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# The Relationship of Earnings and Income to Food Stamp Participation

## A Longitudinal Analysis

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### Abstract

Monthly income and earnings of households that are eligible to participate in the Food Stamp Program (FSP), but that do not participate, vary substantially more than income and earnings of participant households. In particular, many nonparticipant households have had a short-term drop in income. Other nonparticipants, however, have had long-term low income and are often very disadvantaged. Although nonparticipation by such households might partly reflect underreporting of participation or income, many households may not participate because the same conditions that limit their incomes, such as low literacy levels or physical or mental disability, also limit their ability to participate in the FSP. Many poor nonparticipants are receiving other benefits, such as Supplemental Security Income or Medicaid, suggesting an avenue by which agencies can reach eligible nonparticipants. This study considers the role that the dynamics of household income plays in determining FSP participation. The two main objectives of the analysis are to (1) determine the extent to which nonparticipation can reasonably be attributed to temporary low income, and (2) assess why some households that appear to have long-term low income do not participate.

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## EXECUTIVE SUMMARY

The purpose of the Food Stamp Program (FSP) is to increase the food purchasing power of low-income households so that they can maintain a nutritious diet. Households are eligible for the program if their financial resources fall below certain income and asset thresholds. Research shows, however, that a considerable number of households that are eligible for food stamps are not participating in the program either by choice or because they do not know that they are eligible. Specifically, only an estimated 53 percent of all households eligible for food stamps received the benefits in 1999, declining from a high of 69 percent in 1994 (Cunningham 2002).

Policy makers have been concerned about the declining participation rate in the FSP. The Food and Nutrition Service's Strategic Plan for 2000 to 2005 calls for the agency to increase the rate of program participation among eligible people. The question remains as to why some eligible households are not participating.

In this report, we consider the role that the dynamics of household income plays in determining FSP participation. One reason that some eligible households might not participate is that their current income is much lower than they expect it to be over a longer period. Such households might regard their current low income to be a temporary phenomenon, and decide that the short-term benefits of participation are less than the costs of learning about the program, applying for benefits, using the food stamps, and perhaps being stigmatized by participation. The first objective of the analysis is to determine the extent to which non-participation can reasonably be attributed to temporary low income. The second objective is to assess why some households that appear to have low income for a long period do not participate. With better information, policy makers may be able to focus outreach efforts on non-participating long-term poor households.

To conduct this analysis, we analyzed the 1996 Survey of Income and Program Participation (SIPP) panel that follows households over a four-year period.

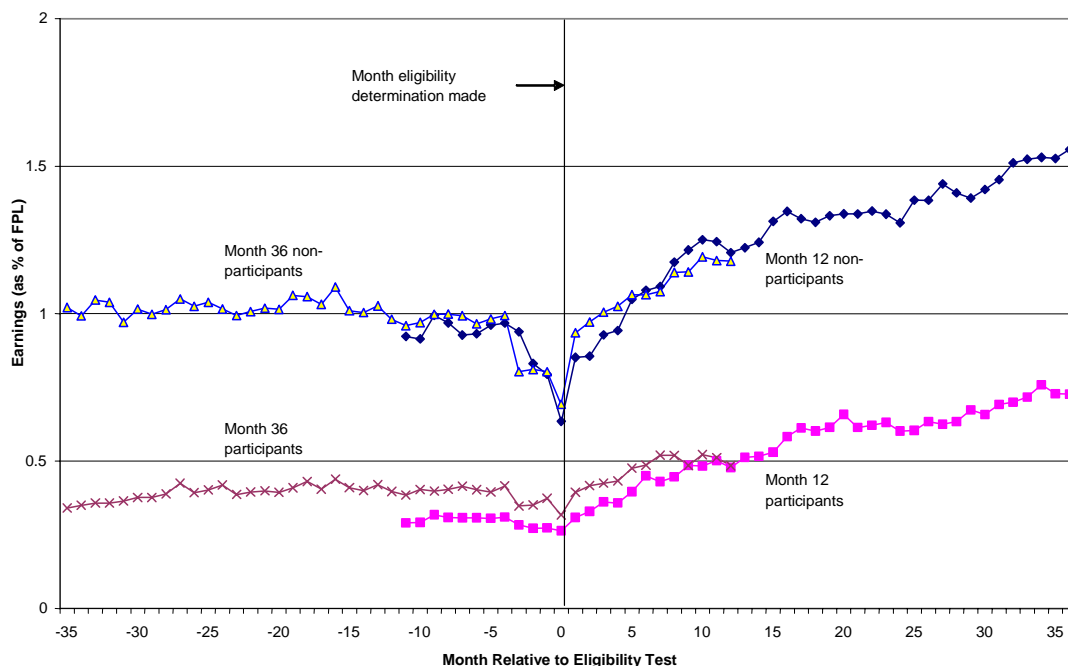
### Key Findings

This report presents the following key findings:

- **A substantial share of food-stamp eligible households are not participating in the FSP.** Just under half of eligible households received food stamps in the month when their eligibility determination was made (the "reference month"). This rate most likely underestimates the true participation in the FSP, because there is evidence from other studies that some individuals fail to report their food stamp receipt on the SIPP. As mentioned above, Cunningham (2002), which relied on food stamp administrative data to measure participation estimated household participation rates of 53 percent in 1999. Still, it appears that a considerable number of households are not receiving benefits for which they are eligible.
- **Food stamp participation declined from 1997 to 1999.** Food-stamp eligible households in 1999 were less likely to participate in 1999 than in 1997, even though these households had lower incomes in 1999. This is consistent with findings from other studies that show a decline in participation rates every year from 1994 to 1999.

- **Non-participant households experienced substantially more variability in their monthly income and earnings than participant households.** In particular, before the months leading up to the reference month, mean income of non-participating, food-stamp eligible households fell by much more than mean income of participant households; similarly, their mean income grew much more rapidly after the reference month (see *Exhibit ES.1*). This is consistent with the premise that expectations of higher future income explain why some non-participant households do not participate.

**Exhibit ES.1: Monthly Household Income for Current Month  
Participants and Non-participants: Food Stamp Eligible Households**



- **Participant households' income tended to fall below the food stamp gross income threshold throughout most of the 48-month SIPP panel.** Specifically, participant households' income was under 130 percent of the federal poverty level (FPL) in about 41 of the 48 months; non-participant households' income averaged 30 months below the threshold.
- **We found an inverted-U relationship between current household income and participation rates, holding other household characteristics constant.** That is, participation rates increase with income over the lowest income range, reach a maximum, and then decline. This is a surprising finding. It could be explained by the presence of a relatively large number of households in the lowest income groups that either have

temporary low income or higher income than reported. It could also be, however, that disadvantages leading to such low levels of income also lead to low participation.<sup>1</sup>

- **Models that reflect the potential importance of longer-term income demonstrate that part of the inverted-U shape and non-participation by some households with very low current income is due to the temporary nature of their low-reported income.** These models also indicate, however, that many households with very low long-term reported income do not participate.
- **Overall, non-participants were less disadvantaged than participants after controlling for longer-term income.** Non-participation was associated with households whose heads were able-bodied and without dependents, male, married, and at least a high school graduate, holding longer-term income constant.
- **While some non-participant households might be considered “temporarily poor,” a surprisingly large share report low income over a longer term and are receiving other means-tested benefits.** As *Exhibit ES.2* shows, almost one quarter of all non-participants had income that temporarily fell below the food stamp gross income threshold during the SIPP reference wave (four-month period). A smaller share (4 percent) were temporarily not receiving food stamps and about 16 percent were Able-bodied Adult Without Dependents (ABAWDs). A relatively large share (35 percent) were not captured in one of the three preceding categories yet were receiving other means-tested benefits. This is a group that USDA might be able to reach with more extensive outreach efforts and increased coordination with other agencies and offices. Among the means-tested programs, the SSI and Medicaid programs had the highest levels of enrollment, followed by WIC and housing assistance.

**Exhibit ES.2: Non-Participating, Food Stamp Eligible Households  
(Eligible in Month 12 of SIPP Panel)**

<b>Mutually Exclusive Category</b>	<b>% of Non-Participants</b>
1. Temporarily Below 130% FPL	22.8%
2. Temporarily Off Food Stamps	3.8%
3. ABAWD	15.8%
4. Receiving Other Means-Tested Benefits	35.4%
SSI	19.7%
Medicaid	18.1%
WIC	6.3%
Housing Assistance	5.5%
AFDC/TANF	1.8%
5. Income Less Than 130% FPL for 48 Months	2.2%
6. Other	20.2%
Total Non-Participants	100.0%

<sup>1</sup> Other studies have found zero income households have substantially lower participation rates than those with low, but positive income (see Cunyningham 2002). Wemmerus and Porter (1996) examined the group of zero-income households on the 1990 SIPP longitudinal file and found that many were financially viable, but a clear event or condition (e.g., a job loss, household dissolution, enrollment in school, or loss of cash benefits) precipitated the zero-income period.

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- **Many persistently poor households that do not participate appear to be very disadvantaged.** We examined a group that reported income below 75 percent of poverty and reported assets below the FSP resource limit in separate months two years apart and found that a substantial share of the household heads have less than a high school education, are not currently married, are caring for a child, and/or are disabled or have a disabled household member. One-fifth of the non-participants were never in the labor force during any month of the 48-month period.
  - **Under-reporting of FSP participation in SIPP might account for a substantial share of non-participation in persistently very poor households, but far from all of it.** As indicated earlier, evidence from other sources suggests that under-reporting is substantial in SIPP. It is likely that participation in our household sample was as much as 10 to 20 percent higher than reported. If under reporting is proportional to estimated participation rates at each income level, it could explain a substantial share of non-participation in very poor households, but substantial non-participation would remain. The estimated relationship between actual participation and long-term income is likely stronger than our estimated relationships between reported participation and various measures of long-term income.

In summary, many of the households not participating in the program have experienced a short-term drop in income. While current reported household income is low enough to meet the income test in a given month, this is a transitory phenomenon. However, long-term income does not explain why all households with low current reported income are not participating in the program. Non-participant households with long-term periods of low reported income are substantially more disadvantaged than other non-participant households. Although non-participation by such households might partly reflect under-reporting of participation or income, it appears that many do not participate because the same conditions that limit their income (e.g., low literacy levels or physical or mental impairments) also limit their ability to participate in the FSP as the program is currently implemented.

## Future Research

Questions still remain regarding why long-term poor households are not participating in the program, especially because so many are receiving other means-tested assistance. Studies have found that participation rates by states vary tremendously. Are some states and localities better in conducting outreach and coordinating with other state programs than others, which might explain some of the variation in participation? Could states increase their participation rates significantly by developing stronger linkages between the FSP and other programs providing means-tested benefits? High SSI participation among long-term poor households that do not receive FSP suggests that disability might limit FSP access for some.

Exhibit ES-1 illustrates visually what we learn from longitudinal data that cannot be learned from a cross-section. While participants and non-participants have somewhat different mean incomes in the current months, income differences are substantially larger in months before and after the current months. In a cross-section, those differences might be partially captured in differences in other characteristics (e.g., education), but, as our findings show, substantial

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differences remain even after controlling for such characteristics. Hence, the results demonstrate the value of using longitudinal income data in future analyses of food stamp participation.

As discussed further in this report, there is some evidence to suggest that earnings in the more distant past (three or more years earlier) might have substantial predictive power. Analysis using restricted research files of the SIPP that are matched to the Social Security Administration's Summary Earnings Records (SER), which span the entire household's earnings history, could test this hypothesis. In addition, analysis of this special dataset would assess whether our findings are replicated using SER earnings data, which are not subject to the recall error found on national surveys.<sup>2</sup>

Another study could attempt to replicate these findings using other SIPP panels. The findings would provide information on whether the composition of participants and non-participants has changed over time – particularly with respect to income histories. We might find, for instance, that participants in the 1992 and 2001 SIPP panels experienced a drop in income more recently than those in the 1996 panel, because of the recession in the early nineties and in early 2000. Our findings concerning the role of long-term income suggest that, holding current income and other characteristics constant, participation will be lower for the 1992 and 2001 panels. Hence, the comparison offers another opportunity to test whether transitory income reductions are less likely than long-term ones to result in FSP participation.

The findings also underscore the value of matching FSP administrative data to the SIPP. Although this is difficult because administrative records are held by individual states, it would greatly help research efforts to understand the determinants of participation, and why some households that appear to be very disadvantaged do not report participation.<sup>3</sup>

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<sup>2</sup> Originally, we had intended to analyze this matched file for this study but were not granted access to the data in time for inclusion in this report.

<sup>3</sup> A similar recommendation was made in Wittenburg et al. (2001), a report that presented 10 potential data development initiatives that would improve the quality or reduce the cost of data resources at the U.S. Department of Agriculture. Because the availability of FSP administrative records varies by state, the authors concluded that the linkage would likely be limited to a select number of states.