

**Food Assistance Programs and the Economic Patterns of
Single Mothers Following Poverty Exits**

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The well-being of single mothers has been a topic of much interest among policymakers and researchers, particularly with the passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). Despite this interest, a detailed understanding of the ways in which single mothers exit and reenter poverty, and of factors that may influence their prospects for long-term self-sufficiency has not yet been developed. A number of studies have looked at poverty transitions of former welfare recipients, but few have focused on poverty dynamics and pathways out of poverty for all single mothers, including those who have never received welfare. Fewer still have investigated non-poverty dynamics following a poverty exit. This paper will contribute toward filling this gap by examining the effect of the Food Stamp Program on the poverty patterns of single mothers, using large, nationally representative samples that cover the post-PRWORA period.

An important component in the longer-term economic success of poor single mothers may be participation in transitional benefit programs. The Food Stamp Program (FSP) is of particular relevance given the substantial size its benefits, and its widespread use. Mechanisms for the relationship between the FSP and poverty dynamics could include the income and consumption stability associated with FSP participation. For example, research presented at the first “Income Volatility and Implications for Food Assistance Programs” conference found that FSP participation is associated with reduced consumption and income volatility (Gundersen & Ziliak 2003). Given the widespread concern with the ability of those in poverty to leave and remain out of poverty, it is important to know whether such stability translates into more poverty exits and less poverty recidivism among single mothers who participate in the FSP. This is particularly relevant considering the much studied changes in FSP participation that accompanied the implementation of TANF programs.

Using data from the 1996 and 2001 panels of the Survey of Income and Program Participation (SIPP), this paper will investigate three highly policy-relevant questions: 1) What are the descriptive patterns of poverty dynamics and FSP participation and eligibility for single mothers during the post-PRWORA period?, 2) What role does FSP participation play in generating poverty exits and better longer term outcomes?, and 3) How has the relationship between FSP and poverty dynamics changed over time during the post-PRWORA period? Documenting and analyzing the relationship between poverty dynamics and FSP eligibility and participation represents an important contribution toward developing an understanding of how the FSP is utilized and how it benefits single mothers. In addition, answers to our research questions could have important implications for the extent to which efforts to increase FSP participation among single mothers should be intensified.

Background

The poverty rate for persons in single-mother households (without spouses) is substantially higher than the overall poverty rate, although the gap has decreased since 1997.¹ In 1991, the poverty rate was 40 percent for those in single-mother households, compared with 15 percent for all persons. The rate for persons in single-mother households, however, decreased in the mid-1990s as a result of the strong economy and the passage of PRWORA; it has remained relatively constant since 2000 (at about 30 percent) even as economic conditions have worsened. Consistent with these findings, there has been a corresponding increase in the employment and earnings of single mothers since the mid-1990s. Furthermore, monthly welfare caseloads have declined by more than half, from

¹ Authors' tabulations based on CPS annual data.

just over 14 million recipients in 1994 to fewer than 6 million in 2000, and the caseloads have stayed fairly stable since then.

As with poverty rates, rates of FSP eligibility and participation are much higher in single-parent households. For instance in 2001, 57 percent of single-parent households were eligible for the FSP compared to 44 percent of all households; 43 percent of single-parent households participated in the FSP compared to 27 percent of all households. Overall food stamp caseloads exhibited similar patterns to welfare caseloads, falling from 27 million recipients in 1994 to 17 million in 2000 before increasing to 21 million in 2003.²

During the past 20 years, there has been considerable research on poverty and poverty dynamics in the United States. Much of this research, however, has focused on all U.S. households rather than on single mothers (for example, Bane and Ellwood 1986; Stevens 1994; McKernan and Ratcliffe 2002). Furthermore, the smaller amount of research on female-headed households has focused on documenting the extent to which they are likely to be in poverty and not on the dynamics of their poverty (e.g. Eller 1996; Naifeh 1998). In addition, most of these studies cover the pre-PRWORA period only. A number of welfare leavers studies have examined the poverty dynamics among former welfare recipients, but most of these studies are not nationally representative, do not focus on the full population of single mothers, and do not consider the role of other programs in poverty dynamics.

Even less is known about how food assistance programs may influence the poverty dynamics of single mothers. The large FSP literature has investigated the effect of the FSP on consumption and income volatility (e.g. Gundersen & Ziliak 2003; Blundell & Pistaferri 2003), food sufficiency (Gundersen & Oliveira 2001), and labor supply (Fraker & Moffitt 1988), but it has not focused on poverty dynamics. Moreover, this literature has generally analyzed the general population rather than single mothers. An exception comes from studies that have investigated the relationship between the FSP and welfare dynamics (e.g. Blank & Ruggles 1996; Figlio, Gundersen, & Ziliak 2000; Reidy et al 2005). However, these studies generally give little treatment to poverty dynamics.³ Consequently, little is known about the relationship between the FSP and the patterns of poverty and poverty recidivism among single mothers during the post-PRWORA period. The objective of this study is to help fill this void by using longitudinal data on a large, nationally representative sample of single mothers.

The research questions for this study focus on providing a descriptive profile of FSP eligibility/participation, employment, income, and other characteristics of single mothers, as well as on exploring the relationship between FSP participation and poverty dynamics. The questions can be broken out into three well-defined areas:

1. ***What are descriptive patterns in poverty dynamics and FSP participation and eligibility among single mothers during the post-PRWORA period?*** How do poverty exit rates compare for single mothers by participation in the FSP? To what extent were single mothers who left poverty participating in the FSP before their poverty exit? To what extent are they eligible for the FSP after their poverty exit? If eligible, to what extent do poverty leavers continue to participate in the FSP? What are the characteristics of women who stay on/leave the FSP following a poverty exit? Do eligibility and take-up patterns differ by reason for leaving poverty? Do the characteristics of FSP leavers and stayers provide any clues about

² These phenomena are likely related, as those who leave welfare may also leave the FSP program despite continued eligibility. A number of studies, such as Figlio, Gundersen, & Ziliak 2000, and Reidy et al 2005, investigate this relationship.

³ Rangarajan & Gleason (2001) is an exception. However, they look only at Illinois data whereas we are using national data.

the reasons for variation in FSP participation? Are changes in FSP participation of similar magnitude for single mothers who fall into poverty and those who exit poverty?

2. ***Is FSP participation associated with poverty exits and better longer-term outcomes for single mothers?*** Does FSP participation affect the probability of exiting poverty? Do pre-poverty-exit or post-poverty-exit FSP participation affect the probability of poverty recidivism among poverty leavers? Does FSP participation affect the length of post-poverty-exit non-poverty spells?
3. ***How has the relationship between the FSP and the poverty dynamics of single mother changed over time?*** How does FSP entry/exit differ for single mothers over time and in different economic environments? Does FSP participation have the same effect across time on poverty recidivism and on post-poverty-exit non-poverty spell length?

Data

To examine the relationship between the FSP and the poverty dynamics of single mothers, this study will use as its primary data source the SIPP, collected by the U.S. Bureau of the Census, although we will also use supplementary data from other sources. Our main focus will be on the 2001 panel of the SIPP, however we will use the 1996 panel to assess how key study measures vary across time and in different economic conditions. The 2001 SIPP is a large, multipanel, longitudinal survey that collected demographic and socioeconomic information on a nationally representative sample of U.S. households. The data cover the period from late 2000 through 2003. SIPP provides detailed monthly measures on labor force participation (for those age 15 and older), income, participation in public programs (including the FSP), and household composition. In addition, we will obtain state-level data on economic conditions, poverty levels, welfare rules, and FSP administration rules. Data on FSP administration rules, such as length of certification period and the timing of Electronic Benefit Transfer implementation, will be important in creating instruments for FSP participation.

The 2001 SIPP panel is particularly well suited for this study for several reasons. First, because it covers the period from late 2000 through 2003, we can examine the poverty dynamics of single mothers during the post-PRWORA period and during a period in which economic conditions worsened and poverty rates increased slightly after a period of decline. Second, because the SIPP contains detailed monthly information on a variety of individual characteristics and program participation during the panel period, we can conduct individual-level longitudinal analyses of FSP experiences and poverty dynamics.

The SIPP data also have several advantages over other national data sets. Cross-sectional data sets, such as the March Current Population Survey (CPS), can provide point-in-time information on those in poverty and FSP participation, but they do not allow analyses of individual-level data over time. The Panel Study of Income Dynamics (PSID) is a longitudinal study that covers the post-PRWORA period and contains information on poverty and FSP participation. However, because the PSID data are collected every other year, compared with every four months for SIPP, recall error is likely to be larger in the PSID. This is a particularly important problem for this study, because the non-poverty and poverty spells of many single mothers are likely to be short. Furthermore, sample sizes are much larger in SIPP (nearly 37,000 households were sampled for the 2001 SIPP, whereas the 2003 PSID contains information on only about 7,000 families). The National Longitudinal Survey of Youth (NLSY) is limited to people who were aged 14 to 21 in 1978, so its data are not well suited for examining the experiences of single mothers of all ages.

This study will use the official U.S. Census Bureau poverty measure as the primary one for the study, although we will conduct sensitivity analyses based on the inclusion of FSP and other near-

cash benefits in our definition of income.⁴ We will also experiment with the inclusion of estimated EITC benefits in the definition of income.⁵ The official poverty measure does have several, well documented shortcomings, but it is the one most commonly used in research examining poverty-related issues, and it offers a straightforward and easily understood method for gauging poverty.

We will measure poverty at the family level, because the family is the basis for the official definition of poverty. Furthermore, SIPP contains constructed family information on income and poverty cutoffs.⁶ We will treat the single mother as the unit of analysis and track her poverty status in whatever family she is in during any given month using the income of that family, even if its members have changed from month to month. Thus, our analyses will focus on obtaining estimates of, for example, the duration of nonpoverty spells of single mothers who exit poverty, rather than the duration of nonpoverty spells of families or households that contain these women.

When investigating poverty exits, our sample will include all single mothers who were in poverty during the sample period. When investigating poverty recidivism, the sample will consist of single mothers who, during the first 12 months of the panel period, were in poverty in one month and exited poverty during the following month. Since the 2001 SIPP is a three year panel, this will allow us to evaluate the experiences of single mothers who exit poverty during a two-year follow-up period; in analyses using the 1996 SIPP we will have a three-year follow-up period. We will define single mothers as those who, during the month before spell exit, were (1) older than 15 (so that employment information is available), (2) living with a biological or adopted child younger than 18, and (3) unmarried.

Methods

The methods employed using this sample correspond to the primary research questions defined above. In assessing the patterns in poverty dynamics and FSP participation and eligibility among single mothers, we will rely primarily on descriptive statistics. We anticipate including tables containing information on demographic characteristics and poverty exit rates by FSP participation and eligibility. We will present information on participation and eligibility for the FSP after poverty exits, and by reason for leaving poverty. We will also look at descriptive characteristics of poverty leavers, such as age, education, number and age of children, program participation, etc., by FSP eligibility and participation.

Disentangling the effect of FSP participation on poverty exits and longer-term poverty status will require careful use of multivariate analyses. We will begin by assessing the extent to which FSP participation influences the probability that a single mother exits poverty. This will involve the estimation of a series of probit regressions on exiting to poverty. Key covariates will include variables related to FSP participation, employment, earnings, household composition, health, and state economic conditions. We will also experiment with the inclusion of other policy participation variables, such as TANF, WIC, and Medicaid, to test for possible complementarities in transitional benefit take-up. Using a parallel set of specifications, we will assess the effect of FSP participation

⁴ If FSP benefits are included in the income definition, poverty status will be affected in an accounting sense. We are more interested in the effect of the FSP on poverty dynamics as a transitional benefit.

⁵ EITC benefits will be estimated based on eligibility and will be allocated evenly across months.

⁶ A SIPP family is a group of two or more persons related by birth, marriage, or adoption and living together; a SIPP family does not include cohabiters.

on the probability that a single mother who exits poverty during the first year of the SIPP panel will return to poverty in one of the two subsequent years of the panel

An important problem we are likely to face in this analysis is the selection process involved in FSP take-up. Prior research on the effects of FSP participation has shown that FSP participants are selected from the most needy of the FSP-eligible population, confounding simple analyses of the effects of FSP participation. For instance, Gundersen & Oliveira (2001) found that without correcting for selection, FSP participation has a negative impact on food security.⁷ In our analysis, selection is likely to introduce a negative bias in estimates of the FSP's effect on poverty exits, and a positive bias in estimates of the FSP's effect on poverty recidivism. For example, if the FSP actually reduces the probability of poverty recidivism, selection bias may cause us to find smaller or positive effects. We will attempt to address this selection issue by exploiting state and time variation in the administration of the FSP program. Such variation includes differences in FSP certification periods, in timing of the implementation of Electronic Benefit Transfer programs, in state take-up of federal matching funds for FSP outreach programs, and in car ownership rules. Important changes in FSP administration also came with the 2002 Farm Bill (USDA 2002), which was implemented in the middle of the 2001 SIPP panel.

The validity of these instruments is motivated by the likelihood that variation in FSP administration is only likely to affect the probability of exiting poverty or subsequently returning to poverty through its effect on FSP participation. Elsewhere in the literature, these administrative variables have been shown to have a strong effect on FSP participation. For example, in research presented in the previous "Income Volatility and Implications for Food Assistance Programs Conference," Kabbani & Wilde (2003) find that short recertification periods are strongly associated with lower FSP participation rates. Similarly, Currie & Grogger (2001) find a strong relationship between state variation in FSP administration and individual-level FSP participation. These results suggest that our instruments would likely lead to strong first stage results, thus we are unlikely to face a "weak instruments" problem.

Another important component of our analysis will be examining the relationship between FSP participation and the length of subsequent non-poverty spells. To determine what factors are associated with longer non-poverty spells, we will use logistic regression procedures to estimate multivariate discrete-time hazard models. The data will include one observation per month of the spell, and the dependent variable for a particular analysis will be an indicator variable set to 0 if the spell was still in progress in the month, and to 1 if the spell ended in the month. The explanatory variables will include indicator variables signifying the elapsed length of the spell (to capture the degree to which spell exit rates depend on how long the spell has already lasted), as well as time-varying covariates that will capture changes in FSP attachment, employment, earnings, household composition, health, and state economic conditions that occurred after the start of the non-poverty spells. These time-varying covariates will be particularly important for identifying key factors that correlate with the economic progress of poor single mothers over the medium term.

As in the probit analyses described above, our spell duration analysis is likely to face problems related to the selection process involved in FSP participation. In order to address this, we will explore controlling for person-specific unobserved heterogeneity by allowing for correlation across an individual's poverty transitions over time, as suggested by Stevens (1999).

⁷ Similarly, without implementing selection-corrections, Reidy et al (2005) find that FSP participation increases the probability of TANF recidivism.

Conclusion

Answers to the questions posed in this paper correspond well with the mandate of the “Income and Volatility and Implications for Food Assistance Programs” conference, and represent a valuable contribution to the literature related both to the FSP and to the well-being of single mothers. In the post-PRWORA era, single mothers have access to fewer social safety nets. Thus, it is critical to document the extent to which single mothers are taking advantage of the remaining programs available to them, and to identify which programs may be associated with greater economic success. If the FSP is such a program, it would represent an important externality of the FSP and increase further our understanding of the value of FSP benefits to program participants.

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