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Examining the Growth of the Zero-Income SNAP Caseload: Characteristics, Circumstances, and Dynamics of Zero-Income SNAP Participants

Volume I: Cross-Sectional, Longitudinal, and
Policy Analysis Findings, 1993–2008

Food and Nutrition Service
U.S. Department of Agriculture
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1993–2008



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EXECUTIVE SUMMARY

The Supplemental Nutrition Assistance Program (SNAP) is one of the Nation's largest and most important assistance programs for low-income households. SNAP has come to represent a critical source of support for a growing number of people with no income. Although all SNAP enrollment has increased in recent years,¹ the growth of SNAP households with no reportable cash income (e.g., income from earnings, cash assistance programs, retirement, etc.) has far surpassed that of the overall SNAP caseload. Based on SNAP Quality Control (QC) data, the share of these households more than doubled between 1993 and 2012, from 9.7 percent of the SNAP caseload in FY 1993 to 20.5 percent in FY 2012. The goal of this study, conducted by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS), was to examine the growth of the zero-income SNAP caseload by describing the characteristics, circumstances, and dynamics of zero-income SNAP participants and assessing whether economic and policy changes may have affected this growth. The study employed four complementary analytic methods:

1. A repeated cross-sectional analysis, using Survey of Income and Program Participation (SIPP) data from 1993, 1996, 2001, 2004, and 2008
2. A longitudinal analysis of 2004 SIPP panel data
3. A policy analysis of data from SIPP and other sources
4. A qualitative analysis of semi-structured in-depth interviews conducted in 2012 with 50 zero-income SNAP participants

Volume I of this report presents findings from the repeated cross-sectional, longitudinal, and policy analyses designed to examine trends in this population over time, the dynamics of income and SNAP participation and how economic and policy changes may have affected the population and its representation in the SNAP caseload. Volume II addresses findings from the in-depth interviews designed to understand the circumstances of zero-income SNAP participants and how, with zero income, these participants are coping.² Key study results from both volumes are presented below.

Zero-Income SNAP Participants Increasingly Live in Single-Parent Families, are ABAWDs, and/or Have Previously Received AFDC/TANF

Between 1993 and 2008, several changes occurred in the composition of the zero-income SNAP population as compared to 1) positive-income SNAP participants; 2) zero-income non-SNAP participants; and 3) positive-income non-SNAP participants. Three of these primary changes include the following.

Family Composition. The proportion of zero-income SNAP participants who live in families with children—particularly single-parent families—increased over time. In comparison,

¹ See USDA, 2014a

² Volume II of this report is entitled "Examining the Growth of the Zero-Income SNAP Caseload: Characteristics, Circumstances, and Dynamics of Zero-Income SNAP Participants: Volume II: In-Depth Interview Findings, June–October 2012."

the proportion of individuals living in single-parent families remained relatively constant or showed modest declines among the three comparison groups.

ABAWDs. The proportion of able-bodied adults without dependents (ABAWDs) among zero-income SNAP adults (ages 18–49) declined by more than half after 1996 before rebounding to nearly one-third of the population between 2004 and 2008. In comparison, increases in the proportion of ABAWDs in the positive-income SNAP and non-SNAP comparison groups were relatively modest, with virtually no change after 1996.

AFDC/TANF Receipt. Past receipt of AFDC/TANF³ increased dramatically among the zero-income SNAP population between 1996 and 2001, after which it remained fairly level. By comparison, receipt of AFDC/TANF decreased substantially among the positive-income SNAP population and remained low and relatively stable within the two non-SNAP comparison groups.

Most Zero-Income SNAP Episodes Are Short Within Longer Periods of SNAP Participation

Over the nearly 3-year period from 2004–2006, most zero-income SNAP experiences were short periods of zero income (median of 3 months) within longer periods of continuous SNAP participation. Of the individuals who experienced any zero-income SNAP episode, over two-thirds of them had only one zero-income episode. Among those with positive income before or after their zero-income SNAP episodes, earnings were the most common source of income lost before (61.3 percent), and gained after (65.2 percent), these episodes. In addition, TANF income was lost by 11.8 percent and gained by 11.0 percent of people.

Increasing Unemployment Rates Significantly Increased the Zero-Income SNAP Population

Of the economic circumstances reviewed through the policy analysis (from 2001–2008), results suggest that the increasing unemployment rate during the 2000s significantly affected the growth of the zero-income SNAP caseload. Weaker economic conditions contributed to higher overall levels, and longer individual episodes, of zero-income SNAP participation.

SNAP Policies Did Not Contribute to the Growth; Longer SNAP Certification Intervals Related to Less Zero-Income SNAP Participation

Of the SNAP policies reviewed through the policy analysis (from 2001–2008), results suggest that SNAP certification intervals negatively affected the growth of the zero-income SNAP caseload. Average certification intervals⁴ for zero-income SNAP participants increased between 2001 and 2008, but counter to the expected trend, these increases may have ameliorated the growth in the zero-income caseload. In other words, the growth could have been even greater in the absence of these policy changes. Although longer certification

³ The AFDC (Aid to Families with Dependent Children) program was replaced by the TANF (Temporary Assistance to Needy Families) program.

⁴ Certification intervals are the period of time a household is certified to receive SNAP benefits. At the end of the certification period, the household typically must complete paperwork to “recertify” for benefits. Between 2001 and 2008, the average certification periods lengthened for zero-income SNAP households.

intervals contributed to an increase in overall SNAP participation (regardless of income status), they contributed to a decrease in *zero-income* SNAP participation. The mechanism behind this finding, however, is unclear.

Other SNAP policies examined, including simplified income reporting, simplified income definitions, broad-based categorical eligibility, child support payment exclusions, and comparable cash assistance disqualification policies—contributed to increased turnover in the zero-income SNAP caseload, but little change in the overall level. In other words, these policies may have contributed to more individuals entering the zero-income SNAP condition, but also more individuals exiting the condition, leaving no net impact on the overall proportion of zero-income SNAP participants.

Circumstances Contributing to Zero Income Include Barriers to Employment and Infrequent Participation in Other Federal Assistance Programs

The interviews with zero-income SNAP participants highlighted in Volume II of this study showed that a variety of circumstances contribute to periods of no income, particularly barriers to employment and infrequent participation in other Federal assistance programs. Barriers to employment included limited education/insufficient professional credentials; lack of training and/or steady work experience; physical or mental health problems; work related injuries; having a criminal record; taking care of dependent family members; employment gaps; and lack of transportation options. Although nearly all respondents experienced at least one of these challenges—and many experienced several—most continued to search for work. With the exception of Medicaid, participation in other Federal assistance programs was otherwise uncommon among respondents.

Zero-income SNAP participants mainly relied on a personal safety net of family, friends, and church communities for food, housing, basic necessities, cash income, odd jobs, and job application assistance. In exchange, respondents often gave labor, cash from intermittent odd jobs, and/or food to those providing assistance. Some respondents cut the size of their meals or skipped them entirely in order to extend their SNAP benefits or to provide food for others.

Worsening Economic Conditions, Barriers to Employment, and Decreased Access to the Public Safety Net Increased the Zero-Income SNAP Population

Worsening Economic Conditions and Lack of Economic Recovery. Worsening economic conditions appear to have contributed to the growth of the zero-income population, including the zero-income SNAP caseload. Results of the policy analysis suggest that increasing unemployment rates contributed to much of the zero-income SNAP caseload growth in the 2000s. Results of the repeated cross-sectional analyses of SIPP data show that the growth of the zero-income SNAP caseload in part reflects an increase among the broader zero-income population. The proportion of SNAP participants living in families with zero income more than tripled in size from 2.4 percent in 1993 to 7.8 percent in 2008. Among the low-income population (individuals in families with incomes of less than 200 percent of the Federal poverty level (FPL)), the proportion of zero-income individuals more than doubled, from 3.5 percent in

1993 to 8.1 percent in 2008.⁵ Zero-income individuals more than doubled as a proportion of the total U.S. population as well, from 1.3 percent in 1993 to 2.8 percent in 2008.

Overall, these findings echo those of previous research showing that the relatively low unemployment rates during the mid-2000s did not translate into gains for the most disadvantaged portions of the population, including those with lower education levels (Greenstone & Looney, 2011). Similarly, there was minimal net change in the poverty rate during the economic recovery between 2004 and 2007, and SNAP participation continued to grow among zero- and low-income households (Hanson & Oliveira, 2012).

Barriers to Employment. In addition to the worsening economic conditions, multiple barriers to employment and greater job volatility appear to have contributed to the growth of the zero-income SNAP population. Longitudinal analyses of SIPP data, for example, show that earned income was the main source of income lost by those who became zero-income SNAP participants (and gained by those who exited the condition), suggesting this population may be prone to job volatility. Study results suggest health and disability issues are persistent barriers to obtaining and retaining employment among this population; analyses of SIPP data, for example, show that approximately one-fifth (19.9 percent) of nonelderly zero-income adults in 2008 reported having a physical and/or mental health condition that prevented them from working, despite not receiving any disability assistance. Overall, nearly four-fifths (79.5 percent) of all adults in zero-income SNAP families in 2008 did not have a job at some point in the 4 months prior to the survey. Explanations provided for lack of recent employment included health or disability issues (30.4 percent); dependent care responsibilities (28.3 percent); an inability to find work (21.2 percent); and other reasons (20.1 percent).

The in-depth interviews similarly highlighted multiple barriers to employment that made it difficult to enter, remain in, or reenter the workforce. Physical and mental health issues were among the most commonly reported factors that led to job loss and made it difficult for respondents to reenter the workforce. In addition to complicating the job search process, ongoing health problems limited the type of jobs that respondents could perform. Many respondents also had limited education and minimal training, so their only real job opportunities were in unskilled jobs that offered little security. Although many respondents had worked in those types of jobs, other factors—such as low wages that did not cover the cost of transportation to and from the job—sometimes made it challenging to keep them.

Decreased Access to the Public Safety Net. Study findings are also consistent with research highlighting the erosion of other supports for poor and near-poor families. A growing body of research, for example, highlights the difficulties faced by disadvantaged families who have either left, been forced off, or been discouraged from entering the cash assistance rolls, but who nevertheless have been unable to secure employment—so-called “disconnected” families. The increased proportions of single-parent families and past AFDC/TANF recipients—

⁵ Note these findings are based on analysis of SIPP data, while previous estimates of the zero-income SNAP caseload have been based on SNAP QC data. Several factors limit the comparability of SIPP and QC estimates, including different units of analysis (individuals vs. SNAP units), underreporting of program participation in surveys, and different measures of income.

coupled with single-parent families' higher likelihoods of experiencing zero-income SNAP and longer lengths of time spent in the condition—shown in quantitative analyses of SIPP data suggest that single-parent SNAP families were increasingly vulnerable to experiencing periods of zero income. Interviews with zero-income SNAP participants similarly pointed to low participation in other Federal assistance programs and high reliance on personal safety net of family and friends. For example, no respondent was receiving UI or SSI, although many might have qualified for these benefits based on circumstances that prevented them from working, such as disabling health problems. Several respondents described administrative hurdles that prevented them from following through with applications. With respect to UI, several respondents were unaware of the eligibility requirements, assumed they were ineligible, or their former employers dissuaded them from applying.

Finally, the increasing proportion of ABAWDs in the zero-income SNAP population similarly echoes the trends in an increasingly disconnected population facing barriers to employment and may explain some of the growth in the zero-income SNAP caseload. This growing segment of the zero-income SNAP population may reflect the limitations placed on SNAP participation by nonworking ABAWDs after the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) was implemented in FY 1997, followed by expansions in ABAWD eligibility due to increases in State waivers of ABAWD requirements in the 2000s for areas with high unemployment.

I. INTRODUCTION

This report presents the results of a U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS) study intended to increase FNS's understanding of the growth of zero-income households in the Supplemental Nutrition Assistance Program (SNAP) caseload. Since passage of the Food Stamp Act of 1964, SNAP has grown to become one of the Nation's largest and most important assistance programs for low-income households. Unlike other FNS nutrition assistance programs, SNAP serves a broad cross section of the population who meet certain financial criteria without restrictions based on age, disability status, or pregnancy status.

The number of individuals participating in SNAP has increased steadily since 2000. SNAP served approximately 47.6 million people in 2013, the largest number to date, with benefits totaling \$76.1 billion in FY 2013 (an average monthly benefit of \$133 per person).⁶ In addition to the growing overall caseload, SNAP has also come to represent a critical source of support for a growing number of people with no income. In recent years, the growth rate of the number of zero-income SNAP households has far surpassed that of the overall SNAP caseload. Recent research conducted for FNS showed that the number of these households has more than doubled since FY 1999, from 8.5 percent of the SNAP caseload in FY 1999 to 20.5 percent in FY 2012 (Gothro & Bencio, 2010; Insight tabulations of SNAP Quality Control (QC) data).⁷ A previous study of zero-income SNAP households showed that in FY 2009, compared to their positive-income counterparts, zero-income SNAP households were five times as likely to contain nonelderly, nondisabled, childless adults that are ineligible for other income maintenance assistance programs (Gothro & Bencio, 2010). Although the composition of the zero-income SNAP households had not changed significantly between FY 1999 and FY 2009, the distributions of these households differed from those of low-income SNAP households on a variety of characteristics including age and gender of unit head, size of household, and presence of children (Gothro & Bencio, 2010).

The goal of the current study is to provide potential explanations for why the percentage of zero-income SNAP households is increasing. The current study builds on prior research by further examining the characteristics and circumstances of the zero-income SNAP population, in comparison to other SNAP and non-SNAP populations with similar incomes, and how these characteristics have changed from 1993–2012. In addition, it examines how, with zero income, these families are surviving and how economic and/or policy changes may have affected this population. The four main study objectives are illustrated below in Table I.1.

⁶ See USDA, 2014a.

⁷ Note these findings are based on analysis of SNAP QC data, while estimates of zero-income SNAP participation in the current study are based on SIPP data. Several factors limit the comparability of QC and SIPP estimates, including different units of analysis (individuals vs. SNAP units), underreporting of program participation in surveys, and different measures of income.

Table I.1
Study Objectives

1. Determine the characteristics of zero-income SNAP participants now and in the past and how those circumstances compare to other SNAP and non-SNAP participants with similar income.
2. Examine how, with zero income, these SNAP participants are surviving and coping.
3. Examine the dynamics of income and SNAP participation for zero-income SNAP participants.
4. Examine how economic and/or policy changes may have affected this population and their representation in the SNAP caseload.

The current volume addresses Objectives 1, 3, and 4 based on repeated cross sectional and longitudinal analyses of the Survey of Income and Program Participation (SIPP) data and other quantitative data. Volume II⁸ of this report addresses Objectives 1 and 2 based on in-depth, semi-structured interviews with 50 zero-income SNAP participants.

A. BACKGROUND

Since the passage of the Food Stamp Act of 1964, SNAP has provided a critical safety net for the Nation's low-income families, providing access to food, a healthful diet, and nutrition education to participants. The SNAP benefit represents a significant share of the total resources of many low-income households, typically amounting to about one-fourth of a household's total purchasing power.^{9,10} FNS administers SNAP at the Federal level, and State agencies administer the program at State and local levels, including determination of eligibility and benefit levels. In general, households must meet the following requirements to participate in SNAP: 1) have gross monthly income of less than 130 percent of the HHS poverty guidelines, 2) have net monthly income of less than 100 percent of the HHS poverty guidelines, and 3) have assets valued at less than \$2,000 (USDA, 2012). Households with an elderly and disabled member must meet only the net income test, and households where all members receive Temporary Assistance to Needy Families (TANF), Supplemental Security Income (SSI), or sometimes General Assistance (GA), are categorically eligible. Finally, eligible households are also subject to certain citizenship and work requirements. For example, able-bodied adults without dependents (ABAWDs) generally are eligible to receive SNAP benefits for only 3 months in any 36-month period if they do not work or participate in an approved work program.

⁸ Volume II of this report is entitled "Examining the Growth of the Zero-Income SNAP Caseload: Characteristics, Circumstances, and Dynamics of Zero-Income SNAP Participants: Volume II: In-Depth Interview Findings, June–October 2012."

⁹ In 2012, the average monthly benefit was \$133.41 per person; see USDA, 2014b.

¹⁰ Mathematica tabulations of the FY 2010 SNAP Quality Control data.

1. Overview of Policy and Economic Circumstances Across the Study Period, 1993–2012

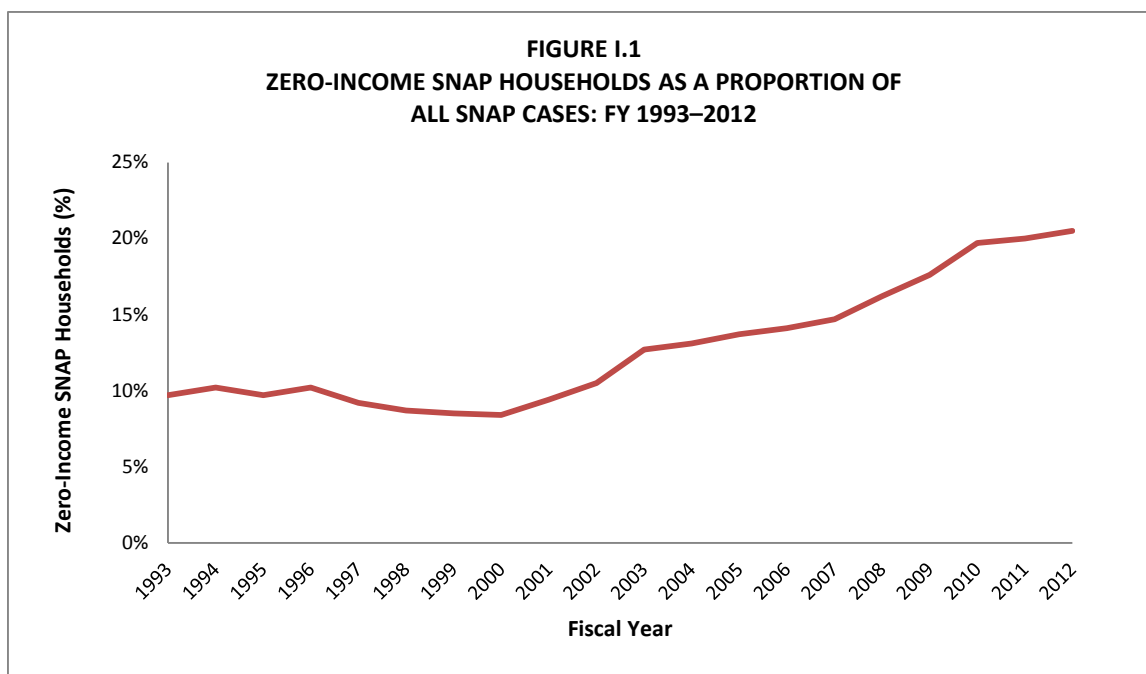
In 1993, unemployment, SNAP participation, and participation in the Aid to Families with Dependent Children program (AFDC) were at near-historic highs. In 1996, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) introduced a major overhaul of AFDC, renaming the program to TANF and implementing—among other things—stricter work requirements and lifetime limits on TANF benefits. The PRWORA also introduced some SNAP-specific changes, including denying benefits to legal immigrants, establishing 3-month time limits for ABAWDs who were not working, and reducing SNAP benefits. Following these changes, the number of SNAP households participating in TANF sharply decreased. Stricter work requirements also resulted in more low-income single mothers who were more vulnerable to periods of little or no income due to their increased reliance on the labor market (Blank, 2009).

In 2000, SNAP participation reached its lowest level; TANF participation was very low as well. The economy entered a mild recession the following year; the unemployment rate was very low at the start of 2001 (4.2 percent in January and February), but increased through the year, reaching 5.7 percent by December. SNAP participation has increased each year since 2000, despite improving economic conditions in the mid-2000s. In addition to the economic downturn during the early 2000s, SNAP policy changes—many of which stemmed from the Farm Bill of 2002—and improved outreach have been identified as reasons for this increase (Ganong & Liebman, 2013; Hanson & Gundersen, 2002; Zedlewski, Waxman, & Gundersen, 2012). Several of the Farm Bill’s provisions aimed to streamline and simplify participation in SNAP, such as simplified reporting requirements, extended certification periods, and expanded eligibility, including to legal immigrants.

The Great Recession began in December 2007, and the unemployment rate started to rise in 2008. In 2008 as compared to 2001, unemployment was higher at the start of the year and reached a much higher level by the end of the year. The SNAP caseload plateaued in 2007, but increased in the following years. SNAP policy changes occurred during this period as well with the introduction of the 2008 Farm Bill. This legislation renamed the FSP to SNAP and introduced several new efforts to streamline and modernize the program, including online applications and joint enrollment efforts with other assistance programs. More recently, the 2009 American Recovery and Reinvestment Act (ARRA) increased SNAP benefits and temporarily lifted work restrictions for ABAWDs in response to the recession.

2. Growth in the Zero-Income SNAP Caseload

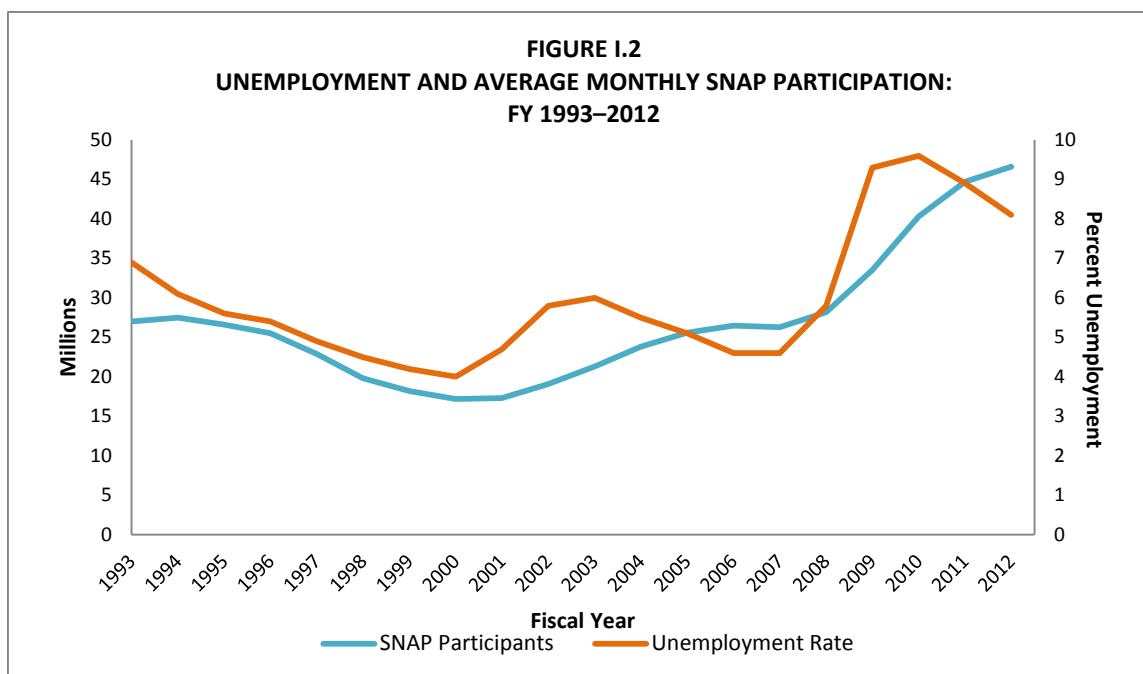
In addition to growth in the overall SNAP caseload, the proportion of SNAP households with zero income increased substantially since the start of the study period in 1993. The proportion of zero-income SNAP households generally declined from 1993–2000 before increasing considerably after 2000, resulting in a dramatic overall increase as a proportion of the SNAP caseload (Figure I.1). In FY 1993, 9.7 percent of SNAP households reported zero gross income, compared to 20.5 percent of households in FY 2012.



Source: Strayer, Eslami, & Leftin, 2012; Insight tabulations of SNAP QC data.

The reasons underlying the growth in zero-income SNAP units have, to date, been largely unexplored, including whether SNAP, TANF, or GA policies, or the economic circumstances discussed above, played a role. SNAP enrollment overall, however, tends to increase as unemployment rates increase (Figure I.2).¹¹ From 2000–2010, the unemployment rate increased substantially and the number of individuals and households participating in SNAP rose steadily. Reductions in SNAP enrollment typically lag behind labor market changes by one or more years; the economic recovery of 2004–2007 was atypical, however, in that there was a minimal net change in the poverty rate and SNAP participation continued to grow among zero- and low-income households (Hanson & Oliveira, 2012).

¹¹ For example, the recent recession is “consistent with the increase [in enrollment] during previous periods of economic decline, at 2 to 3 million participants per 1-percentage-point increase in the unemployment rate” (Hanson & Oliveira, 2012).



Source: USDA, 2014a (SNAP participants); U.S. Department of Labor, 2014 (unemployment rate).

Some research has found that the relatively low unemployment rates between 2004 and 2007 did not translate into gains for those with lower education levels (Danziger & Wimer, 2014; Greenstone & Looney, 2011), who represent the majority of the SNAP population.¹² Similarly, income inequality has increased in recent years; the lowest income households experienced the lowest amount of growth (Congressional Budget Office, 2011; Saez, 2013). These findings are consistent with continued demand for SNAP among the poor, despite improvements in the economy overall.

3. The Zero-Income Population and Disconnected Individuals

One explanation for the increase in SNAP recipients with zero income may be the increase in what many researchers call the “disconnected population.” Researchers refer to the growing subpopulation of low-income individuals who are not participating in the labor market or receiving some sort of cash assistance as “disconnected.” Initially, the term was used to describe individuals who left TANF before finding employment. More recently, however, the term “disconnected” has been used more broadly to include low-income individuals who were unemployed and not receiving cash benefits of any kind, including TANF, GA, SSI, and/or Unemployment Insurance (UI), often for a period of 1–12 months (Loprest, 2011).

Research suggests that the proportion of disconnected families, especially single-mother families, has increased since PRWORA and that many of these families are chronically

¹² Thirty-six percent (35.8 percent) of SNAP unit heads did not complete high school, and an additional 43.3 percent had high school degrees only in FY 2009 (Gothro & Bencio, 2010).

disconnected (Loprest & Nichols, 2011; Ovwigho, Kolupanowich, Hetling, & Born, 2011).¹³ These families face various challenges to participating in the labor market, including lower education levels, dependent care needs, physical and mental health issues, and substance abuse issues (Blank & Kovak, 2007–8; Loprest & Nichols, 2011; Loprest, 2003). These families are also more likely than other low-income families to experience food-related hardships (Loprest, 2003). Particularly in the absence of support from other components of the safety net, these challenges may suggest a potentially greater need for SNAP.

B. ORGANIZATION OF THIS REPORT

The remainder of this report presents findings on the growth of zero-income households on the SNAP caseload. It describes their characteristics, circumstances, dynamics, and how economic and/or policy changes may have affected this population and its representation in the SNAP caseload. Chapter II presents an overview of the study methods used to conduct this research. Chapter III illustrates the characteristics of the zero-income SNAP population over time (and how members of this population compare to other SNAP participants and non-SNAP participants with similar and higher income). Chapter IV examines the dynamics of the SNAP zero-income population, including the entry rate, exit rate, and median spell length. Chapter V highlights key differences in these findings for various subgroups. Chapter VI examines the role policy and economic factors may have played in the increase in the zero-income SNAP caseload. Last, Chapter VII integrates the findings from analyses in previous chapters to discuss possible explanations for the growth in the zero-income SNAP caseload. An examination of the findings from in-depth qualitative interviews is presented in Volume II of this study.

Six appendices provide additional detail on the data sources and collection methods. Appendix A provides a more-detailed description of the methods used to conduct the analyses. Appendix B illustrates a visual picture of the dynamics of the zero-income SNAP population. Appendix C presents the repeated cross-sectional tables used to present data in Chapter III. Appendices D and E present the life tables used for the duration analyses and the dynamics analyses presented in Chapters IV and V, respectively. Appendix F presents results for the policy analyses presented in Chapter VI.

¹³ A disconnected individual enrolled in SNAP is not necessarily considered a zero-income individual. For instance, in the study by Ovwigho and colleagues (2011), the child-only TANF cases that were considered chronically disconnected might have had parents or guardians who were ineligible for TANF and SNAP, but whose income was still considered when determining their children's SNAP eligibility and benefits.

II. STUDY METHODOLOGY

The goal of this study is to examine the characteristics, circumstances, and dynamics of the zero-income SNAP population, and how economic and/or policy changes may have affected this population and its representation in the SNAP caseload, in order to provide potential explanations for why the percentage of zero-income SNAP households is increasing. Four key research objectives drove this study:

1. Determine the characteristics and circumstances of zero-income SNAP participants now and in the past and how those circumstances compare to other SNAP and non-SNAP individuals with similar income.
2. Examine how, with zero income, these SNAP participants are surviving and coping.
3. Examine the dynamics of income and SNAP participation for zero-income SNAP participants.
4. Examine how economic and/or policy changes may have affected this population and their representation in the SNAP caseload.

“Zero income” refers to an individual residing in a family that reports no earnings or other income from any source. This includes salaries, wages, and tips (including self-employment and farm employment); unemployment insurance (UI); disability benefits (SSI and SSDI), Social Security (retirement or survivor’s benefits); cash welfare benefits (e.g., TANF), pensions, or monies from property income, interest, dividends or gifts (Cody, Castner, Mabli, & Sykes, 2007).

SSDI=Social Security Disability Insurance

Section A of this chapter describes the methodology employed for this multicomponent study. Section B provides a list of study limitations and considerations.

A. STUDY METHODS

To address the research objectives, the study used four complementary analytic methods: 1) a repeated cross-sectional analysis; 2) semi-structured in-depth interviews with 50 zero-income SNAP participants; 3) a longitudinal analysis; and 4) a policy analysis. Each of these steps is briefly described below; additional information on each is presented in Appendix A.

1. **Repeated Cross-Sectional Analysis.** This analysis was designed to determine 1) how the composition of the zero-income SNAP population has changed over time and 2) how the distribution of the zero-income SNAP population compares to that of other population groups. The analysis uses cross-sectional SIPP panels from 1993–2008 to document trends in demographic, family, and employment characteristics.¹⁴
2. **In-Depth Interviews.** Semi-structured in-depth interviews were conducted with 50 zero-income SNAP participants to provide an in-depth look at the characteristics of this population and how, with zero income, these participants are coping and what their

¹⁴ The SIPP was selected because it has the ability to compare detailed income information on both the SNAP population and the non-SNAP population. In this way, SIPP data provide a useful complement to existing FNS research using the SNAP QC data.

survival strategies are. The methodology and results of these interviews are presented in Volume II of this study.

3. **Longitudinal Analysis.** Using longitudinal data from the 2004 SIPP panel, this analysis examines individuals' patterns for entering and exiting the zero-income SNAP condition to help assess what, if any, dynamics may help to explain the zero-income SNAP caseload growth in the mid-2000s.^{15,16} The analysis includes two components:
 - a. A **descriptive analysis** of individuals that experienced at least one zero-income SNAP spell over the nearly 3-year (32-month) panel period to describe the variation in their spells, including the number of zero-income SNAP spells that individuals experienced and the total amount of time that they spent in the condition.
 - b. An **event history analysis** to examine the dynamics of income and program participation, including the standard measures of participation (e.g., median spell length; entry rates; and exit rates). Specifically, the analyses examine the frequency with which people enter the zero-income SNAP condition, their durations in the condition, and the frequency with which people exit from the condition. This component of the research also examines whether these measures differ by subgroups, including demographic, family, and employment groups.
4. **Policy Analysis.** The purpose of this analysis was to examine how economic conditions and SNAP policy changes may have affected zero-income SNAP participants' representation in the SNAP caseload. The policy analyses use time-varying State-level measures of economic conditions and policies that were developed from three sources:
 - An electronic State policy file that was prepared by USDA's Economic Research Service (ERS)
 - Several editions of the Food Stamp Program/SNAP State Options Reports that were prepared by FNS
 - The FSP/SNAP quality control (QC) database

These sources were used to construct a longitudinal data file of economic and policy variables that were specific to each State. The data were linked to the individual-level data from the 2001, 2004, and 2008 cross-sectional SIPP datasets and the 2004 longitudinal SIPP dataset, using State identifiers and year and month identifiers for the given individual-level

¹⁵ "Dynamics" refer to changes over time in zero income receipt and SNAP participation.

¹⁶ The data expand on dynamics of overall SNAP participation (see, for example, Mabli, Godfrey, Castner, Tordella, & Foran, 2011) by providing in-depth information about the zero income and SNAP participation dynamics of the SNAP zero-income population.

observation.¹⁷ This analysis includes two main components, each employing both descriptive and multivariate methodological approaches:

1. A **repeated cross-sectional analysis** uses the 2001, 2004, and 2008 cross-sectional SIPP panels to examine the relationship between the incidence of zero-income SNAP participation and different economic circumstances and SNAP policies.
2. A **longitudinal analysis** uses the 2004 longitudinal panel data to examine whether entry into and exit out of the zero-income SNAP condition varies for people living in States with varying economic circumstances and SNAP policies.

Table II.1 below presents a cross walk of the methods and data sources used for each of the four primary research questions.

**Table II.1
Summary of Data Collection Sources and Methods**

Research Objective/ Methodology	Data Sources	Analysis Year(s)
1. Determine the characteristics of zero-income SNAP participants now and in the past and how those circumstances compare to other SNAP and non-SNAP participants with similar income.		
a. Repeated cross-sectional analysis	SIPP cross-sectional data, using the first wave of the 1993, 1996, 2000, 2004, and 2008 panels	1993, 1996, 2001, 2004, 2008
b. Qualitative semi-structured in-depth interviews	In-person interviews with 50 zero-income SNAP participants	2012
2. Examine how, with zero income, these SNAP participants are surviving and coping.		
a. Qualitative semi-structured in-depth interviews	In-person interviews with 50 zero-income SNAP participants	2012
3. Examine the dynamics of income and SNAP participation for zero-income SNAP participants.		
a. Descriptive analysis, including subgroup analysis	2004 SIPP longitudinal panel; in-depth examination of all individuals with at least one zero-income SNAP spell during the panel period	2004, 2005, 2006
b. Event history analysis, including subgroup analysis	2004 SIPP longitudinal panel	2004, 2005, 2006
4. Examine how economic and/or policy changes may have affected this population and their representation in the SNAP caseload.		
a. Repeated cross-sectional analysis, including descriptive and multivariate analyses	<ul style="list-style-type: none"> • SNAP QC data for FY 2001, 2004, and 2008 • SNAP Options Reports for 2004 and 2008 • FSP Rules Database from ERS • SIPP cross-sectional data from the 2001, 2004, and 2008 panels 	2001, 2004, 2008
b. Longitudinal analysis, including descriptive and multivariate analyses	<ul style="list-style-type: none"> • SNAP QC data for FY 2004, 2005, and 2006 • SNAP Options Reports for 2004, 2005, and 2006 • FSP Rules Database from ERS • 2004 SIPP longitudinal data 	2004, 2005, 2006

¹⁷ The 2004 and 2008 SIPP panels identify the State of residence for all respondents in all months. The 2001 SIPP panel identifies the State of residence for most respondents but does not identify the specific State for five States (Maine, New Hampshire, North Dakota, South Dakota, and Wyoming) where small sample sizes raise unacceptable disclosure risks. For the analyses, we linked individual observations to economic and policy measures where States can be identified uniquely, and dropped observations for the five States in the 2001 SIPP panel where they cannot be identified uniquely. Because of these omissions, the 2001 SIPP sample for the policy analysis differs slightly from the 2001 SIPP sample for the earlier repeated cross-sectional analysis.

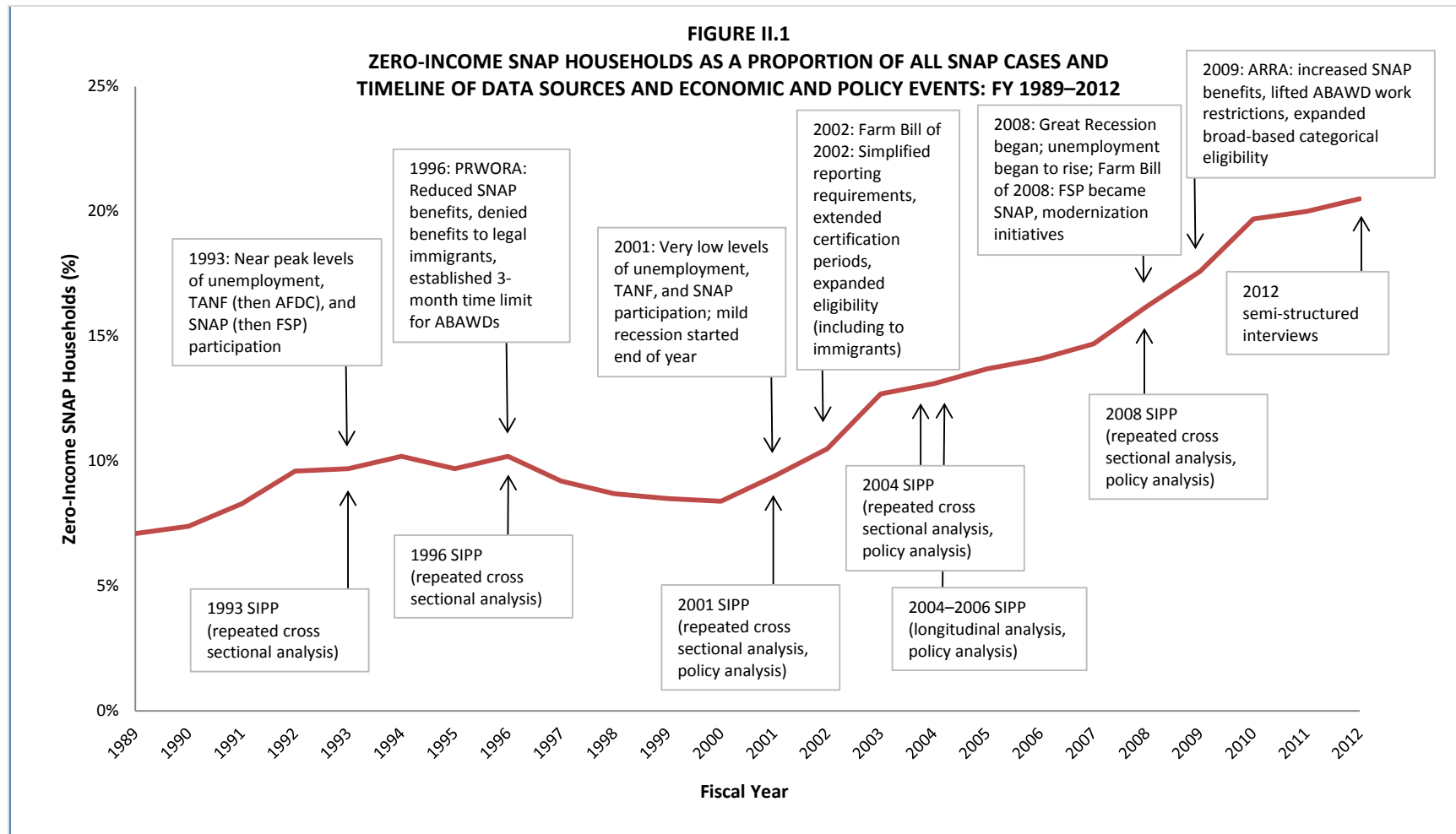
Note that results of Objectives 1b and 2 are presented in Volume II of this study.

B. STUDY LIMITATIONS AND CONSIDERATIONS

Many factors could influence the estimates included in this report. Each of these is described briefly below.

- **Differing Timelines.** Caution should be used when generalizing the findings from this study to the current year due to the varying policy and economic contexts across the periods examined. The repeated cross-sectional analysis presented in Chapter III examines five different points in the 15-year period from 1993 through 2008. The longitudinal analysis presented in Chapter IV uses the 2004 SIPP longitudinal panel, which allowed us to explore the dynamics of income and SNAP participation of individuals from October 2003 through August 2006.¹⁸ The in-depth interviews with SNAP participants took place between June and October 2012. The policy analysis examined policies in effect at the time the SIPP data were collected: in 2001, 2004, and 2008 for the repeated cross-sectional analysis, and in 2004, 2005, and 2006 for the longitudinal analysis. As described in Chapter II, SNAP and other Federal assistance program policies and the economy varied across this period as well, which may have influenced the findings for a given point in time. Figure II.1 below provides a timeline of the data sources used in this study and key policy and economic events.

¹⁸ At the time of this study, the 2004 SIPP panel provided the most recent longitudinal data available. These are the same data used in the most recent SNAP dynamics reports, allowing for maximum comparability between the reports and ensuring that our dynamics measures aligned with those used in previous studies (Cody et al., 2007; Cody, Gleason, Schechter, Satake, & Sykes, 2005; Gleason, Schochet, & Moffitt, 1998).



- Underreporting of Program Participation in the SIPP.** As with any survey of program participation, underreporting of SNAP and other program participation occurs in the SIPP data and should be considered when interpreting these results. Underreporting, defined as the relative difference between weighted survey estimates and corresponding program administrative data, has plagued household survey estimates of participation in SNAP and other programs that serve low-income populations, and the problem has increased over time. For example, previous research shows that when compared to administrative data, SIPP covered only 84 percent of average monthly participation of individuals receiving SNAP in 2004 (Meyer, Mok, & Sullivan, 2009). While this is a higher coverage rate than in other national household surveys, it may still result in artificially lowering estimates of SNAP participants in the current study. This may be particularly true for very low- and zero-income households; research suggests surveys, including SIPP, capture disproportionately fewer low- and zero-income households (Czajka, Peterson, McGill, Thorn, & Warner-Griffin, 2012). As such, estimates of the number of SNAP participants from the SIPP may be conservative. Underreporting of income from TANF and other cash assistance programs, however, may result in an overestimate of zero-income families. As a result, estimates of zero-income SNAP participants should be interpreted with caution.
- Small Sample Sizes.** Similar to other large national surveys, samples sizes for small subsets of the population, such as zero-income SNAP participants, can be small in SIPP, which results in reduced reliability of estimates. Sample sizes for individuals with different characteristics within that subgroup are even smaller. The numbers of zero-income survey respondents in Wave 1, panel month 4 of each panel period ranged from 658 in 1993 to 3,040 in 2008 (Table II.2). Additionally, the number of respondents who were zero-income SNAP participants during this same period ranged from 123 in 1993 to 778 in 2008.

Table II.2
SIPP Cross-Sectional Panels:
Sample Sizes for the Zero-Income Population by Panel

	1993	1996	2001	2004	2008
1. All Individuals with zero income	658	1,826	2,055	2,618	3,040
2. Individuals with zero income participating in SNAP	123	354	337	687	778

For the 2004 SIPP longitudinal panel, out of the 49,922 individuals at risk of entering the zero-income SNAP condition (i.e., those who had incomes of less than 300 percent of the FPL at some point during the panel period¹⁹), only 1,877 individuals (3.8 percent) spent at least 1 month in the zero-income SNAP condition during the panel (Table II.3). The sample size depends on the dynamics measure being estimated. For example, there are 326 individuals that had zero income in the month preceding SNAP entry (i.e., SNAP zero-income entrants).

¹⁹ This condition (i.e., family income of less than 300 percent of the FPL at some point in the panel) was selected to maintain consistency with the at-risk population used in previous SNAP dynamics analyses (e.g., Mabli et al., 2011).

Table II.3
2004 SIPP Longitudinal Panel:
Sample Sizes for the Zero-Income Population

Analysis Group	Sample Size
1. Individuals who experienced at least 1 month of simultaneous SNAP receipt and zero family income in the panel period	1,877
2. Individuals with zero family income in the month preceding SNAP entry (i.e., SNAP entrants with zero income)	326

Note: At a minimum, there are at least 320 individuals in the zero-income SNAP condition during any 1 month.

- Unit of Analysis.** Consistent with previous SNAP dynamics reports (e.g., Mabli et al., 2011), individuals were selected as the unit of analysis for this study, while previous research based on the SNAP QC data focuses on the SNAP unit (or household). This limits the comparability of the estimates produced. Gothro and Bencio (2010), for example, found that nearly 18 percent of SNAP households had zero income in FY 2009. By contrast, the current study estimates that nearly 8 percent of individuals receiving SNAP were living in families with zero income in 2008. Particularly if zero income is concentrated more in smaller families (and positive income in larger families), individual-level estimates of zero income will tend to be smaller than household-level estimates.
- Definition of Zero Income.** This report examines individuals living in families with zero gross income. This includes all families that have no earnings from any source.²⁰ The decision to focus on family-level income was selected for consistency with the most recent SNAP dynamics report (Mabli et al., 2011). Although families and SNAP units are similar, it should be noted that they differ in some cases. According to the U.S. Census Bureau, a family is defined as two or more people who are related by birth, marriage, or adoption and who live together in the same housing unit (U.S. Department of Commerce, 2013). A SNAP unit, on the other hand, is an individual or group of people who live together and buy food and prepare meals together (most of the time) to eat at home; these individuals do not have to be related to each other.
- Differences Between Definitions of Zero Income in SNAP and the SIPP.** This study's definition of zero income may vary from that used by SNAP administrators because some SNAP policies may exclude certain types of income when determining SNAP eligibility. Other policies, such as simplified reporting, may not require changes in income to be reported if they do not exceed reporting thresholds. In these cases, individuals could appear to have zero income in SNAP administrative data but would appear to have positive income in SIPP, where all sources of income in a given month are included. Child support exclusion policies, for example, allow legally obligated child support payments to be excluded from the calculation of the noncustodial parent's income. Similarly, simplified income definition policies allow States to exclude certain

²⁰ In-kind benefits such as SNAP, WIC, subsidized housing, and free and reduced-price school meals are excluded from gross income.

types of income and resources from their definitions of income if those income sources were also excluded from calculations for Medicaid or TANF eligibility.

- **Seam Bias.** Panel surveys suffer from seam bias, which is the tendency of individuals to report changes in status across the “seam” between two survey administrations (waves). In the case of the SIPP, respondents tend to report changes in the months that start or end each 4-month reference period. As a result, transitions into and out of zero-income SNAP condition, for example, may be more likely to be reported in 4- and 8-month intervals.²¹
- **Constructing Spells.** Consistent with previous SNAP dynamics reports, we eliminated 1-month gaps in reported SNAP participation and nonparticipation so that only episodes lasting 2 months or longer are included on the analysis file. In other words, SNAP episodes that consist of a single month were recoded as nonparticipation in SNAP, while breaks in SNAP episodes that consist of a single month were recoded as participation in SNAP. However, while the definition of SNAP participation requires a minimum of 2 consecutive months on SNAP, the combined State of participating in SNAP and having zero income may last for only a single month. This is because zero-income SNAP spells are defined based on monthly changes in income, which can (and do) result in some 1-month zero-income SNAP spells.
- **Comparability Between the 1993 SIPP Panel and Subsequent Panels.** The SIPP underwent a major redesign between the 1993 and 1996 panels that may limit the comparability between 1993 and subsequent panels. In particular, the sample size was approximately doubled; the length of the panel increased from 2.5 years to 4 years; computer-assisted interviewing was introduced; and the 1996 panel included an oversample of households from high-poverty areas for the first time.
- **Comparability Between 2004 Cross-Sectional and Longitudinal Samples.** Although the 2004 SIPP panel is used for both the repeated cross-sectional and longitudinal analyses, the two analytic samples differ. The 2004 cross-sectional sample is constructed directly from the U.S. Census Bureau’s SIPP public release data, selecting all individuals with nonmissing data for month 4 of the panel, resulting in a sample size of 687. By comparison, the 2004 longitudinal analytic file included 371 zero-income SNAP participants in month 4 of the panel. The 2004 longitudinal analysis uses the analytic file developed for the most recent SNAP dynamics analysis (Mabli et al., 2011). Because the file is used to analyze dynamics over the course of the panel, individuals with insufficient data over the course of the panel are excluded from the sample. Mabli and colleagues (2011) found that sample loss from the 2004 panel was higher than in previous panels, and that nearly half of the individuals participating in Wave 1 of the

²¹ In the 2004 SIPP panel, the U.S. Census Bureau implemented dependent interviewing procedures in an effort to reduce seam bias. Evaluation of these efforts found that seam bias was substantially lower in the 2004 panel relative to the 2001 panel, but that seam bias continued to afflict the 2004 panel (Moore, 2008).

survey were excluded from the analytic file due to attrition from the survey or otherwise incomplete data. Although the longitudinal weights are designed to adjust for nonresponse bias, Mabli and colleagues (2011) found that the adjustment might not correct as well for nonresponse of the lowest income groups. As a result, estimates of zero-income SNAP participants using these data should be interpreted with caution.

- **Limited Measures of SNAP Policies.** Although many SNAP policies, or policy changes, were implemented during the period studied, this analysis addresses only a small subset of these policies, for which data were available. For example, many States during this period received waivers lifting work restrictions for ABAWDs in areas with high unemployment; an increase in these waivers may have contributed to increased SNAP participation among ABAWDs without income, and hence may have contributed to increases in the zero-income SNAP caseload. Without State-level measures of these policies over time, however, the relationship of these policies to the growth of the zero-income SNAP caseload could not be measured.

Further, some of the policies that could be measured and that were included in this analysis have unclear effects on the growth of the zero-income portion of the SNAP caseload as measured in the SIPP data. For example, child support exclusion policies allowed legally obligated child support payments to be excluded from the income of the non-custodial parent when determining SNAP eligibility. These clients would appear to have zero income in SNAP administrative data, as discussed above, but would appear to have positive income in SIPP data. As a result, an actual increase in the number of zero-income SNAP participants as seen in SNAP administrative data may not be reflected as an increase in SIPP data.

III. CHARACTERISTICS OF ZERO-INCOME SNAP PARTICIPANTS

This chapter uses cross-sectional SIPP data to examine the characteristics of zero-income SNAP participants from 1993–2008 and the extent to which these individuals are similar to or different from other population groups. The goal of these analyses was to help identify possible reasons for the increase in the zero-income SNAP caseload during this period. Research questions for this component of the analysis are listed below.

Research Objective #1: Determine the characteristics of zero-income SNAP individuals now and in the past and how those circumstances compare to other SNAP and non-SNAP individuals with similar income.

1. Does the increase in the percentage of zero-income SNAP participants indicate a change in the population itself (e.g., is it increasing in the Nation as a whole or in certain subpopulations?), or a change in another population group (e.g., attrition in positive-income participants)?
2. What are the characteristics of zero-income SNAP participants now and in the past as compared to other SNAP and non-SNAP individuals with similar income? For example, if there was a change in the ABAWD population, how might that population change have affected the zero-income SNAP population? Do the characteristics provide an indication of the cause of the increase?

The analyses focused on the characteristics listed in Table III.1.²² Detailed definitions of these characteristics are provided in Appendix A.

Table III.1
Individual Characteristics

Demographic Information	Family Information	Education, Employment, and Income Information
<ul style="list-style-type: none">• Age• Sex• Race/ethnicity• Disability status• ABAWD status	<ul style="list-style-type: none">• Family size• Family composition	<ul style="list-style-type: none">• Education• Employment status• Main reason for lack of recent employment• Past receipt of AFDC/TANF

Three comparison groups were selected, including SNAP participants with positive income and nonparticipants with both zero income and low income (<200 percent of the FPL; Table III.2).

²² Citizenship is included as a characteristic in the longitudinal analysis but not in the repeated cross-sectional analysis due to insufficient sample sizes in some panels. Sample sizes were also not large enough to permit measuring nativity or past receipt of SSI benefits.

Table III.2
Comparison Groups

		SNAP Participation	Gross Income
1.	Positive-income SNAP participants*	Yes	>\$0
2.	Zero-income non-SNAP participants	No	Zero
3.	Positive-income non-SNAP participants (less than 200% of the FPL)**	No	>\$0 and <200% of the FPL

*The positive-income SNAP group contains some individuals with incomes greater than 200 percent of the FPL.

**An income threshold of 200 percent of the FPL was selected to identify individuals at high risk of having their incomes falling below the FPL and of entering SNAP. Similarly, the vast majority of the positive-income SNAP population is in families with incomes of less than 200 percent of the FPL.

Below, we provide the results of this analysis. Section A describes the growth of the SNAP zero-income population over time. Section B assesses the characteristics of the zero-income SNAP population over time as compared to the three comparison groups. Detailed tabulations of these results are presented in Appendix C.

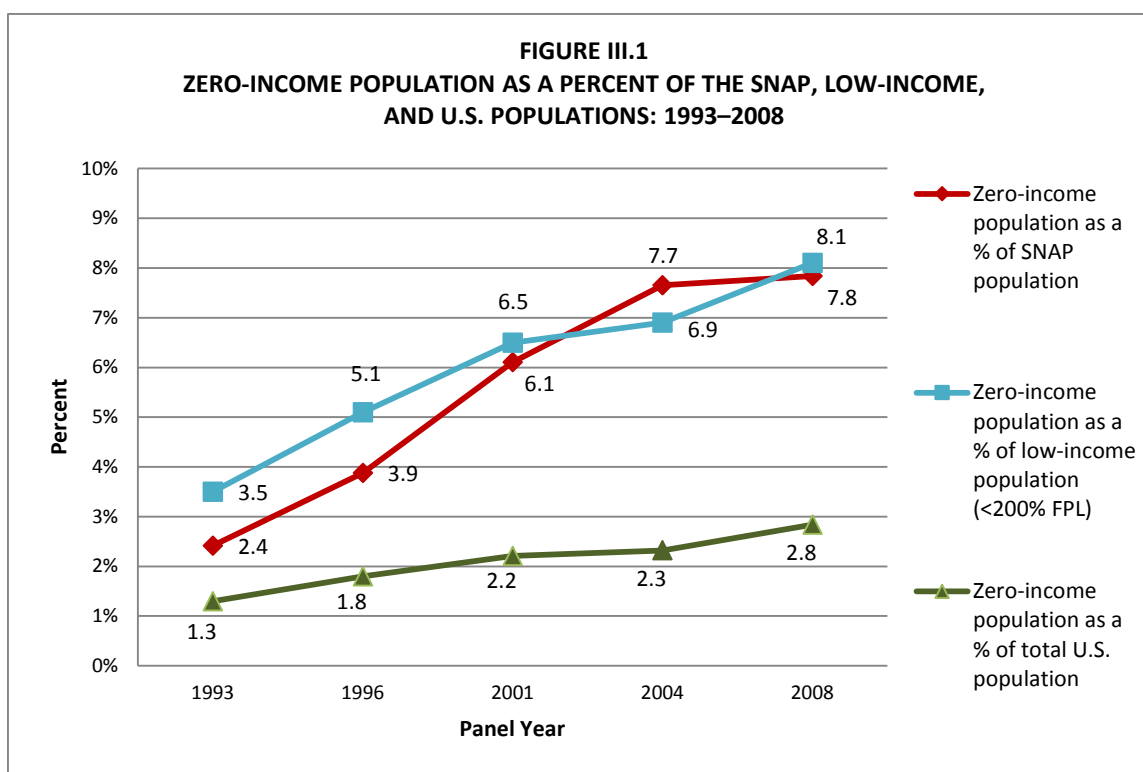
A. GROWTH OF THE ZERO-INCOME SNAP POPULATION

This section provides background on the growth of the zero-income SNAP population. Secondary research questions include the following:

1. Does the increase in the percentage of zero-income participants indicate a change in the population itself, or a change in another population group (e.g., attrition of positive-income participants)?

- How does the percentage of the SNAP population that has zero income compare to the percentage of the U.S. population that has zero income over time? How does it compare to the percentage of the low-income population that has zero income?

The proportion of the SNAP population living in families with zero income more than tripled in the 15-year period from 1993–2008, increasing from 2.4 percent of all SNAP participants in 1993 to 7.8 percent in 2008. This increase appears to reflect a trend in both the low-income population and the U.S. population overall. The proportion of the low-income population (gross family income of less than 200 percent of the FPL) living in families with zero income more than doubled during this period, from 3.5 percent in 1993 to 8.1 percent in 2008 (Figure III.1). Similarly, the proportion of the overall U.S. population living in families with zero income accounted for 1.3 percent of the U.S. population in 1993, compared to 2.8 percent of the U.S. population in 2008.



Source: SIPP 1993, 1996, 2001, 2004, and 2008. Wave 1 interview, panel month 4.

B. ZERO-INCOME SNAP PARTICIPANTS OVER TIME: CHARACTERISTICS FROM 1993–2008 COMPARED TO OTHER POPULATION GROUPS

This section provides information on the characteristics of the zero-income SNAP population from 1993–2008.²³ The analysis also examines whether any changes in the zero-income SNAP population were similar to or different from those in other population groups, including the positive-income SNAP population; the zero-income non-SNAP population; and the positive-income non-SNAP population (individuals in families with incomes of less than 200 percent of the FPL). Secondary research questions include the following.

2. What are the characteristics of zero-income SNAP participants now and in the past as compared to other SNAP and non-SNAP individuals with similar income? For example, if there was a change in the ABAWD population, how might that population change have affected the zero-income SNAP population? Do the characteristics provide an indication of the cause of the increase?

- What are the demographics of these individuals (e.g., age, gender, race/ethnicity, disability, presence of working members)? How has the ABAWD population changed over time?
- What is their family composition (e.g., composition, size of family)?
- What is their employment history? Education? Do they ever receive benefits from other government programs, such as AFDC/TANF?

²³ In some cases, data are presented only for years 1996–2008 due to small sample sizes in 1993. A major redesign of the SIPP occurred between 1993 and 1996, including a large increase in sample size.

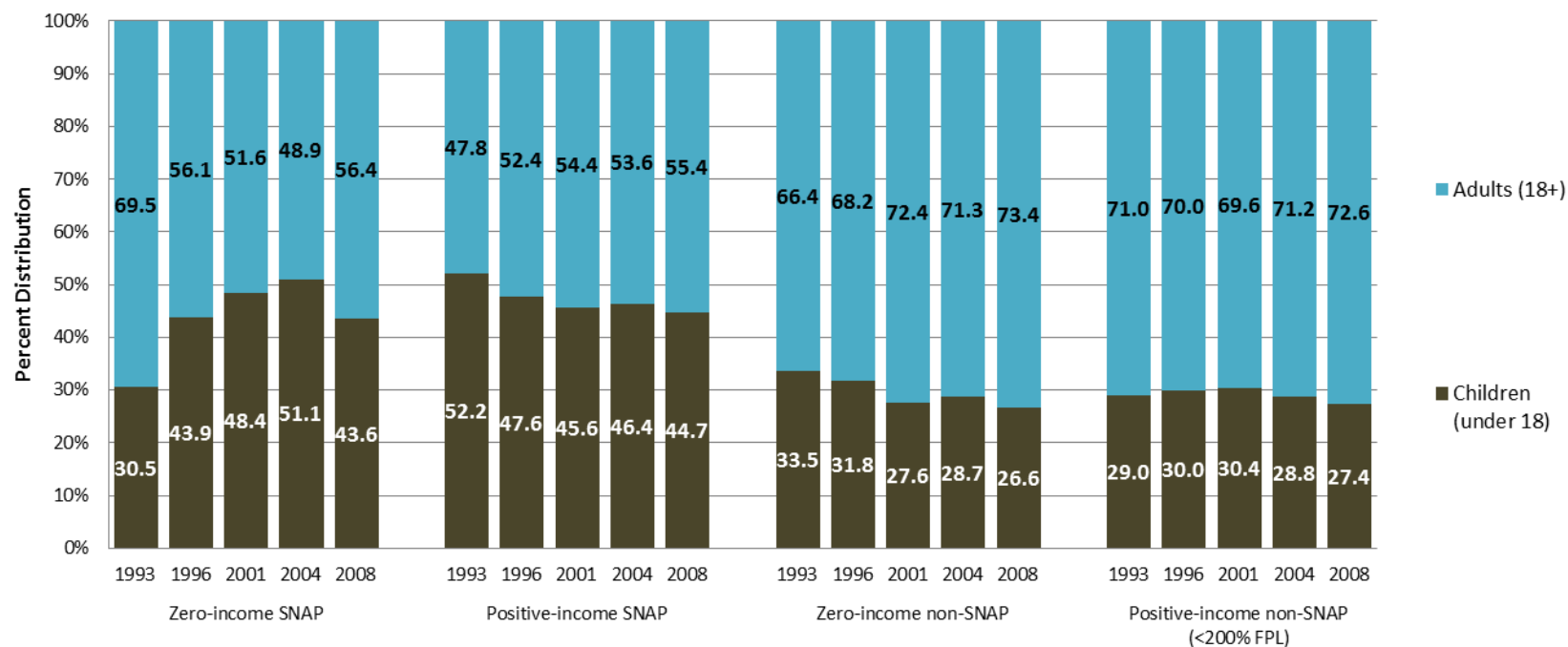
1. Demographics

Age. Since 1993, children who reside in zero-income families comprised an increasing share of the SNAP population, peaking in 2004 and declining somewhat in 2008 (Figure III.2). In 2004, more than half (51.1 percent) of SNAP participants in zero-income families were children younger than age 18, while in 1993, less than one-third (30.5 percent) were children. In contrast, the proportion of children declined among the positive-income SNAP and the zero-income non-SNAP population groups, while remaining fairly constant in the low-income non-SNAP comparison groups during this time period.

Children made up 44 percent of the zero-income SNAP population in 2008, a 43-percent increase since 1993.

Elderly adults (age 60+) comprised only a very small proportion of the zero-income SNAP population, likely due to the availability of Social Security and SSI benefits to the elderly. Less than 2 percent of the zero-income SNAP population was elderly in each of the panel years; this age group is not shown separately from their adult counterparts (ages 18–59) in Figure III.2 due to small cell sizes.

FIGURE III.2
COMPOSITION OF THE ZERO-INCOME SNAP POPULATION AND COMPARISON GROUPS,
BY AGE: 1993–2008

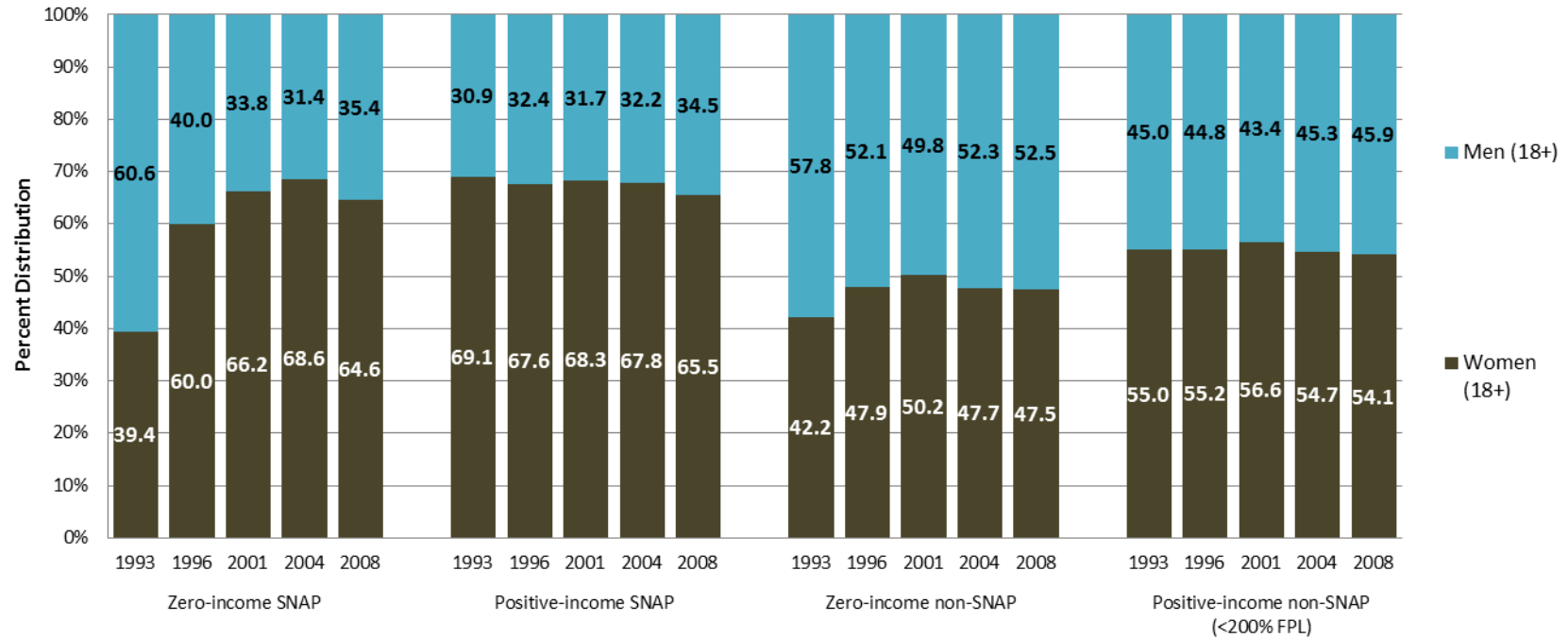


Source: SIPP 1993, 1996, 2001, 2004, and 2008 Panels. Wave 1 interview, panel month 4.

Sex. Among adults (ages 18+), women comprised an increasing share of the zero-income SNAP population over this time period (Figure III.3). In 2008, women represented 61.7 percent of this population, compared to 41.2 percent in 1993. In contrast, women's share among comparison groups remained relatively constant (between 45.6 percent and 59.5 percent).

Women made up nearly two-thirds of the adult zero-income SNAP population in 2008, a 63-percent increase since 1993.

FIGURE III.3
COMPOSITION OF THE ZERO-INCOME SNAP POPULATION AND COMPARISON GROUPS,
BY SEX (ADULTS 18+): 1993–2008



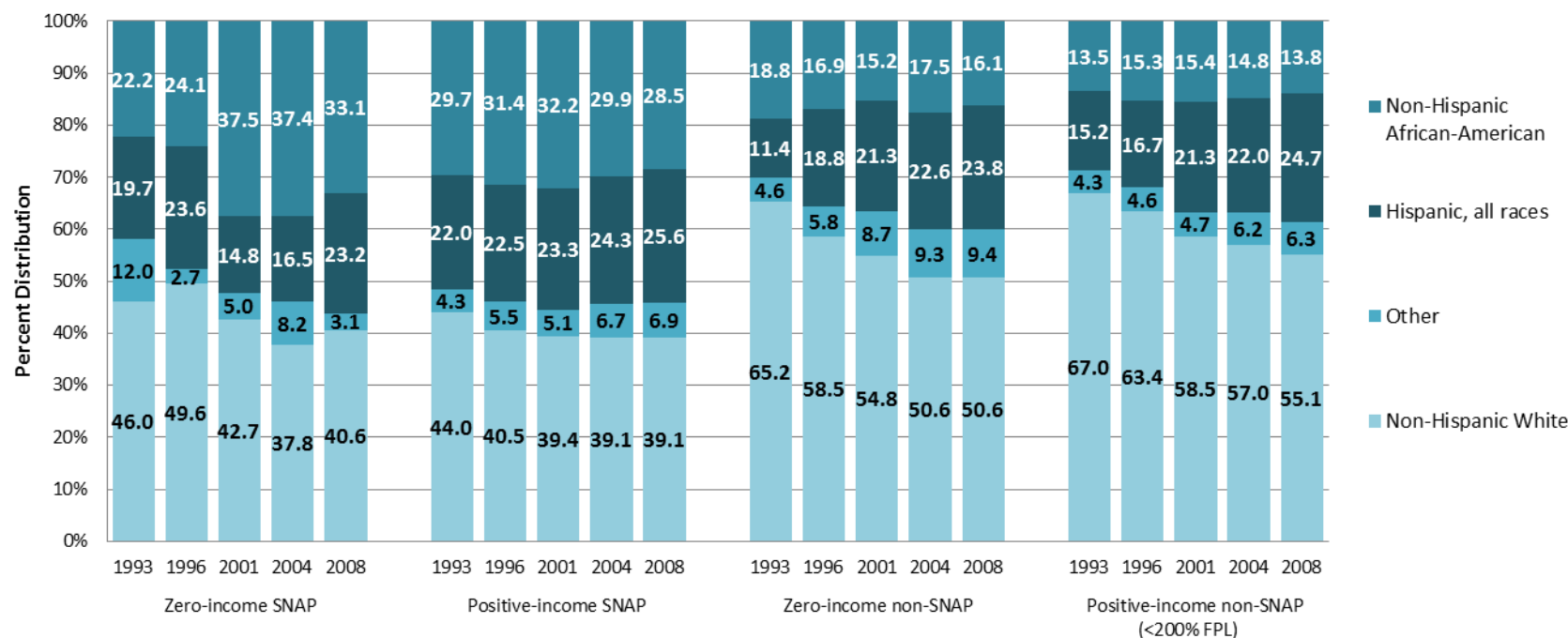
Source: SIPP 1993, 1996, 2001, 2004, and 2008 Panels. Wave 1 interview, panel month 4.

Race/Ethnicity. The racial/ethnic composition of the zero-income SNAP population has varied over the 15-year study period, but overall, the proportion of racial/ethnic minorities has increased slightly. The number of African-American SNAP participants with zero income increased nearly 11 percentage points, from 22.2 percent in 1993 to 33.1 percent in 2008, with a particularly large increase from 1996–2001. In contrast, the proportion of African-Americans remained relatively stable in the comparison groups during this period.

The racial/ethnic composition of the zero-income SNAP population varied over the study period, but the overall proportion of minorities has increased slightly.

Although the share of the population that was Hispanic increased across all comparison groups, it did not increase as substantially in the SNAP groups as it did in the non-SNAP groups.

FIGURE III.4
COMPOSITION OF THE ZERO-INCOME SNAP POPULATION AND COMPARISON GROUPS,
BY RACE AND ETHNICITY: 1993–2008



Source: SIPP 1993, 1996, 2001, 2004, and 2008 Panels. Wave 1 interview, panel month 4.

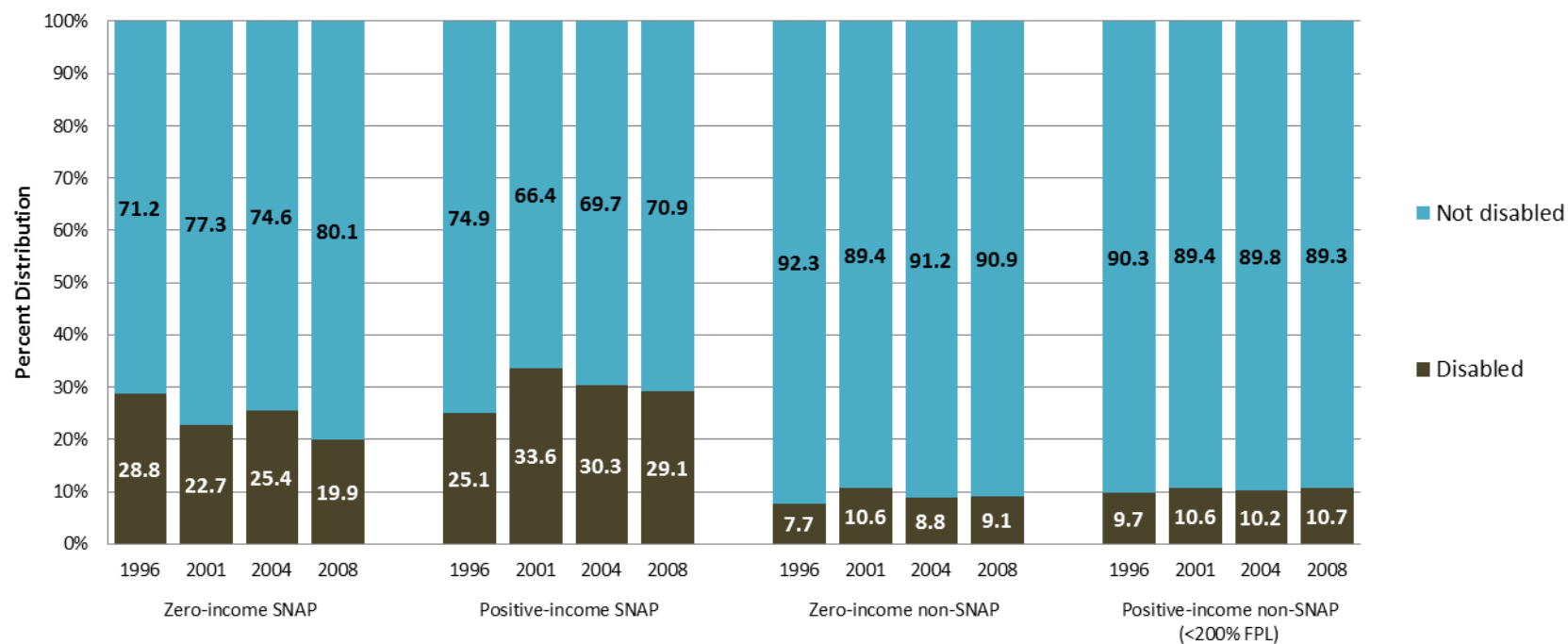
Disability. Among zero-income individuals, disabled adults do not receive cash benefits for disability. As such, for the purposes of this analysis, disability status is measured as nonelderly adults ages 18–59 who received State or Federal SSI benefits or who reported having a work-preventing physical or mental health condition. While this is different than the SNAP definition of disability, which is based on receipt of disability benefits, self-reports of a disabling condition may shed insight into characteristics of this population that may be related to their lack of income.

One-fifth of nonelderly zero-income SNAP adults (18–59) self-reported a disability in 2008, reflecting a 31-percent decrease since 1993.

Disabled adults (ages 18–59) comprised a smaller share of the zero-income SNAP population than in previous years, declining from 28.8 percent in 1996 to 19.9 percent in 2008 (Figure III.5).²⁴ Among the comparison groups, the share of disabled adults in the positive-income SNAP group increased from 25.1 percent in 1996 to 33.6 percent in 2001 and then decreased to 29.1 percent in 2008, while the non-SNAP comparison groups reported lower levels of disability with relatively little change during this period.

²⁴ The measure of self-reported physical or medical work-limiting disability was not available in the 1993 panel.

FIGURE III.5
COMPOSITION OF THE ZERO-INCOME SNAP POPULATION AND COMPARISON GROUPS,
BY DISABILITY (ADULTS 18–59): 1996–2008



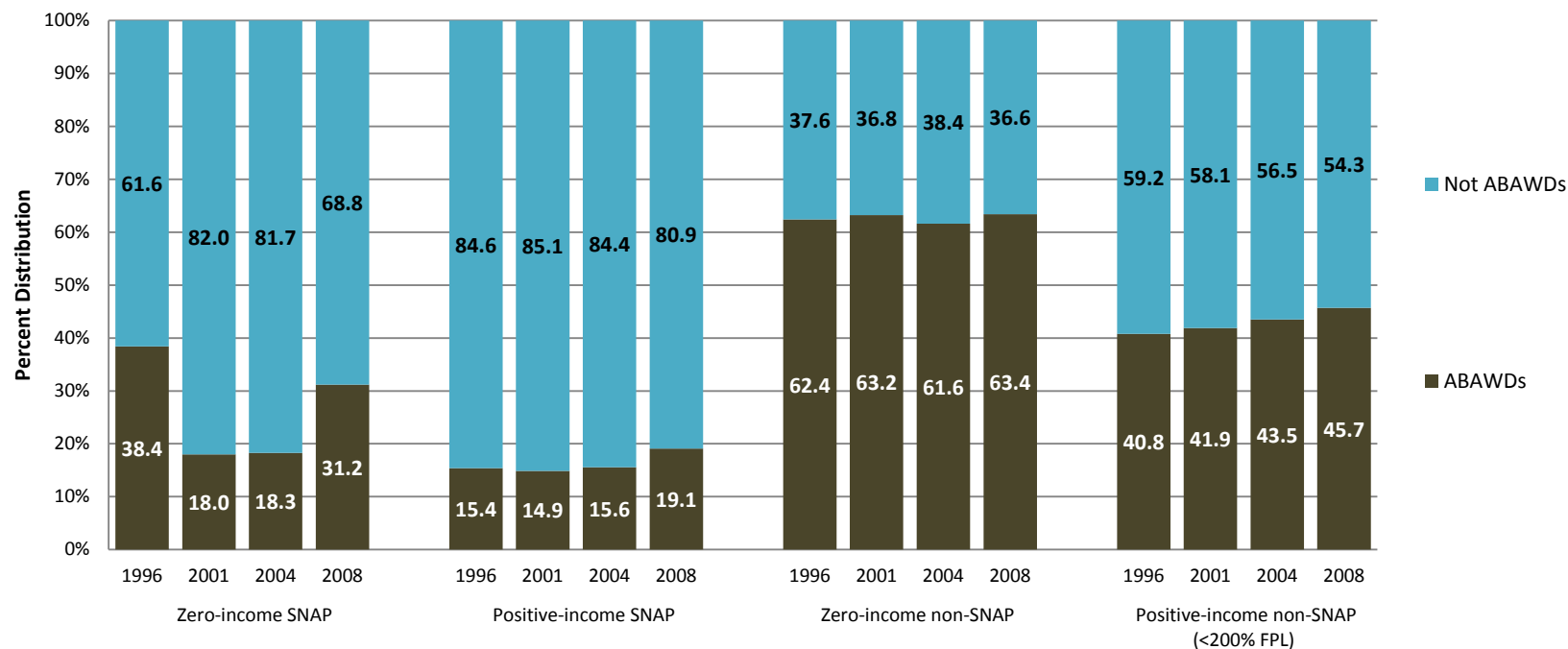
Source: SIPP 1996, 2001, 2004, and 2008 Panels. Wave 1 interview, panel month 4.

Presence of ABAWDs.²⁵ The proportion of ABAWDs among zero-income SNAP adults ages 18–49 decreased sharply between 1996 and 2001, from 38.4 percent in 1996 to 18.0 percent in 2001 and 18.3 percent in 2004 (Figure III.6). The proportion then rebounded in 2008, increasing sharply to 31.2 percent. In contrast, in each of the three comparison groups, the proportion of ABAWDs showed only slight increases across the study period. Consistent with overall restrictions on SNAP receipt by ABAWDs who are not working, the proportions of ABAWDs are lower in both SNAP groups than they are in the non-SNAP comparison groups.

Slightly less than one-third of zero-income SNAP adults (18–49) were ABAWDs in 2008, a proportion lower than in 1996 but higher than in 2001 and 2004.

²⁵ ABAWDs were defined as nondisabled, childless adults ages 18–49.

FIGURE III.6
COMPOSITION OF THE ZERO-INCOME SNAP POPULATION AND COMPARISON GROUPS,
BY ABAWD STATUS (ADULTS 18–49): 1996–2008



Source: SIPP 1996, 2001, 2004, and 2008 Panels. Wave 1 interview, panel month 4.

2. Family

Family Composition. Zero-income SNAP participants were more likely to live in families with children in recent years than they were in the past. (Figure III.7).²⁶ In particular, individuals in zero-income SNAP families have grown increasingly likely to live in single-parent families; this group constituted 28.2 percent of the zero-income SNAP population in 1996 and increased to approximately half of this population from 2001–2008 (49.1 percent in 2001, 55.4 percent in 2004, and 47.1 percent in 2008).²⁷ Comparatively, the proportion of positive-income SNAP individuals in single-parent families decreased modestly, from 37.4 percent in 1996 to 33.2 percent in 2008, while the non-SNAP comparison groups stayed relatively the same.

Nearly half of zero-income SNAP participants lived in single-parent families in 2008, a 67-percent increase since 1996.

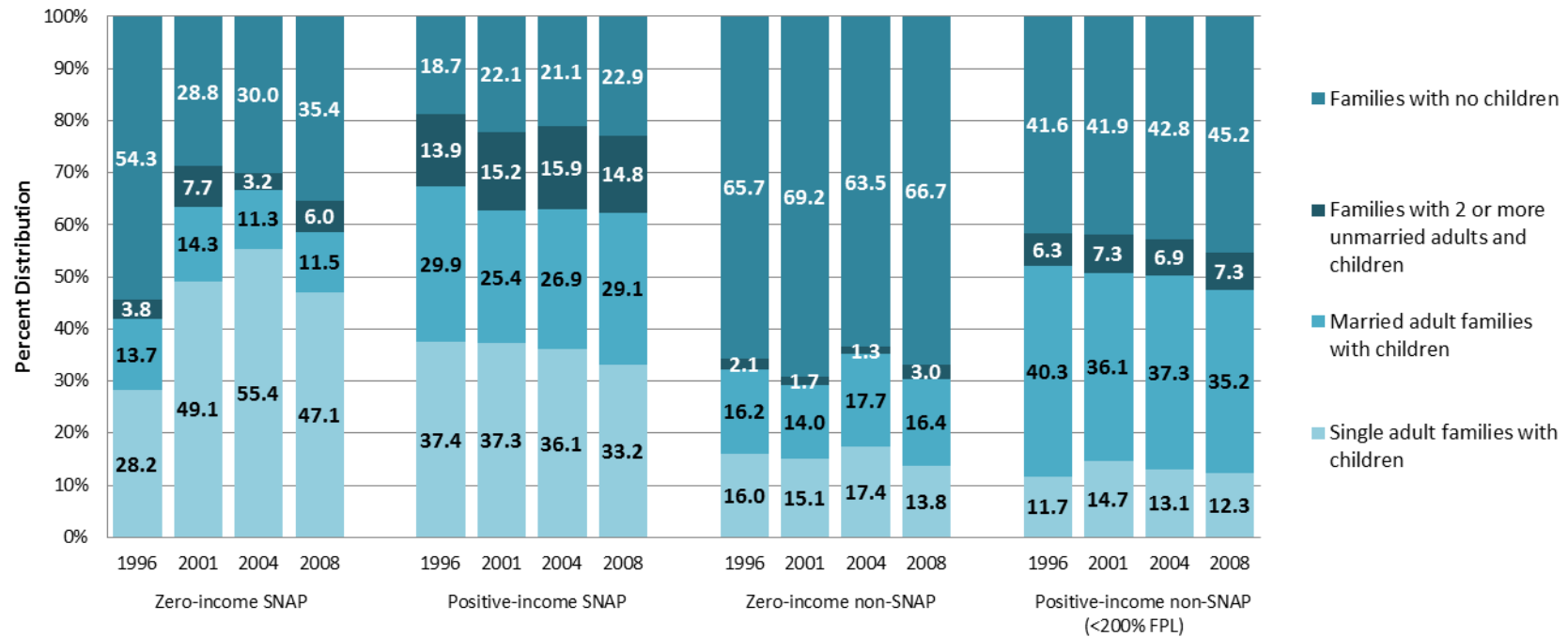
The share of zero-income SNAP participants living in childless families declined from more than half (54.3 percent) in 1996 to approximately one-third (35.4 percent) in 2008. By contrast, the percentage of positive-income SNAP individuals in childless families increased modestly, from 18.7 percent in 1996 to 22.9 percent in 2008. Roughly two-thirds of the zero-income non-SNAP population is made up of individuals without children, a proportion that has remained relatively constant over this period (ranging from 63.5 percent to 69.2 percent). Similarly, the proportion of the positive-income non-SNAP population without children has remained relatively stable over time (ranging from 41.6 percent to 45.2 percent).

Slightly more than one-third of zero-income SNAP participants lived in childless families in 2008, a 35-percent decline since 1996.

²⁶ Single-parent families are defined as those with one adult and one or more children.

²⁷ Data for 1993 are not shown due to small sample sizes in some subgroups.

FIGURE III.7
COMPOSITION OF THE ZERO-INCOME SNAP POPULATION AND COMPARISON GROUPS,
BY FAMILY TYPE: 1996–2008



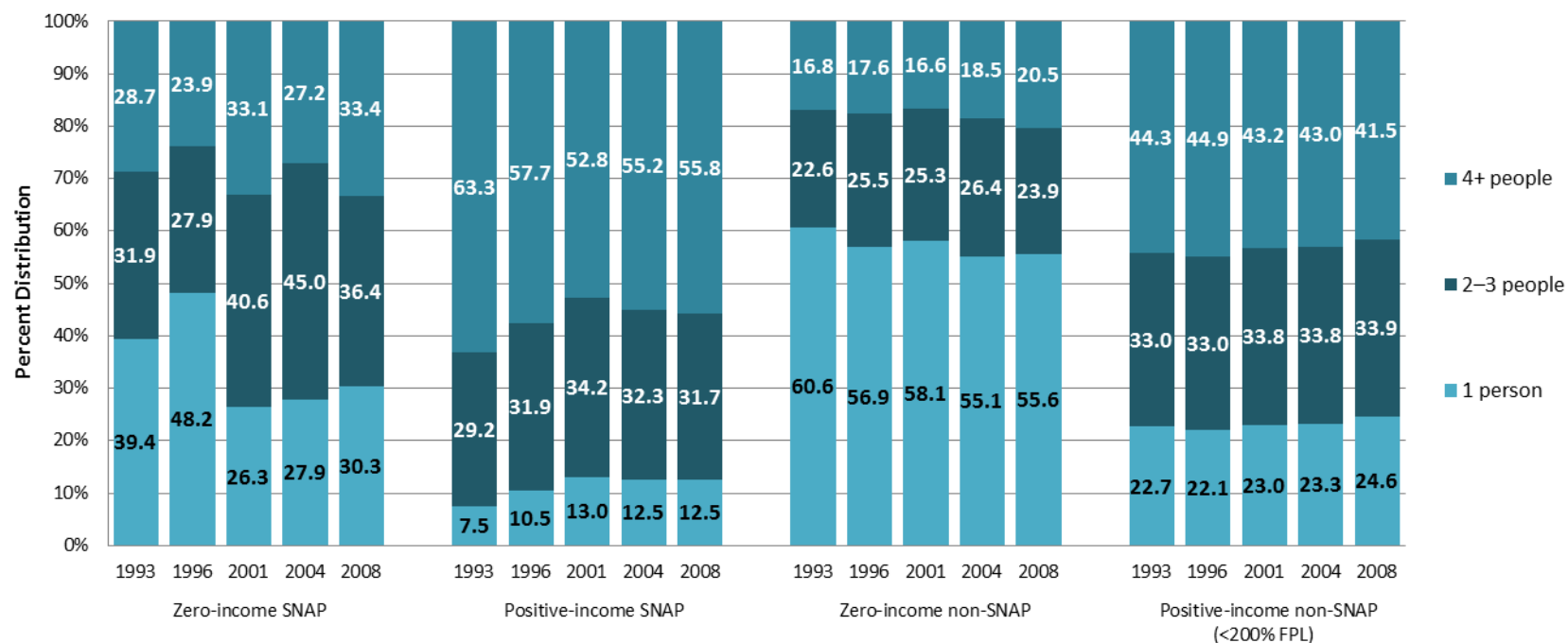
Source: SIPP 1996, 2001, 2004, and 2008 Panels. Wave 1 interview, panel month 4.

Family Size. The distribution of family size in the zero-income SNAP population fluctuated between 1993 and 2008. The proportion of zero-income SNAP participants in single-person families was largest in 1993 and 1996, when 39.4 percent and 48.2 percent of zero-income SNAP participants, respectively, were living in one-person families. This proportion then dropped sharply between 1996 and 2001 before increasing slightly to 27.9 percent in 2004 and 30.3 percent in 2008.

Nearly one-third of zero-income SNAP participants lived in one-person families in 2008, a substantial drop since 1996 when nearly half were in one-person families.

In comparison, the proportion of one-person families was much lower in all years among the positive-income SNAP population, but increased from 7.5 percent in 1993 to 12.5 percent in 2008. The proportion of single-person families remained relatively the same among the non-SNAP populations, accounting for more than half of zero-income non-SNAP participants and less than one-quarter of positive-income non-SNAP participants.

FIGURE III.8
COMPOSITION OF THE ZERO-INCOME SNAP POPULATION AND COMPARISON GROUPS,
BY FAMILY SIZE: 1993–2008



Source: SIPP 1993, 1996, 2001, 2004, and 2008 Panels. Wave 1 interview, panel month 4.

3. Education, Employment, and AFDC/TANF Receipt

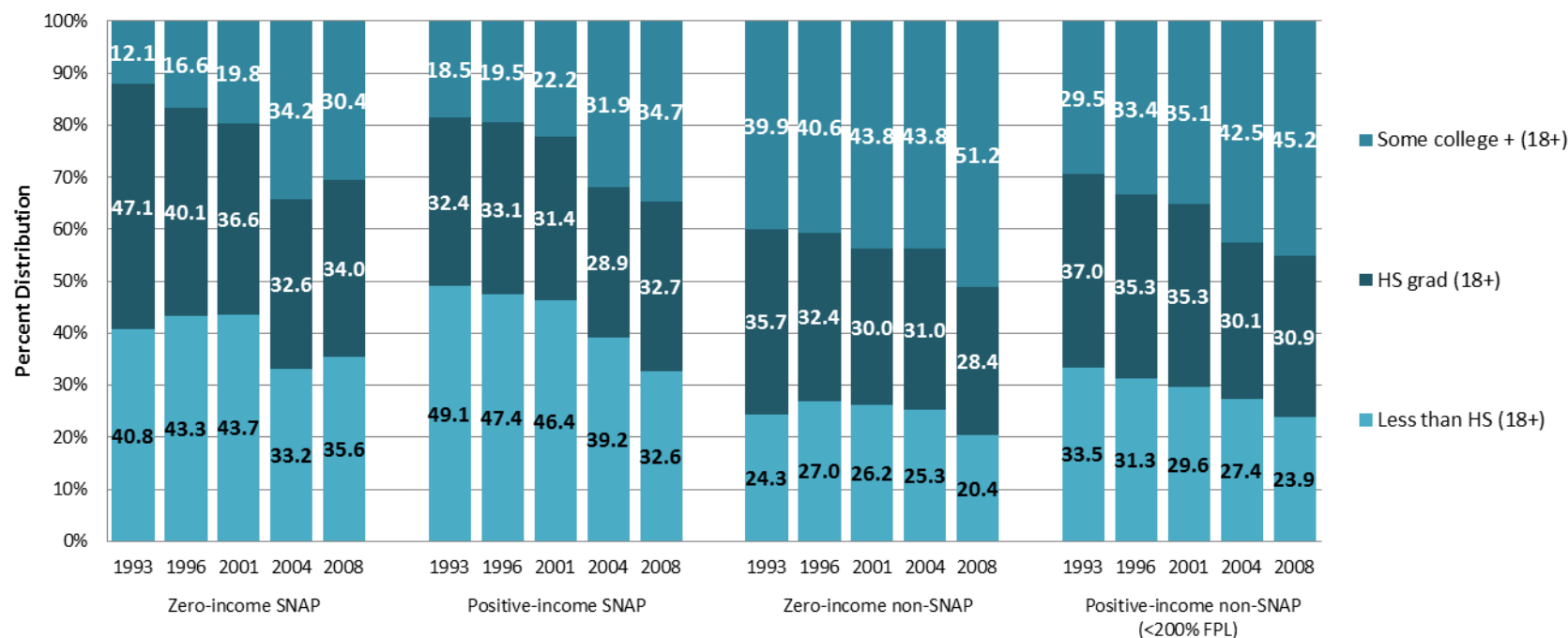
Education. The percent of zero-income SNAP adults (ages 18+) with post-secondary education increased substantially from 1993–2008; 12.1 percent of zero-income SNAP adults had at least some college education in 1993, increasing to 30.4 percent in 2008 (Figure III.9). The proportion of zero-income SNAP adults with less than a high school degree declined somewhat during this period, from 40.8 percent in 1993 to 35.6 percent in 2008.

Nearly one-third of zero-income SNAP adults had at least some post-secondary education in 2008, a 151-percent increase since 1993.

In comparison, the proportion of positive-income SNAP adults with some college education increased similarly during the study period, growing from 18.5 percent in 1993 to 34.7 percent in 2008. The proportion of positive-income SNAP adults with less than a high school degree declined more substantially than it did among zero-income SNAP adults, however, from 49.1 percent of positive-income SNAP adults in 1993 to 32.6 percent in 2008.

Among non-SNAP adults, education levels increased across this period as well, but both zero-income and positive-income non-SNAP groups were more highly educated than their SNAP participant counterparts were in all years.

FIGURE III.9
COMPOSITION OF THE ZERO-INCOME SNAP POPULATION AND COMPARISON GROUPS,
BY EDUCATION (ADULTS 18+): 1993–2008



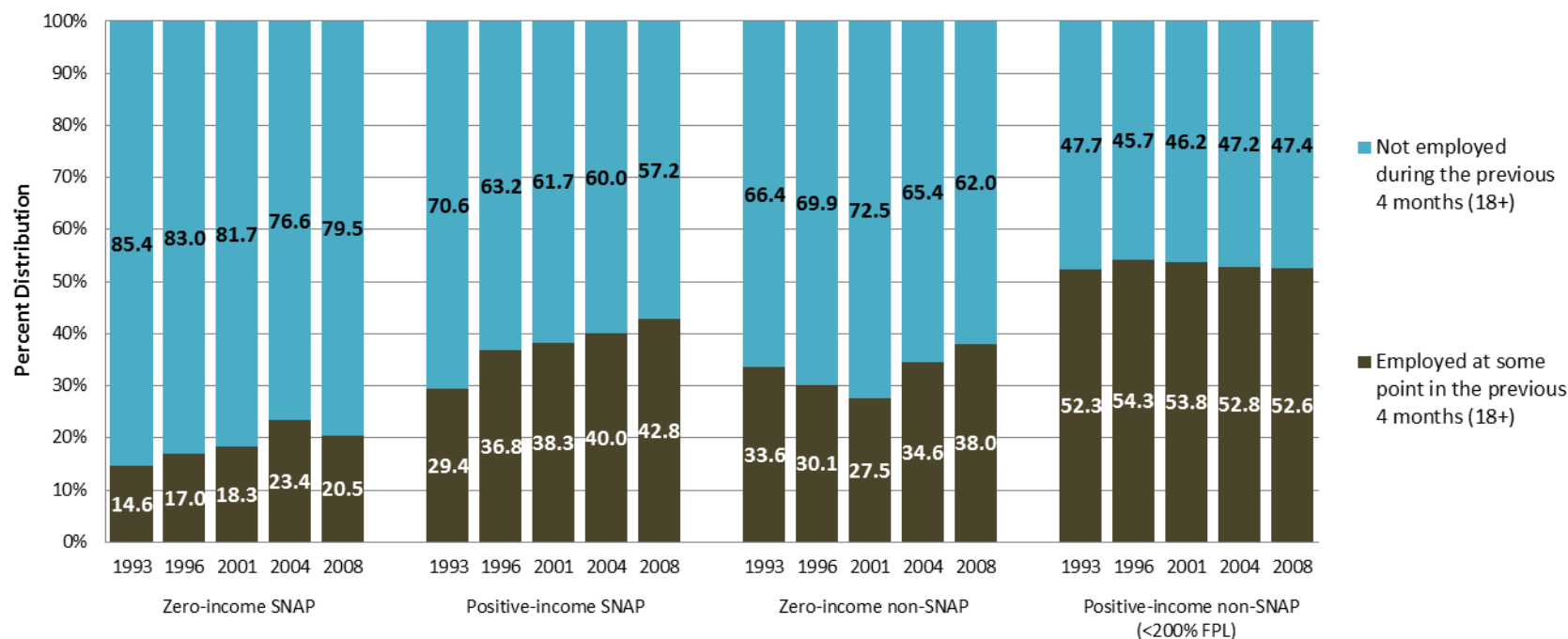
Source: SIPP 1993, 1996, 2001, 2004, and 2008 Panels. Wave 1 interview, panel month 4.

Recent Employment. While zero-income SNAP adults by definition do not have earned income during the reference month, we examined the proportion of adults age 18 and older who were recently employed, which is defined as having been employed at some point in the 4 months prior to the SIPP interview. Across the study period, the adult zero-income SNAP population was increasingly likely to have been recently employed, increasing from 14.6 percent of zero-income SNAP adults in 1993 to 23.4 percent in 2004, before declining slightly to 20.5 percent in 2008 (Figure III.10).

In each year, zero-income SNAP adults were the least likely to have been recently employed among the comparison groups studied. About 1 in 5 was employed at some point in the previous 4 months in 2008.

However, adults in all comparison groups were more likely to have been recently employed than zero-income SNAP adults were in each year examined. The likelihood of recent employment increased over time in most comparison groups as well.

FIGURE III.10
COMPOSITION OF THE ZERO-INCOME SNAP POPULATION AND COMPARISON GROUPS,
BY PRESENCE OF RECENT EMPLOYMENT (ADULTS 18+): 1993–2008



Source: SIPP 1993, 1996, 2001, 2004, and 2008 Panels. Wave 1 interview, panel month 4.

Main Reasons for Recent Unemployment. Zero-income SNAP participants reported various issues as the main reason for not having been employed during the most recent 4 months, including a temporary or chronic health issue or disability (including pregnancy or childbirth); taking care of children or other persons; or being unable to find work.²⁸

The proportion of zero-income SNAP adults reporting dependent care as the main reason for recent unemployment increased over time, from 22.7 percent in 1996²⁹ to 28.3 percent in 2008, which may reflect the increase in single-parent families described above. Across nearly all years examined, zero-income SNAP participants were more likely to cite this reason relative to all other comparison groups.

Slightly less than one-third of zero-income SNAP adults reported health or disability as the main reason for recent unemployment since 2001, decreasing somewhat from 37.1 percent in 1996; these are individuals that did not receive disability payments, as those who reported receiving disability payments are included in the positive-income population. In comparison, an increasing proportion of positive-income SNAP participants reported this reason, from 39.7 percent in 1996 to 49.7 percent in 2008.

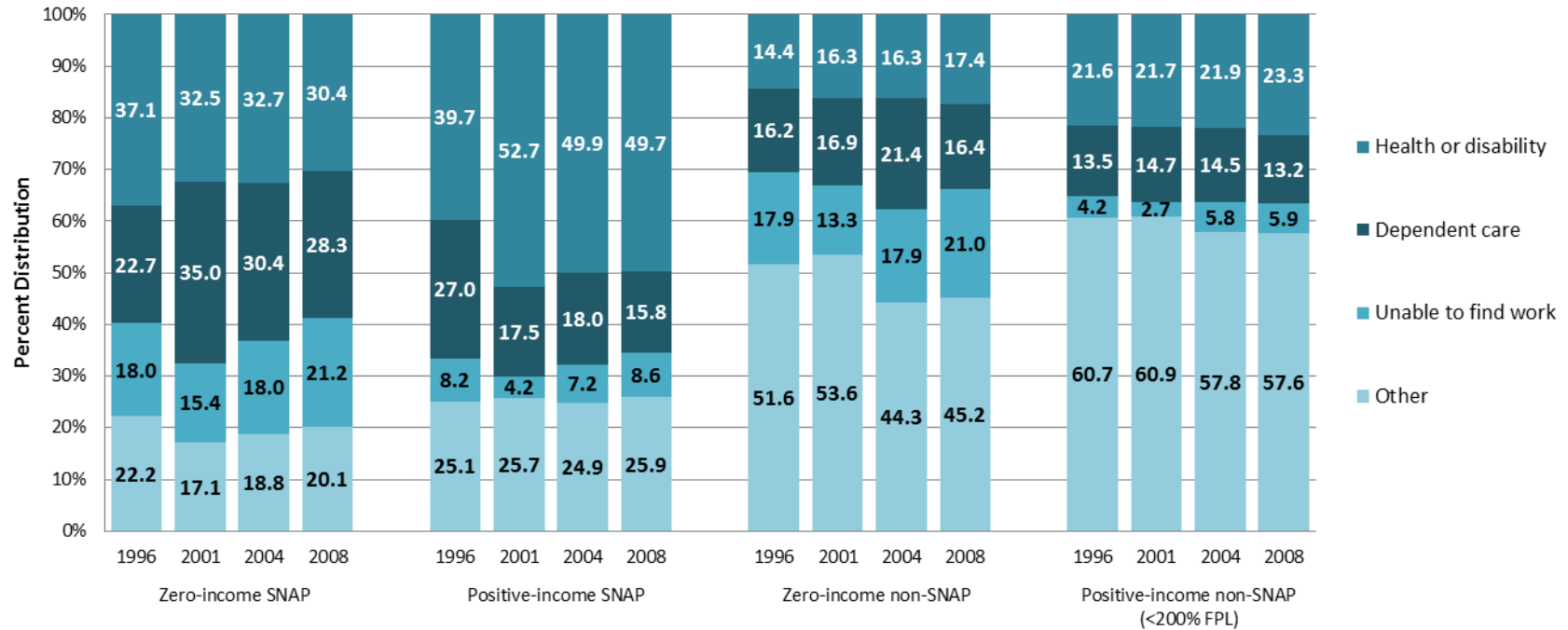
Nearly one-third of zero-income SNAP adults reported health or disability issues as the main reason for their recent unemployment in 2008, despite not receiving disability benefits. Additionally, more than one-quarter reported dependent care as their main obstacle to employment.

The proportion of zero-income SNAP adults citing the inability to find work as the primary reason for their recent unemployment decreased slightly from 18.0 percent in 1996 to 15.4 percent in 2001, and then increased in the 2000s to 18.0 percent in 2004 and 21.2 percent in 2008. Adults in each of the comparison groups followed a similar pattern, with increasing proportions reporting inability to find work, following decreases between 1996 and 2001.

²⁸ Other reasons given include being retired, going to school, being on layoff (temporary or indefinite), not interested in finding a job, and “other” reasons. Sample sizes for most of these categories are too small, however, to show separately for all comparison groups. A large portion of the “other” category for the zero-income non-SNAP group, however, is made up of students, while a large portion of the “other” category for positive-income non-SNAP group is retirees.

²⁹ Data on reasons for lack of employment in the previous 4 months were not available in the 1993 panel.

FIGURE III.11
COMPOSITION OF THE ZERO-INCOME SNAP POPULATION AND COMPARISON GROUPS,
BY MAIN REASON FOR RECENT UNEMPLOYMENT (RECENTLY UNEMPLOYED ADULTS 18+): 1996–2008



Source: SIPP 1996, 2001, 2004, and 2008 Panels. Wave 1 interview, panel month 4.

History of AFDC/TANF Receipt. In 2008, about one-fifth (20.2 percent) of zero-income SNAP participants lived in families that had ever received AFDC or TANF (Figure III.12).³⁰ This level remained fairly stable from 2001 to 2008, but was lower in both 1993 and 1996, when 8.1 percent and 15.2 percent of zero-income SNAP participants, respectively, lived in families that reported ever having received AFDC/TANF. These increases parallel increases in the proportion of single-parent families in the zero-income SNAP population, as receipt of AFDC/TANF is higher among families with children.

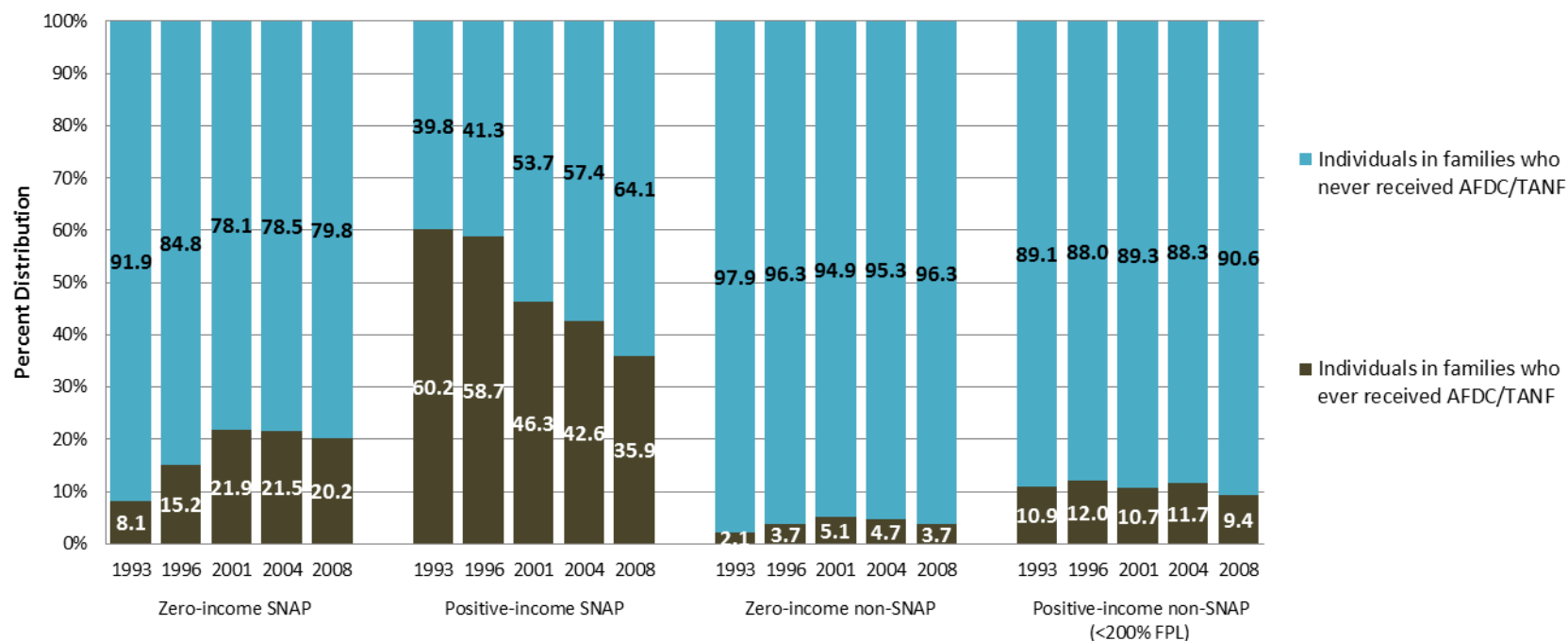
The proportion of zero-income SNAP participants who had received AFDC/TANF in the past increased by 149 percent between 1993 and 2008, from 8.1 percent to 20.2 percent.

As would be expected, larger proportions of positive-income SNAP participants received AFDC/TANF during the reference month or had received it in the past. Over time, however, AFDC/TANF receipt among positive-income SNAP participants decreased substantially, from 60.2 percent in 1993 and 1996 to 35.9 percent in 2008.

In contrast, AFDC/TANF receipt among non-SNAP comparison groups showed relatively little change over the study period. Across all years, these groups showed lower levels of AFDC/TANF receipt as well.

³⁰ Only respondents not currently receiving AFDC/TANF at the time of the survey were asked about their past receipt of these benefits.

FIGURE III.12
COMPOSITION OF THE ZERO-INCOME SNAP POPULATION AND COMPARISON GROUPS,
BY CURRENT OR PAST RECEIPT OF AFDC/TANF: 1993–2008



Source: SIPP 1993, 1996, 2001, 2004, and 2008 Panels. Wave 1 interview, panel month 4.

4. Summary of Key Changes Over Time in the Characteristics of Zero-Income SNAP Participants

Between 1993 and 2008, several changes occurred in the composition of the zero-income SNAP population, particularly with regard to the following characteristics:

- **Family Composition.** Zero-income SNAP participants were increasingly likely to live in single-parent families with children, with a particularly large increase between 1996 and 2001. In contrast, the proportions of single-parent families in zero-income non-SNAP and low-income comparison groups remained relatively stable or showed modest declines during the study period.
- **History of AFDC/TANF Receipt.** Similarly, past receipt of AFDC/TANF increased substantially among the zero-income SNAP population between 1993 and 2001, after which it remained fairly level. By comparison, past or current receipt of AFDC/TANF among the positive-income SNAP population declined sharply during the study period, while remaining low and relatively steady among the non-SNAP populations.
- **ABAWDs.** The proportion of zero-income SNAP adults (ages 18–49) who were ABAWDs dropped sharply between 1996 and 2001, but rebounded between 2004 and 2008. In comparison, increases in the proportion of ABAWDs in the positive-income SNAP and non-SNAP comparison groups were relatively modest, with virtually no change between 1996 and 2001. ABAWDs comprised a relatively high but fairly stable proportion of the zero-income non-SNAP population between 1996 and 2008.

These composition changes shed light on policy changes that may have contributed to the growth of the zero-income SNAP caseload. Together, the trends in family composition and history of AFDC/TANF receipt suggest that part of the growth may be related to policy changes implemented under PRWORA that imposed time limits on receipt of TANF benefits, among other efforts to reduce the TANF rolls. Similarly, declines in the share of ABAWDs among zero-income SNAP adults between 1996 and 2001 point to time limits placed on the receipt of SNAP benefits. Expanded eligibility of ABAWDs for SNAP benefits through increases in State waivers of ABAWD requirements in the mid- to late-2000s, however, may explain the growth of their share of the zero-income SNAP caseload in recent years.

IV. DYNAMICS OF THE ZERO-INCOME SNAP POPULATION

This chapter examines individuals' patterns for entering and exiting the zero-income SNAP condition to help assess whether these patterns explain the zero-income caseload growth in the mid-2000s. The analyses use the 2004 longitudinal SIPP panel to examine the frequency with which people enter the zero-income SNAP condition, the frequency with which people leave the condition, and their duration in the condition. The four research questions for this component of the analysis are shown below.

Research Objective #2: Examine the dynamics of income and SNAP participation for zero-income SNAP participants.

1. *Descriptive Analysis: What are the patterns of zero-income SNAP spells?*
2. *Entry Analysis: What are the entry rates into the zero-income SNAP condition? Among those previously on SNAP, how long were they on SNAP before entering the zero-income SNAP condition? What conditions or events are associated with entrance into the zero-income SNAP condition? What types of income were received before becoming a zero-income SNAP participant?*
3. *Duration Analysis: How long are zero-income SNAP spells for new zero-income SNAP entrants?*
4. *Exit Analysis: What are the exit rates from the zero-income SNAP condition? How long were they on SNAP after exiting? What conditions or events are associated with exits out of the zero-income SNAP condition? What types of income do people begin receiving when they leave the zero-income SNAP condition?*

Zero-income SNAP participation refers to the overlap of two separate conditions: periods of having no income and periods of SNAP participation. While previous SNAP dynamics analyses (see, for example, Mabli et al., 2011) have examined the patterns of transitioning into and out of SNAP participation, the current analysis focuses on patterns of transitioning into and out of periods of simultaneously participating in SNAP and having no income. Because these zero-income SNAP “spells” are the intersection of two different conditions, they may be embedded within longer periods of no income or longer periods of SNAP participation.

To capture this complexity, event history measures and techniques were used to estimate the entry rates into, and exit rates out of, the zero-income SNAP condition, and to examine entry from and exit to the three alternate conditions, including:

1. Group A: Not being on SNAP and having a positive income
2. Group B: Not being on SNAP and having no income
3. Group C: Being on SNAP and having a positive income

Event history techniques were also used to calculate the duration of time spent in the zero-income SNAP condition, as well as the duration of the positive-income SNAP condition preceding and following a given zero-income SNAP episode, or “spell.” As part of these analyses, we assess whether these dynamics are associated with transitions such as the loss of a job, loss of public assistance, and changes in family composition. The figure in Appendix B illustrates the flow of individuals between these conditions.

Each section in this chapter corresponds to one of the four research questions above. Section A summarizes the experiences of the zero-income SNAP population over the panel period to describe the variation in individual spell patterns. Section B assesses the entry rates into the zero-income SNAP condition from the three other possible conditions, indicates the duration of the positive-income SNAP spells that precede entry, and describes the life events that preceded entry and the income sources in the month prior to entry. Section C describes the duration of the zero-income SNAP spells, including the cumulative exit rates from the zero-income SNAP condition. Section D assesses the exit rates out of the zero-income SNAP condition into the three other possible conditions, indicates the duration of the positive-income SNAP spells that follow exit, and defines the life events that precede exit and income sources in the month following exit.

Detailed tables showing entry and exit rates overall and for subgroups are presented in Appendix E. Life tables presenting detailed results for the duration analyses are presented in Appendix D.

A. DESCRIPTIVE ANALYSIS

This section provides a snapshot of the overlap between periods of zero income and periods of SNAP participation by describing the spell variation of individuals that experienced at least one zero-income SNAP spell over the nearly 3-year (32-month) panel period (from October 2003 to August 2006). Secondary research questions include the following:

1. Descriptive Analysis: What are the patterns of zero-income SNAP spells?

- How many zero-income SNAP spells do individuals have (e.g., on average)?
- Are they in and out of the zero-income SNAP condition? Do they experience single spells or multiple spells (e.g., do they enter this condition for a very long time, is there one short spell, or are they transitory)?
- How frequently do they experience this condition?

For these analyses, zero-income SNAP participants are defined as individuals who spent at least 1 month in the zero-income SNAP condition at some point during the nearly 3-year panel period. This group included 1,877 individuals in the panel, who represented 7,392,976 people in the U.S. population (Table IV.1).

Table IV.1
Zero-Income SNAP Population Sample Size and Population Estimate

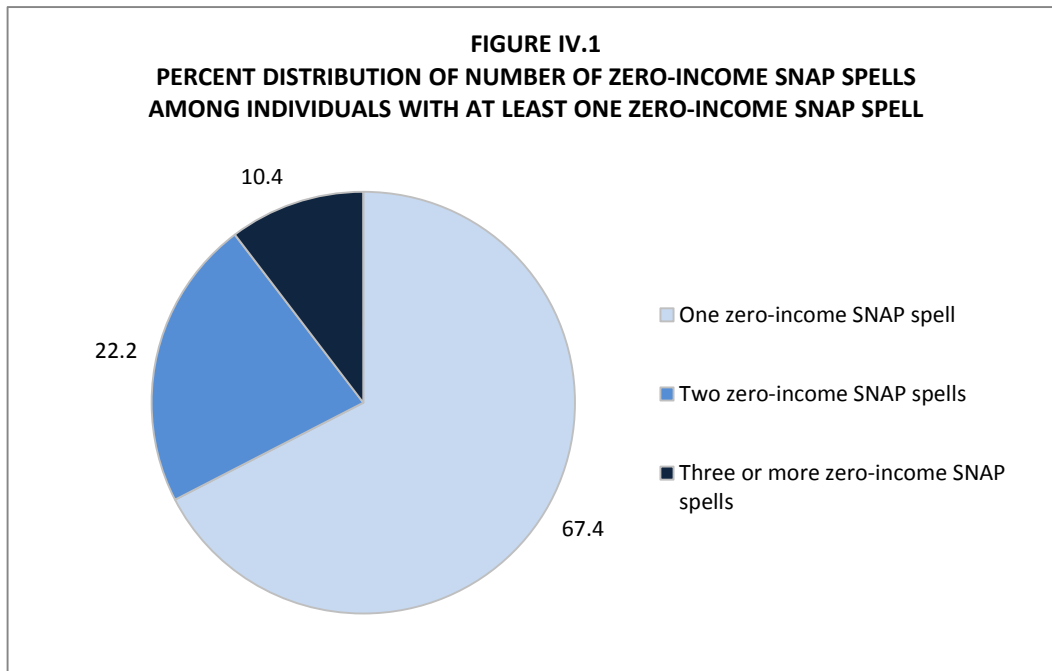
Analysis Group Description	Sample Size	Population Estimate
Zero-income SNAP participants – Individuals who spent at least one month in the zero-income SNAP condition at some point during the full panel period	1,877	7,392,976

The four sections below summarize the zero-income SNAP experiences for these individuals, including 1) the frequency and number of spells; 2) the length of those spells for individuals that experienced a single spell; 3) the total number of months spent in the zero-

income SNAP condition; and 4) the total number of months spent in each of the three alternate conditions.

1. Frequency of Zero-Income SNAP Spells

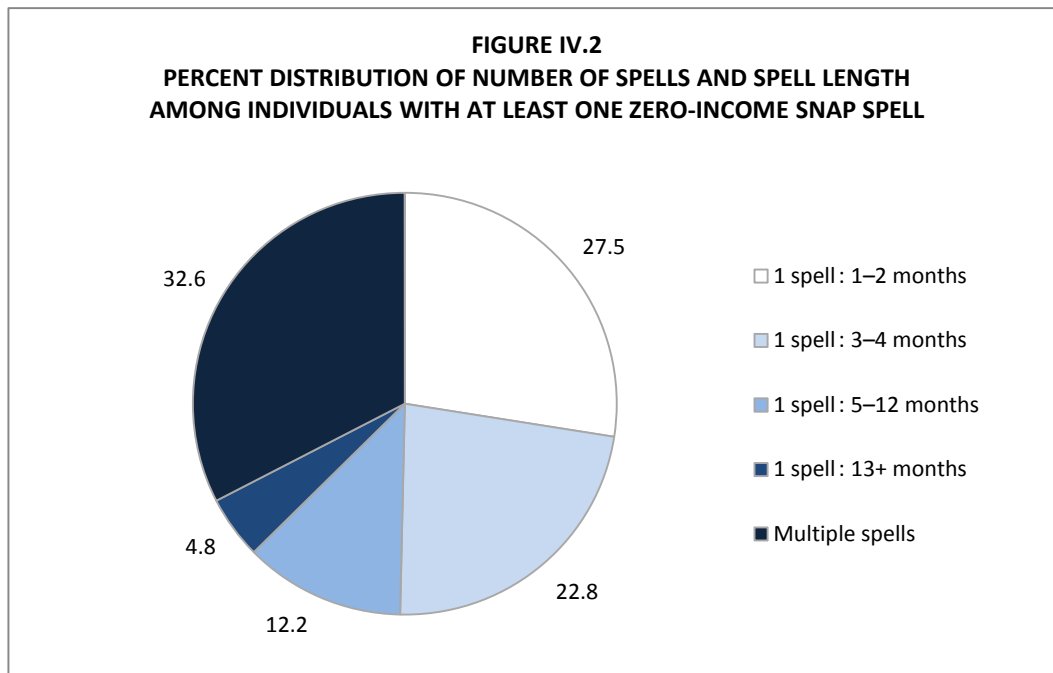
Most (67.4 percent) zero-income SNAP participants experienced a single zero-income SNAP spell throughout the nearly 3-year period. Twenty-two (22.2) percent experienced two spells and 10.4 percent experienced three or more spells (Figure IV.1).



Source: 2004 SIPP Panel, Waves 1–8.

2. Length of Zero-Income SNAP Spells Among Individuals With a Single Spell

Of all individuals who experienced at least one zero-income SNAP spell, about a quarter (27.5 percent) had a single spell lasting 1–2 months, and another 22.8 percent had a single spell lasting 3–4 months (Figure IV.2). Twelve (12.2) percent of zero-income SNAP participants had a single spell lasting 5–12 months. Less than 4.8 percent had a single spell lasting more than a year. The remaining third (32.6 percent) experienced multiple zero-income SNAP spells over the course of the panel.³¹

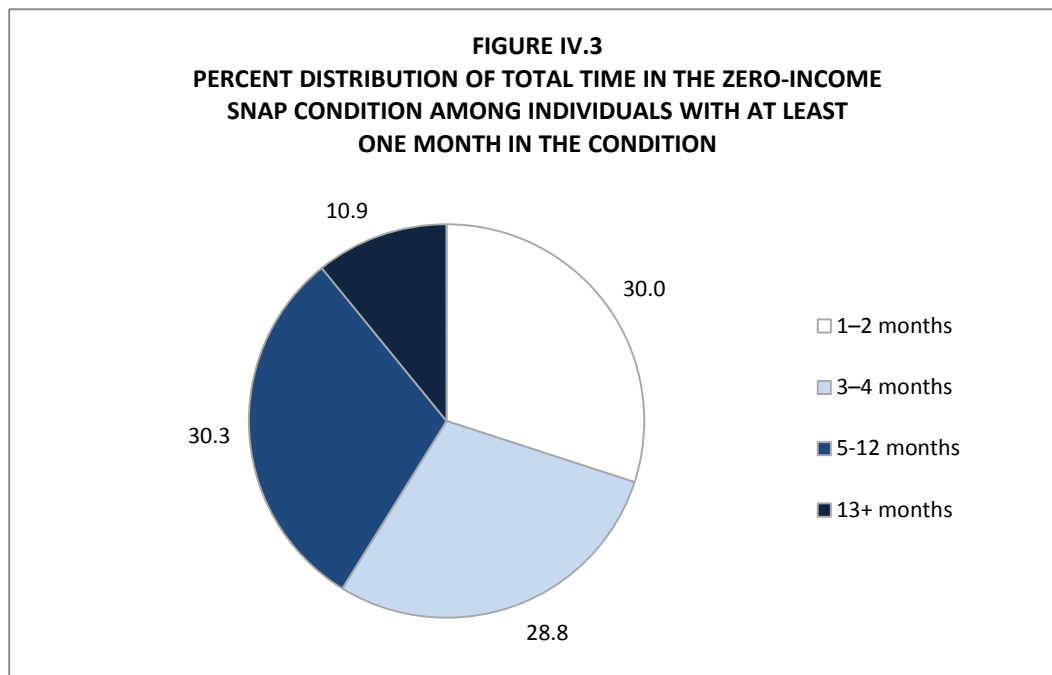


Source: 2004 SIPP Panel, Waves 1–8.

³¹ Since pre-panel data on income were not collected by the survey, the duration of the SNAP spells for zero-income individuals whose spells are ongoing at the beginning of the panel cannot be assessed.

3. Total Time Spent in Zero-Income SNAP Spells

Looking at the total time spent in zero-income SNAP spells³² among all SNAP participants who experienced at least one zero-income spell shows that most spent relatively few months of the nearly 3-year panel period in this condition overall. Thirty percent of this group spent 1–2 months in the zero-income SNAP condition, and almost as many (28.8 percent) spent 3–4 months in the condition (Figure IV.3). Only 3.2 percent of this group spent more than 2 years during the panel in this condition (data not shown separately). Overall, these individuals spent a median of 4 months and an average of 6 months in the zero-income SNAP condition, with an average number of 1.5 spells.



Source: 2004 SIPP Panel, Waves 1–8.

4. Distribution of Time Spent in Alternative Statuses

Most SNAP participants who experienced at least one zero-income spell also spent time in one or more of the following three alternate conditions:

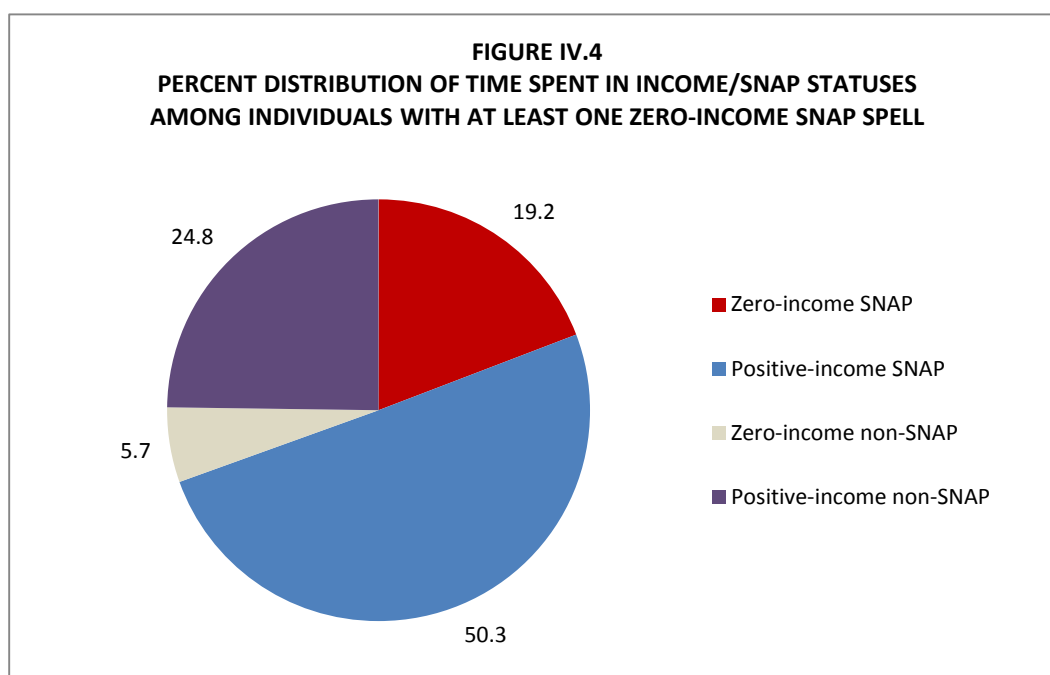
1. Not on SNAP, with positive income
2. Not on SNAP, with zero income
3. On SNAP, with positive income

On average, zero-income SNAP participants spent more than two-thirds (69.5 percent) of the panel months on SNAP (a total of 21.8 months). Almost three-quarters (72.5 percent) of this time was spent in the positive-income condition (a total of 15.8 months), not the zero-income condition (a total of 6.0 months).

³² This is calculated by summing spell durations for zero-income SNAP participants with multiple spells.

When these individuals had zero income (a total of 7.8 months), they typically were participating in SNAP; 77.0 percent of their time spent in the zero-income condition overlapped with SNAP participation (a total of 6.0 months).

Overall, approximately half of the panel months were spent in the positive-income SNAP condition (50.3 percent of panel months). Nearly one-fifth (19.2 percent) of their overall time was spent in the zero-income SNAP condition, compared to only 5.7 percent of their time in the zero-income non-SNAP condition (Figure IV.4).³³



Source: 2004 SIPP Panel, Waves 1–8.

B. ENTRY RATES AND EVENTS PRECEDING ENTRY

The three sections below examine 1) the flows into the zero-income SNAP condition from all three alternate statuses, 2) the length of positive-income SNAP spells immediately preceding entry, and 3) the sources of income and events preceding entry. Secondary research questions include the following:

³³ This represents an average of 6 months in the zero-income SNAP condition, which is higher than the median of 4 months, because the distribution of total time spent in the zero-income condition is non-normal. Most individuals spent 1–4 months in the condition (see Figure IV.3), leading to a median of 4 months, but a few outliers with much larger totals bring the average total duration up to 6 months.

2. Entry Analysis: What are the entry rates into the zero-income SNAP condition? Among those previously on SNAP, how long were they on SNAP before entering the zero-income SNAP condition? What conditions or events are associated with entrance into the zero-income SNAP condition? What types of income were received before becoming a zero-income SNAP participant?

- What are the entry rates into the zero-income SNAP condition?
- [For the subset of positive-income SNAP spells that immediately preceded new entrants' zero-income SNAP spells], how long were they positive-income SNAP participants before entering the zero-income SNAP condition?
- What conditions or events are associated with entrance into the zero-income SNAP condition (e.g., is it always employment, or are there other factors)? What types of income were received before becoming a zero-income SNAP participant?

The zero-income SNAP entry rate is calculated as the number of individuals who entered the zero-income SNAP condition during the panel, divided by the total number of individuals who were at risk of entering. The population at risk of zero-income SNAP entry includes individuals who ever, during the panel period, lived in a family with an income of less than 300 percent of the FPL,³⁴ and who met at least one of the following two criteria:

1. Were living in families with positive incomes
2. Were not receiving SNAP in the month prior to the transition

Similar to previous SNAP dynamics reports, the unit of analysis is person-months, and entry rates are calculated using months 2 through 32 of the panel period. See Appendix A for a detailed discussion of methods used for this analysis.

1. Entry Rates Into the Zero-Income SNAP Condition

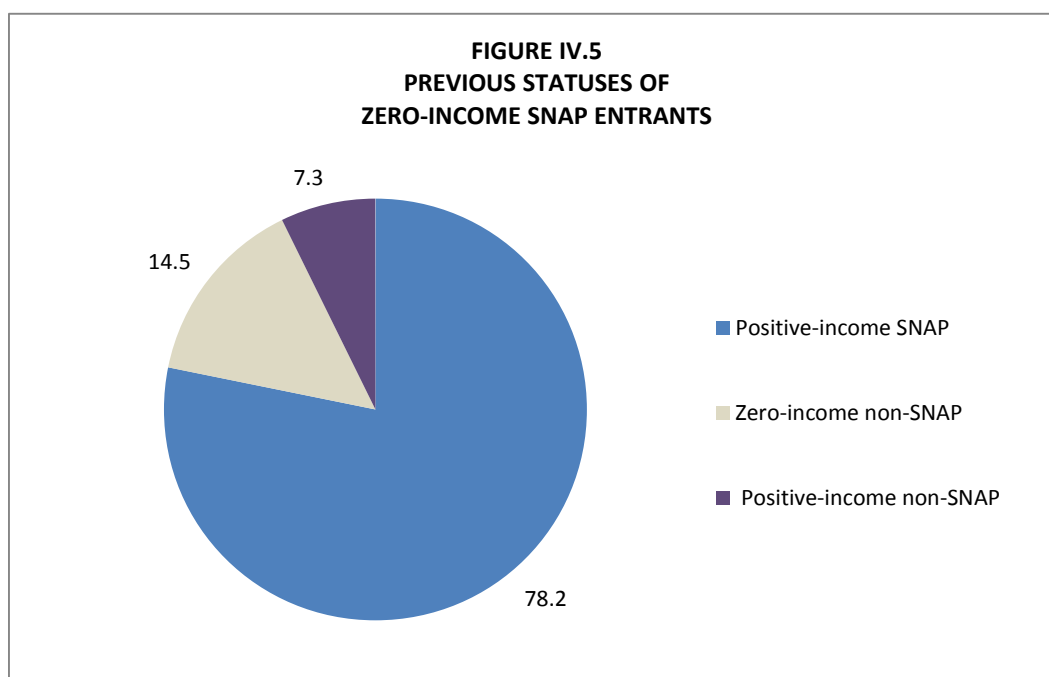
Overall, the monthly rate of entrance into the zero-income SNAP condition (entry rate) among the at-risk population was 0.1 percent. In other words, for every 1,000 individuals in the at-risk population during a month, about 1 entered zero-income SNAP in the next month. While this rate may appear low, it refers to entry into the zero-income SNAP condition in an average month, rather than over a longer period. In addition, the at-risk population includes some individuals in families whose income exceeds the income thresholds for SNAP eligibility, which further diminishes the likelihood of entering the zero-income SNAP condition.

Previous Status of Entrants. Individuals entered this condition from one of three initial statuses: positive-income non-SNAP, zero-income non-SNAP, or positive-income SNAP (see Appendix B for details). Individuals were least likely to enter zero-income SNAP from positive-income non-SNAP, as this involves changes in both income and SNAP receipt statuses within a single month. For example, for every 1,000 positive-income non-SNAP individuals during a month, less than 1 (0.01 percent) entered the zero-income SNAP condition the following month. Individuals were just as likely to enter zero-income SNAP from the zero-income non-

³⁴ This condition (i.e., family income of less than 300 percent of the FPL at some point in the panel) was selected to maintain consistency with the at-risk population used in previous SNAP dynamics analyses (e.g., Mabli et al., 2011).

SNAP condition as from the positive-income SNAP condition (1.2 percent versus 1.1 percent). In other words, for every 1,000 zero-income individuals who were not receiving SNAP during a month, about 12 entered the zero-income SNAP condition the next month. Similarly, for every 1,000 positive-income individuals who were receiving SNAP during a month, 11 transitioned to the zero-income SNAP condition the next month.

Although the rate of entry into zero-income SNAP was similar for individuals coming from either zero-income non-SNAP or positive-income SNAP, those initial groups are very different sizes. In an average month during the panel, 21,573,630 individuals in the at-risk population were in the positive-income SNAP condition, while 3,772,333 individuals were in the zero-income non-SNAP condition (data not shown). Thus, the vast majority (78.2 percent) of zero-income SNAP entrants entered from the positive-income SNAP condition (Figure IV.5). An additional 14.5 percent entered from the zero-income non-SNAP condition and 7.3 percent entered from the positive-income non-SNAP condition.



2. Length of Positive-Income SNAP Spells That Immediately Precede Zero-Income SNAP Participation Spells

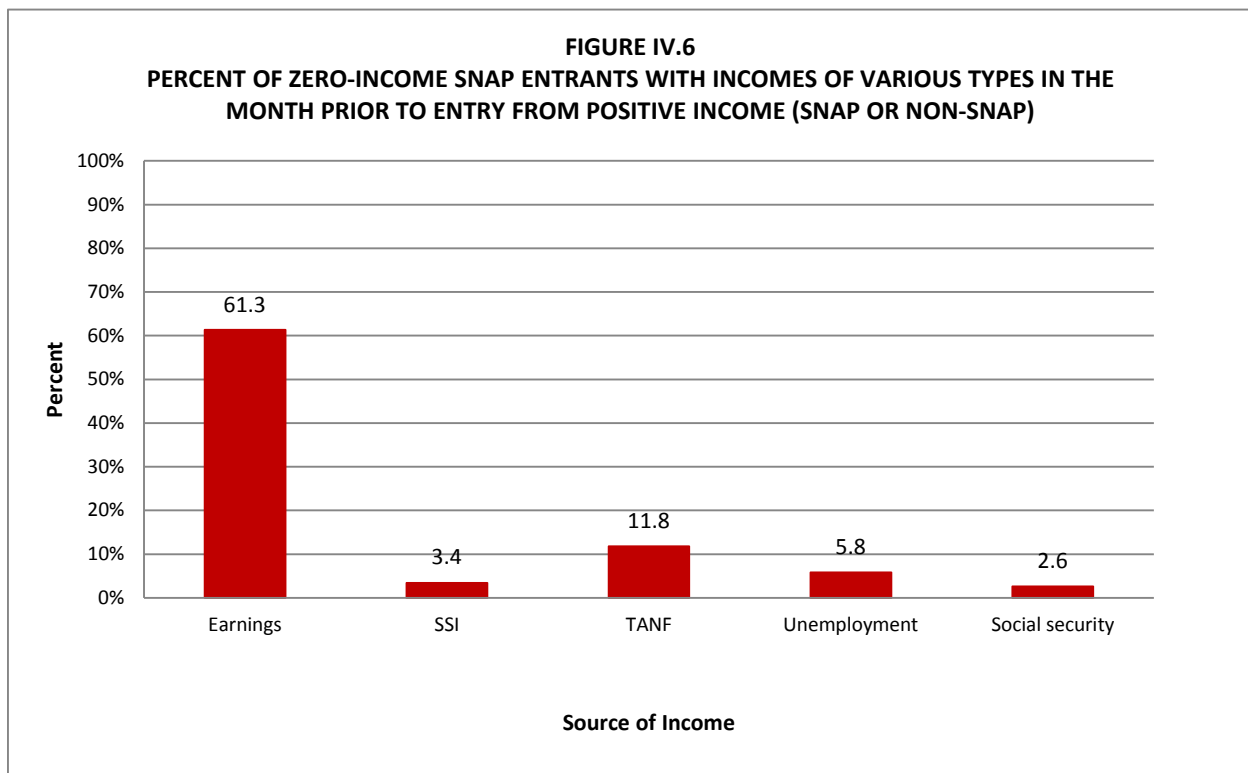
This analysis assesses the length of time that SNAP participants had positive income preceding their zero-income SNAP spells by focusing on the zero-income SNAP entrants transitioning from the positive-income SNAP condition. On average, zero-income SNAP participants had positive income for approximately half a year prior to entering the zero-

income condition: the median spell length for the subset of participants that had a positive-income SNAP spell prior to the zero-income SNAP spell was 6 months.³⁵

3. Income and Events Preceding Entry

This analysis examines income sources and life events prior to zero-income SNAP entry in order to understand the circumstances that may have at least indirectly led that person to enter the zero-income SNAP condition. Because the vast majority of zero-income SNAP individuals transitioned from having income (regardless of SNAP participation) to having no income, examining the sources of income in the month prior to zero-income SNAP entry sheds light on the events that led to economic losses precipitating entry (Figure IV.6).

More than half of zero-income SNAP participants (61.3 percent) lost income from earnings in the month prior to entry (Figure IV.6). The second most common event was a decrease in family TANF income. Nearly 12 percent had lost TANF income, while smaller proportions experienced a loss of benefits from SSI (3.4 percent), unemployment benefits (5.8 percent), or Social Security (2.6 percent).



Source: 2004 SIPP Panel, Waves 1–8. Percent of entrants from positive-income with only other sources of income or with multiple sources of income are not shown.

³⁵ By comparison, the median overall SNAP spell length was 10 months (Mabli et al., 2011).

Following the categorizations defined in previous SNAP dynamics analyses (Mabli et al., 2011), the study team also examined changes in employment, income, and family composition over the 4- and 8-month periods preceding the potential transition date (Table IV.2).

Table IV.2
Events Preceding Entry and Exit

Event	Defining Events
1. Recent Unemployment	<ul style="list-style-type: none"> • Self became unemployed • Other family member became unemployed
2. Decrease in Family Income by Type	<ul style="list-style-type: none"> • Earnings (10% or more) • TANF (any decrease) • Other income (10% or more)
3. Change in Family Composition	<ul style="list-style-type: none"> • Pregnant/new infant in family • New dependent (non-infant) in family • Newly separated or divorced • Other composition change, including any addition of an adult and any departure of a household member other than through separation or divorce

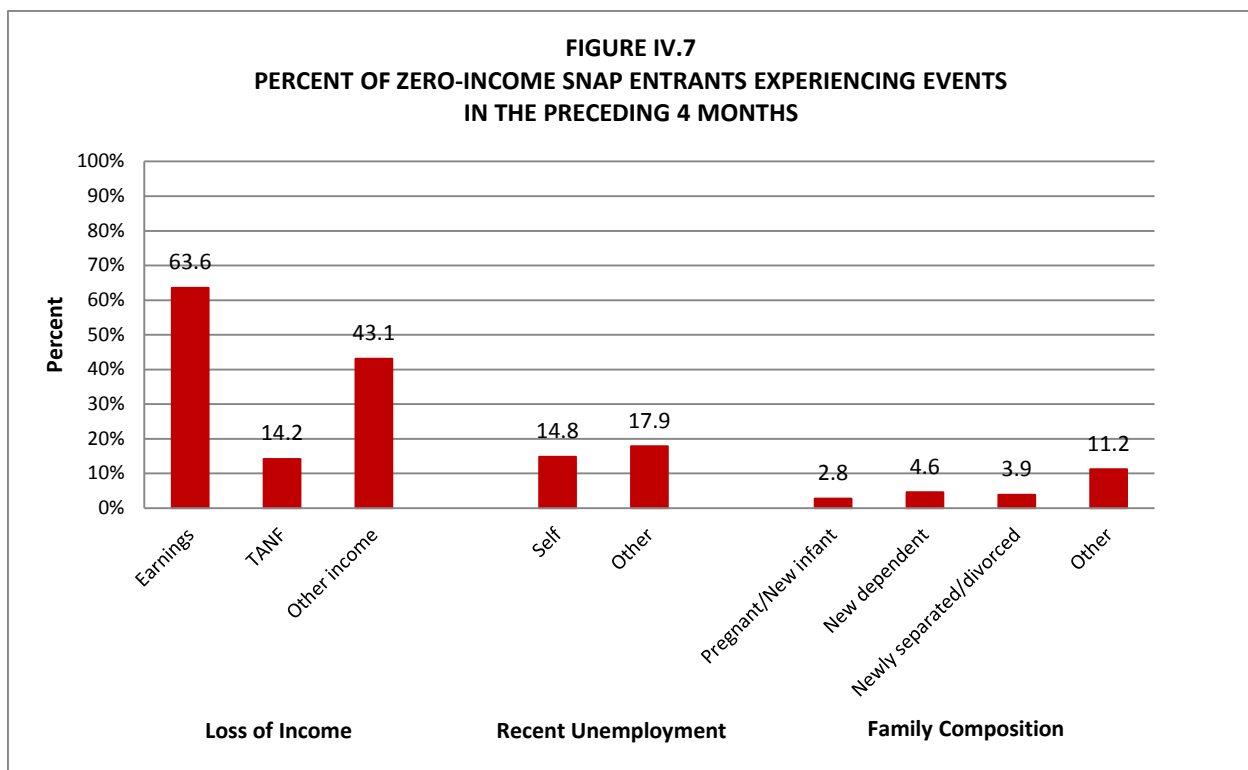
Table IV.3 examines these findings for two populations. First, for those individuals in the at-risk population experiencing the event, we assess how many *subsequently* entered the zero-income SNAP condition within 4 and 8 months of the event. Second, for zero-income SNAP entrants, we examine how many experienced the events within the *previous* 4 and 8 months.

These three types of events were extremely common among the entire at-risk group. Overall, 92.5 percent of the at-risk population experienced at least one event during the panel and three-quarters (75.7 percent) experienced multiple types of events. Decreases in family income were the most common: more than three-quarters (77.5 percent) of individuals in the at-risk population experienced a decrease of at least 10.0 percent in earnings (76.7 percent) or other income, while 5.0 percent experienced a decrease in TANF income. Many individuals also experienced unemployment, including 16.9 percent who themselves became unemployed and 30.1 percent whose family member became unemployed. Family composition changes were relatively less common; however, 23.5 percent did have either a new infant or a new dependent join the family, while 18.5 percent experienced some other family composition change.

Taking a retrospective look, the vast majority of zero-income SNAP entrants experienced at least one event within 4 months of entry (95.2 percent). These findings parallel the high frequency with which the at-risk population experienced these events. Relatively few of the individuals experiencing these changes, however, subsequently transitioned to the zero-income SNAP condition. This parallels the findings that only a small fraction of the at-risk population entered the zero-income SNAP condition in an average month or experienced zero-income SNAP spells during the panel period at all. For example, only 1.3 percent of people who experienced at least one event subsequently entered the zero-income SNAP condition within 4

months. Of the events examined, individuals experiencing a loss of TANF income were most likely to enter zero-income SNAP subsequently: 7.5 percent of individuals who experienced a loss of TANF income entered the zero-income SNAP condition within 4 months. Of all the family composition changes, more newly separated or divorced individuals entered within 4 months compared to others.

A closer examination of all zero-income SNAP entrants and the events they recently experienced, however, may be more informative of events that may have been associated with their transition to zero-income SNAP. Taking this retrospective look, the most common events preceding zero-income SNAP entry were, not surprisingly, losses in income: almost two-thirds (63.6 percent) of entrants experienced a decrease in family earnings of at least 10 percent within the previous 4 months, 14.2 percent lost TANF income, and 43.1 percent experienced a loss in some other form of income (Figure IV.7). Similarly, 14.8 percent of entrants became unemployed and 17.9 percent experienced the unemployment of a family member in the previous 4 months. Volume II of this report further examines the circumstances associated with loss, and volatility, of income, including health and disability issues, transportation difficulties, and limited education or credentials.



Source: 2004 SIPP Panel, Waves 1–8.

Table IV.3
Occurrence of Events Preceding Zero-Income SNAP Spells and Rate of Entry Following Events

Event	Percent of At-Risk Population Who Experienced an Event During the Panel	Percent of People Who Experienced an Event and Who Entered Zero-Income SNAP Within 4 Months of the Event	Percent of Entrants Who Experienced an Event in the Previous 4 Months	Percent of People Who Experienced an Event and Who Entered Zero-Income SNAP Within 8 Months of the Event	Percent of Entrants Who Experienced an Event in the Previous 8 Months
Change in Family Composition					
Pregnant/New infant in family	8.1	1.5	2.8	2.6	6.3
New dependent (non-infant) in family	15.4	1.1	4.6	2.4	10.8
Newly separated or divorced	4.3	3.5	3.9	4.4	4.9
Other composition change	18.5	1.9	11.2	2.8	18.0
Recently Unemployed Family Member					
Self	16.9	2.6	14.8	3.5	20.6
Other family member	30.1	1.6	17.9	2.3	26.4
Decrease in Family Income					
Earnings (by 10% or more)	76.7	1.5	63.6	2.1	74.3
TANF	5.0	7.5	14.2	8.4	16.9
Other income (by 10% or more)	77.5	0.9	43.1	1.4	56.7
Distribution of Events					
Experienced no events	7.5	—	4.8	—	2.8
Experienced any single event	16.8	—	39.9	—	23.6
Experienced multiple events	75.7	—	55.2	—	73.6
Experienced Any Event	92.5	1.3	95.2	1.8	97.2
Sample Size (Person-Months)	51,338	224,215	2,189	189,635	1,813

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006.

Notes:

At-risk population for zero-income SNAP entry: Individuals who were ever observed over the course of the SIPP panel to be living in a family whose income was less than 300% of the FPL, and who met at least 1 of the following criteria: 1) who are living in families with positive income and 2) who are not receiving SNAP.

Sample for Percent of People: Person-months of events experienced occurring before panel months 28 or 24.

Sample for Percent of Entrants: Person-months of new zero-income SNAP spells occurring after panel month 4 or 8.

Events are not mutually exclusive.

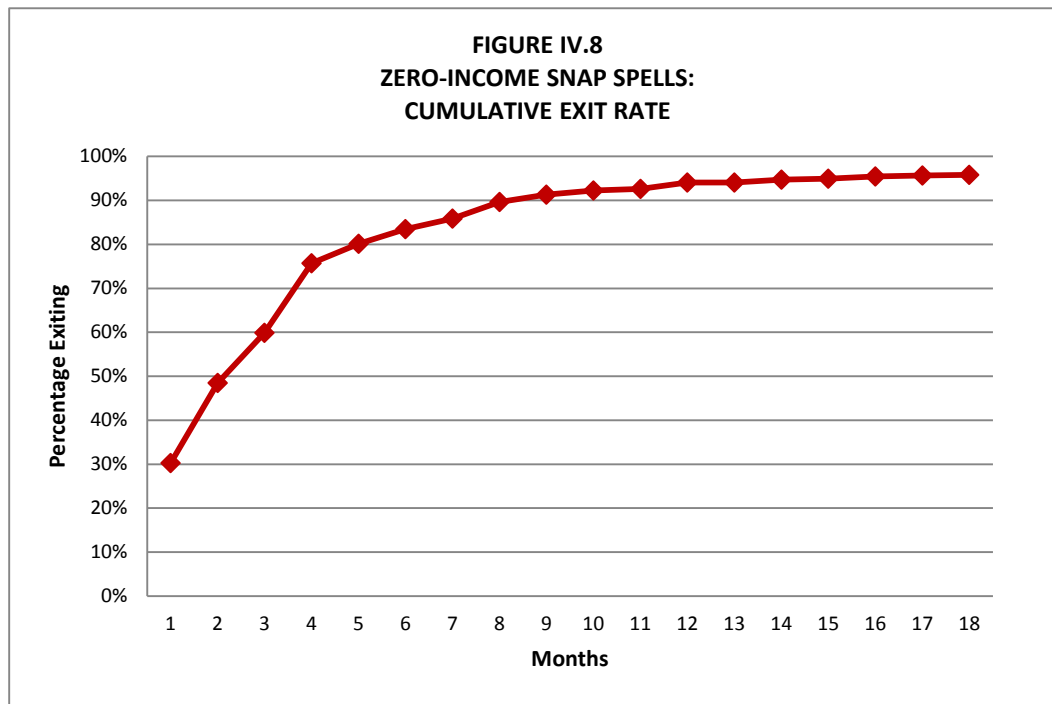
C. LENGTH OF ZERO-INCOME SNAP SPELLS

This section examines the length of zero-income SNAP spells for new entrants to assess whether the zero-income status is only temporary or if it is a more enduring status due to lasting circumstances. Participants could end a zero-income SNAP spell for the following reasons: leaving the SNAP program, entering a positive-income state, and/or leaving the observation universe (e.g., through death, institutionalization, or moving out of the country). The secondary research question addressed in this analysis is as follows:

3. Duration Analysis: How long are zero-income SNAP spells for new zero-income SNAP entrants?

- How long are the zero-income SNAP spell lengths for new entrants into the condition (e.g., what is the median time in this condition after entry)?

More than half of zero-income SNAP spells ended within 3 months; the median zero-income SNAP spell length for participants that entered the SNAP zero-income condition was 3 months (Figure IV.8).³⁶ Within 6 months, more than 80 percent (83.5 percent) of these spells ended and 94.0 percent ended within a year. The fact that very few spells lasted for more than 6 months indicates that the zero-income SNAP condition is typically short, with most participants gaining income or leaving SNAP (or both) after a few months.



Source: 2004 SIPP Panel, Waves 1–8.

³⁶ In contrast, the median overall SNAP spell length was 10 months (Mabli et al., 2011).

D. EXIT RATES AND EVENTS PRECEDING EXIT

This section examines 1) the flows out of the zero-income SNAP condition into all three alternate statuses, 2) the length of positive-income SNAP spells following exit, and 3) the sources of income gained upon exit. Secondary research questions include the following:

4. Exit Analysis: What are the exit rates from the zero-income SNAP condition? How long were they on SNAP after exiting? What conditions or events are associated with exits out of the zero-income SNAP condition? What types of income do people begin receiving when they leave the zero-income SNAP condition?

- What were the exit rates from the zero-income SNAP condition?
- [For the subset of positive-income SNAP spells that immediately followed new entrants' zero-income SNAP spells], how long were they positive-income SNAP participants after exiting the zero-income SNAP condition?
- What conditions may be associated with exits out of the zero-income SNAP condition? What types of income do people begin receiving when they leave the zero-income SNAP condition?

The exit rate is calculated as the number of individuals who exit the zero-income SNAP condition, divided by the number of individuals “at risk” of exiting the zero-income SNAP condition. The “at-risk population” for zero-income SNAP exit consists of those individuals who met both of the following conditions:

1. Were living in families with zero income
2. Were receiving SNAP and had been receiving SNAP for at least 2 months in the month prior to exit

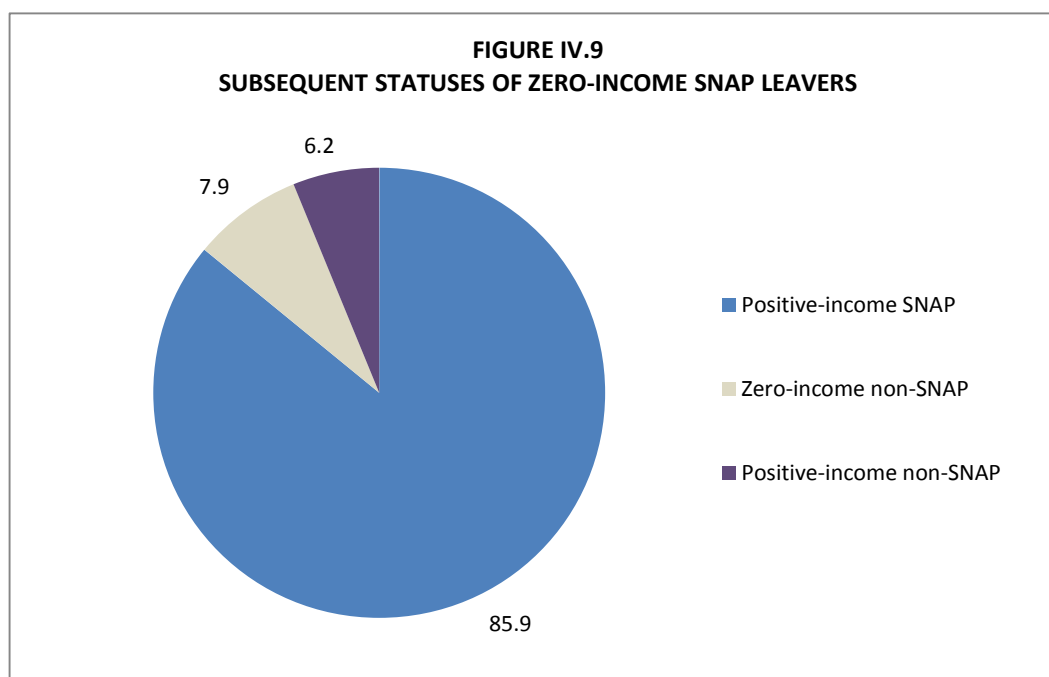
Similar to the entry rate analysis, the unit of analysis for the exit rate analyses is person-months, and exit rates were calculated using months 3–31 of the panel period. See Appendix A for a detailed description of the methods used in this analysis.

1. Exit Rates Out of the Zero-Income SNAP Condition

Overall, the monthly zero-income SNAP exit rate was 21.9 percent. In other words, for every 1,000 individuals in the zero-income SNAP condition at the beginning of a month, about 219 exited that condition by the end of the month. This high exit rate mirrors the findings from the previous section that zero-income SNAP spells were typically fairly short; although individuals overall were unlikely to enter the zero-income SNAP condition, once they entered, they tended to exit the condition fairly quickly.

Zero-income SNAP participants could exit the condition to one of three subsequent statuses: positive-income SNAP, positive-income non-SNAP, or zero-income non-SNAP. Individuals were far more likely to gain positive income while remaining on SNAP than they were to exit SNAP entirely. The overall exit rate to the positive-income SNAP condition was 18.8 percent, while the exit rate to positive-income non-SNAP was 1.4 percent and the exit rate to zero-income non-SNAP was 1.7 percent. In other words, for every 1,000 zero-income SNAP individuals in an average month, about 188 exited into positive-income SNAP. By contrast, only

about 14 individuals transitioned to positive-income non-SNAP and 17 individuals transitioned to no longer receiving SNAP benefits while still having zero income (i.e., exited to the zero-income non-SNAP condition). Consistent with patterns of entry, individuals were least likely to make two transitions in the same month (i.e., transition from zero to positive income and from SNAP to non-SNAP). Among individuals exiting the zero-income SNAP condition, 85.9 percent exited to positive-income SNAP, 6.2 percent exited to positive-income non-SNAP, and 7.9 percent exited to zero-income non-SNAP (Figure IV.9).



Source: 2004 SIPP Panel, Waves 1–8.

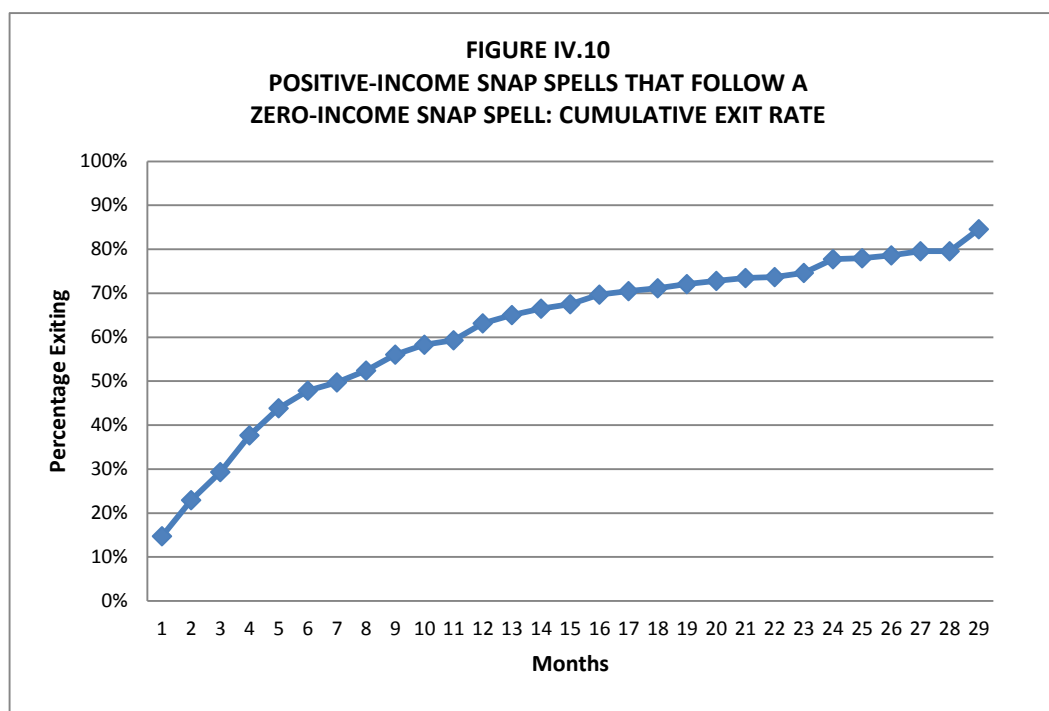
2. Length of Positive-Income SNAP Spells That Immediately Follow Zero-Income SNAP Participation Spells

This section describes the length of time that SNAP participants had positive income following their exit. An exit from the zero-income SNAP condition could occur due to one of the following events: 1) exiting SNAP, 2) exiting back into positive-income SNAP, or 3) removal from the observation universe (e.g., through death, institutionalization, or moving out of the country). Focusing on the vast majority of these zero-income SNAP leavers that transitioned to the positive-income SNAP condition, this analysis identifies how long SNAP participants had income after their zero-earning spells ended.

Positive-income SNAP spells following zero-income SNAP spells appeared to be slightly longer than those that preceded zero-income SNAP spells. The median positive-income SNAP spell that followed a zero-income SNAP spell was 8 months.³⁷ More than 70 percent (70.7 percent) of these positive-income spells continued after 3 months, more than half (52.1 percent) after 6 months, and more than one-third (36.8 percent) after a year following the

³⁷ In comparison, the median overall SNAP spell is 10 months (Mabli et al., 2011).

zero-income spell. However, more than one-fifth (22.2 percent) of the positive-income SNAP spells lasted at least 2 years (Figure IV.10).

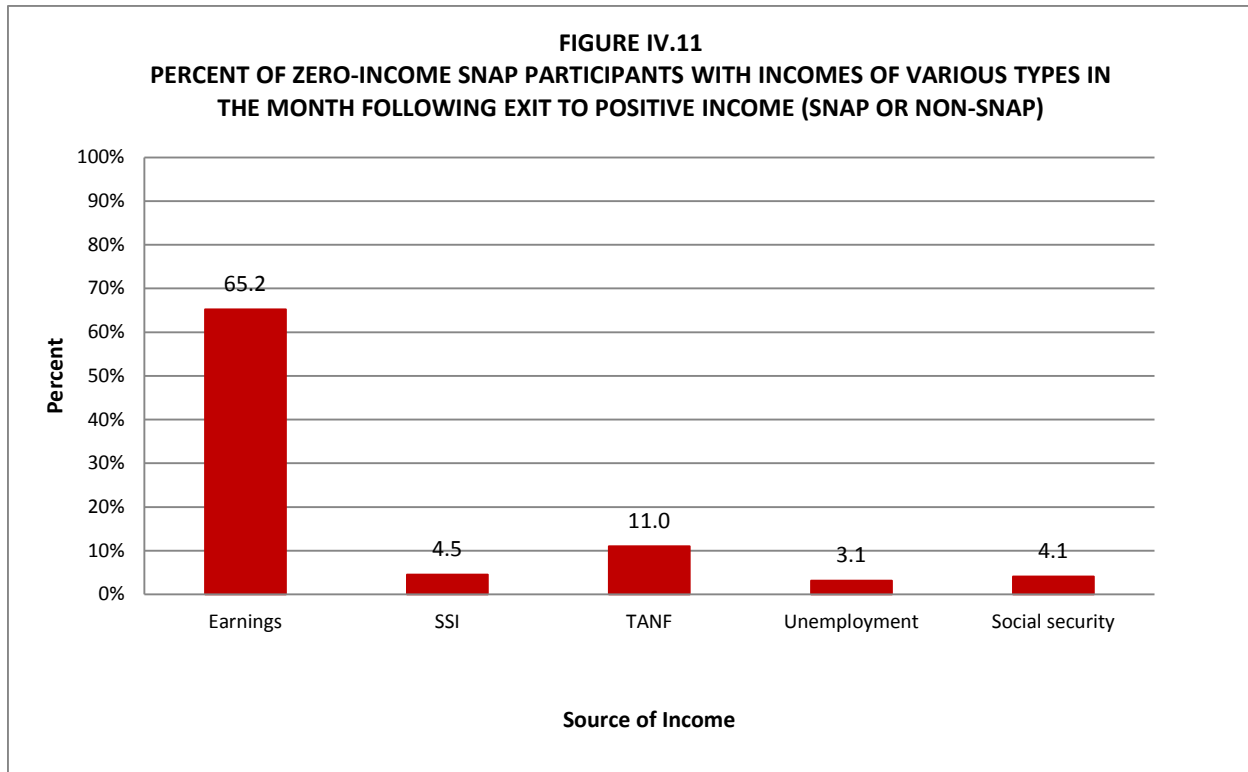


Source: 2004 SIPP Panel, Waves 1–8.

3. Income Sources Following Zero-Income SNAP Spells

Because most zero-income SNAP leavers are individuals who transitioned from having zero income to having positive income regardless of SNAP participation, examining the sources of income in the month following the transition indicates the economic gains that may precipitate zero-income SNAP exit.

Earnings were most commonly indicative of zero-income SNAP exit: nearly two-thirds (65.2 percent) of zero-income SNAP individuals gained income from earnings in the month following exit (Figure IV.11). Eleven percent received TANF income, while smaller proportions received benefits from SSI (4.5 percent), unemployment benefits (3.1 percent), and Social Security (4.1 percent).



Source: 2004 SIPP Panel, Waves 1–8. Percent of zero-income SNAP participants with only other sources of income or with multiple sources of income in the month following exit are not shown.

4. Events Preceding Exits

This analysis examines whether the individuals' family circumstances changed in the 4 and 8 months preceding the zero-income SNAP exit to better understand why the exit transition may have occurred. Consistent with classifications in previous SNAP dynamics analyses (see, for example, Mabli et al., 2011), the events examined include a pregnancy or new infant in the family, a new (non-infant) dependent in the family, a separation or divorce, or some other change in family composition.³⁸ Because an increase in income or employment by definition would indicate an exit from zero-income status, this section only examines changes in family composition. Such changes are less clearly tied to exiting the combined zero-income SNAP condition than to exiting SNAP in general, however, so results should be interpreted with caution. In other words, while many changes in family composition may lead one to transition into or out of SNAP, one would not expect changes in family composition to affect one's *zero-income* SNAP status unless those family composition changes result in a change in income as well.

Table IV.4 illustrates these results for two population groups. First, it examines the percentage of all zero-income SNAP participants who experienced a change in family composition and who subsequently exited the zero-income SNAP condition within 4 and 8

³⁸ As described in Table IV.2, "other changes" in family composition include any addition of an adult and any departure of a household member other than through separation or divorce.

months of the event. Second, it examines the percent of zero-income SNAP leavers who experienced a family composition change event in the previous 4 and 8 months. Results are highlighted below.

- Almost one-fifth (19.3 percent) of zero-income SNAP participants experienced a change in family composition at some point during the panel.
- About two-thirds (66.9 percent) of zero-income SNAP participants exited the condition within 4 months of the change in family composition. These results parallel the high overall exit rates from zero-income SNAP and short average duration of zero-income SNAP spells (Figure IV.8); in other words, regardless of increases or decreases in family size, most individuals tend to exit zero-income SNAP status within 4 months.
- Taking a retrospective look, 11.7 percent of zero-income SNAP leavers experienced a family composition change within the previous 4 months.

Table IV.4
Occurrence of Family Composition Change Preceding Zero-Income SNAP Exits
And Rate of Exit Following Event

Event	Percent of Zero-Income SNAP Participants Who Experienced an Event During the Panel	Percent of People Who Experienced an Event and Who Exited Zero-Income SNAP Within 4 Months of the Event	Percent of Zero-Income SNAP Leavers Who Experienced an Event in the Previous 4 Months	Percent of People Who Experienced an Event and Who Exited Zero-Income SNAP Within 8 Months of the Event	Percent of Zero-Income SNAP Leavers Who Experienced an Event in the Previous 8 Months
Change in Family Composition					
Pregnant/New infant in family	4.0	52.6	1.7	83.3	3.0
New dependent (non-infant) in family	7.5	80.4	4.2	88.2	5.7
Newly separated or divorced	2.3	NA	1.1	NA	1.5
Other composition change	8.6	65.0	5.5	71.1	6.6
Distribution of Events					
Experienced no events	80.7	—	88.3	—	84.6
Experienced any single event	16.3	—	10.9	—	13.9
Experienced multiple events	3.0	—	0.8	—	1.5
Experienced Any Event	19.3	66.9	11.7	79.3	15.4
Sample Size	1,962	364	2,253	304	1,871

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006.

Notes:

Individuals who attrite from the panel (e.g., due to death, institutionalization, nonresponse, etc.) are censored.

Sample for Percent of People: Person-months of events experienced occurring before panel months 28 or 24.

Sample for Percent of Entrants: Person-months of new zero-income SNAP spells occurring after panel month 4 or 8.

Events are not mutually exclusive.

NA=Not available due to small sample sizes.

V. SUBGROUP ANALYSES OF THE DYNAMICS OF THE ZERO-INCOME SNAP POPULATION

This chapter examines the ways in which the zero-income SNAP dynamics presented in Chapter IV differ across identifiable subgroups to help determine whether any such differences, in conjunction with the repeated cross-sectional findings, may suggest possible reasons for the increase in the zero-income SNAP caseload. Research questions include the following:

Research Objective #3: Examine the dynamics of income and SNAP participation for zero-income SNAP participants.

1. *Descriptive analysis: What are the patterns of zero-income SNAP spells among different subgroups?*
2. *Entry analysis: How do the entry rates vary for different subgroups? How long were subgroups on SNAP before going into the zero-income SNAP condition?*
3. *Duration analysis: How do the zero-income SNAP spell lengths vary among different subgroups?*
4. *Exit analysis: How do the exit rates vary for different subgroups? How long were subgroups on SNAP before going into the zero-income SNAP condition?*

The sections in this chapter correspond to the seven subgroups examined, including family composition (Section A), age (Section B), sex (Section C), race/ethnicity (Section D), disability (Section E), education (Section F), and citizenship (Section G). Each section summarizes the key findings from the four analyses above, using the same methods as those used in Chapter IV. Table V.1 at the end of the chapter highlights key results from this analysis, and the tables in Appendix E present results in greater detail.

Subgroups were defined as appropriate for each analysis. For the descriptive analysis, they were defined based on characteristics measured in month 4 of the panel. For the entry, duration, and exit analyses, the subgroups were defined in the month prior to a potential transition or (for durations) at the start of the zero-income SNAP spell. Detailed definitions of these characteristics are provided in Appendix A.

A. FAMILY COMPOSITION

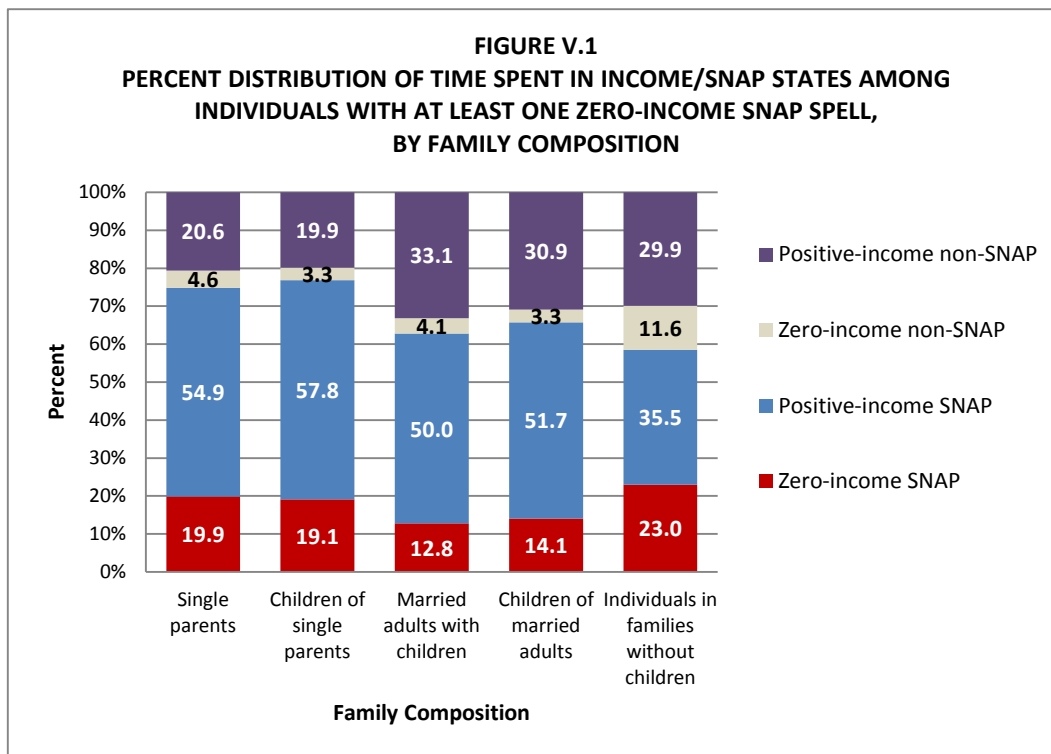
There are two comparisons to be made when looking at the zero-income SNAP experiences of different family types; 1) individuals in families with children in comparison to individuals in families without children, and 2) within families with children, members of single-parent families in comparison to members of married-parent families.³⁹ We also examine differences between children and parents within each family type, but, as to be expected, members of the same family type have similar zero-income SNAP experiences.

Individuals in families with children had a greater likelihood of experiencing a zero-income SNAP spell and higher entry rates into the zero-income SNAP condition compared to individuals in families without children. More than three times as many entrants in an average

³⁹ Members of other family types are not shown separately due to small sample sizes.

month were from families with children (7.3 million individuals in families with children, as compared to 2.0 million in families without children). Families with children, however, experienced shorter zero-income SNAP spells and higher exit rates. Members of families with children spent more total time on SNAP (Figure V.1) and had longer periods of positive-income SNAP preceding and following their zero-income SNAP spells, while those in families without children spent more time in zero-income SNAP and in the zero-income condition (Figure V.1). Together, these findings are consistent both with work requirement policies that limit SNAP participation by adults without dependent children and with cash assistance programs relatively more available to families with children (e.g., TANF).

However, disparities among different types of families with children were even greater than the disparities between families with and without children. Parents and children in single-parent families had the highest likelihood of experiencing a zero-income SNAP spell. Compared to members of married-parent families, those in single-parent families spent more time in SNAP, zero-income, and zero-income SNAP spells; had higher zero-income SNAP entry rates; had longer zero-income SNAP spells; and had lower zero-income SNAP exit rates. Although programs such as TANF provide supplemental income for some low-income families with children, PRWORA introduced lifetime limits on these benefits. The relatively high proportion of time these families spent with zero income may reflect a subset of the population that is no longer eligible for such benefits, sometimes referred to as “disconnected,” as described earlier in this report in Chapter I, Section A.

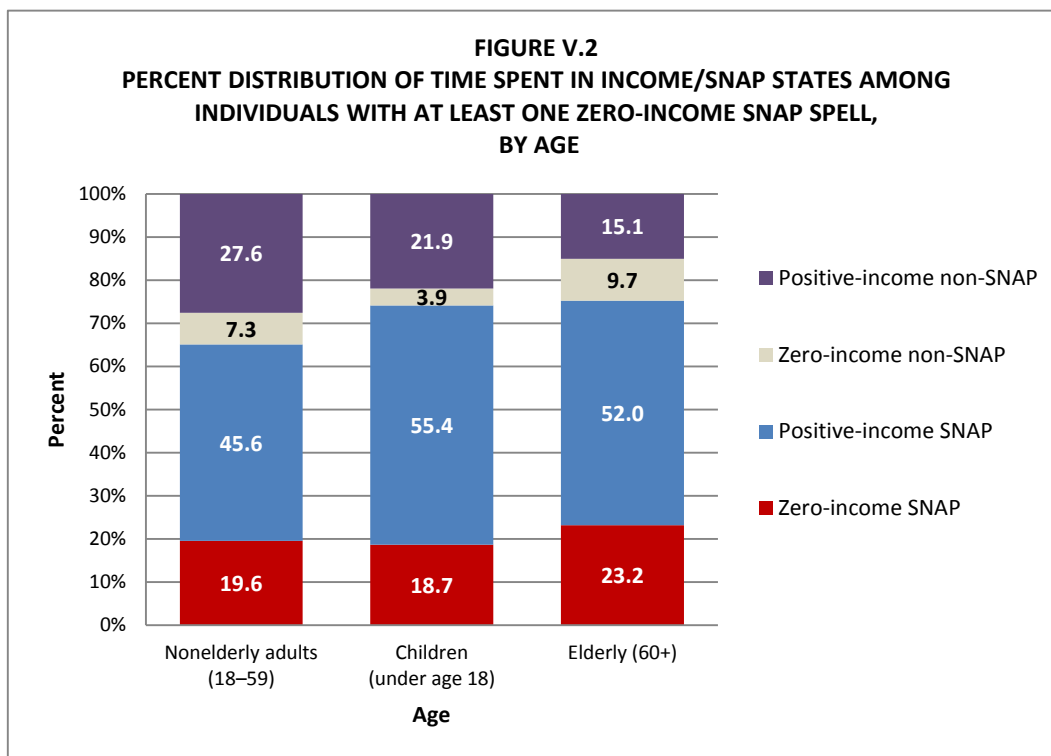


Source: 2004 SIPP Panel, Waves 1–8.

B. AGE

Elderly adults were very unlikely to experience a zero-income SNAP spell, likely due to the near-universal availability of Social Security benefits. Because families with children were more likely to experience zero-income SNAP, when looking at all individuals, children were more than twice as likely as were nonelderly adults to experience a zero-income SNAP spell and had much higher entry rates into the zero-income SNAP condition.

However, when just looking at individuals who experienced a zero-income SNAP spell during the panel, children and nonelderly adults look quite similar, with similar amounts of time spent in the zero-income SNAP condition (Figure V.2),⁴⁰ similar durations of zero-income SNAP spells, and similar exit rates. The striking difference between children and nonelderly adults lies in SNAP participation; children spent a greater percentage of panel months on SNAP (Figure V.2), were more likely to be on SNAP prior to or subsequent to a zero-income SNAP spell, and had longer positive-income SNAP spells before and after their zero-income SNAP spells. In addition, although elderly adults were relatively less likely to enter a zero-income SNAP spell at all, those who did exhibited lower exit rates than their younger counterparts.



Source: 2004 SIPP Panel, Waves 1–8.

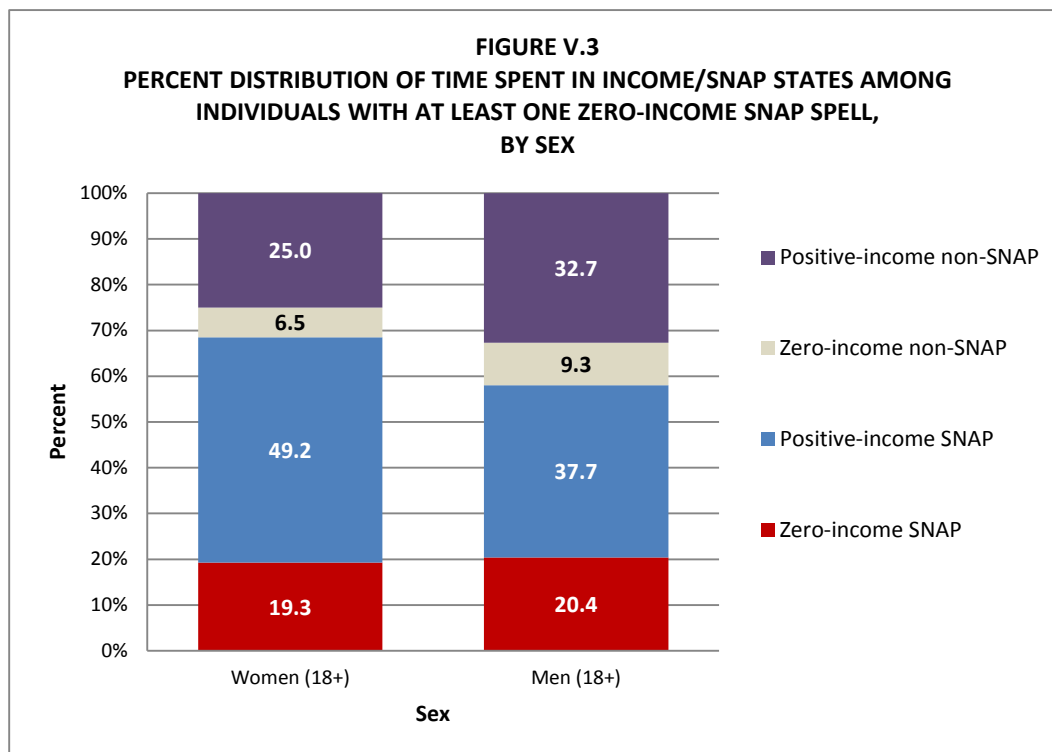
C. SEX

Although women were about twice as likely to have a zero-income SNAP spell as men, among those who experienced such a spell, women and men spent similar amounts of time in

⁴⁰ Sample sizes prevented estimation of adults age 60 and older.

zero-income SNAP (Figure V.3). Two different trends contribute to this similarity. On the one hand, women spent more time on SNAP, as shown by a higher percent of panel months in SNAP; had a greater likelihood of having a positive-income SNAP spell prior to or subsequent to a zero-income SNAP spell; and had longer positive-income SNAP spells. On the other hand, men spent more time with zero income, as shown by a greater proportion of panel months in zero income, and had a greater likelihood of experiencing a zero-income non-SNAP spell either prior to or subsequent to a zero-income SNAP spell.

Much of the difference between men's and women's zero-income SNAP experiences can be attributed to differences in family composition. Women were more likely than men were to be single parents; both women and single parents had relatively high likelihoods of experiencing the zero-income SNAP condition and spent a relatively high proportion of the panel on SNAP. Conversely, men were more likely than women were to live in childless families, a group that had relatively lower likelihoods of having a zero-income SNAP spell, but spent a relatively high percent of the panel months with zero income. Families with children have relatively greater access to TANF benefits, which may explain women's relatively longer spells of positive-income SNAP. Individuals in families without children are more likely to be subject to the restrictions on benefit receipt that apply to ABAWDs, which explains men's relatively longer periods of time with zero income.



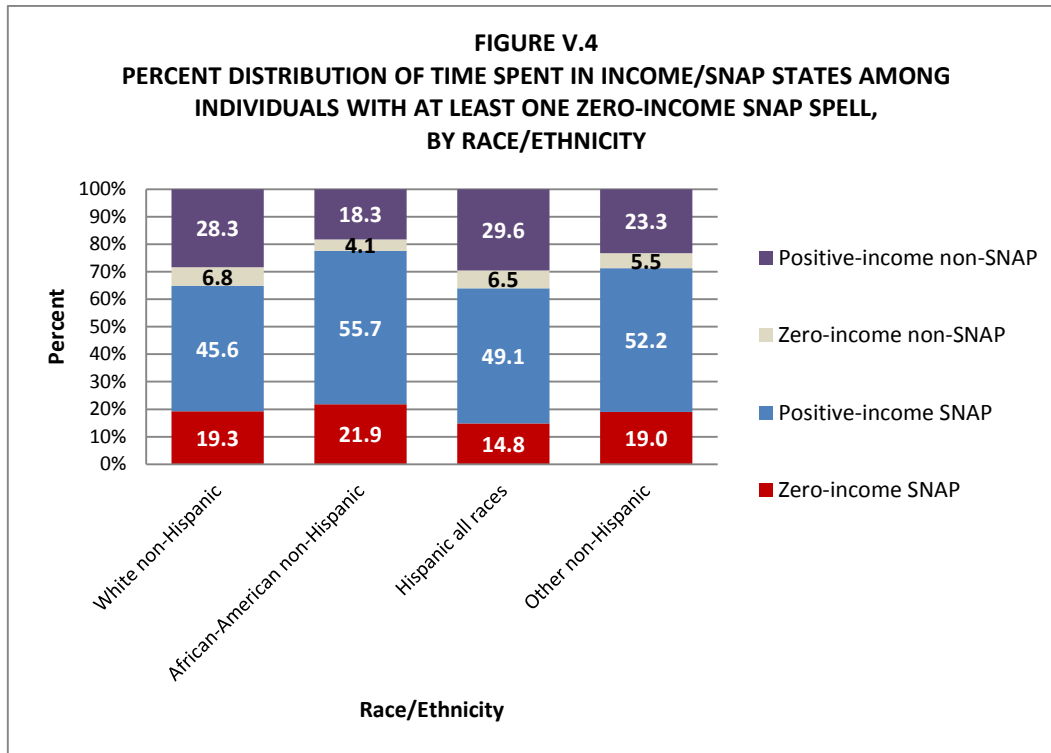
Source: 2004 SIPP Panel, Waves 1–8.

D. RACE/ETHNICITY

Non-Hispanic African-Americans were the most likely to experience the zero-income SNAP condition, as reflected by their greater lengths of time spent in the condition (Figure V.4) and each measure of dynamics (higher entry rates, longer spell durations, and lower exit rates). African-American individuals also spent more time in SNAP overall than did individuals from any other racial/ethnic group (Figure V.4). These findings may be in part due to the relative socioeconomic disadvantage of the African-American population, even within the already disadvantaged population of this study.

Non-Hispanic White individuals exhibited a different pattern. They were the least likely to experience a zero-income SNAP spell, but of those who did have such a spell, White individuals spent more time with zero income than Hispanic or other non-Hispanic individuals did (but a similar amount of time as African-Americans did; Figure V.4); were most likely to enter zero-income SNAP from zero-income non-SNAP; and were most likely to transition to zero-income non-SNAP following a zero-income SNAP spell.

Hispanic individuals were about twice as likely as White individuals, and half as likely as African-Americans, to have had a zero-income SNAP spell during the panel. However, among those with at least one zero-income SNAP spell, Hispanics experienced relatively low levels of participation in SNAP and spent relatively little time with zero income. Hispanic individuals spent the least amount of time on SNAP and with zero income (Figure V.4); they were the least likely of the race/ethnic groups to experience three or more zero-income SNAP spells; and their zero-income SNAP spells were of the shortest duration, with the highest exit rate. Hispanics were also the most likely racial/ethnic group to make two transitions in the same month; they were the most likely to enter zero-income SNAP from positive-income non-SNAP, and the most likely to exit to positive-income non-SNAP.



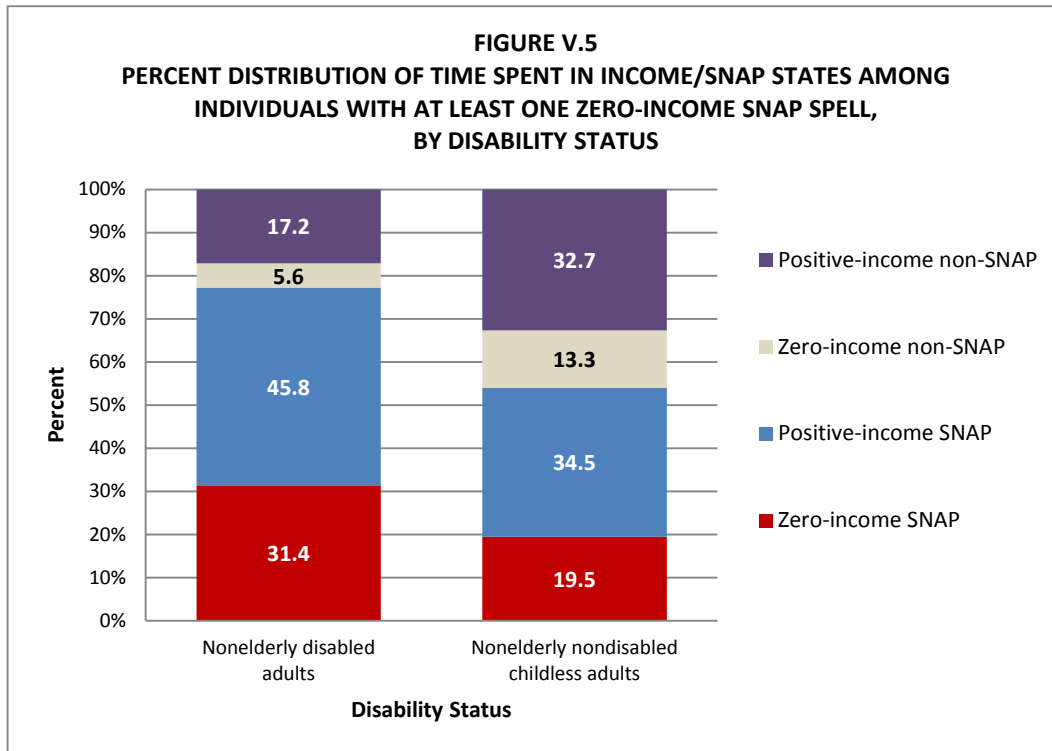
Source: 2004 SIPP Panel, Waves 1–8.

E. DISABILITY

Among the entire at-risk population, people with disabilities had a somewhat elevated risk of experiencing a zero-income SNAP spell and had higher than average entry rates into the zero-income SNAP condition. Some of these disabled individuals in the at-risk population received cash benefits through State and Federal programs, such as SSI and SSDI, and were unlikely to have zero income as a result. Among those who ever experienced a zero-income SNAP spell during the panel, only those who reported a work-limiting disability but did not receive any disability payments are included. This subset of individuals with disabilities looked more disadvantaged than average in their experience of zero-income SNAP, as reflected in various measures of dynamics (including percentage of time in the panel in zero-income and SNAP (Figure V.5), lower exit rates, and longer than average subsequent positive-income SNAP spells). These findings may suggest this is a population with health issues serious enough to make maintaining a job difficult, but not serious enough to make them eligible for disability benefits.

ABAWDs' patterns reflected lower than average levels of participation in SNAP: they were less likely to experience a zero-income SNAP spell, they spent the least amount of time in the panel on SNAP, and they spent less time than average in preceding and subsequent positive-income SNAP spells. On the other hand, ABAWDs spent more time with zero income: they spent a higher than average percent of panel months with zero income (Figure V.5), were more likely than other subgroups to enter the zero-income SNAP condition from zero-income non-SNAP, and were more likely to exit zero-income SNAP to zero-income non-SNAP. These

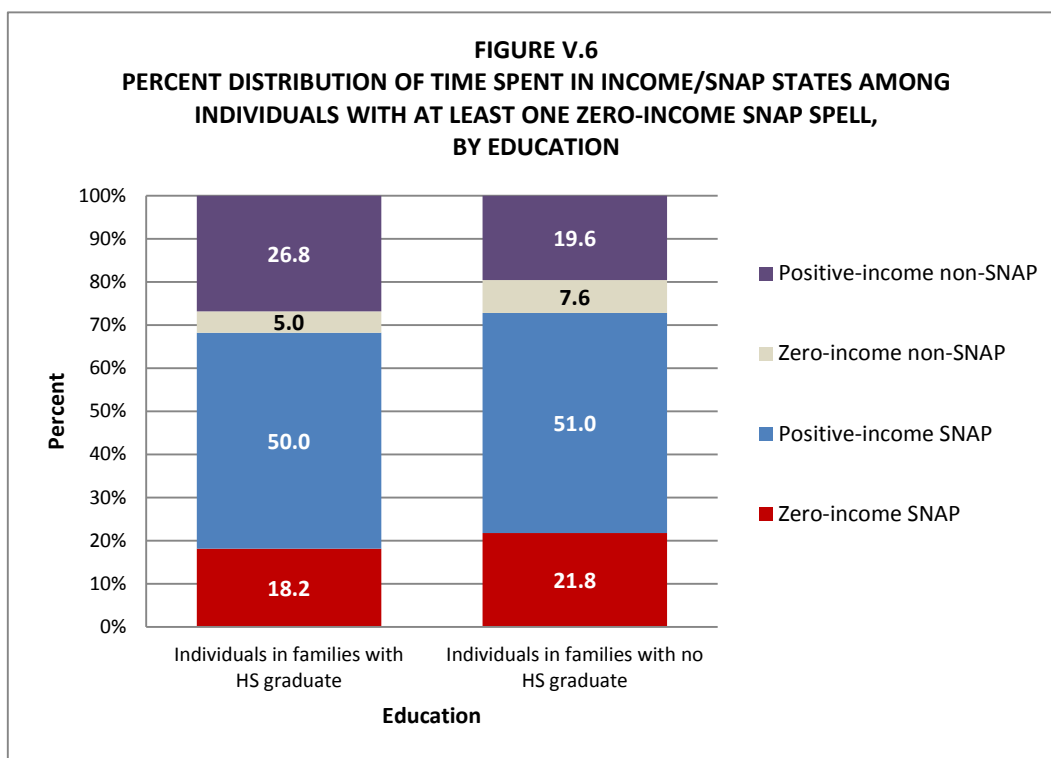
findings are consistent with restrictions placed on ABAWDs' participation in SNAP following the implementation of PRWORA in 1996. These findings are also quite similar to the patterns displayed by individuals residing in childless families, as there is a substantial amount of overlap in the populations of these two groups.



Source: 2004 SIPP Panel, Waves 1–8.

F. EDUCATION

Individuals in families without a high school graduate were more than two-and-a-half times as likely to have experienced a zero-income SNAP spell as were individuals in families with a high school graduate, a pattern that is consistent with the disadvantaged position that people with less formal education have in the labor force. Among people who experienced a zero-income SNAP spell during the panel, those in families without a high school graduate exhibited worse outcomes, including more time in the zero-income SNAP condition (Figure V.6); a greater likelihood of entering the zero-income SNAP condition from, and exiting to, zero-income non-SNAP; and longer preceding and subsequent positive-income SNAP spells. Individuals in families with no high school graduate were also most likely to experience three or more zero-income SNAP spells.

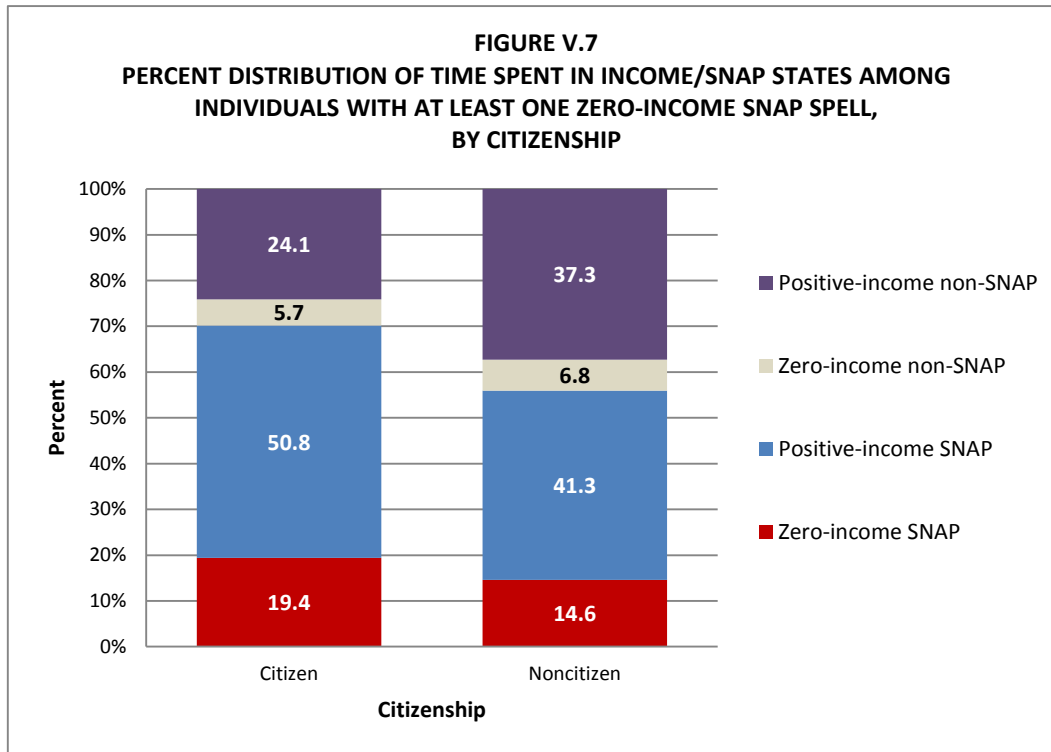


Source: 2004 SIPP Panel, Waves 1–8.

G. CITIZENSHIP

Noncitizens face restrictions on SNAP participation. Most legal-immigrant adults, for example, must wait 5 years before receiving SNAP, and noncitizens that are in the United States temporarily (e.g., students) are ineligible. For this reason, the likelihood of experiencing a zero-income SNAP spell might be reduced among noncitizens. Consistent with this expectation, noncitizens experienced fewer zero-income SNAP spells and had lower entry rates into the condition than did citizens. Noncitizens who did experience a zero-income SNAP spell during the panel spent relatively little time in the zero-income SNAP condition (Figure V.7) and were relatively unlikely to have multiple zero-income SNAP spells; were less likely to experience a

positive-income SNAP spell prior to a zero-income SNAP spell; and exited the zero-income SNAP condition faster than their counterparts.



Source: 2004 SIPP Panel, Waves 1–8.

Table V.1
Zero-Income SNAP Dynamics Outcomes Among Individuals in Different Subgroups

Subgroup Characteristic	Percent Who Experienced a Zero-Income SNAP Spell During the Panel	Median Positive-Income SNAP Spell Preceding Zero-Income SNAP Spell (Months)	Zero-Income SNAP Entry Rate (Percent)	Median Zero-Income SNAP Spell (Months)	Zero-Income SNAP Exit Rate (Percent)	Median Positive-Income SNAP Spell Following Zero-Income SNAP Spell (Months)
Total Population	3.6	6	0.1	3	21.9	8
Family Composition						
Individuals in families with children	4.9	7	0.2	2	23.6	9
Single parents	12.8	6	0.6	2	22.3	8
Children of single parents	15.2	6	0.7	3	23.0	8
Married adults with children	1.8	8	0.1	2	34.0	9
Children of married adults	2.4	8	0.1	2	31.0	8
Individuals in families without children	1.8	4	0.1	3	17.2	5
Age						
Children (<18)	6.1	7	0.3	2	23.1	8
Nonelderly adults (18–59)	3.3	6	0.1	3	21.0	6
Elderly (60+)	NA	NA	0.01	NA	13.7	NA
Sex						
Women (18+)	3.4	7	0.1	3	21.2	8
Men (18+)	1.7	4	0.1	3	19.9	5
Race and Ethnicity						
White non-Hispanic	2.1	6	0.1	2	22.4	6
African-American non-Hispanic	9.0	7	0.4	3	18.9	10
Hispanic all races	4.5	5	0.2	2	27.0	7
Other non-Hispanic	4.3	7	0.2	2	23.6	7
Disability						
Nonelderly disabled adults	5.8	6	0.3	4	11.9	11
Nonelderly nondisabled childless adults	2.9	4	0.1	3	22.2	4

Subgroup Characteristic	Percent Who Experienced a Zero-Income SNAP Spell During the Panel	Median Positive-Income SNAP Spell Preceding Zero-Income SNAP Spell (Months)	Zero-Income SNAP Entry Rate (Percent)	Median Zero-Income SNAP Spell (Months)	Zero-Income SNAP Exit Rate (Percent)	Median Positive-Income SNAP Spell Following Zero-Income SNAP Spell (Months)
(18–49)						
Education						
Individuals in families with HS graduate	2.9	6	0.1	2	22.9	7
Individuals in families with no HS graduate	7.9	10	0.4	3	19.3	10
Citizenship						
Citizen	3.7	6	0.2	3	21.7	7
Noncitizen	2.4	8	0.1	3	26.7	10

NA=Not available due to small sample sizes.

Note: Sample sizes shown in correspondent appendix tables.

VI. THE ROLE OF ECONOMIC AND POLICY FACTORS IN THE GROWTH OF THE ZERO-INCOME SNAP CASELOAD

This chapter examines the relationship of the growth of zero-income SNAP households to economic conditions and SNAP policies. Changes over time are examined across the 2001, 2004, and 2008 SIPP panels as well as within the 2004 longitudinal panel. The research question addressed by this component of the analysis is shown below.

Research Objective #4: Examine how economic and/or policy changes may have affected this population and their representation in the SNAP caseload.

1. *Is the increase attributed to economic or policy changes, both, or neither? If so, which ones were important and how (e.g., direction of the effect)?*

This analysis includes two main components, a repeated cross-sectional analysis and a longitudinal analysis, to examine the relationship between economic and policy circumstances and zero-income SNAP incidence and dynamics. Each component employs both descriptive and multivariate methodological approaches, which parallel and complement the descriptive analyses. The chief advantage of multivariate methods over descriptive methods is that they account for collinearity among explanatory variables and allow for the control of the effects of other explanatory variables when estimating the association between one explanatory variable and the outcome variable. This is especially important for this study because State decisionmakers may set policies conditional on other outcomes, such as the State economy, the existing policy environment, and the State caseload composition. For example, a State may be more likely to adopt a broad-based categorical eligibility policy if it has a high proportion of families who work but still have low incomes. In this case, the State's adoption of the policy might be associated with both the economic conditions in the State (e.g., the availability of work) and with the demographic and economic makeup of its caseload (e.g., the personal and family characteristics that we have considered in other analyses).

Each of the analytic components is described briefly below.

- **Repeated Cross-Sectional Analysis.** Consistent with the repeated cross-sectional component in Chapter III, the repeated cross-sectional policy analyses use month 4 of the first waves of the 2001, 2004, and 2008 SIPP panels,⁴¹ and they examine the relationship between the incidence of zero-income SNAP participation and different economic circumstances and SNAP policies.
 - **Descriptive Analysis.** This analysis estimates the percent of the low-income population that are zero-income SNAP participants by different State-level economic

⁴¹ The policy and economic variables were not available for years included in the 1993 and 1996 SIPP panels.

circumstances and SNAP policies. Additionally, we compare the percent of zero-income SNAP participants to the percent of positive-income SNAP participants.⁴²

- **Multivariate Analysis.** This analysis uses multivariate logistic regressions to predict the likelihood of being in the zero-income SNAP condition based on State-level economic conditions and SNAP policies. Separate models are estimated using the first waves of the 2001, 2004, and 2008 panels of the SIPP, as well as a fourth model pooling the data from each of these three SIPP panels.
- **Longitudinal Analysis.** Consistent with the longitudinal analysis in Chapter IV, the longitudinal policy analyses use the 2004 SIPP panel and calculate estimates for the same at-risk populations. This analysis examines how entry into and exit out of the zero-income SNAP condition varies for people living in States with different economic circumstances and SNAP policies.
 - **Descriptive Longitudinal Analysis.** This analysis estimates the entry rates into, and the exit rates out of, the zero-income SNAP condition for people living in States with different economic circumstances and SNAP policies.
 - **Multivariate Longitudinal Analyses.** This analysis uses multivariate logistic regressions to predict the likelihood of entering the zero-income SNAP condition, as well as the likelihood of exiting the zero-income SNAP condition, conditional on economic conditions and State SNAP policies.

Section A discusses the sources and measures for the study's economic and policy variables. Section B reports results from the repeated cross-sectional analyses of how zero-income SNAP participation varied with the distributions of State-level economic conditions and policies in the 2001, 2004, and 2008 SIPP panels. Section C presents results from the longitudinal analyses examining how patterns of zero-income SNAP entry and exit varied with State-level economic conditions and policies in the 2004 SIPP panel. Appendix F contains detailed tabulations for this policy analysis.

A. MEASURING ECONOMIC CONDITIONS AND POLICIES

The specific economic and policy measures used, the rationales for using them, and their sources are described below.

Unemployment Rate. Economic conditions—and more specifically, job availability— influence the chances that a family would both participate in SNAP and report no cash income. First, low job availability reduces the chances that family members will work and that the family will have earned income. Poor economic conditions may also result in increased job volatility, which could lead to periods of unemployment or earnings instability. Thus, poor economic

⁴² Although not discussed in detail in this chapter, we also examined the incidence of zero-income SNAP non-participation and positive-income SNAP non-participation. Those results are shown in Appendix F.

conditions would increase the likelihood of a family having no income. Second, job availability is likely to affect the duration of periods of low or no income. Families that only expect to have low or no income for a short period might not see SNAP participation as being worthwhile, while families that expect their incomes to be depressed for longer may have stronger incentives to enroll. To measure job availability, we used the State-level unemployment rate, which is recorded on a calendar-year basis in the ERS policy rules database.⁴³

Simplified Income Reporting. SNAP eligibility is based on monthly income and expenses. While some States require households to report any change in circumstances, States have the option of reducing the income-reporting requirements of recipient households during the period for which they are certified to receive benefits. For example, consider a family that entered SNAP with no income, was certified to receive benefits for 6 months, and subsequently experienced a modest increase in its income within that certification period. In some States, the family would have to report that increase within 10 days of beginning to receive it. However, in States with optional “simplified” or “expanded simplified” reporting policies, the family may not need to report increases that keep its income below the gross income eligibility threshold of 130 percent of the HHS poverty guidelines. Separate reporting policies typically apply to earned and unearned sources of income. In each of these cases, the family could be receiving income yet not have to report it (at least within the certification period), making it appear that the family has no or reduced income. We used data from the Food Stamp Program State Options Reports to create a binary indicator that equaled one if the State had simplified reporting of earned and unearned income and that equaled zero otherwise for each calendar year. Note that, because these reports were published starting in 2002, we do not have reliable data for 2001 and therefore exclude this measure from the 2001 cross-sectional (and corresponding multivariate) policy analyses.

Simplified Income Definitions. In calculating SNAP eligibility and benefits, States were given the option of excluding certain types of client income and resources from their definitions of income if they also were excluded from calculations for Medicaid or TANF eligibility. This policy option simplifies the State’s determination of eligibility by aligning it more closely with other public assistance programs. The option also means that some sources of a family’s income might be ignored, possibly increasing the chances that a family will appear to SNAP administrators to have no cash income. As these sources of income are reported in the SIPP, the effect on zero-income SNAP participation in our analyses is unclear. We used data from the Food Stamp Program State Options Reports to create a binary indicator that equaled one if the State had a simplified definition of income and that equaled zero otherwise. Note that, because these reports were published starting in 2002, we do not have reliable data for 2001 and therefore exclude this measure from the 2001 cross-sectional (and corresponding multivariate) policy analyses.

⁴³ The general unemployment rate has been used extensively in other research and tends to eclipse any other economic variables that are included in economic models. Other indicators that were also considered, but dropped due to the supposition that they duplicate information obtained in the unemployment rate, include the *monthly State employment-to-population ratio* and the *annual State gross domestic product*. Other indicators, such as State-level indicators of poverty and education rates that are available, were also dropped, as they tend to be very unreliable at the State level. The American Community Survey (ACS) provides reliable State-level estimates, but data were unavailable for the period of the 2004 SIPP panel. The 2000 Decennial census was also considered, but it was decided that the data were too old.

Child Support Exclusions. Some States exclude legally obligated child support payments from the calculation of the noncustodial parent's income (other States treat these payments as a deduction from income). Depending on the person's circumstances, such an exclusion could reduce the noncustodial parent's reportable income to zero, increasing the chances that he or she would appear to be a zero-income recipient to SNAP administrators. We used data from the Food Stamp Program State Options Reports to create a binary indicator that equaled one if the State had a child support exclusions policy and that equaled zero otherwise for each calendar year. Note that, because these reports were published starting in 2002, we do not have reliable data for 2001 and therefore exclude this measure from the 2001 cross-sectional (and corresponding multivariate) policy analyses.

Broad-Based Categorical Eligibility. Families are categorically eligible to receive SNAP if they also participate in other means-tested public assistance programs, such as TANF. Families categorically eligible for SNAP must have net income low enough to receive a positive benefit, but are not subject to the gross income or resource level tests. Broad-based categorical eligibility policies extend this provision to families that receive non-cash assistance under TANF. In particular, some States have found it useful to qualify families for TANF, to provide them with token non-cash assistance (such as counseling for SNAP eligibility), and then to allow the families to be categorically eligible for SNAP. This provision is especially helpful to families with vehicles or other assets that might be subject to the regular resource test, as well as to families who have incomes of more than 130 percent of the HHS poverty guidelines but who also have high levels of expenses. The anticipated effect on zero-income SNAP participation is uncertain, as the policy tends to favor families with higher levels of income, or with no income but with vehicles or other assets. We used data from the ERS policy rules database to create a binary indicator that equaled one if the State had a broad-based categorical eligibility policy and equaled zero otherwise.

Comparable Disqualifications for Cash Assistance. The PRWORA gave States the option of disqualifying families from SNAP if they failed to comply with requirements of other public assistance programs. Under such a disqualification provision, a family that failed to fulfill its TANF obligations could lose both its TANF and SNAP benefits. Thus, the sanctions, disqualifications, and time limits in cash assistance programs could contribute to families entering the zero-income condition. However, a comparable disqualification policy is expected to reduce the chances of entering the zero-income SNAP condition. Conversely, the lack of a comparable disqualification policy is expected to increase the chances of entering the zero-income SNAP condition. We used data from the SNAP rules database to create a binary indicator that equaled one if the State had a comparable disqualification policy and equaled zero otherwise for each calendar year.

Certification Intervals. When a family is approved for SNAP benefits, it is certified to receive benefits for a certain period of time. At the end of the certification period, the family typically must complete paperwork to "recertify" for benefits. Recertification imposes a reporting burden on families, and many families leave SNAP at their recertification dates. States have some discretion in setting certification intervals, and some States set different

certification intervals for zero-income families than they do for other families (e.g., shorter intervals because the zero-income condition might be viewed as unstable and highly likely to change). For example, in FY 2011, the average certification period for all SNAP households was 12.2 months, while the average certification period for zero-income households was 9.6 months (Strayer et al., 2012). Short recertification intervals tend to reduce participation (e.g., increase the chances of SNAP exit) relative to long intervals. Following the methodology used in the SNAP rules database, we used data from the FSP/SNAP QC database to construct measures of average certification intervals (in months) for zero-income SNAP households in each State and for each fiscal year.

B. REPEATED CROSS-SECTIONAL ANALYSIS

This analysis addresses whether economic conditions, policies, or both contributed to changes in the zero-income caseload and, if so, how much they contributed. Table VI.1 summarizes these economic and policy characteristics across the period studied. The top panel of the table presents the average State unemployment rate and average State-level certification interval for zero-income SNAP households. Results show that the average State unemployment rate among individuals in this sample increased from 4.8 percent in 2001 to 5.9 percent in 2008, and that the average certification interval for zero-income households increased from 6.5 months in 2001 to 8.3 months in 2008. The bottom panel of the table shows the percent of individuals living in States with a specified SNAP policy. These policies appear to have generally increased in prevalence over the study period, with the exception of comparable disqualification policies.⁴⁴ For example, 41.9 percent of individuals lived in States with simplified income definitions in 2004, increasing to 93.0 percent in 2008. These trends in population coverage of the economic and policy characteristics are discussed in greater detail in each of their respective sections below.

Table VI.1
Summary of Selected Economic and Policy Characteristics: 2001–2008

	2001	2004	2008
	Mean		
Average State unemployment rate (percent)	4.8	5.6	5.9
Average certification interval for zero-income households (in months)	6.5	7.5	8.3
Individuals in States with...	Percent		
Simplified income reporting	NA	59.2	73.6
Simplified income definitions	NA	41.9	93.0
Broad-based categorical eligibility	5.3	18.7	37.0
Child support income exclusions	NA	14.7	39.3
Comparable disqualification	36.3	22.6	36.9

Source: 2001, 2004, and 2008 SIPP panels; ERS FSP Rules Database; FSP/SNAP Options Reports.

Note: Estimates are population weighted. Universe includes individuals participating in SNAP or in families with incomes of less than 200% of the FPL. Data for simplified income definitions and reporting and child support income exclusions are not available for 2001.

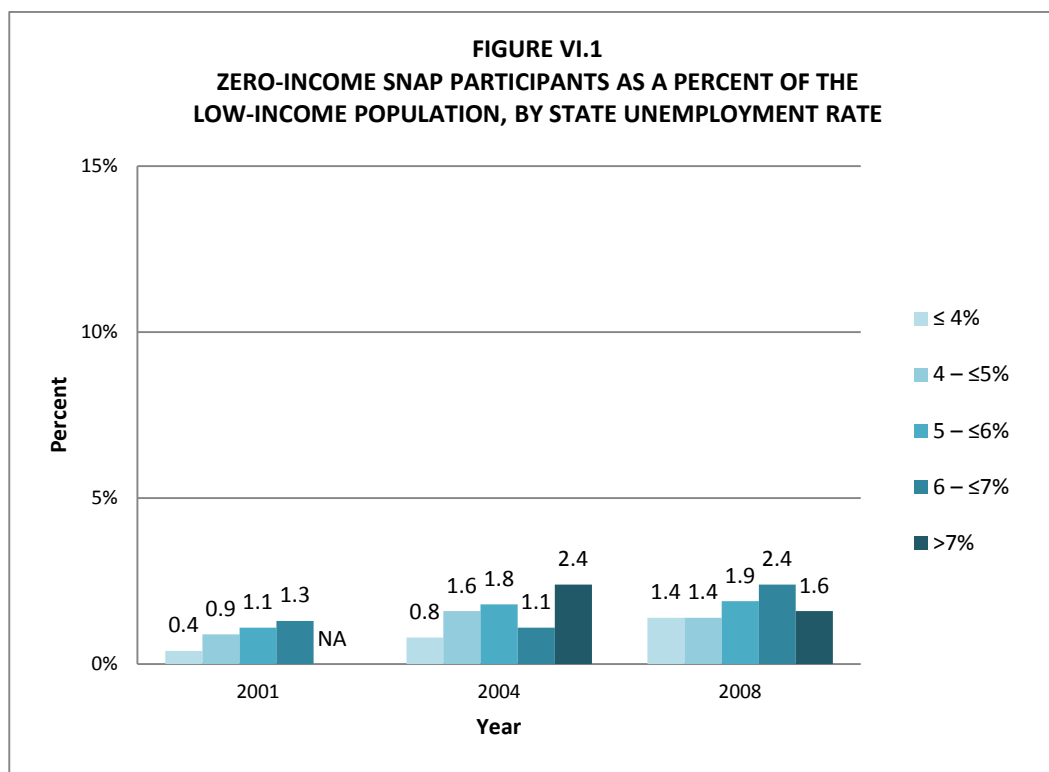
⁴⁴ Note that data on simplified income definitions and reporting and on child support income exclusion policies are not available for 2001.

1. Descriptive Analysis

In this descriptive analysis, we compare the percent of zero-income SNAP participants (and positive-income SNAP participants) among low-income individuals (defined as those who are receiving SNAP or those with incomes of less than 200 percent of the FPL) for people living in States with different unemployment rates and SNAP policies.

Unemployment Rates. Deteriorating economic conditions, in the form of higher State unemployment rates, appear to have a strong positive association with zero-income SNAP participation. In each year examined, the incidence of zero-income SNAP participation (i.e., the proportion of individuals in low-income families who were zero-income SNAP participants) increased with the State's unemployment rate (Figure VI.1). For example, estimates from the 2001 panel indicate that, in States with unemployment rates of 4 percent or lower, only 0.4 percent of low-income people were zero-income SNAP participants. However, the incidence doubled if people lived in States with unemployment rates of 4 percent to 5 percent and tripled if they lived in States with unemployment rates of 6 percent to 7 percent. The incidence of zero-income SNAP participation generally, though not universally, increased with the State unemployment rate in the 2004 and 2008 panels. For example, in 2004, the incidence of zero-income SNAP participation was 0.8 percent for low-income people living in States with unemployment rates that were 4 percent or lower, but three times as high (2.4 percent) for people in States with unemployment rates that were higher than 7 percent.

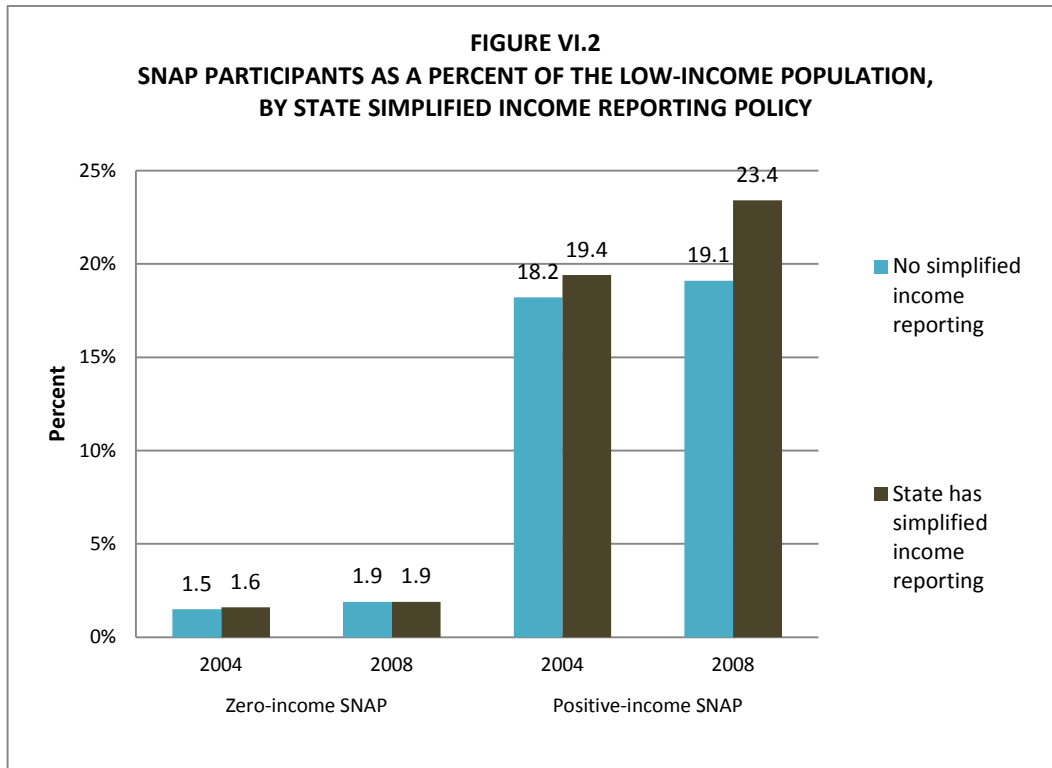
Although growing unemployment likely explains some of the increase in zero-income SNAP participation, it does not appear to be the only explanation. For example, the incidence of zero-income SNAP participation also generally grew over the three panels *within unemployment categories*. For example, among low-income people living in States with unemployment rates of 5 percent to 6 percent, the estimated incidence of zero-income SNAP participation was 1.1 percent in 2001, 1.8 percent in 2004, and 1.9 percent in 2008.



Source: 2001, 2004, and 2008 SIPP panels; ERS FSP Rules Database; FSP/SNAP Options Reports.

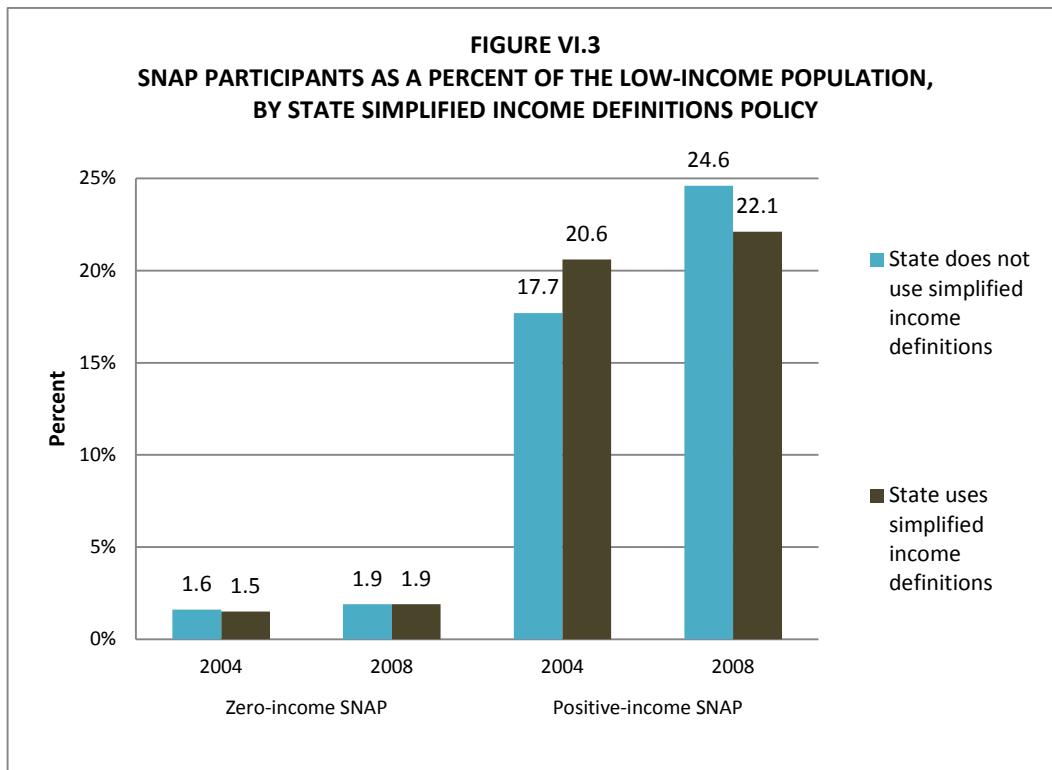
The average national unemployment rate varied, but generally increased across the 3 panel years studied (Figure I.2 and Table VI.1). The 2001 study data were collected from January–April 2001 when the national unemployment rate was slightly more than 4 percent; the 2004 data from January–April 2004 when the national unemployment rate was slightly less than 6 percent; and the 2008 data from August–November 2008 when the national unemployment rate climbed rapidly from marginally more than 6 percent to nearly 7 percent. The positive associations between unemployment and zero-income SNAP participation, coupled with rising unemployment over the 3 panel years, suggest that worsening economic conditions contributed to the growth in the zero-income SNAP caseload.

Simplified Income Reporting. The use of simplified income reporting policies, which effectively allowed some SNAP households to go for longer periods of time without reporting income changes, increased substantially from 2004, when they covered 59.2 percent of the low-income population, to 2008, when they covered 73.6 percent of the low-income population (Table VI.1). The incidence of zero-income SNAP participation was similar in States with simplified income reporting policies (1.6 percent) and in other States (1.5 percent) in 2004 and 2008 (Figure VI.2). However, in both years, positive-income SNAP participation was substantially higher in States with simplified income reporting than it was in other States. These findings suggest that by increasing SNAP participation among positive-income households while leaving zero-income households unaffected, the policies may be associated with a lower proportion of SNAP participants who were zero income.



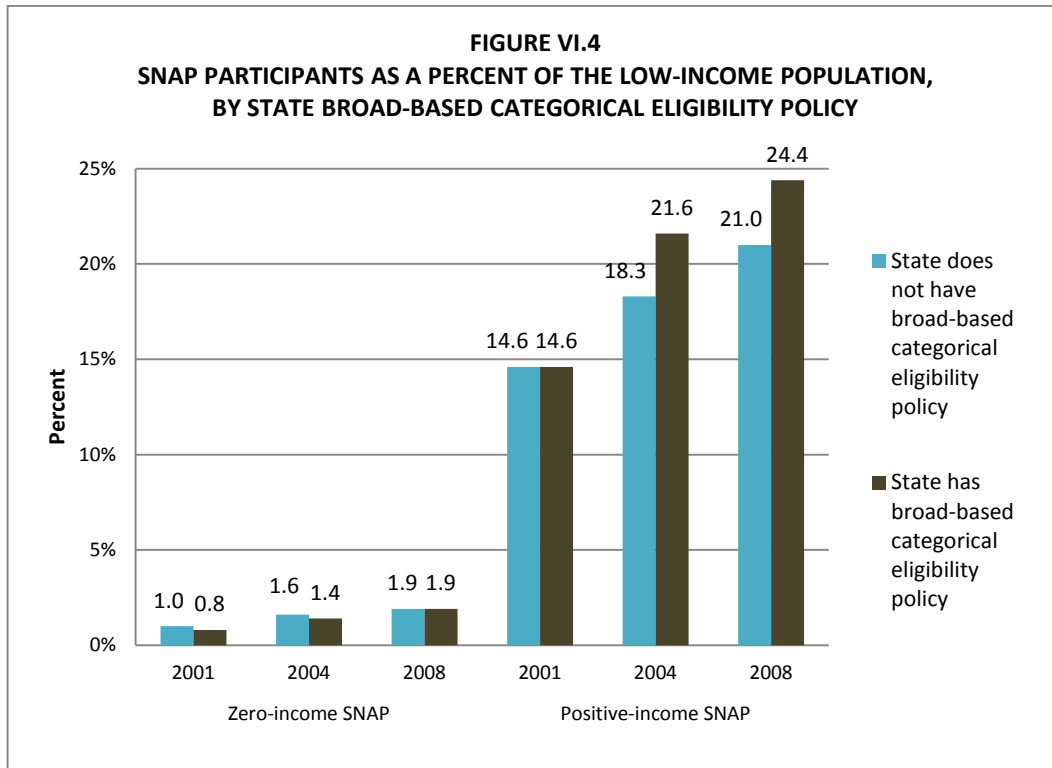
Source: 2001, 2004, and 2008 SIPP panels; ERS FSP Rules Database; FSP/SNAP Options Reports.

Simplified Income Definitions. The use of simplified income definition policies, which allow States to exclude some sources of income if they are excluded by TANF or Medicaid, increased from covering 41.9 percent of the low-income population in 2004 to covering 93.0 percent in 2008 (Table VI.1). The incidence of zero-income SNAP participation was about the same in States that had simplified income reporting policies and those that did not have them (1.5 percent in 2004 and 1.9 percent in 2008; Figure VI.3). Positive-income SNAP participation was substantially higher in 2004, but lower in 2008, in States with simplified income definitions than it was in other States. These findings suggest no strong pattern of association between these policies and the incidence of zero-income SNAP participation.



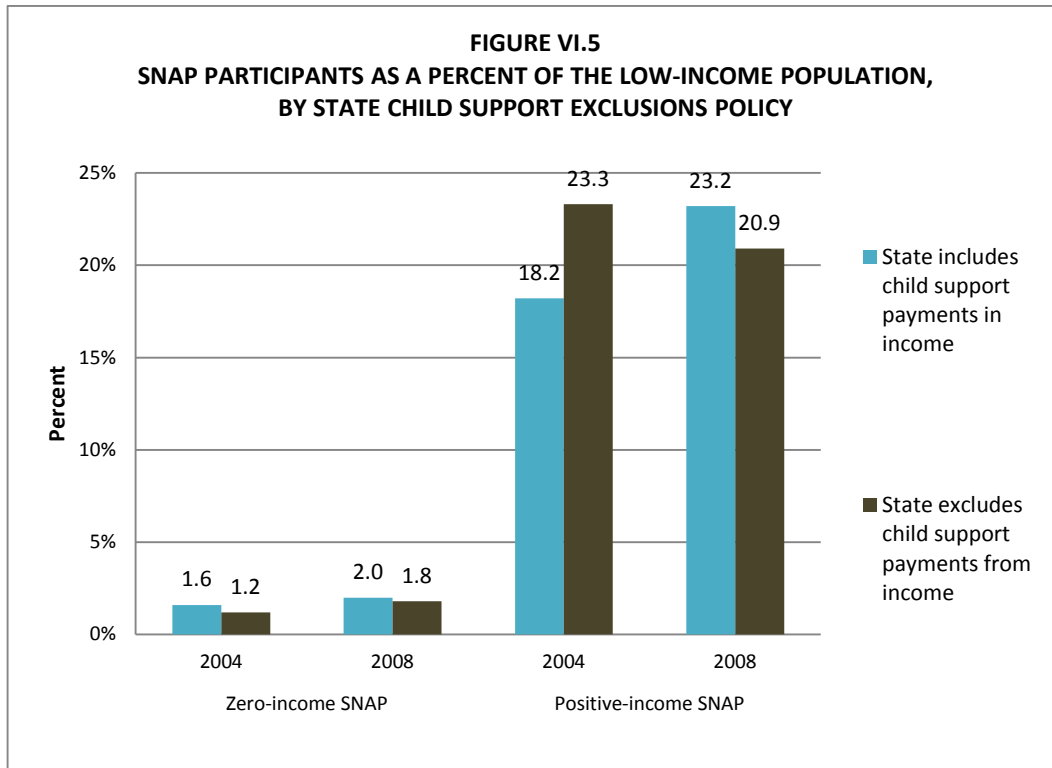
Source: 2001, 2004, and 2008 SIPP panels; ERS FSP Rules Database; FSP/SNAP Options Reports.

Broad-Based Categorical Eligibility. The use of broad-based categorical eligibility policies increased from covering only 5.3 percent of the low-income population in 2001 to covering 37.0 percent in 2008 (Table VI.1). Across the 3 years examined, the incidence of zero-income SNAP participation was nearly the same in both types of States (Figure VI.4). Positive-income SNAP participation was the same in both types of States in 2001, but was substantially higher in 2004 and 2008 in States with broad-based categorical eligibility. These results suggest that by increasing SNAP participation among positive-income households while leaving zero-income households unaffected, broad-based categorical eligibility is associated with a lower proportion of the SNAP caseload being zero income.



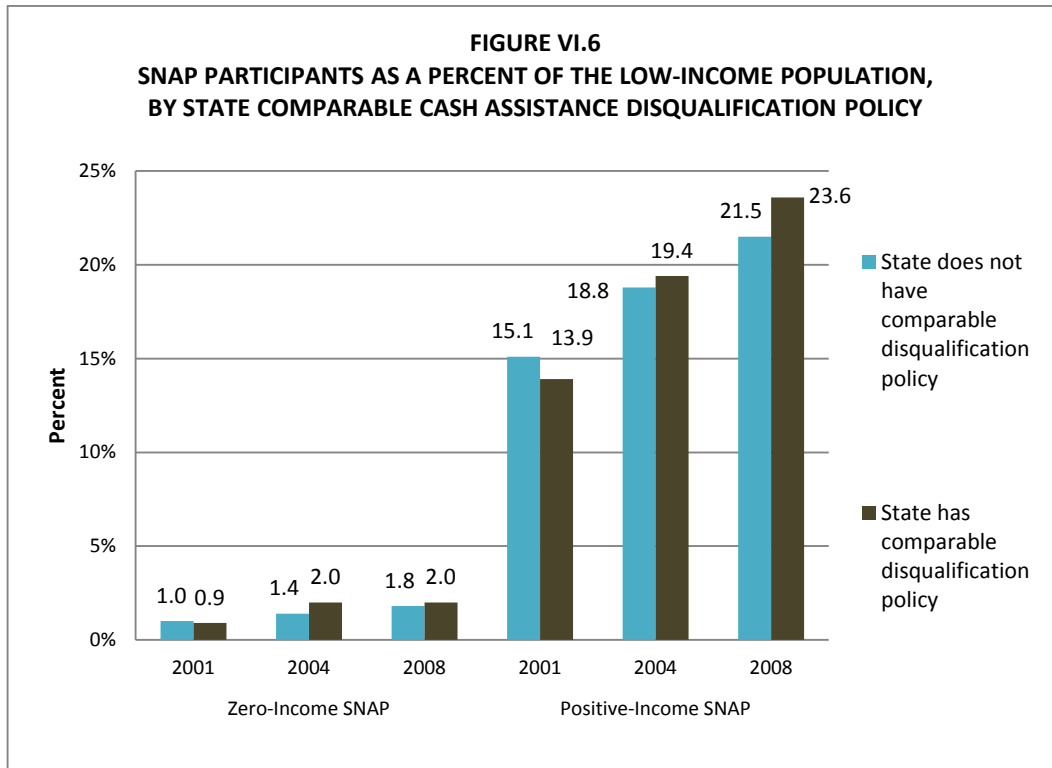
Source: 2001, 2004, and 2008 SIPP panels; ERS FSP Rules Database; FSP/SNAP Options Reports.

Child Support Exclusions. The use of child support exclusion policies more than doubled from covering 14.7 percent of the low-income population in 2004 to covering 39.3 percent in 2008 (Table VI.1). The incidence of zero-income SNAP participation was similar in States with these exclusions in 2004 and 2008 (Figure VI.5). However, the patterns of positive-income SNAP participation were mixed.

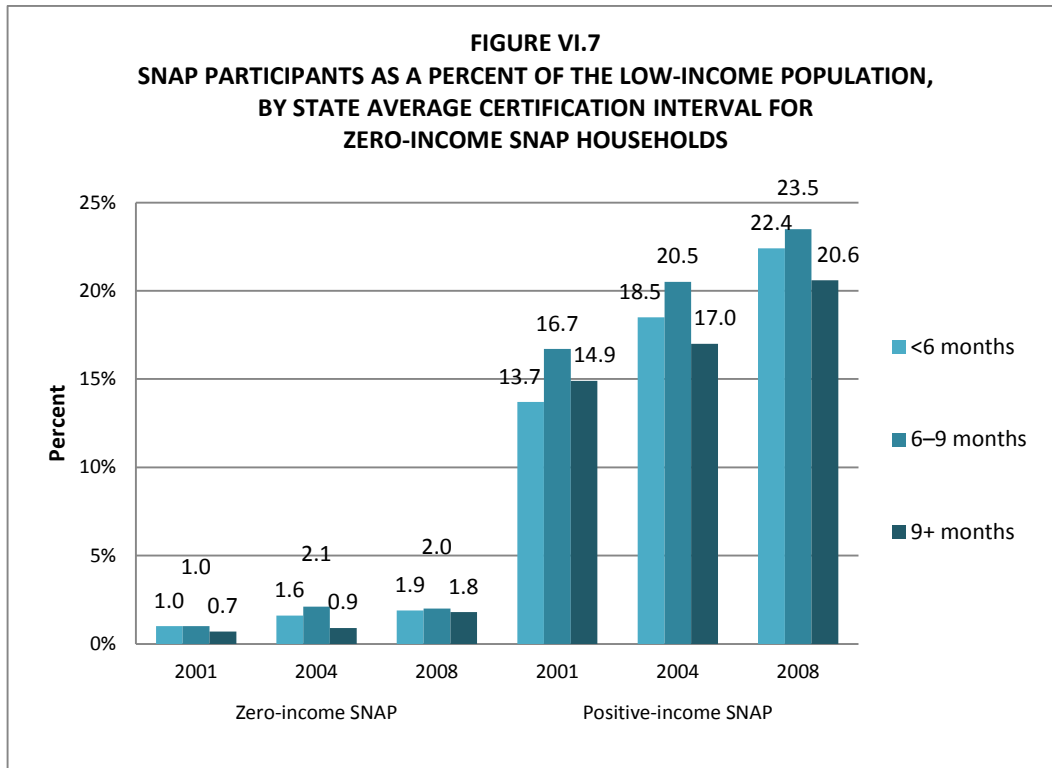


Source: 2001, 2004, and 2008 SIPP panels; ERS FSP Rules Database; FSP/SNAP Options Reports.

Comparable Cash Assistance Disqualifications. Policies of comparable cash assistance disqualifications were expected to reduce both zero-income SNAP participation and positive-income SNAP participation. The use of comparable disqualification policies decreased from covering 36.3 percent of the low-income population in 2001 to covering 22.6 percent in 2004; coverage then increased again to 36.9 percent in 2008 (Table VI.1). Zero- and positive-income SNAP participation both exhibited small differences in the expected directions in 2001 (Figure VI.6). However, in 2004 and 2008, small differences in the opposite directions appeared—the incidence was higher for both groups in States with these policies. The results suggest that comparable disqualification policies are not strongly associated with changes in the zero-income caseload.



Certification Intervals. From 2001–2008, the average certification intervals for zero-income SNAP households increased from 6.5 months in 2001 to 8.3 months in 2008 (Table VI.1). In all 3 years, zero-income and positive-income SNAP participation tended to be highest for the middle (6–9 month) certification category and lower for the other two categories (Figure VI.7).



Source: 2001, 2004, and 2008 SIPP panels; ERS FSP Rules Database; FSP/SNAP Options Reports.

2. Multivariate Analysis

The multivariate repeated cross-sectional analyses estimate logistic regression models in which zero-income SNAP participation is the dependent variable. Four specifications are presented using the 2001, 2004, and 2008 cross-sectional datasets and a dataset that pools observations over the 3 years. The pooled model is included to provide a better estimate of how changes over time in the policy and economic measures are associated with a change in zero-income SNAP participation by producing a single estimate rather than an estimate for each point in time.

Each model includes linear measures of the State unemployment rate and the average State certification interval and binary indicators of whether the State had policies for broad-based categorical eligibility and comparable cash assistance disqualifications. The 2004 and 2008 models also include controls for States having policies for simplified income reporting, simplified income definitions, and child support payment exclusions. Additionally, the models control for characteristics that were considered in our repeated cross-sectional analyses in Chapter III. These characteristics include age; gender; race/ethnicity; disability status; education; employment; previous receipt of TANF; family size; family composition; and ABAWD status. All models incorporate survey weights normed to the sample size.

Table VI.2
Results of Logistic Regression Analyses Predicting Incidence of Zero-Income SNAP Participation
Conditional on Policy and Economic Variables

Parameter	2001	2004	2008	All Years Pooled
State unemployment rate	0.63*** <i>1.87</i>	0.26*** <i>1.29</i>	0.14** <i>1.15</i>	0.16*** <i>1.17</i>
Simplified income reporting	NA	0.25* <i>1.29</i>	0.10 <i>1.11</i>	NA
Simplified income definitions	NA	-0.20* <i>0.82</i>	0.13 <i>1.14</i>	NA
Broad-based categorical eligibility policy	-0.75* <i>0.47</i>	-0.40** <i>0.67</i>	0.06 <i>1.06</i>	-0.06 <i>0.94</i>
Child support exclusions	NA	-0.58*** <i>0.56</i>	-0.14 <i>0.87</i>	NA
Comparable disqualification policy	-0.12 <i>0.88</i>	0.09 <i>1.09</i>	-0.03 <i>0.97</i>	0.02 <i>1.02</i>
Average certification interval for zero-income households	-0.08*** <i>0.93</i>	-0.11*** <i>0.89</i>	0.02 <i>1.02</i>	-0.05*** <i>0.95</i>
Log Likelihood Value	-1304.25	-2378.00	-2659.98	-6436.70
Number of observations	32,773	39,895	39,648	112,316

Source: 2001, 2004, and 2008 SIPP panels; ERS FSP Rules Database; FSP/SNAP Options Reports.

Note: These models also include all demographic and household control variables included in the repeated cross-sectional and longitudinal components of this study (coefficients not shown separately). All estimates are weighted. Odds ratios are presented in italics below each parameter estimate.

*** $p < 0.001$

** $p < 0.01$

* $p < 0.05$

Two measures—the State unemployment rate and the average certification interval—show significant associations with zero-income SNAP participation in all or most of the specifications (Table VI.2). As with the descriptive results, the State unemployment rate is positively associated with the incidence of zero-income SNAP participation in all four specifications. In the pooled specification, a 1-percent increase in the State unemployment rate increases the odds of being a zero-income SNAP participant by 17 percent.

In contrast, the average certification interval is negatively associated with zero-income SNAP participation in all specifications except for the 2008 model; in other words, longer certification periods are associated with lower zero-income SNAP participation. In the pooled specification, for example, a 1-month increase in the average certification interval reduces the odds of being a zero-income SNAP participant by 5 percent.

Other policies are significantly associated with zero-income SNAP participation in some specifications but not others. Broad-based categorical eligibility, for example, is negatively associated with zero-income SNAP participation in the 2001 and 2004 models, but not in the 2008 and pooled models. In 2004, simplified income definitions and child support exclusions were negatively related to zero-income SNAP participation in 2004, while simplified income reporting was positively associated with zero-income SNAP participation. However, none of these associations is significantly distinguishable from zero in 2008. Comparable cash assistance disqualification policies were not associated with zero-income SNAP participation in any of the specifications.

C. LONGITUDINAL ANALYSIS

This longitudinal policy analysis further examines whether economic conditions, policies, or both contributed to changes in the zero-income caseload—and if so, how much they contributed—by examining the association between economic and policy circumstances and zero-income SNAP dynamics.

1. Descriptive Analysis

The descriptive analyses use the SIPP 2004 longitudinal sample to estimate entry rates into and exit rates out of the zero-income SNAP condition for people living in States with different unemployment rates and SNAP policies. Table VI.3 presents results from these analyses. The first column lists estimates of entry into the zero-income SNAP condition in an average month.⁴⁵ Higher rates of entry raise the incidence of zero-income SNAP participation. The second column lists estimates of exit out of the zero-income SNAP condition. Higher rates of exit lower the incidence of zero-income SNAP participation. Estimates are calculated separately for people living in States with the policy and economic characteristics listed in the rows.

⁴⁵ Consistent with the longitudinal analyses presented in Chapters IV and V, the at-risk population for zero-income SNAP entry is those individuals who were ever observed in the 2004 SIPP panel living in a family with an income of less than 300 percent of the FPL.

Unemployment Rates. Unemployment was associated with entry into the zero-income SNAP condition. The entry rate among the “at risk” population in States with unemployment at or less than 4 percent was 0.13 percent, while the entry rate for those in States with unemployment greater than 7 percent was 0.17 percent. The unemployment rate, however, was not consistently related to entry—the entry rate for those in States with unemployment between 6 percent and 7 percent was 0.13 percent. Additionally, unemployment shows no consistent pattern of association with exit rates. Although the highest unemployment category was associated with the highest estimated exit rate, the second and third highest unemployment categories were associated with the lowest exit rates.

Simplified Income Reporting. Simplified income reporting policies were associated with both higher entry rates into zero-income SNAP participation and higher exit rates, although the mechanism behind this association is unclear. One conjecture for these patterns, however, is that reporting requirements in States without simplified reporting might be a hurdle that discourages SNAP participants from taking jobs that are likely to be short term or unstable. This is consistent with fewer transitions out of and into a zero-income condition among SNAP participants in these States, in comparison to more transitions in States that allow SNAP participants to take low-wage jobs without reporting them. These transitions into and out of the zero-income condition would be captured in the SIPP data, but would not necessarily be captured in SNAP administrative data unless the income from these jobs exceeded the reporting threshold. The results illustrate the usefulness of incorporating an event history approach. In particular, the findings highlight unique ways that income-reporting policies are associated with zero-income SNAP participation, such that the policies net out the overall incidence of zero-income SNAP participation (i.e., the policies appear to raise the incidence of zero-income SNAP participation through increased entry but lower the incidence through increased exit, leading to little change overall).

Simplified Income Definitions and Child Support Exclusions. While States’ use of simplified income definitions and child support exclusions would increase the chances a household would appear to be zero income in SNAP administrative data, the expected effects in SIPP data, where all monthly income is measured, were unclear. Results show these policies were associated with lower entry and exit rates. For both policies, entry rates into the zero-income SNAP condition were 0.14 percent in States with these policies and were 0.15 percent in States without them. Exit rates in States using simplified income definitions were 20.0 percent, compared to 24.9 percent in States without them. Exit rates in States excluding child support payments were 21.3 percent, compared to 22.0 percent in States that include child support payments.

Broad-Based Categorical Eligibility and Comparable Cash Assistance Disqualifications. On the other hand, broad-based categorical eligibility policies and comparable cash disqualification policies were estimated to be associated with higher entry and exit rates. Entry rates into the zero-income SNAP condition were 0.17 percent in States with broad-based categorical eligibility and were 0.16 percent in States with comparable cash assistance disqualifications, compared to 0.14 percent in States without these policies. Exit rates were

24.3 percent in States with broad-based categorical eligibility, compared to 21.2 percent in other States, and were 22.5 percent in States with comparable cash assistance disqualification, compared to 21.6 percent in other States.

Certification Intervals. Longer certification intervals were not consistently associated with entry rates into the zero-income SNAP condition. However, longer intervals were consistently and positively associated with exit rates, which is counter to the expected trend. Previous research (e.g., Kabbani & Wilde, 2003; Ribar, Edelhoch, & Liu, 2008, 2010) has found that longer certification intervals lead to longer spells of SNAP participation overall (e.g., regardless of income status).⁴⁶

Table VI.3
Monthly Zero-Income SNAP Entry and Exit Rates
For States with Different Economic Conditions and SNAP Policies

State Characteristics	Zero-Income SNAP Entry Rate	Zero-Income SNAP Exit Rate
All States	0.15%	21.9%
Unemployment		
≤ 4%	0.13	22.5
> 4 – ≤ 5%	0.15	23.3
> 5 – ≤ 6%	0.15	20.9
> 6 – ≤ 7%	0.13	20.3
> 7%	0.17	26.9
Simplified income reporting		
Does not have simplified income reporting	0.12	20.9
Has simplified income reporting	0.16	22.3
Simplified income definitions		
Does not use simplified income definitions	0.15	24.9
Uses simplified income definitions	0.14	20.0
Broad-based categorical eligibility		
Does not have broad-based categorical eligibility	0.14	21.2
Has broad-based categorical eligibility	0.17	24.3
Child support payments		
Includes	0.15	22.0
Excludes	0.14	21.3
Comparable cash assistance disqualification		
Does not have comparable cash assistance disqualification	0.14	21.6
Has comparable cash assistance disqualification	0.16	22.5
Zero-income certification interval		
< 6 months	0.16	20.2
6–9 months	0.18	22.3
> 9 months	0.10	23.3

Source: 2004 SIPP panel; ERS FSP Rules Database; FSP/SNAP Options Reports.

⁴⁶ A conjecture is that the mechanism behind their association with *shorter* zero-income SNAP spells (i.e., higher exit rates from the zero-income SNAP condition) may be similar to the mechanism behind the association between simplified income policies and shorter zero-income SNAP spells—namely, that the policies may encourage SNAP participants to take on certain types of work that reduce the duration of being in the zero-income condition.

2. Multivariate Analysis

The multivariate longitudinal analyses estimate two logistic binary outcome models using the 2004 SIPP event history sample:

- An “entry” model in which the dependent variable was an indicator for being a zero-income SNAP participant, and which was estimated for people who were not zero-income SNAP participants in the preceding month
- An “exit” model in which the dependent variable was an indicator for not being a zero-income SNAP recipient, and which was estimated for people who were zero-income SNAP participants in the preceding month

Both models include linear measures of the State unemployment rate and the six policy variables from the multivariate repeated cross-sectional analysis. The models also control for characteristics that were considered in the longitudinal analyses presented in Chapter IV and dummy variables for the year of the observation. Both models incorporate longitudinal survey weights normed to the sample size.

Table VI.4
Results of Logistic Regression Analyses Predicting Incidence Of
Zero-Income SNAP Entry and Exit Conditional on Policy and Economic Variables

Parameter	Entry	Exit
State unemployment rate	-0.01 0.99	-0.10** 0.91
Simplified income reporting	0.21*** 1.24	0.16** 1.17
Simplified income definitions	-0.19*** 0.83	-0.16** 0.86
Broad-based categorical eligibility policy	0.03 1.03	0.13* 1.14
Child support exclusions	-0.10 0.91	0.06 1.07
Comparable disqualification policy	0.16** 1.17	0.15** 1.16
Average certification interval for zero-income households	-0.06*** 0.95	0.05*** 1.05
Log Likelihood Value	-15057.78	-5812.61
Number of observations	1,519,794	11,408

Source: 2004 SIPP panel; ERS FSP Rules Database; FSP/SNAP Options Reports.

Note: These models also include all demographic and household control variables included in the repeated cross-sectional and longitudinal components of this study (coefficients not shown separately). All estimates are weighted. Odds ratios are presented in italics below each parameter estimate.

*** $p < 0.001$

** $p < 0.01$

* $p < 0.05$

The unemployment rate is significantly negatively associated with exit from the zero-income SNAP condition but is not significantly associated with entry (Table VI.4). This implies that the positive associations between unemployment and the incidence of zero-income SNAP participation from our repeated cross-sectional analyses stem from longer spells of being in this condition.

Longer average certification intervals for zero-income SNAP participants are negatively associated with zero-income SNAP entry and are positively associated with zero-income SNAP exit (Table VI.4). These results are consistent with the negative association between certification intervals and the incidence of zero-income SNAP participation in the repeated cross-sectional analyses.

Consistent with the descriptive analyses, State policies for simplified income reporting, broad-based categorical eligibility, and comparable cash assistance disqualification are positively associated with both entry into and exit out of the zero-income SNAP condition (Table VI.4). All of the relevant coefficients are statistically distinguishable from zero, except for the coefficient on broad-based categorical eligibility in the entry model. Also consistent with

the descriptive analyses, State policies for simplified income definitions are negatively associated with zero-income SNAP entry and exit.

VII. CONCLUSIONS: POTENTIAL EXPLANATIONS FOR THE GROWTH OF THE ZERO-INCOME SNAP POPULATION

This report examines the characteristics, circumstances, and dynamics of zero-income SNAP participants and similar populations in order to better understand the growth of the zero-income SNAP caseload over time. In addition, it examines whether changes in policies or economic circumstances have affected the zero-income SNAP population and its representation in the SNAP caseload. The primary study findings are summarized below.

How has the composition of the zero-income SNAP population changed over time?

Between 1993 and 2008, several changes occurred in the composition of the zero-income SNAP population, particularly with regard to the following characteristics:

- **Family Composition.** Zero-income SNAP participants were increasingly likely to live in families with children, particularly single-parent families with children. By comparison, the proportions living in single-parent families in zero-income non-SNAP and positive-income comparison groups remained relatively stable or showed modest declines.
- **AFDC/TANF Receipt.** Past receipt of AFDC/TANF increased substantially among the zero-income SNAP population, from 8.1 percent in 1993 and 15.2 percent in 1996 to 21.9 percent in 2001, after which it remained fairly level. By comparison, past or current receipt of AFDC/TANF among the positive-income SNAP population decreased substantially and remained low and relatively stable among the non-SNAP comparison groups.
- **ABAWDs.** The proportion of zero-income SNAP adults (ages 18–49) who were ABAWDs dropped sharply from 38.4 percent in 1996 to 18.0 percent in 2001 and 18.3 percent in 2004 before rebounding to 31.2 percent in 2008. In comparison, increases in the proportion of ABAWDs in the positive-income SNAP and non-SNAP comparison groups were relatively modest, with virtually no change between 1996 and 2001.

What are the dynamics of zero-income SNAP participants?

The longitudinal analysis examined individuals' income and SNAP participation histories over a nearly 3-year period (2004–2006). Results found that most zero-income SNAP experiences were short (median of 3 months); more than three-quarters of individuals (75.7 percent) exited the condition within 4 months. In addition, most individuals did not cycle in and out of the zero-income SNAP condition: more than two-thirds (67.4 percent) experienced only a single spell over the course of the panel.

Most zero-income SNAP spells tended to be experiences of zero income within a longer SNAP spell. In other words, the vast majority of zero-income SNAP participants were already on SNAP for a median of 6 months before entering the zero-income condition. Similarly, for every

1,000 zero-income SNAP individuals in an average month, about 188 exited into positive-income SNAP, while only about 14 individuals transitioned to positive-income non-SNAP and 17 individuals transitioned to no longer receiving SNAP benefits while still having zero income. Zero-income SNAP participants who exited the condition to positive-income SNAP remained on SNAP for a median of 8 months.

As expected, income from earnings was the most common source of income lost and gained among individuals with positive income before and after zero-income SNAP spells: 61.3 percent lost earnings when they entered the zero-income SNAP condition, and 65.2 percent gained earnings when leaving the condition. TANF provided another source of income, lost by 11.8 percent and gained by 11.0 percent of people with positive income before or after their zero-income SNAP spells. Smaller proportions (3 percent to 6 percent) lost or gained other cash assistance benefits.

On average, the relatively uncommon and short occurrence of zero-income SNAP experiences suggest that their increased proportion of the SNAP caseload does not stem from individuals lingering in this condition for long periods or from repeatedly returning to the condition after exit. Rather, zero-income SNAP spells are typically short periods of having no income within a longer spell of SNAP participation, most often preceded and followed by periods of positive income while still participating in SNAP.

Have economic and/or policy changes affected this population and their representation in the SNAP caseload?

Of the SNAP policies and economic circumstances reviewed through the policy analysis (from 2001–2008), results suggest that unemployment rates and SNAP certification intervals affected the growth of the zero-income SNAP caseload, although in opposite directions. First, the analyses consistently indicate that weaker economic conditions contributed to a higher incidence of zero-income SNAP participation. Further, the increasing unemployment rate during the 2000s affected zero-income SNAP participation primarily through longer spells of being in this condition. Over the period covered by this analysis (2001–2008), unemployment generally increased. Coupled with the results from these analyses, this implies that rising unemployment accounts for some of the growth in the zero-income SNAP caseload.

Average certification intervals for zero-income SNAP participants increased between 2001 and 2008 as well, although, counter to what was expected, these increases ameliorated the growth in the zero-income caseload. In other words, the growth could have been even greater in the absence of these policies. Although longer certification intervals contributed to an increased overall incidence of SNAP participation (regardless of income status), they contributed to a lower incidence of zero-income SNAP participation. Longer average certification intervals were negatively associated with incidence of being a zero-income SNAP participant and with entry into the condition (i.e., fewer zero-income SNAP participants), and were positively associated with exit from the condition (i.e., more zero-income SNAP participants leaving the condition).

Results for the other policies considered in this analysis—simplified income reporting, simplified income definitions, broad-based categorical eligibility, child support payment exclusions, and comparable cash assistance disqualification policies—were less consistent. The longitudinal policy analyses revealed one possible explanation for these inconsistent results: nearly all of these policies had associations with both entry and exit that led to little net change in the overall incidence of zero-income SNAP participation. For example, simplified income reporting and comparable cash assistance disqualification policies were positively associated with entry, which increased the incidence, but were also positively associated with exit, which reduced the incidence. Thus, these two policies may have contributed to increased turnover in the zero-income SNAP caseload, but little change in the overall level.

What are the circumstances of zero-income SNAP participants?

Interviews with zero-income SNAP participants in 2012 showed that a variety of circumstances contribute to periods of no income, particularly barriers to employment and infrequent participation in other Federal assistance programs. Barriers to employment included physical or mental health problems; limited education/insufficient professional credentials; lack of training and/or steady work experience; work-related injuries; having a criminal record; taking care of dependent family members; employment gaps; and lack of transportation options. Although nearly all respondents experienced at least one of these challenges—and many experienced several—most continued to search for work. With the exception of Medicaid, participation in other Federal assistance programs was otherwise uncommon among respondents.

How, with zero income, are these SNAP families surviving and coping?

The interviews with zero-income SNAP participants also showed that participants relied on family, friends, and church communities for food, housing, basic necessities, cash income, odd jobs, and job application assistance. In exchange, they often gave labor, cash from intermittent odd jobs, and/or food to those providing assistance. Some respondents cut the size of their meals or skipped them entirely in order to extend their benefits or to provide food for others.

Why is the zero-income SNAP population increasing?

Overall, study findings suggest that the following factors have played a role in the observed increase in the zero-income SNAP caseload:

Worsening Economic Conditions and Lack of Economic Recovery. Worsening economic conditions appear to have contributed to the growth of the zero-income population, including the zero-income SNAP caseload. The policy analysis results have shown, for example, that increasing unemployment rates contributed to some of the zero-income SNAP caseload growth in the 2000s. Repeated cross-sectional analyses of SIPP data have shown that the growth of the zero-income SNAP caseload also reflects an increase among the broader zero-income population. The proportion of SNAP participants living in families with zero income more than

tripled in size from 2.4 percent in 1993 to 7.8 percent in 2008. Among the low-income population (individuals in families with incomes of less than 200 percent of the FPL), the proportion of zero-income individuals more than doubled, from 3.5 percent in 1993 to 8.1 percent in 2008. Zero-income individuals more than doubled as a proportion of the total U.S. population as well, from 1.3 percent in 1993 to 2.8 percent in 2008. These findings are consistent with research discussed above showing that the most disadvantaged segment of the population did not benefit from the economic recovery in the mid-2000s.

Overall, these findings echo those of previous research showing that the relatively low unemployment rates during the mid-2000s did not translate into gains for the most disadvantaged portions of the population, including those with lower education levels (Greenstone & Looney, 2011), and that the long-term unemployed tend to be those with a high school degree or less (Mitchell, 2013). Similarly, there was minimal net change in the poverty rate during the economic recovery between 2004 and 2007, and SNAP participation continued to grow among zero- and low-income households (Hanson & Oliveira, 2012).

Barriers to Employment. In addition to the worsening economic conditions, multiple barriers to employment and greater job volatility appear to have contributed to the growth of the zero-income SNAP population. Longitudinal analyses of SIPP data, for example, have shown that earned income was the main source of income lost by those who became zero-income SNAP participants (and gained by those exiting the condition), suggesting this population may be prone to job volatility. Study results suggest health and disability issues are persistent barriers to obtaining and retaining employment among this population; analyses of 2008 SIPP data, for example, showed that approximately one-fifth (19.9 percent) of nonelderly zero-income adults reported having a physical and/or mental health condition that prevented them from working, despite not receiving any disability assistance. Overall, nearly four-fifths (79.5 percent) of all adults in zero-income SNAP families in 2008 did not have a job at some point in the 4 months prior to the survey. Explanations provided for lack of recent employment included health or disability issues (30.4 percent); dependent care responsibilities (28.3 percent); an inability to find work (21.2 percent); and other reasons (20.1 percent).

The in-depth interviews similarly highlighted multiple barriers to employment that made it difficult to enter, remain in, or reenter the workforce. Physical and mental health issues were among the most commonly reported factors that led to job loss and made it difficult for respondents to reenter the workforce. In addition to complicating the job search process, ongoing health problems limited the type of jobs that respondents could perform. Many respondents also had limited education and minimal training, so their only real job opportunities were in unskilled jobs that offered little security. Although many respondents had worked in those types of jobs, other factors—like low wages that did not cover the cost of transportation to and from the job—sometimes made it challenging to keep them.

Decreased Access to the Public Safety Net. Study findings are also consistent with research highlighting the erosion of other supports for poor and near-poor families. A growing body of research, for example, highlights the difficulties faced by disadvantaged families who

have either left, been forced off, or been discouraged from entering the cash assistance rolls but who nevertheless have been unable to secure employment—so-called “disconnected” families. The increased proportion of single-parent families and past AFDC/TANF recipients—coupled with single-parent families’ higher likelihoods of experiencing zero-income SNAP and longer lengths of time spent in the condition—suggest that single-parent SNAP families who once might have entered the cash welfare system were increasingly vulnerable to experiencing periods of zero income. Interviews with zero-income SNAP participants similarly pointed to low participation in other Federal assistance programs and high reliance on personal safety net of family and friends.

In addition to single-parent families, ABAWDs increased as a proportion of the zero-income SNAP caseload during the 2000s at a higher rate than that of other groups. ABAWDs, however, were similar to the overall population in terms of likelihood of entering or exiting zero-income condition and time spent in the condition, and they spent less time on SNAP before and after their experience of having zero income. Similar to disconnected families, these findings suggest that some of the zero-income SNAP caseload growth may be attributed to a growing segment of the population who is not receiving cash assistance but who may face barriers to employment, experience a high degree of job volatility, and need nutrition assistance. Additionally, this growing segment of the zero-income SNAP population may reflect the limitations placed on SNAP participation by nonworking ABAWDs after the PRWORA was implemented in FY 1997, followed by expansions in their eligibility due to increases in State waivers of ABAWD requirements for high unemployment areas in the 2000s.

REFERENCES

- Blank, R. (2009). Economic change and the structure of opportunity for less-skilled workers. *Focus*, 26(2), 14–20.
- Blank, R., & Kovak, B. (2007–8). The growing problem of disconnected single mothers. *Focus*, 25(2), 27–34.
- Cody, S., Castner, L., Mabli, J., & Sykes, J. (2007). *Dynamics of Food Stamp Program participation, 2001–2003*. (Prepared by Mathematica Policy Research, Inc.) Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.
- Cody, S., Gleason, P., Schechter, B., Satake, M., & Sykes, J. (2005). *Food Stamp Program entry and exit: An analysis of participation trends in the 1990s*. (Prepared by Mathematica Policy Research, Inc.) Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.
- Congressional Budget Office. (2011). *Trends in the distribution of household income between 1979 and 2010*. Washington, DC: U.S. Government Printing Office.
- Czajka, J.L., Peterson, A., McGill, B., Thorn, B., & Warner-Griffin, C. (2012). *The extent and nature of underreporting of SNAP participation in Federal surveys*. (Prepared under Contract No. AG–3198–B–11–0011). Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.
- Danziger, S., & Wimer, C. (2014). *Poverty. The poverty and inequality report 2014*. Stanford, CA: Center on Poverty and Inequality.
- Ganong, P., & Liebman, J. (2013). *The decline, rebound, and further rise in SNAP enrollment: Disentangling business cycle fluctuations and policy changes*. Retrieved from <http://scholar.harvard.edu/files/ganong/files/explainingtrendsinsnapenrollmentaugust2013.pdf>
- Gleason, P., Schochet, P., & Moffitt, R. (1998). *The dynamics of Food Stamp Program participation in the early 1990s*. (Prepared by Mathematica Policy Research, Inc.) Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.
- Gothro, A., & Bencio, K. (2010). *Final memorandum: Examine characteristics of zero-income households*. [Internal memorandum.] Princeton, NJ: Mathematica Policy Research.
- Greenstone, M., & Looney, A. (2011, December 2). What is happening to America's less-skilled workers? The importance of education and training in today's economy. [Web blog post.] Retrieved from <http://www.brookings.edu/blogs/jobs/posts/2011/12/02-jobs-greenstone-looney>.

- Hanson, K., & Gundersen, C. (2002). *Issues in food assistance: How unemployment affects the Food Stamp Program*. (Food Assistance and Nutrition Research Report 26–7). Washington, DC: U.S. Department of Agriculture, Economic Research Service.
- Hanson, K., & Oliveira, V. (2012, September). *How economic conditions affect participation in USDA nutrition assistance programs*. (Economic Information Bulletin No. 100). Washington, DC: U.S. Department of Agriculture, Economic Research Service.
- Kabbani, N.S., & Wilde, P.E. (2003). Short recertification periods in the U.S. Food Stamp Program. *Journal of Human Resources* 38(Supplement), 1112–1113
- Loprest, P. (2003). *Disconnected welfare leavers face serious risks*. (Snapshots 3). Retrieved from The Urban Institute Web site http://www.urban.org/UploadedPDF/310839_snapshots3_no7.pdf
- Loprest, P. (2011). *Disconnected families and TANF*. (Brief No. 2). Retrieved from The Urban Institute Web site <http://www.urban.org/UploadedPDF/412568-Disconnected-Families-and-TANF.pdf>
- Loprest, P., & Nichols, A. (2011). *Dynamics of being disconnected from work and TANF*. Washington, DC: The Urban Institute.
- Mabli, J., Godfrey, T., Castner, L., Tordella, S., & Foran, P. (2011). *Dynamics of Supplemental Nutrition Assistance Program participation in the mid–2000s*. Retrieved from <http://www.fns.usda.gov/ora/MENU/Published/SNAP/FILES/Participation/DynamicsMid2000.pdf>
- Meyer, B.D., Mok, W.K.C., & Sullivan, J.X. (2009). *The underreporting of transfers in household surveys: Its nature and consequences* (Working paper #09.03). Chicago, IL: University of Chicago, Harris School of Public Policy Studies.
- Mitchell, J. (2013). *Who are the long-term unemployed?* Retrieved from the Urban Institute Web site <http://www.urban.org/uploadedpdf/412885-who-are-the-long-term-unemployed.pdf>
- Moore, J.C. (2008). *Seam bias in the 2004 SIPP Panel: Much improved, but much bias still remains*. Washington, DC: U.S. Department of Commerce, Census Bureau, Statistical Research Division. Retrieved from <http://www.census.gov/srd/www/abstract/rsm2008-03.html>
- Owigho, P., Kolupanowich, N., Hetling, A., & Born, C. (2011). Lost leavers: Uncovering the circumstances of those without welfare and without work. *Families in Society*, 92(4), 397–404.

- Ribar, D.C., Edelhoch, M., & Liu, Q. (2008). Watching the clocks: The role of Food Stamp recertification and TANF time limits in caseload dynamics. *Journal of Human Resources* 43(1), 208–239.
- Ribar, D.C., Edelhoch, M., & Liu, Q. (2010). Food Stamp participation and employment among adult-only households. *Southern Economic Journal*, 77(2), 244–270.
- Saez, E. (2013). *Striking it richer: The evolution of top incomes in the United States* (updated). Retrieved from <http://elsa.berkeley.edu/~saez/saez-UStopincomes-2012.pdf>
- Strayer, M., Eslami, E., & Leftin, J. (2012). *Characteristics of Supplemental Nutrition Assistance Program households: Fiscal year 2011*. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis. Retrieved from <http://www.fns.usda.gov/ora/MENU/Published/SNAP/FILES/Participation/2011Characteristics.pdf>
- U.S. Department of Agriculture, Food and Nutrition Service. (2014). *Food and Nutrition Service Web site*. [Web page.] Retrieved from <http://www.fns.usda.gov/snap/rules/memo/PRWORA/abawds/abawdspage.htm>
- U.S. Department of Agriculture, Food and Nutrition Service (2014a, May). *Supplemental Nutrition Assistance Program (SNAP)*. [Web page.] Retrieved from <http://www.fns.usda.gov/pd/SNAPsummary.htm>
- U.S. Department of Agriculture, Food and Nutrition Service (2014b, May). *Supplemental Nutrition Assistance Program participation and costs*. [Web page.] Retrieved from <http://www.fns.usda.gov/sites/default/files/pd/SNAPsummary.pdf>
- U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis. (2012). *Building a healthy America: A profile of the Supplemental Nutrition Assistance Program*. [Web page.] Retrieved from <http://www.fns.usda.gov/sites/default/files/BuildingHealthyAmerica.pdf>
- U.S. Department of Commerce, Census Bureau (2013, October). *Current Population Survey (CPS) – definitions*. Retrieved from <https://www.census.gov/cps/about/cpsdef.html>
- U.S. Department of Labor, Bureau of Labor Statistics (2014, May). *Labor force statistics from the Current Population Survey*. [Web page.]. Retrieved from http://data.bls.gov/timeseries/LNU04000000?years_option=all_years&periods_option=specific_periods&periods=Annual+Data
- Zedlewski, S., Waxman, E., & Gundersen, C. (2012). *SNAP's role in the Great Recession and beyond*. Washington, DC: The Urban Institute.

APPENDIX A: DETAILED DESCRIPTION OF STUDY METHODS

To address the study objectives, the study team utilized four complementary phases of work: 1) a repeated cross-sectional analysis; 2) a longitudinal data analysis; 3) a policy analysis; and 4) semi-structured in-depth interviews with 50 zero-income SNAP participants. Following a brief discussion of key definitions, the discussion below details the methodology used by the study team for each of these project phases.

1. Key Definitions

To make these analyses as compatible as possible with previous analyses, the study team a) used the individual's membership in a family with a negative or zero income as our indicator of the zero-income condition, and b) adopted the individual as the unit of analysis.⁴⁷ Each of these decisions is discussed below.

Definition of Zero Income. To be consistent with the SNAP dynamics reports (e.g., Mabli et al., 2011), we defined individuals as having zero income according to their *family* income (e.g., the monthly gross family income is \$0) and according to *gross* income (i.e., as opposed to net income).^{48,49}

Individual as the Unit of Analysis. To be consistent with SNAP dynamics reports, we conducted the analyses at the individual level (i.e., individuals in zero-income families), rather than the household or family level.⁵⁰

2. Repeated Cross-Sectional Analysis

Repeated cross-sectional analyses of SIPP data provided information about the demographic, family, and employment characteristics of zero-income SNAP participants over time as compared to other SNAP participants and nonparticipants with similar income (to determine the extent to which these individuals were similar to or different from other population groups). The SIPP cross-sectional data were compiled using Wave 1, panel month 4 of the most recent five SIPP panels (i.e., the 1993, 1996, 2000, 2004, and 2008 panels). Using Wave 1 data maximized the sample size, as attrition impacts the later waves. Brief descriptions of some of the key methodological elements are provided below.

⁴⁷ Following households and families over time can be challenging because the members of these units can change.

⁴⁸ If we look only at the individual's income, we may miss the fact that a zero-income individual is living with an employed partner or spouse. Typically, all children also have zero income.

⁴⁹ SNAP assistance units can be smaller than households are because a SNAP unit may exclude some individuals in the same household if they do not eat together. Thus, using households may underestimate the number of zero-income units. On the other hand, SNAP units tend to be broader than families, though this is not always the case (e.g., elderly family members can sometimes comprise their own separate assistance unit; individual family members may also be disqualified from receiving benefits). Therefore, using families may overestimate the number of zero-income units.

⁵⁰ Gross-income measurements reflect income that was received before deductions, taxes, or Medicare premiums.

Data Source. The SIPP is a national longitudinal survey that has been conducted since 1984. A new sample for the survey is reintroduced every 2½ to 4 years; these new samples are described as “panels.” The members of these households are then interviewed every 4 months over this period; sample households within the panel are divided into four rotation groups consisting of random samples of approximately equal size. The reference period for each interview is the 4 months preceding the interview. For example, rotation group 1 was interviewed in Wave 1 in February 2004 for the reference months of October 2003 through January 2004, while rotation group 2 was interviewed in Wave 1 in March 2004 for the reference months of November 2003 through February 2004. The members of these households are interviewed every 4 months over the panel period; these 4-month intervals are referred to as “waves.”

The SIPP follows people even after they leave their initial households and interviews new members of these initial households. At each interview, the SIPP obtains economic, demographic, and program participation information about the members, including cash and in-kind income sources (from employment to public programs); employment and length of job; SNAP participation spells; participation in other Federal programs (e.g., WIC, TANF, and SSI), and other information. The SIPP asks respondents to provide this information for each of the 4 months preceding the interview.

The component of the questionnaire that collects this contemporary and short-term retrospective economic, demographic, and programmatic information is referred to as the “core” interview. The SIPP also collects some information less frequently in “topical module” interviews. For example, each panel of the SIPP includes an Employment History Module that identifies patterns of employment, length of employment at jobs, and reasons for any periods of unemployment subsequent to the respondent's first job. Each panel also includes a Reciprocity History Module that profiles respondents’ histories in receiving certain means-tested benefits. This particular module obtains a profile of patterns of participation in government programs—specifically TANF, SNAP, and SSI—prior to the beginning of the SIPP panel. Specific questions address the first time a respondent participated in a particular program, the length of participation, and the number of times the respondent has been in the program.

Analysis Month. The repeated cross-sectional analysis uses the “most recent month” (i.e., month 4 in the reference period) in the Wave 1 interview of the five SIPP panels for all respondents. This month occurs immediately prior to the month of interview. As such, the most recent month varies by rotation group over a 4-month period, because it depends on the timing of the first interview for each SIPP respondent. For example, the Wave 1 interview month for one rotation group may be January, for another it will be February, for another it will be March, and for another it will be April. This approach was selected to minimize recall error and avoid seam bias, which is the tendency of individuals to report changes in status in the months that start or end each 4-month reference period.

Panel	Sample Size (approx.)
1993	n/a
1996	36,700 households
2001	35,100 households
2004	43,700 households
2008	42,000 households

Number and Types of Comparison Groups. Three comparison groups were selected, including 1) individuals with positive-income families participating in SNAP; 2) individuals in zero-income families not participating in SNAP; and 3) individuals in low-income families who meet the SNAP gross-income test but are not participating in SNAP (incomes of less than 200 percent of the FPL). This analysis allowed the study team to assess what the zero-income SNAP population “looks like” in comparison to 1) the zero-income population that is not participating in SNAP, and 2) individuals with low, but positive, income who are either participating in SNAP or eligible for, but not participating in, SNAP.⁵¹

Weights. All analyses are weighted to reflect population-level estimates. To account for survey design features and differential response of the SIPP panels, the analysis used the cross-sectional survey weights that were supplied by the SIPP.

Subgroup Characteristics. Subgroup characteristics examined in the repeated cross-sectional analysis are defined in Table A.1 below.

Table A.1
Subgroup Characteristics in the Repeated Cross-Sectional Analysis

Category	Definition
Age	Three exhaustive, mutually exclusive groups: <ul style="list-style-type: none"> • Children, ages 0–17 • Nonelderly adults, ages 18–59 • Elderly adults, age 60+ <p>Additionally, we examine nonelderly adults ages 18–35 and 36–59 separately.</p>
Sex	Two exhaustive, mutually exclusive groups: <ul style="list-style-type: none"> • Men, age 18+ • Women, age 18+
Race/Ethnicity	Four exhaustive, mutually exclusive groups: <ul style="list-style-type: none"> • Non-Hispanic White • Non-Hispanic African-American • Hispanic, any race • Non-Hispanic other race (includes individuals of Asian, Hawaiian/Pacific Islander, American Indian/Alaska Native descent, as well as individuals with multiple racial identifications)
Disability Status	Self-Reported Disability: Nonelderly adults (ages 18–59) who receive Federal or State SSI benefits or report having a work-preventing physical/mental/health condition <ul style="list-style-type: none"> • Nonelderly adults (ages 18–59) who are disabled • Nonelderly adults (ages 18–59) who are not disabled <p>Able-Bodied Adults Without Dependents (ABAWDs): Nonelderly, nondisabled adults (ages 18–49) without children in the household¹</p> <ul style="list-style-type: none"> • Nonelderly adults (ages 18–49) who are ABAWDs • Nonelderly adults (ages 18–49) who are not ABAWDs
Education	Three mutually exclusive groups: <ul style="list-style-type: none"> • Adults (age 18+) with at least some college education • Adults (age 18+) with a high school diploma

⁵¹ In conjunction with FNS, we ruled out additional comparison groups, such as positive-income groups with incomes of <130 percent of the FPL or <300 percent of the FPL. This decision maintained the focus on zero-income groups, while keeping the number of comparison groups to a number that can be shown on graphs illustrating all 5 years. Additionally, because much of the population is ineligible for SNAP, we decided to remove the “300 percent+” category from the analysis.

Category	Definition
	<ul style="list-style-type: none"> Adults (age 18+) with less than a high school diploma <p>Two exhaustive, mutually exclusive groups:</p> <ul style="list-style-type: none"> Individuals in families in which no one has a high school diploma Individuals in families in which at least 1 person has a high school diploma
Employment	<p>Two mutually exclusive groups:</p> <ul style="list-style-type: none"> Adults (age 18+) who were employed at some point in the previous 4 months Adults (age 18+) who were not employed at some point in the previous 4 months <p>Among adults (age 18+) reporting no employment in the previous 4 months, we additionally examine the main reason for no employment in the previous 4 months (4 mutually exclusive groups):</p> <ul style="list-style-type: none"> Health or disability: Unable to work due to temporary illness or injury, or chronic health condition or disability, including pregnancy or childbirth Dependent care: Unable to work because taking care of children or other persons Unable to find work Other: Unable to work because retired, going to school, being on layoff (temporary or indefinite), not interested in finding a job, and “other” reasons (not otherwise specified).² <p>Two exhaustive, mutually exclusive groups:</p> <ul style="list-style-type: none"> Individuals in families in which an adult (age 18+) was employed in panel month 4 Individuals in families in which no adult (age 18+) was employed in panel month 4
Receipt of AFDC/TANF	<p>Two exhaustive, mutually exclusive groups:</p> <ul style="list-style-type: none"> Individuals in families that currently receive, or have ever in the past received, AFDC/TANF benefits Individuals in families that do not currently receive, and have never in the past received, AFDC/TANF benefits
Family Composition	<p>Three exhaustive, mutually exclusive groups:</p> <ul style="list-style-type: none"> Individuals in families of 1 person Individuals in families with 2–3 people Individuals in families with 4 or more people <p>Two exhaustive, mutually exclusive groups:</p> <ul style="list-style-type: none"> Individuals in families without children Individuals in families with children <p>Individuals in families with children is further broken down into 3 mutually exclusive, but not exhaustive, groups:³</p> <ul style="list-style-type: none"> Individuals in families with one adult Individuals in families with married adults Individuals in families with other multiple unmarried adults

¹ SNAP receipt is limited to 3 months in a 3-year period for ABAWDs who are not working, participating in, and complying with the requirements of a work program for 20 hours or more per week, or a workfare program. Under SNAP policy, individuals who are exempt from this provision include those who are younger than 18 or older than 49; responsible for the care of a child or incapacitated household member; medically certified as physically or mentally unfit for employment; pregnant; or already exempt from the work requirements of the Food Stamp Act. Some States, however, may request a waiver from this provision based on high unemployment, or they may exempt individuals using the 15-percent exemption authorized by the Balanced Budget Act. (Source: <http://www.fns.usda.gov/snap/rules/memo/PRWORA/abawds/abawdspage.htm>)

² Sample sizes for most of these categories were too small to show separately.

³ One other category not shown separately due to small sample sizes is child-only families. In both the 1996 and 2001 panels, there are two cases of zero-income non-SNAP recipients who appear to be in child-only families.

3. Longitudinal Data Analysis

Longitudinal data analyses were conducted to assess the dynamics of the zero-income SNAP population. To remain consistent with the SNAP dynamics reports, the study team followed the methods as documented most recently in the report “Dynamics of SNAP

Participation in the Mid-2000s” (Mabli et al., 2011). Brief descriptions of some of the key methodological considerations are provided below.

Data Source. This analysis used the 2004 SIPP longitudinal panel, which allowed the study team to explore the income and SNAP participation of individuals from October 2003 through August 2006.⁵² This was the same file used to compute the estimates in the most recent SNAP dynamics report by Mabli and colleagues (2011) referenced above. The 2004 SIPP panel consisted of approximately 51,000 households, initially; members of these households were interviewed every 4 months over an approximately 3-year period (referred to as “waves.”)

Discrete Months as Time Unit. The 2004 longitudinal SIPP file was organized with person-months as the observations, and membership in a zero-income family and a SNAP family were each measured on a month-by-month basis. For the entry and exit analyses, person-months were used as the analysis unit, and SNAP receipt and membership in a zero-income family were each measured on a month-by-month basis. This allowed us to examine all spells, including those for individuals that experienced multiple spells. The units of analyses for the duration analyses include all spells in a given condition.

Definition of At-Risk Population. In accordance with previous dynamics reports, the “at risk” population for these analyses includes all individuals who were ever observed over the course of the SIPP panel to be living in a family whose income was less than 300 percent of the FPL.^{53,54,55}

Events Preceding Entry and Exit. Consistent with previous SNAP dynamics reports, the entry and exit analyses examine whether the individuals’ circumstances changed preceding zero-income SNAP entry or exit in order to understand the events that at least indirectly may have contributed to a person entering or exiting zero-income SNAP. These events are generally large or important changes in characteristics that are closely tied to eligibility for SNAP, including employment, income, and family composition. To be consistent with previous SNAP dynamics analyses, the study team examined changes in these conditions over the 4 months, and 8 months, preceding a potential zero-income SNAP entry. The analysis also examined events in 4, and 8 months preceding potential exits from the zero-income SNAP condition.

Following the categorizations in previous SNAP dynamics reports, the study team examined the following events:

⁵² To conduct the longitudinal analyses, FNS provided Insight with the 2004 SIPP longitudinal file, which was created for FNS’s most recent SNAP dynamics report “Dynamics of SNAP Participation in the Mid-2000s” (Mabli et al., 2011).

⁵³ Note that the FPL is defined using U.S. Census Bureau poverty levels, not HHS poverty guidelines. SNAP eligibility uses HHS poverty guidelines.

⁵⁴ By construction, the zero-income SNAP and zero-income non-SNAP groups include people who have lived in families with incomes of less than 300 percent of the FPL. In addition, because of SNAP eligibility criteria, all or nearly all of the people in the positive-income SNAP group will have lived in families with incomes of less than 300 percent of the FPL.

⁵⁵ Sample sizes were too small to examine a cross section of individuals that experienced a zero-income SNAP spell in Wave 1, month 4 of the panel. Overall, there were 371 individuals with zero gross income participating in SNAP in Wave 1, panel month 4. Similarly, during the month of May 2004, there were only 360 individuals with zero gross family income that were also participating in SNAP.

Event Category	Defining Events
Loss of Employment	<ul style="list-style-type: none"> • Self unemployed • Other family member unemployed
Decrease in Family Income	<ul style="list-style-type: none"> • Earnings (10% or more)¹ • TANF (any decrease) • Other income (10% or more)
Change in Family Composition	<ul style="list-style-type: none"> • Pregnant/new infant in family • New dependent (non-infant) in family • Newly separated or divorced • Other composition change, including any addition of an adult and any departure of a household member other than through separation or divorce

¹ As described in the most recent SNAP dynamics report, “If we observe a decrease in income during any month of the trigger window, it is considered a trigger event, regardless of what happened to income in other months of the trigger window. Thus, if a sample member experienced a 10-percent decrease in family income in one month and gained the income back in a subsequent month, it is still considered a trigger event. On the other hand, if a sample member experienced a series of 5-percent decreases in family income in consecutive months during the trigger window, this is not considered a trigger event” (Mabli et al., 2011, p. 53).

Note that caution should be exercised when interpreting these findings, as these events may be more loosely associated with zero-income SNAP transitions than SNAP transitions overall. For example, while a new dependent in the family may be logically associated with entry into SNAP (e.g., due to greater need for food assistance), it is less clear how a new dependent in the family may be associated with a transition from the positive-income SNAP condition to zero-income SNAP condition, independent of a change in income. Further, as zero-income SNAP spells tend to be fairly short (median of 3 months), particularly relative to overall SNAP spells (median of 10 months), it is less clear how a change in family composition 4–8 months in advance would be associated with a transition into or out of the zero-income SNAP condition.

Duration Analysis Techniques. Survival analysis methods were used to perform the duration analyses; these methods have the ability to account for both time and “right-censored” data (i.e., where the end of a spell is not observed). For example, the end of the spell was not observed for some households, such as those who 1) leave the universe at some point in the study (e.g., due to death, being institutionalized, or moving out of the country), or 2) remained in the zero-income SNAP condition at the last SIPP interview. For each spell, we observed the length of the spell during the panel period and whether the spell was still in progress at the end of the panel period (that is, whether the spell was right censored). Additionally, this analysis uses new entrants into the zero-income SNAP condition over the panel period.⁵⁶ The sample is limited to individuals whose spells began in month 2 or later (and therefore were not left censored).⁵⁷ Each observation in the analysis sample represents a

⁵⁶ We chose to use the entry cohort sample for this analysis rather than a cross-sectional sample. This sample includes all individuals who began (or entered) a zero-income SNAP spell during the entire SIPP panel period rather than those who are participating at a specified point in time. The cross-sectional analysis usually indicates longer participation spells than the entry cohort because the cross-sectional analysis includes the accumulation of entrants that do not exit quickly (Mabli et al., 2011).

⁵⁷ Previous dynamics reports use month 3 or later.

single participation spell of an individual; sample members may have contributed more than one spell to the analysis.

Life tables were used to illustrate, for each month of spell duration, the number of spells at the beginning of the month, the number of spells in the following month, and the number that exit during the following month along with weighted estimates of the survivor, hazard, and cumulative exit rates. Full life table results are shown in Appendix D. Each of these rates is briefly described below (Mabli et al., 2011):

- The **hazard rate** is the probability that a spell ends in a particular month, given that it has lasted at least until the beginning of that month.⁵⁸
- The **survivor rate** is the probability that a spell remains in progress more than a given number of months (i.e., survives beyond t months);
- The **cumulative exit rate** is the unconditional probability that a spell ends within a given number of months.

The analysis also assesses 1) the median spell length (i.e., the month that the cumulative exit rate reaches 50 percent), and 2) cumulative exit rates (or proportion of participants exiting) at 4, 12, and 24 months for each of three types of spells: zero-income SNAP spells, positive-income SNAP spells preceding zero-income SNAP spells, and positive-income SNAP spells following zero-income SNAP spells. Overall, the 2004 SIPP longitudinal panel contained 2,844 total zero-income SNAP spells from 1,962 unique individuals.⁵⁹ About 17 percent, or 469 spells, were left censored.⁶⁰ The remaining 84 percent (2,375) of spells were not left censored and comprised the sample for this analysis. Of these spells, 86 percent (2,030) were neither left censored nor right censored, and 15 percent (345) were right censored.

For the analysis of positive-income SNAP spells preceding zero-income SNAP spells, two approaches were used. The results reported in Chapters IV and V reflect the results of a “backward-looking” life table. The spell starting point is the month prior to the transition into the zero-income SNAP condition for individuals whose previous status was positive-income SNAP. The analysis counts backwards from this transition point to the beginning of the positive-income SNAP spell. Using this technique, rather than a standard forward-looking approach, allows us to minimize the effects of censoring. Results from a forward-looking analysis of the positive-income SNAP spells that precede zero-income SNAP spells are presented in Appendix D. The forward-looking approach, however, estimates duration based on a smaller subset of spells, as it is restricted to complete spells (spells for which the start and end dates are observed), omitting both left- and right-censored spells.

⁵⁸ The hazard rate is an instantaneous incidence rate in that it is the probability that if you survive to month t , you will succumb to the event in the next instant. Because the samples on which the spell lengths are based decline as the duration increases, the estimates of the hazard rates generally become less precise as duration rises.

⁵⁹ Most of these individuals (67.6 percent, or 1,327 individuals) contributed only one spell to the analysis.

⁶⁰ Of the left-censored spells, 90.8 percent, or 426 spells, ended within the panel period (before month 32) and 9.2 percent (43 spells) were also right censored.

Sample Sizes. The entry analysis is based on a sample size of 2,375 entry events into the zero-income SNAP condition that occurred over the course of the 32-month panel (i.e., nearly 10 million—an estimated 9,362,379—entry events at the population level). The exit analysis is based on a sample size of 2,456 exits from the zero-income SNAP condition that occurred over the course of the 32-month panel (i.e., almost 10 million exits at the population level). For the duration analyses, there were 1,882 positive-income SNAP spells that preceded zero-income SNAP spells; 2,375 total zero-income SNAP spells that began during the 30-month observation period; and 2,142 positive-income SNAP spells that followed zero-income SNAP spells.

Weights. All analyses were weighted to reflect population-level estimates. To account for survey design features, general survey nonresponse, and differential attrition in the longitudinal analysis dataset, all of the estimates using this sample incorporate a longitudinal survey weight that was developed for prior SNAP dynamics reports.

Subgroup Characteristics. Subgroup characteristics examined in the longitudinal analysis are defined in Table A.2 below.

Table A.2
Subgroup Characteristics in the Longitudinal Analysis

Category	Definition
Age	Three exhaustive, mutually exclusive groups: <ul style="list-style-type: none"> • Children, ages 0–17 • Nonelderly adults, ages 18–59 • Elderly adults, age 60+
Sex	Two exhaustive, mutually exclusive groups: <ul style="list-style-type: none"> • Men, age 18+ • Women, age 18+
Race/Ethnicity	Four exhaustive, mutually exclusive groups: <ul style="list-style-type: none"> • Non-Hispanic White • Non-Hispanic African-American • Hispanic, any race • Non-Hispanic other race (includes individuals of Asian, Hawaiian/Pacific Islander, American Indian/Alaska Native descent, as well as individuals with multiple racial identifications)
Disability Status	Two mutually exclusive, but not exhaustive groups: <ul style="list-style-type: none"> • Disabled: Nonelderly adults (ages 18–59) who receive SSI or report having a work-preventing physical/mental/health condition • Able-Bodied Adults Without Dependents (ABAWDs): Nonelderly, nondisabled adults (ages 18–49) without children in the household⁶¹
Family Composition	Two exhaustive, mutually exclusive groups: <ul style="list-style-type: none"> • Individuals in families without children • Individuals in families with children <p>Individuals in families with children is further broken down into 4 mutually exclusive, but not exhaustive groups.⁶²</p>

⁶¹ SNAP receipt is limited to 3 months in a 3-year periods for ABAWDs who are not working, participating in, and complying with the requirements of a work program for 20 hours or more per week, or a workfare program. Under SNAP policy, individuals who are exempt from this provision include those who are younger than 18 or older than 49; responsible for the care of a child or incapacitated household member; medically certified as physically or mentally unfit for employment; pregnant; or already exempt from the work requirements of the Food Stamp Act. Some States, however, may request a waiver from this provision based on high unemployment, or they may exempt individuals using the 15-percent exemption authorized by the Balanced Budget Act (Source: USDA, 2014).

Category	Definition
	<ul style="list-style-type: none"> • Single parents • Children of single parents • Married adults • Children of married adults
Education	Two exhaustive, mutually exclusive groups: <ul style="list-style-type: none"> • Individuals in families in which no one has a high school diploma • Individuals in families in which at least 1 person has a high school diploma
Citizenship ⁶³	Two exhaustive, mutually exclusive groups: <ul style="list-style-type: none"> • Individuals who are citizens of the United States • Individuals who are not citizens of the United States⁶⁴

Note: Since pre-panel data from the SIPP Reciprocity history module were not included on the previous SNAP Dynamics reports' data file, we could not assess past receipt of public assistance (TANF or SSI). Similarly, we could not assess past receipt of SNAP benefits prior to the panel.

¹ SNAP receipt is limited to 3 months in a 3-year periods for ABAWDs who are not working, participating in, and complying with the requirements of a work program for 20 hours or more per week, or a workfare program. Under SNAP policy, individuals who are exempt from this provision include those who are younger than 18 or older than 49; responsible for the care of a child or incapacitated household member; medically certified as physically or mentally unfit for employment; pregnant; or already exempt from the work requirements of the Food Stamp Act. Some States, however, may request a waiver from this provision based on high unemployment, or they may exempt individuals using the 15-percent exemption authorized by the Balanced Budget Act (Source: USDA, 2014).

4. Policy Analysis

The policy analysis was designed to assess the relationship between the zero-income SNAP caseload and economic conditions and policy changes to help explain the factors that may have contributed to the increase. Brief descriptions of some of the key methodological elements are provided below.

Defining Economic Measures. Economic conditions were measured through the seasonally adjusted monthly State unemployment rate, which is available from the U.S. Department of Labor's (DOL) Bureau of Labor Statistics (BLS) Local Area Unemployment Statistics (LAUS) series. The general unemployment rate has been used extensively in other research and tends to eclipse any other economic variables that are included in economic models.⁶⁵ Though we would have preferred to use an economic measure that is more specific to potential SNAP recipients, such as unemployment among people with low levels of

⁶² Other categories not shown separately due to small sample sizes included 1) individuals in families with children and multiple unmarried adults (including, for example, cohabiting parents), and 2) child-only families. Consistent with previous FNS SNAP dynamics reports, however, individuals in families with children and a married head are shown as a unique category. Previous research tends to show that individuals in married-parent families often have different outcomes (e.g., child well-being, parental health) from other multiple adult households, such as cohabiting couples with children.

⁶³ Citizenship is included as a characteristic in the longitudinal analysis but not in the repeated cross-sectional analysis, due to insufficient sample sizes in some panels.

⁶⁴ During the 2004 SIPP panel, nondisabled, nonelderly, adult legal resident noncitizens were required to live in the United States for 5 years before becoming eligible for SNAP benefits. Other legal resident noncitizens were eligible to receive benefits sooner.

⁶⁵ Other indicators that were also considered, but dropped due to the supposition that they duplicate information obtained in the unemployment rate include the *monthly State employment-to-population ratio*, also available from the LAUS series (but has nothing skill specific), and the *annual State gross domestic product*, which is available from the Bureau of Economic Analysis (BEA) along with employment by industry (but not skill specific). Other indicators, such as State-level indicators of poverty and education rates that are available, were also dropped, as they tend to be very unreliable at the State level. The American Community Survey (ACS) does a good job of State-level estimates, but data was unavailable for the period of the 2004 SIPP panel. The 2000 Decennial census was also considered, but data are for too far back.

education, there are several drawbacks to using these measures. First, these rates are not readily available and would have to be constructed from another survey source, such as the Current Population Survey (CPS). Second, such measures tend to have high standard errors at the State level, and are not reliable for small States.⁶⁶

Defining SNAP Policies. First, the study team developed a dataset of available measures of State policies that may have contributed to the zero-income caseload during the period for which we have SIPP panel data (2001, 2004 to 2006, and 2008), including 1) simplified income reporting, 2) simplified income definitions, 3) child support exclusions, 4) broad-based categorical eligibility, 5) comparable disqualifications for cash assistance, and 6) certification intervals. These measures are discussed in detail in Chapter VI. Most measures were obtained from the Food Stamp Program State Options Reports and the ERS FSP Rules Database. One final measure, average certification interval for zero-income SNAP households, was developed using SNAP Quality Control (QC) data.

Analysis Methods. The policy and economic measures (constructed for each State) were linked to 1) the 2001, 2004, and 2008 cross-sectional SIPP panels, and 2) the 2004 SIPP longitudinal panel data using State identifiers that were available in the SIPP. Once the data were linked, the analysis included two components: 1) repeated cross-sectional analysis of the relationship between policies and economic conditions and the incidence of zero-income SNAP cases, and 2) a longitudinal analysis of the relationship between policies and economic conditions and entry into, and exit from, the zero-income SNAP condition. Each component employed descriptive and multivariate methods.

For the descriptive analysis, we prepared tables in which zero-income SNAP incidence, entry, and exit were calculated separately for individuals living in States with specified policy and economic measures (e.g., with and without broad-based categorical eligibility, different levels of State unemployment rate, etc.). Results from the repeated cross-sectional descriptive analysis are shown in Table F.1 (in Appendix F), which is arranged with income and SNAP status in the columns and the State policy and economic characteristics in the rows.

For the multivariate analyses, the policy and economic measures appear as explanatory variables in a multivariate model of outcomes (i.e., the probability that an individual is a zero-income SNAP participant, zero-income SNAP entry, zero-income SNAP exit). All individual and household characteristics examined in the repeated cross-sectional and longitudinal analyses in Chapters III and IV are included in these models as control variables. In the cross-sectional models, these characteristics include age (<18 years of age, 18–35 years old, 35–59 years old, or older than age 59); gender; race/ethnicity (White non-Hispanic, African-American non-Hispanic, Hispanic, or Other); disability status; education (indicators for being a high school graduate and living in a family with a high school graduate); work status (indicators for working in the last 4 months and living in a family with a worker); previous receipt of TANF; family size (indicators for

⁶⁶ The overall unemployment rate does not always capture the SNAP group, because their employment patterns often do not follow the general pattern. However, State-level indicators of employment crossed by other demographic variables, although available through the CPS, typically end up being too noisy for small States.

living alone, having a family with 2–3 people, and having a family with 4 or more people); family composition (indicators for an adult-only family, single-parent family, married-parent family, and other family with children); and ABAWD status. In the longitudinal models, these characteristics include the person's age and family composition (child living with a lone adult, lone adult living with a child, child living with multiple adults, adult living with other adults and children, and adult living without children); gender; race/ethnicity (White non-Hispanic, African-American non-Hispanic, Hispanic, or Other); being elderly; disability status; ABAWD status; living in a family with a high school graduate; citizenship; as well as dummy variables for year. All models incorporate survey weights normed to the sample size.

Weights. All analyses were weighted. The repeated cross-sectional policy analyses incorporate cross-sectional survey weights that were supplied by the SIPP. The longitudinal policy analyses use the longitudinal survey weight that was developed for previous SNAP dynamics analyses to account for survey design features, general survey nonresponse, and differential attrition. To facilitate statistical inference in the multivariate analyses, the survey weights are scaled/normed to sum to the survey sample sizes.

5. In-Depth Interviews

Finally, semi-structured in-depth interviews were conducted with 50 zero-income SNAP participants to provide an in-depth look at the characteristics of this population and determine how zero-income households are coping and surviving. Refer to Volume II of this report for additional details.

APPENDIX B: VISUAL PICTURE OF ZERO-INCOME SNAP DYNAMICS

The term “dynamics” refers to movements by an observational unit over time between different statuses. Examples of these outcomes include both movements between statuses (entries and exits) and the lengths of time within a status (durations). Figure B.1 below shows all of the possible joint statuses and dynamics that might involve having or not having zero income and receiving or not receiving SNAP. The joint status that is of fundamental interest is having zero income *and* receiving SNAP; this is illustrated by the red cylinder in the center of Figure B.1. The cylinders around the edges of the figure depict the three alternate statuses that people could occupy:

- Having positive income and not receiving SNAP (cylinder A, top center)
- Having zero income but not receiving SNAP (cylinder B, bottom left)
- Having positive income and receiving SNAP (cylinder C, bottom right)

There is a multitude of combinations of dynamics that can be examined.⁶⁷ For example, an analysis of the SNAP caseload and/or its dynamics involves studying the red cylinder and cylinder C. An analysis of the zero-income population and/or its dynamics involves studying the red cylinder and cylinder B. An analysis of the “disconnected” population as a source of SNAP caseload growth involves studying cylinder C. The status of being a zero-income SNAP recipient involves two component statuses: having zero-income and receiving SNAP. Each of these component statuses can vary over time.

The arrows in Figure B.1 show the possible movements or flows between the joint statuses. We used shading to highlight the flows that directly involve the joint status of having zero income and receiving SNAP (being in the red cylinder). The light-grey solid arrows show flows (entry) into this status from being:

- A positive-income SNAP nonrecipient (arrow IN-A)
- A zero-income SNAP nonrecipient (arrow IN-B)
- A positive-income SNAP recipient (arrow IN-C)

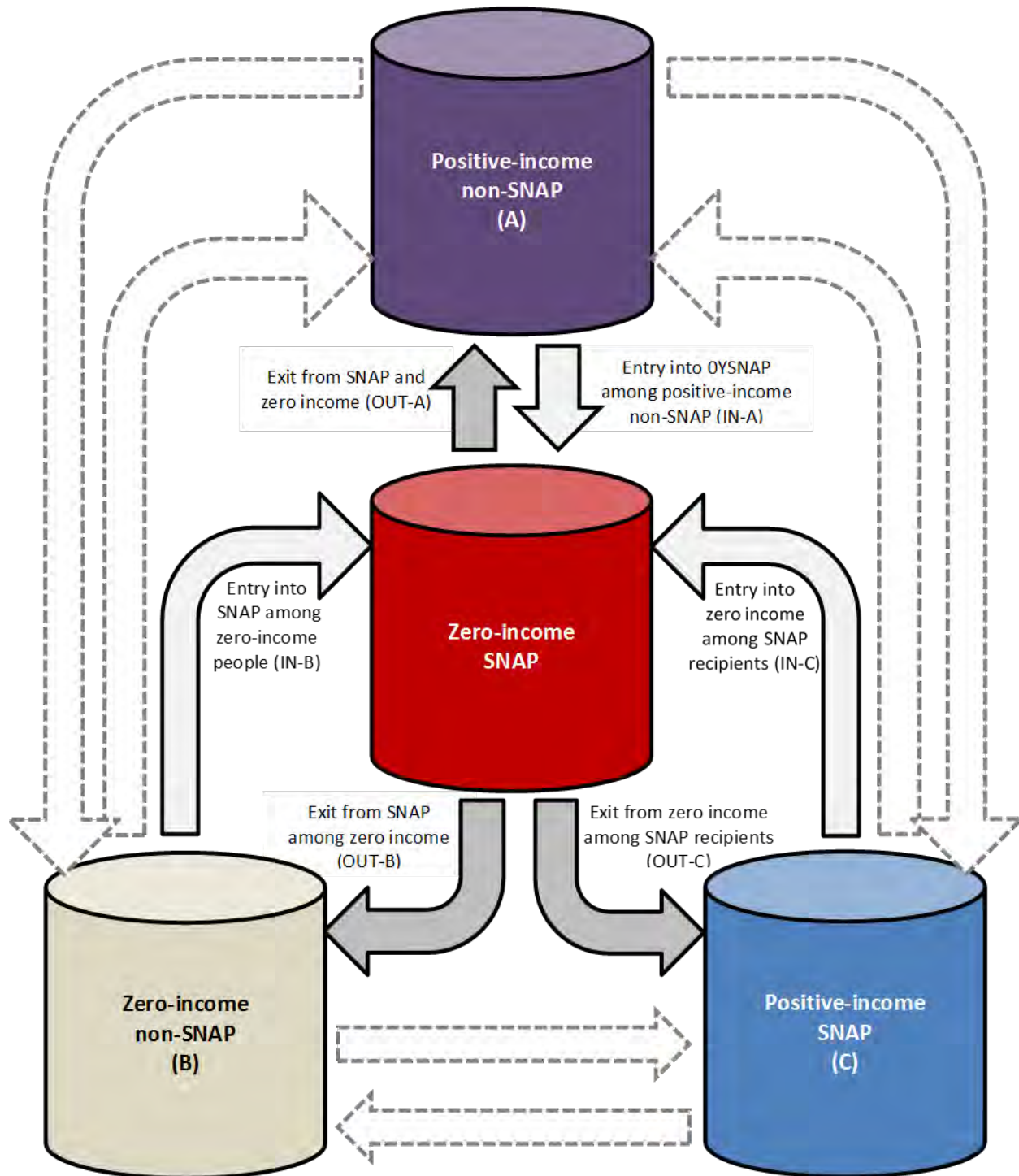
The dark-grey solid arrows show flows (exits) from being a zero-income SNAP recipient into each of the possible alternative states. The light-grey dashed arrows indicate possible flows between the other joint statuses.

While each of the four States would be interesting to look at in their own right, the focus of this study is on *zero-income SNAP participants*—the group represented by the red cylinder. For example, the statistics show what happens to zero-income SNAP recipients when they leave that status: do they remain on SNAP, do they remain zero income, or do they transition into positive income and/or off SNAP? This analysis also helps to clarify logically applicable and inapplicable events preceding entry and exit. Logically, the loss of a job or of

⁶⁷ A challenge to examining dynamics in the each of the component statuses (e.g., movements on and off SNAP) is how to account simultaneously for dynamics in the “other” status.

government assistance can be a precursor for flows IN-A and IN-C but not IN-B. Similarly, gaining employment or government benefits can be a precursor for OUT-A and OUT-C but not OUT-B.

Figure B.1
Flows Into and Out of Zero-Income SNAP Participation



APPENDIX C: REPEATED CROSS-SECTIONAL TABLES

Table C.1
Percent Distribution of the Characteristics of Zero-Gross-Income Individuals: SIPP, 1993–2008

	1993		1996		2001		2004		2008	
Characteristic	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP
Weighted total (in thousands)	3,354	639	4,865	875	6,172	917	6,672	1,549	8,525	2,048
Unweighted total	658	123	1,826	354	2,055	337	2,618	687	3,040	778
Total (percent)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DEMOGRAPHIC CHARACTERISTICS										
Age										
Children (<18)	33.0	30.5	34.0	43.9	30.7	48.4	33.9	51.1	30.7	43.6
Nonelderly adults (18–59)	64.1	68.8	62.0	54.5	65.4	49.8	63.2	47.6	64.8	54.8
-Adults 18-35	38.6	38.6	35.9	30.2	37.3	31.2	35.2	27.1	35.4	33.6
-Adults 36-59	25.6	30.2	26.2	24.3	28.1	18.6	28.0	20.5	29.4	21.2
Elderly adults (60+)	2.9	NA	4.0	NA	3.9	NA	2.9	1.3	4.5	1.6
Sex										
Male (18+)	58.3	60.6	50.2	40.0	48.0	33.8	48.7	31.4	49.2	35.4
Female (18+)	41.7	39.4	49.8	60.0	52.0	66.2	51.3	68.6	50.8	64.6
Race/Ethnicity										
Hispanic, all races	13.0	19.7	19.6	23.6	20.3	14.8	21.2	16.5	23.7	23.2
Non-Hispanic White	61.6	46.0	56.9	49.6	53.0	42.7	47.6	37.8	48.2	40.6
Non-Hispanic African-American	19.4	22.2	18.2	24.1	18.5	37.5	22.1	37.4	20.2	33.1
Other	6.0	12.0	5.3	2.7	8.1	5.0	9.0	8.2	7.9	3.1
Self-Reported Disability (18–59) ¹										
Yes	–	–	11.0	28.8	12.0	22.7	11.7	25.4	11.3	19.9
No	–	–	89.0	71.2	88.0	77.3	88.3	74.6	88.7	80.1
ABAWD Status (18–49) ²										
Yes	–	–	58.6	38.4	57.9	18.0	53.7	18.3	56.4	31.2
No	–	–	41.4	61.6	42.1	82.0	46.3	81.7	43.6	68.8

	1993		1996		2001		2004		2008	
Characteristic	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP
EDUCATION, EMPLOYMENT, AND INCOME										
Education										
Less than high school (18+)	27.6	40.8	29.5	43.3	28.1	43.7	26.6	33.2	23.4	35.6
HS grad (18+)	38.0	47.1	33.6	40.1	30.7	36.6	31.2	32.6	29.5	34.0
Some college+ (18+)	34.4	12.1	37.0	16.6	41.2	19.8	42.1	34.2	47.1	30.4
HS graduate in the family	64.5	62.1	62.4	51.8	66.3	57.2	67.7	65.6	72.1	65.6
No HS graduate in the family	35.5	37.9	37.6	48.2	33.7	42.8	32.3	34.4	27.9	34.4
Employment										
Ever employed in previous 4 months (18+)	29.8	14.6	28.1	17.0	26.5	18.3	32.7	23.4	34.6	20.5
Not employed in previous 4 months (18+)	70.2	85.4	71.9	83.0	73.5	81.7	67.3	76.6	65.4	79.5
Main reason no job in previous 4 months (18+):										
-Health or disability ³	—	—	18.4	37.1	18.3	32.5	19.5	32.7	20.5	30.4
-Dependent care	—	—	17.3	22.7	19.1	35.0	23.2	30.4	19.2	28.3
-Unable to find work	—	—	17.9	18.0	13.5	15.4	17.9	18.0	21.1	21.2
-Other ⁴	—	—	46.4	22.2	49.1	17.1	39.3	18.8	39.2	20.1
Employed adult in family this month	17.9	NA	23.3	10.1	20.7	13.4	23.9	14.6	25.2	8.6
No employed adult in family this month	82.1	NA	76.7	89.9	79.3	86.6	76.1	85.4	74.8	91.4
Family Ever Received AFDC/TANF? ⁵										
Yes	3.3	8.1	5.8	15.2	7.6	21.9	8.6	21.5	7.6	20.2
No	96.7	91.9	94.2	84.8	92.4	78.1	91.4	78.5	92.4	79.8
FAMILY COMPOSITION										
Family Size										
1 person	56.5	39.4	55.3	48.2	53.3	26.3	48.8	27.9	49.5	30.3
2-3 people	24.3	31.9	26.0	27.9	27.6	40.6	30.7	45.0	26.9	36.4
4 or more people	19.1	28.7	18.7	23.9	19.1	33.1	20.5	27.2	23.6	33.4

Characteristic	1993		1996		2001		2004		2008	
	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP	All Zero Income	Zero-Income SNAP
Family Composition ⁶										
In families with children	36.2	50.0	36.4	45.8	36.8	71.2	44.3	70.0	40.8	64.6
-One adult	17.2	23.9	18.2	28.2	20.1	49.1	26.3	55.4	21.8	47.1
-Married adults	16.1	24.8	15.7	13.7	14.1	14.3	16.2	11.3	15.3	11.5
-Other multiple adults	3.0	NA	2.4	3.8	2.6	7.7	1.8	3.2	3.7	6.0
In families without children	63.8	50.0	63.6	54.2	63.2	28.8	55.7	30.0	59.2	35.4

Source: Weighted tabulations of the 1993, 1996, 2001, 2004, and 2008 SIPP Panels

Notes:

Individuals are considered to have zero gross income if their total gross family income is zero or less. All figures are weighted unless otherwise specified.

¹Disability is measured as nonelderly adults (ages 18–59) who receive SSI or report having a work-preventing physical/mental/health condition.

²ABAWDs are measured as nondisabled, childless adults ages 18–49.

³This category includes being unable to work due to temporary injury/illness or chronic health condition/disability, including pregnancy/childbirth.

⁴The “other” category includes being retired, going to school, being on layoff (temporary or indefinite), not interested in finding a job, and “other” reasons. Sample sizes for most of these categories are too small, however, to show separately.

⁵This includes current or past receipt of AFDC/TANF.

⁶In both 1996 and 2001, there are two cases of zero-income non-SNAP recipients who appear to be in child-only families.

NA=Not available due to small sample sizes

Table C.2

Percent Distribution of the Characteristics of Individuals in Zero-Gross-Income Families, SIPP 1993–2008: By SNAP Participation

Characteristic	1993				1996				2001				2004				2008			
	SNAP		Non-SNAP		SNAP		Non-SNAP		SNAP		Non-SNAP		SNAP		Non-SNAP		SNAP		Non-SNAP	
	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)
Unweighted total	123	5,227	535	13,571	354	8,981	1,472	26,672	337	5,302	1,718	25,782	687	8,321	1,931	28,956	778	9,455	2,262	27,153
Weighted total (in thousands)	639	25,833	2,715	67,375	875	21,677	3,990	70,876	917	14,104	5,255	76,043	1,549	18,686	5,122	73,356	2,048	24,076	6,477	75,566
DEMOGRAPHIC CHARACTERISTICS																				
Age																				
Children (<18)	30.5	52.2	33.5	29.0	43.9	47.6	31.8	30.0	48.4	45.6	27.6	30.4	51.1	46.4	28.7	28.8	43.6	44.7	26.6	27.4
Nonelderly adults (18–59)	68.8	41.4	63.0	52.3	54.5	44.6	63.7	49.9	49.8	44.7	68.1	50.2	47.6	45.5	67.9	51.8	54.8	46.7	68.0	52.4
-Adults 18-35	38.6	26.7	38.6	29.3	30.2	25.9	37.1	26.8	31.2	23.9	38.4	25.6	27.1	24.3	37.6	25.8	33.6	25.5	35.9	25.7
-Adults 36-59	30.2	14.7	24.5	22.9	24.3	18.6	26.6	23.1	18.6	20.8	29.8	24.7	20.5	21.2	30.3	25.9	21.2	21.2	32.0	26.8
Elderly adults (60+)	NA	6.5	3.4	18.8	NA	7.8	4.5	20.1	NA	9.7	4.3	19.4	1.3	8.2	3.4	19.4	1.6	8.7	5.4	20.2
Sex																				
Male (18+)	60.6	30.9	57.8	45.0	40.0	32.4	52.1	44.8	33.8	31.7	49.8	43.4	31.4	32.2	52.3	45.3	35.4	34.5	52.5	45.9
Female (18+)	39.4	69.1	42.2	55.0	60.0	67.6	47.9	55.2	66.2	68.3	50.2	56.6	68.6	67.8	47.7	54.7	64.6	65.5	47.5	54.1
Race/Ethnicity																				
Hispanic, all races	19.7	22.0	11.4	15.2	23.6	22.5	18.8	16.7	14.8	23.3	21.3	21.3	16.5	24.3	22.6	22.0	23.2	25.6	23.8	24.7
Non-Hispanic White	46.0	44.0	65.2	67.0	49.6	40.5	58.5	63.4	42.7	39.4	54.8	58.5	37.8	39.1	50.6	57.0	40.6	39.1	50.6	55.1
Non-Hispanic African-American	22.2	29.7	18.8	13.5	24.1	31.4	16.9	15.3	37.5	32.2	15.2	15.4	37.4	29.9	17.5	14.8	33.1	28.5	16.1	13.8
Other	12.0	4.3	4.6	4.3	2.7	5.5	5.8	4.6	5.0	5.1	8.7	4.7	8.2	6.7	9.3	6.2	3.1	6.9	9.4	6.3
Self-Reported Disability (18–59) ¹																				
Yes	–	–	–	–	28.8	25.1	7.7	9.7	22.7	33.6	10.6	10.6	25.4	30.3	8.8	10.2	19.9	29.1	9.1	10.7
No	–	–	–	–	71.2	74.9	92.3	90.3	77.3	66.4	89.4	89.4	74.6	69.7	91.2	89.8	80.1	70.9	90.9	89.3
ABAWD Status (18–49) ²																				

Characteristic	1993				1996				2001				2004				2008			
	SNAP		Non-SNAP		SNAP		Non-SNAP		SNAP		Non-SNAP		SNAP		Non-SNAP		SNAP		Non-SNAP	
	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)
Yes	—	—	—	—	38.4	15.4	62.4	40.8	18.0	14.9	63.2	41.9	18.3	15.6	61.6	43.5	31.2	19.1	63.4	45.7
No	—	—	—	—	61.6	84.6	37.6	59.2	82.0	85.1	36.8	58.1	81.7	84.4	38.4	56.5	68.8	80.9	36.6	54.3
EDUCATION, EMPLOYMENT, AND INCOME																				
Education																				
Less than high school (18+)	40.8	49.1	24.3	33.5	43.3	47.4	27.0	31.3	43.7	46.4	26.2	29.6	33.2	39.2	25.3	27.4	35.6	32.6	20.4	23.9
HS grad (18+)	47.1	32.4	35.7	37.0	40.1	33.1	32.4	35.3	36.6	31.4	30.0	35.3	32.6	28.9	31.0	30.1	34.0	32.7	28.4	30.9
Some college+ (18+)	12.1	18.5	39.9	29.5	16.6	19.5	40.6	33.4	19.8	22.2	43.8	35.1	34.2	31.9	43.7	42.5	30.4	34.7	51.2	45.2
HS graduate in the family	62.1	63.1	65.1	78.9	51.8	64.7	64.8	79.8	57.2	65.8	67.9	80.5	65.6	72.1	68.4	81.4	65.6	77.5	74.2	84.0
No HS graduate in the family	37.9	36.9	34.9	21.1	48.2	35.3	35.2	20.2	42.8	34.2	32.1	19.5	34.4	27.9	31.6	18.6	34.4	22.5	25.8	16.0
Employment																				
Ever employed in previous 4 months (18+)	14.6	29.4	33.6	52.3	17.0	36.8	30.1	54.3	18.3	38.3	27.5	53.8	23.4	40.0	34.6	52.8	20.5	42.8	38.0	52.6
Not employed in previous 4 months (18+)	85.4	70.6	66.4	47.7	83.0	63.2	69.9	45.7	81.7	61.7	72.5	46.2	76.6	60.0	65.4	47.2	79.5	57.2	62.0	47.4
Main reason no job in previous 4 months (18+):																				
-Health or disability ³	—	—	—	—	37.1	39.7	14.4	21.6	32.5	52.7	16.3	21.7	32.7	49.9	16.3	21.9	30.4	49.7	17.4	23.3
-Dependent care	—	—	—	—	22.7	27.0	16.2	13.5	35.0	17.5	16.9	14.7	30.4	18.0	21.4	14.5	28.3	15.8	16.4	13.2
-Unable to find work	—	—	—	—	18.0	8.2	17.9	4.2	15.4	4.2	13.3	2.7	18.0	7.2	17.9	5.8	21.2	8.6	21.0	5.9
-Other ⁴	—	—	—	—	22.2	25.1	51.6	60.7	17.1	25.7	53.6	60.9	18.8	24.9	44.3	57.8	20.1	25.9	45.2	57.6
Employed adult in family this month	NA	41.9	20.9	72.2	10.1	52.6	26.3	74.0	13.4	57.5	22.0	73.9	14.6	60.0	26.7	73.2	8.6	63.9	30.5	73.3

*Examining the Growth of the Zero-Income SNAP Caseload:
Characteristics, Circumstances, and Dynamics of Zero-Income SNAP Participants*

Characteristic	1993				1996				2001				2004				2008			
	SNAP		Non-SNAP		SNAP		Non-SNAP		SNAP		Non-SNAP		SNAP		Non-SNAP		SNAP		Non-SNAP	
	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)	Zero Income	Positive Income	Zero Income	Low Income (<200% of the FPL)
No employed adult in family this month	NA	58.1	79.1	27.8	89.9	47.4	73.7	26.0	86.6	42.5	78.0	26.1	85.4	40.0	73.3	26.8	91.4	36.1	69.5	26.7
Family Ever Received AFDC/TANF? ⁵																				
Yes	8.1	60.2	2.1	10.9	15.2	58.7	3.7	12.0	21.9	46.3	5.1	10.7	21.5	42.6	4.7	11.7	20.2	35.9	3.7	9.4
No	91.9	39.8	97.9	89.1	84.8	41.3	96.3	88.0	78.1	53.7	94.9	89.3	78.5	57.4	95.3	88.3	79.8	64.1	96.3	90.6
FAMILY COMPOSITION																				
Family Size																				
1 person	39.4	7.5	60.6	22.7	48.2	10.5	56.9	22.1	26.3	13.0	58.1	23.0	27.9	12.5	55.1	23.3	30.3	12.5	55.6	24.6
2-3 people	31.9	29.2	22.6	33.0	27.9	31.9	25.5	33.0	40.6	34.2	25.3	33.8	45.0	32.3	26.4	33.8	36.4	31.7	23.9	33.9
4 or more people	28.7	63.3	16.8	44.3	23.9	57.7	17.6	44.9	33.1	52.8	16.6	43.2	27.2	55.2	18.5	43.0	33.4	55.8	20.5	41.5
Family Composition ⁶																				
In families with children	50.0	85.8	33.0	58.3	45.8	81.3	34.3	58.4	71.2	77.9	30.8	58.1	70.0	78.9	36.5	57.2	64.6	77.1	33.3	54.8
-One adult	23.9	39.7	15.6	10.8	28.2	37.4	16.0	11.7	49.1	37.3	15.1	14.7	55.4	36.1	17.4	13.1	47.1	33.2	13.8	12.3
-Married adults	24.8	33.5	14.0	41.7	13.7	29.9	16.2	40.3	14.3	25.4	14.0	36.1	11.3	26.9	17.7	37.3	11.5	29.1	16.4	35.2
-Other multiple adults	NA	12.6	3.4	5.8	3.8	13.9	2.1	6.3	7.7	15.2	1.7	7.3	3.2	15.9	1.3	6.9	6.0	14.8	3.0	7.3
In families without children	50.0	14.2	67.0	41.7	54.3	18.7	65.7	41.6	28.8	22.1	69.2	41.9	30.0	21.1	63.5	42.8	35.4	22.9	66.7	45.2

Source: Weighted tabulations of the 1993, 1996, 2001, 2004, and 2008 SIPP Panels

Notes:

Individuals are considered to have zero gross income if their total gross family income is zero or less. All figures are weighted unless otherwise specified.

¹ Disability is measured as nonelderly adults (ages 18–59) who receive SSI or report having a work-preventing physical/mental/health condition.

² ABAWDs are measured as nondisabled, childless adults ages 18–49.

³ This category includes being unable to work due to temporary injury/illness or chronic health condition/disability, including pregnancy/childbirth.

⁴ The “other” category includes being retired, going to school, being on layoff (temporary or indefinite), not interested in finding a job, and “other” reasons. Sample sizes for most of these categories are too small, however, to show separately.

⁵ This includes current or past receipt of AFDC/TANF.

⁶ In both 1996 and 2001, there are two cases of zero-income non-SNAP recipients who appear to be in child-only families.

NA=Not available due to small sample sizes

APPENDIX D: LIFE TABLE RESULTS USED FOR DURATION ANALYSES

Table D.1
Life Table of Positive-Income SNAP Spells That Precede
Zero-Income SNAP Spells

Months	Number of Spells at Beginning of Month	Number In-Sample in Following Month	Number Exiting During Following Month	Survivor Rate	Hazard Rate	Cumulative Exit Rate	Standard Error of Survivor Rate
1	1,882	1,840	296	83.9	16.1	16.1	0.01
2	1,544	1,514	136	76.4	9.0	23.6	0.01
3	1,378	1,342	123	69.3	9.2	30.7	0.01
4	1,218	1,135	182	58.2	16.1	41.8	0.01
5	952	893	73	53.4	8.2	46.6	0.01
6	820	790	54	49.8	6.8	50.2	0.01
7	736	699	58	45.7	8.3	54.3	0.01
8	641	575	40	42.5	7.0	57.5	0.01
9	535	526	47	38.7	8.8	61.3	0.01
10	480	457	30	36.2	6.5	63.8	0.01
11	427	412	7	35.5	1.8	64.5	0.01
12	405	383	46	31.3	12.0	68.7	0.01
13	337	333	25	28.9	7.4	71.1	0.01
14	308	289	23	26.6	8.0	73.4	0.01
15	266	252	13	25.3	5.2	74.7	0.01
16	239	206	10	24.1	4.8	75.9	0.01
17	196	181	13	22.4	7.0	77.6	0.01
18	168	157	5	21.6	3.3	78.4	0.01
19	152	142	8	20.4	5.8	79.6	0.01
20	134	109	5	19.5	4.5	80.5	0.01
21	104	93	2	19.1	1.8	80.9	0.01
22	91	82	7	17.4	8.7	82.6	0.01
23	75	70	4	16.5	5.2	83.5	0.01
24	66	46	9	13.5	18.6	86.5	0.01
25	38	30	1	13.2	1.8	86.8	0.01
26	30	24	2	12.0	9.5	88.0	0.02
27	22	19	3	10.2	14.7	89.8	0.02
28	16	10	0	10.2	0.0	89.8	0.02
29	10

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006.

Notes:

Reference Months 1–31. Left-censored spells are excluded. Months with less than 30 spells are not presented.

This table presents the results of a “backward-looking” analysis. The spell starting point is the month prior to the transition into the zero-income SNAP condition for individuals whose previous status was positive-income SNAP. The analysis counts backwards from this transition point to the beginning of the positive-income SNAP spell. Using this technique, rather than a standard forward-looking approach, allows us to minimize the effects of censoring. Results from a forward-looking analysis of the positive-income SNAP spells that precede zero-income SNAP spells are presented in Appendix C.2. The forward-looking approach, however, estimates duration based on a smaller subset of spells, as it is restricted to complete spells (spells for which the start and end dates are observed), omitting both left- and right-censored spells.

Estimates are weighted to reflect population characteristics. Weights are normalized by the sample size in the first month to produce proper standard errors.

Column (a) represents the number of SNAP zero-income spells that have lasted at least the indicated number of months, regardless of when the spell first started. Column (b) indicates the number of the spells from (a) that we continue to observe in the following month (that is, spells that are not right censored. Column (c) is the number of spells from (b) that exit SNAP zero income in the following month. The hazard rate (e) is

$100 * (c) / (b)$. The cumulative exit rate (f) is the sum of the previous row's cumulative exit rate and the product of the current row's hazard rate and previous row's survivor rate, divided by 100. The survivor rate is $1 - (f)$. The change in the number of spells from the first row of the table to the last row reflects losses due to both SNAP exits and right censoring. In the upper rows of the table, with the shorter participation spells, more of the loss is due to exits, while in the lower rows of the table, with the longer participation spells, more of the loss is due to right censoring.

Table D.2
Life Table of Positive-Income SNAP Participation Spells That Precede
Zero-Income SNAP Spells: Alternate Methodology¹

Months (Forward- Looking)	Number of Spells at Beginning of Month	Number In- Sample in Following Month	Number Exiting During Following Month	Survivor Rate	Hazard Rate	Cumulative Exit Rate	Standard Error of Survivor Rate
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	1,196	1,196	290	75.8	24.2	24.2	1.2
2	906	906	133	64.6	14.7	35.4	1.4
3	773	773	121	54.5	15.6	45.5	1.4
4	652	652	178	39.6	27.4	60.4	1.4
5	474	474	72	33.6	15.2	66.4	1.4
6	402	402	53	29.2	13.2	70.8	1.3
7	349	349	57	24.4	16.2	75.6	1.2
8	292	292	39	21.1	13.5	78.9	1.2
9	253	253	46	17.3	18.0	82.7	1.1
10	207	207	29	14.9	14.1	85.1	1.0
11	178	178	7	14.3	4.1	85.7	1.0
12	171	171	45	10.5	26.4	89.5	0.9
13	126	126	24	8.5	19.3	91.5	0.8
14	101	101	22	6.6	22.2	93.4	0.7
15	79	79	13	5.5	16.2	94.5	0.7
16	66	66	10	4.7	14.5	95.3	0.6
17	57	57	12	3.7	22.0	96.3	0.5
18	44	44	5	3.3	11.5	96.7	0.5
19	39	39	8	2.6	20.7	97.4	0.5

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Reference Months 2–31. Months with less than 30 spells are not presented.

Sample: Positive income SNAP spells that precede zero-income SNAP spells

¹ In this table, all of the spells are "complete," or uncensored, meaning that both the start and end dates of all of the spells are observed.

Specifically, the sample was restricted to include only new spells that began after the start of the SIPP panel; this drops the left-censored spells (spells where the start date is missing). In addition, by selecting spells that immediately precede a zero-income SNAP spell, all of the ending dates are known; thus, there is no right censoring. In summary, because this table considers new positive-income SNAP spells that immediately precede zero-income SNAP spells, it is restricted to complete spells (spells for which the start and end dates are observed) and omits both left- and right-censored spells.

Estimates are weighted to reflect population characteristics. Weights are normalized by the sample size in the first month to produce proper standard errors.

Column (a) represents the number of SNAP zero-income spells that have lasted at least the indicated number of months, regardless of when the spell first started. Column (b) indicates the number of the spells from (a) that we continue to observe in the following month (that is, spells that are not right censored). Column (c) is the number of spells from (b) that exit SNAP zero income in the following month. The hazard rate (e) is $100 \cdot (c)/(b)$. The cumulative exit rate (f) is the sum of the previous row's cumulative exit rate and the product of the current row's hazard rate and previous row's survivor rate, divided by 100. The survivor rate is $1 - (f)$.

The change in the number of spells from the first row of the table to the last row reflects losses due to both SNAP exits and right censoring. In the upper rows of the table, with the shorter participation spells, more of the loss is due to exits, while in the lower rows of the table, with the longer participation spells, more of the loss is due to right censoring.

Table D.3
Length of Positive-Income SNAP Spells That Precede
Zero-Income SNAP Spells by Subgroup: Alternate Methodology¹

Characteristic	Sample Size	Cumulative Exit Rate (Percent)			
		Median Spell Length	4 Months or Less	12 Months or Less	24 Months or Less
Total Population	1,196	4	60.4	89.5	99.5
Family Composition					
Individuals in families with children	978	4	58.9	88.4	99.5
Single parents	203	4	60.8	87.7	99.5
Children of single parents	415	4	62.7	88.2	99.6
Married adults with children	99	5	48.5	89.8	.
Children of married adults	138	4	51.1	89.4	.
Individuals in families without children	218	4	66.4	94.0	99.8
Age					
Children (<18)	617	4	60.7	88.2	99.6
Nonelderly adults (18–59)	576	4	60.3	90.7	99.5
Elderly (60+)	NA	NA	NA	.	.
Sex					
Women (18+)	408	4	56.8	89.3	99.4
Men (18+)	171	3	67.6	93.8	99.7
Race and Ethnicity					
White non-Hispanic	455	4	62.2	92.7	99.4
African-American non-Hispanic	412	4	58.3	85.6	99.4
Hispanic all races	217	4	61.7	91.4	.
Other non-Hispanic	112	3	58.2	87.3	.
Disability					
Nonelderly disabled adults	99	4	69.7	91.9	100.0
Nonelderly nondisabled childless adults (18–49)	140	4	62.9	93.6	99.7
Education					
Individuals in families with HS graduate	910	4	60.1	90.9	99.7
Individuals in families with no HS graduate	286	4	61.6	84.8	99.0
Citizenship					
Citizen	1,167	4	60.4	89.5	99.5
Noncitizen	29	4	61.2	90.9	.

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Reference Months 2–31. Cells with less than 30 spells are not presented.

Sample: Positive income SNAP spells that precede zero-income SNAP spells

¹ In this table, all of the spells are "complete," or uncensored, meaning that both the start and end dates of all of the spells are observed.

Specifically, the sample was restricted to include only new spells that began after the start of the SIPP panel; this drops the left-censored spells (spells where the start date is missing). In addition, by selecting spells that immediately precede a zero-income SNAP spell, all of the ending dates are known; thus, there is no right censoring. In summary, because this table considers new positive-income SNAP spells that immediately precede zero-income SNAP spells, it is restricted to complete spells (spells for which the start and end dates are observed) and omits both left- and right-censored spells.

Subgroups represent characteristics in month before SNAP zero-income spell began.

Estimates are weighted to reflect population characteristics. Weights are normalized by the sample size in the first month to produce proper standard errors.

NA=Not available due to small sample sizes.

Table D.4
Life Table of Zero-Income SNAP Participation Spells

Months	Number of Spells at Beginning of Month	Number In-Sample in Following Month	Number Exiting During Following Month	Survivor Rate	Hazard Rate	Cumulative Exit Rate	Standard Error of Survivor Rate
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	2,375	2,340	709	69.7	30.3	30.3	1.0
2	1,631	1,617	422	51.5	26.1	48.5	1.0
3	1,195	1,156	255	40.1	22.1	59.9	1.0
4	901	826	326	24.3	39.5	75.7	0.9
5	500	489	89	19.9	18.2	80.1	0.9
6	400	375	63	16.5	16.8	83.5	0.8
7	312	295	43	14.1	14.6	85.9	0.8
8	252	224	60	10.4	26.7	89.6	0.7
9	164	155	26	8.6	16.5	91.4	0.7
10	130	108	11	7.7	10.6	92.3	0.6
11	97	84	4	7.3	5.1	92.7	0.6
12	80	73	14	6.0	18.9	94.0	0.6
13	59	58	1	5.9	1.0	94.1	0.6
14	58	58	6	5.3	10.2	94.7	0.6
15	52	51	2	5.1	4.0	94.9	0.6
16	49	39	4	4.5	11.3	95.5	0.6
17	35	35	2	4.3	4.7	95.7	0.6
18	33	30	1	4.2	2.9	95.8	0.6

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Reference Months 2–32. Left-censored spells are excluded. Months with less than 30 spells are not presented.

Sample: New zero-income SNAP spells

Estimates are weighted to reflect population characteristics. Weights are normalized by the sample size in the first month to produce proper standard errors.

Column (a) represents the number of SNAP zero income spells that have lasted at least the indicated number of months, regardless of when the spell first started. Column (b) indicates the number of the spells from (a) that we continue to observe in the following month (that is, spells that are not right censored). Column (c) is the number of spells from (b) that exit SNAP zero income in the following month. The hazard rate (e) is $100 \cdot (c)/(b)$. The cumulative exit rate (f) is the sum of the previous row's cumulative exit rate and the product of the current row's hazard rate and previous row's survivor rate, divided by 100. The survivor rate is $1 - (f)$.

The change in the number of spells from the first row of the table to the last row reflects losses due to both SNAP exits and right censoring. In the upper rows of the table, with the shorter participation spells, more of the loss is due to exits, while in the lower rows of the table, with the longer participation spells, more of the loss is due to right censoring.

Table D.5
Life Table of Positive-Income SNAP Participation Spells That Follow Zero-Income SNAP Spells

Months	Number of Spells at Beginning of Month	Number In-Sample in Following Month	Number Exiting During Following Month	Survivor Rate	Hazard Rate	Cumulative Exit Rate	Standard Error of Survivor Rate
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	2,142	2,095	309	85.3	14.7	14.7	0.8
2	1,786	1,725	166	77.0	9.6	23.0	0.9
3	1,558	1,527	126	70.7	8.2	29.3	1.0
4	1,401	1,295	154	62.3	11.9	37.7	1.1
5	1,142	1,108	109	56.2	9.8	43.8	1.1
6	999	984	71	52.1	7.2	47.9	1.1
7	913	873	31	50.3	3.6	49.7	1.2
8	842	798	42	47.6	5.3	52.4	1.2
9	756	729	56	43.9	7.7	56.1	1.2
10	673	665	33	41.7	5.0	58.3	1.2
11	631	611	15	40.7	2.4	59.3	1.2
12	596	537	52	36.8	9.6	63.2	1.2
13	485	475	24	34.9	5.1	65.1	1.2
14	451	428	17	33.5	4.0	66.5	1.2
15	411	401	12	32.5	3.1	67.5	1.2
16	389	355	24	30.3	6.8	69.7	1.2
17	330	310	8	29.5	2.5	70.5	1.2
18	303	299	7	28.8	2.3	71.2	1.2
19	292	261	8	27.9	3.1	72.1	1.2
20	252	209	6	27.2	2.8	72.8	1.2
21	203	188	5	26.5	2.4	73.5	1.2
22	183	176	1	26.3	0.8	73.7	1.2
23	175	170	6	25.4	3.5	74.6	1.2
24	164	85	11	22.2	12.5	77.8	1.4
25	75	72	1	22.1	0.7	77.9	1.4
26	72	67	2	21.4	3.0	78.6	1.4
27	65	62	3	20.4	4.5	79.6	1.5
28	59	31	0	20.4	0.0	79.6	1.5
29	31	18	4	15.4	24.4	84.6	2.4

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Reference Months 2–32. Left-censored spells are excluded. Months with less than 30 spells are not presented.

Sample: Positive income SNAP spells that follow zero-income SNAP spells

Estimates are weighted to reflect population characteristics. Weights are normalized by the sample size in the first month to produce proper standard errors.

Column (a) represents the number of SNAP zero-income spells that have lasted at least the indicated number of months, regardless of when the spell first started. Column (b) indicates the number of the spells from (a) that we continue to observe in the following month (that is, spells that are not right censored). Column (c) is the number of spells from (b) that exit SNAP zero income in the following month. The hazard rate (e) is $100 \cdot (c)/(b)$. The cumulative exit rate (f) is the sum of the previous row's cumulative exit rate and the product of the current row's hazard rate and previous row's survivor rate, divided by 100. The survivor rate is $1 - (f)$.

The change in the number of spells from the first row of the table to the last row reflects losses due to both SNAP exits and right censoring. In the upper rows of the table, with the shorter participation spells, more of the loss is due to exits, while in the lower rows of the table, with the longer participation spells, more of the loss is due to right censoring.

APPENDIX E: SUPPLEMENTAL DYNAMICS SUBGROUP ANALYSIS TABLES

Table E.1
Summary of Zero-Income SNAP Experiences Among the Entire "At-Risk" Population

Characteristic	Average Total Number of Zero-Income SNAP Spells	Average Total Number of Months in the Zero- Income/ SNAP Condition	Total	No Zero-Income SNAP Spells		Any Zero-Income SNAP Spells	
			N	N	%	N	%
Total Population	0.1	0.2	207,713,769	200,320,793	96.4	7,392,976	3.6
Family Composition							
Individuals in families with children	0.1	0.3	118,037,376	112,288,769	95.1	5,748,607	4.9
Single parents	0.2	0.8	8,531,360	7,440,697	87.2	1,090,663	12.8
Children of single parents	0.2	0.9	14,235,074	12,065,394	84.8	2,169,680	15.2
Married adults with children	0.0	0.1	43,909,153	43,114,556	98.2	794,597	1.8
Children of married adults	0.03	0.1	37,631,109	36,742,240	97.6	888,869	2.4
Individuals in families without children	0.03	0.1	89,676,393	88,032,024	98.2	1,644,369	1.8
Age							
Children (<18)	0.1	0.4	57,755,382	54,251,746	93.9	3,503,636	6.1
Nonelderly adults (18–59)	0.05	0.2	114,848,174	111,027,129	96.7	3,821,045	3.3
Elderly (60+)	0.00	0.01	35,110,214	35,041,919	99.8	NA	NA
Sex							
Women (18+)	0.05	0.2	79,923,872	77,230,781	96.6	2,693,091	3.4
Men (18+)	0.02	0.1	70,034,515	68,838,266	98.3	1,196,249	1.7
Race and Ethnicity							
White non-Hispanic	0.03	0.1	130,843,739	128,146,239	97.9	2,697,500	2.1
African-American non-Hispanic	0.1	0.6	28,795,200	26,216,510	91.0	2,578,690	9.0
Hispanic all races	0.1	0.2	35,592,891	34,008,476	95.5	1,584,415	4.5
Other non-Hispanic	0.1	0.3	12,481,940	11,949,569	95.7	532,371	4.3

Characteristic	Average Total Number of Zero-Income SNAP Spells	Average Total Number of Months in the Zero- Income/ SNAP Condition	Total	No Zero-Income SNAP Spells		Any Zero-Income SNAP Spells	
			N	N	%	N	%
Disability							
Nonelderly disabled adults	0.1	0.6	10,135,336	9,547,712	94.2	587,624	5.8
Nonelderly nondisabled childless adults (18–49)	0.04	0.2	36,542,263	35,497,797	97.1	1,044,466	2.9
Education							
Individuals in families with HS graduate	0.04	0.2	181,394,245	176,085,412	97.1	5,308,833	2.9
Individuals in families with no HS graduate	0.1	0.5	26,319,524	24,235,382	92.1	2,084,142	7.9
Citizenship							
Citizen	0.1	0.2	191,195,657	184,201,900	96.3	6,993,757	3.7
Noncitizen	0.03	0.1	16,518,113	16,118,895	97.6	399,218	2.4

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Weighted analysis (n = 49,922).

Only respondents who participated in month 4 of the panel and whose family income dropped to less than 300 percent of the FPL at some point during the panel are included.

NA=Not available due to small sample sizes

Table E.2
Summary of Zero-Income SNAP Experiences Among Individuals With Any Zero-Income SNAP Spells

Characteristic	Average Total Number of Zero-Income SNAP Spells	Average Total Number of Months in the Zero- Income/SNAP Condition	One Zero-Income SNAP Spell		Two Zero-Income SNAP Spells		Three or More Zero-Income SNAP Spells	
			N	%	N	%	N	%
Total Population	1.5	6.0	4,982,807	67.4	1,644,317	22.2	765,852	10.4
Family Composition								
Individuals in families with children	1.5	5.7	3,835,732	66.7	1,329,060	23.1	583,816	10.2
Single parents	1.5	6.3	700,354	64.2	263,123	24.1	127,186	11.7
Children of single parents	1.5	6.0	1,410,198	65.0	508,539	23.4	250,942	11.6
Married adults with children	1.3	4.0	599,334	75.4	128,722	16.2	NA	NA
Children of married adults	1.5	4.5	608,339	68.4	186,779	21.0	NA	NA
Individuals in families without children	1.4	7.1	1,147,075	69.8	315,257	19.2	182,036	11.1
Age								
Children (<18)	1.5	5.9	2,270,606	64.8	858,239	24.5	374,791	10.7
Nonelderly adults (18–59)	1.4	6.1	2,655,838	69.5	774,146	20.3	391,061	10.2
Elderly (60+)	1.2	7.4	NA	NA	NA	NA	NA	NA
Sex								
Women (18+)	1.4	6.0	1,848,172	68.6	574,547	21.3	270,373	10.0
Men (18+)	1.4	6.3	864,029	72.2	211,532	17.7	120,688	10.1
Race and Ethnicity								
White non-Hispanic	1.5	6.1	1,755,971	65.1	642,361	23.8	299,169	11.1
African-American non-Hispanic	1.5	6.8	1,696,989	65.8	611,245	23.7	270,456	10.5
Hispanic all races	1.3	4.6	1,202,295	75.9	234,412	14.8	147,708	9.3
Other non-Hispanic	1.5	6.0	327,552	61.5	156,299	29.4	NA	NA
Disability								
Nonelderly disabled adults	1.4	9.8	431,968	73.5	103,413	17.6	NA	NA
Nonelderly nondisabled childless adults (18–49)	1.5	6.0	665,816	63.7	240,823	23.1	137,827	13.2

Characteristic	Average Total Number of Zero-Income SNAP Spells	Average Total Number of Months in the Zero- Income/SNAP Condition	One Zero-Income SNAP Spell		Two Zero-Income SNAP Spells		Three or More Zero-Income SNAP Spells	
			N	%	N	%	N	%
Education								
Individuals in families with HS graduate	1.4	5.7	3,641,836	68.6	1,221,261	23.0	445,736	8.4
Individuals in families with no HS graduate	1.5	6.8	1,340,970	64.3	423,056	20.3	320,116	15.4
Citizenship								
Citizen	1.5	6.1	4,639,823	66.3	1,607,208	23.0	746,726	10.7
Noncitizen	1.2	4.2	342,984	85.9	NA	NA	NA	NA

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Weighted analysis (n = 49,922).

Only respondents who participated in month 4 of the panel and whose family income dropped to less than 300 percent of the FPL at some point during the panel are included.

NA=Not available due to small sample sizes

Table E.3
Distribution of Time in the Panel by SNAP Receipt and Income Status Among Individuals With Any Zero-Income SNAP Spells

Characteristic	Individuals Who Had Any Zero-Income SNAP Spells in the Panel Period	Positive-Income Non-SNAP		Zero-Income Non-SNAP		Positive-Income SNAP		Zero-Income SNAP		Total Months on SNAP	Total Months Zero- Income
		Total Months	Percent of Time in Panel	Total Months	Percent of Time in Panel	Total Months	Percent of Time in Panel	Total Months	Percent of Time in Panel		
Total Population	7,392,976	7.8	24.8	1.8	5.7	15.8	50.3	6.0	19.2	21.8	7.8
Family Composition											
Individuals in families with children	5,748,607	7.3	23.3	1.3	4.1	17.1	54.5	5.7	18.1	22.8	7.0
Single parents	1,090,663	6.5	20.6	1.4	4.6	17.3	54.9	6.3	19.9	23.6	7.7
Children of single parents	2,169,680	6.2	19.9	1.0	3.3	18.0	57.8	6.0	19.1	24.0	7.0
Married adults with children	794,597	10.5	33.1	1.3	4.1	15.8	50.0	4.0	12.8	19.8	5.3
Children of married adults	888,869	9.9	30.9	1.1	3.3	16.5	51.7	4.5	14.1	21.0	5.5
Individuals in families without children	1,644,369	9.3	29.9	3.6	11.6	11.0	35.5	7.1	23.0	18.1	10.7
Age											
Children (<18)	3,503,636	6.9	21.9	1.2	3.9	17.4	55.4	5.9	18.7	23.3	7.1
Nonelderly adults (18–59)	3,821,045	8.6	27.6	2.3	7.3	14.2	45.6	6.1	19.6	20.3	8.4
Elderly (60+)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sex											
Women (18+)	2,693,091	7.8	25.0	2.0	6.5	15.4	49.2	6.0	19.3	21.4	8.1
Men (18+)	1,196,249	10.2	32.7	2.9	9.3	11.7	37.7	6.3	20.4	18.1	9.2
Race and Ethnicity											
White non-Hispanic	2,697,500	9.0	28.3	2.2	6.8	14.4	45.6	6.1	19.3	20.5	8.3
African-American non-Hispanic	2,578,690	5.7	18.3	1.3	4.1	17.2	55.7	6.8	21.9	24.0	8.0
Hispanic all races	1,584,415	9.2	29.6	2.0	6.5	15.3	49.1	4.6	14.8	19.9	6.6
Other non-Hispanic	532,371	7.4	23.3	1.7	5.5	16.5	52.2	6.0	19.0	22.5	7.7

Characteristic	Individuals Who Had Any Zero-Income SNAP Spells in the Panel Period	Positive-Income Non-SNAP		Zero-Income Non-SNAP		Positive-Income SNAP		Zero-Income SNAP		Total Months on SNAP	Total Months Zero- Income
		Total Months	Percent of Time in Panel	Total Months	Percent of Time in Panel	Total Months	Percent of Time in Panel	Total Months	Percent of Time in Panel		
Disability											
Nonelderly disabled adults	587,624	5.4	17.2	1.8	5.6	14.3	45.8	9.8	31.4	24.1	11.5
Nonelderly nondisabled childless adults (18–49)	1,044,466	10.1	32.7	4.1	13.3	10.6	34.5	6.0	19.5	16.7	10.1
Education											
Individuals in families with HS graduate	5,308,833	8.4	26.8	1.6	5.0	15.7	50.0	5.7	18.2	21.4	7.2
Individuals in families with no HS graduate	2,084,142	6.1	19.6	2.4	7.6	15.9	51.0	6.8	21.8	22.8	9.2
Citizenship											
Citizen	6,993,757	7.6	24.1	1.8	5.7	16.0	50.8	6.1	19.4	22.1	7.9
Noncitizen	399,218	10.7	37.3	2.0	6.8	11.9	41.3	4.2	14.6	16.1	6.2

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Weighted analysis ($n = 1,877$).

Only respondents who experienced a SNAP zero-income spell at some point during the panel are included.

NA=Not available due to small sample sizes

Table E.4
Entry Rate (Percent) Into the Zero-Income SNAP Condition in an Average Month

Characteristic	Entry Rate From All Initial Statuses (Percent)	Entry Rate From Positive- Income Non-SNAP (Percent)	Entry Rate From Zero-Income Non-SNAP (Percent)	Entry Rate From Positive- Income SNAP (Percent)
Total Population	0.1	0.01	1.2	1.1
Family Composition				
Individuals in families with children	0.2	0.02	1.4	1.2
Single parents	0.6	0.1	2.3	2.0
Children of single parents	0.7	0.1	2.7	1.9
Married adults with children	0.1	0.01	0.7	0.7
Children of married adults	0.1	0.01	0.6	0.8
Individuals in families without children	0.1	0.01	1.0	0.8
Age				
Children (<18)	0.3	0.02	1.4	1.3
Nonelderly adults (18–59)	0.1	0.01	1.2	1.2
Elderly (60+)	0.01	0.0	0.5	0.1
Sex				
Women (18+)	0.1	0.01	1.5	1.1
Men (18+)	0.1	0.01	0.8	0.8
Race and Ethnicity				
White non-Hispanic	0.1	0.01	1.0	1.1
African-American non-Hispanic	0.4	0.02	2.2	1.4
Hispanic all races	0.2	0.03	1.1	0.9
Other non-Hispanic	0.2	0.02	1.0	1.2
Disability				
Nonelderly disabled adults	0.3	0.04	2.4	0.6
Nonelderly nondisabled childless adults (18–49)	0.1	0.01	1.1	2.5
Education				
Individuals in families with HS graduate	0.1	0.01	1.1	1.1
Individuals in families with no HS graduate	0.4	0.05	1.6	1.3
Citizenship				
Citizen	0.2	0.01	1.3	1.2
Noncitizen	0.1	0.01	0.6	0.6

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Cells are percent of people with a given characteristic making the transition. Characteristics are measured in the month prior to the transition/entry

At-risk population for zero-income SNAP entry: Individuals who were ever observed over the course of the SIPP panel to be living in a family whose income was less than 300 percent of the FPL, and who met at least 1 of the following criteria: 1) who are living in families with positive income and 2) who are not receiving SNAP and have not received SNAP for at least 2 months

Sample: Person-months, reference months 3–31.

Entry rate: Number of individuals at risk of entering the zero-income SNAP condition who subsequently enter, divided by the number of individuals at risk of entering, multiplied by 100 to get a percent.

Table E.5
Distribution of the Characteristics of Individuals Who Enter the Zero-Income SNAP Condition

Characteristic	All Entrants	Entry From Positive-Income Non-SNAP		Entry From Zero-Income Non-SNAP		Entry From Positive-Income SNAP	
	Number	Number	Percent	Number	Percent	Number	Percent
Total Population	9,362,379	679,947	7.3	1,361,443	14.5	7,320,989	78.2
Family Composition							
Individuals in families with children	7,321,988	479,823	6.6	748,567	10.2	6,093,598	83.2
Single parents	1,640,039	NA	NA	188,296	11.5	1,358,625	82.8
Children of single parents	3,066,553	147,287	4.8	306,672	10.0	2,612,594	85.2
Married adults with children	757,574	NA	NA	NA	NA	581,756	76.8
Children of married adults	887,056	107,326	12.1	NA	NA	709,941	80.0
Individuals in families without children	2,040,391	200,124	9.8	612,876	30.0	1,227,390	60.2
Age							
Children (<18)	4,514,981	276,081	6.1	466,527	10.3	3,772,372	83.6
Nonelderly adults (18–59)	4,791,730	400,766	8.4	875,015	18.3	3,515,949	73.4
Elderly (60+)	NA	NA	NA	NA	NA	NA	NA
Sex							
Women (18+)	3,383,593	232,023	6.9	578,025	17.1	2,573,545	76.1
Men (18+)	1,463,805	171,843	11.7	316,890	21.6	975,071	66.6
Race and Ethnicity							
White non-Hispanic	3,523,077	246,284	7.0	611,412	17.4	2,665,380	75.7
African-American non-Hispanic	3,240,009	136,689	4.2	334,625	10.3	2,768,695	85.5
Hispanic all races	1,878,469	226,754	12.1	304,664	16.2	1,347,051	71.7
Other non-Hispanic	720,823	NA	NA	110,741	15.4	539,863	74.9
Disability							
Nonelderly disabled adults	863,479	NA	NA	178,819	20.7	596,186	69.0
Nonelderly nondisabled childless adults (18–49)	1,251,366	90,238	7.2	409,756	32.7	751,372	60.0
Education							
Individuals in families with HS graduate	6,988,981	484,697	6.9	932,115	13.3	5,572,169	79.7
Individuals in families with no HS graduate	2,373,398	195,250	8.2	429,328	18.1	1,748,820	73.7
Citizenship							
Citizen	9,014,418	628,283	7.0	1,269,471	14.1	7,116,664	78.9

Characteristic	All Entrants	Entry From Positive-Income Non-SNAP		Entry From Zero-Income Non-SNAP		Entry From Positive-Income SNAP	
	Number	Number	Percent	Number	Percent	Number	Percent
Noncitizen	347,960	NA	NA	NA	NA	204,325	58.7

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Cells are numbers of people with a given characteristic making the transition. Characteristics are measured in the month prior to the transition/entry.

At-risk population for zero-income SNAP entry: Individuals who were ever observed over the course of the SIPP panel to be living in a family whose income was less than 300 percent of the FPL, and who met at least 1 of the following criteria: 1) who are living in families with positive income and 2) who are not receiving SNAP and have not received SNAP for at least 2 months.

NA=Not available due to small sample sizes

Table E.6
Length of Positive-Income SNAP Spells That Precede Zero-Income SNAP Spells by Subgroup

Characteristic	Sample Size	Median Spell Length	Cumulative Exit Rate (Percent)		
			4 Months or Less	12 Months or Less	24 Months or Less
Total Population	1,882	6	41.8	68.7	86.5
Family Composition					
Individuals in families with children	1,584	7	39.5	66.1	85.6
Single parents	320	6	40.8	64.6	83.8
Children of single parents	686	6	41.2	63.1	83.1
Married adults with children	154	8	34.5	73.9	96.8
Children of married adults	214	8	35.7	73.4	.
Individuals in families without children	298	4	52.3	80.9	90.1
Age					
Children (<18)	1,019	7	40.0	64.8	85.9
Nonelderly adults (18–59)	854	6	44.0	73.0	87.7
Elderly (60+)	NA	NA	NA	NA	NA
Sex					
Women (18+)	635	7	39.3	68.9	85.1
Men (18+)	228	4	55.2	83.2	93.4
Race and Ethnicity					
White non-Hispanic	707	6	44.5	73.5	84.3
African-American non-Hispanic	685	7	38.9	63.4	86.5
Hispanic all races	316	5	43.7	70.8	85.5
Other non-Hispanic	174	7	37.5	66.2	.
Disability					
Nonelderly disabled adults	152	6	47.3	68.0	85.2
Nonelderly nondisabled childless adults (18–49)	179	4	52.3	83.2	93.4
Education					
Individuals in families with HS graduate	1371	6	43.0	72.0	89.4
Individuals in families with no HS graduate	511	10	38.2	58.8	79.9

Characteristic	Sample Size	Median Spell Length	Cumulative Exit Rate (Percent)		
			4 Months or Less	12 Months or Less	24 Months or Less
Citizenship					
Citizen	1,835	6	41.8	68.7	86.4
Noncitizen	47	8	40.2	74.8	95.5

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Reference Months 1–31. Cells with less than 30 spells are not presented.

Sample: Positive income SNAP spells that precede zero-income SNAP spells

Subgroups represent characteristics in month before SNAP zero-income spell began.

Estimates are weighted to reflect population characteristics. Weights are normalized by the sample size in the first month to produce proper standard errors.

This table presents the results of a “backward-looking” analysis. The spell starting point is the month prior to the transition into the zero-income SNAP condition, for individuals whose previous status was positive-income SNAP. The analysis counts backwards from this transition point to the beginning of the positive-income SNAP spell. Using this technique, rather than a standard forward-looking approach, allows us to minimize the effects of censoring. Results from a forward-looking analysis of the positive-income SNAP spells that precede zero-income SNAP spells are presented in Appendix C.3. The forward-looking approach, however, estimates duration based on a smaller subset of spells, as it is restricted to complete spells (spells for which the start and end dates are observed), omitting both left- and right-censored spells.

NA=Not available due to small sample sizes

Table E.7
Length of Zero-Income SNAP Participation Spells by Subgroup

	Sample Size (Spells)	Median Spell Length	Cumulative Exit Rate (Percent)		
			4 Months or Less	12 Months or Less	24 Months or Less
Total Population	2,375	3	75.7	94.0	97.9
Family Composition					
Individuals in families with children	1,875	2	76.7	95.1	96.6
Single parents	420	2	74.4	93.9	95.0
Children of single parents	836	3	75.2	95.0	95.6
Married adults with children	176	2	87.1	96.6	.
Children of married adults	229	2	82.7	97.0	.
Individuals in families without children	500	3	72.4	90.8	99.0
Age					
Children (<18)	1,200	2	76.0	95.3	96.6
Nonelderly adults (18–59)	1,155	3	75.6	93.0	98.4
Elderly (60+)	NA	NA	NA	NA	NA
Sex					
Women (18+)	826	3	74.3	93.6	98.0
Men (18+)	349	3	78.0	91.7	99.0
Race and Ethnicity					
White non-Hispanic	923	2	76.3	94.2	100.0
African-American non-Hispanic	799	3	71.8	92.3	96.2
Hispanic all races	428	2	81.8	96.2	98.9
Other non-Hispanic	225	2	73.7	94.1	.
Disability					
Nonelderly disabled adults	230	4	60.9	86.0	100.0
Nonelderly nondisabled childless adults (18–49)	281	3	78.4	93.5	98.8
Education					
Individuals in families with HS graduate	1,753	2	76.8	94.9	98.6
Individuals in families with no HS graduate	622	3	72.4	91.4	94.9
Citizenship					
Citizen	2,293	3	75.5	93.9	97.8
Noncitizen	82	3	80.5	97.9	.

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Reference Months 2–32.

Sample: New zero-income SNAP spells

Subgroups represent characteristics in month before SNAP zero-income spell began.

Estimates are weighted to reflect population characteristics. Weights are normalized by the sample size in the first month to produce proper standard errors.

NA=Not available due to small sample sizes

Table E.8
Exit Rates from the Zero-Income SNAP Condition in an Average Month

Characteristic	All Leavers (Percent)	Exit to Positive- Income Non-SNAP (Percent)	Exit to Zero-Income Non-SNAP (Percent)	Exit to Positive- Income SNAP (Percent)
Total Population	21.9	1.4	1.7	18.8
Family Composition				
Individuals in families with children	23.6	1.4	1.2	21.0
Single parents	22.3	1.6	0.9	19.7
Children of single parents	23.0	1.6	1.1	20.3
Married adults with children	34.0	1.4	1.4	31.2
Children of married adults	31.0	0.7	1.0	29.4
Individuals in families without children	17.2	1.2	3.1	12.9
Age				
Children (<18)	23.1	1.4	1.4	20.4
Nonelderly adults (18–59)	21.0	1.4	2.0	17.6
Elderly (60+)	13.7	0.2	1.7	11.8
Sex				
Women (18+)	21.2	1.3	1.6	18.3
Men (18+)	19.9	1.5	2.9	15.5
Race and Ethnicity				
White non-Hispanic	22.4	1.7	2.2	18.5
African-American non-Hispanic	18.9	0.4	1.1	17.4
Hispanic all races	27.0	2.5	2.1	22.4
Other non-Hispanic	23.6	1.7	2.0	19.8
Disability				
Nonelderly disabled adults	11.9	0.6	1.5	9.9
Nonelderly nondisabled childless adults (18–49)	22.2	1.5	4.7	16.0
Education				
Individuals in families with HS graduate	22.9	1.4	1.6	19.9
Individuals in families with no HS graduate	19.3	1.2	2.1	16.0
Citizenship				
Citizen	21.7	1.3	1.7	18.7
Noncitizen	26.7	4.1	1.7	20.9

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Cells are percent of people with a given characteristic making the transition. Characteristics are measured in the month prior to the transition/exit.

At-risk population for zero-income SNAP exit: Individuals who are 1) living in families with zero-income, and 2) receiving SNAP and have been receiving SNAP for at least 2 months.

Sample: Person-months, reference months 3–31.

Exit rate: Number of individuals at risk of exiting the zero-income SNAP condition who subsequently exit divided by the number of individuals at risk of exit multiplied by 100 to get a percent.

Table E.9
Distribution of the Characteristics of Individuals Who Exit the Zero-Income SNAP Condition

Characteristic	All Leavers	Exit to Positive-Income Non-SNAP		Exit to Zero-Income Non-SNAP		Exit to Positive-Income SNAP	
	Number	Number	Percent	Number	Percent	Number	Percent
Total Population	9,720,186	600,061	6.2	765,676	7.9	8,354,449	85.9
Family Composition							
Individuals in families with children	7,676,918	462,988	6.0	397,615	5.2	6,816,316	88.8
Single parents	1,740,276	NA	NA	NA	NA	1,541,486	88.6
Children of single parents	3,361,786	236,080	7.0	159,361	4.7	2,966,345	88.2
Married adults with children	820,262	NA	NA	NA	NA	752,654	91.8
Children of married adults	900,336	NA	NA	NA	NA	852,229	94.7
Individuals in families without children	2,043,268	137,073	6.7	368,061	18.0	1,538,133	75.3
Age							
Children (<18)	4,806,710	281,083	5.8	285,575	5.9	4,240,052	88.2
Nonelderly adults (18–59)	4,822,713	317,761	6.6	468,593	9.7	4,036,359	83.7
Elderly (60+)	NA	NA	NA	NA	NA	NA	NA
Sex							
Women (18+)	3,388,421	203,177	6.0	258,412	7.6	2,926,832	86.4
Men (18+)	1,525,054	NA	NA	221,690	14.5	1,187,564	77.9
Race and Ethnicity							
White non-Hispanic	3,636,429	281,456	7.7	354,890	9.8	3,000,083	82.5
African-American non-Hispanic	3,286,737	NA	NA	186,181	5.7	3,026,329	92.1
Hispanic all races	2,010,604	187,348	9.3	157,051	7.8	1,666,205	82.9
Other non-Hispanic	786,415	NA	NA	NA	NA	661,831	84.2
Disability							
Nonelderly disabled adults	778,527	NA	NA	NA	NA	644,549	82.8
Nonelderly nondisabled childless adults (18–49)	1,258,033	NA	NA	263,588	21.0	907,154	72.1
Education							
Individuals in families with HS graduate	7,243,199	443,807	6.1	497,385	6.9	6,302,008	87.0
Individuals in families with no HS graduate	2,476,987	156,254	6.3	268,292	10.8	2,052,441	82.9
Citizenship							

Characteristic	All Leavers	Exit to Positive-Income Non-SNAP		Exit to Zero-Income Non-SNAP		Exit to Positive-Income SNAP	
	Number	Number	Percent	Number	Percent	Number	Percent
Citizen	9,304,564	536,873	5.8	738,752	7.9	8,028,940	86.3
Noncitizen	415,622	NA	NA	NA	NA	325,509	78.3

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Cells are numbers or percents of people with a given characteristic making the transition. Characteristics are measured in the month prior to the transition/exit.

At-risk population for zero-income SNAP exit: Individuals who are 1) living in families with zero-income, and 2) receiving SNAP and have been receiving SNAP for at least 2 months.

NA=Not available due to small sample sizes

Table E.10
Length of Positive-Income SNAP Participation Spells That Follow Zero-Income SNAP Spells by Subgroup

Characteristic	Sample Size	Median Spell Length	Cumulative Exit Rate (Percent)		
			4 Months or Less	12 Months or Less	24 Months or Less
Total Population	2,142	8	37.7	63.2	77.8
Family Composition					
Individuals in families with children	1,777	9	35.3	60.9	76.7
Single parents	365	8	36.3	64.0	79.7
Children of single parents	766	8	34.6	60.7	75.4
Married adults with children	199	9	31.6	62.1	71.6
Children of married adults	259	8	37.9	65.8	82.3
Individuals in families without children	365	5	48.7	73.9	83.4
Age					
Children (<18)	1,129	8	35.7	60.5	76.4
Nonelderly adults (18–59)	989	6	40.1	66.5	79.3
Elderly (60+)	NA	NA	NA	NA	NA
Sex					
Women (18+)	727	8	36.1	64.5	78.0
Men (18+)	286	5	48.6	69.3	82.3
Race and Ethnicity					
White non-Hispanic	816	6	44.7	70.9	82.6
African-American non-Hispanic	732	10	31.9	55.1	75.9
Hispanic all races	379	7	35.7	63.8	72.8
Other non-Hispanic	215	7	37.7	62.9	79.4
Disability					
Nonelderly disabled adults	188	11	36.2	53.9	70.2
Nonelderly nondisabled childless adults (18–49)	195	4	55.4	85.0	92.8
Education					
Individuals in families with HS graduate	1,648	7	38.2	64.8	78.2
Individuals in families with no HS graduate	494	10	36.1	58.0	75.7

Characteristic	Sample Size	Median Spell Length	Cumulative Exit Rate (Percent)		
			4 Months or Less	12 Months or Less	24 Months or Less
Citizenship					
Citizen	2,060	7	38.1	63.4	78.2
Noncitizen	82	10	29.5	57.7	69.0

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006

Notes:

Reference Months 2–32.

Sample: Positive income SNAP spells that follow zero-income SNAP spells

Subgroups represent characteristics in month before SNAP zero-income spell began.

Estimates are weighted to reflect population characteristics. Weights are normalized by the sample size in the first month to produce proper standard errors.

NA=Not available due to small sample sizes

APPENDIX F: POLICY ANALYSIS TABLES

Table F.1
SNAP Zero-Income Incidence Conditional on Economic and Policy Conditions

	2001				2004				2008			
	SNAP		Non-SNAP		SNAP		Non-SNAP		SNAP		Non-SNAP	
	Zero-Income	Positive-Income	Zero-Income	Positive-Income	Zero-Income	Positive-Income	Zero-Income	Positive-Income	Zero-Income	Positive-Income	Zero-Income	Positive-Income
Total Population	0.9	14.6	5.5	78.9	1.6	18.9	5.2	74.3	1.9	22.3	6.0	69.9
State unemployment rate:												
<=4%	0.4	13.1	5.5	81.0	0.8	18.3	5.0	75.9	1.4	22.5	4.6	71.5
4-5%	0.9	14.8	5.4	78.8	1.6	16.6	5.4	76.4	1.4	23.6	4.9	70.0
5-6%	1.1	15.1	5.3	78.4	1.8	21.4	4.5	72.3	1.9	24.6	5.8	67.7
6-7%	1.3	12.4	7.7	78.5	1.1	16.3	5.9	76.7	2.4	22.3	6.6	68.8
7+%	NA	NA	NA	NA	2.4	25.0	6.1	66.5	1.6	17.0	6.7	74.7
Simplified income reporting												
State does not have simplified income reporting	–	–	–	–	1.5	18.2	5.6	74.7	1.9	19.1	5.9	73.1
State has simplified income reporting	–	–	–	–	1.6	19.4	4.9	74.0	1.9	23.4	6.0	68.7
Simplified income definitions												
State does not use simplified income definitions	–	–	–	–	1.6	17.7	5.5	75.2	1.9	24.6	5.9	67.6
State uses simplified income definitions	–	–	–	–	1.5	20.6	4.7	73.1	1.9	22.1	6.0	70.0
Broad-based categorical eligibility												
State does not have broad-based categorical eligibility policy	1.0	14.6	5.3	79.1	1.6	18.3	5.2	74.9	1.9	21.0	6.2	70.9
State has broad-based categorical eligibility policy	0.8	14.6	8.2	76.4	1.4	21.6	5.0	72.0	1.9	24.4	5.6	68.0
Child support exclusions												
State includes child support payments in income	–	–	–	–	1.6	18.2	5.2	75.0	2.0	23.2	6.0	68.8
State excludes child support payments from income	–	–	–	–	1.2	23.3	5.0	70.6	1.8	20.9	5.9	71.4
Comparable disqualification												
State does not have comparable disqualification policy	1.0	15.1	5.4	78.6	1.4	18.8	5.1	74.6	1.8	21.5	5.8	70.9
State has comparable disqualification policy	0.9	13.9	5.7	79.6	2.0	19.4	5.4	73.2	2.0	23.6	6.3	68.1
Average certification interval for zero-												

	2001				2004				2008			
	SNAP		Non-SNAP		SNAP		Non-SNAP		SNAP		Non-SNAP	
	Zero-Income	Positive-Income	Zero-Income	Positive-Income	Zero-Income	Positive-Income	Zero-Income	Positive-Income	Zero-Income	Positive-Income	Zero-Income	Positive-Income
income households												
<6 months	1.0	13.7	5.5	79.7	1.6	18.5	5.4	74.5	1.9	22.4	6.3	69.4
6-9 months	1.0	16.7	5.5	76.7	2.0	20.5	4.8	72.8	2.0	23.5	6.1	68.5
9+ months	0.7	14.9	5.3	79.0	0.9	17.0	5.6	76.5	1.8	20.6	5.8	71.8

Source: Weighted tabulations of the 2001, 2004, and 2008 SIPP Panels. ERS FSP Rules Database; FSP/SNAP Options Reports

Note: Estimates are population weighted. Universe includes individuals participating in SNAP or in families with incomes of less than 200 percent of the FPL.

NA=Not available due to small sample sizes

Table F.2
SNAP Zero-Income Entry Rates Conditional on Economic and Policy Conditions

	Entry Rate from All Conditions	Entry Rate from Positive- Income Non-SNAP	Entry Rate from Zero- Income Non-SNAP	Entry Rate from Positive-Income SNAP
Total Population	0.15	0.01	1.21	1.14
State unemployment rate:	0.13	0.01	1.22	1.12
<=4%	0.15	0.01	1.18	1.23
4–5%	0.15	0.01	1.20	1.13
5–6%	0.13	0.01	1.19	0.99
6–7%	0.17	0.01	1.57	1.09
Simplified income reporting	0.12	0.01	1.02	1.03
State does not have simplified income reporting				
State has simplified income reporting	0.16	0.01	1.33	1.18
Simplified income definitions	0.15	0.01	1.34	1.21
State does not use simplified income definitions				
State uses simplified income definitions	0.14	0.01	1.10	1.10
Broad-based categorical eligibility	0.14	0.01	1.16	1.13
State does not have broad-based categorical eligibility policy				
State has broad-based categorical eligibility policy	0.17	0.01	1.41	1.16
Child support exclusions	0.15	0.01	1.22	1.18
State includes child support payments in income				
State excludes child support payments from income	0.14	0.01	1.14	0.99
Comparable disqualification	0.14	0.01	1.17	1.09
State does not have comparable disqualification policy				
State has comparable disqualification policy	0.16	0.01	1.31	1.31
Average certification interval for zero-income households	0.16	0.01	1.14	1.27
<6 months				
6–9 months	0.18	0.02	1.30	1.28
9+ months	0.10	0.01	1.16	0.83

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006; ERS FSP Rules Database; FSP/SNAP Options Reports

Note: Estimates are population weighted. Universe includes individuals ever in families with incomes of less than 300 percent of the FPL at risk of zero-income SNAP entry.

Table F.3
SNAP Zero-Income Exit Rates Conditional on Economic and Policy Conditions

	Exit Rate to All Conditions	Exit Rate to Positive-Income Non-SNAP	Exit Rate to Zero-Income Non-SNAP	Exit Rate to Positive-Income SNAP
Total Population	21.9	1.4	1.7	18.8
State unemployment rate	22.5	1.9	2.2	18.5
<=4%				
4–5%	23.3	1.0	1.6	20.7
5–6%	20.9	1.6	1.9	17.4
6–7%	20.3	1.0	1.3	18.0
7+%	26.9	1.4	1.8	23.8
Simplified income reporting	20.9	1.0	1.9	18.1
State does not have simplified income reporting				
State has simplified income reporting	22.3	1.5	1.7	19.1
Simplified income definitions	24.9	1.4	2.3	21.1
State does not use simplified income definitions				
State uses simplified income definitions	20.0	1.3	1.3	17.3
Broad-based categorical eligibility	21.2	1.2	1.6	18.4
State does not have broad-based categorical eligibility policy				
State has broad-based categorical eligibility policy	24.3	1.9	2.2	20.3
Child support exclusions	22.0	1.3	1.8	19.0
State includes child support payments in income				
State excludes child support payments from income	21.3	1.7	1.5	18.1
Comparable disqualification	21.6	1.3	1.9	18.4
State does not have comparable disqualification policy				
State has comparable disqualification policy	22.5	1.4	1.3	19.8
Average certification interval for zero-income households	20.2	1.6	1.3	17.3
<6 months				
6–9 months	22.3	1.3	1.6	19.4
9+ months	23.3	1.3	2.5	19.5

Source: Weighted tabulations of the 2004 SIPP Panel, October 2003–August 2006; ERS FSP Rules Database; FSP/SNAP Options Reports

Note: Estimates are population weighted. Universe includes individuals ever in families with incomes of less than 300 percent of the FPL at risk of zero-income SNAP exit.



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