

Chapter 1

Introduction and Overview

Christopher J. O’Leary

W.E. Upjohn Institute for Employment Research

David Stevens

University of Baltimore

Stephen A. Wandner

Urban Institute and W.E. Upjohn Institute for Employment Research

Michael Wiseman

George Washington University

Unemployment Insurance (UI) and the Supplemental Nutrition Assistance Program (SNAP) are essential threads in the social safety net for working Americans. These programs were particularly important during and immediately after the Great Recession.¹ Many workers lost their jobs, collected UI benefits, and often also received SNAP benefits. At the same time, many persons in low-income households already receiving SNAP lost their jobs and applied for UI benefits. Annual SNAP benefit payments reached roughly the same scale as the total of all state regular UI benefit payments in the period: nearly \$80 billion was paid in regular UI benefits during calendar year 2009, while just over \$76 billion in SNAP benefits was paid out in 2013.² Both SNAP and UI responded quickly to soaring unemployment, as the numbers of annual SNAP recipients rose from 20 million to 50 million and the numbers of annual UI beneficiaries increased from 10 million to 20 million during the recession.

Many households received benefits from both SNAP and UI during this period, but little is known about the extent of program interaction. Understanding how these programs worked together in the

crisis is necessary for improving policies to address hardship when economic difficulties reemerge. While the two programs have previously been studied separately, this is the first study to use administrative data to look at how these two programs worked together during a period of crisis in the economy and the labor market.

This book is based on analyses of SNAP and UI program benefit receipt around the time of the Great Recession in six states—Florida, Georgia, Maryland, Michigan, Missouri, and Texas.³ These six states span the full range of labor market experience during the Great Recession. Michigan, with an unemployment rate above 7 percent, had still not recovered from the early 2000s recession by December 2007, when the economic decline commenced. At the other extreme, Maryland started the recession in a strong position and was only mildly affected by the economic downturn. Missouri closely matched the pattern of decline and recovery seen in national averages, and the three large states of Florida, Georgia, and Texas all started the Great Recession in strong economic positions, but all three saw rapid declines in economic activity.

The six states also present a diversity of policy contexts. While access to SNAP benefits is governed by federal laws and regulations, SNAP reciprocity rates differ significantly across the six states, suggesting differences in state program administration. Similarly, state laws and regulations governing UI eligibility and benefits encompass a broad range of policy principles, particularly for lower-level earners who might turn to SNAP after job loss. Additionally, data available for analysis allowed us to examine program changes in Florida and Georgia, where there was declining UI generosity, as benefits were reduced during the economic recovery. Our analysis of SNAP in Texas examined the state's policy choice not to fully expand eligibility in all the ways permitted by federal recession recovery legislation. Together, the six states provide a rich context for learning about interactions in SNAP and UI program use.

The state analyses were done using data from before, during, and after the Great Recession. The state studies were not restricted

to a common limited range of data available in all states, because more information was available for some states than others, and all available data were used to examine the SNAP-UI interaction. For example, the Maryland, Georgia, and Texas studies all have a long-enough time frame to distinguish between the early postrecession “jobless recovery” phase and the later more robust recovery period. Furthermore, while the universe of all SNAP recipient households was available for all states, only the Michigan analysis used the universe of all UI applicants, including those who were denied benefits. For most of the states, UI benefit information was available only for SNAP households.

Evidence from the state studies shows that joint usage of SNAP and UI is significant even in good economic times, and that joint usage dramatically increased during the Great Recession. The rate of long-term joblessness increased, and even with substantial temporary extensions in the potential duration of UI benefits, many workers and households suffered food insecurity and turned to SNAP. Additionally, low-income working households already receiving SNAP often turned to UI following job loss. Averaged across the six states studied, UI receipt among SNAP households ranged from 4.5 percent in 2006 to 11.3 percent in 2009. Among UI beneficiaries in Michigan, 7.5 percent were also receiving SNAP at the time of UI application in 2006, and that reciprocity doubled to 15.0 percent by 2010.

While in good economic times there tends to be a smaller overlap between the two programs in benefit receipt, the level of program interaction is noteworthy at all times. SNAP is available only to eligible low-income households, while UI provides temporary benefits during involuntary unemployment to workers with strong labor-force attachments and solid earnings histories.

Data for analysis were drawn from the years before, during, and after the Great Recession—although the precise time periods differed across the six states. This book distills the evidence about how the UI and SNAP programs worked individually and how they overlapped and complemented each other. Changes in the parameters of one pro-

gram may have unintended impacts on the other program. Therefore, the new findings about the recession and postrecession interactions of UI and SNAP participation presented in this book have immediate relevance for public policy formation and program administration.

This introductory chapter proceeds with brief overviews of the UI and SNAP programs and an outline of the way eligibility rules permit the programs to interact. (More detailed examinations of the UI and SNAP programs are given in Chapters 2 and 3.) It continues with a general description of the data available for research and the national context for our state studies. Next, there is a description of the data available for the separate studies, along with contrasts drawn between these various data, followed by a graphical review of the extent of SNAP and UI program use and interaction in the study states. Finally, we present important results from each of the six state studies and offer some summary comments.

A BRIEF OVERVIEW OF THE PROGRAMS

Unemployment Insurance

UI is a federal-state program under which states determine most of the rules for eligibility and the levels and duration of benefits. UI is designed to pay temporary weekly benefits to individual experienced workers unemployed through no fault of their own, usually because of layoffs. In many states, UI benefit levels approximate half of an unemployed worker’s prior wage up to a maximum weekly amount set by the state. For the year ending December 2018, the U.S. average weekly benefit amount was \$356. In good economic times, UI beneficiaries receive only “regular” benefits, for which the maximum potential duration of benefit receipt is usually 26 weeks in most states. During recessions, additional benefit programs may be available. These include the permanent Extended Benefits (EB) Program, which generally pays up to an additional 13 weeks of benefits “trig-

gered” by specified levels of either state-insured employment or total unemployment. During most recessions, Congress enacts temporary emergency programs on top of EB. These temporary programs have had a variety of names, but recently they have been called Emergency Unemployment Compensation (EUC). During and after the Great Recession, there were brief periods during which UI recipients in some states could receive up to 99 total combined weeks of regular UI, EB, and EUC. At any given time, the potential duration of benefits available to individuals depends on state and federal law and the level of unemployment in the state.

UI recipients are required to search for work. They are aided in that search by the provision of reemployment services by the state Employment Service agency. Longer durations of benefits during recessions give UI beneficiaries more time to search for and find jobs. During the Great Recession, exhaustion of entitlement to UI benefits increased sharply, even though EB and EUC were available. As a result, many UI recipients became eligible for SNAP. Chapter 2 describes the UI program in greater detail.

Supplemental Nutrition Assistance Program

SNAP is designed to add food purchasing power to an eligible household’s budget to improve the household’s food security. Access to SNAP benefits starts with an evaluation of a household’s eligibility, based on income limits that increase with the number of eligible household members. These income limits take into account a handful of specific deductions, such as for housing costs and child care. Some states also impose specific asset limits, and some counties require single adults to look for work in order to receive benefits for more than three months. Initial household eligibility is usually set for a fixed period. This duration can be as long as one year for single adults or families and two years for elderly or disabled beneficiaries, although some states set shorter periods. For many households, reporting on basic eligibility conditions is required after half of the initial eligibil-

ity period, or any time there is a nontrivial change in income or assets. Once the initial eligibility period expires, households must complete the full recertification process again. As long as the household-size specific eligibility criteria remain satisfied during reporting and recertification, regular monthly SNAP benefits can continue uninterrupted.

The additional spending power provided by SNAP is restricted to food purchases. In contrast, federal and state UI laws place no restrictions on how UI cash benefits can be used or shared with others. For SNAP, in addition to being restricted to food purchases, there are limitations on the types of food SNAP can be used to buy—and the diversity of allowable items has changed over the years. Furthermore, a SNAP benefit amount cannot be transferred to anyone who is not a defined countable member of the recipient household. The SNAP program is fully explained in Chapter 3.

SNAP-UI Interaction

SNAP and UI affect the household budget very differently. SNAP is paid monthly, while UI is paid weekly. For a household that qualifies for both SNAP and UI, benefits in a month will usually be higher for UI than for SNAP. This stems from the different missions of the two programs—SNAP supplements food-purchasing power for low-income households, and the benefit can only be spent on food at authorized retailers, while UI aims to maintain socially adequate consumption by unemployed labor-force members and provides general purchasing power. Importantly, in determining SNAP eligibility, UI benefits are considered part of household income; but in determining UI eligibility, SNAP benefits are not considered.

Eligibility for SNAP requires net household income to be less than 130 percent of the federal poverty level for a given household size, and the monthly benefit amount can be lower than the federally determined maximum, depending on the level of net income, which has allowances for housing costs, child care costs, and the household contribution to food costs (see examples in Appendix 1A). UI eligi-

bility is not limited by the individual worker's usual income level or the economic activity of any other household members. Rather, UI depends only on two things: 1) prior earnings as a measure of workforce attachment and 2) the reason for the individual worker's job separation. UI benefit amounts increase with the level of prior earnings up to a state-determined maximum weekly benefit amount (WBA).

Within limits, both SNAP and UI can be received in periods when there are also earnings or other nonlabor income. However, added income may reduce benefit payments from both programs. The rates of reductions in program benefits resulting from additional income are referred to as effective marginal tax rates. We explain these rates for SNAP and UI first separately and then together, accounting for program interactions. It is important to note that as nonlabor income, UI benefits affect the SNAP amount differently than an equivalent amount of wage income earned through work.

Effective Marginal Tax Rates in SNAP

The monthly household SNAP benefit will decline with increased labor income at a rate of 24 percent, while added nonlabor income—like UI—will reduce SNAP benefits by 30 percent. These different effective marginal tax rates on income result from SNAP beneficiary households being expected to spend 30 percent of their net income on food—that is, 30 cents of each added dollar of nonlabor income. However, only 24 cents of each added dollar earned by work is to be spent on food, because labor earnings are given a 20 percent deduction before net income is determined for SNAP eligibility.

Over somewhat higher levels of income, the two effective marginal tax rates on SNAP each rise by half, to 36 and 45 percent for income from labor and nonlabor sources. These higher effective marginal tax rates come into force above the income level at which actual shelter costs minus *half* of SNAP countable income equal the maximum allowable shelter deduction. As income rises, the effect of

housing-cost deductions on effective marginal tax rates declines. The jump to a higher effective marginal tax rate through SNAP occurs at a lower level of gross nonlabor income than labor income, because nonlabor income is not given the 20 percent earnings deduction.

Effective Marginal Tax Rates in UI

Once initially eligible for weekly UI benefits, nonlabor income such as SNAP does not affect the weekly UI benefit paid. The full entitled UI weekly benefit amount when someone is involuntarily unemployed is based on prior earnings, and that amount is paid unless there are labor earnings reported for a week of benefits claimed. All states have a definition of earnings that qualify for a partial UI payment. Many states have only an initial earnings disregard amount, after which earnings reduce benefits dollar for dollar.⁴ Five of our study states have only initial UI earnings disregards. The initial earnings disregards in Georgia and Maryland are \$50, in Florida \$58, in Missouri 20 percent of the WBA, and in Texas 25 percent of the WBA. Several states have both an initial earnings disregard and a benefit reduction rate of less than 100 percent on earnings above the disregard. Michigan does not have an initial earnings disregard but reduces UI benefits by 50 cents for every dollar of earnings reported up to the WBA, beyond which the benefit reduction rate is 100 percent.

Effective Marginal Tax Rates Combining SNAP and UI

Both SNAP and UI require that beneficiaries actively seek work and accept suitable work offered to them. Increasing income from work can affect benefits from both SNAP and UI, and the combined effective marginal tax rates on earnings can vary widely and encompass a range from 0 to 100 percent.⁵ Over no range of earnings is the combined SNAP and UI effective marginal tax rate either less than zero or greater than 100 percent.

For a Michigan UI beneficiary, when labor earnings increase, the marginal tax rate on UI benefits is initially 50 percent and rises to

100 percent when labor earnings reach the WBA. Over this range of earnings for a Michigan UI recipient who is also eligible for SNAP and who is single with two children, the SNAP-UI effective marginal tax rate is 59 percent. This rate is the sum of a 50 percent reduction in UI benefits and a 9 percent reduction in SNAP benefits.⁶ As labor income continues to increase, the effective marginal tax rate on labor earnings next increases to 63.5 percent. This rate is the sum of a 50 percent reduction in UI benefits and a 13.5 percent reduction in SNAP benefits when the SNAP shelter-cost deduction begins to erode. As labor income rises past the WBA, the effective marginal tax rate on labor earnings rises to 91 percent. This rate is the sum of a 100 percent reduction in UI benefits and a 9 percent increase in SNAP benefits. This occurs as labor earnings are offset dollar for dollar by declines in nonlabor income from UI, so that one would expect a net change in income of zero. However, labor earnings receive a 20 percent deduction for SNAP determination, meaning that countable income falls and SNAP benefits rise.⁷ Michigan UI benefits end when labor earnings reach 1.5 times the WBA, so that all household income above this level is only labor earnings. In our Michigan example, after UI ends and earnings continue to increase, the SNAP benefit reduction rate becomes 36 percent, and this is the effective marginal tax rate. As earnings increase, the monthly SNAP payment declines until SNAP is zero when 30 percent of net monthly earnings equals the household full SNAP benefit. For earnings above this level, total income is equal to earnings, and neither SNAP nor UI benefits are received.⁸

Among the five study states with only an initial earnings disregard for UI, Texas provides a good example of effective marginal tax rates for SNAP-UI interaction because it has the biggest initial earnings disregard (see Appendix 1A). The pattern of effective marginal tax rates in these five states depends on whether the beneficiary is normally a relatively low earner or high earner.

A single parent with two children who normally works full time in Texas at a minimum-wage job and becomes involuntarily unemployed could receive both UI and SNAP (see example in Appendix

1A). Earnings below 25 percent of the parent's UI WBA would not affect either SNAP or UI benefits, but above that level UI is reduced dollar for dollar. Our simulation in Appendix 1A suggests that just before labor earnings reach the UI disregard, the effective marginal tax rate on labor earnings rises to 24 percent through a SNAP benefit reduction. Then, at slightly higher weekly earnings, UI benefits are reduced dollar for dollar, but SNAP is restored by 6 percent because nonlabor income is reduced as labor earnings increase, so the combined effective marginal tax rate is 94 percent. The combined effective marginal tax rate rises to 100 percent once SNAP is restored to the full monthly entitled benefit and remains at 100 percent until earnings are 125 percent of the WBA. The marginal effective tax rate then falls to zero until labor earnings rise to the maximum allowed by SNAP, given the assumptions about housing, child care, and other expenses. Above that level, SNAP declines by 24 cents for each additional dollar earned. Then, as earnings rise and the housing allowance begins to erode, SNAP declines by 36 cents per dollar earned until the SNAP grant falls to zero.

For a Texas example of a higher earner, consider a single parent of two who normally works full time, earning double the minimum wage. Both SNAP and UI would be payable when this person is involuntarily unemployed (Appendix 1A). As this worker gradually increases hourly earnings, the range of marginal effective tax rates would be limited to first 36, then 91, and finally 36 percent after UI entitlement ends, before falling to zero as SNAP entitlement ends.

Large and Variable Effective Marginal Tax Rates

Beneficiaries receiving both SNAP and UI at the same time face a large and widely varying range of marginal effective tax rates. Because of the different treatment of labor and nonlabor income in SNAP, additional earnings from work affect total household resources differently over different earnings ranges.

Other things being equal, because of the UI benefit reduction formula, joint SNAP-UI benefit receipt in Michigan reaches higher into the income distribution than in the other five states. The things held equal in this comparison include the household composition, the housing expense, and the level of base period earnings. Our discussion of SNAP and UI benefit interactions abstracts from several factors, including state income taxes, payroll taxes for social insurance, and the Earned Income Tax Credit. The aggregate scales of simultaneous SNAP and UI receipt in the states studied in this book reflect not only the differing SNAP and UI program rules for each state, but also the levels of unemployment and opportunities for reemployment.

In all six states studied for this book, the range of simultaneous SNAP and UI benefit receipt is longer for lower-wage earners than for higher-wage earners. As earnings recover from full unemployment, SNAP benefits end earlier than UI benefits for an adult who usually has higher wages, while UI benefits end earlier than SNAP benefits for an adult who usually has lower earnings. This pattern is particularly pronounced in states having UI partial benefit formulas with only an earnings disregard and a 100 percent benefit reduction rate after the disregard. This is the case for most U.S. states, and for all the states studied in this book except Michigan.

The examples discussed in this section describe the marginal effective tax rates an individual would face if his or her labor earnings increased. A more practical interpretation is the array of marginal effective tax rates that the full range of program participants would encounter by having different income and earnings at the time of benefit determination. Furthermore, the amount of UI received can change from week to week depending on earnings, but the amount of monthly SNAP benefits is usually only recomputed every six months. Nonetheless, when considering the interaction of SNAP and UI, it is important to recognize that marginal effective tax rates on additional earnings can range between zero and 100 percent, depending on initial entitlements and current labor and nonlabor income.

CONTEXT OF OUR ANALYSIS

Two features distinguish the research presented in this book about interactions between SNAP and UI: 1) the data available for investigation and 2) the dramatic change in economic events during the period studied. To set the stage for our exposition, we describe the data used by our state research teams, then we present national- and state-specific descriptions of the labor market crises, the level of SNAP and UI program use, and the degree of program interaction.

Data Coverage in the Six State Studies

The data sets available for all six states each cover all 19 months of the Great Recession. The time period the data cover ranges before and after these core months, and the period covered differs among the states. Researchers for each state requested data covering the maximum period available around the Great Recession. Three main administrative data systems accessed in all states were these: 1) UI applications and benefit payments, 2) SNAP applications and benefit payments, and 3) UI quarterly wage records. The application data provide demographic and geographic characteristics, and the benefit payment data give the levels of support provided. The UI wage records provide quarterly earnings context to benefit receipt from both programs. The data provided by states differed greatly in variables provided and time period—the latter is summarized in Table 1.1.

A key issue relating to the time period for the data is the fact that unemployment remained high well after the official end of the Great Recession in June 2009, and extended benefits remained in effect until the end of 2013. With currently available data, the effects of these and other postrecession changes in both the UI and SNAP programs can be observed in only a few of our study states. As a result, there are lessons that can be learned about the return to relative normality only if data are extended until 2014 and beyond. Three states examine SNAP and UI after 2013: 1) Georgia, with data into 2014 and 2015;

2) Maryland, with data through 2015; and 3) Texas, with data through 2014. The Georgia analysis team is the only group that split the post–Great Recession period into a period of jobless recovery and a period of normal job recovery; the latter finally emerged in 2013 and 2014. Therefore, the Georgia investigation provides complete information about the SNAP and UI return to prerecession levels.

Table 1.1 Data Coverage: Timing of SNAP and UI Data

State	UI benefits		UI wage records		SNAP benefits	
	Begin date	End date	Begin date	End date	Begin date	End date
Florida	July 2007	Apr 2012	2007 Q3	2012 Q2	July 2007	Apr 2012
Georgia	Jan 2006	Sept 2015	2006 Q1	2015 Q3	Oct 2004	July 2014
Maryland	Jan 2009	Dec 2015	2009 Q1	2015 Q4	Jan 2009	Dec 2015
Michigan	Jan 2001	Dec 2010	1997 Q3	2010 Q3	Jan 2006	Aug 2011
Missouri	July 2007	Dec 2011	2007 Q3	2011 Q4	July 2007	Dec 2012
Texas	Oct 2002	Apr 2014	2001 Q1	2014 Q3	Oct 2002	Sep 2014

SOURCE: This table summarizes the differing time ranges of three categories of program administrative data provided by state agencies to the research teams.

Availability of UI Application Data

Not all applicants for UI eventually receive UI benefits. Some applicants do not have enough recent prior earnings, so they are not monetarily eligible. Other applicants may have sufficient earnings, but they are found ineligible because of the nature of their job separation, especially if they quit rather than being laid off, in which case they are found “nonmonetarily ineligible” for UI benefits. These groups of applicants—eligible, monetarily ineligible, and nonmonetarily ineligible—have different economic and demographic characteristics. As a result, we would expect each group to have a different experience with respect to whether they become SNAP participants. Among our six study states, only the Michigan team used UI applicant data for analysis of UI and SNAP interactions. Researchers for most of the other states only had access to UI payment data among SNAP beneficiaries. Texas had a universe of UI payment data but not UI applicant data.

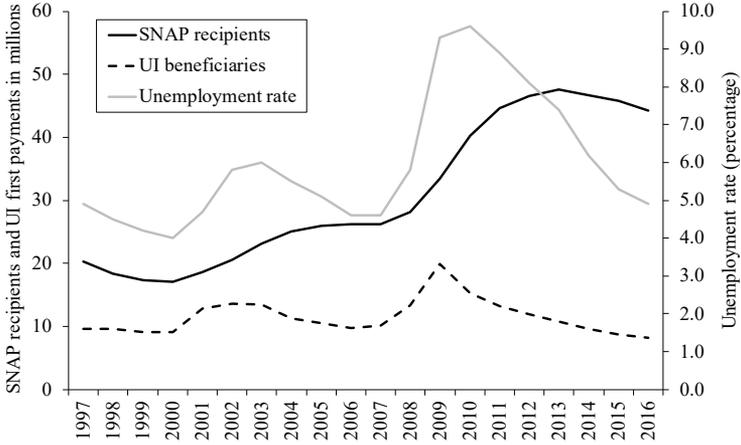
In Chapter 8, using Michigan data, Christopher J. O'Leary is able to show the effects of two things: 1) varying levels of prior earnings among unemployed workers who applied for UI and 2) the reason for their separation from employment. The analysis suggests that lower prior earnings are associated with a higher probability of receiving SNAP. O'Leary reports on the proportion of UI applicants who had SNAP before, at the time of, or after UI application and how those proportions differ by the degree of UI monetary and nonmonetary eligibility. He finds that UI applicants are most likely to receive SNAP benefits if they had weak attachment to the labor force (i.e., found not to be monetarily eligible) or quit their job or were fired (i.e., found not to be nonmonetarily eligible). By contrast, UI applicants were least likely to collect SNAP if they collected UI benefits but did not exhaust their regular UI entitlement.

Unemployment Rates and Program Benefit Receipt

The core time frame for analysis of SNAP and UI interactions is from 2006 to 2010. This time frame includes several months before and after the official period of the Great Recession, defined as lasting from December 2007 to June 2009. Figure 1.1 charts the national annual average of monthly unemployment rates, measured on the right vertical axis, against the numbers of SNAP and UI recipients, measured on the left vertical axis. The graph shows unemployment declining gradually after the early 2000s to reach about 4.5 percent in 2006, then rising dramatically to 9.6 percent in 2010. For every year displayed in the graph, SNAP had three to four times as many recipients as UI, and the numbers of benefit recipients in both programs follow a pattern generally similar to the unemployment rate. However, the SNAP peak (47.6 million SNAP recipients in 2013) lags behind the unemployment peak by about four years, while the UI peak (19.9 million UI beneficiaries in 2009) nearly coincides with the unemployment peak.

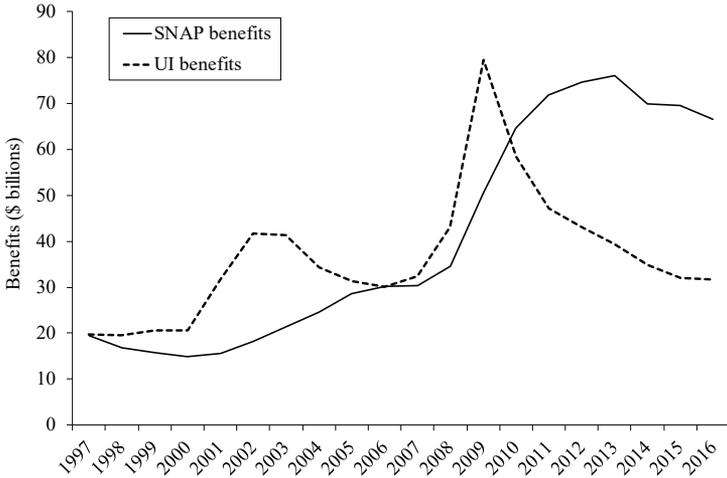
Total nationwide expenditures on SNAP and regular UI are presented in Figure 1.2. The scale of the two programs is about the same.

Figure 1.1 SNAP Recipients, New UI Beneficiaries, and Unemployment Rate in the United States, 1997–2016



NOTE: Amounts in nominal dollars.
SOURCE: USDA (2017); USDOL (2017).

Figure 1.2 National Totals for SNAP and Regular UI Benefits, 1997–2016

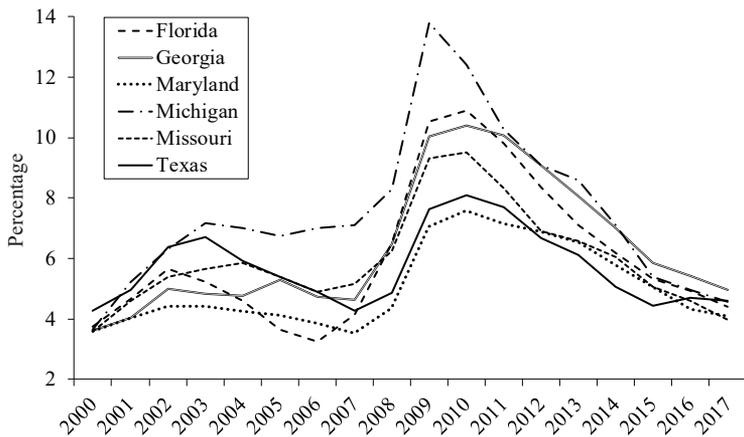


SOURCE: USDA (2017); USDOL (2017).

Expenditures for both programs were about \$20 billion annually in 1997. Regular state UI expenditures peaked at nearly \$80 billion in 2009, while SNAP spending reached just over \$76 billion in 2013. Both programs appear to respond automatically to changes in unemployment, but UI program expenditures respond much more quickly than SNAP, particularly in the downward direction after cyclical peaks in unemployment.

Unemployment in our six study states follows the same general pattern as the national average, but there are important differences in the patterns among the states. Figure 1.3 shows that Michigan had not yet recovered from the early 2000s recession before the onset of the Great Recession in late 2007, and among our states Michigan reached the highest rate—nearly 14 percent on a seasonally adjusted basis in 2009. Unemployment in the five states except for Michigan had declined during the early 2000s to new minimums by 2007, and all these states later peaked again in 2010. Among the six states in this period, Michigan had the worst labor market experience, while Mary-

Figure 1.3 Annual Average Unemployment Rates by State from Seasonally Adjusted Monthly Data, Jan. 2000–Oct. 2017

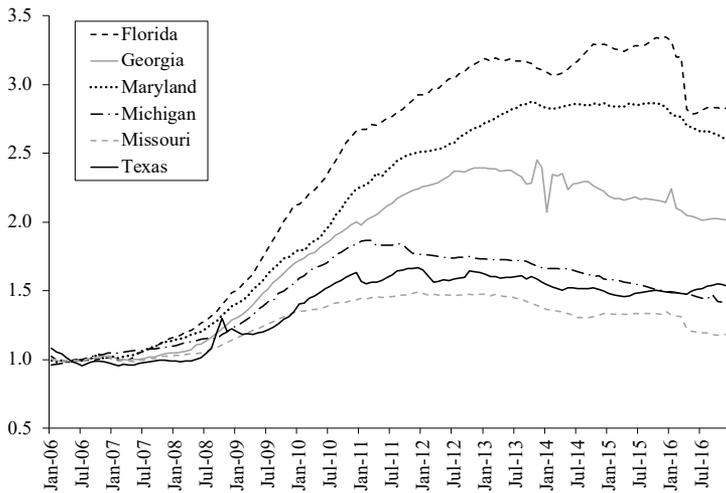


SOURCE: BLS (2017).

land had the best. As shown in Figure 1.3, Maryland had the lowest peak unemployment at under 8 percent.

To examine trends in SNAP beneficiaries over time, Figure 1.4 sets January 2006 equal to one as the base period of an index to compare all six states on the number of SNAP households. Between 2006 and 2010, the biggest increases in the index are seen in Florida, where

Figure 1.4 Monthly SNAP Households by State, 2006–2016, Indexed to January 2006 = 1.000

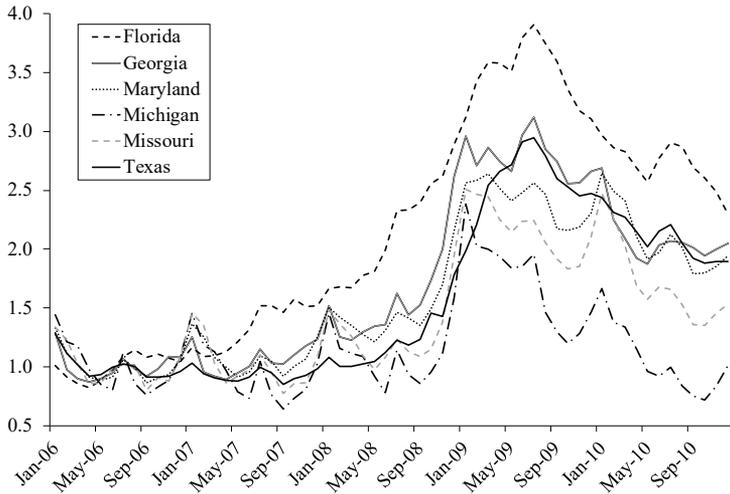


SOURCE: USDA (2017).

the index reaches 2.6, Maryland (2.2), and Georgia (2.0); Michigan, Texas, and Missouri showed smaller increases over the period.

Figure 1.5 presents the counts of UI beneficiaries in each of the six states indexed to January 2006 equal to one. Over the period January 2006 to July 2009, this index shows that the number of UI beneficiaries increased the most in Florida (3.9). After starting at the highest unemployment rate in 2006 (Figure 1.3), Michigan (2.0) showed the smallest increase in UI beneficiaries over the same period.

Figure 1.5 Monthly UI Beneficiaries by State, 2006–2010, Indexed to January 2006 = 1.000



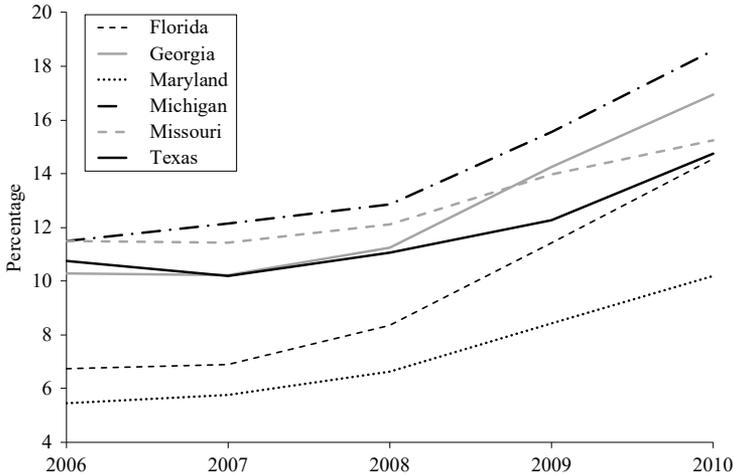
SOURCE: USDOL (2017).

By July 2009, the numbers of UI recipients in Georgia and Texas roughly tripled, while the increases in Maryland and Missouri more than doubled.

Based on published federal reports, Figure 1.6 shows that SNAP recipients, as percentages of state populations, increased in all study states from 2006 to 2010. The biggest relative increase over the period occurred in Florida, where the SNAP recipient rate rose from 7 percent in 2006 to over 14 percent in 2010. Most of the states stayed in the same rank order over the entire period. The exception was Georgia, which moved from the fourth-highest to the second-highest percentage of SNAP reciprocity. Among the six states, average annual SNAP receipt in the population rose from 9.4 percent in 2006 to 15.2 percent in 2010.

Figure 1.7 shows UI benefit reciprocity from 2006 to 2010 as a percentage of state populations. Michigan’s rates were the highest;

Figure 1.6 SNAP Recipients as Shares of State Populations, Monthly Averages, 2006–2010

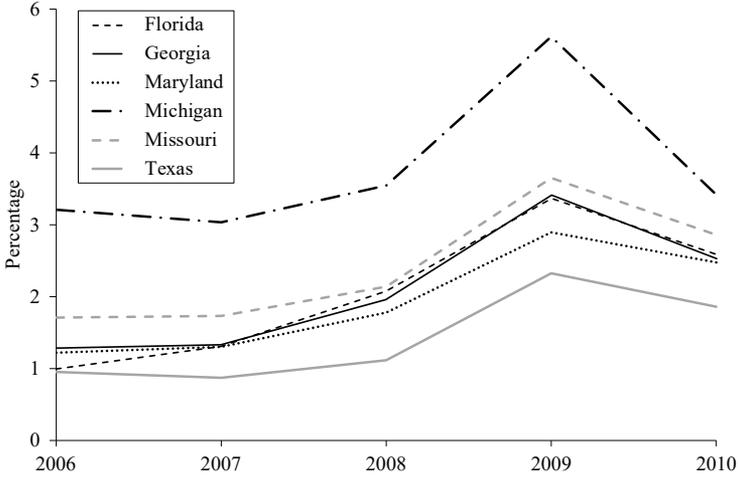


SOURCE: USDA (2017); U.S. Census Bureau (2017).

they rose from 3.0 percent of the adult population in 2006 to about 5.5 percent in 2009 before declining sharply to 3.5 percent in 2010. The population reciprocity rate in the other five states followed the same pattern as in Michigan but was lower. In all years, the lowest rates occurred in Texas. The average rate across the six states ranged from 1.4 percent in 2006 to 3.3 percent in the peak reciprocity year of 2009.

A commonly used measure of UI reciprocity is beneficiaries as a percentage of all unemployed persons. By this measure, Figure 1.8 shows that Michigan had the highest UI reciprocity rate among the six states during the period of the Great Recession, although the Michigan rate declined every year from 2006 on and dropped sharply in the first year of the economic recovery, as fewer newly laid-off workers applied for benefits. Over this period, Texas had the lowest reciprocity rate. The average reciprocity rate among the six states ranged from 37.6 percent in 2006 to 43.8 percent in 2009.

Figure 1.7 UI Recipients as Shares of State Populations Aged 18–64, Monthly Averages, 2006–2010

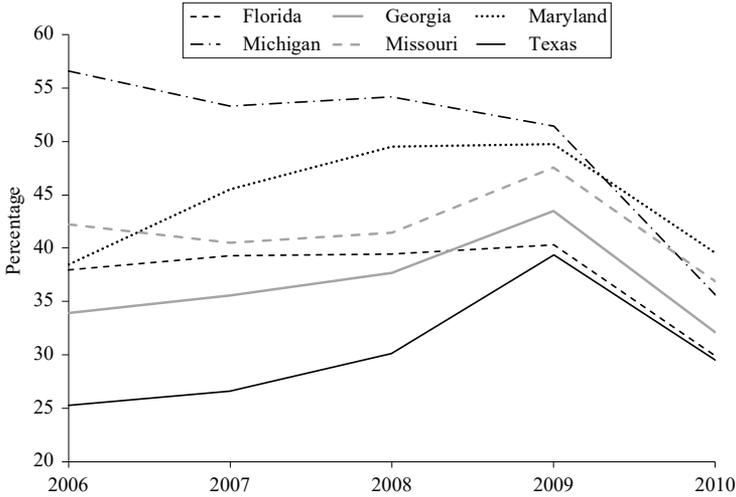


SOURCE: USDOL (2017); U.S. Census Bureau (2017).

The joint program benefit receipt rate among six states from 2006 to 2009, based on state administrative data, is shown in Figure 1.9. Among all SNAP recipients in each state, the percentage of those also receiving UI is charted in the figure. As UI receipt increased, the percentage of SNAP recipients also receiving UI increased every year in all five states over the period from 2006 to 2009. Michigan had the highest percentages from 2006 to 2008, with between 8 and 11 percent of SNAP adult recipients receiving UI benefits too. Florida experienced the biggest increase from 2006 to 2009, as its UI recipient percentage rose from 3.5 to 13.5 percent among all SNAP adult recipients. For the six states, the average percentage of UI recipients among adult SNAP recipients increased from 4.5 percent in 2006 to 11.3 percent in 2009.

For Michigan, between the years 2006 and 2010, Figure 1.10 summarizes the percentage of SNAP recipients among all UI benefi-

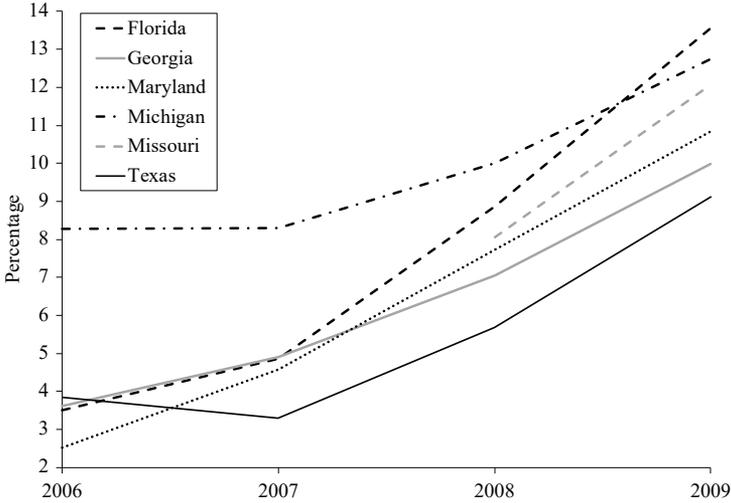
Figure 1.8 UI Recipients as Shares of State Unemployed, Monthly Averages, 2006–2010



SOURCE: USDOL (2017); BLS (2017).

ciaries for different time periods relative to the UI application date. The solid line at the bottom shows that, in the month of UI application in 2006, 7.5 percent of UI beneficiaries in Michigan were also in SNAP recipient households, and that this percentage increased each year, reaching 15 percent in 2010. The dotted line shows that for every year in the graph, the percentage of UI beneficiaries who had received SNAP in the 12 months prior to UI application was about 5 percentage points higher than the percentage receiving SNAP in the month of UI application. The percentage receiving SNAP within one year after UI application was about 10 percentage points higher than the rates of receipt at application for UI benefits, and within two years after UI application, the SNAP receipt rate was higher still, reaching 29 percent in 2008.⁹ Essentially, the results show that about 10 percent of UI beneficiaries were receiving SNAP when they applied for UI.

Figure 1.9 Shares of SNAP Recipients Aged 18–64 with UI Receipt in the Same Month, by State 2006–2009



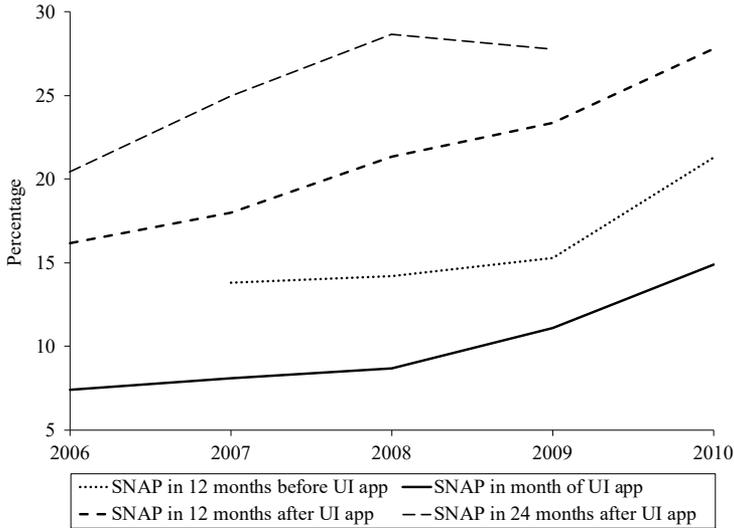
SOURCE: Author’s calculations from state SNAP and UI program administrative data.

This is about 5 points lower than the percentage who received SNAP in the year before UI application, and 10 and 15 points lower than the percentages of UI beneficiaries receiving SNAP within one and two years of UI application, respectively. What this means is that SNAP receipt by UI beneficiaries was not insignificant, and it increased substantially during the Great Recession.

LESSONS FROM PRIOR RESEARCH

A review of the prior research on SNAP-UI program interaction is found in Chapter 4 as a prelude to the six state studies discussed in Chapters 5 through 10. It serves as a contrast to these later studies, in that the prior research was based mainly on general household survey data from the Current Population Survey (CPS) or the Survey

Figure 1.10 Shares of Michigan Regular UI Beneficiaries Aged 18–64 Who Received SNAP before, during, and after UI Application



SOURCE: Author's calculations from Michigan SNAP and UI program administrative data.

of Income and Program Participation (SIPP). These studies involved relatively small and geographically dispersed samples of SNAP and UI program participants.

Evidence from prior studies suggests that the liberalization of SNAP policy since 2001 led to steady increases in SNAP participation. However, during the Great Recession, policy liberalization appears to have been less important in driving program participation than economic conditions. The surge in SNAP participation during the Great Recession built on a prerecession trend. The relaxation of strict time limits on SNAP beneficiaries who are able-bodied adults without dependents (ABAWDs) contributed to increased SNAP participation in the Great Recession. SNAP also played a greater role in income support for UI recipients during the Great Recession than was

observed in the 2001 recession, and its importance increased with UI exhaustion. SNAP receipt surged with the rise in joblessness during the Great Recession, but the prior literature does not address the pattern of SNAP receipt in a recovery.

The previous studies informed the topic of joint benefit receipt but left many questions unanswered. The deeper analysis of SNAP and UI usage in the six state studies in this book illuminates the previously documented recession trends and provides evidence on post-recession outcomes. Brief summaries of the state studies are provided next, followed by a synthesis of the new evidence from these studies.

LESSONS FROM THE SIX STATE STUDIES

Florida

The Great Recession induced significant changes in patterns of both SNAP and UI receipt in Florida. In Chapter 5, authors Colleen Heflin and Peter Mueser note that the share of SNAP recipients also receiving UI increased, and reliance on SNAP became secondary for many of these households. However, since UI eligibility rests on work history and employment separation status, many disadvantaged households receiving SNAP were not eligible for UI benefits. That the growth in the SNAP recipients was more than three times greater than the growth in the number of joint SNAP-UI recipients makes clear the significant limits to the cushion provided by UI to disadvantaged individuals facing economic distress.

Evidence from Florida suggests important limitations to the role of UI in helping those at the bottom of the income distribution, most of whom weathered the recession with SNAP alone. Noteworthy results from the Florida analysis include the following:

- SNAP and UI caseloads increased more dramatically in Florida than in the United States as a whole.

- The large growth in joint SNAP-UI receipt was driven mainly by increasing UI usage among new SNAP entrants.
- The percentage of households consisting of able-bodied adults without dependents (ABAWDs) among all SNAP households in the Florida study group more than doubled during the Great Recession, from 20 percent to 42 percent.
- Characteristics of households on SNAP changed dramatically as a result of the Great Recession: the proportions of male-headed households and white households increased, while there were declines in the proportions of households with children, individuals with disabilities, and African Americans.
- For households receiving them, UI benefits were of substantially higher value than SNAP benefits, despite Florida's low maximum UI benefit amount.

Georgia

In the Georgia evaluation, Chapter 6, authors Lakshmi Pandey, Peter Bluestone, Alex Hathaway, Sarah E. Larson, and Erdal Tekin used data spanning a longer time period than was available in most of the other study states. This allowed evaluation of recession impacts in the Great Recession as well as during the intermediate and protracted long-term recovery periods in Georgia. Trends in usage during the Great Recession were similar for both SNAP and UI, but SNAP was used by considerably more Georgians than UI. Joint SNAP-UI recipients represented only a small portion of the total SNAP population, but UI provided substantially larger benefits than SNAP. While UI and joint SNAP-UI participation quickly returned to prerecession levels, SNAP participation remained elevated well above prerecession levels after the recession bottomed out. Several factors contributed to this pattern.

First, UI benefits are available only for a limited time, while SNAP benefits are normally not time limited. Second, in July 2012, Geor-

gia reduced the maximum potential duration of UI benefits from 26 weeks to a sliding scale ranging between 14 and 20 weeks, depending on the level of state unemployment. Third, in January 2014, extended and Emergency Unemployment Compensation for persons exhausting regular UI benefits expired. Finally, some job creation reduced the UI recipient population, but in some cases the new jobs paid less than recipients had earned before, leaving many still eligible for SNAP benefits. Conclusions of the Georgia study included the following:

- Joint SNAP-UI receipt was a small portion of total SNAP receipt.
- UI receipt and joint SNAP-UI receipt declined faster than SNAP-only receipt.
- Older SNAP beneficiaries became a larger percentage of the SNAP population during the recession.
- By 2015, the total SNAP recipient population had declined.
- Older SNAP recipients remained a larger share of beneficiaries during the recovery.

Given the evidence and change in the Georgia program environment, Chapter 6 authors Pandey et al. also offered speculation about what might happen in the next recession:

- Many Georgians will return to UI and SNAP.
- Shorter potential UI duration in Georgia will speed up the move from UI to SNAP.
- There will be a larger reliance on SNAP than on UI.
- More federal support through SNAP and EUC will be needed.

Maryland

The Great Recession was milder in Maryland than in other states. However, the state unemployment rate was around the national average during the recovery. The Maryland SNAP caseload increased

faster than the national caseload through 2015. This trend may reflect increased SNAP benefit amounts, relaxed eligibility conditions, and increased outreach efforts by the Maryland Department of Human Resources, say authors Ting Zhang, Susan Christiansen, and Jing Li in Chapter 7.

The Maryland SNAP and UI beneficiary populations differed in postbenefit earning patterns. Less than half of the 950,000 adult SNAP recipient households had income from employment after receiving benefits, compared to over 90 percent for UI households. Nonetheless, more than one-quarter of individuals who received some UI benefits also received SNAP benefits, suggesting that they had either no job or a low-wage job that allowed eligibility for SNAP.

Maryland households receiving both SNAP and UI were among the most disadvantaged. They qualified for weekly UI benefit amounts that were so low they could still qualify for SNAP. Adults in such households were more likely to be single, younger, female, to have children, to have completed only a secondary or lower education level, to have low earnings, and to be minority and/or Hispanic. Among these households, average earnings were highest for the 31- to 45-year-old age group, but even for this group, average earnings were still below the federal poverty level for a household of two. On the other hand, those who received UI benefits before SNAP had higher average earnings levels and did not qualify for SNAP before exhausting their UI benefits. Some of the main results from the Maryland analysis were as follows:

- Many UI benefit exhaustees drew SNAP benefits as a last resort.
- Two years after starting SNAP benefits, only about one-quarter of recipients reported earnings.
- Two years after starting UI benefits, about one-third were employed and another one-third were receiving SNAP.
- The Maryland SNAP population increased after the recession and remains stubbornly high.

Michigan

In the Michigan analysis, which forms Chapter 8, author Chris O'Leary focuses on rates of SNAP receipt among UI applicants between 2007 and 2010 by the degree of UI eligibility and the duration of UI receipt. In that period, the rates of SNAP receipt in the year before UI application were 20.2 percent among all UI applicants and 15.8 percent among all UI beneficiaries. Excluding those who received SNAP anytime in the year before UI application, average rates of SNAP receipt in the year after UI application were 13.0 percent among all UI applicants and 11.1 percent among UI beneficiaries. Within two years after UI application, the SNAP receipt rates were about 5 percentage points higher in each category.

Among UI beneficiaries, those who exhausted UI entitlement and got extended or emergency UI benefits had higher rates of SNAP receipt than those who did not exhaust regular UI. From 2007 to 2010, the rates of SNAP receipt among UI applicants increased by 50 percent in the year before UI application, 80 percent in the month of UI application, and 150 percent in the year after UI application. The biggest year-to-year increase for all measures was from 2009 to 2010. In models controlling for UI eligibility, entitlement, and other observable variables, O'Leary observed the following:

- There were no differences between urban and rural areas in rates of SNAP receipt among UI beneficiaries.
- SNAP receipt rates among UI beneficiaries decreased with increasing tenure in the prior job, with age of the beneficiary, and with prior earnings level as measured by the UI weekly benefit amount (WBA).
- In Michigan, 28.1 percent of those who received SNAP within a three-year period around their UI application qualified for the state maximum UI weekly benefit amount.
- SNAP usage among Michigan UI beneficiaries reached well up into the income distribution during the Great Recession.

Simple unadjusted comparisons between UI beneficiaries and nonbeneficiaries suggest that being a UI beneficiary reduces the rate of flow into SNAP receipt by about 6 percentage points. Controlling for differences in observable characteristics, the estimated reduction is about 3 percentage points.

Effective as of January 2012, the maximum potential UI duration in Michigan was cut from 26 to 20 weeks. Simulations estimated that this cut in UI duration would increase SNAP receipt by 2.6 percentage points within two years of UI application. Consequently, any effect of UI reducing the flow into SNAP would be diminished. This suggests that federal responsibilities for income replacement through SNAP would increase relative to the state employer-financed responsibilities through UI. However, recent federal cuts to SNAP mean that the program will not address needs of the unemployed at the same level as during the Great Recession.

Missouri

In Missouri, the onset of the Great Recession induced expected changes in the size and character of the SNAP and UI caseloads, but during the subsequent recovery, the return to prior patterns has been uneven. Even during the recession, most Missouri SNAP recipients retained strong connections to the labor market. And while the recession led to a dramatic growth in the overlap of SNAP and UI, the programs fell far short of providing a meaningful social safety net in the face of financial hardship caused by the economic downturn. Following are some lessons from the Missouri analysis, put forth by authors Heflin and Mueser in Chapter 9.

- The recession led to a dramatic increase in the joint use of SNAP and UI.
- The percentage of SNAP households receiving UI increased from 3 percent to over 10 percent.
- The percentage of UI recipients receiving SNAP increased

from around 20 percent to nearly 25 percent as the number of UI recipients tripled.

- The characteristics of SNAP recipients in Missouri changed in expected ways because of the recession, but we do not observe a return to the prior characteristics in the period of recovery.
- Most Missouri SNAP recipients aged 18–64 were strongly connected to the labor market.
- The SNAP and UI programs fell short of being a complete social safety net for Missouri families during the economic downturn.
- Although UI provided important benefits to many families receiving SNAP, a large share of families facing financial hardship during the economic downturn relied exclusively on SNAP.

Texas

The Texas research examined SNAP and UI and discovered four benefit receipt patterns encompassing the years of the Great Recession:

- 1) UI-only recipients had the highest earnings and best recovery.
- 2) UI-before-SNAP beneficiaries had prior earnings nearly as high but slower earnings recovery.
- 3) SNAP-before-UI recipients had lower earnings and very slow earnings recovery.
- 4) SNAP-only recipients had the lowest earnings and little recovery after program benefits.

Chapter 10 authors Daniel Schroeder and Ashweeta Patnaik suggest that small changes in the timing or sequencing of benefits have significantly different effects on reemployment and earnings suc-

cess. The authors also found that program use in the jobless recovery period was more similar to the recession period than to the prerecession period. Furthermore, they found that the absence of benefits in periods of hardship can severely hinder later employment and earnings success.

The Texas study also closely examined the Great Recession-era experience of SNAP beneficiaries who are ABAWDs. The ABAWD research focused on the limited pursuit by Texas of available federal waivers on the strict SNAP-benefit time limits for ABAWDs. The authors concluded the following three things: 1) hardship could have been reduced for ABAWDs, had waivers relaxed time limits; 2) additional federally funded SNAP payments would not have cost the state anything; and 3) SNAP and UI recipients recover prior earnings levels faster when receiving benefits quickly from both programs upon experiencing job loss or other economic stress. Texas did not actually have a lower rate of ABAWDs than other states, but it did have shorter benefit durations among ABAWDs. Schroeder and Patnaik offered further policy guidance:

- Policies should aim to explicitly link SNAP and UI more closely.
- More joint benefit receipt is needed under recessionary conditions.
- A jobless recovery period presents a policy context that is distinct from prerecession or expansionary periods.
- Special services are needed for those who lag in earnings recovery during the early recovery.
- States can avoid unnecessary hardship when federal funds are available.
- Future research should further investigate evidence that hardship is not a spur to success, but rather, it can delay employment and earnings recovery.

Synthesis of the State Lessons

At the start of the Great Recession in late 2007, the labor markets in the six states varied. The labor market was worst in Michigan and best in Maryland. By the official end of the recession in June 2009, the economic collapse had ended in Michigan but was still slowly spiraling downward in Maryland. In all six states, the UI programs responded more quickly than SNAP, both when increasing payments during the decline and when scaling back in the recovery. Changes in the numbers of recipients were particularly dramatic for UI in Florida, and they were somewhat weaker for SNAP in Texas.

The number of UI recipients increased and decreased quickly between 2007 and 2010 in all six study states. However, starting in 2007, the number of SNAP beneficiary households increased relatively slowly, finally peaking between 2013 and 2015 in these states. The numbers of joint SNAP-UI recipients also started to rise by 2007 in all six study states and, like UI, joint SNAP-UI receipt peaked more quickly than SNAP-only receipt. The general time pattern of joint usage in all states was similar. Florida had the biggest rise in UI receipt among SNAP beneficiaries, with the rate rising from 3.5 percent in 2006 to 13.5 percent in 2009. In Michigan, SNAP receipt among new UI beneficiaries rose from 7.5 to 15.0 percent over the period, with joint SNAP-UI rates being much higher within one and two years after UI application.

Based on program design, UI provides more income support than SNAP. The average dollar value of UI benefits was more than three times the SNAP benefits per month, but as emphasized in the Texas analysis, the sequencing of SNAP and UI receipt mattered. People who received SNAP first and then UI tended to have lower usual earnings levels, and therefore they qualified for lower levels of UI benefits than people who got UI before SNAP. Most SNAP-recipient households had members who were attached to the labor force and had some quarterly earnings from work, but, as seen in Florida and Georgia, those earnings tended to be very low. Job loss often created

severe hardship for households receiving SNAP only or SNAP before UI, because with low weekly benefit amounts, the added income from UI for these households tended to be very low. The growth in the number of SNAP-UI joint recipients came mostly from people who received UI first—individuals with relatively strong attachment to the labor force whose households became eligible for SNAP only after they lost their jobs and their wage income.

The six state studies revealed varied information about the characteristics of joint SNAP-UI recipients. The analysis from Maryland indicated that SNAP-UI recipients were most likely to be young, female, minority, single with children, and with high school or less schooling. Evidence from participant inflow in Florida indicated the characteristics of joint recipients were changing, as the increase in joint SNAP-UI recipients came mostly from male-headed white households, leading to declines in the percentage of joint program beneficiaries with children, those with disabilities, and those who were African American. Controlling for observable characteristics, the Michigan analysis indicated no difference in the rate of SNAP-UI receipt in urban or rural households but found higher levels of SNAP-UI receipt associated with higher job tenure, age, prior earnings, and more recent prior SNAP receipt. Also in Michigan, 28.1 percent of SNAP-UI beneficiaries received the maximum state UI weekly benefit amount. Additionally, Georgia provided evidence that, for older recipients, SNAP became particularly important in the midst of the recession and during both the early and late stages of the economic recovery.

This study provides limited information about the postrecession period. However, Georgia, Maryland, and Texas had longer postrecession data for analysis, and these study teams identified two postrecession phases. The first phase, called *jobless recovery*, was much like the recession phase, and both of these were distinct from the late-stage recovery. By the late-stage recovery, the characteristics of SNAP and UI program participants had returned to prerecession profiles. Authors of the Texas and Florida chapters both highlighted

the important group of ABAWDs. In Florida, these households more than doubled, from 20 percent to 42 percent of the SNAP population, while in Texas the ABAWD group of SNAP recipients increased by only 5 percent. Schroeder and Patnaik attribute this to a decision by state program administrators not to apply for available federal waivers that would have relaxed time restrictions on SNAP durations for ABAWDs. The importance of this missed opportunity is highlighted by the Texas evidence that increased economic hardship can delay reemployment. Indeed, early and adequate interventions greatly benefit those most challenged in earnings recovery. Additionally, there is also some evidence from Michigan that among prior SNAP recipients who lost their jobs after leaving SNAP, receiving UI benefits reduced their chances of returning to SNAP, indicating that access to UI helps control SNAP benefit costs. Indeed, federally funded extended and Emergency Unemployment Compensation certainly reduced the flow from UI into SNAP.

To reduce future UI costs, a small but significant number of states responded to the Great Recession by reducing the maximum duration of UI benefits. Led by Missouri in 2011, four of the six study states responded to UI benefit financing stress in the Great Recession by shortening the potential duration of regular UI benefits to less than the standard 26 weeks as a way of reducing or eliminating the need to raise UI taxes. Michigan shortened potential UI duration to 20 weeks, and Florida and Georgia shortened the potential duration to a variable period of 20 or fewer weeks, depending on the severity of unemployment. The Michigan chapter estimates that shortening the potential duration of regular UI benefits from 26 to 20 weeks during the Great Recession would have increased the number of SNAP beneficiaries by 2.6 percentage points within two years of UI application. In this case, the state UI program benefit reductions generated spillover costs on federally funded SNAP benefits.

Public policy designed to reduce UI benefit costs has gone beyond reducing the maximum duration of UI benefits. Since the Great Recession, the eligibility and generosity of SNAP have been reduced in

nearly a dozen states. The Michigan study estimated increased spillover into SNAP from reducing UI benefit adequacy, but this flow also might have been lower under stricter SNAP eligibility conditions. Nonetheless, the next downturn in the business cycle will come with job loss and economic hardship. The major public policy question for the future is, to what extent will the social safety net be strong enough to help workers and households survive and recover?

CONCLUSION

The six state studies show that a great deal can be learned about SNAP and UI, both separately and as they interact, by analyzing state program administrative data. The two programs are very different: they have different public policy goals, are designed to serve distinct populations, provide differing types of transfer payments, have different eligibility requirements, and offer benefits in differing amounts and durations.

We learned that even in good economic times, some unemployed workers who are solidly in the middle class do not return to work before using up their entitlement to UI benefits, and some of these individuals experience economic losses that qualify them to receive SNAP benefits. Other workers in low-wage jobs with irregular hours and persistently low incomes regularly receive SNAP benefits and occasionally turn to UI. This is more likely to happen when job opportunities evaporate in severe recessions. While the overlap in benefit use from the two programs always exists, the overlap is much greater in recessionary times.

Studying the period before, during, and after the Great Recession, we see that both programs were under great strain because unusually large numbers of individuals and families had inadequate incomes or were unemployed. Because of its severity and duration, the Great Recession was a real stress test for both programs. Nonetheless, both programs continued to have a significant welfare-improving effect on

households and individuals with respect to food security and income replacement.

The state studies show that the degree of overlap in the populations served by the UI and SNAP programs during recessions depends on state and federal policy regarding each program. Three key factors are 1) state UI program generosity regarding eligibility requirements and the potential duration of UI benefits, 2) federal enactment of UI extended benefits programs, and 3) federal generosity in SNAP's program parameters.

The interaction between SNAP and UI will continue in the future, and the interaction will increase with the severity of recessionary periods. From public policy and public administration perspectives for either program, it is important to take into consideration what happens in the other program. For example, if more states legislate reductions in the potential duration of regular UI benefits to less than 26 weeks, more individuals will exhaust their entitlement to UI benefits, and more of these households will seek SNAP benefits. In recessions, increased access to EB benefits and enactment of EUC programs will delay some individuals' exhaustion of benefits, and in some cases those individuals will find jobs before they exhaust their entitlement to UI, especially if robust publicly funded reemployment services are offered to unemployed workers who are permanently separated from their prior jobs. Thus, UI benefit extensions allow UI beneficiaries to apply for SNAP either later or not at all.

For example, Congressional Budget Office (CBO) analysis by Acs and Dahl (2010) finds that among households in 2009 with at least one member of the household unemployed, those receiving federal Emergency Unemployment Compensation (EUC) after exhausting regular state UI benefits had a poverty rate of 19.6 percent, while the poverty rate of those same households would have been 24.3 percent without EUC. Since the eligibility level for SNAP is 130 percent of the poverty level, in the absence of EUC the spillover from UI benefit exhaustion into SNAP could have been 5 percentage points higher among households experiencing unemployment.

Research presented in this volume shows the direct and large effects that SNAP and UI have on each other. Since all legislative proposals considered in Congress that involve new expenditures must be “scored” by the CBO for the likely net impact on the unified budget of the government before Congressional action can take place, the interaction between SNAP and UI demonstrated in this book should be taken into consideration in making these scoring estimates.¹⁰ When new temporary Emergency Unemployment Compensation programs are enacted during future recessions, Congress should reduce the budgetary cost estimates of the new UI legislation because of the expected reduction in SNAP costs that will result.

PLAN FOR THE BOOK

The rest of the book is divided into nine chapters. The next two chapters provide detailed backgrounds on the UI and SNAP programs. Chapter 4 provides a review of the previous research literature on SNAP and UI interactions. Chapters 5 through 10 present the six state studies in alphabetical order: Florida, Georgia, Maryland, Michigan, Missouri, and Texas. The summary and conclusions to these state studies have been given in this introductory chapter.

Notes

1. The National Bureau of Economic Research’s recession dating committee designated December 2007 to June 2009 as the longest period of declining gross domestic product since the Great Depression of the 1930s. As such, it has often been referred to as the “Great Recession.”
2. Adding federally funded emergency extended and additional unemployment benefits to regular state UI resulted in the total reaching \$151.8 billion in 2010. The \$76 billion for SNAP in 2013 does include the increased maximum allotments for households, which started on April 1, 2009, and lasted until late 2013 because of provisions in Public Law 111-5, known as the American Recovery and Reinvestment Act of 2009.

3. Studies in the six states were conducted by teams of social scientists at public universities and nonprofit research organizations, supported by the Economic Research Service of the U.S. Department of Agriculture and coordinated by the Jacob France Institute at the University of Baltimore.
4. Examples are given in Appendix 1A for the effects of UI partial benefit systems in Michigan and Texas. The Michigan system is more complicated than the Texas system, which has only an initial earnings disregard. Michigan has no initial earnings disregard, and UI benefits are reduced by 50 cents of each dollar in earnings up to the full entitled WBA. Earnings above the WBA in Michigan reduce UI dollar for dollar until the beneficiary works his or her way off UI when earnings equal 150 percent of the WBA.
5. A full range of examples representative of our six study states are given in Appendix 1A.
6. The effective SNAP tax rate is 0.09, resulting from the asymmetric treatment of the increase in labor earnings and the decrease in nonlabor UI income. Added labor earnings reduce SNAP by 24 percent after the 20 percent labor earnings deduction and the 30 percent obligation for spending on food. However, the labor earnings gain reduces nonlabor (UI) income by 50 percent, and, given the 30 percent obligation for food expenditures, the SNAP tax rate with respect to labor income further declines by 0.15, from 0.24 to 0.09.
7. When UI is replaced dollar for dollar by labor earnings and the SNAP reduction rate is 45 percent, because countable income declines by 20 percent of labor earnings, the effective marginal tax rate on SNAP benefits is -9 percent (0.45 multiplied by -0.20).
8. The effective marginal tax rates described in this paragraph are displayed graphically in Figure 1A.5 of Appendix 1A.
9. The charted rate of SNAP receipt within two years after UI application in 2009 was based on data from only part of 2011, since the available Michigan SNAP receipt data ended in August 2011.
10. See Wandner (2010), pp. 87-91, regarding federal budget scoring.

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Appendix 1A

Simulation of SNAP-UI Interaction

Christopher J. O’Leary
W.E. Upjohn Institute for Employment Research

To provide simulation examples of the interaction between Supplemental Nutrition Assistance Program (SNAP) benefits and unemployment insurance (UI) benefits, we consider a low-income working family and determine its SNAP eligibility and monthly benefit amount. For this family, we then examine how SNAP benefits would change as labor earnings increase. We next consider the effect on SNAP benefits for this household when nonlabor income increases and everything else is held constant. After this, we examine how weekly UI benefits are determined, and how they change with additional earnings in the six states we study in this book. Finally, we examine how both SNAP and UI benefits would change if earnings gradually increased for a beneficiary of both programs.

SNAP ELIGIBILITY AND MONTHLY BENEFITS

The Supplemental Nutrition Assistance Program is designed to improve food security among eligible households. To determine if a given family is eligible for SNAP benefits, SNAP administrators first evaluate a household’s monthly income and assets. Gross monthly income must be at or below 130 percent of the federal poverty level, which depends on the household size. From usual gross monthly income, officials apply a standard deduction, which also depends on household size. Officials then apply a 20 percent earnings disregard and a series of specific deductions, including a child care expense deduction, a deduction for shelter expenses in excess of half of count-

able income, and a medical expenses deduction for elderly or disabled households.¹ The household is expected to spend 30 percent of its own net monthly income on food. So from labor earnings, after the 20 percent disregard, the obligation to spend 30 percent of the net on food means a 24 percent benefit reduction rate for additional labor income.

Box 1A.1 provides an example of SNAP benefit determination for a household with one adult and two young dependent children.² The maximum monthly SNAP benefit for a three-person household in 2018 is \$504. The adult in this household is assumed to work 40 hours per week at the federal minimum wage of \$7.25 per hour. While the adult is working full time, this family would receive \$431 in monthly SNAP benefits.³ Details of this example are listed in the rows of Table 1A.1. The second column of this table presents an example in which the adult in the hypothetical household earns the Michigan minimum wage of \$9.25, but all other circumstances remain unchanged. In that case, the monthly household SNAP benefit would be \$309.

CHANGES IN SNAP MONTHLY BENEFITS AS LABOR EARNINGS INCREASE

Once initially SNAP eligible, in most states a household's continued eligibility is subject to periodic redetermination based on the same initial eligibility conditions. As long as the household continues to satisfy these criteria, monthly SNAP benefits can continue. An example of how SNAP benefits would change for the hypothetical three-person family as monthly labor earnings increase is presented in the first column of Table 1A.2. This column shows that if the adult has no monthly earnings, the monthly SNAP benefit would be \$504, and the SNAP benefit would remain unchanged as monthly income from labor earnings increased, until earnings reached \$952. The third column shows the effective marginal tax rate on earnings in terms of the SNAP benefit reduction. The \$100 increments obscure the pre-

**Box 1A.1 Determination of the SNAP Benefit Amount—
An Example**

Step 1 — Gross income: The federal minimum wage is currently \$7.25 per hour. Full-time work for 40 hours per week yields average monthly earnings of \$1,256, since the average month has 4.3 weeks.

Step 2 — Net income for shelter deduction: Begin with the gross monthly earnings of \$1,256. Subtract the standard deduction for a three-person household (\$160), the earnings deduction (20 percent times \$1,256, or \$251), and the child care deduction (\$67). The result is \$778 (Countable Income A).

Step 3 — Shelter deduction: Begin with the shelter costs of \$934. Subtract half of Countable Income A (half of \$778 is \$389) for a result of \$545. The shelter deduction is \$535 because of the excess shelter deduction cap.

Step 4 — Net income: Subtract the shelter deduction (\$535) from Countable Income A (\$778) for a result of \$243.

Step 5 — Family's expected contribution toward food: 30 percent of the household's net income (\$286) is \$73.

Step 6 — SNAP benefit: The maximum benefit in 2018 for a family of three is \$504. The maximum benefit minus the household contribution (\$504 minus \$73) equals \$431.

Result—The family's monthly SNAP benefit is \$431.

cise changes, but when earnings reach \$952, SNAP declines by 24 cents for each additional dollar earned. This tax rate becomes effective when countable income reaches the cap on shelter costs of \$535. The 36 percent tax rate becomes effective when one-half of countable

Table 1A.1 Summary of SNAP and UI Benefits for a Working or Unemployed Adult with Two Young Children and Various Wage Rates

	Working individuals		Unemployed individuals			
Hourly wage (\$)	7.25	9.25	7.25	9.25	13.00	16.55
Usual weekly hours	40	40	40	40	40	40
UI weekly benefit amount:						
WBA = $0.041 \times \text{HQ} + \text{DA}$ (\$6 \times kids) (\$)			165	208	287	362
Hours per month (4.3 \times weekly hours)	173	173				
Monthly gross earnings (if working) (\$)	1,256	1,602				
Quarterly earnings (if working) (\$)	3,768	4,807				
Monthly UI benefits = $4.3 \times \text{WBA}$ (\$)			711	893	1,234	1,557
Standard deduction (\$)	160	160	160	160	160	160
Earnings deduction (20% of gross) (\$)	251	320	0	0	0	0
Child-care costs (kids = 2) (\$)	67	67	67	67	67	67
Countable income (\$)	778	1,055	484	666	1,007	1,330
Shelter costs (\$)	934	934	934	934	934	934
Half countable income (\$)	389	527	242	333	504	665
Shelter deduction (capped at \$535) (\$)	535	407	535	535	430	269
Net income (\$)	243	648	-51	131	577	1,061
Family contribution (30% of net) (\$)	73	195	-15	39	173	318
Maximum SNAP benefit						
(persons = 3 = 1 adult + 2 kids) (\$)	504	504	504	504	504	504
Actual SNAP benefit (\$)	431	309	504	465	331	186
Total income (SNAP + UI + earnings) (\$)	1,687	1,912	1,215	1,358	1,565	1,743

SOURCE: Authors' computations based on assumed household characteristics and existing program parameters.

income plus the cap on the shelter-cost deduction reaches the actual shelter-cost amount. This happens in this case when earnings reach about \$1,282 in SNAP, since after this point the housing allowance deduction begins to decline. As earnings continue to increase, SNAP declines by 36 cents for each dollar increase in net income until 30 percent of net income equals the maximum entitled monthly SNAP benefit, at which point the monthly SNAP benefit is zero. In this case, this happens when labor earnings reach \$2,463.

CHANGES IN SNAP MONTHLY BENEFITS AS NONLABOR INCOME INCREASES

In contrast to the previous example of increasing labor income, increases in nonlabor income from any source are not reduced by the 20 percent earnings deduction when determining countable income. Examples of nonlabor income include things like interest on savings deposits, rental income, stock dividends, and—most importantly for this appendix—money from transfer programs such as UI. The consequence of the exemption of nonlabor income from the earnings deduction is that the household is expected to spend a full 30 cents of each dollar of nonlabor income on food. So in the case of our hypothetical household, after nonlabor income exceeds the sum of the standard deduction (\$160), the child-care allowance (\$67), and the cap on shelter expenses (\$535), then the marginal effective tax is 30 percent on nonlabor income above \$762. The effective marginal tax rate on nonlabor income will jump to 45 percent when nonlabor income rises to a level at which half of countable income plus the maximum shelter deduction equals the actual shelter costs. In our example, that is when nonlabor income reaches about \$1,022 and countable income is about \$800. The 45 percent effective marginal tax rate reduces SNAP until nonlabor income rises to about \$1,720, at which point the expected 30 percent food expenditure from net income of \$1,681 after the standard deduction and child-care costs is just equal (at \$504.30) to the

Table 1A.2 SNAP Monthly Benefit Amounts for a Three-Person Family with an Unemployed Adult Who Normally Works Full-Time at \$9.25 Hourly, with and without Michigan UI Benefits as Earnings Increase

Additional income without UI				Additional income with UI benefits				
Monthly earnings (\$)	SNAP benefit amount (\$)	SNAP tax rate with respect to earnings	Monthly UI benefit (\$)	Marginal tax rate on UI for earnings	SNAP benefit after UI and earnings (\$)	Marginal tax rate on SNAP for earnings	Marginal tax rate on SNAP+UI for earnings	Total income, earnings+ SNAP+UI (\$)
0	504	0.00	893	0.00	465	0.00	0.00	1,358
100	504	0.00	843	0.50	456	0.09	0.59	1,399
200	504	0.00	793	0.50	447	0.09	0.59	1,440
300	504	0.00	743	0.50	438	0.09	0.59	1,481
400	504	0.00	693	0.50	429	0.09	0.59	1,522
500	504	0.00	643	0.50	417	0.12	0.62	1,560
600	504	0.00	593	0.50	403	0.14	0.64	1,597
700	504	0.00	543	0.50	390	0.14	0.64	1,633
800	504	0.00	493	0.50	376	0.14	0.64	1,670
900	504	0.00	440	0.53	365	0.12	0.65	1,704
1,000	493	0.11	340	1.00	374	-0.09	0.91	1,713
1,100	469	0.24	240	1.00	383	-0.09	0.91	1,722
1,200	445	0.24	140	1.00	392	-0.09	0.91	1,731
1,300	418	0.26	40	1.00	401	-0.09	0.91	1,740
1,400	382	0.36	0	0.40	382	0.18	0.58	1,782
1,500	346	0.36	0	0.00	346	0.36	0.36	1,846

1,600	310	0.36	0	0.00	310	0.36	0.36	1,910
1,700	274	0.36	0	0.00	274	0.36	0.36	1,974
1,800	238	0.36	0	0.00	238	0.36	0.36	2,038
1,900	202	0.36	0	0.00	202	0.36	0.36	2,102
2,000	166	0.36	0	0.00	166	0.36	0.36	2,166
2,100	130	0.36	0	0.00	130	0.36	0.36	2,230
2,200	94	0.36	0	0.00	94	0.36	0.36	2,294
2,300	58	0.36	0	0.00	58	0.36	0.36	2,358
2,400	22	0.36	0	0.00	22	0.36	0.36	2,422
2,500	0	0.22	0	0.00	0	0.22	0.22	2,500
2,600	0	0.00	0	0.00	0	0.00	0.00	2,600

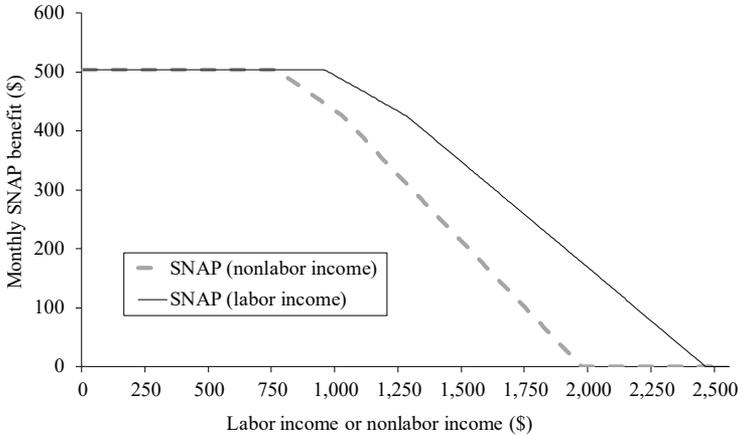
NOTE: These examples illustrate the interaction between SNAP, UI, and earnings. The examples do not consider federal and state income taxes, payroll taxes, or the Earned Income Tax Credit. In some earnings ranges, because of the \$100 increments in earnings simulated, these approximations miss the precise change points of tax rates.

SOURCE: Authors' computations based on assumed household characteristics and existing program parameters.

initial full SNAP monthly entitlement of \$504 for our hypothetical household.

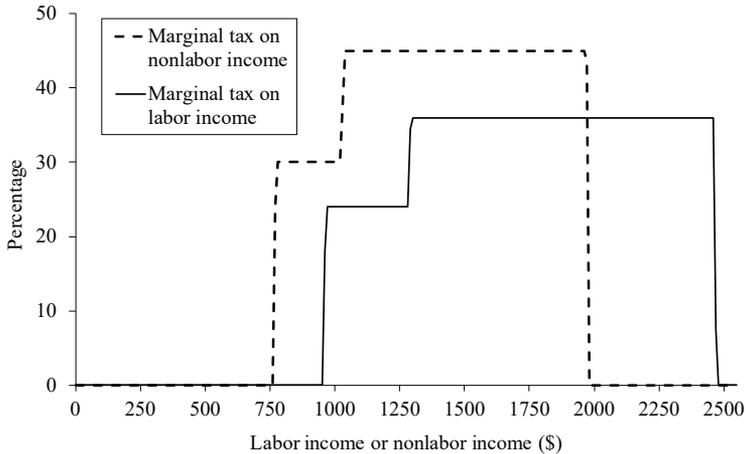
The different effects of labor earnings and nonlabor earnings on SNAP benefits are summarized graphically for our hypothetical household in Figure 1A.1. This figure shows that SNAP benefits are not reduced until a higher level of labor earnings is reached compared to nonlabor earnings. The marginal effective tax rates on SNAP benefits for the different types of income in our hypothetical household are shown in Figure 1A.2. The household is expected to spend 30 percent of net income on food. For additional nonlabor income, the marginal effective tax rates are 30 and 45 percent, with the higher rate applicable after the shelter deduction is exhausted, and for labor income, the marginal effective tax rates are 24 and 36 percent because labor income is reduced by 20 percent by the earnings deduction.

Figure 1A.1 SNAP Benefits with Increasing Labor or Nonlabor Income with \$504 Initial Monthly SNAP Benefit



SOURCE: Authors’ computations based on assumed household characteristics and existing program parameters.

Figure 1A.2 SNAP Effective Marginal Tax Rates with Increasing Labor or Nonlabor Income with \$504 Initial SNAP Benefit



SOURCE: Authors' computations based on assumed household characteristics and existing program parameters.

Determination of weekly unemployment benefits

As an example of UI benefit determination, we start with the case of Michigan. While the Michigan minimum wage is higher, we include the federal minimum wage of \$7.25 among the examples. The Michigan UI weekly benefit amount (WBA) is set at 4.1 percent of high-quarter earnings in the UI base period. The base period is the first four of the last five completed calendar quarters. We assume steady prior work without any quarterly variation in earnings. The right four columns in Table 1A.1 show UI benefit computations for an unemployed adult with two young children in Michigan for four increasing hourly wage rates. For earnings rates of \$7.25, \$9.25, \$13.00, and \$16.55, the WBA amounts would be \$165, \$208, \$287, and \$362, respectively. The last example is the maximum WBA paid in Michigan. The UI benefit formulas in the five other states studied in

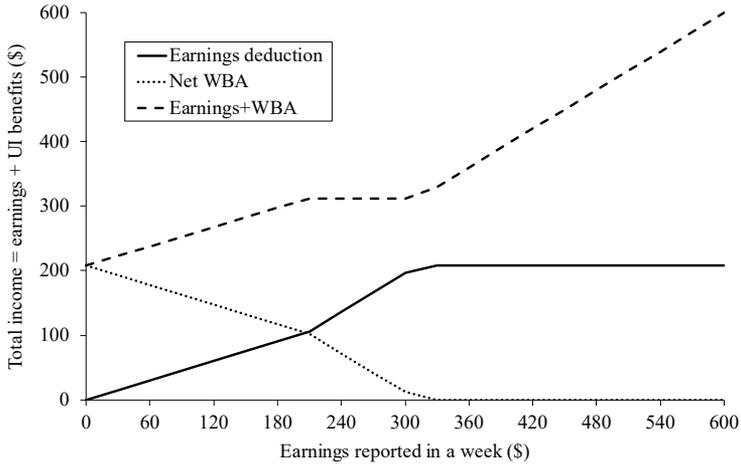
this book are similar to Michigan's in that they all are based on earnings in the one or two highest-earnings quarters of the base period.

EFFECT OF REPORTED EARNINGS ON WEEKLY UI BENEFITS

All states allow at least some earnings during weeks for which UI benefits are paid. When less than the full WBA is paid, it is usually called *partial UI benefits*. For some benefits to be paid, all states require earnings to be less than the full UI weekly benefit amount. Most states, including five of the six studied in this book, have UI benefit rules that disregard some reported weekly earnings and reduce weekly benefits dollar for dollar above a set threshold of reported earnings. Michigan does not have an earnings disregard and instead reduces weekly UI benefits by 50 cents for every dollar of earnings reported on the continued claim form up to the WBA amount. After that point, weekly UI benefits are reduced dollar for dollar from the WBA until the benefit is zero—that is, when earnings reach 1.5 times the WBA. Therefore, the effective marginal tax rate on earnings for UI beneficiaries in Michigan is initially 50 percent, and then 100 percent, until it falls to zero when the beneficiary works his or her way off UI. Figure 1A.3 depicts the levels of weekly UI and total income for increasing levels of additional reported earnings for an unemployed Michigan adult who normally earns \$9.25 hourly and has a WBA of \$208. Usual weekly earnings for this person are \$370. The 50 percent effective marginal tax rate on UI benefits continues until earnings reach the WBA (\$208). Earnings above that level reduce UI benefits dollar for dollar until weekly earnings are \$312. Above this level, the adult has worked his or her way off UI.

The algebra of partial UI weekly benefits depending on weekly labor earnings can be written as a negative income tax system with a guarantee amount, an earnings disregard, and a tax on earnings beyond the disregard. The algebra involves the following:

Figure 1A.3 Impact of Reported Earnings on the Michigan UI Weekly Benefit Amount for an Individual with a \$208 WBA



SOURCE: Authors' computations based on assumed household characteristics and existing program parameters.

E = weekly earnings

R = the weekly earnings disregard

t = the fraction of earnings deducted from benefits

Y = total weekly income

WBA = the weekly benefit amount

With partial benefits under UI, total weekly income is

$$Y = E + WBA - t \times (E - R),$$

so that income while receiving UI reaches the highest level when

$$Y^* = E^* = (WBA / t) + R.$$

For Michigan, $R = 0$, and

$$t = \{0.5 \mid E \leq WBA; 1.0 \mid WBA < E \leq 1.5 \times WBA\}.$$

So income is maximum on UI when $Y = WBA / 0.5$; after that point, weekly benefits decline dollar for dollar with increasing earnings until the beneficiary works his or her way off UI beyond $E = 1.5 \times WBA$.

For Georgia, Maryland, Florida, Missouri, and Texas, the weekly UI earnings disregards are \$50, \$50, \$58, $0.2 \times WBA$, and $0.25 \times WBA$, respectively, and $t = \{1 \mid E > R\}$, so that total weekly income while receiving UI reaches a maximum when $E = R$ and continues at the level of $Y = WBA + R$ until $E > WBA + R$.

In principle, the SNAP system works the same way: the monthly benefit is $SNAP(n)$, which depends on the number of beneficiaries in the household, n , and is reduced at rates t_i depending on the level of monthly earnings E_m . Different SNAP benefit reduction rates become effective at different levels of earnings, depending on the household size and other factors. For the three-person household in our example, the main other factors governing the SNAP amount are monthly housing cost subject to limits, child-care costs, the level of nonlabor income, and the requirement that 30 percent of net income must be spent on food. The SNAP benefit reduction rates (marginal effective tax rates) observed in our simulations are 0.24 and 0.36. These parameters guide our simulations of interaction between SNAP and UI. There is an implicit level of earnings disregard $R(n)$ for SNAP that also depends on the household size.

RECEIPT OF SNAP WHILE RECEIVING UI

To link UI to SNAP, we compute monthly UI as 4.3 times the UI weekly benefit amount (WBA). We see in Table 1A.1 that hourly earnings at the federal minimum wage of \$7.25 would result in Michigan UI benefits of \$711 per month, which would be low enough to yield the maximum SNAP benefit amount of \$504 per month for a family with one unemployed UI beneficiary adult and two young children.⁴ More accurately, at the Michigan minimum wage of \$9.25, the monthly UI amount would be \$893. If fully unemployed, our hypo-

thetical household in Michigan could receive a monthly SNAP benefit of \$465 along with the \$893 in UI. As shown in Table 1A.1, the \$13.00-per-hour job would yield a UI WBA of \$287 and a SNAP monthly benefit amount of \$331 when the person becomes unemployed. Working 40 hours weekly at \$16.55 is the minimum needed to qualify for the maximum UI WBA of \$362 in Michigan. Unemployment with a \$362 WBA would yield a monthly SNAP benefit for this household of \$186 without any other earnings.

EFFECTS OF ADDITIONAL LABOR EARNINGS WHILE RECEIVING SNAP AND UI

Table 1A.2 shows the interaction of SNAP and UI as labor earnings increase for our hypothetical household. This household has two young children and one adult who normally works full-time at the Michigan minimum wage of \$9.25 per hour. The first column in the table shows monthly earnings increasing in \$100 increments. Columns 2 and 3 apply to a household with an unemployed adult without UI, and the remaining columns assume Michigan UI benefit eligibility and receipt. Column 4 shows how monthly UI benefits would change with increases in monthly earnings. Column 5 shows the effective marginal tax on labor earnings through UI benefit reductions, column 6 shows changes in monthly SNAP benefits, column 7 shows the effective marginal tax on labor earnings due to SNAP benefit reductions, column 8 shows the total effective marginal tax on labor earnings through reductions in both UI and SNAP benefits, and column 9 shows the total income from earnings, SNAP, and UI.

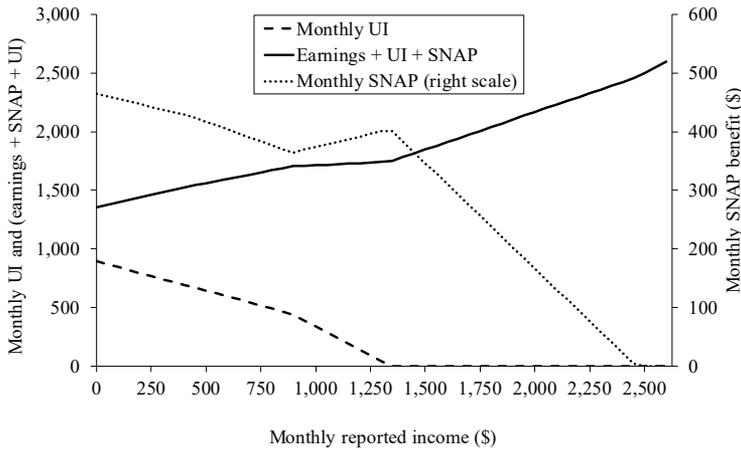
The first UI tax rate is 0.5, and it rises to 1.0 when labor earnings reach the monthly UI benefit amount. The first SNAP tax rate is 0.09. This rate results because added labor earnings reduce SNAP by 24 percent after the 20 percent labor earnings deduction and 30 percent obligation for spending on food. However, effective earnings go up only by half since UI goes down by 50 percent, and there is a reduc-

tion in nonlabor income from UI that is replaced by labor income. The labor income is given an earnings reduction; the UI benefit is less, and that is not given the earnings reduction. Figures in the second row of Table 1A.2 show that when labor income increases by \$100, UI benefits fall by \$50 and SNAP falls by \$9, so the total effective marginal tax rate is 59 percent, and the net gain to the household from a \$100 increase in labor earnings is \$41.

Continuing the UI and SNAP example in Table 1A.2, the effective marginal tax rate on labor earnings through SNAP rises to 0.135 when the shelter-cost deduction begins to erode after labor earnings exceed \$652. Interestingly, the effective marginal tax rate on labor income through SNAP becomes -9 percent when labor earnings reach the monthly UI benefit amount and the Michigan UI benefit reduction rate is dollar for dollar. In this range of 100 percent UI benefit reduction, nonlabor income is effectively exchanged for labor income, which has a more favorable treatment in terms of SNAP, but the combined benefit reduction rate is 91 percent instead of 100 percent because SNAP payments actually increase. This pattern is displayed in Figure 1A.4, which shows the monthly SNAP payments plotted on the right-hand y axis, while monthly UI and total household income are plotted on the left-hand y axis. Michigan UI benefits end when labor earnings reach 1.5 times UI benefits, so all household income above this level represents labor earnings. After UI ends and earnings continue to increase, the SNAP benefit reduction rate rises to 36 percent as the shelter deduction is eroded. SNAP benefits end when labor earnings rise above \$2,463 per month. For earnings above this level, total income is equal to earnings. Again, this scenario ignores the federal and state income tax systems, payroll taxes for social insurance, and the Earned Income Tax Credit. The pattern of Michigan effective marginal tax rates on labor earnings for this hypothetical household is given in Figure 1A.5.

The five other states studied in this book have earnings disregards only for UI, followed by 100 percent benefit reduction rates for earnings above the disregard level. The disregards in Georgia and

Figure 1A.4 Monthly UI and SNAP Benefits for an Unemployed Michigan Minimum-Wage Worker with Two Young Children as Earnings Increase

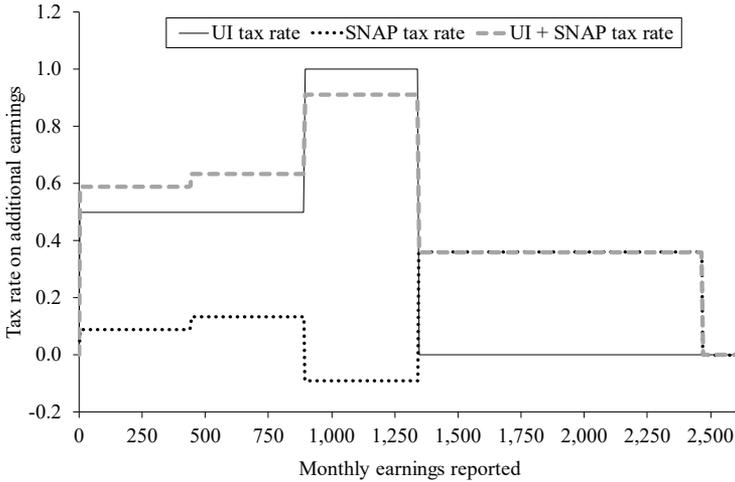


SOURCE: Authors' computations based on assumed household characteristics and existing program parameters.

Maryland are \$50, in Florida \$58 (the federal minimum hourly wage times eight), in Missouri 20 percent of the WBA, and in Texas 25 percent of the WBA. The pattern of marginal benefit taxation in these states depends on whether the beneficiary is normally a relatively high earner or a low earner.

Texas provides a good graphical example for these five states. Since Texas has the biggest UI earnings disregard ($0.25 \times \text{WBA}$), it's possible to see the pattern of marginal tax rates graphically. In Texas, the federal minimum wage of \$7.25 is the effective rate, and someone who normally works 40 hours per week at that wage would qualify for a UI WBA of \$151. For a single adult with two young dependent children and the usual expenses listed in Box 1A.1, when out of work, that person's monthly SNAP payment would be \$504 and the monthly UI would be \$648. Figure 1A.6 shows the marginal tax rates for this Texan when earnings increase from zero. At \$162 ($0.25 \times \648), the

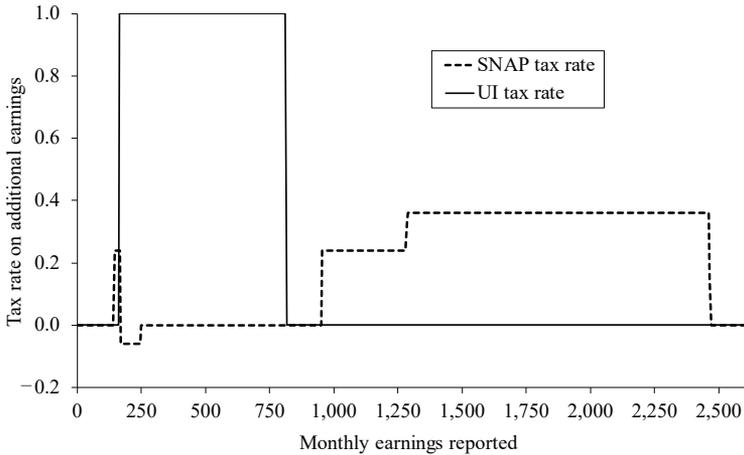
Figure 1A.5 SNAP and UI Tax Rates with Respect to Earnings for a Michigan Minimum-Wage Worker (\$9.25 hourly) with \$465 Monthly SNAP and \$893 Monthly UI Benefits



SOURCE: Authors' computations based on assumed household characteristics and existing program parameters.

tax on UI rises to 100 percent. As earnings increase, UI is reduced dollar for dollar until earnings reach \$810 (1.25×648) monthly, at which point UI ends. Interestingly, before labor earnings reach the UI disregard of \$162, the effective marginal tax rate on labor earnings rises to 24 percent through a SNAP benefit reduction. The SNAP reduction starts when UI is \$648 and labor earnings are about \$144. When labor earnings rise to \$162 or slightly higher, the effective marginal tax rate drops to -6 percent as UI is reduced dollar for dollar in labor earnings, and SNAP benefits rise because UI (which is nonlabor income) is exchanged for labor earnings. As labor earnings continue to increase, monthly SNAP recovers to the full \$504 entitled benefit until labor earnings reach \$952. Above that level, SNAP declines by 24 cents for each additional dollar earned. Then, starting at earnings of \$1,340, SNAP declines by 36 cents per dollar earned until SNAP

Figure 1A.6 SNAP and UI Tax Rates with Respect to Earnings for a Texas Minimum-Wage Worker (\$7.25 hour) with a \$648 Monthly UI Benefit Amount and a \$504 Monthly SNAP Benefit

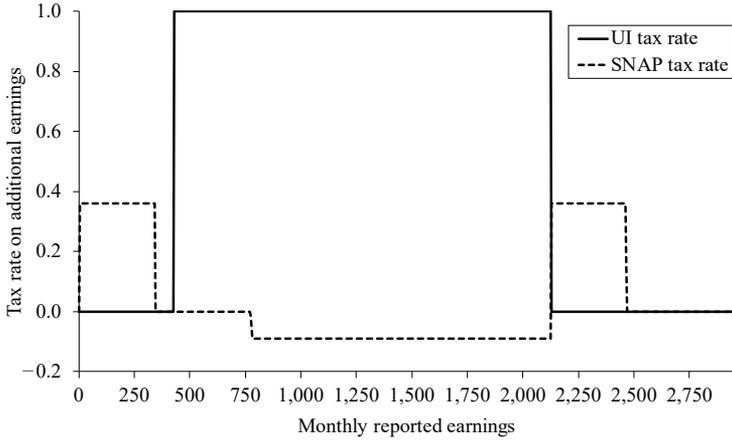


SOURCE: Authors' computations based on assumed household characteristics and existing program parameters.

ends at earnings of \$2,463. The changes in SNAP tax rates occur at the same earnings levels as the Michigan example, because for this particular low-income household, the reductions both follow the example given in Box 1A.1.

Contrast the minimum-wage Texas earner to an adult earning \$19.15 hourly. That hourly rate is sufficient to yield a 2018 UI WBA in Texas of \$395. If the household consists of this adult with two dependent children and the usual expenses assumed above, a totally unemployed adult would receive \$122 in monthly SNAP payments, along with \$1,700 in monthly UI.⁵ The pattern of SNAP and UI marginal tax rates is illustrated in Figure 1A.7. Starting from unemployment, any earnings would reduce SNAP by 36 cents for each dollar earned, and SNAP benefits would stop when labor earnings reached \$339 (SNAP/0.36). As labor earnings continue to increase, UI bene-

Figure 1A.7 SNAP and UI Tax Rates with Respect to Earnings for a Texas Wage Earner with a \$395 Weekly Benefit Amount (\$1,700 monthly) and a \$122 Monthly SNAP Benefit

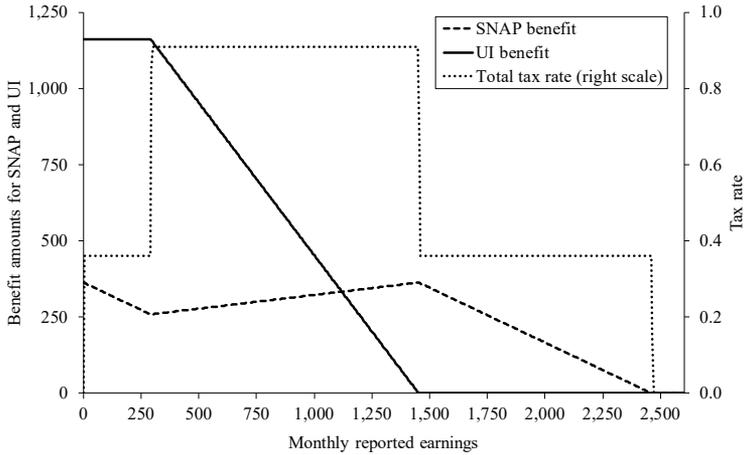


SOURCE: Authors' computations based on assumed household characteristics and existing program parameters.

fits begin to fall, dollar for dollar, after \$425 in earnings. Interestingly, as labor income rises and replaces nonlabor UI, the 20 percent SNAP earnings deduction comes into play again when earnings top \$780. From that level up to labor earnings of \$2,125 (or $1.25 \times \$1,700$), SNAP continues to rise, reaching the original entitlement of \$122. For earnings beyond that level, SNAP starts declining at a rate of 36 percent of additional labor earnings, and it reaches zero at earnings of \$2,463.

For an unemployed Texan with two young dependents and a usual full-time job at \$13 per hour, when working off SNAP and UI from full unemployment, the patterns of income, benefits, and tax rates are depicted in Figure 1A.8. In this middle case, the SNAP and UI reductions happen in the same range of increasing earnings, and in this case SNAP receipt also can continue beyond the earnings range when UI benefits end. The three figures for Texas summarize the gen-

Figure 1A.8 SNAP and UI Benefit Amounts and Tax Rates for Earnings by a Texas Wage Earner (\$13.00 hourly) with a \$363 Monthly SNAP Benefit and a \$270 UI WBA



SOURCE: Authors' computations based on assumed household characteristics and existing program parameters.

eral pattern of interaction for SNAP and UI in the five study states other than Michigan.

Appendix Notes

I thank Ken Kline for excellent research assistance. For constructive comments that improved accuracy and exposition of this appendix I thank Steve Wandner, Colin Gray, Michael Wiseman, Pauline Leung, Peter Mueser, and David Stevens.

1. There are two types of shelter deductions: The capped shelter deduction is capped at \$535 per month for households that do not include an elder, disabled adult, or disabled child, regardless of how high the shelter costs are. The uncapped shelter deduction applies if the household includes at least one person who is elderly (aged 60+) or is disabled; there is no limit or cap on the shelter costs that exceed 50 percent of net income.
2. The example further assumes that no one in the household is either over age 60 or disabled.

3. This comes from <https://www.cbpp.org/research/food-assistance/a-quick-guide-to-snap-eligibility-and-benefits> (Center on Budget and Policy Priorities 2018). Countable income = $0.8 \times$ gross income – standard deduction (persons) – child care (kids); net income = countable income – (shelter price – $0.5 \times$ countable income); SNAP = SNAP (number of persons) – ($0.3 \times$ net income).
4. We leave the child-care expense in the SNAP computation to simplify comparisons, and because both UI and SNAP continuing eligibility require active search for work or employability development for most beneficiaries.
5. A WBA of \$395 would yield an annualized income rate of \$20,540. The poverty threshold for a family of three is \$20,780 for 2018, and 130 percent is \$27,014. So even a \$395 WBA would not disqualify an unemployed adult with two young children from getting SNAP payments.

Appendix Reference

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Net in the Great Recession**

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and Unemployment Insurance**

Christopher J. O’Leary
David Stevens
Stephen A. Wandner
Michael Wiseman
Editors

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