Assessing the Changing Relationship Between Food Stamps and Work

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Abstract

This study uses data from the 1996 and 2004 panels of the Survey of Income and Program Participation (SIPP) to examine the relationship between work and the Food Stamp Program and assesses how that relationship changed pursuant to major changes to the program codified in the Food Security and Rural Investment Act of 2002. A central goal behind these changes was to make it easier for low-income working households to receive food stamps. The study finds that the share of adults (ages 19 to 55) in low-income households participating in the Food Stamp Program (FSP) fell from 23 percent in 1996 to 20 percent in 2004. Among those receiving food stamps, about 40 percent combined food stamps and work in both 1996 and 2004. Recipients who combine food stamps and work in the same four month period are substantially more likely to exit the program and exit the program with earnings than adults who do not mix food stamps and work. Further, the likelihood of exiting the FSP was greater during the 1996-1999 period than during the 2004-2007 period, even after taking the characteristics of recipients and macroeconomic conditions into account.

I. Introduction

By early 2011, nearly one out of every eight individuals in the U.S. received benefits through the Supplemental Nutrition Assistance Program (SNAP), formerly called the Food Stamp Program. This historically high level of SNAP participation reflects (1) the ongoing effects of the economic downturn that began in late 2007, which took a toll on household incomes and raised the number of families eligible for the program; (2) recent, large increases in the amount of SNAP benefits, which increased the incentive for eligible households to take up benefits; and (3) changes in program administration, which increased outreach to eligible households and reduced bureaucratic burdens for initiating and maintaining SNAP benefits. Those changes in program administration pre-date the recession and highlight the evolving view of the SNAP program as an important source of support for low-income working families.

Before the passage of federal welfare reform in 1996, food stamps were largely viewed as a source of material support for non-working, welfare-reliant families. Even though working families with incomes below 130 percent of the federal poverty line were eligible for some food stamp benefits, it was generally quite difficult for them to apply for benefits and prove they remained eligible for benefits because administrative offices were typically only open during normal working hours. Federal welfare reform, however, focused on moving welfare-reliant families into work. The food stamp benefits a low-income working family could receive made work even more financially rewarding than welfare alone and could also improve the material well-being of these families. However, in the first few years following welfare reform, many families that left welfare but could have retained their food stamp benefits failed to do so. In response, federal, state, and local policymakers and program administrators made substantial changes to the Food Stamp Program to improve access for working families. These included

expanding food stamp office hours, streamlining application and recertification procedures, and shifting entirely to electronic benefits and away from physical food stamps.

We use data from the 1996 and 2004 panels of the Survey of Income and Program Participation to examine the relationship between work and the Food Stamp Program and to assess how that relationship changed pursuant to major changes codified in the program following the Food Security and Rural Investment Act of 2002. We find that:

- Participation in the Food Stamp Program among adults in low-income households fell from 23 percent in 1996 to 20 percent in 2004.
- Two out of five adults in households receiving food stamps worked during the same four-month interval they participated in the program in both 1996 and 2004.
- Food stamp recipients who work or live with another working adult were substantially more likely to exit the program and exit the program with earnings than adults who do not mix SNAP and work.
- The likelihood of exiting the Food Stamp Program was noticeably greater the 1996-1999 period than during the 2004-2007 period, even after taking the characteristics of recipients and macroeconomic conditions into account.

II. Background to Food Stamp Program

Formerly known as the Food Stamp Program (FSP), the Supplemental Nutrition Assistance Program (SNAP) helps low-income individuals and families purchase food.[1] The program was established by Congress in the Food Stamp Act of 1964 and since that time, a variety of legislative actions have changed different elements of the program, including eligibility criteria, outreach programs, and methods of benefit receipt. Congress made major changes to the program in 1996 as part of the Personal Responsibility and Work Opportunities Reconciliation Act (PRWORA), in 2002 as part of the Food Security and Rural Investment Act of 2002, and again in 2008 as part of the Food and Nutrition Act of 2008. Additional benefit and

[1] The food stamp program was renamed "SNAP" in The Food, Conservation, and Energy Act of 2008, P.L. 110-246.

eligibility expansions, some temporary, were enacted in The American Recovery and Reinvestment Act of 2009 (ARRA).

Program Goals, Eligibility, and Benefits

Despite all the changes to the program, its basic structure remains in place today. Low-income households that meet the eligibility criteria for the program receive assistance to purchase food and certain other necessities. Though paid for by the federal government, states operate SNAP through local offices and can sometimes vary eligibility criteria. States issue benefits through local state or county offices. Traditionally, states issued paper coupons (or 'food stamps'), but today, the sole method of benefit delivery is through Electronic Benefit Transfer (EBT) cards. The EBT is a plastic electronic card and works like a bank debit card.[2] Because the benefits can only be used for the purchase of food, they are considered in-kind rather than cash benefits and are not counted as income for tax purposes or when determining poverty status.

Eligibility for the program is based on the needs and resources available to "food assistance units"—groups of people living together and sharing in the purchase, preparation, and consumption of food. Basically, these units are generally equivalent to households. A household's eligibility for SNAP benefits depends on its assets and income. Some households that participate in other public assistance programs (e.g., Temporary Assistance for Needy Families (TANF) and Supplemental Security Income (SSI)) are deemed "categorically eligible" for SNAP and are exempt from asset and income tests. Finally, there are additional considerations for immigrants, the elderly, the disabled, and able-bodied adults without

[2] Some research has shown the change from traditional paper food stamps to the EBT card has reduced stigma attached to being on the program and has raised program participation (Danielson, Caroline and Jacob Alex Klerman. 2006. "Why Did the Food Stamp Caseload Decline (and Rise)?" RAND Working Paper WR-386 (April)). The EBT card has the additional advantage that benefits can be loaded directly to the household's account each month instead of a household representative having to travel to the local office to pick up physical stamps.

dependents (ABAWDs), and certain eligibility criteria may vary by state.[3] Eligibility is determined monthly; households can move on and off the program for as many months during the year for which they meet these eligibility criteria.

Assets. Households may have no more than $2,000 in countable resources, such as a bank account, or no more than $3,000 if at least one person in the household is age 60 or older ("elderly") or is disabled. In the past, vehicles were considered a countable resource; however, as of February 2011, 39 states exclude the value of all vehicles entirely, 11 states exclude the value of at least one vehicle, and three others have an exemption if the value of the vehicle exceeds $4,650.[4] Certain assets are not counted, however, such as a home and most retirement plans (such as a 401(k)).[5]

Income. If all members of a household are receiving TANF, SSI, or certain other forms of general assistance, the household is categorically eligible for SNAP benefits. Most other households are subject to two income tests, "gross" and "net".[6] "Gross" income is defined as a household's total income, before any deductions or exclusions have been taken into account and, to qualify for SNAP, cannot exceed 130 percent of the monthly Federal poverty line, adjusted for household size. The gross income test, however, does not apply to households in which any member is elderly or disabled. Households subject to the net income test are allowed to take deductions from their gross income. These deductions include a 20 percent deduction from earned income, a standard deduction that varies by household size but is about $150 per month,

[3] For the purposes of the SNAP program, individuals 60 years of age and older are considered elderly. Individuals are considered to be disabled if they receive income from SSI or DI or meet other disability criteria (e.g., veterans deemed totally disabled).
[4] The 53 "states" include Washington, D.C., Guam, and the Virgin Islands. See the "Eligibility Requirements" page at the Food and Nutrition Service's website, http://www.fns.usda.gov/snap/applicant_recipients/eligibility.htm.
[5] An exception to this is that in the State of California SSI recipients are not eligible for SNAP benefits, because they receive a State supplement to their SSI benefits in lieu of SNAP benefits.
[6] Households with an older or disabled person who is receiving certain types of disability payments only have to meet the "net" income test.

and various deductions for child care, medical care, and some housing costs.[7] The resulting net income cannot exceed 100 percent of the federal poverty line, again adjusted for household size.

*Categorical Eligibility***.** Certain households are exempt from either or both of the income tests. If all members of a household are receiving other types of cash assistance, such as TANF or SSI, the household is considered "categorically eligible" for SNAP benefits.[8] In that case the household qualifies for SNAP benefits and there is no consideration of the gross or net income test in determining eligibility. More than 40 states consider households to be eligible for SNAP if all members of the household receive non-cash benefits from TANF (such as a pamphlet or other information describing the TANF program) and if gross income is below a limit that can be as high as 200 percent of the poverty guidelines. Eligibility based on the receipt of non-cash benefits as well as cash benefits is referred to as expanded categorical eligibility or broad-based categorical eligibility. Net income is calculated for all households, even if it is not considered when determining eligibility, and is the basis for calculating the SNAP benefit.

Additional Restrictions. Generally, able-bodied adults without dependents (ABAWDs) between the ages of 18 and 50 are only eligible for SNAP benefits for 3 months in a 36-month period if they do not work or participate in a workfare or employment and training program other than job search.[9] With some exceptions, ABAWDs between ages 16 and 60 must register for work, accept suitable employment, and take part in an employment and training program to which they are referred by the local SNAP office. Failure to comply with those requirements can result in disqualification from the program.

[7] http://www.fns.usda.gov/snap/applicant_recipients/eligibility.htm

[8] One exception is in California. SSI recipients are not eligible for SNAP benefits, because they receive a State supplement to their SSI benefits in lieu of SNAP benefits.

[9] The time limit for ABAWDs was temporarily lifted by ARRA from April 1, 2009 to September 30, 2010 unless a State offers a qualifying work activity.

Benefit Calculations. The amount of benefits the household receives—called an allotment—is calculated by subtracting 30 percent of the household's net monthly income from the maximum allotment for the household's size. The maximum allotment levels are set by the United States Department of Agriculture (USDA). In fiscal year 2010, the maximum allotments ranged from $200 for a household with one member to $668 for a household with four members to over $1,200 for households with eight or more people.

To apply for benefits, a household must file an application form, provide proof (verification) of certain information, such as income and expenses, and, in many states, have a face-to-face interview. The office interview may be waived if the household is unable to appoint an authorized representative and no household member is able to go to the office because of age or disability. If the office interview is waived, a local office representative will interview the household by telephone, or do a home visit.

Food Security and Rural Investment Act of 2002

This analysis focuses on the effects of changes to the Food Stamp Program enacted under the Food Security and Rural Investment Act, passed by Congress in May 2002.[10] That bill accomplished a number of program expansions:

- replaced the fixed standard deduction with a deduction that varies according to household size and is adjusted annually for increases in the cost-of-living;[11]
- provided States with options to simplify the program, including aligning the definition of income and/or resources to that used in other public assistance programs (e.g., the

[10] For a timeline and overview of food stamp legislation, see "From Food Stamps to the Supplemental Nutrition Assistance Program" at http://www.fns.usda.gov/SNAP/rules/Legislation/timeline.pdf.

[11] Prior to the change, the standard deduction was $134 a month regardless of household size. Following the legislation, the minimum standard deduction was 8.31 percent of the poverty threshold which varies by household size. A minimum standard deduction was set at $134 and a maximum was set at the poverty threshold for a 6 person household.

Temporary Assistance for Needy Families (TANF) Program or Medicaid), adopting a simplified reporting system, extended transitional benefits for clients leaving TANF, and mandated certain states to post their SNAP applications online;[12]

- encouraged outreach to eligible households and improved access to food stamp benefits[13];
- made substantial changes to the Quality Control (QC) system, which measures states' payment accuracy in issuing food stamp benefits;
- restored food stamp eligibility to qualified immigrants who had been in the United States for at least five years (PRWORA had significantly restricted immigrants' eligibility to food stamps);
- restored eligibility for immigrants receiving certain disability payments and for children, regardless of how long they have lived in the country.[14]

Even before the 2002 federal legislation, states had begun to make changes to their food stamp programs. For example, by April 2002, nearly every state had nutrition education and outreach plans in place, about the same number of states as in November 2007. Other changes, such as aligning SNAP rules with other general assistance program (e.g., TANF) were also implemented in some states prior to the 2002 legislation.[15] In May 2002, when the legislation was passed, there were nearly 8.3 million households receiving food stamps. (See *Figure 1*). That represented an 11 percent increase over the 7.4 million households receiving benefits just a year earlier. By

[12] For example, by 2004, 42 states had elected to simplify their income reporting requirements and 39 elected to expand categorical eligibility: http://www.fns.usda.gov/snap/rules/Memo/Support/State_Options/4-State_Options.pdf (last accessed 6/8/11).
[13] Efforts to improve outreach include distributing program information at food banks, establishing toll free numbers for program information, and linking to other outreach efforts such as those encouraging low-income families to sign their children up for public health insurance.
[14] See http://www.fns.usda.gov/snap/rules/Legislation/default.HTM
[15] See *Food Stamp Program State Options Report*, Food and Nutrition Service, various editions, 2002-2009, http://www.fns.usda.gov/snap/government/Policy.htm

October 2002, when many of the legislated program changes had been implemented, food stamp participation had grown to 8.7 million households, an increase of 4.7 percent.

III. Characteristics of Program Participants and the Relationship between Work and SNAP

SNAP served a large and diverse set of households during fiscal year 2009.[16] Out of the 33.7 million individuals receiving SNAP benefits during an average month in 2009, almost half (48 percent) were children and 8 percent were over age 60. Among working-age participants, women outnumbered men by about two-to-one. The average number of people in a SNAP household was 2.2, and over 93 percent of SNAP households included a U.S. born citizen.

For the typical SNAP household, SNAP benefits represented a significant supplement to cash income. The average SNAP household had $711 a month in gross cash income and received $272 in benefits from SNAP in 2009 (SNAP benefits are considered in-kind transfers and are not counted as gross income). SNAP households with children received more, about $400 a month on average. Over one-third of SNAP households received the maximum SNAP benefit which reached $668 for a family of four after ARRA. In contrast, 4 percent received the minimum monthly benefit, which was $16 during the second half of 2009. Less than 10 percent of SNAP households received income from TANF, but about a quarter received SSI. Further, 22 percent of SNAP households received income from Social Security.

Participation in SNAP varies by family characteristics. Because the program is means tested, only households with limited financial resources are eligible to participate in the program. Even among poor and low-income households, many families do not receive food stamps. For

[16] Data on the characteristics of SNAP participants come from the SNAP Quality Control sample. The statistics presented in this section come from Leftin, Joshua, Andrew Gothro, and Esa Eslami. 2010. *Characteristics of Supplemental Nutrition Assistance Program Households: Fiscal Year 2009*. U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis.

example, only about one-quarter of families with children and incomes between 50 and 100 percent of the poverty line received food stamps in 2002.[17] Food stamp participation rates are higher for families that participate in other public assistance programs. For example, over 80 percent of poor families with children that receive cash welfare participate in food stamps. Education is also associated with food stamp participation: Individuals in families in which no one has a high school degree are more than twice as likely to receive food stamps as those in families with at least one high school graduate.[18]

The characteristics of food stamp recipients depend on the factors that lead people to enter the program, stay on the program, and ultimately leave the program. Among all households, single adults with children are the most likely to enter the food stamp program while childless adults are the least likely.[19] Further, adults reporting a work-limiting disability are more likely to start receiving food stamps than other eligible adults.[20] Sudden income drops of 20 percent or more as well as a loss of employment (which may have caused the income loss) are common triggers for entry into the food stamp program.[21]

The majority of people who enter the food stamp program stay on for less than one year and half the people who enter food stamps exit the program within nine months.[22] Nevertheless, 45 percent of those who leave the program end up back on food stamps within a year.[23] Among those who start receiving food stamps, able-bodied individuals and those without children tend to

[17] Zedlewski, Sheila and Kelly Rader. 2004. "Recent Trends in Food Stamp Participation among Poor Families with Children," Assessing the New Federalism Discussion Paper 04-03. Washington, DC: The Urban Institute.
[18] Cody, Scott, Laura Castner, James Mabli, and Julie Sykes. 2007. "Dynamics of Food Stamp Program Participation, 2001-2003," U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis.
[19] Ibid.
[20] Blank, Rebecca and Patricia Ruggles. 1996. "When Do Women Use Aid to Families with Dependent Children and Food Stamps? The Dynamics of Eligibility Versus Participation," Journal of Human Resources 31(1): 57-89.
[21] Gleason, Philip, Peter Schochet, and Robert Moffitt. 1998. "The Dynamics of Food Stamp Program Participation in the Early 1990s," U.S. Department of Agriculture, Food and Nutrition Service; and Cody, Castner, Mabli and Sykes (2007).
[22] Gleason, Schochet, and Moffitt (1998).
[23] Cody, Castner, Mabli, and Sykes (2007).

leave the program relatively quickly while single mothers, those with more children, and those who have had prior food stamp experience tend to remain on the program for longer periods.[24] Among current and former recipients of cash welfare that receive food stamps, those who relied on cash assistance for longer periods of time and those whose children have persistent health problems tend to take longer to leave food stamps.[25] Further, the longer a period of food stamp receipt progresses, the less likely it is to come to an end.[26]

An important change among food stamp recipients over the past twenty years is in the likelihood that they work. Between 1989 and 2009, the share of food stamp households that had earnings rose from 20 to 29 percent.[27] Further, over 40 percent of all individuals receiving food stamps lived in households with earned income in 2009.[28] Increasing work among food stamp recipients occurred not only because non-working recipients found jobs, but also because low-income working families that were eligible for food stamps have increased their participation in the program in recent years. Between 2002 and 2007, the food stamp participation rate of individuals in working families eligible for benefits grew from 45 to 56 percent. Researchers attribute that rise in food stamp participation among low-income working families to various changes in program rules and operation. Those changes include less frequent eligibility reviews (i.e., longer recertification periods), allowing recipients to have more assets and remain eligible (i.e., less restrictive assets tests), and improved outreach.[29] Compared with other food stamp

[24] Cody, Castner, Mabli, and Sykes (2007); Gleason, Schochet, and Moffitt (1998).
[25] Heflin, Colleen (2004). "Who Exits the Food Stamp Program after Welfare Reform?" Institute for Research on Poverty discussion paper, Madison, WI: University of Wisconsin; and Cadena, Brian, Sheldon Danziger, and Kristin Seefeld. 2006. "The Dynamics of Food Stamp Receipt after Welfare Reform among Current and Former Welfare Recipients." National Poverty Center. Ann Arbor, MI: University of Michigan.
[26] Heflin (2004).
[27] Leftin, Gothro, and Eslami (2010).
[28] Ibid.
[29] Ratcliffe, Carolin, Signe-Mary McKernan, and Kenneth Finegold. 2007. "The Effect of State Food Stamp and TANF Policies on Food Stamp Program Participation." Washington, DC: The Urban Institute.

recipients, those who work and those who were working when they started receiving food stamp benefits tend to leave the program after shorter stays.[30]

Food stamp recipients leave the program for various reasons, yet most research does not distinguish between those who exit the program because their economic situation improved and those who exit because they could not comply with program rules. One study based on administrative data from South Carolina found that one fifth of program exits occurred because recipients' incomes or other resources rose and that half of program exits were due to recipients failing to recertify for benefits.[31] Of course, some of those who failed to recertify may have also experienced an improvement in their circumstances and just not bothered to inform the food stamp office.

This study examines the relationship between working and the receipt of food stamp benefits using survey data. In particular, we assess whether changes in the Food Stamp Program enacted in 2002 meant to facilitate program participation among low-income working families has changed the amount of work by nonelderly adults in food stamp households. In addition, we assess how working while on food stamps influences the timing of exits from the program. We use the 2002 legislation as a formal codification of policy changes that were already taking place in state food stamp agencies around the country. By examining food stamp participation between 1996 and 1999 and between 2004 and 2007, our pre-reform period pre-dates the changes that were already underway before the 2002 legislation and our post-reform period allows states several years to further implement changes to their food stamp programs.

[30] Gleason, Schochet, and Moffitt (1998); Heflin (2004).
[31] Ribar, David and Marilyn Edelhoch. 2007. "Earnings Volatility and the Reasons for Leaving the Food Stamp Program," In Income Volatility and Food Assistance in the United States, Dean Jolliffe, James P. Ziliak, editors. Kalamazoo, MI: W.E. Upjohn Institute, pp. 63-102.

IV. Data and Methods: Estimating the Work-SNAP Relationship

Data

To evaluate the relationship between work and food stamp program (FSP) participation, this study uses the 1996 and 2004 panels from the Survey of Income and Program Participation (SIPP). Those two SIPP panels bracket the 2002 changes in the FSP that expanded outreach to working households. The SIPP contains data on a cohort of individuals over three to four year periods. SIPP respondents are interviewed every four months—these data collection periods are called "waves." At each interview, the SIPP gathers information on respondents' labor force participation, program participation, and income over the previous four calendar months. Of particular importance to this study, the SIPP gathers information regarding food stamp (SNAP) receipt, household size and make-up, race, educational attainment, state of residence, number of children, whether household members have a disability, earnings of all household members, and transfer income from sources such as TANF.

The two panels are some of the largest of the various SIPP panels: the 1996 panel contains 12 separate waves, beginning in April 1996 and ending almost four years later in March 2000. The 2004 panel also contains 12 separate waves, beginning in February 2004 and ending in January 2008. The 1996 panel includes information on nearly 116,000 respondents; the 2004 panel has nearly 130,000. When sample weights are used, the SIPP provides nationally representative data.

Analysis Sample

Because this study examines how the relationship between food stamps and work changed over time, certain SIPP respondents were excluded from the sample. The sample begins with about 244,000 unique individuals in either the 1996 or 2004 panels. We first drop about 65

percent of the entire sample after restricting the sample to working age adults (25 to 55 year olds). Because food stamps are targeted at low-income families, the sample was further restricted to those persons in household with household incomes below 200 percent of the federal poverty line; that selection dropped about another 60,000 observations.

We rely on different subsets of the sample for different parts of the analysis. The first analysis sample consists of those who report receiving food stamps in the first wave of the SIPP (about 5,800 observations across the two SIPP panels). We follow this cohort of recipients over time to see changes in its members' food stamp receipt and work behavior. We also compare this food stamp cohort sample to other low-income adults who did not receive food stamps in the first wave of the SIPP (about 19,500 observations across the two panels). A drawback of this cohort approach, however, is that some cohort members were receiving food stamps for quite some time by the time they were observed in the first wave of the SIPP while other had just started participating in the program. To see how important time on the program was for the relationship between food stamp receipt and work and ultimately exits from the program, we also use a sample of 'new entrants' to the program—these are individuals who did not receive food stamps in the first wave of the SIPP but then started receiving them at some point over the next year (i.e., the next three waves) (about 1,600 observations across the two panels). The new entrant sample is smaller than the cohort sample, which affects the precision of the estimates, but the new entrant sample does make it possible to take time on food stamps into account in statistical analyses.

Technical Approach

Our approach compares the characteristics of working age food stamp recipients before and after the 2002 changes to the Food Stamp Program, assesses changes in their work patterns,

and uses multivariate statistical techniques to examine the factors that contribute to exits from the program, particularly those associated with work.[32] The first set of analyses use the cohort sample to examine changes in the demographic characteristics of food stamp recipients between 1996 and 2004 as well as to compare recipients to low-income non-recipients. Note that status as a food stamp recipient for the cohort sample is based on receipt in the first wave of each SIPP panel. Next, we track the work behavior, earnings, and future food stamp receipt of food stamp recipients over time, again making comparisons across the pre- and post-reform period and comparing recipients to non-recipients. That analysis is extended to distinguish between non-recipients who enter the food stamp program within a year and low-income adults who remain off of food stamps. Finally, to obtain a more comprehensive view of the changing relationship between food stamps and work, we estimate a series of multivariate econometric models as described below.

Regression Models

We use discrete time hazard models to econometrically assess the correlation between work and food stamp receipt and whether that relationship changed after legislation in 2002. Hazard models are used to investigate transitions over time and the factors that influence those transitions. Here, the focus is on changes in individuals' food stamp receipt. Each sample member's food stamp receipt is assessed on a wave by wave basis (i.e., from one four month period to the next) based on reported receipt in the fourth month of the wave. Each individual continued providing additional waves of data to the hazard model until that individual left the program, left the SIPP panel, or completed the SIPP panel. Technically speaking, the unit of

[32] This analysis does not assess the impact of specific policy changes or specific options pursued by any given state. Rather, by comparing the periods several years before and after the 2002 legislation the analysis attempts to detect the broad effects of the policy shift including a change in the culture of the program on the relationship between food stamps and work.

analysis is a person-wave, and the dependent variable is equal to 0 if a person received food stamps in the given wave and 1 if the person exited the program in that wave. Because each observation is a person-wave and the dependent variable is binary, the model is estimated using a standard logit approach.[33]

The three key factors of interest in the models are whether individuals are more or less likely to stop receiving food stamps after the 2002 reforms were implemented; whether individuals who combine work and food stamp receipt are more or less likely to leave the program than those who do not work; and whether the effects of combining work and food stamp receipt on eventual program exit changed after the 2002 reforms. A variable indicating whether a person-wave observation is drawn from the 2004 SIPP panel is used to detect a change on exit behavior over time, and a variable denoting work in the prior wave identified recipients who combined work and food stamps detected if work facilitated exits over time. The two variables are interacted to see if the relationship between work and food stamp exits has changed over time.

The models include a full set of demographic controls: number of adults in the household, number of children in the household, race, age, sex, educational attainment, disability status and change in disability status, and, to account for the macroeconomic climate, the average state unemployment rate over the wave in question (because SNAP is provided at the state level).[34] An indicator variable for whether the household received any TANF/AFDC income in

[33] Allison, Paul D. 1984. "Event History Analysis: Regression for Longitudinal Event Data." Sage University Paper no. 07-046. Newbury Park, Calif.: Sage Publications, and Jenkins, Stephen. 1995. "Easy Estimation Methods for Discrete-Time Duration Models." *Oxford Bulletin of Economics and Statistics*, vol. 57, no. 1, pp. 129-137.

[34] Note that the 1996 and 2004 panels, for the most part, cover similar periods of economic growth. (*Appendix Figure A*). Over roughly the first 44 months of each panel, the overall unemployment rates fell by about the same amounts. Between December 1995 and July 1999, the unemployment rate fell by 1.3 percentage points, from 5.6 percent to 4.3 percent. During the first 44 months of the 2004 panel—between October 2003 and May 2007—the unemployment rate declined by a similar amount, from 6.0 percent to 4.4 percent. However, over the final seven

that wave is also included. Finally, each regression contains dummy variables indicating the number of waves an individual has been observed receiving food stamps.

$$\Pr\left(SNAP\ Exit_{i,t}|X; w;\ SNAP\ Exit_{i,t-1} = 0\right) = \alpha + \beta X_{i,t} + \sum_{t=2}^{T} \beta w_t + \varepsilon_{i,t}$$

The regressions are estimated using person-level weights for each wave; standard errors are clustered at the individual level.

The basic model described above is estimated on the two separate samples of food stamp recipients: (1) the *cohort sample* comprising prime age adults receiving food stamps in the first wave of either the 1996 or the 2004 SIPP panels and (2) the *new entrant* sample comprising prime-age adults who were not receiving food stamps in the first wave of the panels, but began receiving benefits in waves 2, 3 or 4.[35] The cohort sample has over 24,000 person-wave observations, the new entrant sample, about 4,000 person-wave observations.

Interpreting the findings from the basic model is complicated by the fact that individuals could have left the food stamp program for very different reasons, and any given factor may have made certain types of exits more likely while making other types of exits less likely. For example, individuals who combine work and food stamps might stay on the program longer than non-combiners, but they may be more likely to exit for work.

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months of these two panels—roughly the length of two waves—the patterns in the unemployment rates diverged slightly: from August 1999 to February 2000 the unemployment rate declined slightly, from 4.2 percent to 4.1 percent while the unemployment rate over the final seven months of the 2000 panel (June 2007 to December 2007) rose from 4.6 percent to 5.0 percent. The overall results from the model are little changed when the last two waves of each the 1996 and 2004 panels are dropped from the analysis.

[35] When estimating the hazard model on the cohort sample, the first wave in which an individual can exit the program is wave 2 and time at risk for leaving the FSP is measured relative to wave 2. For the new entrant sample, the first wave in which an individual can exit the program is the first wave after that individual is observed entering the program—i.e., the first opportunity for some ne who entered the FSP in wave 2 to exit the program is wave 3. Consequently, time at risk for leaving the program for the new entrant sample models is measured relative to the time of actual entry. That is, a person who enters FSP in wave 2 and stays on the program for 2 more waves and a person who enters FSP in wave 3 and stays on the program for 2 more waves both exit the program after two waves at risk.

To address this concern, we estimate a slightly more refined hazard model known as a competing risk model. Competing risk models allow for two or more different types of transitions. Here, the competing risk models distinguish between exits in which the individual has earnings at the time of exit from food stamps (i.e., a work-related exit) and exits in which the individual had no earnings at the time of exit (i.e., non-work exit). As a practical matter, the competing risk models are estimated on the same person-wave samples as the basic hazard model, but they are estimated as multinomial logits.

V. Characteristics of Food Stamp Recipients and their Work Behavior

This section examines work behavior and demographic characteristics of food stamp recipients focusing on those receiving food stamps in the first waves of the 1996 and 2004 SIPP panels and comparing them to other individuals in low-income families (i.e., families with incomes below 200 percent of the federal poverty line) that were not on food stamps in the first waves of the two SIPP panels. We then track their earnings and work patterns over the course of the two panels. There is virtually no difference in the share of prime-age adult food stamp recipients who worked between 1996 and 2004: at the start of both SIPP panels, about two out of five adult food stamp recipients worked in the same four month period that they received food stamps.[36] There were some small changes in the characteristics of food stamp recipients, which are discussed below.

Demographic Make-Up of Food Stamp Recipients in 1996 and 2004

In the first wave of the 2004 SIPP panel, 19.8 percent of low-income prime-age adults reported receiving food stamps, down from 22.5 percent in the first wave of the 1996 SIPP panel

[36] In the new entrant sample, about half of food stamp recipients worked during the wave in which they entered the program in both 1996 and 2004. For a full comparison of the characteristics of the cohort and new entrants samples, see *Appendix Table A*.

(*Table 1*). Comparing recipients in 1996 and 2004 revealed several notable changes. First, the share of food stamp recipients receiving cash welfare through AFDC/TANF dropped by more than 50 percent. Further, there has been a decline in the share of food stamp recipients who were foreign-born (from 17.9 to 15.8 percent) and who were noncitizens (from 13.9 to 11.6 percent). Those shifts likely reflect responses to the implementation of the 1996 federal welfare reform along with subsequent changes to provisions affecting immigrants. There has also been a rise in the share of adults receiving food stamps that did not live with children (from 24.8 to 29.4 percent) as well as a rise in the share of food stamp recipients reporting work-limiting disabilities (from 34.5 to 38.8 percent). Finally, adult food stamp recipients have become more educated over time: in 1996, 19.4 percent had some schooling post-high school, by 2004, the share rose to 34 percent.

Food stamp recipients differed from other low-income adults who do not participate in the FSP in several notable ways. Food stamp recipients were more likely to be African-American, U.S.-born, and citizens than low-income adults not receiving benefits. They were also more likely to be female, have children at home, have a work-limiting disability, and have no education beyond high school. Further, food stamp recipients were twice as likely to be poor than other low-income adults. Estimated p-values shown in *Table 1* demonstrate that most differences between the food stamp participant group and the non-food stamp participant group within and across the two panels are statistically significant.

Persistence of Food Stamp Receipt and Changes in Work Behavior

Food stamp recipients in 2004 were more likely to receive food stamps four years later than food stamp recipients in 1996. Whereas 61 percent of individuals participating in the FSP in the first wave of the 2004 SIPP also participated in wave 12 of the panel (e.g., in 1999, about

four years later), only 45 percent of food stamp recipients from the first wave of the 1996 SIPP also participated in wave 12 (*Table 2*). Increased levels of participation can also be seen among low-income adults who did not receive food stamps at the start of the SIPP panels; 10 percent of non-participants in 2004 were receiving food stamps four years later as compared with 5 percent of non-participants in 1996. The higher levels of participation in the later of the two periods are consistent with the idea that the 2002 FSP improved access to food stamps and reduced the stigma associated with the program.

Even though one of the aims of the 2002 reforms was to help working families obtain and retain food stamps, the share of recipients that were working about four years after they were first observed on the program was lower for the 2004 cohort than for the 1996 cohort of recipients (46 percent as compared with 54 percent) (*Table 3*). The difference in rates of employment between the 1996 and 2004 cohorts may reflect the declining economic conditions for low-wage workers towards the end of 2007. Even among low-income non-recipients (i.e., those with family incomes below 200 percent of the federal poverty line but not receiving food stamp benefits), the share working four years after the start of the panels was about seven percentage points higher in the 1996 cohort than in the 2004 cohort (73 percent and 66 percent, respectively. Nevertheless, there is little evidence of increased work among food stamp recipients pursuant to the 2002 program reforms.[37]

Future food stamp and work outcomes for those combining food stamps and work

[37] In the new entrant sample, food stamp recipients exited the program at much higher rates than in the cohort sample, but the share working was similar between the two panels. For results for the new entrant sample, see *Appendix Table B*. In supplementary analyses not shown here, we examined work behavior at the household rather than at the individual level. More individuals live in households in which someone works than work themselves (all individuals who work themselves, by definition, live in a household where someone works), and the trend towards increased work over time is slightly weaker when measured based on any work in the household. The probability that a food stamp recipient or other low-income individuals lives in a household in which someone works is about 20 percentage points higher than the probability that the individuals works himself.

Food stamps may enable individuals to stay in lower paying jobs long enough to build their skills, advance to higher paying jobs, and move off food stamps permanently. Thus, the 2002 changes to the FSP to make it easier to combine work and food stamps should have led to longer periods of time during which individuals both work and draw benefits. The patterns in *Figure 2* show that long-term combining was higher after the 2002 reforms. Focusing on food stamp recipients that were initially observed to combine work and FSP participation ("combiners") shows that almost 40 percent of combiners at the start of the 2004 panel were still combiners four years later. That was a notably higher share than observed in the 1996 panel. Among first wave combiners in 1996, less than 30 percent were still combining four years later.

Ultimately, the goal is to have combiners move completely off the food stamp program, but the share of combiners who moved off the program within a four period did not increase following the 2002 reforms. About one-third of combiners in 2004 were working and not receiving food stamps four years after they were initially observed as compared with slightly over half of combiners in the 1996 cohort. Taken together, these findings suggest that food stamps became a more important support for low-income working families but within a four year period, that elevated work effort did not increase their earnings enough to leave the FSP.

Earnings Patterns of Food Stamp Recipients

Over time, food stamp recipients experienced real growth in their earnings, but their earnings were persistently lower than those of other low-income working age adults. Food stamp recipients with positive earnings in the 2004 cohort sample earned an average of $3,600 over the four months of wave 1 (that is about $10,800 when annualized) (see *Table 4*). Four years later in wave 12, the average earnings of those working in that wave were $5,600 ($16,800 when annualized), a 56 percent rise in real earnings. Some of these food stamp recipients from wave 1

had left the program by wave 12 while others were still combiners. In comparison, the "wavely" earnings of those not receiving food stamps in wave 1 of the 2004 SIPP rose from $4,900 in wave 1 to $7,900 in wave 12.

Earnings growth was higher for the pre-reform (1996) cohort than for the post-reform (2004) cohort. That occurred because wave 1 earnings were lower in 1996 than in 2004 but wave 12 earnings were higher. Among food stamp recipients in wave 1 of the 1996 cohort, average earnings for those with earnings was $3,200 in inflation-adjusted terms; four years later, average earnings reached $5,900, an increase of 85 percent. The earnings of low-income adults not receiving food stamps in wave 1 of the 1996 SIPP were consistently higher than the earnings of the food stamp recipient cohort, and they also grew by over 80 percent. Given that earnings growth among low-income adults not on food stamps in wave 1 was higher for the 1996 cohort than the 2004 cohort, the differences in earnings growth among food stamp recipients from 1996 and 2004 likely reflect differences in the overall low-wage labor market rather than a response to the 2002 FSP reforms.[38]

Even with notable earnings growth, food stamp recipients have persistently low earnings over time (defined as having earnings below the 25th percentile of all workers during a year). Among the cohort of food stamp recipients in 2004, 83 percent were low-earners in all of the next three years (*Figure 3*). The situation was slightly better for the 1996 cohort: 76 percent were low earners in all of the next three years.[39] Cohort members who combined work and food stamps fared a bit better. The share that had persistently low-earnings was 69 percent for the 2004 cohort and 55 percent for the 1996 cohort. Even when restricting the sample to those with

[38] The earnings of new entrants exhibited the same patterns as those of the cohort sample (see *Appendix Table C*).
[39] The 25th percentile for earnings ranged from $17,200 to $18,700 during the 1996 panel and from $18,900 to $19,300 during the 2004 panel (all dollar figures are reported in 2004 inflation-adjusted dollars). The 25th percentile of earnings hovers around the poverty line for a family of four suggesting that low earning food stamp recipients are likely to meet the gross income test for food stamp eligibility.

positive earnings in all of the next three years shows the limited earnings of food stamp recipients who worked: 63 percent of the 2004 cohort and 51 percent of the 1996 cohort were low-earners in all of the next three years despite working in all three years.

The next section offers a reassessment of the relationship between working and exiting the food stamp program using a multivariate regression framework. This method can help disentangle changes in exit patterns pre- and post-reform from changes in the underlying food stamp caseloads as well as differences in economic conditions.

VI. Regression Analysis: Probability of Exiting the SNAP Program

Results from discrete time hazard and competing risk models estimating the factors that influence exits from food stamps confirm and enhance the descriptive findings presented above. We use the models to estimate the probability that an individual exits the FSP in any given four month period (wave) given that they have not yet left the program. The discrete time hazard model shows how the factors considered affect the likelihood of an exit from the FSP, and the competing risk model showed how the factors affect exits to work as opposed to exits for other reasons. The results are presented in terms of percentage point changes in the probability of exit.

Regression Results for the Cohort Sample

The first set of results is based on the pooled cohort samples of prime-age adults on food stamps in 1996 and 2004. Essentially, this analysis takes a snapshot of the food stamp caseload at a given point in time (namely the first wave of each SIPP panel) and asks what happens to these food stamp recipients going forward in time. Some of the recipients in the cohort sample have been on the program for many years while others were recent entrants. The average likelihood that a food stamp recipient exits the program in any given wave is 12.4 percent; the probability

of an exit to work is 7.5 percent, and for other reasons is 4.9 percent on average in any given wave (see the bottom row in *Table 5*).

Food stamp recipients from the post-reform period are 5.2 percentage points less likely than recipients in the pre-reform period to exit the program, on average, in any given wave even when differences in their characteristics are taken into account. When exits to work and exits for other reasons are considered separately in the competing risk model, the findings indicate that recipients in the post-reform period are 2.1 percentage points less likely to exit without work and 1.4 percentage points less likely to exit with work than recipients in the pre-reform period.[40] That recipients are less likely to exit the FSP without work after the 2002 reforms suggests that those reforms improved program access aimed at helping low-income families maintain their food stamp benefits. That recipients are also less likely to exit the program for work post-reform suggests that reforms made it easier for recipients to combine work and food stamps.[41]

Adult food stamp recipients that combine work and food stamps are 5.1 percentage points more likely to leave food stamps in any given wave than those who do not. Further, combiners are 9.5 percentage points more likely to exit the program with work and 5.5 percentage points less likely to exit food stamps without work than non-combiners. That suggests that combining work and food stamps hastens exits to the program associated with work and actually reduces the likelihood that a food stamp recipient becomes disconnected from the program without access to a job.

The relationship between combining work and overall exits from the FSP did not change

[40] In supplementary analyses not shown here, we considered work at the household rather than the individual level. We found that probability that an individual exits food stamps and lives in a household in which someone is working was 2.0 percentage points lower in the post-reform period than in the pre-reform period.

[41] Another potential explanation is that earnings growth was slower during the post-reform period than during the pre-reform period. However, recall that the differential growth in earnings is due to lower initial earnings in the pre-reform period rather than appreciably higher earnings at the ends of the two periods, and there is not much difference in earnings at the end of the two periods.

following the 2002 reforms. To detect changes in the relationship between work and food stamp receipt, the model includes a variable that interacts the combiner and the post-reform indicators: The estimated effect is small and indistinguishable from zero. Findings from the competing risk model indicate that the relationship between combining and exits to work was no greater post-reform than pre-reform. The relationship between combining and exits without work is weaker than before the reform. Prior to reform, combiners are 5.5 percentage points less likely to leave food stamps without work than non-combiners; that fell to 3.6 percentage points following reform.[42]

Many other factors influence the likelihood that food stamp recipients exit the program. For example, recipients that also receive cash welfare through AFDC/TANF are 3.7 percentage points less likely to exit the program in any given wave than those not on welfare. Welfare recipients are less likely to leave food stamps for both work and non-work related reasons. Age is not strongly correlated with food stamp exits overall, but younger adults on food stamps are 0.4 percentage points more likely to exit the program with work. African-Americans are less likely to exit food stamps overall and for both work and non-work related reasons than whites. Hispanics are less likely than whites to exit food stamps overall and for work. U.S. citizenship is not strongly correlated with exits. Compared with women, men are more likely to exit food stamps and to exit for work.

Household composition also influences exits from food stamps. Compared with households with multiple adults, one adult households are less likely to exit the program, particularly for non-work reasons. Adults living with one child are 2.9 percentage points more likely to leave food stamps than childless adults, and they are more likely to exit for both work

[42] The 3.6 percentage point figure is computed by summing the estimated impact of combining on exits (-5.5 percentage points) and the estimated impact of combining post-reform (+1.9 percentage points).

and non-work reasons. Adults living with two or more children are no more or less likely to exit the program for any reason than childless adults.

Skills, the ability to work, and the economic climate are also related to exits from the FSP. Recipients with some post-secondary education are both more likely to stop receiving food stamps and to exit the program for work than those with only high school educations. And those with work-limiting disabilities are both less likely to exit food stamps and exit for work than those without disabilities. Unemployment rates have no statistically significant relationship with exits from food stamps overall, but higher unemployment rates do appear to reduce the probability of work-related exits.[43]

Finally, the likelihood of leaving food stamps generally declines over time—that is, the longer a person receives food stamps, the less likely they are to leave. In the cohort sample, time is measured from the point at which food stamp recipients are initially observed—again, some recipients in the cohort sample may have been receiving food stamps for many years while others may have just entered the program. As such the indicator variables for the number of waves each sample member has remained on the program reflects time since the sample was drawn and not time on the program for each individual. For those who did not leave food stamps in the first wave after they were observed on the program, the probability of exit declined by about 2 percentage points in the next wave (*Figure 4*). For those who had remained on food stamps for over two and half years, the probability of exit fell by about 7 percentage points relative to the probability of exit in the first wave after they were observed on the program. Both work and non-work related exits followed that overall exit pattern.

Regression Results for the New Entrant Sample

[43] As noted in footnote 29, omitting the last two waves of each SIPP panel—the period in which the unemployment rates during the two panels diverge—does not have an important impact on the estimated results. Regression results from those samples are available from the authors upon request.

Because any sample of food stamp recipients drawn at a specific point in time comprises individuals who are disproportionately likely to be longer-term recipients and who may differ in unobservable ways from the typical individual entering the program, it is important to corroborate the key findings about food stamp exits obtained from the cohort sample using the new entrant sample. The new entrant sample has the advantage of providing exact information on how long each individual's current episode of food stamp receipt has been going on; however, the sample is far smaller than cohort sample, which affects the precision of the estimated relationships in the regression models.

As expected, food stamp recipients in the new entrant sample are more likely than recipients in the cohort sample to exit the program in any given wave for both work and non-work reasons, but the overall pattern of findings on the policy and work-related factors influencing exits is quite similar across the samples. The average likelihood that a food stamp recipient in the new entrant sample exits the program in any given wave is 25 percent as compared with 5.2 percent in the cohort sample; the probability of an exit to work is 15 percent, and for other reasons is 10 percent on average in any given wave for the new entrant sample as compared with 7.5 and 4.9 percent, respectively, in the cohort sample (*Table 6*).

In the new entrant sample, food stamp recipients from the post-reform period are 9.9 percentage points less likely than recipients in the pre-reform period to exit the program, on average, in any given wave even when differences in their characteristics are taken into account; the comparable estimate from the cohort sample is 5.2 percentage points. When exits to work and exits for other reasons are considered separately in the competing risk model, the findings indicate that recipients in the post-reform period are 3.6 percentage points less likely to exit without work and 2.8 percentage points less likely to exit with work than recipients in the pre-

reform period. Adult food stamp recipients that combine work and food stamps are 6.7 percentage points more likely to leave food stamps in any given wave than those who do not. Further, combiners are 14.7 percentage points more likely to exit the program with work and 11.2 percentage points less likely to exit food stamps without work than non-combiners. Finally, the relationship between working and overall exits from the FSP did not change following the 2002 reforms. Again the same pattern of results is obtained from the cohort sample.

Largely due to the smaller sample size, few of the other factors that could potentially influence food stamp exits are measured precisely enough to conclude that they had significant effects. Overall, less educated individuals and those with work limiting disabilities are less likely to exit food stamps in any given wave than more educated individuals and those without disabilities. Those without high school educations are less likely to exit food stamps for work than those with high school degrees, but no more likely to exit for non-work reasons. Those with disabilities are more likely to exit for non-work reasons and less likely to exit for work than those without disabilities. And in one notable departure from the cohort sample, Hispanics in the new entrant sample are more likely than whites to exit the food stamp program for work.

Just as in the cohort sample, the likelihood of leaving food stamps generally declines over time for the new entrant sample (*Figure 5*). Here the indicator variables of waves-since-entry reflect time on the program for each individual. For those who do not leave food stamps in the first wave after they entered the program, the probability of exit declined by about 5 percentage points in the next wave. Over the next few years, the probability of exiting for those who remained on the program generally follows a downward trend although there was some volatility in the estimates. The pattern in exits for both work and non-work related reasons follow the pattern in overall exits.

VII. Conclusion

One of the goals underlying the 2002 reforms to the Food Stamp Program was to make the program more accessible to needy families, especially low-income working families. Those changes could have both induced more low-income working families to sign up for benefits and induced more non-working food stamp recipients to start working. Further, some food stamp recipients that would have left the program upon finding jobs may have stayed on the program even after they started working. On one hand, changes that made it easier to obtain and retain food stamp benefits should lead to longer periods of food stamp receipt; on the other hand, increasing work effort among food stamp recipients should enhance their earnings growth leading to shorter stays on the program.

This study finds that, on average, the rate at which adult food stamp recipients exited the program fell following the 2002 reforms. In addition, longer term food stamp recipients are more likely to combine work and food stamp receipt following the reforms. Although individuals who combine work and food stamp receipt are more likely to leave the program at any given point in time, no evidence suggests that "combiners" are exiting the program faster following the 2002 reforms. Taken together, these results suggest that the 2002 reforms may have induced more food stamp recipients to work while receiving benefits rather than drawing more low-income working families on to the program.

Table 1

Characteristics of Adults in Low-Income Families by Food Stamp Participation

	Wave 1, 1996			Wave 1, 2004			On FS-96 v. On FS-04
	On FS (%)	No FS (%)	p-value	On FS (%)	No FS (%)	p-value	p-value
All	22.5	77.5		19.8	80.2		
Work-FSP Combiner	39.6			40.5			0.531
Age							
25-44	78.6	77.4	0.157	74.0	71.0	0.005	0.000
45+	21.4	22.6	0.157	26.0	29.0	0.005	0.000
Race/ethnicity							
White and other	49.5	66.9	0.000	47.3	59.6	0.000	0.136
Black	29.1	15.1	0.000	29.2	15.6	0.000	0.943
Hispanic	21.4	18.0	0.000	23.4	24.9	0.208	0.109
Foreign Born	17.9	18.5	0.432	15.8	26.7	0.000	0.058
Citizen	86.1	85.2	0.279	88.4	80.2	0.000	0.022
Sex							
Male	34.8	48.8	0.000	33.2	46.6	0.000	0.268
Female	65.2	51.2	0.000	66.8	53.4	0.000	0.268
Family composition							
One adult	44.3	38.0	0.000	47.6	38.9	0.000	0.020
Multiple adults	55.7	62.0	0.000	52.4	61.1	0.000	0.020
No children	24.8	41.0	0.000	29.4	42.0	0.000	0.000
1 child	17.9	17.4	0.564	17.8	16.7	0.208	0.983
2 or more children	57.4	41.6	0.000	52.8	41.4	0.000	0.001
Work-limiting disability	34.5	16.7	0.000	38.8	17.5	0.000	0.002
Education							
Less than High School	42.8	24.4	0.000	36.5	24.2	0.000	0.000
High School	36.1	37.2	0.293	29.5	29.8	0.790	0.000
Some College	15.2	21.4	0.000	27.1	27.1	0.982	0.000
College or Higher	4.2	14.1	0.000	6.9	18.9	0.000	0.000
Income to Needs							
0-49 %	29.4	15.1	0.000	32.3	17.6	0.000	0.032
50-99 %	41.7	18.6	0.000	37.2	19.5	0.000	0.001
100-149%	20.9	29.1	0.000	20.2	28.1	0.000	0.569
150-200%	8.0	37.3	0.000	10.3	34.8	0.000	0.007
TANF Receipt	40.0	1.7	0.000	19.4	1.0	0.000	0.000
Observations	3,019	9,598		2,770	9,855		0.000

Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP)

Table 2

Future Food Stamp Receipt: Comparing Cohorts of Food Stamp Recipients and Other Low Income Adults

	On Food Stamps in Wave 1		Not on Food Stamps in Wave 1	
	1996	2004	1996	2004
Wave				
1	100%	100%	0%	0%
2	81%	83%	5%	5%
3	71%	79%	5%	7%
4	68%	76%	5%	7%
5	61%	72%	5%	8%
6	60%	69%	5%	9%
7	57%	67%	5%	9%
8	52%	65%	5%	9%
9	51%	62%	5%	9%
10	47%	59%	5%	8%
11	46%	62%	5%	10%
12	45%	61%	5%	10%

Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP).

Table 3

Work Over Time: Comparing Cohorts of Food Stamp Recipients and Other Low Income Adults

	On Food Stamps in Wave 1		Not on Food Stamps in Wave 1	
	1996	2004	1996	2004
Wave				
1	40%	41%	65%	58%
2	44%	45%	70%	64%
3	45%	45%	71%	65%
4	47%	44%	71%	64%
5	49%	46%	72%	64%
6	49%	46%	72%	66%
7	49%	46%	71%	66%
8	49%	47%	72%	66%
9	51%	47%	72%	66%
10	52%	46%	72%	65%
11	54%	47%	72%	65%
12	54%	46%	73%	66%

Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP).

Table 4

Average Personal Earnings of Low-Income Wave 1 Food Stamp Recipient and Non-Recipient Adults, 1996 SIPP

(Dollars)

	1996 SIPP		2004 SIPP	
	FS Recipients in Wave 1	Non-Recipients in Wave 1	FS Recipients in Wave 1	Non-Recipients in Wave 1
Wave				
1	3,197	4,707	3,577	4,913
2	3,963	6,233	4,125	6,142
3	4,399	6,794	4,501	6,662
4	4,414	6,830	4,677	6,956
5	4,979	7,425	4,564	7,082
6	5,063	7,519	4,752	7,179
7	5,112	7,676	4,789	7,157
8	5,471	7,954	4,956	7,352
9	5,324	8,128	5,033	7,836
10	5,338	8,237	5,112	7,613
11	5,629	8,366	5,249	7,675
12	5,902	8,495	5,594	7,890
Overall Growth	84.6%	80.5%	56.4%	60.6%

Table 5

Estimated Probability of Exiting the Food Stamp Program For Any Reason and by Reason, Cohort Sample

	Hazard	Competing Risk	
		Exit for:	
	Any Exit	Other	Work
2004 SIPP Cohort	-0.0516***	-0.0209***	-0.0135***
	[0.00629]	[0.00264]	[0.00461]
Wage-FSP Combiner	0.0506***	-0.0548***	0.0953***
	[0.00649]	[0.00371]	[0.00688]
Combiner/2004 Interaction	0.00399	0.0189*	-0.00390
	[0.00898]	[0.00993]	[0.00490]
Any TANF Income	-0.0366***	-0.0188***	-0.00702***
	[0.00472]	[0.00237]	[0.00250]
Age 25-44	0.00009	-0.00315	0.00440*
	[0.00511]	[0.00249]	[0.00259]
Black	-0.0188***	-0.00687***	-0.00678***
	[0.00499]	[0.00251]	[0.00245]
Hispanic	-0.0185***	-0.00410	-0.00879***
	[0.00634]	[0.00325]	[0.00301]
Male	0.0168***	0.00262	0.0101***
	[0.00528]	[0.00262]	[0.00270]
One Adult	-0.0199***	-0.0129***	-0.00149
	[0.00464]	[0.00247]	[0.00228]
One Child	0.0294***	0.00818*	0.0128***
	[0.00876]	[0.00429]	[0.00472]
2 or More Children	-0.00144	-0.000448	0.000154
	[0.00668]	[0.00321]	[0.00349]
Less than High School	-0.00651	-0.000108	-0.00437*
	[0.00495]	[0.00255]	[0.00243]
Some College or More	0.0128**	0.00311	0.00575**
	[0.00561]	[0.00301]	[0.00274]
Work Limiting Disability	-0.0373***	-0.00414	-0.0269***
	[0.00560]	[0.00257]	[0.00368]
Non-Citizen	-0.00182	-0.00318	0.000946
	[0.00769]	[0.00378]	[0.00386]
State Unemployment Rate	-0.00527	0.00140	-0.00465**
	[0.00391]	[0.00201]	[0.00196]
Observations	24,228	24,228	24,228
Mean of Dependent Variable	0.1239	0.0486	0.0752

Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP).

Notes:

Estimates represent the marginal effect of a discrete change in the explanatory variable from 0 to 1, evaluated at the mean of the dependent variable.

* significant at the 10% level, ** significant at 5% level, *** significant at the 1% level

Table 6

Estimated Probability of Exiting the Food Stamp Program For Any Reason and by Reason, New Entrant Sample

	Hazard	Competing Risk	
		Exit for:	
	Any Exit	Other	Work
2004 SIPP Cohort	-0.0985***	-0.0359***	-0.0281*
	[0.0239]	[0.0110]	[0.0163]
Wage-FSP Combiner	0.0671***	-0.112***	0.147***
	[0.0232]	[0.0149]	[0.0214]
Combiner/2004 Interaction	-0.0131	0.0393	-0.0206
	[0.0282]	[0.0269]	[0.0148]
Any TANF Income	0.00194	-0.0111	0.0111
	[0.0212]	[0.0102]	[0.0121]
Age 25-44	0.0137	0.0161*	0.00244
	[0.0188]	[0.00905]	[0.00971]
Black	-0.0206	0.000123	-0.0130
	[0.0178]	[0.0101]	[0.00854]
Hispanic	0.00567	-0.0150	0.0213*
	[0.0245]	[0.0125]	[0.0124]
Male	0.0221	-0.00119	0.0147*
	[0.0158]	[0.00849]	[0.00805]
One Adult	-0.0195	-0.0119	-0.00330
	[0.0166]	[0.00888]	[0.00779]
One Child	-0.0163	-0.0124	-0.00441
	[0.0248]	[0.0119]	[0.0121]
2 or More Children	-0.0207	0.000878	-0.0205*
	[0.0217]	[0.0117]	[0.0107]
Less than High School	-0.0313*	0.00278	-0.0259***
	[0.0172]	[0.00969]	[0.00787]
Some College or More	0.0454**	0.0228*	0.0115
	[0.0187]	[0.0117]	[0.00889]
Work Limiting Disability	-0.0503***	0.0259**	-0.0715***
	[0.0187]	[0.0111]	[0.0106]
Non-Citizen	0.0118	0.0171	0.00265
	[0.0263]	[0.0164]	[0.0127]
State Unemployment Rate	-0.0128	-0.00637	-0.00265
	[0.0134]	[0.00714]	[0.00648]
Observations (Person-Waves)	4,046	4,046	4,046
Mean of Dependent Variable	0.2504	0.0999	0.1505

Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP).

Notes:

Estimates represent the marginal effect of a discrete change in the explanatory variable from 0 to 1, evaluated at the mean of the dependent variable.

* significant at the 10% level, ** significant at 5% level, *** significant at the 1% level

Figure 1. Number of Households Receiving SNAP Benefits, October 1992-September 2008

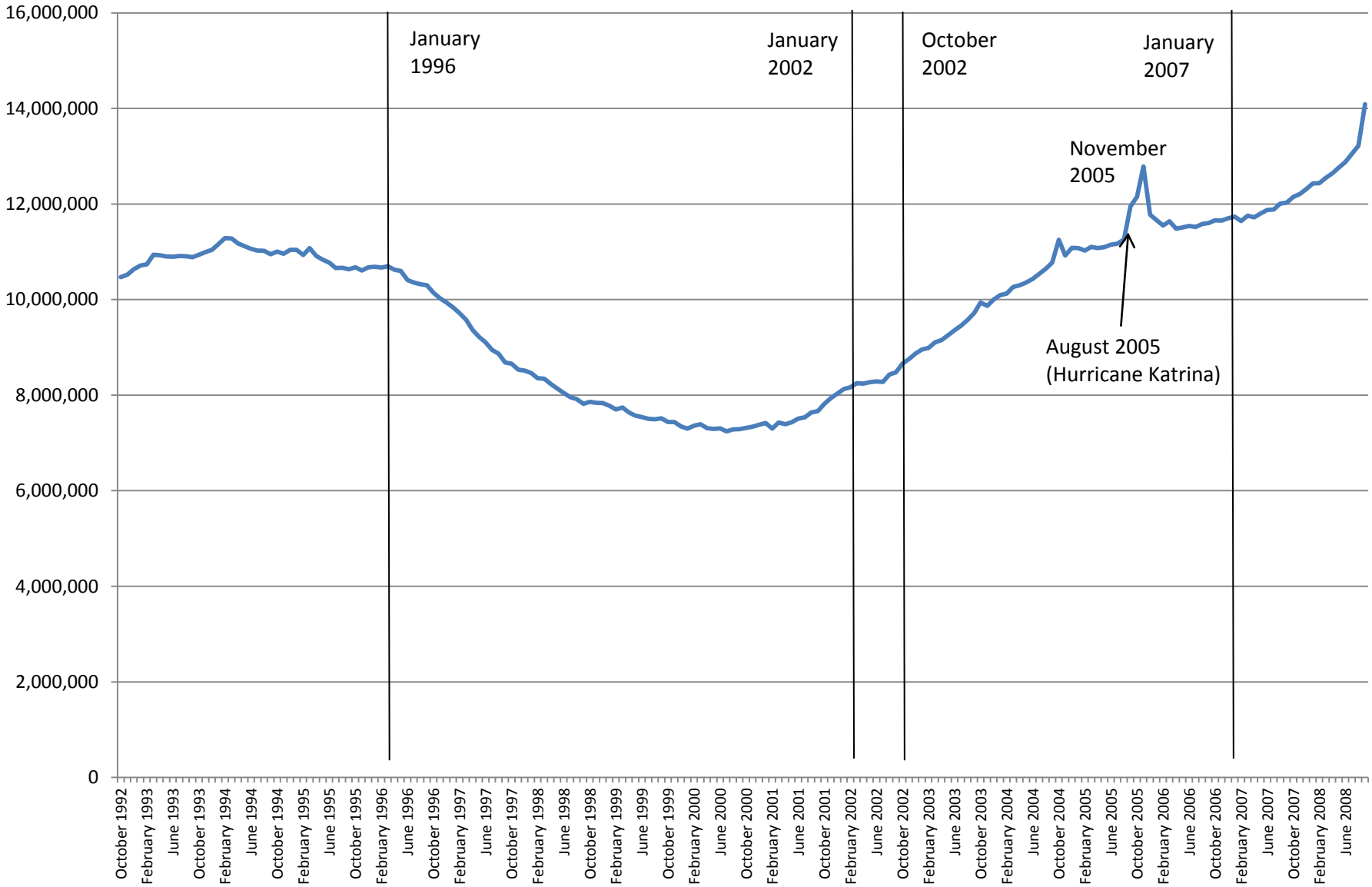
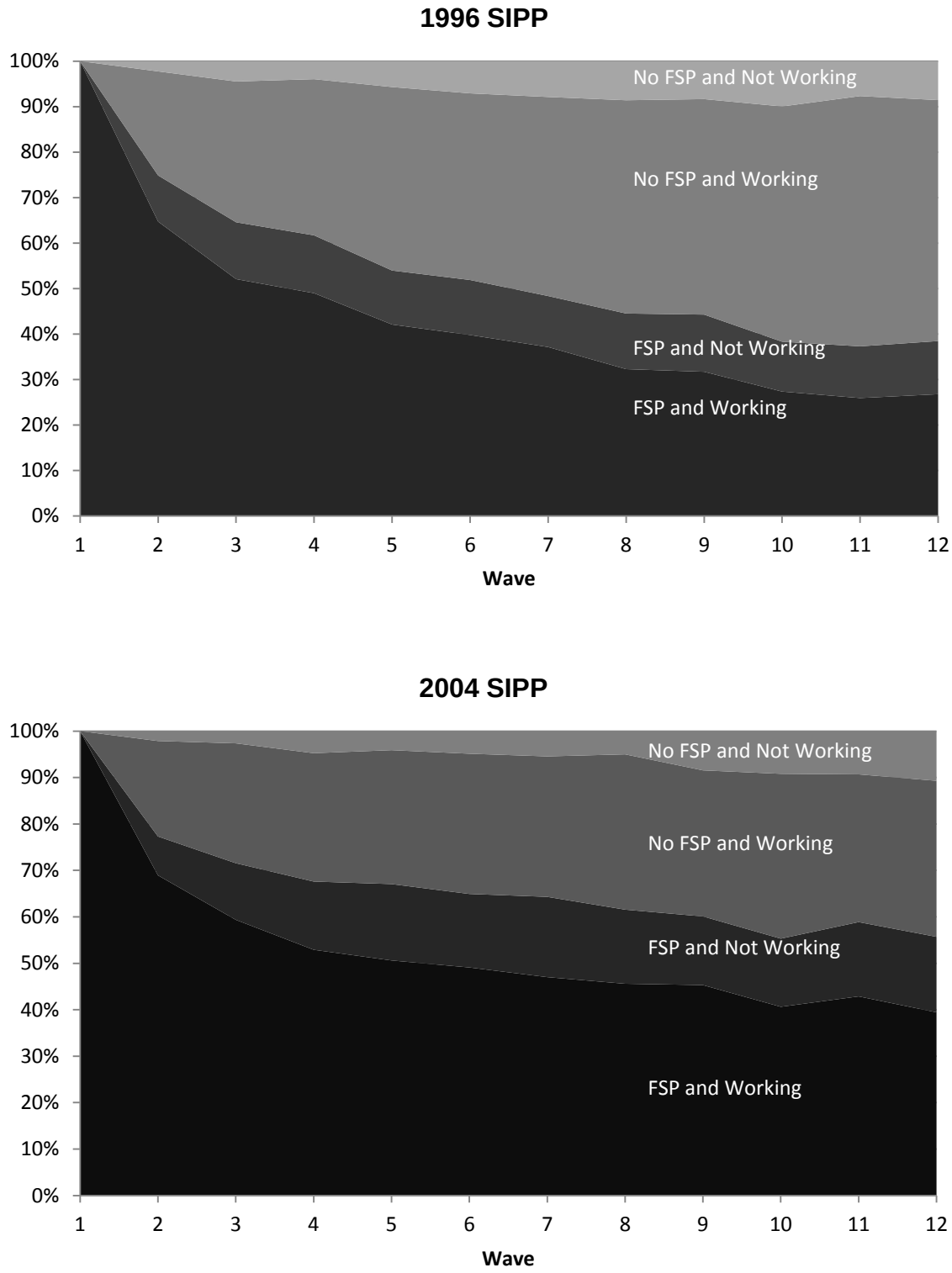


Figure 2

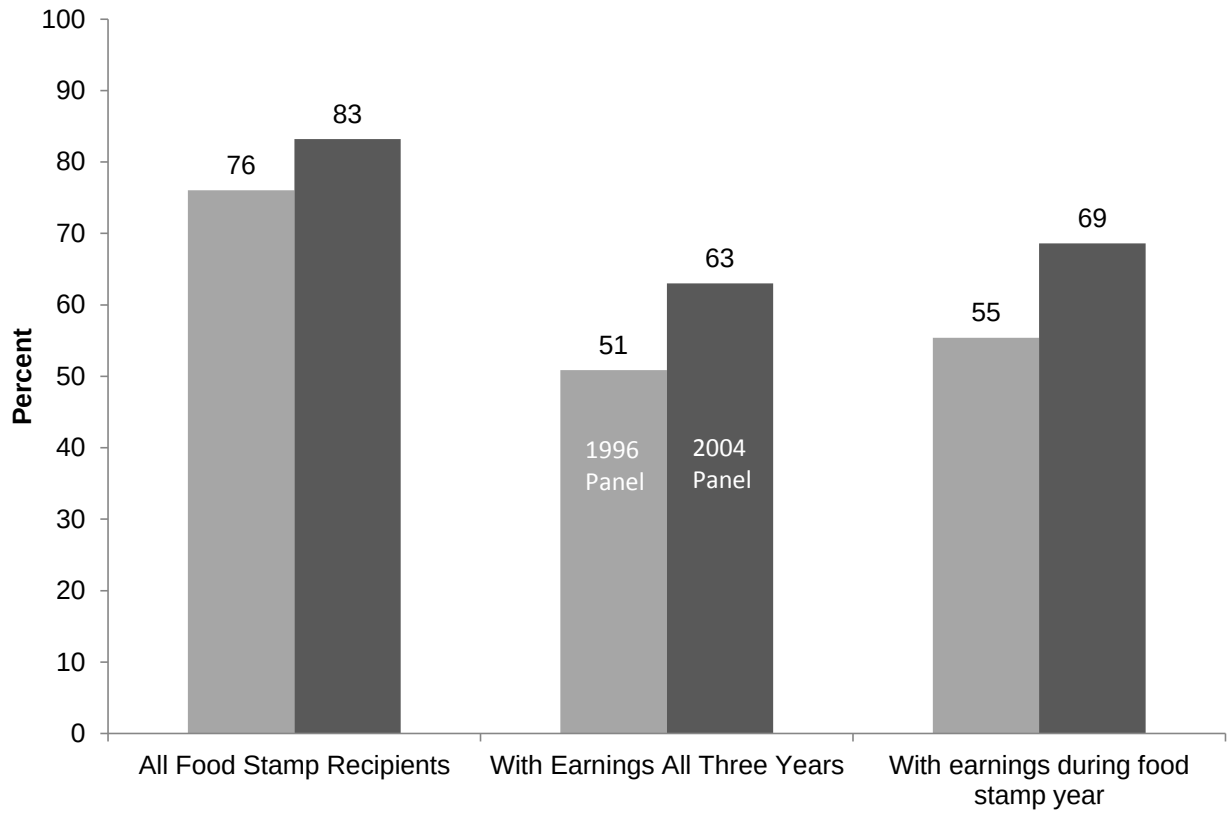
Earnings and Food Stamp Receipt of Low-Income FSP and Work Combiners, 1996 and 2004 SIPP Panels



Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP).

Figure 3

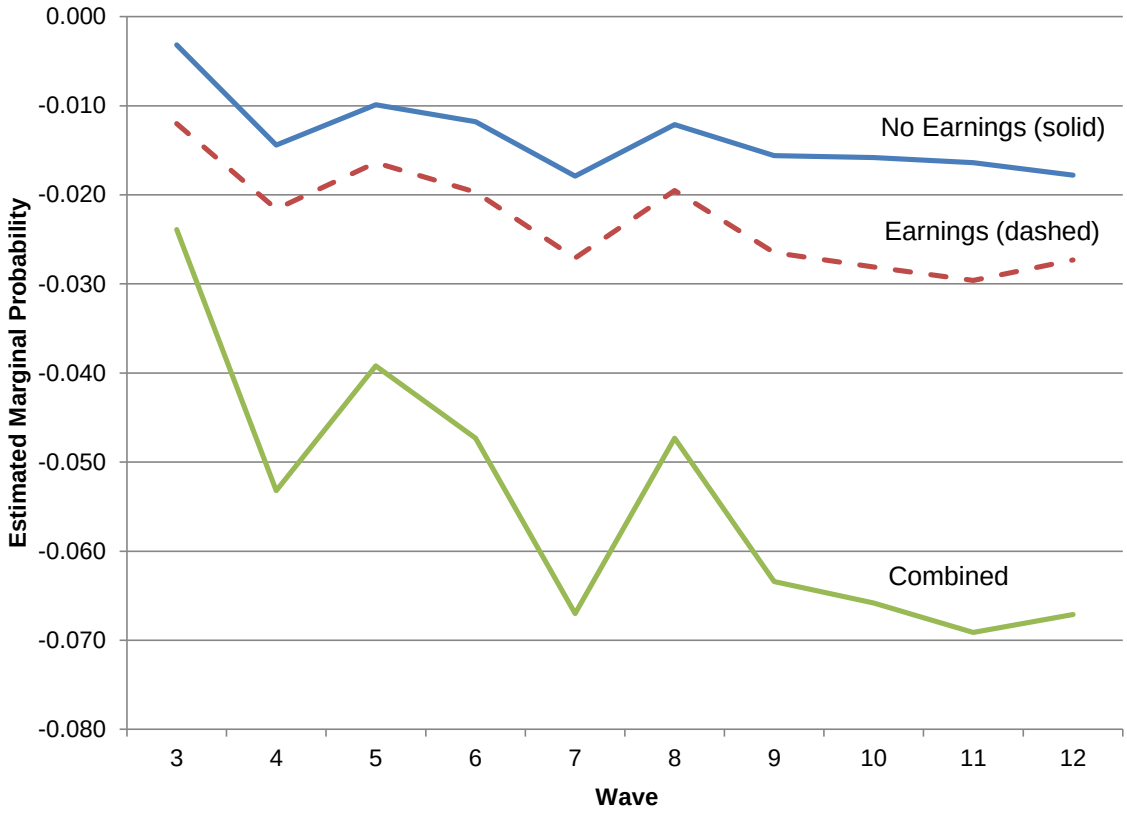
Food Stamp Recipients With Earnings Below the 25th Percentile Over a Three Year Period, 1996 and 2004 Cohort Samples



Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP).

Figure 4

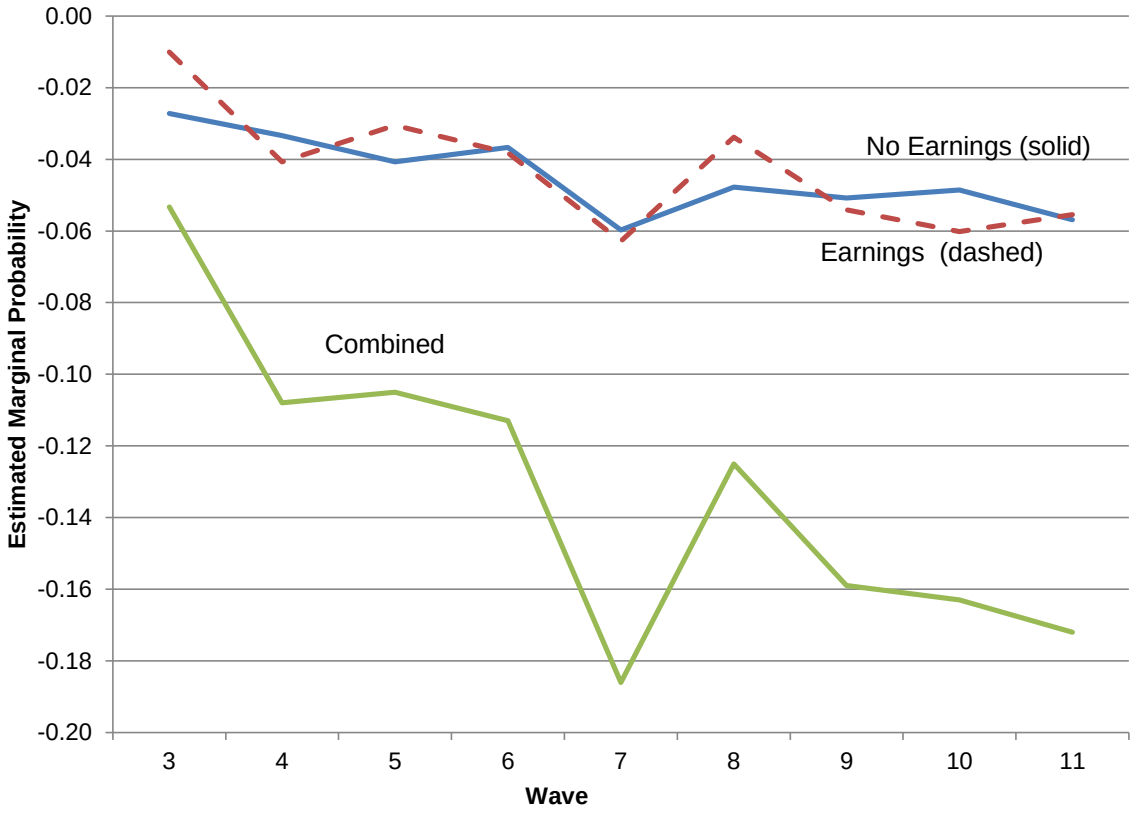
Estimated Marginal Probability of Exit from Food Stamps Over Time by Reason for Exit, Cohort Sample



Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP). See Table 5.

Figure 5

Estimated Marginal Probability of Exit from Food Stamps Over Time by Reason for Exit, New Entrants Sample



Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP). See Table 6.

Appendix Table A

Comparison of the Cohort and New Entrant Samples

	Wave 1, 1996			Wave 1, 2004			New Entrant-96 v. New Entrant-04
	Cohort Sample[1] (%)	New Entrants[2] (%)	p-value	Cohort Sample[1] (%)	New Entrants[2] (%)	p-value	p-value
Work-SNAP Combiner							
Yes	39.6	53.3	0.000	40.5	47.6	0.001	0.041
Age							
25-44	78.6	79.0	0.825	74.0	71.6	0.198	0.001
45+	21.4	21.0	0.825	26.0	28.1	0.248	0.002
Race/ethnicity*							
White and other	49.5	55.8	0.005	47.3	55.8	0.000	0.994
Black	29.1	27.4	0.389	29.2	23.6	0.002	0.118
Hispanic	21.4	16.8	0.008	23.4	20.5	0.137	0.097
Foreign Born	17.9	18.6	0.697	15.8	18.2	0.156	0.868
Citizen	86.1	86.3	0.885	88.4	87.8	0.717	0.416
Sex							
Male	34.8	40.9	0.006	33.2	39.4	0.003	0.575
Female	65.2	59.1	0.006	66.8	60.6	0.003	0.575
Family composition							
One adult	44.3	37.2	0.001	47.6	42.9	0.026	0.034
Multiple adults	55.7	62.8	0.001	52.4	57.1	0.026	0.034
No children	24.8	27.9	0.126	29.4	34.7	0.009	0.010
1 child	17.9	17.1	0.657	17.8	17.2	0.690	0.960
2 or more children	57.4	54.9	0.284	52.8	48.1	0.027	0.013
Work-limiting disability	34.5	29.6	0.020	38.8	36.9	0.342	0.005
Education							
Less than High School	42.8	37.1	0.010	36.5	24.5	0.000	0.000
High School	36.1	36.6	0.810	29.5	39.0	0.000	0.377
Some College	15.2	21.1	0.001	27.1	25.9	0.514	0.040
College or Higher	4.2	3.5	0.454	6.9	10.6	0.005	0.000
Income to Needs							
0-49 %	29.4	23.2	0.002	32.3	22.2	0.000	0.673
50-99 %	41.7	35.2	0.003	37.2	26.6	0.000	0.001
100-149%	20.9	21.6	0.689	20.2	29.5	0.000	0.001
150-200%	8.0	19.9	0.000	10.3	21.7	0.000	0.440
TANF Receipt	40.0	22.8	0.000	19.4	11.7	0.000	0.000
Observations	3,019	655		2,770	913		

Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP).

Notes:

1. Estimates are for people on food stamps in wave 1 of each SIPP panel.
2. Estimates are for people on food stamps in either waves 2, 3, or 4 but not wave 1 of each SIPP panel.

Appendix Table B

Earnings and SNAP Receipt of Low-Income Food Stamps New Entrants

	1996 Panel		2004 Panel	
	On SNAP	Working	On SNAP	Working
Wave				
1	100%	53%	100%	48%
2	60%	54%	71%	47%
3	36%	57%	51%	46%
4	28%	57%	41%	48%
5	22%	58%	32%	49%
6	18%	59%	24%	49%
7	15%	59%	22%	49%
8	12%	57%	19%	51%
9	10%	58%	17%	52%

Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP).

Notes: Wave 1 is the wave of entry for each individual

Appendix Table C

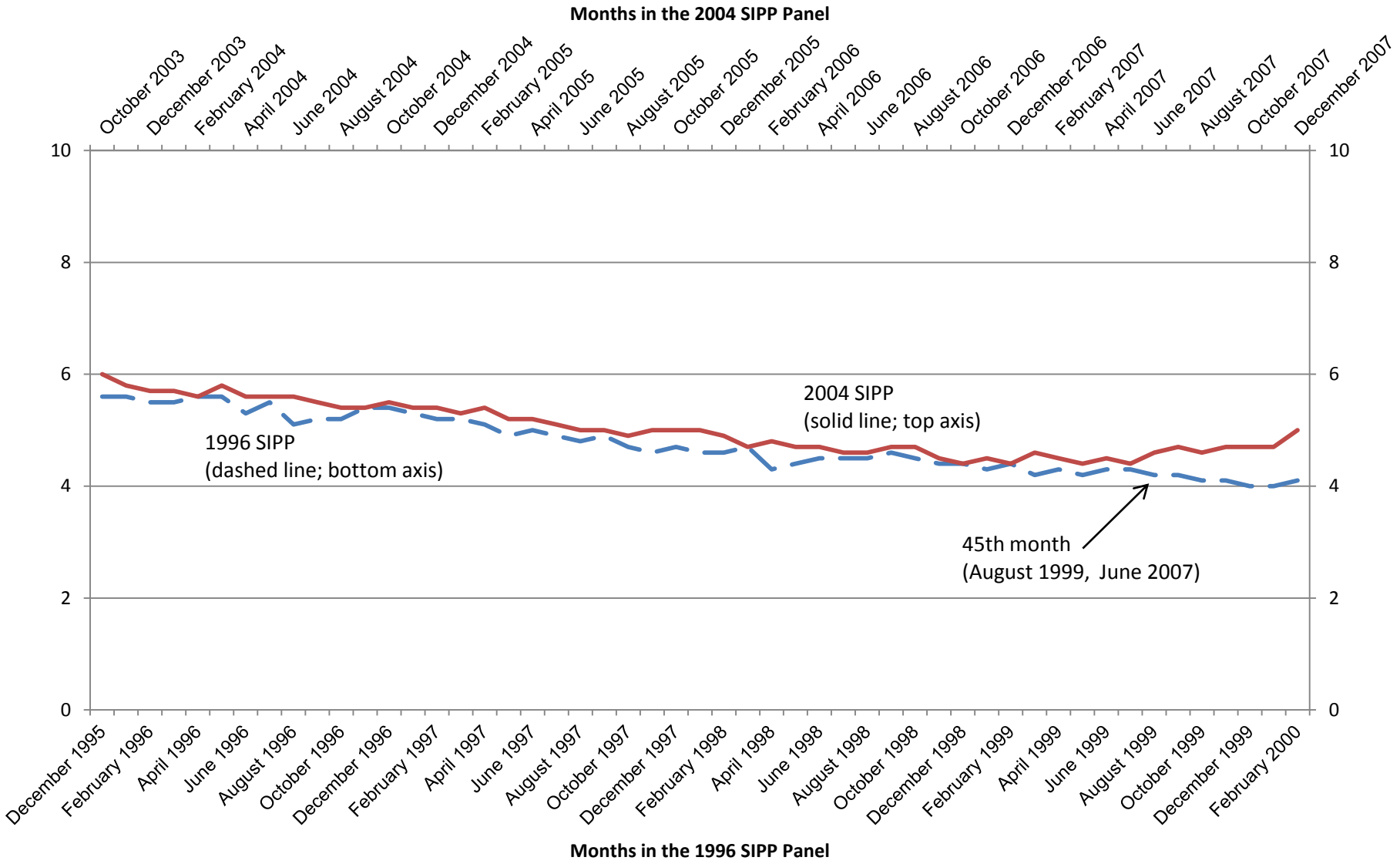
Average Personal Earnings of Low-Income Food Stamps New Entrants

(Dollars)

	1996 Panel	2004 Panel
Wave		
1	4,147	4,489
2	4,515	4,336
3	4,904	5,300
4	5,274	5,118
5	5,417	5,212
6	5,573	5,138
7	5,969	5,428
8	6,178	5,392
9	6,279	5,244
Overall Growth	51.4%	16.8%

Source: Authors' calculations based on data from the Survey of Income and Program Participation (SIPP).

Appendix Figure A. Monthly Unemployment Rate, 1996 and 2004 SIPP Periods, All, 16 or older



Source: Authors' calculations based on seasonally-adjusted monthly unemployment rate data from the Bureau of Labor Statistics.