the United States, though prior research has used different timeframes and poverty definitions so findings are not directly comparable. Prior studies using older data (pre-1990s), using the official federal poverty measure or a closely related measure to define annual poverty, and using various criteria for distinguishing between short- and long-term poverty similarly found that short-term poverty was much more common than long-term poverty, with long-term poverty rates generally of less than 5%, and short-term poverty rates of 20% or more (Duncan, 1984; Anderson, 2011; Bane & Elwood, 1986; Rank & Hirschl, 1999).

Research Question 2: What are the demographics of chronic and transient poverty, when measuring poverty using the Supplemental Poverty Measure?

Chronic and transient poverty rates for many different demographic subgroups of the sample were examined and compared to the chronic and transient poverty rates for the overall sample, as described below in Table 5. In general, the demographic subgroups with disproportionately high poverty rates were similar across both chronic and transient poverty. However, subgroups with disproportionately high transient poverty rates tended to have chronic poverty rates that were even more disproportionate compared to the rate for the overall sample. Thus disproportionately high transient poverty rates for different demographic subgroups ranged from 102% to 322% of the overall transient poverty rate, with a median of 161% of the overall rate, while disproportionately high chronic poverty rates for different subgroups ranged from 105% to 486% of the overall chronic poverty rate, with a median of 214% of the overall rate. Consequently, chronic poverty was more concentrated among specific highly impacted demographic subgroups, while the transient poverty population was more similar to the overall sample. This general finding parallels the findings of prior research on the demographics of short-term versus long-term poverty in the United States (Duncan, 1984; Anderson, 2011), though again other research used different poverty measures and timeframes so results are not directly comparable.

As noted above, the transient poverty rate for the overall sample was 18.9%. Demographic subgroups with particularly high transient poverty rates (more than 150% the rate for the sample overall) included individuals in households with Hispanic household heads (37.5% transient poverty rate), and those in immigrant households (33.2%), as well as those in households with Black household heads (31.0%).

Particularly high transient poverty rates were also found for individuals in households where the head, wife, or cohabitor had no employment income for one year or more (35.9%); individuals in households with a head, wife, or cohabitor who was not a high school graduate (36.2%); individuals in single-mother households for at least one year (34.2%); and individuals in households where the head, wife, or cohabitor was disabled for one year or more (30.4%). Not surprisingly, relatively high transient poverty rates were also found for individuals in renter households (34.9%), and those in households that predominantly lacked health insurance (60.8%) or utilized public health insurance (37.1%).

In terms of chronic poverty rates, the rate for the overall sample was 2.1%, as noted above. Chronic poverty rates were particularly high (more than 150% of the rate for the overall sample) for individuals in immigrant households (10.2% chronic poverty rate) and for individuals in households with Hispanic household heads (9.8%). These rates were more disproportionate compared to the rate for the overall population than the transient poverty rates for Hispanics and immigrants. Those in households with Black household heads also had a relatively high chronic poverty rate (4.0%), though it was notably lower than the Hispanic and immigrant chronic poverty rates, contrasting with the more similar rates for transient poverty across these three subgroups.

Particularly high chronic poverty rates were also found for individuals in households with a head, wife, or cohabitor who was not a high school graduate (8.9%); individuals in households where the head, wife, or cohabitor had no employment income for one year or more (5.6%); and individuals in households where the head, wife, or cohabitor was disabled for one year or more (4.5%). These rates were more disproportionate compared to the rates for the overall population

than the transient poverty rates for these groups. Individuals in single-mother households for at least one year had a nominally high chronic poverty rate (3.1%), but it was less disproportionate compared to the overall sample than the transient poverty rate for this subgroup. Seniors also had a relatively high chronic poverty rate (5.1%) but less disproportionate transient poverty rate.

Finally, relatively high chronic poverty rates were found for individuals in renter households (5.5%), and those in households that predominantly lacked health insurance (10.1%) or utilized public health insurance (9.9%).

The demographics of transient and chronic poverty found in this study have some parallels in the findings of earlier research on poverty duration in the United States. Duncan (1984) also found that short-term poverty was more common among households headed by individuals with disabilities and African Americans, for example, while their representation among the long-term poor was even greater. Stevens (1999) found that demographic groups with the longest stays in poverty included individuals in households headed by single mothers, individuals without high school diplomas, and African Americans. However, this study examined a wider range of demographic characteristics and a more recent timeframe than earlier research, and thus earlier findings are not directly comparable. Earlier research examined short-versus long-term poverty during the 1960s through 1980s, and certain demographic groups were unexamined; for example, no prior research has systematically examined poverty duration among Hispanics or among immigrants in general in the United States, particularly important groups to consider as these are important growing demographic groups with high rates of annual poverty (Grieger & Wyse, 2012).

Table 5. Chronic and transient poverty rates for demographic subgroups.

Demographic subgroup	Transient poverty rate	(se) [95% CI]	Subgroup rate as % of rate for overall sample	Chronic poverty rate	(se) [95% CI]	Subgroup rate as % of rate for overall sample
All individuals	18.9%	(0.7) [17.3, 20.4]		2.1%	(0.4) [1.4, 2.8]	
Age 18 to 54 at baseline (working-age adult entire period)	16.5%	(0.9) [14.7, 18.2]	87%	1.6%	(0.3) [1.0, 2.2]	76%
Age 0 to 7 at baseline (child entire period)	20.6%	(1.8) [17.1, 24.1]	109%	2.5%	(0.8) [0.8, 4.2]	119%
Age 65+ at baseline (senior entire period)	24.2%	(2.4) [19.2, 29.1]	128%	5.1%	(1.2) [2.8, 7.5]	243%
Hispanic household head	37.5%	(3.8) [29.9, 45.1]	198%	9.8%	(3.1) [3.5, 16.0]	467%
Black household head	31.0%	(2.1) [26.7, 35.4]	164%	4.0%	(0.6) [2.8, 5.2]	190%
White household head	15.1%	(0.7) [13.6, 16.5]	80%	1.5%	(0.9) [-0.3, 3.2]	71%
Other race household head	15.0%	(3.3) [8.4, 21.6]	79%	0.9%	(0.2) [0.6, 1.2]	43%
Immigrant household	33.2%	(3.8) [25.4, 41.0]	176%	10.2%	(3.2) [3.7, 16.6]	486%
Child age 0 to 17 in household more than half of years	19.3%	(1.3) [16.8, 21.9]	102%	2.2%	(0.6) [0.9, 3.5]	105%
Non-high school graduate head/wife/cohabitor	36.2%	(2.7) [30.7, 41.6]	192%	8.9%	(1.9) [5.0, 12.7]	424%

Table 5 (cont'd).

Demographic subgroup	Transient poverty rate	(se) [95% CI]	Subgroup rate as % of rate for overall sample	Chronic poverty rate	(se) [95% CI]	Subgroup rate as % of rate for overall sample
All individuals	18.9%	(0.7) [17.3, 20.4]		2.1%	(0.4) [1.4, 2.8]	
No working head/wife/cohabitor – at least one year	35.9%	(1.6) [32.7, 39.1]	190%	5.6%	(0.6) [4.3, 6.9]	267%
Working head/wife/cohabitor – all years	13.3%	(0.8) [11.7, 14.9]	70%	0.9%	(0.4) [0.1, 1.7]	43%
Unemployed (seeking work) head/wife/cohabitor – for some period of year during at least one year	24.1%	(1.4) [21.3, 27.0]	128%	2.9%	(0.8) [1.2, 4.5]	138%
Disabled head/wife/cohabitor – at least one year	30.4%	(1.5) [27.3, 33.5]	161%	4.5%	(0.7) [3.1, 5.9]	214%
Single mother household – at least one year	34.2%	(2.9) [28.5, 40.0]	181%	3.1%	(0.8) [1.5, 4.7]	148%
High cost housing area – more than half of years	19.9%	(2.0) [15.9, 23.9]	105%	3.4%	(1.2) [1.0, 5.9]	162%
Urban/suburban (in MSA)	17.1%	(0.9) [15.2, 18.9]	90%	1.8%	(0.6) [0.6, 3.0]	86%
Rural (outside MSA)	21.0%	(1.4) [18.1, 23.9]	111%	1.9%	(0.4) [1.1, 2.8]	90%
Region West	21.5%	(2.2) [17.0, 26.0]	114%	4.1%	(1.4) [1.3, 6.9]	195%
Region South	20.9%	(1.2) [18.6, 23.3]	111%	2.2%	(0.4) [1.3, 3.0]	105%
Region Midwest	17.5%	(1.5) [14.4, 20.6]	93%	1.2%	(0.3) [0.5, 1.8]	57%
Region Northeast	14.7%	(1.5) [11.7, 17.7]	78%	0.9%	(0.3) [0.3, 1.5]	43%

Table 5 (cont'd).

Demographic subgroup	Transient poverty rate	(se) [95% CI]	Subgroup rate as % of rate for overall sample	Chronic poverty rate	(se) [95% CI]	Subgroup rate as % of rate for overall sample
All individuals	18.9%	(0.7) [17.3, 20.4]		2.1%	(0.4) [1.4, 2.8]	
Renter	34.9%	(1.9) [31.1, 38.7]	185%	5.5%	(0.8) [3.8, 7.2]	262%
Homeowner without mortgage	21.9%	(1.7) [18.5, 25.3]	116%	2.1%	(0.6) [1.0, 3.3]	100%
Homeowner with mortgage	11.8%	(0.9) [10.0, 13.5]	62%	0.8%	(0.5) [-0.2, 1.7]	38%
Uninsured household	60.8%	(5.2) [50.2, 71.3]	322%	10.1%	(3.3) [3.6, 16.7]	481%
Public health insurance household	37.1%	(2.3) [32.6, 41.6]	196%	9.9%	(1.7) [6.5, 13.3]	471%
Private health insurance household	13.8%	(0.7) [12.4, 15.2]	73%	0.3%	(0.1) [0.1, 0.4]	14%

Research Question 3: Are the prevalence and demographics of chronic and transient poverty different when measuring poverty using the Supplemental Poverty Measure versus using the official federal poverty measure?

To examine the effect of using the Supplemental Poverty Measure (SPM) rather than the official poverty measure (OPM) to determine chronic and transient poverty status, chronic and transient poverty rates using the two different poverty measures were calculated and compared for the overall sample and for various demographic subgroups. The analysis examined individuals for which both SPM and OPM poverty status were available for all six years in which data was collected. In each case, chronic poverty was defined as meeting the criteria for annual poverty using either the SPM or OPM in more than half of the years examined during the study timeframe, while transient poverty was defined as meeting the criteria for annual poverty using either the SPM or OPM in at least one but no more than half of the years examined.

There were statistically significant differences in both the transient and chronic poverty rates for the overall sample depending on whether the SPM or OPM was used. Overall, transient poverty was more prevalent using the SPM compared to the OPM, while chronic poverty was less prevalent. For transient poverty, the overall SPM rate was 18.9% while the OPM rate was 14.7%, a difference of 4.2% ($p < 0.01$). For chronic poverty, the overall SPM rate was 2.1% and the OPM rate was 3.3%, a difference of -1.2% ($p < 0.01$).

Transient and chronic poverty rates for various demographic subgroups were also different depending on the poverty measure used, as described below in Tables 6 and 7. In total, poverty rates for 28 demographic subgroups were examined. Transient poverty rates calculated using the SPM were significantly different ($p < 0.05$) from rates calculated using the OPM for 22 of the subgroups, while chronic poverty rates were significantly different for 13 of the subgroups. The differences in point estimates of SPM rates versus OPM rates for various demographic subgroups ranged from 0.7% to 18.1% for transient poverty, with a median of 4.3%, and from 0.1% to 10.0% for chronic poverty, with a median of 1.5%.

Transient poverty rates calculated using the SPM were notably higher than rates using the OPM (difference $>$ median of 4.3% and $p < 0.05$) for several demographic subgroups. These included: seniors (Δ SPM - OPM = 12.5%); individuals in households with a Hispanic household head (Δ = 9.9%); individuals in households where the head, wife, or cohabitor was not a high school graduate (Δ = 7.8%); individuals in households where the head, wife, or cohabitor had no employment income for at least one year (Δ = 10.3%); individuals in households where the head, wife, or cohabitor was disabled for at least one year (Δ = 8.1%); individuals living in high-cost housing areas (Δ = 7.0%); individuals living in the Northeast (Δ = 5.2%), West (Δ = 5.2%), or South (Δ = 4.5%) regions of the United States; individuals in households headed by homeowners without a mortgage (Δ = 7.8%); individuals in households that predominantly lacked health insurance (Δ = 18.1%); and individuals in households that predominantly utilized public health insurance (Δ = 9.6%).

For chronic poverty, poverty rates calculated using the SPM were notably lower (difference $<$ median of -1.5% and $p < 0.05$) than rates calculated using the OPM for a number of demographic subgroups. These comprised: children (Δ SPM - OPM = -3.7%); individuals predominantly living in households with children (Δ = -3.0%); individuals in households with a black household head (Δ = -8.6%); individuals in households where the head, wife, or cohabitor had no employment income for at least one year (Δ = -3.6%); individuals in households where the head, wife, or cohabitor was unemployed for some part of at least one year (Δ = -2.5%);

individuals in households where the head, wife, or cohabitor was disabled for at least one year ($\Delta = -1.8\%$); individuals living in single mother households for at least one year ($\Delta = -10.0\%$); individuals living in rural areas ($\Delta = -2.4\%$); individuals living in the South region of the United States ($\Delta = -2.8\%$); and individuals in households that predominantly used public health insurance ($\Delta = -5.4\%$).

Many of these differences are likely attributable to the expanded range of household resources and expenses incorporated in the SPM compared to the OPM. For example, the SPM includes the geographically-specific cost of living (using housing costs as a proxy) in the poverty threshold. Thus demographic subgroups particularly impacted by the local cost of living are likely to demonstrate different poverty rates using the SPM than the OPM, perhaps explaining the higher SPM transient poverty rate for seniors (due to reliance of many on federally-fixed Social Security benefits for income) and the lower SPM chronic poverty rate for individuals in rural areas and in the South (due to lower housing costs in those areas). As another example, the SPM includes in household resources a variety of near-cash government benefits such as the EITC and food stamps. Some immigrants are ineligible for some of these benefits, which might explain why the SPM transient and chronic poverty rates were higher than the OPM rates for immigrants.

No prior studies have examined poverty duration using the SPM, so these findings related to differences between short-term and long-term poverty using the SPM versus the OPM cannot be directly compared to earlier research. However, prior research on differences in annual poverty rates using the SPM versus the OPM has found that the annual SPM rate is higher overall than the OPM rate, and particularly higher for seniors, Hispanics, immigrants, and individuals living in high cost-of-living areas, while annual SPM rates are lower than OPM rates for blacks, children, and individuals living in low cost-of-living areas (Short, 2012; Short, 2011a). These findings related to differences between SPM and OPM annual poverty rates are most similar to the differences found between longitudinal SPM and OPM rates for transient poverty in this study, which is not surprising given that transient poor individuals comprise a larger proportion of the poor population in any given year, and prior research on differences in poverty demographics using the SPM versus OPM has been based on poverty status in cross-sectional annual samples.

Table 6. Transient poverty rates for demographic subgroups using SPM vs OPM.

Demographic subgroup	SPM rate	(se) [95% CI]	OPM rate	(se) [95% CI]	Δ SPM rate – OPM rate	p-value
All Individuals	18.9%	(0.7) [17.3, 20.4]	14.7%	(0.8) [13.2, 16.3]	4.2%	* (p<0.01)
Age 65+ at baseline (senior entire period)	24.2%	(2.4) [19.2, 29.1]	11.7%	(1.5) [8.6, 14.7]	12.5%	* (p<0.01)
Age 18 to 54 at baseline (working-age adult entire period)	16.5%	(0.9) [14.7, 18.2]	13.2%	(0.8) [11.5, 14.9]	3.3%	* (p<0.01)
Age 0 to 7 at baseline (child entire period)	20.6%	(1.8) [17.1, 24.1]	19.4%	(1.6) [16.1, 22.6]	1.2%	ns (p=0.48)
Hispanic household head	37.5%	(3.8) [29.9, 45.1]	27.6%	(2.6) [22.2, 32.9]	9.9%	* (p<0.01)
Black household head	31.0%	(2.1) [26.7, 35.4]	26.9%	(3.2) [20.5, 33.3]	4.1%	ns (p=0.13)
Other race household head	15.1%	(0.7) [13.6, 16.5]	11.4%	(0.7) [9.9, 12.8]	3.7%	* (p<0.01)
White household head	15.0%	(3.3) [8.4, 21.6]	12.6%	(3.0) [6.6, 18.5]	2.4%	ns (p=0.38)
Immigrant household	33.2%	(3.8) [25.4, 41.0]	25.2%	(2.3) [20.6, 29.8]	8.0%	* (p=0.01)
Non-high school graduate head/wife/cohabitor	36.2%	(2.7) [30.7, 41.6]	28.4%	(2.6) [23.2, 33.5]	7.8%	* (p<0.01)
Child age 0 to 17 in household more than half of years	19.3%	(1.3) [16.8, 21.9]	17.0%	(1.3) [14.5, 19.5]	2.3%	ns (p=0.05)
No working head/wife/cohabitor – at least one year	35.9%	(1.6) [32.7, 39.1]	25.6%	(1.6) [22.3, 28.8]	10.3%	* (p<0.01)
Working head/wife/cohabitor – all years	13.3%	(0.8) [11.7, 14.9]	11.2%	(0.9) [9.4, 13.0]	2.1%	* (p<0.01)
Unemployed (seeking work) head/wife/cohabitor – for some period in at least one year	24.1%	(1.4) [21.3, 27.0]	21.0%	(1.4) [18.2, 23.7]	3.1%	* (p=0.02)
Disabled head/wife/cohabitor – at least one year	30.4%	(1.5) [27.3, 33.5]	22.3%	(1.4) [19.5, 15.1]	8.1%	* (p<0.01)
Single mother household – at least one year	34.2%	(2.9) [28.5, 40.0]	33.5%	(2.6) [28.4, 38.7]	0.7%	ns (p=0.82)

* p<0.05

Table 6 (cont'd).

Demographic subgroup	SPM rate	(se) [95% CI]	OPM rate	(se) [95% CI]	Δ SPM rate – OPM rate	p-value
All Individuals	18.9%	(0.7) [17.3, 20.4]	14.7%	(0.8) [13.2, 16.3]	4.2%	* (p<0.01)
High cost housing area more than half of years	19.9%	(2.0) [15.9, 23.9]	12.9%	(1.6) [9.6, 16.2]	7.0%	* (p<0.01)
Urban/suburban (in MSA)	17.1%	(0.9) [15.2, 18.9]	13.3%	(1.0) [11.3, 15.4]	3.8%	* (p<0.01)
Rural (outside MSA)	21.0%	(1.4) [18.1, 23.9]	17.4%	(1.3) [14.8, 20.0]	3.6%	* (p<0.01)
Region Northeast	14.7%	(1.5) [11.7, 17.7]	9.5%	(1.4) [6.7, 12.3]	5.2%	* (p<0.01)
Region West	21.5%	(2.2) [17.0, 26.0]	16.3%	(1.6) [13.0, 20.0]	5.2%	* (p=0.01)
Region South	20.9%	(1.2) [18.6, 23.3]	16.4%	(1.0) [14.3, 18.5]	4.5%	* (p<0.01)
Region Midwest	17.5%	(1.5) [14.4, 20.6]	15.5%	(1.6) [12.2, 18.8]	2.0%	* (p=0.05)
Homeowner without mortgage	21.9%	(1.7) [18.5, 25.3]	14.1%	(1.3) [11.5, 16.8]	7.8%	* (p<0.01)
Renter	34.9%	(1.9) [31.1, 38.7]	30.5%	(2.1) [26.2, 34.8]	4.4%	ns (p=0.07)
Homeowner with mortgage	11.8%	(0.9) [10.0, 13.5]	9.0%	(0.8) [7.3, 10.7]	2.8%	* (p<0.01)
Uninsured household	60.8%	(5.2) [50.2, 71.3]	42.7%	(5.7) [31.2, 54.2]	18.1%	* (p<0.01)
Public health insurance household	37.1%	(2.3) [32.6, 41.6]	27.5%	(1.9) [23.8, 31.3]	9.6%	* (p<0.01)
Private health insurance household	13.8%	(0.7) [12.4, 15.2]	11.2%	(0.8) [9.5, 12.8]	2.6%	* (p<0.01)

* p<0.05

Table 7. Chronic poverty rates for demographic subgroups using SPM vs OPM.

Demographic subgroup	SPM rate	(se) [95% CI]	OPM rate	(se) [95% CI]	Δ SPM rate – OPM rate	p-value
All Individuals	2.1%	(0.4) [1.4, 2.8]	3.3%	(0.4) [2.5, 4.2]	-1.2%	* (p<0.01)
Age 0 to 7 at baseline (child entire period)	2.5%	(0.8) [0.8, 4.2]	6.2%	(1.3) [3.5, 8.9]	-3.7%	* (p<0.01)
Age 18 to 54 at baseline (working-age adult entire period)	1.6%	(0.3) [1.0, 2.2]	2.6%	(0.4) [1.8, 3.4]	-1.0%	* (p<0.01)
Age 65+ at baseline (senior entire period)	5.1%	(1.2) [2.8, 7.5]	4.1%	(1.1) [1.8, 6.4]	1.0%	ns (p=0.29)
Black household head	4.0%	(0.6) [2.8, 5.2]	12.6%	(2.0) [8.5, 16.7]	-8.6%	* (p<0.01)
Hispanic household head	9.8%	(3.1) [3.5, 16.0]	11.4%	(2.6) [6.1, 16.6]	-1.6%	ns (p=0.52)
White household head	1.5%	(0.9) [-0.3, 3.2]	1.2%	(0.7) [-0.3, 2.7]	0.3%	ns (p=0.61)
Other race household head	0.9%	(0.2) [0.6, 1.2]	1.2%	(0.2) [0.7, 1.6]	-0.3%	ns (p=0.19)
Immigrant household	10.2%	(3.2) [3.7, 16.6]	9.3%	(2.0) [5.2, 13.4]	0.9%	ns (p=0.64)
Child age 0 to 17 in household more than half of years	2.2%	(0.6) [0.9, 3.5]	5.2%	(0.9) [3.3, 7.0]	-3.0%	* (p<0.01)
Non-high school graduate head/wife/cohabitor	8.9%	(1.9) [5.0, 12.7]	11.8%	(1.7) [8.3, 15.2]	-2.9%	ns (p=0.14)
No working head/wife/cohabitor – at least one year	5.6%	(0.6) [4.3, 6.9]	9.2%	(1.2) [6.8, 11.6]	-3.6%	* (p<0.01)
Working head/wife/cohabitor – all years	0.9%	(0.4) [0.1, 1.7]	1.4%	(0.3) [0.7, 2.1]	-0.5%	ns (p=0.06)
Unemployed (seeking work) head/wife/cohabitor – for some period of year during at least one year	2.9%	(0.8) [1.2, 4.5]	5.4%	(0.9) [3.6, 7.2]	-2.5%	* (p<0.01)
Disabled head/wife/cohabitor – at least one year	4.5%	(0.7) [3.1, 5.9]	6.3%	(0.8) [4.6, 7.9]	-1.8%	* (p=0.04)
Single mother household – at least one year	3.1%	(0.8) [1.5, 4.7]	13.1%	(2.7) [7.6, 18.7]	-10.0%	* (p<0.01)

* p<0.05

Table 7 (cont'd).

Demographic subgroup	SPM rate	(se) [95% CI]	OPM rate	(se) [95% CI]	Δ SPM rate – OPM rate	p-value
All Individuals	2.1%	(0.4) [1.4, 2.8]	3.3%	(0.4) [2.5, 4.2]	-1.2%	* (p<0.01)
High cost housing area more than half of years	3.4%	(1.2) [1.0, 5.9]	3.5%	(1.1) [1.1, 5.9]	-0.1%	ns (p=0.96)
Rural (outside MSA)	1.9%	(0.4) [1.1, 2.8]	4.3%	(0.8) [2.7, 5.9]	-2.4%	* (p<0.01)
Urban/suburban (in MSA)	1.8%	(0.6) [0.6, 3.0]	2.5%	(0.5) [1.6, 3.5]	-0.7%	ns (p=0.06)
Region South	2.2%	(0.4) [1.3, 3.0]	5.0%	(0.7) [3.5, 6.5]	-2.8%	* (p<0.01)
Region Midwest	1.2%	(0.3) [0.5, 1.8]	2.5%	(0.6) [1.3, 3.7]	-1.3%	* (p=0.02)
Region West	4.1%	(1.4) [1.3, 6.9]	4.2%	(1.5) [1.3, 7.1]	-0.1%	ns (p=0.93)
Region Northeast	0.9%	(0.3) [0.3, 1.5]	1.0%	(0.3) [0.3, 1.7]	-0.1%	ns (p=0.67)
Renter	5.5%	(0.8) [3.8, 7.2]	11.1%	(1.6) [8.0, 14.3]	-5.6%	ns (p<0.01)
Homeowner without mortgage	2.1%	(0.6) [1.0, 3.3]	3.2%	(0.4) [2.4, 4.0]	-1.1%	ns (p=0.06)
Homeowner with mortgage	0.8%	(0.5) [-0.2, 1.7]	0.5%	(0.3) [-0.0, 1.1]	0.3%	ns (p=0.35)
Uninsured household	10.1%	(3.3) [3.6, 16.7]	19.8%	(5.9) [7.9, 31.7]	-9.7%	ns (p=0.08)
Public health insurance household	9.9%	(1.7) [6.5, 13.3]	15.3%	(2.0) [11.3, 19.3]	-5.4%	* (p<0.01)
Private health insurance household	0.3%	(0.1) [0.1, 0.4]	0.4%	(0.1) [0.3, 0.6]	-0.1%	* (p=0.02)

* p<0.05

Discussion

This study examined poverty duration in the United States from the late 1990s to the late 2000s, a time period representative of the current post-welfare-reform policy environment, using a sample representative of the U.S. population, including recent immigrants and Hispanics, and using the Supplemental Poverty Measure to categorize individuals as poor in a given year. Rates of transient and chronic poverty were calculated, with chronic poverty defined as poor more than half the time, while transient poverty was defined as poor in at least one year but no more than half of the years for which data were collected. A key initial finding was that chronic poverty was quite rare, affecting only approximately one in fifty individuals, while transient poverty was relatively common, affecting nearly one in five individuals.

In terms of demographics, particularly high chronic poverty rates were found among some specific demographic subgroups including Hispanics, blacks, immigrants, and seniors; individuals in households that included non-high school graduates, single mothers, adults with disabilities, and non-working adults; and individuals living in high-cost areas. Renters and individuals with no health insurance or public health insurance also had high chronic poverty rates. All of these groups had relatively high transient poverty rates as well, but their chronic poverty rates were generally more disproportionate compared to the rate for the overall population. Overall, then, chronic poverty was more concentrated among these subgroups, while the transient poor population was more similar to the overall population.

Hispanics and immigrants had high rates of transient poverty, and substantially more disproportionate rates of chronic poverty, which is noteworthy because earlier research has not systematically examined poverty duration for these groups. Other noteworthy demographic groups with particularly disproportionate chronic poverty rates compared to transient poverty rates included seniors and individuals in households that included non-high school graduates, disabled adults, and non-working adults.

Finally, rates of transient and chronic poverty calculated using the Supplemental Poverty Measure were compared to rates calculated using the official federal poverty measure, to assess whether the measure used resulted in substantially different rates. Results showed that the differences in rates using the SPM versus the OPM were highly statistically significant for the overall population and for many demographic subgroups. SPM rates for transient poverty were generally higher than the OPM rates, while SPM rates for chronic poverty were generally lower than the OPM rates. Rates for specific demographic subgroups differed by as much as 18% for transient poverty and 10% for chronic poverty, though median differences were more modest. Differences are likely attributable to the more comprehensive range of resources and expenses included in the SPM versus the OPM. Overall, then, it does make a difference which poverty measure is used to examine poverty duration, as the prevalence and demographics of transient and chronic poverty differ significantly when using the Supplemental Poverty Measure versus the official poverty measure.

Chapter 6

RESULTS

Impact of Existing Policies on Chronic and Transient Poverty

One of the key advantages of using the Supplemental Poverty Measure versus the official federal poverty measure is that the SPM facilitates analysis of the impact of a wide variety of government policies on reducing (or increasing) poverty among individuals and households. Because the SPM incorporates in the measure of family resources a variety of cash and near-cash government benefits, as well as taxes and other specific household expenses, it is possible to quantify the impact of different benefits, income sources, taxes, and expenses on poverty rates by recalculating poverty rates after subtracting specific items from or adding specific items to household resources. Thus this study examined the impact of various government benefits, taxes, private income sources, and household expenses on transient and chronic poverty rates for the population overall and for three particularly vulnerable demographic subgroups: children, seniors, and immigrants.

Research Question 4: What are the impacts of current government supports in reducing the rates of chronic and transient poverty? What are the impacts of private supports? How much do taxes and other specific household expenses contribute to chronic and transient poverty?

Overall Transient and Chronic Poverty Rates

Rates of transient and chronic poverty measured using the SPM were calculated first for the overall sample with all SPM income and expense components of family resources included. Then transient and chronic rates were recalculated with specific income components subtracted, or expense components added, to family resources. The differences between the original rates and the recalculated rates represent the impact of specific income or expense components in terms of reducing or increasing the rates of transient or chronic poverty. Table 8 shows these results for the overall sample, ordered by type of income or expense. Data were then sorted to identify the income and expense components with the greatest impact on transient and chronic poverty rates for the overall sample, as shown in Tables 9 and 10.

It is important to note that confidence intervals for many of the recalculated poverty rates (with specific SPM elements excluded) were larger than the differences between these rates and the original rate (with all SPM elements included). Caution should be taken in interpreting these nominal differences as accurate estimates or strong evidence of measurable impact on transient and chronic poverty rates. Note is made in the text and tables below where confidence intervals for the recalculated poverty rates included the point estimate for the original rate, and thus should be interpreted with caution.

Examining transient poverty first, the effect of all government benefits combined was to reduce the transient poverty rate by an estimated five percentage points. Thus if households had not received any of the government benefits included in the SPM²⁰, the transient poverty rate for the overall sample would have been 23.9%, but with these programs included in household

²⁰ Government benefits included in the SPM comprise the Child Tax Credit (CTC), the EITC, housing subsidies, the Low Income Home Energy Assistance Program (LIHEAP), school lunch, SNAP (food stamps), Social Security, SSI, TANF, unemployment insurance, WIC, and worker's compensation.

resources, the transient poverty rate was lower at 18.9%, a difference of 5.0%. In other words, all government benefits combined reduced the overall transient poverty rate by more than a fifth. Social Security had the greatest impact on the transient poverty rate for the overall sample, reducing the rate by an estimated 3.7 percentage points. The federal EITC, unemployment insurance, and SNAP (food stamps) all produced nominal rate reductions.

Private resources also had an impact on the transient poverty rate for the overall population. Private pensions and retirement income reduced the rate by an estimated 4.6 percentage points. Help from relatives and child support produced nominal reductions in the rate.

Examining the effect of specific expenses on the transient poverty rate, medical out-of-pocket expenses (MOOP) had the largest impact. If households had not spent any money on MOOP, the overall transient poverty rate would have been only 14.3%, or an estimated 4.6 percentage points lower than the 18.9% rate with MOOP included²¹. Thus MOOP increased the overall transient poverty rate by nearly a third. Taxes were the expense with the next largest impact on the transient poverty rate. The combination of federal payroll taxes plus federal and state income taxes increased the transient poverty rate by an estimated 2.3 percentage points. Of these taxes, the largest contributor to the overall transient poverty rate was payroll taxes, which increased the rate by 1.7%. Work-related expenses (excluding childcare) produced a nominal increase in the rate.

For chronic poverty, the picture was somewhat different. All government benefits combined reduced the overall chronic poverty rate by an estimated 8.7 percentage points (versus the 5.0 percentage point reduction in the transient poverty rate resulting from all government benefits combined). Thus with government benefits included in household resources, the chronic poverty rate was 2.1%, but if households had not received these benefits, the chronic poverty rate would have been 10.8%. In other words, government benefits reduced the chronic poverty rate by more than four-fifths. It is important to note that this reduction in chronic poverty represents a combination of two distinct phenomena: some individuals shifted from chronic poverty into a nonpoor state, while others shifted from chronic poverty into transient poverty.

In terms of specific benefits, Social Security was again the government program with the largest impact on the overall rate, reducing the chronic poverty rate by an estimated 5.0 percentage points. This impact was larger than the 3.7 percentage point reduction in the transient poverty rate associated with Social Security. Other government benefits with statistically nominal impacts on the overall chronic poverty rate were housing subsidies, the federal EITC, and SNAP and SSI. It is noteworthy that housing subsidies and SSI appeared to have a larger impact on the chronic poverty rate (though the rate reduction was not statistically significant) than on the transient poverty rate. In contrast, unemployment insurance had no notable impact on the chronic poverty rate, though it had a nominal impact on the transient poverty rate. In terms of private income sources, employment income had by far the largest impact on the chronic poverty rate, which is not surprising given that most households rely on employment as a primary source of income. Without employment income, 82.2% of the overall sample would have been categorized as chronically poor. Private pensions and retirement income reduced the

²¹ Note that MOOP was imputed for each year for households with missing values, raising the possibility that the imputation could have contributed to the strong influence of MOOP on observed poverty rates. However, this possibility is discounted by the fact that poverty rates excluding MOOP were compared for the sample of complete cases versus complete-plus-imputed cases, and found to be similar. Moreover, prior research on annual poverty rates using the SPM has found that MOOP has a large impact on observed poverty rates (Short, 2011a & 2012).

chronic poverty rate by an estimated 1.6 percentage points, while help from relatives and child support had no substantial impact.

In terms of expenses, medical out-of-pocket expenses had a nominally significant impact. Taxes and work expenses had no substantial impact on the chronic poverty rate.

Table 8. Transient and chronic poverty rates after excluding specific components of the SPM, for the overall sample, *ordered by type of income source or expense*.

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	18.9%	(0.7) [17.3, 20.4]		2.1%	(0.4) [1.4, 2.8]	
Component excluded						
Federal EITC	20.4%	(0.9) [18.7, 22.1]	1.5%	2.7%	(0.4) [2.0, 3.5]	0.6%
Federal + state EITC	20.4%	(0.9) [18.7, 22.2]	1.5%	2.7%	(0.4) [2.0, 3.5]	0.6%
Child Tax Credit (CTC)	19.1%	(0.8) [17.5, 20.6]	0.2%	2.2%	(0.3) [1.6, 2.8]	0.1%
Social Security	22.6%	(1.0) [20.6, 24.6]	3.7%	7.1%	(0.5) [6.2, 8.1]	5.0%
SSI	19.0%	(0.8) [17.4, 20.6]	0.1%	2.6%	(0.4) [1.8, 3.3]	0.5%
Unemployment insurance	20.2%	(0.8) [18.6, 21.8]	1.3%	2.2%	(0.4) [1.5, 3.0]	0.1%
SNAP (food stamps)	19.5%	(0.8) [17.9, 21.1]	0.6%	2.6%	(0.4) [1.9, 3.4]	0.5%
Housing subsidies	19.0%	(0.7) [17.5, 20.4]	0.1%	2.9%	(0.4) [2.0, 3.7]	0.8%
School lunch	19.2%	(0.8) [17.6, 20.8]	0.3%	2.3%	(0.4) [1.5, 3.1]	0.2%
TANF	18.9%	(0.8) [17.4, 20.5]	0.0%	2.2%	(0.4) [1.5, 2.9]	0.1%
WIC	19.0%	(0.8) [17.5, 20.6]	0.1%	2.2%	(0.4) [1.5, 2.9]	0.1%
Low Income Home Energy Assistance Program (LIHEAP)	19.0%	(0.8) [17.4, 20.5]	0.1%	2.1%	(0.4) [1.4, 2.8]	0.0%
Worker's compensation	19.1%	(0.8) [17.5, 20.6]	0.2%	2.1%	(0.4) [1.4, 2.8]	0.0%
ALL GOVT BENEFITS COMBINED	23.9%*	(1.1) [21.8, 26.0]	5.0%	10.8%*	(0.7) [9.4, 12.2]	8.7%
Child support rec'd	19.4%	(0.8) [17.8, 21.1]	0.5%	2.2%	(0.4) [1.5, 3.0]	0.1%
Help from relatives	19.9%	(0.8) [18.2, 21.5]	1.0%	2.2%	(0.4) [1.5, 3.0]	0.1%
Private pensions and retirement	23.5%*	(0.8) [21.9, 25.2]	4.6%	3.7%*	(0.4) [2.9, 4.6]	1.6%
Employment income	10.8%* †	(0.5) [9.7, 11.9]	-8.1%	82.2%*	(0.7%) [80.8, 83.5]	80.1%

* CI excludes point estimate for original rate.

† Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 8 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	18.9%	(0.7) [17.3, 20.4]		2.1%	(0.4) [1.4, 2.8]	
Component excluded						
Work expenses (excluding childcare)	18.4%	(0.7) [16.9, 19.8]	-0.5%	2.1%	(0.4) [1.3, 2.8]	0.0%
Childcare expenses	18.6%	(0.8) [17.1, 20.2]	-0.3%	2.1%	(0.4) [1.4, 2.8]	0.0%
Medical out-of-pocket expenses (MOOP)	14.3%*	(0.8) [12.7, 15.9]	-4.6%	1.6%	(0.3) [0.9, 2.3]	-0.5%
Child support paid	18.6%	(0.8) [17.1, 20.1]	-0.3%	2.1%	(0.4) [1.4, 2.8]	0.0%
Federal income tax (before credits)	18.2%	(0.8) [16.6, 19.7]	-0.7%	2.0%	(0.4) [1.3, 2.8]	-0.1%
FICA (federal payroll tax)	17.2%*	(0.7) [15.7, 18.6]	-1.7%	1.9%	(0.4) [1.2, 2.6]	-0.2%
ALL FEDERAL TAXES	16.7%*	(0.7) [15.3, 18.1]	-2.2%	1.9%	(0.4) [1.2, 2.6]	-0.2%
State income tax (before credits)	18.6%	(0.8) [17.0, 20.1]	-0.3%	2.1%	(0.4) [1.3, 2.8]	0.0%
ALL FEDERAL + STATE TAXES	16.6%*	(0.8) [15.2, 18.1]	-2.3%	1.9%	(0.4) [1.2, 2.6]	-0.2%

* CI excludes point estimate for original rate.

Table 9. Transient and chronic poverty rates after excluding specific components of the SPM, for the overall sample, *ordered by impact on transient poverty rate*.

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	18.9%	(0.7) [17.3, 20.4]		2.1%	(0.4) [1.4, 2.8]	
Component excluded						
ALL GOVT BENEFITS COMBINED	23.9%*	(1.1) [21.8, 26.0]	5.0%	10.8%*	(0.7) [9.4, 12.2]	8.7%
Private pensions and retirement	23.5%*	(0.8) [21.9, 25.2]	4.6%	3.7%*	(0.4) [2.9, 4.6]	1.6%
Social Security	22.6%*	(1.0) [20.6, 24.6]	3.7%	7.1%*	(0.5) [6.2, 8.1]	5.0%
Federal EITC	20.4%	(0.9) [18.7, 22.1]	1.5%	2.7%	(0.4) [2.0, 3.5]	0.6%
Federal + state EITC	20.4%	(0.9) [18.7, 22.2]	1.5%	2.7%	(0.4) [2.0, 3.5]	0.6%
Unemployment insurance	20.2%	(0.8) [18.6, 21.8]	1.3%	2.2%	(0.4) [1.5, 3.0]	0.1%
Help from relatives	19.9%	(0.8) [18.2, 21.5]	1.0%	2.2%	(0.4) [1.5, 3.0]	0.1%
SNAP (food stamps)	19.5%	(0.8) [17.9, 21.1]	0.6%	2.6%	(0.4) [1.9, 3.4]	0.5%
Child support rec'd	19.4%	(0.8) [17.8, 21.1]	0.5%	2.2%	(0.4) [1.5, 3.0]	0.1%
School lunch	19.2%	(0.8) [17.6, 20.8]	0.3%	2.3%	(0.4) [1.5, 3.1]	0.2%
Child Tax Credit (CTC)	19.1%	(0.8) [17.5, 20.6]	0.2%	2.2%	(0.3) [1.6, 2.8]	0.1%
Worker's compensation	19.1%	(0.8) [17.5, 20.6]	0.2%	2.1%	(0.4) [1.4, 2.8]	0.0%
SSI	19.0%	(0.8) [17.4, 20.6]	0.1%	2.6%	(0.4) [1.8, 3.3]	0.5%
Housing subsidies	19.0%	(0.7) [17.5, 20.4]	0.1%	2.9%	(0.4) [2.0, 3.7]	0.8%
WIC	19.0%	(0.8) [17.5, 20.6]	0.1%	2.2%	(0.4) [1.5, 2.9]	0.1%
Low Income Home Energy Assistance Program (LIHEAP)	19.0%	(0.8) [17.4, 20.5]	0.1%	2.1%	(0.4) [1.4, 2.8]	0.0%
TANF	18.9%	(0.8) [17.4, 20.5]	0.0%	2.2%	(0.4) [1.5, 2.9]	0.1%

* CI excludes point estimate for original rate.

Table 9 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	18.9%	(0.7) [17.3, 20.4]		2.1%	(0.4) [1.4, 2.8]	
Component excluded						
Childcare expenses	18.6%	(0.8) [17.1, 20.2]	-0.3%	2.1%	(0.4) [1.4, 2.8]	0.0%
Child support paid	18.6%	(0.8) [17.1, 20.1]	-0.3%	2.1%	(0.4) [1.4, 2.8]	0.0%
State income tax (before credits)	18.6%	(0.8) [17.0, 20.1]	-0.3%	2.1%	(0.4) [1.3, 2.8]	0.0%
Work expenses (excluding childcare)	18.4%	(0.7) [16.9, 19.8]	-0.5%	2.1%	(0.4) [1.3, 2.8]	0.0%
Federal income tax (before credits)	18.2%	(0.8) [16.6, 19.7]	-0.7%	2.0%	(0.4) [1.3, 2.8]	-0.1%
FICA (federal payroll tax)	17.2%*	(0.7) [15.7, 18.6]	-1.7%	1.9%	(0.4) [1.2, 2.6]	-0.2%
ALL FEDERAL TAXES	16.7%*	(0.7) [15.3, 18.1]	-2.2%	1.9%	(0.4) [1.2, 2.6]	-0.2%
ALL FEDERAL + STATE TAXES	16.6%*	(0.8) [15.2, 18.1]	-2.3%	1.9%	(0.4) [1.2, 2.6]	-0.2%
Medical out-of-pocket expenses (MOOP)	14.3%*	(0.8) [12.7, 15.9]	-4.6%	1.6%	(0.3) [0.9, 2.3]	-0.5%
Employment income	10.8%*†	(0.5) [9.7, 11.9]	-8.1%	82.2%	(0.7%) [80.8, 83.5]	80.1%

* CI excludes point estimate for original rate.

†Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 10. Transient and chronic poverty rates after excluding specific components of the SPM, for the overall sample, *ordered by impact on chronic poverty rate.*

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	18.9%	(0.7) [17.3, 20.4]		2.1%	(0.4) [1.4, 2.8]	
Component excluded						
Employment income	10.8%*†	(0.5) [9.7, 11.9]	-8.1%	82.2%*	(0.7%) [80.8, 83.5]	80.1%
ALL GOVT BENEFITS COMBINED	23.9%*	(1.1) [21.8, 26.0]	5.0%	10.8%*	(0.7) [9.4, 12.2]	8.7%
Social Security	22.6%*	(1.0) [20.6, 24.6]	3.7%	7.1%*	(0.5) [6.2, 8.1]	5.0%
Private pensions and retirement	23.5%*	(0.8) [21.9, 25.2]	4.6%	3.7%*	(0.4) [2.9, 4.6]	1.6%
Housing subsidies	19.0%	(0.7) [17.5, 20.4]	0.1%	2.9%	(0.4) [2.0, 3.7]	0.8%
Federal EITC	20.4%	(0.9) [18.7, 22.1]	1.5%	2.7%	(0.4) [2.0, 3.5]	0.6%
Federal + state EITC	20.4%	(0.9) [18.7, 22.2]	1.5%	2.7%	(0.4) [2.0, 3.5]	0.6%
SNAP (food stamps)	19.5%	(0.8) [17.9, 21.1]	0.6%	2.6%	(0.4) [1.9, 3.4]	0.5%
SSI	19.0%	(0.8) [17.4, 20.6]	0.1%	2.6%	(0.4) [1.8, 3.3]	0.5%
School lunch	19.2%	(0.8) [17.6, 20.8]	0.3%	2.3%	(0.4) [1.5, 3.1]	0.2%
Unemployment insurance	20.2%	(0.8) [18.6, 21.8]	1.3%	2.2%	(0.4) [1.5, 3.0]	0.1%
Help from relatives	19.9%	(0.8) [18.2, 21.5]	1.0%	2.2%	(0.4) [1.5, 3.0]	0.1%
Child support rec'd	19.4%	(0.8) [17.8, 21.1]	0.5%	2.2%	(0.4) [1.5, 3.0]	0.1%
Child Tax Credit (CTC)	19.1%	(0.8) [17.5, 20.6]	0.2%	2.2%	(0.3) [1.6, 2.8]	0.1%
WIC	19.0%	(0.8) [17.5, 20.6]	0.1%	2.2%	(0.4) [1.5, 2.9]	0.1%
TANF	18.9%	(0.8) [17.4, 20.5]	0.0%	2.2%	(0.4) [1.5, 2.9]	0.1%
Worker's compensation	19.1%	(0.8) [17.5, 20.6]	0.2%	2.1%	(0.4) [1.4, 2.8]	0.0%
Low Income Home Energy Assistance Program (LIHEAP)	19.0%	(0.8) [17.4, 20.5]	0.1%	2.1%	(0.4) [1.4, 2.8]	0.0%

* CI excludes point estimate for original rate.

†Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 10 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	18.9%	(0.7) [17.3, 20.4]		2.1%	(0.4) [1.4, 2.8]	
Component excluded						
Childcare expenses	18.6%	(0.8) [17.1, 20.2]	-0.3%	2.1%	(0.4) [1.4, 2.8]	0.0%
Child support paid	18.6%	(0.8) [17.1, 20.1]	-0.3%	2.1%	(0.4) [1.4, 2.8]	0.0%
State income tax (before credits)	18.6%	(0.8) [17.0, 20.1]	-0.3%	2.1%	(0.4) [1.3, 2.8]	0.0%
Work expenses (excluding childcare)	18.4%	(0.7) [16.9, 19.8]	-0.5%	2.1%	(0.4) [1.3, 2.8]	0.0%
Federal income tax (before credits)	18.2%	(0.8) [16.6, 19.7]	-0.7%	2.0%	(0.4) [1.3, 2.8]	-0.1%
FICA	17.2%*	(0.7) [15.7, 18.6]	-1.7%	1.9%	(0.4) [1.2, 2.6]	-0.2%
ALL FEDERAL TAXES	16.7%*	(0.7) [15.3, 18.1]	-2.2%	1.9%	(0.4) [1.2, 2.6]	-0.2%
ALL FEDERAL + STATE TAXES	16.6%*	(0.8) [15.2, 18.1]	-2.3%	1.9%	(0.4) [1.2, 2.6]	-0.2%
Medical out-of-pocket expenses (MOOP)	14.3%*	(0.8) [12.7, 15.9]	-4.6%	1.6%	(0.3) [0.9, 2.3]	-0.5%

* CI excludes point estimate for original rate.

Child Transient and Chronic Poverty Rates

Next, transient and chronic poverty rates with and without specific SPM components were calculated for three particularly vulnerable demographic subpopulations, beginning with children. Table 11 presents the results for poverty rates for children²² ordered by type of income or expense, while Tables 12 and 13 present these results ordered by impact on the child transient and chronic poverty rates, respectively.

The child transient poverty rate with all components of the SPM included was 20.6%, nominally higher than the 18.9% rate for the overall sample. All government benefits combined reduced the child transient poverty rate by an estimated 3.3 percentage points; thus without government benefits, the rate would have been 23.9%, or one seventh larger. Government benefits combined had a smaller impact on the child transient poverty rate (3.3% reduction) than on the transient poverty rate for the overall population (5.0% reduction). In terms of specific government programs, several had statistically nominal impacts on the child transient poverty rate, including the EITC, unemployment insurance, SNAP or food stamps, and school lunch. Social Security, the Child Tax Credit, SSI, and WIC also had smaller nominal impacts in reducing the child transient poverty rate.

In terms of private resources, child support and help from relatives produced nominal reductions in the child transient poverty rate. Private pensions and retirement income were also associated with a nominal decrease in the rate. It may be noteworthy that both public and private income sources associated with seniors (Social Security and private retirement income) had some impact on the child transient poverty rate (though the reduction was not statistically significant), presumably impacting children living in multi-generational households that included seniors, or those receiving survivors' benefits after the death of an eligible parent.

Examining expenses, medical out-of-pocket expenses had the largest apparent impact on the child transient poverty rate, as on the transient poverty rate for the sample overall (but the rate increase was not statistically significant). Federal payroll taxes plus federal and state income taxes nominally raised the child transient poverty rate. Childcare expenses and other work-related expenses also produced nominal increases in the rate.

Turning to chronic poverty among children, the chronic child poverty rate with all components of the SPM included was 2.5%, nominally higher than the 2.1% rate for the sample overall. Government benefits had a larger impact on the chronic child poverty rate than the transient child poverty rate, reducing the chronic rate by an estimated 8.9 percentage points. This was similar to the impact of government benefits on the chronic poverty rate for the overall sample. Thus without government benefits, 11.4% of children would have been chronically poor, a jump of nearly four-fifths. Housing subsidies were the government program with the largest apparent impact on the child chronic poverty rate (though this reduction was not statistically significant). Note, however, that an apparent effect of housing subsidies was to shift individuals from chronic to transient poverty, as seen by the fact that the chronic poverty rate declined but the transient poverty rate actually *increased* when housing subsidies were included in family resources. Other government benefits with nominal impacts on the child chronic poverty rate included the federal EITC, SNAP (food stamps), Social Security, and school lunch.

Other than employment, none of the private resources examined (help from relatives, child support, and private retirement income) had a substantial impact on the child chronic

²² The child subpopulation was defined by selecting individuals who were ages zero to seven in the baseline year of the study, so that it comprised individuals who were under age 18 for the entire study period.

poverty rate. Neither taxes, MOOP, nor other specific expenses had any substantial impact on the chronic rate for children either.

Table 11. Transient and chronic poverty rates after excluding specific components of the SPM, for children, *ordered by type of income source or expense*.

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	20.6%	(1.8) [17.1, 24.1]		2.5%	(0.8) [0.8, 4.2]	
Component excluded						
Federal EITC	23.3%	(1.9) [19.5, 27.2]	2.7%	4.3%	(0.9) [2.4, 6.1]	1.8%
Federal + state EITC	23.4%	(1.9) [19.6, 27.3]	2.8%	4.3%	(0.9) [2.5, 6.2]	1.8%
Child Tax Credit (CTC)	21.2%	(1.8) [17.6, 24.7]	0.6%	2.9%	(0.8) [1.3, 4.4]	0.4%
Social Security	21.4%	(1.8) [17.9, 24.9]	0.8%	3.6%	(0.9) [1.8, 5.4]	1.1%
SSI	21.1%	(1.9) [17.4, 24.8]	0.5%	2.8%	(0.8) [1.1, 4.5]	0.3%
Unemployment insurance	22.5%	(1.8) [18.9, 26.1]	1.9%	2.9%	(1.0) [1.0, 4.9]	0.4%
SNAP (food stamps)	22.0%	(1.8) [18.4, 25.6]	1.4%	3.7%	(0.9) [1.9, 5.5]	1.2%
Housing subsidies	19.7%†	(1.5) [16.7, 22.7]	-0.9%	4.6%	(1.2) [2.2, 7.1]	2.1%
School lunch	21.7%	(1.7) [18.2, 25.2]	1.1%	3.1%	(1.0) [1.2, 5.0]	0.6%
TANF	20.9%	(1.8) [17.3, 24.4]	0.3%	2.8%	(0.8) [1.2, 4.5]	0.3%
WIC	21.1%	(1.8) [17.6, 24.6]	0.5%	2.9%	(0.9) [1.1, 4.6]	0.4%
Low Income Home Energy Assistance Program (LIHEAP)	20.8%	(1.8) [17.3, 24.4]	0.2%	2.6%	(0.8) [0.9, 4.2]	0.1%
Worker's compensation	20.8%	(1.8) [17.2, 24.3]	0.2%	2.6%	(0.8) [0.9, 4.2]	0.1%
ALL GOVT BENEFITS COMBINED	23.9%*	(1.8) [20.2, 27.6]	3.3%	11.4%*	(1.9) [7.6, 15.1]	8.9%
Child support rec'd	22.8%	(1.9) [18.9, 26.7]	2.2%	3.0%	(0.8) [1.3, 4.8]	0.5%
Help from relatives	22.7%	(1.9) [18.9, 26.4]	2.1%	2.6%	(0.8) [0.9, 4.3]	0.1%
Private pensions and retirement	21.6%	(1.7) [18.3, 24.9]	1.0%	2.6%	(0.8) [0.9, 4.3]	0.1%
Employment income	3.0%*†	(0.6) [1.7, 4.3]	-17.6%	96.4%*	(0.7) [95.0, 97.8]	93.9%

* CI excludes point estimate for original rate.

†Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 11 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	20.6%	(1.8) [17.1, 24.1]		2.5%	(0.8) [0.8, 4.2]	
Component excluded						
Work expenses (excluding childcare)	19.9%	(1.7) [16.5, 23.2]	-0.7%	2.5%	(0.8) [0.9, 4.2]	0.0%
Childcare expenses	20.0%	(1.7) [16.5, 23.4]	-0.6%	2.5%	(0.8) [0.9, 4.2]	0.0%
Medical out-of-pocket expenses (MOOP)	17.6%	(1.8) [14.0, 21.2]	-3.0%	2.4%	(0.8) [0.8, 4.1]	-0.1%
Child support paid	20.2%	(1.8) [16.7, 23.7]	-0.4%	2.5%	(0.8) [0.9, 4.2]	0.0%
Federal income tax (before credits)	19.6%	(1.8) [16.1, 23.1]	-1.0%	2.5%	(0.8) [0.9, 4.2]	0.0%
FICA (federal payroll tax)	18.6%	(1.7) [15.2, 22.1]	-2.0%	2.3%	(0.8) [0.7, 4.0]	-0.2%
ALL FEDERAL TAXES	18.4%	(1.7) [15.0, 21.8]	-2.2%	2.3%	(0.8) [6.8, 4.0]	-0.2%
State income tax (before credits)	20.4%	(1.8) [16.8, 23.9]	-0.2%	2.5%	(0.8) [0.9, 4.2]	0.0%
ALL FEDERAL + STATE TAXES	18.3%	(1.7) [14.9, 21.7]	-2.3%	2.3%	(0.8) [0.7, 4.0]	-0.2%

* CI excludes point estimate for original rate.

Table 12. Transient and chronic poverty rates after excluding specific components of the SPM, for children, *ordered by impact on transient poverty rate*.

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	20.6%	(1.8) [17.1, 24.1]		2.5%	(0.8) [0.8, 4.2]	
Component excluded						
ALL GOVT BENEFITS COMBINED	23.9%*	(1.8) [20.2, 27.6]	3.3%	11.4%*	(1.9) [7.6, 15.1]	8.9%
Federal + state EITC	23.4%	(1.9) [19.6, 27.3]	2.8%	4.3%	(0.9) [2.5, 6.2]	1.8%
Federal EITC	23.3%	(1.9) [19.5, 27.2]	2.7%	4.3%	(0.9) [2.4, 6.1]	1.8%
Child support rec'd	22.8%	(1.9) [18.9, 26.7]	2.2%	3.0%	(0.8) [1.3, 4.8]	0.5%
Help from relatives	22.7%	(1.9) [18.9, 26.4]	2.1%	2.6%	(0.8) [0.9, 4.3]	0.1%
Unemployment insurance	22.5%	(1.8) [18.9, 26.1]	1.9%	2.9%	(1.0) [1.0, 4.9]	0.4%
SNAP (food stamps)	22.0%	(1.8) [18.4, 25.6]	1.4%	3.7%	(0.9) [1.9, 5.5]	1.2%
School lunch	21.7%	(1.7) [18.2, 25.2]	1.1%	3.1%	(1.0) [1.2, 5.0]	0.6%
Private pensions and retirement	21.6%	(1.7) [18.3, 24.9]	1.0%	2.6%	(0.8) [0.9, 4.3]	0.1%
Social Security	21.4%	(1.8) [17.9, 24.9]	0.8%	3.6%	(0.9) [1.8, 5.4]	1.1%
Child Tax Credit (CTC)	21.2%	(1.8) [17.6, 24.7]	0.6%	2.9%	(0.8) [1.3, 4.4]	0.4%
SSI	21.1%	(1.9) [17.4, 24.8]	0.5%	2.8%	(0.8) [1.1, 4.5]	0.3%
WIC	21.1%	(1.8) [17.6, 24.6]	0.5%	2.9%	(0.9) [1.1, 4.6]	0.4%
TANF	20.9%	(1.8) [17.3, 24.4]	0.3%	2.8%	(0.8) [1.2, 4.5]	0.3%
Low Income Home Energy Assistance Program (LIHEAP)	20.8%	(1.8) [17.3, 24.4]	0.2%	2.6%	(0.8) [0.9, 4.2]	0.1%
Worker's compensation	20.8%	(1.8) [17.2, 24.3]	0.2%	2.6%	(0.8) [0.9, 4.2]	0.1%

* CI excludes point estimate for original rate.

Table 12 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	20.6%	(1.8) [17.1, 24.1]		2.5%	(0.8) [0.8, 4.2]	
Component excluded						
State income tax (before credits)	20.4%	(1.8) [16.8, 23.9]	-0.2%	2.5%	(0.8) [0.9, 4.2]	0.0%
Child support paid	20.2%	(1.8) [16.7, 23.7]	-0.4%	2.5%	(0.8) [0.9, 4.2]	0.0%
Childcare expenses	20.0%	(1.7) [16.5, 23.4]	-0.6%	2.5%	(0.8) [0.9, 4.2]	0.0%
Work expenses (excluding childcare)	19.9%	(1.7) [16.5, 23.2]	-0.7%	2.5%	(0.8) [0.9, 4.2]	0.0%
Housing subsidies	19.7%†	(1.5) [16.7, 22.7]	-0.9%	4.6%	(1.2) [2.2, 7.1]	2.1%
Federal income tax (before credits)	19.6%	(1.8) [16.1, 23.1]	-1.0%	2.5%	(0.8) [0.9, 4.2]	0.0%
FICA (federal payroll tax)	18.6%	(1.7) [15.2, 22.1]	-2.0%	2.3%	(0.8) [0.7, 4.0]	-0.2%
ALL FEDERAL TAXES	18.4%	(1.7) [15.0, 21.8]	-2.2%	2.3%	(0.8) [6.8, 4.0]	-0.2%
ALL FEDERAL + STATE TAXES	18.3%	(1.7) [14.9, 21.7]	-2.3%	2.3%	(0.8) [0.7, 4.0]	-0.2%
Medical out-of-pocket expenses (MOOP)	17.6%	(1.8) [14.0, 21.2]	-3.0%	2.4%	(0.8) [0.8, 4.1]	-0.1%
Employment income	3.0%*†	(0.6) [1.7, 4.3]	-17.6%	96.4%*	(0.7) [95.0, 97.8]	93.9%

* CI excludes point estimate for original rate.

†Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 13. Transient and chronic poverty rates after excluding specific components of the SPM, for children, *ordered by impact on chronic poverty rate.*

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	20.6%	(1.8) [17.1, 24.1]		2.5%	(0.8) [0.8, 4.2]	
Component excluded						
Employment income	3.0%*†	(0.6) [1.7, 4.3]	-17.6%	96.4%*	(0.7) [95.0, 97.8]	93.9%
ALL GOVT BENEFITS COMBINED	23.9%*	(1.8) [20.2, 27.6]	3.3%	11.4%*	(1.9) [7.6, 15.1]	8.9%
Housing subsidies	19.7%†	(1.5) [16.7, 22.7]	-0.9%	4.6%	(1.2) [2.2, 7.1]	2.1%
Federal EITC	23.3%	(1.9) [19.5, 27.2]	2.7%	4.3%	(0.9) [2.4, 6.1]	1.8%
Federal + state EITC	23.4%	(1.9) [19.6, 27.3]	2.8%	4.3%	(0.9) [2.5, 6.2]	1.8%
SNAP (food stamps)	22.0%	(1.8) [18.4, 25.6]	1.4%	3.7%	(0.9) [1.9, 5.5]	1.2%
Social Security	21.4%	(1.8) [17.9, 24.9]	0.8%	3.6%	(0.9) [1.8, 5.4]	1.1%
School lunch	21.7%	(1.7) [18.2, 25.2]	1.1%	3.1%	(1.0) [1.2, 5.0]	0.6%
Child support rec'd	22.8%	(1.9) [18.9, 26.7]	2.2%	3.0%	(0.8) [1.3, 4.8]	0.5%
Child Tax Credit (CTC)	21.2%	(1.8) [17.6, 24.7]	0.6%	2.9%	(0.8) [1.3, 4.4]	0.4%
Unemployment insurance	22.5%	(1.8) [18.9, 26.1]	1.9%	2.9%	(1.0) [1.0, 4.9]	0.4%
WIC	21.1%	(1.8) [17.6, 24.6]	0.5%	2.9%	(0.9) [1.1, 4.6]	0.4%
SSI	21.1%	(1.9) [17.4, 24.8]	0.5%	2.8%	(0.8) [1.1, 4.5]	0.3%
TANF	20.9%	(1.8) [17.3, 24.4]	0.3%	2.8%	(0.8) [1.2, 4.5]	0.3%
Low Income Home Energy Assistance Program (LIHEAP)	20.8%	(1.8) [17.3, 24.4]	0.2%	2.6%	(0.8) [0.9, 4.2]	0.1%
Worker's compensation	20.8%	(1.8) [17.2, 24.3]	0.2%	2.6%	(0.8) [0.9, 4.2]	0.1%
Help from relatives	22.7%	(1.9) [18.9, 26.4]	2.1%	2.6%	(0.8) [0.9, 4.3]	0.1%
Private pensions and retirement	21.6%	(1.7) [18.3, 24.9]	1.0%	2.6%	(0.8) [0.9, 4.3]	0.1%

* CI excludes point estimate for original rate.

†Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 13 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	20.6%	(1.8) [17.1, 24.1]		2.5%	(0.8) [0.8, 4.2]	
Component excluded						
Work expenses (excluding childcare)	19.9%	(1.7) [16.5, 23.2]	-0.7%	2.5%	(0.8) [0.9, 4.2]	0.0%
Childcare expenses	20.0%	(1.7) [16.5, 23.4]	-0.6%	2.5%	(0.8) [0.9, 4.2]	0.0%
Child support paid	20.2%	(1.8) [16.7, 23.7]	-0.4%	2.5%	(0.8) [0.9, 4.2]	0.0%
Federal income tax (before credits)	19.6%	(1.8) [16.1, 23.1]	-1.0%	2.5%	(0.8) [0.9, 4.2]	0.0%
State income tax (before credits)	20.4%	(1.8) [16.8, 23.9]	-0.2%	2.5%	(0.8) [0.9, 4.2]	0.0%
Medical out-of-pocket expenses (MOOP)	17.6%	(1.8) [14.0, 21.2]	-3.0%	2.4%	(0.8) [0.8, 4.1]	-0.1%
FICA (federal payroll tax)	18.6%	(1.7) [15.2, 22.1]	-2.0%	2.3%	(0.8) [0.7, 4.0]	-0.2%
ALL FEDERAL TAXES	18.4%	(1.7) [15.0, 21.8]	-2.2%	2.3%	(0.8) [6.8, 4.0]	-0.2%
ALL FEDERAL + STATE TAXES	18.3%	(1.7) [14.9, 21.7]	-2.3%	2.3%	(0.8) [0.7, 4.0]	-0.2%

* CI excludes point estimate for original rate.

Senior Transient and Chronic Poverty Rates

Seniors²³ were the next vulnerable subpopulation to be examined. Tables 14, 15, and 16 present the transient and chronic poverty rates for seniors with specific SPM elements excluded.

The transient poverty rate for seniors with all components of the SPM included was 24.2%, slightly higher than the 18.9% transient poverty rate for the overall sample. All government benefits combined reduced the rate by an estimated 8.0 percentage points; without government benefits, 32.2% of seniors would have been categorized as transient poor, a one-quarter jump in the poor senior population. Government benefits reduced transient poverty among seniors substantially more than for the sample overall, where benefits resulted in an overall 5 percentage point rate reduction. Virtually all of the reduction in senior transient poverty was due to Social Security.

Despite the large impact of Social Security, private resources actually had a larger impact on the senior transient poverty rate. Private pensions and retirement income reduced the transient poverty rate for seniors by an estimated 12.1 percentage points. In addition, employment income reduced the rate by 9.2 percentage points, which is noteworthy because seniors are typically not expected to work for wages. Note that employment income could represent income earned by seniors through work, and/or income earned by younger working family members with whom seniors shared a household.

In terms of expenses, federal income tax had a nominal impact on the senior transient poverty rate. However, the expense with by far the largest impact was medical out-of-pocket expenses (MOOP), which raised the senior transient poverty rate by 9.7 percentage points. Thus if seniors had not paid any MOOP, their transient poverty rate would have been only 14.5%, a two-fifths drop.

Examining chronic poverty among seniors, the senior chronic poverty rate with all SPM components included was 5.1%, somewhat higher than the rate for the overall sample. Government benefits had a very substantial impact, reducing the senior chronic poverty rate by an estimated 33.2 percentage points, again primarily due to Social Security. Thus without Social Security, a full 37.8% of seniors would have been categorized as chronically poor. A few other government benefits had nominal impacts on senior chronic poverty as well, including housing subsidies and SSI. An apparent effect of both of these programs was to shift individuals from chronic poverty to transient poverty, as seen by the fact that the chronic poverty rate decreased while the transient poverty rate actually increased when housing subsidies and SSI were included in family resources.

As with senior transient poverty, private resources had a substantial impact on senior chronic poverty, though much less than the impact of Social Security. Thus private pensions and retirement income reduced the senior chronic poverty rate by an estimated 9.9 percentage points, and employment income was linked to a 6.5% rate reduction.

In terms of expenses, only medical out-of-pocket expenses had a substantial impact on the senior chronic poverty rate, raising the rate by an estimated 3.1 percentage points. This increase was smaller, however, than the MOOP-associated increase in the transient poverty rate for seniors.

²³ The senior population was defined by selecting individuals who were age 65 or older in the baseline year of the study, and thus were seniors for the entire study period.

Table 14. Transient and chronic poverty rates after excluding specific components of the SPM, for seniors, *ordered by type of income source or expense*.

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	24.2%	(2.4) [19.2, 29.1]		5.1%	(1.2) [2.8, 7.5]	
Component excluded						
Federal EITC	24.3%	(2.5) [19.3, 29.3]	0.1%	5.2%	(1.2) [2.8, 7.5]	0.1%
Federal + state EITC	24.3%	(2.5) [19.3, 29.3]	0.1%	5.2%	(1.2) [2.8, 7.5]	0.1%
Child Tax Credit (CTC)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Social Security	32.2%*	(2.7) [26.7, 37.7]	8.0%	37.8%*	(2.7) [32.3, 43.3]	32.7%
SSI	23.9%†	(2.4) [19.1, 28.8]	-0.3%	5.6%	(1.2) [2.1, 8.1]	0.5%
Unemployment insurance	24.2%	(2.5) [19.2, 29.2]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
SNAP (food stamps)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.2%	(1.1) [2.8, 7.5]	0.1%
Housing subsidies	23.6%†	(2.4) [18.8, 28.5]	-0.6%	5.8%	(1.2) [3.3, 8.3]	0.7%
School lunch	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
TANF	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
WIC	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Low Income Home Energy Assistance Program (LIHEAP)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Worker's compensation	24.2%	(2.5) [19.3, 29.2]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
ALL GOVT BENEFITS COMBINED	32.2%*	(2.8) [26.6, 37.8]	8.0%	38.3%*	(2.7) [32.8, 43.8]	33.2%
Child support rec'd	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Help from relatives	24.4%	(2.4) [19.6, 29.2]	0.2%	5.2%	(1.2) [2.8, 7.7]	0.1%
Private pensions and retirement	36.3%*	(3.2) [29.9, 42.7]	12.1%	15.0%*	(1.8) [11.3, 18.7]	9.9%
Employment income	33.4%*	(2.6) [28.2, 38.6]	9.2%	11.6%*	(1.7) [8.2, 15.0]	6.5%

* CI excludes point estimate for original rate.

†Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 14 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	24.2%	(2.4) [19.2, 29.1]		5.1%	(1.2) [2.8, 7.5]	
Component excluded						
Work expenses (excluding childcare)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Childcare expenses	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Medical out-of-pocket expenses (MOOP)	14.5%*	(1.7) [11.1, 17.9]	-9.7%	2.0%*	(0.6) [0.7, 3.2]	-3.1%
Child support paid	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Federal income tax (before credits)	23.7%	(2.5) [18.6, 28.8]	-0.5%	5.1%	(1.2) [2.8, 7.5]	0.0%
FICA (federal payroll tax)	24.0%	(2.4) [19.2, 28.9]	-0.2%	5.1%	(1.2) [2.8, 7.5]	0.0%
ALL FEDERAL TAXES	23.6%	(2.5) [18.6, 28.6]	-0.6%	5.1%	(1.2) [2.8, 7.5]	0.0%
State income tax (before credits)	24.0%	(2.5) [18.9, 29.0]	-0.2%	5.1%	(1.2) [2.8, 7.5]	0.0%
ALL FEDERAL + STATE TAXES	23.6%	(2.5) [18.6, 28.6]	-0.6%	5.1%	(1.2) [2.8, 7.5]	0.0%

* CI excludes point estimate for original rate.

Table 15. Transient and chronic poverty rates after excluding specific components of the SPM, for seniors, *ordered by impact on transient poverty rate*.

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	24.2%	(2.4) [19.2, 29.1]		5.1%	(1.2) [2.8, 7.5]	
Component excluded						
Private pensions and retirement	36.3%*	(3.2) [29.9, 42.7]	12.1%	15.0%*	(1.8) [11.3, 18.7]	9.9%
Employment income	33.4%*	(2.6) [28.2, 38.6]	9.2%	11.6%*	(1.7) [8.2, 15.0]	6.5%
Social Security	32.2%*	(2.7) [26.7, 37.7]	8.0%	37.8%*	(2.7) [32.3, 43.3]	32.7%
ALL GOVT BENEFITS COMBINED	32.2%*	(2.8) [26.6, 37.8]	8.0%	38.3%*	(2.7) [32.8, 43.8]	33.2%
Help from relatives	24.4%	(2.4) [19.6, 29.2]	0.2%	5.2%	(1.2) [2.8, 7.7]	0.1%
Federal EITC	24.3%	(2.5) [19.3, 29.3]	0.1%	5.2%	(1.2) [2.8, 7.5]	0.1%
Federal + state EITC	24.3%	(2.5) [19.3, 29.3]	0.1%	5.2%	(1.2) [2.8, 7.5]	0.1%
Child Tax Credit (CTC)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Unemployment insurance	24.2%	(2.5) [19.2, 29.2]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
SNAP (food stamps)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.2%	(1.1) [2.8, 7.5]	0.1%
School lunch	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
TANF	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
WIC	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Low Income Home Energy Assistance Program (LIHEAP)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Worker's compensation	24.2%	(2.5) [19.3, 29.2]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Child support rec'd	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%

* CI excludes point estimate for original rate.

Table 15 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	24.2%	(2.4) [19.2, 29.1]		5.1%	(1.2) [2.8, 7.5]	
Component excluded						
Work expenses (excluding childcare)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Childcare expenses	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Child support paid	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
FICA (federal payroll tax)	24.0%	(2.4) [19.2, 28.9]	-0.2%	5.1%	(1.2) [2.8, 7.5]	0.0%
State income tax (before credits)	24.0%	(2.5) [18.9, 29.0]	-0.2%	5.1%	(1.2) [2.8, 7.5]	0.0%
SSI	23.9%†	(2.4) [19.1, 28.8]	-0.3%	5.6%	(1.2) [2.1, 8.1]	0.5%
Federal income tax (before credits)	23.7%	(2.5) [18.6, 28.8]	-0.5%	5.1%	(1.2) [2.8, 7.5]	0.0%
ALL FEDERAL TAXES	23.6%	(2.5) [18.6, 28.6]	-0.6%	5.1%	(1.2) [2.8, 7.5]	0.0%
ALL FEDERAL + STATE TAXES	23.6%	(2.5) [18.6, 28.6]	-0.6%	5.1%	(1.2) [2.8, 7.5]	0.0%
Housing subsidies	23.6%†	(2.4) [18.8, 28.5]	-0.6%	5.8%	(1.2) [3.3, 8.3]	0.7%
Medical out-of-pocket expenses (MOOP)	14.5%*	(1.7) [11.1, 17.9]	-9.7%	2.0%*	(0.6) [0.7, 3.2]	-3.1%

* CI excludes point estimate for original rate.

†Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 16. Transient and chronic poverty rates after excluding specific components of the SPM, for seniors, *ordered by impact on chronic poverty rate.*

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	24.2%	(2.4) [19.2, 29.1]		5.1%	(1.2) [2.8, 7.5]	
Component excluded						
ALL GOVT BENEFITS COMBINED	32.2%*	(2.8) [26.6, 37.8]	8.0%	38.3%*	(2.7) [32.8, 43.8]	33.2%
Social Security	32.2%*	(2.7) [26.7, 37.7]	8.0%	37.8%*	(2.7) [32.3, 43.3]	32.7%
Private pensions and retirement	36.3%*	(3.2) [29.9, 42.7]	12.1%	15.0%*	(1.8) [11.3, 18.7]	9.9%
Employment income	33.4%*	(2.6) [28.2, 38.6]	9.2%	11.6%*	(1.7) [8.2, 15.0]	6.5%
Housing subsidies	23.6%†	(2.4) [18.8, 28.5]	-0.6%	5.8%	(1.2) [3.3, 8.3]	0.7%
SSI	23.9%†	(2.4) [19.1, 28.8]	-0.3%	5.6%	(1.2) [2.1, 8.1]	0.5%
Federal EITC	24.3%	(2.5) [19.3, 29.3]	0.1%	5.2%	(1.2) [2.8, 7.5]	0.1%
Federal + state EITC	24.3%	(2.5) [19.3, 29.3]	0.1%	5.2%	(1.2) [2.8, 7.5]	0.1%
SNAP (food stamps)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.2%	(1.1) [2.8, 7.5]	0.1%
Help from relatives	24.4%	(2.4) [19.6, 29.2]	0.2%	5.2%	(1.2) [2.8, 7.7]	0.1%
Child Tax Credit (CTC)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Unemployment insurance	24.2%	(2.5) [19.2, 29.2]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
School lunch	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
TANF	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
WIC	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Low Income Home Energy Assistance Program (LIHEAP)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Worker's compensation	24.2%	(2.5) [19.3, 29.2]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Child support rec'd	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%

* CI excludes point estimate for original rate.

†Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 16 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	24.2%	(2.4) [19.2, 29.1]		5.1%	(1.2) [2.8, 7.5]	
Component excluded						
Work expenses (excluding childcare)	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Childcare expenses	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Child support paid	24.2%	(2.4) [19.2, 29.1]	0.0%	5.1%	(1.2) [2.8, 7.5]	0.0%
Federal income tax (before credits)	23.7%	(2.5) [18.6, 28.8]	-0.5%	5.1%	(1.2) [2.8, 7.5]	0.0%
FICA (federal payroll tax)	24.0%	(2.4) [19.2, 28.9]	-0.2%	5.1%	(1.2) [2.8, 7.5]	0.0%
ALL FEDERAL TAXES	23.6%	(2.5) [18.6, 28.6]	-0.6%	5.1%	(1.2) [2.8, 7.5]	0.0%
State income tax (before credits)	24.0%	(2.5) [18.9, 29.0]	-0.2%	5.1%	(1.2) [2.8, 7.5]	0.0%
ALL FEDERAL + STATE TAXES	23.6%	(2.5) [18.6, 28.6]	-0.6%	5.1%	(1.2) [2.8, 7.5]	0.0%
Medical out-of-pocket expenses (MOOP)	14.5%*	(1.7) [11.1, 17.9]	-9.7%	2.0%*	(0.6) [0.7, 3.2]	-3.1%

* CI excludes point estimate for original rate.

Immigrant Transient and Chronic Poverty Rates

The final demographic subpopulation for which poverty rates were examined was immigrants²⁴. Tables 17, 18, and 19 present the transient and chronic poverty rates for immigrants after excluding specific components of the SPM.

In general, the pattern of policy impact on transient and chronic poverty for immigrants was distinct from the patterns seen for the sample overall and other subpopulations examined. Most importantly, among immigrants the dominant impact of government benefits was not to shift individuals out of poverty, but rather to shift individuals from chronic poverty into transient poverty. Specific government programs with the largest apparent impact were also different for immigrants, and expenses with the largest apparent impact were also somewhat different.

With all elements of the SPM included, the immigrant transient poverty rate was 33.2%, substantially higher than the 18.9% rate for the sample overall. The EITC and Social Security did not substantially impact the immigrant transient poverty rate, in contrast to their larger impact on the overall transient poverty rate, perhaps because immigrants are less likely to be eligible for these benefits. Government benefits with statistically nominal impacts on the immigrant transient poverty rate included unemployment insurance, the Child Tax Credit, and worker's compensation. The overall (statistically significant) impact of government benefits, however, was to shift individuals out of chronic poverty and into transient poverty; thus the transient poverty rate was actually 0.9% *higher* among immigrants when all government benefits were included in family resources. In terms of private resources, help from relatives had a nominal impact in reducing the immigrant transient poverty rate.

Examining expenses, both medical out-of-pocket expenses and taxes had nominal impacts on the immigrant transient poverty rate, with federal payroll taxes being the tax with the largest nominal impact. Note that taxes had a larger apparent impact than MOOP for immigrants, in contrast to the opposite pattern seen for the sample overall and for seniors and children. Immigrants may have relatively lower medical-out-of-pocket expenditures due to younger average ages.

Turning to chronic immigrant poverty, the chronic poverty rate for immigrants with all components of the SPM included was 10.2%, substantially higher than the 2.1% rate for the population overall. Government benefits had a significant impact on chronic poverty among immigrants, reducing the chronic poverty rate by an estimated 12.3 percentage points. As noted above, however, this decline in chronic poverty largely reflects a shift from chronic poverty to transient poverty. Government benefits that nominally reduced the immigrant chronic poverty rate included the federal EITC, school lunch, housing subsidies, Social Security, SNAP, unemployment insurance, WIC, the Child Tax Credit, and SSI. For many of these programs – specifically housing subsidies, SSI, Social Security, WIC, and school lunch – an apparent effect was shifting immigrant individuals from chronic poverty to transient poverty, as the chronic poverty rate decreased (by 12.3 percentage points) while the transient poverty rate increased (by 0.9 percentage point) when these benefits were included in family resources.

Besides employment, no private resources examined (help from relatives, private pensions, or child support) had a substantial impact on the immigrant chronic poverty rate. It is noteworthy, however, that employment had an even larger impact for immigrants than for the

²⁴ The immigrant subpopulation was defined by selecting individuals marked as part of the PSID Immigrant Sample, comprising individuals living in households in the baseline year of the study timeframe with a head of household (and if applicable wife or cohabitor) who had immigrated to the United States after 1968.

sample overall. Without employment income, 98.4% of immigrants would have been chronically poor, versus 82.2% of the overall sample.

In terms of expenses, both taxes and medical out-of-pocket expenses had nominal impacts on the immigrant chronic poverty rate. As with immigrant transient poverty, taxes had the larger nominal impact, particularly payroll taxes, versus MOOP.

Table 17. Transient and chronic poverty rates after excluding specific components of the SPM, for immigrants, *ordered by type of income source or expense*.

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	33.2%	(3.8) [25.4, 41.0]		10.2%	(3.2) [3.7, 16.6]	
Component excluded						
Federal EITC	33.5%	(3.5) [26.4, 40.6]	0.3%	13.5%	(2.9) [7.6, 19.4]	3.3%
Federal + state EITC	33.5%	(3.5) [26.4, 40.6]	0.3%	13.7%	(2.8) [7.9, 19.5]	3.5%
Child Tax Credit (CTC)	33.7%	(3.7) [26.0, 41.3]	0.5%	10.9%	(2.7) [5.5, 16.4]	0.7%
Social Security	33.1%†	(3.4) [26.1, 40.2]	-0.1%	11.7%	(3.1) [5.4, 17.9]	1.5%
SSI	32.7%†	(3.8) [24.9, 40.6]	-0.5%	10.9%	(3.1) [4.6, 17.3]	0.7%
Unemployment insurance	35.5%	(3.4) [28.6, 42.5]	2.3%	11.4%	(3.3) [4.6, 18.3]	1.2%
SNAP (food stamps)	33.5%	(3.5) [26.4, 40.5]	0.3%	11.5%	(2.9) [5.6, 17.5]	1.3%
Housing subsidies	31.6%†	(3.3) [24.9, 38.4]	-1.6%	12.1%	(3.3) [5.4, 18.7]	1.9%
School lunch	32.8%†	(3.4) [25.8, 39.7]	-0.4%	12.2%	(3.5) [5.1, 19.3]	2.0%
TANF	33.1%†	(3.8) [25.4, 40.8]	-0.1%	10.4%	(3.2) [3.9, 16.9]	0.2%
WIC	32.9%†	(3.9) [25.0, 40.8]	-0.3%	11.0%	(3.1) [4.7, 17.2]	0.8%
Low Income Home Energy Assistance Program (LIHEAP)	33.4%	(3.8) [25.6, 41.1]	0.2%	10.2%	(3.2) [3.7, 16.6]	0.0%
Worker's compensation	33.7%	(3.8) [25.9, 41.6]	0.5%	10.2%	(3.2) [3.7, 16.7]	0.0%
ALL GOVT BENEFITS COMBINED	32.3%*†	(3.6) [25.1, 39.6]	-0.9%	22.5%*	(4.2) [13.9, 31.2]	12.3%
Child support rec'd	32.9%†	(3.7) [25.2, 40.6]	-0.3%	10.5%	(3.2) [4.0, 17.0]	0.3%
Help from relatives	34.8%	(3.4) [27.7, 41.9]	1.6%	10.2%	(3.2) [3.7, 16.7]	0.0%
Private pensions and retirement	33.4%	(3.8) [25.6, 41.3]	0.2%	10.2%	(3.2) [3.7, 16.6]	0.0%
Employment income	1.6%*†	(0.6) [0.4, 2.8]	-31.6%	98.4%*	(0.6) [97.2, 99.6]	88.2%

* CI excludes point estimate for original rate.

†Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 17 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	33.2%	(3.8) [25.4, 41.0]		10.2%	(3.2) [3.7, 16.6]	
Component excluded						
Work expenses (excluding childcare)	31.3%	(3.4) [24.2, 38.3]	-1.9%	10.0%	(3.2) [3.5, 16.5]	-0.2%
Childcare expenses	32.8%	(3.7) [25.2, 40.5]	-0.4%	10.2%	(3.2) [3.7, 16.6]	0.0%
Medical out-of-pocket expenses (MOOP)	29.3%	(3.8) [21.5, 37.2]	-3.9%	9.4%	(3.0) [3.3, 15.5]	-0.8%
Child support paid	32.6%	(3.8) [24.9, 40.4]	-0.6%	10.2%	(3.2) [3.7, 16.6]	0.0%
Federal income tax (before credits)	31.4%	(3.6) [24.0, 38.8]	-1.8%	10.2%	(3.2) [3.7, 16.6]	0.0%
FICA (federal payroll tax)	29.3%	(3.2) [22.7, 35.9]	-3.9%	9.1%	(3.2) [2.6, 15.7]	-1.1%
ALL FEDERAL TAXES	28.0%	(3.1) [21.6, 34.5]	-5.2%	9.1%	(3.2) [2.5, 15.7]	-1.1%
State income tax (before credits)	33.1%	(3.8) [25.3, 40.9]	-0.1%	10.2%	(3.2) [3.7, 16.6]	0.0%
ALL FEDERAL + STATE TAXES	28.1%	(3.1) [21.7, 34.5]	-5.1%	9.0%	(3.2) [2.4, 15.6]	-1.2%

* CI excludes point estimate for original rate.

Table 18. Transient and chronic poverty rates after excluding specific components of the SPM, for immigrants, *ordered by impact on transient poverty rate*.

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	33.2%	(3.8) [25.4, 41.0]		10.2%	(3.2) [3.7, 16.6]	
Component excluded						
Unemployment insurance	35.5%	(3.4) [28.6, 42.5]	2.3%	11.4%	(3.3) [4.6, 18.3]	1.2%
Help from relatives	34.8%	(3.4) [27.7, 41.9]	1.6%	10.2%	(3.2) [3.7, 16.7]	0.0%
Child Tax Credit (CTC)	33.7%	(3.7) [26.0, 41.3]	0.5%	10.9%	(2.7) [5.5, 16.4]	0.7%
Worker's compensation	33.7%	(3.8) [25.9, 41.6]	0.5%	10.2%	(3.2) [3.7, 16.7]	0.0%
Federal EITC	33.5%	(3.5) [26.4, 40.6]	0.3%	13.5%	(2.9) [7.6, 19.4]	3.3%
Federal + state EITC	33.5%	(3.5) [26.4, 40.6]	0.3%	13.7%	(2.8) [7.9, 19.5]	3.5%
SNAP (food stamps)	33.5%	(3.5) [26.4, 40.5]	0.3%	11.5%	(2.9) [5.6, 17.5]	1.3%
Low Income Home Energy Assistance Program (LIHEAP)	33.4%	(3.8) [25.6, 41.1]	0.2%	10.2%	(3.2) [3.7, 16.6]	0.0%
Private pensions and retirement	33.4%	(3.8) [25.6, 41.3]	0.2%	10.2%	(3.2) [3.7, 16.6]	0.0%

* CI excludes point estimate for original rate.

Table 18 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	33.2%	(3.8) [25.4, 41.0]		10.2%	(3.2) [3.7, 16.6]	
Component excluded						
Social Security	33.1%†	(3.4) [26.1, 40.2]	-0.1%	11.7%	(3.1) [5.4, 17.9]	1.5%
State income tax (before credits)	33.1%	(3.8) [25.3, 40.9]	-0.1%	10.2%	(3.2) [3.7, 16.6]	0.0%
TANF	33.1%†	(3.8) [25.4, 40.8]	-0.1%	10.4%	(3.2) [3.9, 16.9]	0.2%
WIC	32.9%†	(3.9) [25.0, 40.8]	-0.3%	11.0%	(3.1) [4.7, 17.2]	0.8%
Child support rec'd	32.9%†	(3.7) [25.2, 40.6]	-0.3%	10.5%	(3.2) [4.0, 17.0]	0.3%
Childcare expenses	32.8%	(3.7) [25.2, 40.5]	-0.4%	10.2%	(3.2) [3.7, 16.6]	0.0%
School lunch	32.8%†	(3.4) [25.8, 39.7]	-0.4%	12.2%	(3.5) [5.1, 19.3]	2.0%
SSI	32.7%†	(3.8) [24.9, 40.6]	-0.5%	10.9%	(3.1) [4.6, 17.3]	0.7%
Child support paid	32.6%	(3.8) [24.9, 40.4]	-0.6%	10.2%	(3.2) [3.7, 16.6]	0.0%
ALL GOVT BENEFITS	32.3%*†	(3.6) [25.1, 39.6]	-0.9%	22.5%*	(4.2) [13.9, 31.2]	12.3%
Housing subsidies	31.6%†	(3.3) [24.9, 38.4]	-1.6%	12.1%	(3.3) [5.4, 18.7]	1.9%
Federal income tax (before credits)	31.4%	(3.6) [24.0, 38.8]	-1.8%	10.2%	(3.2) [3.7, 16.6]	0.0%
Work expenses (excluding childcare)	31.3%	(3.4) [24.2, 38.3]	-1.9%	10.0%	(3.2) [3.5, 16.5]	-0.2%
Medical out-of-pocket expenses (MOOP)	29.3%	(3.8) [21.5, 37.2]	-3.9%	9.4%	(3.0) [3.3, 15.5]	-0.8%
FICA	29.3%	(3.2) [22.7, 35.9]	-3.9%	9.1%	(3.2) [2.6, 15.7]	-1.1%
ALL FEDERAL + STATE TAXES	28.1%	(3.1) [21.7, 34.5]	-5.1%	9.0%	(3.2) [2.4, 15.6]	-1.2%
ALL FEDERAL TAXES	28.0%	(3.1) [21.6, 34.5]	-5.2%	9.1%	(3.2) [2.5, 15.7]	-1.1%
Employment income	1.6%*†	(0.6) [0.4, 2.8]	-31.6%	98.4%*	(0.6) [97.2, 99.6]	88.2%

* CI excludes point estimate for original rate.

†Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 19. Transient and chronic poverty rates after excluding specific components of the SPM, for immigrants, *ordered by impact on chronic poverty rate.*

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	33.2%	(3.8) [25.4, 41.0]		10.2%	(3.2) [3.7, 16.6]	
Component excluded						
Employment income	1.6%*†	(0.6) [0.4, 2.8]	-31.6%	98.4%*	(0.6) [97.2, 99.6]	88.2%
ALL GOVT BENEFITS COMBINED	32.3%*†	(3.6) [25.1, 39.6]	-0.9%	22.5%*	(4.2) [13.9, 31.2]	12.3%
Federal + state EITC	33.5%	(3.5) [26.4, 40.6]	0.3%	13.7%	(2.8) [7.9, 19.5]	3.5%
Federal EITC	33.5%	(3.5) [26.4, 40.6]	0.3%	13.5%	(2.9) [7.6, 19.4]	3.3%
School lunch	32.8%†	(3.4) [25.8, 39.7]	-0.4%	12.2%	(3.5) [5.1, 19.3]	2.0%
Housing subsidies	31.6%†	(3.3) [24.9, 38.4]	-1.6%	12.1%	(3.3) [5.4, 18.7]	1.9%
Social Security	33.1%†	(3.4) [26.1, 40.2]	-0.1%	11.7%	(3.1) [5.4, 17.9]	1.5%
SNAP (food stamps)	33.5%	(3.5) [26.4, 40.5]	0.3%	11.5%	(2.9) [5.6, 17.5]	1.3%
Unemployment insurance	35.5%	(3.4) [28.6, 42.5]	2.3%	11.4%	(3.3) [4.6, 18.3]	1.2%
WIC	32.9%†	(3.9) [25.0, 40.8]	-0.3%	11.0%	(3.1) [4.7, 17.2]	0.8%
Child Tax Credit (CTC)	33.7%	(3.7) [26.0, 41.3]	0.5%	10.9%	(2.7) [5.5, 16.4]	0.7%
SSI	32.7%†	(3.8) [24.9, 40.6]	-0.5%	10.9%	(3.1) [4.6, 17.3]	0.7%
Child support rec'd	32.9%†	(3.7) [25.2, 40.6]	-0.3%	10.5%	(3.2) [4.0, 17.0]	0.3%
TANF	33.1%†	(3.8) [25.4, 40.8]	-0.1%	10.4%	(3.2) [3.9, 16.9]	0.2%
Low Income Home Energy Assistance Program (LIHEAP)	33.4%	(3.8) [25.6, 41.1]	0.2%	10.2%	(3.2) [3.7, 16.6]	0.0%
Worker's compensation	33.7%	(3.8) [25.9, 41.6]	0.5%	10.2%	(3.2) [3.7, 16.7]	0.0%
Help from relatives	34.8%	(3.4) [27.7, 41.9]	1.6%	10.2%	(3.2) [3.7, 16.7]	0.0%
Private pensions and retirement	33.4%	(3.8) [25.6, 41.3]	0.2%	10.2%	(3.2) [3.7, 16.6]	0.0%

* CI excludes point estimate for original rate.

†Note that drop in transient poverty rate is due to increase in chronic poverty rate.

Table 19 (cont'd).

	Transient Poverty Rate	(se) [95% CI]	Difference in rate	Chronic Poverty Rate	(se) [95% CI]	Difference in rate
SPM with all components	33.2%	(3.8) [25.4, 41.0]		10.2%	(3.2) [3.7, 16.6]	
Component excluded						
Childcare expenses	32.8%	(3.7) [25.2, 40.5]	-0.4%	10.2%	(3.2) [3.7, 16.6]	0.0%
Child support paid	32.6%	(3.8) [24.9, 40.4]	-0.6%	10.2%	(3.2) [3.7, 16.6]	0.0%
Federal income tax (before credits)	31.4%	(3.6) [24.0, 38.8]	-1.8%	10.2%	(3.2) [3.7, 16.6]	0.0%
State income tax (before credits)	33.1%	(3.8) [25.3, 40.9]	-0.1%	10.2%	(3.2) [3.7, 16.6]	0.0%
Work expenses (excluding childcare)	31.3%	(3.4) [24.2, 38.3]	-1.9%	10.0%	(3.2) [3.5, 16.5]	-0.2%
Medical out-of-pocket expenses (MOOP)	29.3%	(3.8) [21.5, 37.2]	-3.9%	9.4%	(3.0) [3.3, 15.5]	-0.8%
FICA (federal payroll tax)	29.3%	(3.2) [22.7, 35.9]	-3.9%	9.1%	(3.2) [2.6, 15.7]	-1.1%
ALL FEDERAL TAXES	28.0%	(3.1) [21.6, 34.5]	-5.2%	9.1%	(3.2) [2.5, 15.7]	-1.1%
ALL FEDERAL + STATE TAXES	28.1%	(3.1) [21.7, 34.5]	-5.1%	9.0%	(3.2) [2.4, 15.6]	-1.2%

* CI excludes point estimate for original rate.

Discussion

Some prior research has used the SPM to assess the impact of specific government programs and specific taxes and household expenses on annual SPM poverty rates (Short, 2011a, 2011b, & 2012). However, no research to date has examined SPM poverty over time, or the corresponding impact on chronic or transient poverty of specific government benefits or household expenses incorporated in the SPM. Thus the results from this study cannot be directly compared to prior research. However, the limited parallels to prior findings related to annual SPM poverty are noted below where applicable.

Overall Impact of Government Poverty Policies

This study found an overall transient poverty rate of 18.9% and chronic poverty rate of 2.1%. Without the support of a variety of cash and near-cash government benefits, however, these rates would have been substantially higher: 23.9% of individuals would have been transiently poor, and 10.8% would have been chronically poor. Thus government benefits reduced the overall transient poverty rate by more than one fifth, and the chronic poverty rate by more than four fifths. Poverty policies had a significant impact in reducing the rates of both types of poverty.

At the same time, the impact of government poverty programs was uneven and incomplete. Government intervention had a greater impact on reducing the chronic poverty rate (achieving an estimated 8.7 percentage point reduction), but less impact on the transient poverty rate (with a 5.0 percentage point reduction).

This outcome is at least partly explained by the fact that an important effect of government programs was to shift some individuals out of chronic poverty into transient poverty, thus shrinking the chronic poverty rate but increasing the transient poverty rate. This phenomenon was apparent among immigrants across several government programs (and in fact for government benefits overall among immigrants), and appeared to occur among other subpopulations particularly for two specific benefit programs, namely housing subsidies (among immigrants, seniors, and children) and SSI (among immigrants and seniors). To explore this phenomenon further, additional analysis was conducted to examine chronic and transient poverty rates after excluding all government benefits for the transient poor subsample only. This analysis revealed that nearly one third of transient poor individuals overall (31.6%) would have been chronically poor if they had not received any government benefits.

Poverty policies also had very different impacts on transient and chronic poverty rates for different demographic subgroups. Government benefits had by far the greatest impact on transient and especially chronic poverty rates for seniors, essentially due to Social Security. Even after accounting for government benefits, seniors had somewhat disproportionately high transient and chronic poverty rates. Without Social Security, however, the senior transient poverty rate would have increased from 24.2% to 32.2%, an estimated 8.0 percentage-point increase, and the senior chronic poverty rate would have exploded from 5.1% to 37.8%. To some extent, this finding may reflect seniors deliberately planning ahead to fund their retirement income needs through Social Security, such that for some seniors, at least, the program may have functioned less as a safety net for individuals with no other available resources, and more as a financial planning instrument for individuals secure in their entitlement to a certain level of future retirement income.

For children, poverty policies had a fairly substantial impact on the chronic poverty rate, as government benefits reduced the child chronic poverty rate from 11.4% to 2.5%. However,

government programs had less impact on the child transient poverty rate, achieving only an estimated 3.3 percentage point rate reduction, less than the impact of government benefits on the transient poverty rate for the population overall. This more limited impact in reducing transient poverty among children may be of concern given that children – particularly very young children – are in a sensitive developmental stage and thus may be especially detrimentally impacted by even a short-term spell of poverty.

Finally, among immigrants, as noted above, the dominant impact of government benefits was not to reduce poverty overall, but rather to improve individuals' resource security just enough to shift them from chronic poverty into transient poverty. To some extent this finding reflects the fact that immigrants started with a more precarious resource position in general; in the absence of government benefits, a full 22.5% of immigrants would have been chronically poor, whereas for the sample overall, the chronic poverty rate without government benefits would have been 10.8%. This result may also reflect the fact that immigrants are more likely to be ineligible for two of the most generous federal benefit programs, namely the EITC (if they have an immigrant status that precludes legal employment) and Social Security (if they have spent insufficient time working at eligible jobs in the United States before reaching retirement age).

Impact of Specific Government Programs

It is interesting to note that specific government programs appeared to have different effects on transient and chronic poverty. To some extent these differences reflect the economic theory of transient versus chronic poverty and the types of policies expected to be effective in addressing each. For example, unemployment insurance provides the type of short-term income insurance that would be expected to be effective in addressing transient poverty, and in fact unemployment insurance had a greater (though only nominally significant) impact in reducing transient poverty than chronic poverty, for the sample overall and for children and immigrants. On the other hand, housing subsidies and SSI provide the type of ongoing long-term support that would be expected to be effective in reducing chronic poverty, and these programs had a greater (though again nominally significant) impact on chronic poverty rates than transient poverty rates, for the sample overall and for seniors and immigrants.

The fact that housing subsidies had an apparent impact on chronic poverty rates, for the sample overall and for children and seniors, is particularly noteworthy because this benefit is not an entitlement; in fact housing subsidies are greatly oversubscribed, typically with multi-year waitlists, so that only a small proportion of eligible households actually receives the subsidies. This suggests that if housing subsidies were made available to more of the households eligible to receive them, a greater reduction in chronic poverty rates might be expected.

The federal²⁵ EITC had an apparent impact on both transient and chronic poverty rates, particularly for children and immigrants (though this impact was only nominally significant). Notably, a not insignificant percentage of children (1.8%) and immigrants (3.3%) would have been chronically poor in the absence of the EITC. As the EITC is only available to individuals with paid legal employment, this finding offers some indication that there is a population of

²⁵ State EITC payments were also examined, but had much less impact as they are generally much smaller in dollar amount per recipient compared to federal EITC payments.

working households who would have been chronically poor without government assistance, despite the fact that they were employed and “playing by the rules”.²⁶

Social Security, as noted above, had a very significant impact on both transient and chronic poverty rates, with the greatest impact on the rate of chronic poverty. This result parallels findings from prior research on annual poverty using the SPM, which has similarly found Social Security to be the government program with the largest impact on the SPM annual poverty rate (Short, 2012). Obviously the dominant impact of Social Security was on poverty rates among seniors, but there was also a small (and nominally significant) impact on transient and chronic poverty rates among children, presumably for those living in multi-generational households or receiving survivors’ benefits.

Finally, it is worth noting that TANF had no significant impact on transient or chronic poverty rates for the overall sample or for any of the vulnerable subpopulations examined, including children. This finding will not be surprising to poverty policy scholars, as TANF is not one of the larger government poverty programs in terms of number of recipients, and per capita benefits are time-limited and often relatively small in amount. Arguably, in fact, the policy objective of TANF is not to reduce transient or chronic poverty at all, but rather to move non-working individuals into the workforce. Nonetheless, members of the general public might be surprised that the program most strongly associated with government “welfare” had very little measurable impact in reducing either short- or long-term poverty rates.

Impact of Household Expenses

Medical out-of-pocket expenses (MOOP) had an important impact on both transient and chronic poverty rates for the sample overall and for all three subpopulations examined. In fact, for transient poverty, MOOP nearly counteracted the effect of all government benefits combined for the overall sample, as MOOP raised the transient poverty rate by an estimated 4.6 percentage points, while government benefits lowered the rate by 5.0%. Similarly, among children MOOP raised the transient poverty rate by an estimated 3.0 percentage points, while government benefits lowered the rate by 3.3% (though nominally significant). MOOP had a particularly large impact on the transient poverty rate for seniors, raising the senior transient poverty rate by an estimated 9.7 percentage points. The impact of MOOP on chronic poverty rates was less dramatic but still noteworthy, particularly among seniors. These results parallel the findings from prior research on annual SPM poverty, showing that medical out-of-pocket expenses are the expense with the largest impact on SPM annual poverty rates, and that MOOP drives a disproportionately high SPM annual poverty rate for seniors (Short, 2011a & 2012).

These findings suggest that health care policies not specifically designed as poverty policies – e.g. Obamacare and Medicare reform – may have significant potential as strategies to reduce poverty. This may be particularly true for transient poverty and particularly among seniors.

Federal²⁷ taxes were another expense that contributed to poverty rates, primarily for transient poverty. Federal income taxes (before tax credits) had some impact on transient

²⁶ In fact, some working households found to have escaped chronic poverty through the EITC in this study might actually have remained chronically poor, as no direct measure of EITC receipt was available in the data and thus this study assumed that all eligible individuals claimed the credit. Uptake of the EITC is widespread among eligible households, but it is known that some households do not claim the credit despite being eligible.

²⁷ State income tax was also examined, but had much less impact, reflecting the smaller amounts households typically pay in state versus federal income taxes.

poverty rates, but the largest impact derived from federal payroll taxes (FICA), for the sample overall and nominally for children and immigrants²⁸. FICA raised the overall transient poverty rate by an estimated 1.7 percentage points, the child transient poverty rate by a nominal 2.0%, and the immigrant transient poverty rate by a nominal 3.9%. This finding somewhat parallels results of prior research on SPM annual poverty, which found that FICA was the federal tax with the largest impact on the annual SPM poverty rate (Short, 2012). The observed effect of FICA on poverty rates could be interpreted as a generational trade-off; payroll taxes increase transient poverty among children, immigrants, and working-age adults, but they also fund Social Security, which reduces transient and especially chronic poverty among seniors. This finding may also suggest support for transient poverty policies that specifically target the working poor (e.g. the EITC), as a way of mitigating the impact of payroll taxes on these households.

Impact of Private Resources

Though government benefits were important in reducing both transient and especially chronic poverty rates, it is important to note that private resources were in many cases equally or more influential. However, there were limitations to the impact of private resources.

Employment income had by far the largest impact on poverty rates of all income sources examined; this is not at all surprising, given that most households in the United States rely on employment as their primary source of income. However, it is noteworthy that employment income had a substantial impact on both transient and chronic poverty rates for seniors, who are not typically expected to work for wages. This finding suggests that many seniors were either continuing to work beyond the typical retirement age of 65, or that they were living in households with younger working-age family members. Employment income was also particularly important for immigrants. More than 98% of immigrants would have been chronically poor in the absence of employment, even with all government benefits included in household resources (versus 82.2% for the sample overall).

Private pensions and retirement income were also important in reducing both transient and chronic poverty rates among seniors; this was the income source with the greatest impact in reducing the senior transient poverty rate, though it had less of an impact than Social Security on the senior chronic poverty rate. This finding may largely reflect deliberate financial planning on the part of seniors who saved in advance for retirement or were eligible for employer-based pensions. It is important to consider, however, that employer-based pensions have become less common and less generous for currently employed generations, and thus this income source may not function as well to prevent transient and chronic senior poverty in the future.

Finally, help from relatives had an apparent (though only nominally significant) impact on poverty rates, particularly among immigrants and children – but only for transient poverty. This finding may suggest that support from extended family may be sufficient to overcome a short-term spell of financial difficulty, but cannot compensate for a long-term mismatch between needs and resources.

²⁸ Seniors were less impacted by payroll taxes, presumably due to lower rates of employment.

Chapter 7 RESULTS

Predictors of Chronic and Transient Poverty

Economic theory predicts that transient poverty is caused by temporary disruptions in income, e.g. short-term unemployment, while chronic poverty is caused by an inadequate asset base to predictably generate a non-poverty level of income, e.g. lack of education required to obtain a non-poverty-wage job. One of the objectives of this study was to assess the degree to which household characteristics corresponding to expected predictors of short- versus long-term poverty actually corresponded to the household characteristics associated with transient and chronic poverty during the timeframe examined for the PSID-derived sample.

Research Question 5: Economic theory posits that transient poverty is associated with short-term income disruption, while chronic poverty is associated with a long-term inadequate base of assets to generate income. Do the predictors of chronic and transient poverty in the United States correspond to this conceptualization of different types of poverty?

Description of Regression Model

Multinomial logistic regression was used to analyze the relationship between various predictor variables and the categorical outcome variable *longitudinal poverty status*, with three possible values: transient poor, chronic poor, or nonpoor (the reference category). Chronic poverty was defined as meeting the criteria for annual poverty (using the Supplemental Poverty Measure) in more than half of the years examined during the study timeframe (4-6 of 6 data years), while transient poverty was defined as meeting the criteria for annual poverty (using the SPM) in at least one but no more than half of the years examined (1-3 of 6 data years).

Per economic theory, transient poverty is expected to be associated with factors that cause short-term disruption of income. Thus two covariates linked to income disruption were examined, as described in more detail below: *short-term unemployment* (of head, wife, or cohabitor); and *short-term disability* (of head, wife, or cohabitor). It was expected that regression analysis would show these covariates to be significant predictors of transient, but not chronic poverty status, and/or that the relative risk of poverty associated with these covariates would be significantly larger for transient poverty than chronic poverty.

Short-term unemployment among usually working individuals implies a temporary period of reduced income while out of work, followed by restored income once a new job is secured. Thus *short-term unemployment*²⁹ was included as an independent variable expected to predict transient poverty.

Disability may also cause a short-term income disruption if the disability is temporary and interferes with an individual's ability to work, as for example with a recoverable injury, acute illness, or temporary medical condition such as pregnancy. Thus *short-term disability*³⁰ was also included as a covariate expected to predict transient poverty.

²⁹ Defined as living in a household where the head, wife, or cohabitor experienced at least one period of unemployment (i.e. not working but actively seeking work), during at least one but no more than half of the years for which data was collected (1-3 of 6 data years).

³⁰ Defined as living in a household where the head, wife, or cohabitor reported having a disability that prevented work "a lot," in at least one but no more than half of the years for which data was collected (1-3 of 6 data years).

Economic theory posits that the predictors of chronic poverty comprise factors that imply a long-term inadequate base of assets to generate income, with assets defined as household resources or characteristics that facilitate the production of income or income-equivalent resources. In the United States in the policy context of the study timeframe, household income (or income-equivalent resources) could be generated through work, government benefits, or in some cases through private transfers such as support from family members. However, even for households that also receive government benefits, employment is typically necessary to generate income at non-poverty levels, due to both low benefit amounts and the work requirements associated with many benefits such as the EITC and TANF. Thus household assets that enable work, with adequate wages – or the lack of such resources or characteristics– are particularly important to examine.

In total, six independent variables representing limitations in the long-term income-generating capacity of households were examined as predictors of chronic poverty: *long-term unemployment* (of head, wife, or cohabitor); *long-term disability* (of head, wife, or cohabitor); *non-high school graduate* (head, wife, or cohabitor); *immigrant household*; *single mother household*, and *senior household* (head, wife, or cohabitor). These are described in more detail below. In regression analysis, these covariates were expected to be significant predictors of chronic, but not transient poverty status, and/or the relative risk of poverty associated with these covariates was expected to be significantly larger for chronic poverty than transient poverty.

*Long-term unemployment*³¹ was included as a possible predictor of chronic poverty. Being chronically unable to find work despite actively searching for jobs likely indicates lack of skills and work experience that are valued by employers, and thus limited capacity to earn income through employment.³²

Long-term disability was another covariate included. Long-term disability can substantially limit an individual's ability to work or the types of jobs an individual is able to do. Households that include adults with chronic disabilities may consequently be more limited in their capacity to generate income through employment. Thus *long-term disability*³³ was included as an independent variable related to chronic poverty.

Lack of a high school education was another chronic poverty predictor examined. From the study timeframe to the present, most jobs in the United States – even low-wage entry-level jobs – have required a minimum education credential of a high school diploma or GED. Households where adults lack this minimum level of education have a more limited income-generating asset base, in that the adults potentially available to earn income through work are ineligible for many jobs, including most that pay adequate wages. Thus *non-high school graduate*³⁴ was included as a predictor of chronic poverty.

³¹ Defined as living in a household where the head, wife, or cohabitor experienced at least one period of unemployment (i.e. not working but actively seeking work), in more than half the years for which data was collected (4-6 of 6 data years).

³² Long-term unemployment was also included in order to facilitate comparison of the risk of poverty associated with short-term unemployment to a reference category of no unemployment (rather than a combined reference group of either no or long-term unemployment).

³³ Defined as living in a household where the head, wife, or cohabitor reported having a disability that limited the ability to work “a lot,” in more than half the years for which data was collected (4-6 of 6 data years).

³⁴ Defined as living in a household where the highest education obtained by the head, wife, or cohabitor was less than a high school diploma or GED. This variable was based on educational achievement of the head, wife, and/or cohabitor reported during the final year of the study timeframe (2008).

Immigrant status was also examined as an independent variable related to chronic poverty, as such status may limit a household's income-generating capacity in several ways. Some immigrants are ineligible to work legally because they are undocumented or present in the United States with a legal residency status that prohibits employment. Recent immigrants may also lack the English language skills required for many jobs, and may lack the social networks needed to connect them to job opportunities or to information about how to access government benefits. Many immigrants who arrived in this country after August 1996, even if they are properly documented, are also categorically ineligible for certain government benefits (e.g. TANF and SSI) due to exclusions written into welfare reform law (Pavetti, 2002). Many elderly immigrants are also ineligible for Social Security, a key source of income for many seniors, because they did not work in the United States for the required number of years at eligible jobs before reaching retirement age. Therefore *immigrant status*³⁵ was included as a predictor of chronic poverty.

Another covariate linked to chronic poverty was single mother household. Households that comprise a single mother with children are more limited in their income-generating capacity, compared to two-parent households, because there is only one rather than two adults potentially available to work (or to qualify for government benefits). Thus *single mother household*³⁶ was included as a predictor of chronic poverty.

Finally, households where the head, wife, or cohabitor are seniors may be limited in their income-generating capacity. Many elderly individuals are physically or mentally unable to work, or unable to work full-time. (Many seniors are, however, eligible for Social Security as an alternative, though limited, source of income.) Thus *senior household*³⁷ was included as a predictor of chronic poverty.³⁸

Three control variables were also included. *Children in household*³⁹ and *high housing cost area*⁴⁰ were both included in order to compare individuals living in households with similar levels of resource needs per income-generating adult. *Race/ethnicity* (of head of household)⁴¹ was also included as a possible confounder, as race/ethnicity is known to be associated with both poverty status and some of the characteristics represented in the independent variables such as non-high school graduate, single motherhood, and immigrant status.

Results of Univariate Analysis

Univariate analysis showed some support for the expected relationships between longitudinal poverty status and the hypothesized predictors of transient and chronic poverty, as

³⁵ Defined as living in a household at baseline where the head (and wife or cohabitor if present) had immigrated to the United States after 1968.

³⁶ Defined as living in a household with children with a single female household head and no other adults, in more than half the years for which data was collected (4-6 of 6 data years).

³⁷ Defined as living in a household where the head, wife, or cohabitor was age 65 or older, in more than half the years for which data was collected (4-6 of 6 data years).

³⁸ Senior household was also included because it might be a confounder of unemployment, as retired seniors are likely to report no unemployment because they no longer work for wages.

³⁹ Defined as living in a household that included one or more children, in more than half the years for which data was collected (4-6 of 6 data years).

⁴⁰ Defined as living in an area where the Fair Market Rent was in the 75th percentile or higher of national Fair Market Rents, in more than half the years for which data was collected (4-6 of 6 data years).

⁴¹ Race/ethnicity categories included Hispanic, Black, White, and Other (including Asian/Pacific Islander, American Indian, and "other" race/ethnicity), and the modal value across the six data years was used.

described in Table 20 below. *Short-term unemployment* significantly predicted increased relative risk of transient poverty, and not chronic poverty. *Short-term disability* was significantly associated with transient poverty, but was also significantly associated with chronic poverty, with no statistically significant difference in the size of the relative risk estimates.

Five of the six expected predictors of chronic poverty were significantly associated with an increased relative risk of chronic poverty. All of these covariates were also significantly associated with transient poverty, but relative risks for chronic poverty were significantly higher than those for transient poverty for three of the five: *long-term disability*, *non-high school graduate*, and *immigrant household*. For the remaining two, *long-term unemployment* and *senior household*, there was no statistically significant difference between the coefficients for chronic poverty and transient poverty. In contrast to expectations, *single mother household* was significantly associated with transient poverty, and not with chronic poverty.

Table 20. Univariate analysis results of multinomial logistic regression.

Independent variable	Transient poverty relative risk	(se) [95% CI]	t statistic (p-value)	Chronic poverty relative risk	(se) [95% CI]	t statistic (p-value)	Difference in coefficients for transient vs chronic poverty: F statistic (p-value)
Transient poverty predictors							
Short-term unemployment of head, wife, or cohabitor (1-3 years) (vs no unemployment)	1.32	(0.17) [1.02, 1.72]	t= 2.15 (p=0.04)*	0.98	(0.30) [0.53, 1.84]	t= -0.05 (p=0.959)	F = 0.67 (p=0.42)
Short-term disability of head, wife, or cohabitor (1-3 years) (vs no disability)	2.66	(0.37) [2.02, 3.50]	t=7.11 (p<0.01)*	4.77	(1.45) [2.59, 8.78]	t=5.15 (p<0.01)*	F=2.94 (p=0.09)
Chronic poverty predictors							
Long-term unemployment of head, wife, or cohabitor (4-6 years) (vs no unemployment)	3.91	(1.19) [2.12, 7.20]	t=4.47 (p<0.01)*	5.89	(4.20) [1.42, 24.49]	t= 2.49 (p=0.02)*	F=0.40 (p=0.53)
Long-term disability of head, wife, or cohabitor (4-6 years) (vs no disability)	3.74	(0.88) [2.32, 6.01]	t=5.59 (p<0.01)*	11.36	(4.81) [4.86, 26.58]	t= 5.75 (p<0.01)*	F=7.29 (p=0.01)*
Non-high school graduate head, wife, or cohabitor	3.72	(0.66) [2.60, 5.31]	t=7.42 (p<0.01)*	10.18	(3.18) [5.39, 19.20]	t= 7.42 (p<0.01)*	F=10.20 (p<0.01)*
Immigrant household	2.09	(0.43) [1.38, 3.16]	t=3.55 (p<0.01)*	5.74	(2.24) [2.62, 12.53]	t= 4.47 (p<0.01)*	F=6.81 (p=0.01)*
Single mother household	1.81	(0.48) [1.07, 3.07]	t=2.27 (p=0.03)*	1.72	(0.91) [0.60, 4.95]	t= 1.03 (p=0.31)	F=0.01 (p=0.92)
Senior household	1.77	(0.24) [1.34, 2.33]	t=4.13 (p<0.01)*	3.14	(0.95) [1.70, 5.77]	t=3.76 (p<0.01)*	F=3.45 (p=0.07)

* p<0.05

Results of Multivariate Analysis

Multivariate regression analysis was then conducted. All original independent variables were retained in the initial multivariate model as all were significantly associated with the outcomes of interest in univariate analysis. One adjustment was made to the control variable *race/ethnicity*; the category of *Other race/ethnicity* was collapsed into the reference category as univariate analysis showed it was not significantly different from the reference category of *White* as a predictor of transient or chronic poverty. Thus the retained categories for race/ethnicity were *Hispanic* and *Black*, with *White* or *Other* as the new reference category.

In the initial multivariate model, all covariates were significant predictors of transient and/or chronic poverty status. Because different covariates were expected to predict transient poverty versus chronic poverty, variables were not eliminated if they were significantly associated with only one of the two outcome values. Thus all covariates were retained in the model.

Next, a few interaction terms were tested. Single mother households might be more affected by unemployment, disability, or lack of a high school education than non-single mother households because they include only one income-generating adult supporting a multi-person family; there is no second (or third or more) adult in the household to compensate for the income disruption or asset limitations of the single household head. Thus the interaction terms *single mother household x unemployment*, *single mother household x disability*, and *single mother household x non-high school graduate*, were individually added to the model. None of these interaction terms were significant at the $p < 0.10$ level, thus none were retained in the model.

Immigrant households might be more affected by unemployment because immigrants may not be eligible for unemployment insurance if they are not employed legally. Thus the interaction term *immigrant household x unemployment* was tested, but was not significant at the $p < 0.10$ level, and thus was not retained in the model.

Senior households might be more affected by high housing costs because many seniors rely on federal Social Security benefits as a major income source, and these benefits are not adjusted for geographic differences in cost of living. Thus the interaction term *senior household x high housing cost area* was tested, but was not significant at the $p < 0.10$ level and so was not retained.

Finally, households that include individuals with long-term disabilities might similarly be more impacted by high housing costs than non-disabled households, because such individuals often rely primarily on federal disability benefits (SSI or SSDI) for income, and these benefits are not adjusted for geographic differences in housing costs. Thus the interaction term *long-term disability x high housing cost area* was tested. This interaction term was highly significantly associated with both chronic poverty ($p = 0.01$) and transient poverty ($p = 0.04$) and was thus retained in the model.

The final multivariate model thus contained two expected predictors of transient poverty – *short-term unemployment* and *short-term disability*; six expected predictors of chronic poverty – *long-term unemployment*, *long-term disability*, *non-high school graduate*, *immigrant household*, *single mother household*, and *senior household*; one interaction term – *long-term disability x high housing cost area*, and three control variables – *race/ethnicity*, *children in household* and *high housing cost area*. Relative risk point estimates and confidence intervals and test statistics for this model are summarized in Table 21 below. Additional coefficients and confidence intervals for the interaction effect of long-term disability x high housing cost area and for alternate reference categories for disability and unemployment are included in Table 22.

First examining the outcome of chronic poverty, results largely mirrored expectations. All independent variables expected to significantly predict an increased risk of chronic poverty were highly significant in the final multivariate model, with the exception of *senior household*. Point estimates of individual coefficients were similar for all significant predictors of chronic poverty: *long-term unemployment* ($\beta=5.02$; CI 1.59, 15.88), *non-high school graduate* ($\beta=5.12$; CI 2.31, 11.33), *immigrant household* ($\beta=4.16$; CI 1.57, 10.99), and *single mother household* ($\beta=3.68$; CI 11.07, 12.68). *Long-term disability* was associated with a particularly large relative risk of chronic poverty for households living in high housing cost areas ($\beta=60.32$; CI 10.87, 334.59)⁴², and was also associated with a higher risk of chronic poverty for households outside of such areas ($\beta=4.97$; CI 1.70, 14.52).

In terms of independent variables that were expected to predict transient poverty and not chronic poverty, *short-term unemployment* was not significantly associated with chronic poverty in the final model. *Short-term disability*, however, was significantly associated with an increased relative risk of both chronic poverty and transient poverty, though its chronic poverty coefficient was somewhat smaller than those of the expected chronic poverty predictors ($\beta=3.45$; CI 1.71, 6.96). Further analysis showed that there was no statistically significant difference in the estimates of the transient poverty relative risk versus chronic poverty risk for this variable.

Turning next to the outcome of transient poverty, the two independent variables expected to predict an increased relative risk of transient poverty were both significant in the final multivariate model at the $p<0.05$ level. Point estimates of relative risk were fairly similar, but somewhat larger for *short-term disability* ($\beta=2.31$; CI 1.74, 3.07) than *short-term unemployment* ($\beta=1.46$; CI 1.10, 1.95).

Interestingly, all but one of the independent variables that were included in the model as expected predictors of chronic poverty were all significantly associated with transient poverty as well (*immigrant household* was the exception), though they appeared to be associated with smaller relative risks for transient poverty than chronic poverty. Further analysis confirmed that the differences in size of the coefficients for transient poverty versus chronic poverty for these variables was statistically significant for *immigrant household* and the interaction effect of *long-term disability in high housing cost area*, and borderline significant for *non-high school graduate*. Coefficients for transient poverty were nominally but not statistically significantly smaller than chronic poverty coefficients for *long-term unemployment*, *single mother household*, and *long-term disability outside of high housing cost area*.

Point estimates of relative risk of transient poverty for these coefficients were similar for *single mother household* ($\beta=2.25$; CI 1.13, 4.45) and *non-high school graduate* ($\beta=2.40$; CI 1.62, 3.58) and somewhat larger for *long-term unemployment* ($\beta=4.10$; CI 2.02, 8.32). *Long-term disability* in a high housing cost area was associated with a particularly large relative risk of transient poverty ($\beta=10.80$; CI 3.17, 36.84)⁴³, while long-term disability outside of such areas also had a significant association with transient poverty, with a smaller relative risk ($\beta=2.50$; CI 1.40, 4.47). It is noteworthy that the relative risks of transient poverty associated with each of these expected predictors of chronic poverty (*single mother household*, *non-high school graduate*, *long-term unemployment*, and *long-term disability*) were similar in size to the risks of transient poverty associated with the expected transient poverty predictors (*short-term disability* and *short-term unemployment*).

⁴² Note the very large confidence interval indicating that this point estimate is not very precise.

⁴³ But note the very large confidence interval, indicating imprecision in the point estimate.

Finally, *senior household*, which was expected to predict chronic poverty status, instead was significantly associated only with transient poverty. However, its transient poverty coefficient was relatively small ($\beta=1.44$; CI 1.01, 2.05), and p-value relatively large ($p=0.042$). Moreover, analysis of goodness of fit of the model using separate binary logistic regression models for transient poverty and chronic poverty (as described above in Chapter 4) showed that this variable was only borderline significant ($p=0.053$) in that analysis as a predictor of transient poverty.

Briefly examining the control variables, *Hispanic* and *Black race/ethnicity* were significantly associated with an increased relative risk of both chronic and transient poverty versus *White or Other race/ethnicity*, with coefficients similar in size to those of the primary explanatory variables. *Children in household* was significantly associated with a decreased relative risk of transient poverty and a borderline significant decreased risk of chronic poverty. *High housing cost area* was not significantly associated with transient or chronic poverty, other than as a component of the significant interaction of *long-term disability* $\times$ *high housing cost area*.

Table 21. Multivariate analysis results of multinomial logistic regression.

Covariate	Transient poverty relative risk	(se) [95% CI]	t statistic (p-value)	Chronic poverty relative risk	(se) [95% CI]	t statistic (p-value)	Difference in coefficients for transient vs chronic poverty: F statistic (p-value)
Transient poverty predictors							
Short-term unemployment (1-3 yrs) (vs no unemployment)	1.46	(0.21) [1.10, 1.95]	t= 2.69 (p=0.01)*	1.17	(0.41) [0.58, 2.35]	t= 0.46 (p=0.65)	F=0.36 (p=0.55)
Short-term disability (1-3 yrs) (vs no disability)	2.31	(0.33) [1.74, 3.07]	t=5.87 (p<0.01)*	3.45	(1.21) [1.71, 6.96]	t= 3.54 (p<0.01)*	F=1.26 (p=0.27)
Chronic poverty predictors							
Long-term unemployment (4-6 yrs) (vs no unemployment)	4.10	(1.45) [2.02, 8.32]	t=3.99 (p<0.01)*	5.02	(2.89) [1.59, 15.88]	t=2.80 (p=0.01)*	F=0.16 (p=0.69)
Long-term disability (4-6 yrs) (vs no disability)	2.50	(0.71) [1.40, 4.47]	t= 3.22 (p<0.01)*	4.97	(2.66) [1.70, 14.52]	t=2.99 (p<0.01)*	F=1.77 (p=0.19)
Long-term disability x high housing cost area interaction term	4.31	(3.00) [1.07, 17.41]	t= 2.10 (p=0.04)*	12.14	(11.72) [1.76, 83.65]	t= 2.59 (p=0.01)*	F=1.63 (p=0.21)
Non-high school graduate	2.40	(0.47) [1.62, 3.58]	t=4.48 (p<0.01)*	5.12	(1.98) [2.31, 11.33]	t=4.21 (p<0.01)*	F=4.21 (p=0.05)
Immigrant household	1.27	(0.33) [0.75, 2.15]	t= 0.92 (p=0.36)	4.16	(1.96) [1.57, 10.99]	t= 3.02 (p=0.01)*	F=4.71 (p=0.04)*
Single mother household	2.25	(0.77) [1.13, 4.45]	t=2.37 (p=0.02)*	3.68	(2.27) [1.07, 12.68]	t= 2.11 (p=0.04)*	F=0.72 (p=0.40)
Senior household	1.44	(0.25) [1.01, 2.05]	t=2.08 (p=0.04)*	2.13	(0.90) [0.92, 4.95]	t= 1.80 (p=0.08)	F=1.13 (p=0.29)

* p<0.05

Table 21 (cont'd).

Covariate	Transient poverty relative risk	(se) [95% CI]	t statistic (p-value)	Chronic poverty relative risk	(se) [95% CI]	t statistic (p-value)	Difference in coefficients for transient vs chronic poverty: F statistic (p-value)
Control variables							
Race/ethnicity (of head of household)							
Hispanic	2.59	(0.56) [1.68, 4.01]	t= 4.39 (p<0.01)*	4.13	(1.90) [1.61, 10.56]	t= 3.08 (p<0.01)*	F=0.88 (p=0.36)
Black	2.16	(0.37) [1.51, 3.09]	t= 4.31 (p<0.01)*	4.01	(1.47) [1.91, 8.40]	t= 3.80 (p<0.01)*	F=3.29 (p=0.08)
White or other (omitted)							
Children in household (more than half of years)	0.75	(0.08) [0.62, 0.92]	t=-2.82 (p=0.01)*	0.52	(0.17) [0.27, 1.00]	t=-2.02 (p=0.05)	F=1.20 (p=0.28)
High housing cost area (more than half of years)	0.94	(0.18) [0.65, 1.37]	t=-0.32 (p=0.75)	0.71	(0.24) [0.35, 1.41]	t=-1.02 (p=0.32)	F=0.63 (p=0.43)

* p<0.05

Table 22. Estimates for interaction effects and alternate reference categories from multivariate multinomial logistic regression.

Covariate	Transient poverty relative risk	(se) [95% CI]	t statistic (p-value)	Chronic poverty relative risk	(se) [95% CI]	t statistic (p-value)	Difference in coefficients for transient vs chronic poverty: F statistic (p-value)
<i>Interaction effect:</i> Long-term disability in high housing cost area (vs no disability)	10.80	(6.61) [3.17, 36.84]	t= 3.89 (p<0.01)*	60.32	(51.60) [10.87, 334.59]	t= 4.79 (p<0.01)*	F=6.20 (p=0.02)*
Long-term disability outside high housing cost area (vs no disability)	2.50	(0.71) [1.40, 4.47]	t= 3.22 (p<0.01)*	4.97	(2.66) [1.70, 14.52]	t=2.99 (p<0.01)*	F=1.77 (p=0.19)
<i>Interaction effect:</i> Long-term disability in high housing cost area (vs short-term disability)	4.68	(2.98) [1.30, 16.80]	t= 2.42 (p=0.02)*	17.49	(14.19) [3.45, 88.66]	t= 3.53 (p=0.01)*	F=3.86 (p=0.05)
Long-term disability outside high housing cost area (vs short-term disability)	1.08	(0.32) [0.59, 1.98]	t=0.27 (p=0.79)	1.44	(0.73) [0.52, 3.95]	t=0.72 (p=0.47)	F=0.36 (p=0.55)
Long-term unemployment (vs short-term unemployment)	2.80	(0.96) [1.41, 5.57]	t=3.00 (p=<0.01)*	4.28	(2.55) [1.30, 14.09]	t=2.45 (p=0.02)*	F=0.56 (p=0.46)

* p<0.05

Distinguishing Predictors of Chronic Poverty Over Transient Poverty

Comparing the size of the relative risk coefficients for chronic versus transient poverty, as described above, is one approach to identifying covariates that are associated with both chronic and transient poverty, but more strongly associated with chronic poverty. Analysis above showed that the relative risk of chronic poverty was significantly larger than the relative risk of transient poverty for *long-term disability in a high housing cost area* and borderline statistically significantly larger for *non-high school graduate household*. In addition, *immigrant household* was significantly associated with only chronic poverty, not transient poverty, and was linked to a statistically significantly larger relative risk for chronic poverty.

A more direct approach to distinguishing covariates that predict chronic poverty over and above transient poverty is to examine which covariates significantly predict chronic poverty when examining only individuals who are poor (i.e. excluding nonpoor individuals from the sample for analysis). To do this, a binary logistic regression was conducted for the sample of transient and chronic poor individuals only, using the dependent variable of chronic poverty status, and including all independent variables from the original multivariate multinomial regression model.

Results paralleled the findings above from the comparison of the size of the relative risks in the multinomial regression model. Covariates that significantly predicted chronic poverty over and above transient poverty, among individuals who were poor, included *immigrant household*, *non-high school graduate household*, and *long-term disability in a high housing cost area*. These results are described below in Tables 23 and 24.

Table 23. Multivariate analysis results of binary logistic regression with outcome chronic poverty status, for poor population only (excluding nonpoor from sample).

Covariate	Chronic poverty odds ratio	(se) [95% CI]	t statistic (p-value)
Transient poverty predictors			
Short-term unemployment (1-3 yrs) (vs no unemployment)	0.76	(0.32) [0.33, 1.76]	t=-0.66 (p=0.51)
Short-term disability (1-3 yrs) (vs no disability)	1.31	(0.48) [0.62, 2.76]	t= 0.72 (p=0.47)
Chronic poverty predictors			
Long-term unemployment (4-6 yrs) (vs no unemployment)	1.23	(0.61) [0.46, 3.30]	t= 0.41 (p=0.68)
Long-term disability (4-6 yrs) (vs no disability)	2.15	(1.11) [0.76, 6.07]	t= 1.48 (p=0.15)
Long-term disability x high housing cost area interaction term	2.53	(2.09) [0.48, 13.32]	t= 1.12 (p=0.27)
Non-high school graduate	2.15	(0.78) [1.01, 4.55]	t= 2.11 (p<0.05)*
Immigrant household	3.82	(2.34) [1.06, 13.73]	t= 2.18 (p=0.04)*
Single mother household	1.93	(1.11) [0.60, 6.18]	t= 1.15 (p=0.26)
Senior household	1.49	(0.59) [0.67, 3.29]	t= 1.00 (p=0.32)
Control variables			
Race/ethnicity (of head of household)			
Hispanic	1.69	(0.88) [0.58, 4.95]	t= 1.00 (p=0.33)
Black	2.06	(0.78) [0.95, 4.47]	t= 1.91 (p=0.07)
White or other (omitted)			
Children in household (more than half of years)	0.54	(0.20) [0.25, 1.15]	t=-1.67 (p=0.11)
High housing cost area (more than half of years)	0.72	(0.28) [0.33, 1.58]	t=-0.84 (p=0.41)

* p<0.05

Table 24. Estimates for interaction effect from multivariate binary logistic regression with outcome chronic poverty status, for poor population only (excluding nonpoor from sample).

Covariate	Chronic poverty odds ratio	(se) [95% CI]	t statistic (p-value)
<i>Interaction effect:</i> Long-term disability in high housing cost area (vs no disability)	5.44	(3.95) [1.25, 23.60]	t= 2.33 (p=0.03)*
Long-term disability outside high housing cost area (vs no disability)	2.15	(1.11) [0.76, 6.07]	t= 1.48 (p=0.15)

* p<0.05

Exploring the Impact of Government Benefits

The results from multivariate analysis showed somewhat less of a distinction between the predictors of transient poverty and those of chronic poverty than expected from economic theory, as many of the significant predictors of chronic poverty were also significant predictors of transient poverty, and in several cases coefficients for these variables as predictors of chronic poverty were not statistically significantly larger than their coefficients for transient poverty. One possible explanation is that these results reflected the effect of current government policies on the characteristics of the chronic and transient poor populations. Specifically, descriptive analysis showed that one effect of current government policies was to shift individuals from chronic poverty into transient poverty (as described above in Chapter 6). If the addition of government benefits to family resources enabled an important proportion of households with weak asset bases, who would therefore be expected to be chronically poor, to move into transient poverty instead, then household characteristics associated with asset limitations would become predictors of transient poverty as well as chronic poverty.

To test this possibility, the final multivariate multinomial logistic regression model was run again using a different outcome variable: longitudinal SPM poverty status calculated with government benefits excluded from family resources (i.e. the chronic or transient poverty status households would have had if they had received no government benefits). It was expected that there would be a stronger distinction between the predictors of chronic versus transient poverty in this analysis if the results of the original analysis were substantially influenced by government benefits shifting asset-limited households from chronic to transient poverty. Specifically, variables indicating asset limitations were expected to predict chronic poverty more strongly than transient poverty to a greater degree than in the original analysis.

Results (shown below in Table 25) largely matched expectations. Chronic poverty coefficients for covariates linked to limited assets were larger in the second analysis (excluding government benefits from family resources) than in the original analysis (with government benefits included in resources) for five of the six expected chronic poverty predictors. *Immigrant household* was the exception, but as in the original analysis this variable was significantly associated only with chronic poverty, not transient poverty. Moreover, coefficients for these variables as predictors of chronic poverty were statistically significantly larger than their coefficients as predictors of transient poverty for more of the covariates than in the original analysis, including *long-term disability* (both inside and outside high housing cost areas), *single mother household*, *immigrant household*, *non-high school graduate*, and *senior household*. Differences were particularly striking for *senior household*, which was not a significant predictor of chronic poverty in the original analysis but was highly significant in the second analysis, reflecting the strong effect of Social Security on chronic poverty among seniors.

Table 25. Multivariate analysis results of multinomial logistic regression, with outcome of longitudinal SPM poverty status *after excluding government benefits from family resources*.

Covariate	Transient poverty relative risk	(se) [95% CI]	t statistic (p-value)	Chronic poverty relative risk	(se) [95% CI]	t statistic (p-value)	Difference in coefficients for transient vs chronic poverty: F statistic (p-value)
Transient poverty predictors							
Short-term unemployment (1-3 yrs) (vs no unemployment)	1.88	(0.20) [1.52, 2.32]	t= 5.95 (p<0.01)*	1.37	(0.29) [0.90, 2.08]	t= 1.49 (p=0.14)	F=2.91 (p=0.09)
Short-term disability (1-3 yrs) (vs no disability)	2.48	(0.30) [1.94, 3.16]	t= 7.41 (p<0.01)*	4.60	(0.77) [3.29, 6.42]	t= 9.15 (p<0.01)*	F=11.36 (p<0.01)*
Chronic poverty predictors							
Long-term unemployment (4-6 yrs) (vs no unemployment)	6.69	(1.91) [3.78, 11.85]	t= 6.67 (p<0.01)*	9.17	(4.04) [3.79, 22.18]	t= 5.02 (p<0.01)*	F=0.85 (p=0.36)
Long-term disability (4-6 yrs) (vs no disability)	2.87	(1.04) [1.39, 5.94]	t= 2.92 (p=0.01)*	9.65	(4.08) [4.13, 22.52]	t= 5.35 (p<0.01)*	F=13.79 (p<0.01)*
Long-term disability x high housing cost area interaction term	3.23	(2.51) [0.68, 15.33]	t= 1.51 (p=0.137)	7.04	(6.14) [1.23, 40.40]	t= 2.23 (p=0.03)*	F=0.88 (p=0.35)
Non-high school graduate	1.97	(0.33) [1.42, 2.75]	t= 4.11 (p<0.01)*	5.13	(0.95) [3.54, 7.44]	t= 8.83 (p<0.01)*	F=29.69 (p<0.01)*
Immigrant household	1.07	(0.29) [0.61, 1.85]	t= 0.24 (p=0.81)	2.12	(0.55) [1.26, 3.56]	t= 2.90 (p=0.01)*	F=4.11 (p<0.05)*
Single mother household	2.78	(0.77) [1.60, 4.83]	t= 3.72 (p<0.01)*	5.53	(1.77) [2.92, 10.50]	t= 5.35 (p<0.01)*	F=4.92 (p=0.03)*
Senior household	3.59	(0.57) [2.61, 4.95]	t= 8.01 (p<0.01)*	17.60	(4.56) [10.48, 29.57]	t= 11.07 (p<0.01)*	F=59.69 (p<0.01)*

* p<0.05

Table 25 (cont'd).

Covariate	Transient poverty relative risk	(se) [95% CI]	t statistic (p-value)	Chronic poverty relative risk	(se) [95% CI]	t statistic (p-value)	Difference in coefficients for transient vs chronic poverty: F statistic (p-value)
Control variables							
Race/ethnicity (of head of household)							
Hispanic	2.56	(0.74) [1.43, 4.58]	t= 3.23 (p<0.01)*	3.59	(1.22) [1.82, 7.09]	t= 3.78 (p<0.01)*	F=1.13 (p=0.29)
Black	2.05	(0.39) [1.40, 2.99]	t= 3.78 (p<0.01)*	7.03	(1.99) [4.00, 12.37]	t= 6.90 (p<0.01)*	F=22.89 (p<0.01)*
White or other (omitted)							
Children in household (more than half of years)	0.76	(0.08) [0.62, 0.93]	t= -2.73 (p=0.01)*	1.32	(0.24) [0.92, 1.90]	t= 1.55 (p=0.13)	F=7.93 (p=0.01)*
High housing cost area (more than half of years)	0.86	(0.14) [0.63, 1.18]	t= -0.96 (p=0.34)	0.76	(0.22) [0.42, 1.37]	t= -0.94 (p=0.35)	F=0.22 (p=0.64)

* p<0.05

Table 26. Estimates for interaction effects from multivariate analysis results of multinomial logistic regression, with outcome of longitudinal SPM poverty status *after excluding government benefits from family resources*.

Covariate	Transient poverty relative risk	(se) [95% CI]	t statistic (p-value)	Chronic poverty relative risk	(se) [95% CI]	t statistic (p-value)	Difference in coefficients for transient vs chronic poverty: F statistic (p-value)
<i>Interaction effect:</i> Long-term disability in high housing cost area (vs no disability)	9.26	(6.48) [2.29, 37.53]	t= 3.18 (p<0.01)*	67.87	(58.26) [12.19, 377.89]	t= 4.91 (p<0.01)*	F=5.88 (p=0.02)*
Long-term disability outside high housing cost area (vs no disability)	2.87	(1.04) [1.39, 5.94]	t= 2.92 (p=0.01)*	9.65	(4.08) [4.13, 22.52]	t= 5.35 (p<0.01)*	F=13.79 (p<0.01)*

* p<0.05

To more directly examine covariates that predicted chronic poverty over and above transient poverty in the absence of government benefits, a binary logistic regression analysis was conducted for the sample of poor individuals only, using the dependent variable of chronic poverty status with government benefits excluded, including all covariates from the original multivariate multinomial regression model. Initial analysis showed that the interaction term was highly non-significant with a very small cell size, so it was removed from the model.

Results were similar to the findings from the comparison of the size of the relative risks in the multinomial regression model, though with some differences. Covariates that significantly predicted chronic poverty over and above transient poverty in the absence of government benefits, among individuals who were poor, included *long-term disability*, *non-high school graduate*, and *senior household*, paralleling the findings above. In contrast to the findings above, *long-term unemployment* was also a significant predictor of chronic poverty among individuals who were poor, while *immigrant household* and *single mother household* were not. As above, the difference was particularly striking for *senior household*, which was not a significant predictor of chronic poverty in earlier analysis that included government benefits in resources, but was highly significant when government benefits were excluded. These results are shown below in Table 27.

Table 27. Multivariate analysis results of binary logistic regression with outcome chronic poverty status *after excluding government benefits from family resources*, for poor population only (excluding nonpoor from sample).

Covariate	Chronic poverty odds ratio	(se) [95% CI]	t statistic (p-value)
Transient poverty predictors			
Short-term unemployment (1-3 yrs) (vs no unemployment)	0.90	(0.61) [0.23, 3.55]	t=-0.15 (p=0.88)
Short-term disability (1-3 yrs) (vs no disability)	2.69	(1.31) [1.01, 7.16]	t=2.05 (p<0.05)*
Chronic poverty predictors			
Long-term unemployment (4-6 yrs) (vs no unemployment)	28.34	(36.12) [2.17, 370.50]	t= 2.62 (p=0.01)*
Long-term disability (4-6 yrs) (vs no disability)	26.88	(30.47) [2.73, 264.36]	t=2.90 (p=0.01)*
Non-high school graduate	3.39	(1.91) [1.08, 10.64]	t=2.16 (p=0.04)*
Immigrant household	1.52	(1.32) [0.26, 8.78]	t=0.49 (p=0.63)
Single mother household	1.25	(1.04) [0.23, 6.73]	t=0.27 (p=0.79)
Senior household	27.48	(25.51) [4.23, 178.71]	t=3.57 (p<0.01)*
Control variables			
Race/ethnicity (of head of household)			
Hispanic	1.06	(0.88) [0.20, 5.68]	t= 0.08 (p=0.94)
Black	10.57	(6.64) [2.97, 37.55]	t= 3.75 (p<0.01)*
White or other (omitted)			
Children in household (more than half of years)	1.43	(0.98) [0.36, 5.67]	t=0.52 (p=-0.60)
High housing cost area (more than half of years)	1.38	(0.80) [0.43, 4.43]	t=0.55 (p=0.58)

* p<0.05

Discussion

The results of the regression analysis, using the original outcome of longitudinal SPM status (with government benefits included in family resources), broadly conform to the conceptualization of transient versus chronic poverty from economic theory. However, a few results were different from those expected.

In terms of chronic poverty, the relative risk of chronic poverty was substantially increased for households with long-term limitations in their base of income-producing assets, as predicted by economic theory.

Chronic unemployment, despite actively seeking work, is a likely indicator of lack of marketable job skills or work experience, and thus constrained ability to earn income through employment. Households in which adults were unemployed for the long-term demonstrated five times the risk of chronic poverty, controlling for other covariates.

Households in which adults have long-term disabilities are also limited in their income-generating capacity, as such individuals are often unable to work or limited in the types of jobs they can perform. Results showed that households where the head, wife, or cohabitor had a disability over the long-term (compared to no disability) were linked to more than five and a half times the risk of chronic poverty for households predominantly living in a lower housing cost area over time, and to an even larger risk for households predominantly living in a high housing cost area, controlling for other covariates. The particularly high risk of chronic poverty associated with long-term disability in a high housing cost area may reflect the fact that individuals with long-term disabilities typically rely on federal disability benefits (SSI or SSDI) as a primary income source, and such benefits are not adjusted for geographic differences in costs of living.

Households where adults lack a high school education are also limited in their income-generating capacity because the potential family wage earners are ineligible for most jobs that pay adequately. Results showed households where the head, wife, or cohabitor had less than a high school education had more than five times the risk of chronic poverty, controlling for other covariates. Immigrant households may face multiple limitations in their capacity to produce income over the long-term, for example due to ineligibility for legal employment, ineligibility for federal benefits, lack of English language skills, and/or inadequate social networks to connect to job opportunities. Results showed that immigrant households experienced more than four times the risk of chronic poverty, controlling for all other covariates. Finally, households headed by single mothers (not living with partners, relatives, or friends to share household income and expenses) are limited in their income-generating capacity because they include only one adult, not two or more, to support a multi-person family. Results showed that predominantly single mother households, controlling for other covariates, had more than three and a half times the risk of chronic poverty.

Results for transient poverty were more complex. Economic theory posits that transient poverty is associated with short-term disruptions in income. Short-term unemployment and short-term disability can cause such income disruptions, when usually working family members experience a temporary stoppage in employment. Indeed, results showed that households where the head, wife, or cohabitor was unemployed for the short-term (versus no unemployment) experienced nearly one and a half times the risk of transient poverty, and households where the head, wife, or cohabitor was disabled for the short-term (versus no disability) were linked to more than twice the risk of transient poverty, after controlling for other covariates.

However, an increased risk of transient poverty was also significantly predicted by several variables expected to be associated with chronic poverty that imply long-term limitations in income-generating capacity. Thus long-term unemployment was associated with more than four times the risk of transient poverty, controlling for other covariates. Households with non-high school graduate adults and single mother households were linked to more than twice the risk of transient poverty, while households where individuals had long-term disabilities (versus no disability) experienced a nearly three-fold increased risk of transient poverty among those predominantly living in lower housing cost areas and an even greater risk among those predominantly living in high housing cost areas, controlling for other covariates. These relative risks were similar in size or larger than those associated with expected transient poverty predictors that are directly linked to income disruption.

These results suggest that a limited base of income-generating assets not only substantially increases the risk of long-term poverty, but also, to a lesser degree, increases vulnerability to the detrimental impact of short-term resource shortfalls. Thus some households with a precarious asset base and constrained ability to generate income may succeed in securing resources above the poverty threshold in most years, but may still be less able to avoid or mitigate the effects of temporary reductions in income (or increases in expenses), resulting in a greater likelihood of transient poverty.

For each of these variables related to long-term limitations in assets that significantly predicted transient as well as chronic poverty, the associated relative risk of transient poverty was smaller than the risk of chronic poverty. Further analysis showed that covariates significantly associated with chronic poverty over and above transient poverty among individuals who were poor included immigrant household, non-high school graduate household, and long-term disability in high housing cost areas.

Based on economic theory, more covariates associated with asset limitations might be expected to show a stronger association with chronic poverty over transient poverty. A possible explanation for the somewhat weaker-than-expected observed distinction between the predictors of chronic poverty versus transient poverty is that government benefits may have shifted many households with asset limitations from chronic poverty into transient poverty, so that household characteristics indicative of a weak asset base became more significant as predictors of transient poverty. Analysis to test this possibility provided some support for this proposition. When government benefits were excluded from family resources, more variables associated with asset limitations were significant predictors of chronic poverty, chronic poverty relative risks were generally larger for these variables, and chronic poverty coefficients were statistically significantly larger than transient poverty coefficients for more of these variables. The differences were particularly striking for senior households, which showed a greatly increased risk of chronic poverty when government benefits were excluded, reflecting the strong impact of Social Security on chronic poverty among seniors.

An unexpected result was that short-term disability (households where the head, wife, or cohabitor was disabled for the short-term) was associated with a more than three-fold increased risk of chronic poverty, after controlling for other covariates, though this risk factor was expected to be associated only with transient poverty. Further exploration is needed to explain this relationship. In addition, senior households were significantly associated with transient poverty, and not with chronic poverty as expected. However, the associated increased risk of transient poverty was relatively small (less than 1.5 times the risk), and analysis of goodness of fit for the separate binary logit model for transient poverty showed only borderline significance

for this variable, suggesting together that senior household was not a particularly important predictor of transient poverty. The lack of significant association with chronic poverty likely indicates that seniors' reduced capacity to earn income through work was counterbalanced by their eligibility to receive non-employment income through Social Security; this explanation is supported by the results of the regression analysis with government benefits excluded from family resources, which showed senior status to significantly predict chronic poverty in the absence of government benefits.

Finally, though the control variables were not the focus of this study, two of them merit brief mention as they were significant predictors of both transient and chronic poverty in multivariate analysis. Households with children demonstrated a decreased risk of transient poverty and a borderline significantly decreased risk of chronic poverty, after controlling for all other covariates. This result is somewhat unexpected in that children generally increase household expenses without directly contributing income, so households with children might be expected to have a greater risk of poverty than households without children, after accounting for other household characteristics. However, this result could reflect the fact that most households with children are headed by adults in their prime working ages, with relatively strong capacity to secure income through employment; or it could reflect the fact that many government benefits that are included in family resources under the Supplemental Poverty Measure are particularly targeted to households with children, e.g. the EITC, WIC, and TANF, creating relatively more potential income sources for these types of households. The latter explanation is supported by the results of the analysis excluding government benefits from family resources, which showed that children in the household was significantly associated with chronic poverty in the absence of government benefits.

The control variables for race/ethnicity were also significantly associated with longitudinal poverty status. Specifically, Hispanic and Black race/ethnicity of the head of household were each linked to an increased risk of transient poverty and chronic poverty, after controlling for other covariates. There are a variety of possible explanations for this relationship. Hispanic and black individuals might experience hiring and wage discrimination that constrains their ability to earn income through employment or avoid interruptions in work income; they might experience housing discrimination that leads them to pay more for housing or live in areas with reduced access to employment opportunities; cultural attitudes or beliefs linked to race/ethnic-specific communities might influence patterns of employment or participation in government benefit programs; or some other explanation. Further research would be needed to clarify this relationship.

Chapter 8

IMPLICATIONS

Policy and Research Implications

This study was motivated by the idea that the traditional approach to measuring poverty in the United States has serious shortcomings as a method of describing the poor population and informing policy solutions. By adopting an alternative approach to quantifying the problem of poverty, this study aimed to offer a different, more nuanced, and more useful picture of the poor population of the United States. Two major shortcomings of the traditional measurement approach that this study addressed were 1) the use of the poorly-grounded official federal poverty measure to define who qualifies as poor, and 2) the use of a cross-sectional approach to describe and analyze the characteristics of the poor population.

Thus this study employed the Supplemental Poverty Measure (SPM) in place of the official poverty measure (OPM) to determine who qualified as poor, and adopted a longitudinal approach instead of the traditional cross-sectional approach for analyzing the size and characteristics of the poor population. The SPM was used because it better accounts for the current costs of basic needs, geographic differences in cost of living, contemporary living arrangements, non-discretionary household expenses, and perhaps most importantly, a more complete range of resources available to households to meet their basic needs, including indirect and cash-equivalent government benefits such as food stamps (SNAP), housing subsidies, and the EITC. The longitudinal approach to data analysis was adopted because prior research showed that duration of poverty was an important determinant of poverty demographics and detrimental outcomes. Prior empirical research offered evidence that the demographics of long-term or chronic poverty differed from those of short-term or transient poverty, and that chronic poverty had a greater detrimental impact on individual life outcomes than transient poverty. Moreover, economic theory posits that transient and chronic poverty are distinct phenomena, with transient poverty caused by short-term income disruptions, while chronic poverty is caused by long-term limitations in the base of human and/or material assets used to generate income, again suggesting the importance of examining these two types of poverty separately.

Prior research had examined poverty in the United States using the SPM and its precursors, but only using a cross-sectional analysis approach. Other research had examined poverty in the United States from a longitudinal perspective, but only using the official federal poverty measure or a derivative measure, and using older data from the pre-welfare reform era and/or data that excluded key demographic groups, particularly immigrants and Hispanics, so that results were not representative of the current U.S. population and policy environment. The current study aimed to fill this gap by examining poverty in the United States using the better-grounded Supplemental Poverty Measure, employing a longitudinal approach in order to distinguish transient versus chronic poverty, and utilizing data that were representative of the U.S. population during a timeframe that reflects the current structure of U.S. poverty policy.

Thus the objectives of this study included the following: to describe the prevalence and demographics of transient and chronic poverty in the United States in the post-welfare reform era, using the Supplemental Poverty Measure; to determine whether using the SPM rather than the official federal poverty measure made a difference in the measured size and characteristics of the transient and chronic poor populations; to identify the impact of government benefits, private resources, and specific household expenses on decreasing or increasing the rates of chronic and transient poverty; and to determine the degree to which the predictors of chronic and transient

poverty in the United States during this timeframe corresponded to ideas from economic theory about the different determinants of chronic versus transient poverty; all with a focus on identifying implications for research and for policy to address poverty in the United States.

Implications of Results

Use of the Supplemental Poverty Measure

Descriptive analysis examined transient and chronic poverty rates and demographics using both the Supplemental Poverty Measure and the official federal poverty measure (OPM), in order to assess the impact of using the SPM versus the OPM to examine poverty longitudinally. Results showed statistically significant differences in the overall rates of chronic and transient poverty, as well as significant differences in the transient and chronic poverty rates for a variety of demographic subgroups, depending on which measure was used. In general, chronic poverty rates were lower, and transient poverty rates were higher, when using the SPM versus using the OPM. Absolute differences in the overall chronic and transient poverty rates calculated using each measure were relatively modest, but differences in the rates for some demographic subgroups were large.

Because the SPM is more rationally grounded and comprehensively operationalized than the OPM, any significant difference in the picture of poverty produced using the SPM versus the OPM can be viewed as justifying the use of the SPM over the OPM to examine poverty in the United States. Results from earlier research show that the demographics of cross-sectional poverty in the United States look different when using the SPM versus the OPM, and this study shows that the same holds true when examining poverty longitudinally. Results from this study thus suggest that researchers and policymakers should consider using the SPM rather than the OPM when studying poverty from a longitudinal perspective as well.

Impact of Current Policies on Chronic and Transient Poverty Rates

An important research rationale for utilizing the SPM to examine poverty is that the SPM incorporates nearly all of the cash, near-cash, and tax-related government benefits intended to address poverty when accounting for family resources, while also accounting for taxes as non-discretionary family expenses, and therefore using the SPM enables examination of the impact of these different government policies and programs on poverty rates. This type of analysis is not possible when using the OPM, as the OPM only considers direct cash benefits as contributors to household resources. Thus through descriptive analysis, this study examined the impact of various government policies on decreasing or increasing chronic and transient poverty rates, while also examining the impact of selected private resources and specific household expenses on these rates.

Results showed that government benefits overall had a greater absolute and relative impact on the chronic poverty rate than the transient poverty rate. Eliminating all government benefits would have increased the overall chronic poverty rate by 9 percentage points (from 2.1% to 10.8%), while increasing the overall transient poverty rate by 5 percentage points (from 18.9% to 23.9%). This partly reflects an observed effect of government benefits in this study, which was to increase household resources just enough in some cases to shift individuals out of chronic poverty into transient poverty, thus reducing the chronic poverty rate while simultaneously increasing the transient poverty rate. This effect was the dominant impact of government benefits among immigrants, and was also particularly apparent for two specific

benefit programs, namely housing subsidies (among immigrants, seniors, and children) and SSI (among immigrants and seniors). Overall, nearly one third of transient poor individuals would have been chronically poor if they had not received any government benefits.⁴⁴ These results suggest that policymakers should consider the longitudinal impact of specific policies and of the overall package of government benefits on poverty. Is the objective of specific policies, or policy in general, to lift individuals out of poverty over the long-term? Or is the objective of policy to reduce but not eliminate the impact of poverty, by lifting individuals out of chronic poverty while leaving them vulnerable to transient poverty?

Analysis results also suggested that specific government programs may have different effects on transient versus chronic poverty, though the ability to detect these effects was limited by statistical power, particularly for specific demographic subgroups. For example, unemployment insurance had a greater (though only nominally significant) impact in reducing transient poverty than chronic poverty, while housing subsidies had a greater (though again nominally significant) impact on chronic poverty rates than transient poverty rates. These results suggest that policymakers should consider whether specific policies may be more effective in addressing either chronic or transient poverty.

Results showed, as well, that the existing system of government benefits had an uneven impact on chronic and transient poverty rates for different demographic subgroups. Seniors saw by far the largest reduction in poverty rates, particularly the chronic poverty rate, as a result of government benefits (essentially due to Social Security), while the overall system of benefits was less effective in reducing poverty rates among children, particularly the transient poverty rate. For immigrants, as stated above, the dominant impact of government benefits was not to reduce poverty overall, but rather to shift individuals out of chronic poverty into transient poverty. These results imply that policymakers should consider the differential impact of specific policies and the overall system of government policies on chronic and transient poverty among different demographic groups.

Prevalence, Demographics, and Predictors of Chronic and Transient Poverty

The primary focus of this study was to describe and analyze transient and chronic poverty in the post-welfare-reform United States, using the Supplemental Poverty Measure to examine who was *still* poor after accounting for most of the existing government policies designed to address poverty. Results showed some important differences between the chronic and transient poor populations, though the distinction between the two types of poverty was not as strong as might have been expected.

Chronic poverty—defined as poor in more than half of the years examined—affected a very small proportion of individuals in this study. The measured chronic poverty rate was only 2.1%, or approximately one in 50 individuals, equivalent to 6.4 million people, per U.S. Census population estimates for 2008 (U.S. Census, 2009). Demographic groups with particularly high chronic poverty rates included immigrants, Hispanics, blacks, and seniors; individuals in households that included non-high school graduates, adults with disabilities, non-working adults, and single mothers; and individuals living in areas with high housing costs.

⁴⁴ The effect of government benefits of shifting individuals from chronic into transient poverty might help explain why the chronic poverty rate was lower, and the transient poverty rate higher, when using the SPM versus the OPM. The SPM includes more government benefits in family resources, so one might expect to see more individuals shifted from chronic poverty into transient poverty (thus reducing the chronic poverty rate while increasing the transient poverty rate) when measuring poverty using the SPM.

Chronic poverty was significantly predicted by household characteristics associated with long-term limitations in the base of assets available to generate income. Thus households characterized by chronic unemployment (a likely indicator of limited job skills or work experience), long-term disability (particularly in high housing cost areas), lack of a high school diploma or GED, immigrant status, and single motherhood, all showed significantly increased risks of chronic poverty, after controlling for other covariates. Three characteristics were particularly linked to chronic poverty more than transient poverty, after controlling for other covariates: immigrant household was a significant predictor of chronic but not transient poverty; long-term disability in a high housing cost area was associated with a significantly higher risk of chronic poverty than transient poverty; and lack of a high school diploma or GED was associated with a borderline significantly higher risk of chronic poverty than transient poverty. Moreover, all three of these covariates were significant predictors of chronic poverty over and above transient poverty when examining poor individuals only.

These results suggest that policies to address chronic poverty should target individuals with limited bases of assets available to generate income. Two policy approaches are possible: 1) asset building, designed to increase the capability of individuals to generate income, particularly through employment; or 2) sustained support, i.e. providing long-term income supplements or expense subsidies so that individuals can meet their basic needs with the predictably low levels of income they are able to generate independently.

In terms of asset building, two particular strategies that could be effective in addressing chronic poverty are suggested by the results that non-high school graduate households and immigrant households were particularly likely to be categorized as chronically poor. One would be targeting educational interventions or vocational training opportunities to young people at risk of dropping out of high school, in order to enhance their likelihood of receiving the educational credentials needed to qualify for jobs that pay adequate wages. The other would be immigration reform, to enhance income-generating capacity by creating more opportunities for immigrants to work legally, which could also have the effect of increasing immigrants' incomes through increased eligibility for work-dependent government benefits such as Social Security and the EITC.

Some strategies for sustained support policies are also suggested by the results. Households with long-term disabled individuals living in high housing cost areas had an especially high risk of chronic poverty, perhaps because such individuals frequently rely on federal disability benefits, which are uniform across the country and do not account for higher living costs in more expensive areas. Increasing these disability benefits, and in particular adjusting them for geographic differences in costs of living, could thus be a useful strategy for addressing chronic poverty. Another strategy that could be considered is targeting ongoing housing subsidies to asset-limited households particularly likely to experience chronic poverty. This strategy is suggested by the fact that housing subsidies showed a notable (though nominally significant) impact on reducing chronic poverty rates in this study, even though such subsidies are greatly oversubscribed so that only a small proportion of eligible and interested households actually receive them.

In contrast to the small population affected by chronic poverty, this study found that transient poverty – defined as poor in at least one year but not more than half of years examined – affected a fairly large proportion of individuals. The transient poverty rate for the overall sample over the 11-year study timeframe was 18.9%, or nearly one in five individuals, equivalent to 57.5 million individuals, per U.S. Census population estimates for 2008 (U.S.

Census, 2009). Demographic groups with particularly high transient poverty rates largely matched those with high chronic poverty rates, including immigrants, Hispanics, and blacks, as well as individuals in households that included non-high school graduates, adults with disabilities, single mothers, and non-working adults. However, transient poverty rates were generally less disproportionately high than chronic poverty rates for these groups. As a result, the transient poor population was less concentrated among particularly disadvantaged demographic groups, and more similar to the demographics of the overall sample, compared to the chronic poor population.

Transient poverty was significantly predicted, and chronic poverty was not, by one of the expected predictors linked to income disruption: short-term unemployment. This result suggests that enhancing unemployment benefits could be a strategy to reduce transient poverty.

However, transient poverty was equally or more strongly predicted by household characteristics linked to asset limitations, including long-term unemployment, long-term disability, non-high school graduate, single mother household, and senior household. In the case of households characterized by long-term unemployment, single mothers, and seniors, the relative risk of transient poverty was not statistically different from the relative risk of chronic poverty. These results suggest that individuals with a constrained base of income-generating assets had an increased vulnerability to short-term poverty, perhaps due to reduced ability to avoid or mitigate the effects of temporary income reductions (or expense increases), even if they were usually able to secure an income above the poverty threshold. This outcome appeared to be partly explained by the fact that government benefits increased household resources enough to shift some individuals from chronic poverty into transient poverty, so that asset-limited individuals who would be expected to be chronically poor appeared instead in the transient poor population.

These results imply that policies targeting individuals with limited asset bases are likely to have an impact on transient poverty as well as chronic poverty. Identifying whether such individuals require long-term/intensive interventions (appropriate to address chronic poverty) versus short-term interventions (appropriate to address transient poverty) may require accounting for eligibility for or receipt of government benefits as part of the income-generating asset base. For example, asset-limited households already receiving housing subsidies or Social Security might be more likely to require additional short-term rather than long-term support to avoid poverty.

Findings from the analysis of the impact on chronic and transient poverty rates of government benefits, private resources, and specific household expenses suggest two other policy interventions to address transient poverty, as two expenses were linked to significant increases in the overall transient poverty rate. Medical out-of-pocket expenses had the largest impact, increasing the transient poverty rate by 4.6 percentage points. This result suggests that health care reform policies not specifically designed as poverty interventions could have an important impact on transient poverty if they reduce out-of-pocket medical spending. Federal payroll taxes (FICA) also had a significant impact, raising the transient poverty rate by 1.7 percentage points. This result suggests that strategies such as reducing payroll or income taxes for the working poor, and/or expanding government benefits that specifically target the working poor – e.g. the EITC – could potentially help reduce transient poverty by mitigating the impact of payroll taxes for these individuals.

Prioritizing Policy Interventions

This study found that government benefits overall had an important impact on the transient poverty rate and especially on the chronic poverty rate during the study timeframe, reducing the rate of transient poverty by more than one fifth and of chronic poverty by more than four fifths. However, even after accounting for a wide range of government programs designed to address poverty, one in five individuals still experienced transient poverty and one in fifty experienced chronic poverty. Given the documented serious negative effects of poverty on a variety of life outcomes, these findings suggest a justification for greater government investment in addressing poverty. At the same time, given the current political climate of reluctance to significantly expand government spending, any proposal for new or increased spending on poverty interventions would be most likely to succeed if it is strategic and targeted.

Identifying particular types of poverty over time that are likely to cause the greatest damage to individual health and well-being is one approach to choosing how to prioritize poverty policy interventions. This study did not directly examine the impact of transient or chronic poverty on life outcomes, but prior research, informed by the life course approach to epidemiology, suggests two types of poverty over time that are likely to have a particularly negative impact on life outcomes.

Chronic poverty is likely to cause greater harm than transient poverty, because a longer exposure to the negative health influence of poverty is likely to result in an accumulation of risk. Empirical research provides some support for the proposition that chronic poverty is associated with more serious health, mental health, and developmental problems than transient poverty, with the strongest evidence of worse outcomes attributable to chronic poverty for children. At the same time, while transient poverty is likely to have a lesser impact in general, even short-term exposure to poverty may have serious long-term impact or even cause irreversible damage if it occurs during a particularly critical or sensitive period of development. Again, empirical research supports this idea, particularly with respect to the serious long-term impact of even short-term poverty experienced during the sensitive developmental period of childhood. Thus chronic poverty, along with transient poverty occurring during sensitive periods such as childhood, are two logical targets for prioritizing expansion of poverty policy interventions.

Results from this study suggest that eliminating chronic poverty could be a feasible, if somewhat ambitious policy goal in terms of cost and scope. Chronic poverty was found to affect only 2.1% of individuals, equivalent to 6.4 million individuals per U.S. Census population estimates for 2008 (U.S. Census, 2009). The cumulative gap between annual household resources and annual poverty thresholds for these individuals over the study timeframe was approximately \$14,530 per person over the six years examined, or an average of \$2,420 per person per year (in 2008 dollars). Thus completely eliminating poverty for these individuals through direct income transfers would have cost approximately \$15.5 billion per year overall (in 2008 dollars), representing approximately half of one percent (0.52%) of total 2008 federal budget outlays (U.S. Office of Management and Budget, 2009). To eliminate poverty for chronically poor children only, through direct income transfers, would have cost approximately \$4.7 billion per year (in 2008 dollars), equivalent to less than two-tenths of one percent (0.16%) of 2008 federal budget outlays. Costs would have been lower to achieve the more modest goal

of lifting these individuals out of chronic poverty, without necessarily eliminating transient poverty among this group.⁴⁵

In terms of transient poverty among children, this study found a child transient poverty rate⁴⁶ of 20.6%, equivalent to 15.2 million children per U.S. Census population estimates for 2008 (U.S. Census, 2009). Child transient poverty affected a larger number of individuals than chronic poverty, but with a smaller gap between resources and needs. Thus the cumulative gap between annual household resources and annual poverty thresholds for transient poor children was approximately \$5,170 per child over the six years examined, or an average of \$860 per child per year (in 2008 dollars). Eliminating poverty for these children, then, via direct income transfers would have cost approximately \$13.1 billion per year overall (in 2008 dollars), equivalent to less than half of one percent (0.44%) of total 2008 federal budget outlays (U.S. Office of Management and Budget, 2009). Thus in terms of total dollars required, this study suggests that eliminating child transient poverty could also potentially be a feasible, if somewhat ambitious policy goal.

Limitations and Future Research

This study had some limitations and raised some issues that call for additional research.

Methodologically, the sample used for analysis in this study had a larger-than-ideal level of missing data in the outcome of longitudinal SPM poverty status. A high rate of missing data is probably inherent in any research utilizing a 17-parameter measure across multiple years, and imputation strategies were used to minimize the rate of missingness. Nonetheless, the missing data introduces an undesired possibility of sample bias. Thus future research should explore additional or alternative imputation strategies to reduce the number of observations lacking valid SPM status data, keeping in mind the additional level of uncertainty introduced by any imputation method employed. This challenge in utilizing the SPM for research also raises questions about the practicality of a poverty measure that involves such a high level of complexity. Research to explore the possibility of a more streamlined but still well-grounded poverty measure, with a smaller number of components, could be beneficial.

The relatively small size of the sample used for this study also led to large confidence intervals for many analyses, limiting the precision of the estimates of risk of poverty and rates of poverty especially for demographic subgroups. This was particularly true in the case of estimates related to chronic poverty, because chronic poverty affected such a small proportion of the sample. Repeating this analysis in another larger dataset would thus be ideal; unfortunately, no larger nationally representative long-term longitudinal dataset exists that includes all of the variables required to calculate the SPM. Forthcoming research from the Census Bureau will examine SPM poverty status longitudinally in the Survey of Income and Program Participation

⁴⁵ Note that actually addressing chronic (or transient) poverty through federal policy would likely require a less precise benefit mechanism than specifically targeted annual direct income transfers, and would therefore probably involve somewhat higher costs. As a possibly more realistic example, housing subsidies could be provided to chronically poor individuals. The rough cost of providing housing subsidies for the duration of the study period to all chronically poor individuals who were not already receiving them would have been approximately \$2,700 per chronically poor individual per year (in 2008 dollars), for a total of \$17.2 billion per year, equivalent to 0.57% of total 2008 federal budget outlays (U.S. Office of Management and Budget, 2009). To provide housing subsidies to families of chronically poor children only would have cost approximately \$9.4 billion per year, equivalent to 0.32% of 2008 federal budget outlays.

⁴⁶ Rate for individuals age 0 to 7 in the baseline year of the study, i.e. those who were children for the entire study period.

(SIPP) (Short & Garner, 2012), which does have a much larger sample and will thus offer an interesting complement to this study, but the SIPP covers only a three-year timeframe, which does not seem adequate to fully explore the phenomena of transient versus chronic poverty. It is worth noting, as well, that no existing longitudinal dataset provides adequate representation of the homeless population of the United States, who are presumably particularly likely to experience chronic poverty, and thus the true extent of chronic poverty is likely underestimated in any research that relies on a longitudinal survey administered via mail or telephone.

In terms of results, this study attempted to identify some relevant distinctions between the demographics and predictors of chronic versus transient poverty. Some distinctions were found, but there was also substantial overlap in the characteristics of individuals affected by these two types of poverty, in part due to the impact of government policies that shifted some individuals from chronic poverty into transient poverty. To be able to effectively design and target policies specifically to benefit individuals who remain chronically poor after accounting for the effects of existing government benefits, more research would be useful to more specifically identify characteristics or combinations of characteristics that predict chronic poverty over and above transient poverty. Qualitative research might be particularly useful for exploring this question and identifying specific variables to examine on a larger scale in further quantitative analysis. In the absence of a more specific set of predictors of chronic poverty, however, a retrospective approach could also be used to target chronic poverty policies, for example targeting benefits to individuals who meet both a multi-year income-to-means test (e.g. income below the poverty threshold in multiple prior years) in combination with an asset test that includes human assets (like education or disability) as well as material assets.

This study also offered only a limited exploration of the phenomenon of transient poverty. Further research would be beneficial in this area, particularly research to understand the types of income- or expense-related events that trigger entrance into and exits from short-term spells of poverty. Some prior research on poverty in the United States has examined these types of trigger events (Bane & Elwood, 1986; Stevens, 1999), but all has used older data from the pre-welfare-reform era and the official federal poverty measure, and none has explicitly focused on transient poverty. Thus updated research using more current data, employing the SPM, and focusing on transient poverty would be helpful in strategizing policies to specifically target transient poverty.

In addition, as noted above, some findings from this study showed that an impact of existing government benefits was to shift some individuals from chronic poverty into transient poverty. This phenomenon deserves more in-depth study, in order to better understand the longitudinal impact of specific policies and of the combined set of government policies designed to address poverty. Analysis of the extent to which specific policies and the overall system of government programs benefit chronically poor versus transiently poor individuals would also be worthwhile. This type of research might suggest opportunities to improve the targeting of resources or design of programs to address distinct needs of individuals experiencing short-term versus long-term poverty.

Finally, it is important to note that this study examined chronic and transient poverty during a specific timeframe (1998 to 2008), from the beginning of the full implementation of welfare reform through the first year of the Great Recession. The Great Recession triggered some important expansions and changes in the system of government benefits designed to address poverty, though many of these changes were relatively short-term. Moreover, the long-term macroeconomic impact of the Great Recession may have changed the likelihood of and characteristics that would predict chronic versus transient poverty. Thus it would be useful for

future research to examine the phenomena of chronic and transient poverty in the post-Great Recession era, once data are available to do so.

Contributions of Study

Overall, this study makes several contributions to the existing research on poverty in the United States. By examining poverty longitudinally, over a timeframe relevant to the current post-welfare reform policy context, and using a sample designed to be representative of the population of the United States, including the immigrant population, this study presents a more up-to-date picture of chronic and transient poverty than is available in prior research.

This study was also the first to examine longitudinal poverty in the United States using the Supplemental Poverty Measure, a better-grounded measure of poverty than the official federal poverty measure used in all prior research on poverty duration. Developing a method to construct the SPM in the Panel Study of Income Dynamics represents a contribution in itself, as the SPM had not previously been implemented in the PSID, and the method developed has potential to facilitate the use of the SPM as an indicator of poverty in other research using the PSID, an important national longitudinal dataset. Use of the SPM also made it possible for this study to examine the longitudinal impact of diverse government policies and benefits on rates of chronic and transient poverty, an analysis which was not possible in earlier longitudinal poverty research using the OPM. In addition, by comparing longitudinal poverty rates using the SPM versus the OPM, this study also provides more information about the differences in the descriptions of poverty produced by these two measures, contributing to ongoing discussion about the merits and appropriate uses of the SPM as a poverty measurement tool.

An important objective of this study was to describe and analyze the characteristics of the chronic poor and transient poor populations, using economic theory to guide the exploration of predictors of each type of poverty. Results showed some ways in which these two populations differ, suggesting some different possible strategies for targeting and addressing policies to specifically address each type of poverty. More research would be useful, however, to identify more distinctive predictors of chronic poverty over and above transient poverty, and to further explore the triggers of transient poverty, in order to operationalize policy design and targeting.

Perhaps the most important contribution of this study, however, is the potential impact of illustrating an approach to measuring poverty that differs substantially from the traditional practice of poverty measurement in the United States. The approach presented here suggests additional dimensions of poverty causes and effects and policy impacts to consider when designing, targeting, and prioritizing interventions to address poverty. Thus perhaps this study can contribute to the development of a more thoughtful, efficient, and effective system to mitigate the social problem of poverty in the United States.

Chapter 9

CONCLUSION

Attention to poverty and particularly measurement of poverty in the United States is currently at an historic high. The Great Recession pointed a spotlight on poverty at the national level, and while public interest may have subsided some recently, Americans in general are more attuned to the problem of poverty now than they have been for many years. In terms of poverty measurement, the official U.S. government announcement and implementation of the Supplemental Poverty Measure in 2011 represents the most significant change in official poverty measurement since the original development of the Orshansky thresholds in 1968 (Besharov & Couch, 2009; ITWG, 2010). Exploring alternative approaches to measuring U.S. poverty is thus very timely, with potential to inform the active and ongoing debate about how poverty should be assessed and ultimately addressed.

This study sought to offer a useful alternative approach to measuring the extent and characteristics of poverty in the United States, in order to suggest some concrete policy approaches and priorities that might enhance the effectiveness of poverty interventions. On a broader level, however, this study also sought to question traditional ways of thinking about poverty in the United States, suggesting the value of exploring alternative approaches to framing poverty as a social problem, and thereby making visible different possible policy solutions. By broadening the debate about what poverty in the United States means and how it can be examined, the hope is to encourage diverse new approaches to understanding and addressing the important problem of poverty.

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