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On intra-annual consumption-poverty in the U.S: Response to SNAP and the importance of within-year variation☆

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ABSTRACT

We use U.S. quarterly consumption data and decomposable poverty indexes to study consumption-based intra-annual poverty and its relationship to participation in the Supplemental Nutrition Assistance Program (SNAP). Intra-annual spells of consumption-poverty account for half of the incidence and one-third of the severity of all consumption-poverty among U.S. households. Households experiencing consumption-poverty for at least one quarter, but not for the whole year, are more likely to self-select into SNAP than the general population but less likely to do so than those who are poor for the year. SNAP participation, in turn, reduces annual and intra-annual poverty.

1. Introduction

Static poverty measures, based on the share of households with annual incomes below the poverty line, provide an incomplete representation of material deprivation among U.S. households. The importance that the dynamic nature of poverty has for understanding deprivation and for developing an effective social safety net is now well recognized in social science; the poverty dynamics agenda has elicited dozens of studies in the context of the U.S. alone (Cellini, McKernan, & Ratcliffe, 2008).

One of the most persistent findings on U.S. poverty dynamics is that a significant portion of exposure to poverty is temporary. While more than half of the U.S. population will experience at least one year of poverty before age 65 (Rank & Hirschl, 1999), only 2.8% of all households were poor every year between 2004 and 2006 (Anderson, 2011).

A review of the literature on U.S. poverty dynamics demonstrates that the likelihood of entering poverty is roughly 4% per year and exiting poverty is 33%. Shorter poverty spells are more likely than longer spells. Up to 59% of individuals entering poverty have a spell that only lasts one year, and up to 84% of new spells end within 4 years (Cellini et al., 2008).

The annual reference data in most studies, however, masks the higher prevalence of even shorter spells. Monthly income data shows that the median length of poverty exposure is only 4.5 months (Anderson, 2011;

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Naifeh, 1998). However, hardship lasting less than one year receives little attention in the literature. This may be a consequence of a relative scarcity of data that report measures of well-being for reference periods shorter than one year.

This study contributes to the relatively thin literature on intra-annual poverty dynamics, and it is the first to do so with consumption-based measures. Most of what we know about short-term poverty spells comes from the Survey of Income and Program Participation (SIPP), a series of three or four year-long panels that report monthly income.[1] SIPP data for 2004–2006 show annual poverty rates between 10.4 and 10.9%, while rates of episodic poverty, that is poor for at least two consecutive months, are nearly 20% each year (Anderson, 2011).

The contrast between short- and long-term poverty is even sharper for longer time frames: from January 2004 to December 2006, 28.9% of the U.S. population experienced episodic poverty while only 2.8% were poor over the entire three-year period. Episodic poverty in the ongoing 2008–2013 SIPP is even higher with nearly one in three individuals experiencing a poverty spell in the course of just two years (DeNavas-Walt, Proctor, & Smith, 2012).

Further examination of intra-annual poverty spells can supplement our understanding of poverty dynamics because their incidence is high (Anderson, 2011), and they align well with eligibility criteria for many transfer programs. Short poverty spells also predict hardship, including housing problems, lack of consumer durables, fear of crime, and difficulties in paying for necessities (Iceland & Bauman, 2007). Short-lived poverty spells have also proven useful in understanding food insecurity (Leete & Bania, 2010), a condition with severe consequences for health and productivity (Gundersen & Kreider, 2009).

On the other hand, short-term income-poverty spells may have limited consequences because many U.S. households have predictable seasonal variation in income, and access to sufficient consumption smoothing techniques to handle short-term adversity. The quarterly expenditure data in this paper shed light on the incidence and severity of short-lived hardship by examining the extent to which consumption, as opposed to income, falls short of the poverty line for a whole year and for portions of it. Moreover, one of the primary reasons for quantifying hardship is to help identify vulnerable populations and to provide metrics for measuring the effects of transfer programs on those targeted. This study, therefore, estimates the impact that participation in the Supplemental Nutrition Assistance Program (SNAP) has on annual and intra-annual consumption-poverty. Nearly half of those with consumption below the poverty line for at least one quarter do not experience consumption-poverty for the whole year. Households that experience at least one quarter of consumption-poverty are more likely to turn to SNAP for assistance than the general population but less likely to do so than those who are poor over the whole year. Participation in SNAP, in turn, lowers annual and intra-annual consumption-poverty.

[1] A series of U.S. Census Bureau reports on short-term poverty dynamics based on the various SIPP panels can be found at: http://www.census.gov/hhes/www/poverty/data/sipp/.

2. Background and motivation

2.1. Short spells of income poverty

Much of our understanding of U.S. poverty dynamics comes from the Panel Study of Income Dynamics (PSID), a long-term panel that started in 1968 (Bane & Ellwood, 1986; Rank & Hirschl, 1999, 2001; Rodgers & Rodgers, 1993; Stevens, 1999). A smaller number of studies also use the 1979 National Longitudinal Survey of Youth (NLSY) (Meyer & Cancian, 1998). This research generally focuses on the number of years in poverty over any given multi-year period, duration of poverty spells in terms of consecutive years, and transition probabilities of entering, exiting, and returning into poverty each year.

Initially, the study of poverty dynamics was largely motivated by concerns over a chronic underclass of households that are poor for long periods of time (Rodgers & Rodgers, 1993). The long-term nature of panels like the PSID and NLSY is fit for this task. A few decades of inquiry indicate that most poverty spells are short and, while chronic poverty that lasts for multiple years is present, it is not the norm. Most periods of deprivation are experienced as isolated or repeated entries and exits from poverty (Cellini et al., 2008; Stevens, 1999). The fact that, to a large extent, material deprivation is not actualized within a persistent underclass, but is experienced by more than half of the U.S. population at some point in their lives calls for a better understanding of transient poverty.

Transient poverty is typically examined in the context of year to year changes in well-being over multiple years. Rodgers and Rodgers (1993) point out that, while data collection practices make measuring one-year poverty spells convenient, the choice of time period over which to measure poverty may be scope-dependent. They propose that for studies aiming to understand why some people are unable to achieve a satisfactory standard of living in the long run, a one-year measurement period may be too short, and multi-year panels are needed. If the objective is to identify people in need of short-term aid, a one-year period may be too long. Ours is one of few studies to focus on intra-annual poverty spells and their relationship to SNAP participation, and the only to do so with consumption-based measures.

Use of monthly income data from the SIIP sheds light on episodic poverty dynamics and consequences. Most studies show that nearly half of those experiencing episodic poverty in a given year are not poor by annual measures (Anderson, 2011). Iceland and Bauman (2007) show that households in poverty for only two months are more likely to report neighborhood and housing problems, fear of crime, lack of consumer durables, difficulties in paying for basic needs, and food insecurity. Adjusted odds ratios for these conditions, for those with one spell of episodic poverty relative to none, range from 1.2 to 1.9. Leete and Bania (2010) also find that monthly income volatility predicts food insecurity, regardless of annual income.

These studies imply that an examination of intra-annual deprivation may provide a supplement to what we know about U.S. poverty dynamics. Income-based