Eliminating Limits: How Removing Asset and Income Tests Affects Older Households' SNAP Participation

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Abstract

We explore barriers to safety net participation among older adults, who may have low income but disqualifying assets. Leveraging variation from the staggered adoption of state Broad-Based Categorical Eligibility (BBCE) expansions for Supplemental Nutrition Assistance Program (SNAP) benefits, we find loosened asset and income limits increase older household SNAP participation by about 25%. We estimate that the modal expansion nearly doubles eligibility for older households. The largest impacts are among households with gross incomes between 115-200% FPL, where both asset and net income limits are most binding. We find no evidence of participation increases among federally eligible older households.

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1 Introduction

The Supplemental Nutrition Assistance Program (SNAP) is one of the largest safety net programs in the US, and 45 states have adopted major eligibility expansions. These expansions have different criteria for older households (i.e., at least one household member is age 60 or older). Since one-third of SNAP recipient households are "older households,"[1] and SNAP participation among older households has been found to be particularly low (Ziliak, Gundersen, and Ismail 2022), it is important to understand how eligibility expansions impact SNAP participation among older households. Using detailed household-level income and asset information, this paper provides the first evidence on how program *eligibility* among older households changes in responses to these optional state Broad Based Categorical Eligibility (BBCE) expansions that eliminate the asset limit and loosen net income limits. This paper then shows how both self-reported and administrative measures of SNAP participation respond to these expansions and provides insight into whether increased participation is among those who are newly-eligible for SNAP, or among those who would be eligible in the absence of the expansion.

SNAP provides monthly benefits to U.S. households at risk of food insecurity to purchase food with an Electronic Benefits Transfer (EBT) card. SNAP is a federal means-tested entitlement program that is run by the United States Department of Agriculture (USDA) but is jointly administered with states. Benefit levels are a decreasing function of a household's net income, and the USDA sets minimum federal SNAP eligibility criteria that all states must adhere to.[2] Federal SNAP rules also allow states to adopt policies to bolster SNAP participation to increase food security, including the expanded eligibility policies that are the focus of this paper. These optional state SNAP eligibility expansions provide an ideal setting to examine older adults' interaction with safety net

[1] `https://www.fns.usda.gov/research/snap/characteristics-fy23`. Viewed February 23, 2026.

[2] For all households, the parameters include limits on assets and net income. For younger households with no disabilities, federal parameters also include work requirements and gross income limits.

programs because state policy changes over time generate large differences in eligibility and SNAP is one of the largest social safety net programs.

Safety net program asset limits are binding for many older households with low income. For example, nearly one quarter of older adults enrolled in Medicare who meet their state's Medicaid income limit (for "full Medicaid") fail the asset test (Cornelio 2021). Ratcliffe et al. (2016) show that *one-fifth* of older households (or households with a member who has a disability) meet the SNAP income limit but fail the asset test. For this reason, we expect that eliminating asset limits will increase *eligibility* among older households.

Eliminating asset limits is correspondingly expected to increase SNAP *participation*, both because of increased eligibility and reduced administrative burden. In addition to increased participation among newly-eligible households, some households with sufficiently low assets who were already eligible for SNAP might also begin to take up benefits either because eliminating asset limits reduces the administrative burden of documenting assets or because they were eligible but did not realize it (Herd and Moynihan 2025). Although tax-preferred retirement accounts and one's primary residence do not count against SNAP eligibility, older adults may face uncertainty about how these assets are treated under program rules. In fact, a 2009 USDA Policy Memo cited widespread confusion about the how the SNAP program treated "tax-preferred" retirement assets, and encouraged regional directors to work with states to ensure the policy is being applied accurately.[3] Guidance was again issued in 2017 due to both on-going confusion and to provide clarification on the treatment of new tax-preferred savings products.[4] Since many older adults have these types of assets, including older adults with low income (McInerney et al. 2025), they may not apply for SNAP if they think holding these assets would make them ineligible, but when asset limits are eliminated they realize they are eligible and apply.

In practice, loosening net income limits expands access to a minimum SNAP benefit. This is because SNAP benefit amounts are a decreasing function of household net income, so households

[3] See `https://www.fns.usda.gov/snap/eligibility/deduction-retirement-account-exclusion-clarification`, accessed December 2025).

[4] See `https://www.fns.usda.gov/snap/eligibility/deduction-retirement-account-exclusion`, accessed December 2025).

with net income exceeding roughly 100 percent of the federal poverty level (FPL) have a zero dollar constructed benefit. SNAP units of 1-2 persons whose calculated benefit is zero (or negative), and meet all other eligibility criteria, are eligible to receive a minimum monthly benefit of 23 dollars per month.[5] Many older households have only 1-2 persons,[6] so loosening the net income limit is likely to expand access to the minimum benefit for these smaller older households with net income above 100 percent FPL but who meet all other eligiblity criteria. In response to these provisions, eligibility among older households is unambiguously expected to increase. However, it is an empirical question whether participation will increase for households that would only receive this small monthly benefit.

This study leverages state variation in SNAP eligibility from the optional BBCE expansions to examine how SNAP eligibility and participation change for older households. Currently, 45 states (including DC) have expanded SNAP eligibility by adopting BBCE policies. All of the expansion states studied in this paper elected to eliminate the asset limit, and all but two chose to loosen the net income limit (which effectively expands access to minimum benefits).[7]

This paper makes three contributions to the existing literature. First, using detailed cross-sectional data on household finances from the Survey of Income and Program Participation (SIPP), we conduct eligibility simulations among a nationally representative sample of older households with typical asset, spending, and income profiles. We first simulate what share of these households are eligible for SNAP under federal rules and after eliminating asset limits and expanding access to minimum benefits (i.e., eliminating the net income limit). This is the first evidence of how these parameters change *eligibility*, and with the SIPP we can examine the relative importance of each provision. These expansions nearly double eligibility, and eliminating the asset limit and loosening the net income limit/expanding access to the minimum benefit are equally important.

[5]There is no minimum benefit provision for households with 3 or more persons, see `https://fns-prod.azureedge.us/sites/default/files/media/file/FY2025-Minimum-Allotments.pdf`, Viewed March 13, 2026.

[6]A recent Census Bureau publication shows that 80.2 percent of women (and 89.7 percent of men) age 65 and older either live alone or live only with their spouse (Hemez and Kreider 2024).

[7]Roughly two-thirds of expansion states chose to eliminate the asset limit and loosen the net income limit/expand access to the minimum benefit, so the expansion states studied in this analysis reflect the modal expansion state.

We also examine simulated eligibility by gross income and show that it is households with income between 115-200% of the FPL who experience the largest gains in eligibility due to binding income and asset limits.

Second, to examine whether the changes in eligibility translate to increased participation, we use quasi-experimental methods and the nation's largest household survey, the American Community Survey (ACS), which is new to SNAP research (e.g., Li, Zuo, and Heflin 2023; Schmidt, Shore-Sheppard, and Watson 2024), to examine the effects on participation. In addition to documenting the change in participation among all older adults, using the ACS permits the study of participation by single year of householder age and subgroups by demographic and socioeconomic characteristics. Using a robust two-way fixed effects (TWFE) estimation strategy that accounts for time-varying treatment effect heterogeneity, we find these expansions increase SNAP participation by approximately 25 percent among older households.[8] We do not find that the SNAP participation increases are concentrated among a particular group. Rather, the response is similar by the age of the oldest householder and by broad demographic group, suggesting a large and broad impact of BBCE expansions on the SNAP participation of older households.

A key question is whether the increased participation is among households who were already eligible under the federal criteria ("federally eligible") or gained eligibility under the state expansions ("expansion-only eligible"). Finkelstein and Notowidigdo (2019) conduct an information and enrollment assistance RCT intervention among older adults who are likely eligible for SNAP but not currently participating. They find the biggest response to the intervention is among those with the highest net income and lowest medical spending. This finding would be consistent with

[8]Prior work unambiguously shows that SNAP participation among households of all ages increases in response to expanded eligibility in general (Jones et al. 2022; Stacy, Tiehen, and Marquardt 2018; Dickert-Conlin et al. 2021) and these state expansions in particular (Anders and Rafkin forthcoming; Han 2016). Though not statistically significant, Jones et al. (2022) (Table 2) estimates a positive relationship between these state eligibility expansions and SNAP participation among older households. When estimated as part of a simulated eligibility variable that either includes other policies (e.g., Jones et al. 2022) or households with younger adults who have a disability (e.g., Han 2016), prior work finds a positive and statistically significant relationship between more generous eligibility criteria and SNAP participation of older households. The sample of households with older adults in the ACS is over 40 times as large as the number of observations in the Current Population Survey Food Security Supplement used in Jones et al. (2022), allowing us to more precisely estimate this relationship. In a new working paper, Moffitt and Yang (2026) explore both SSI and SNAP participation among older households using repeated cross-sections of the Survey of Income and Program Participation.

the state expansions bringing in households with high net income who may have gained eligibility. However, other work examining the BBCE expansions directly suggests that, among households of all ages, many new participants following state expansions were federally eligible (Anders and Rafkin forthcoming). The third contribution of this paper is to provide new evidence addressing whether or not the increased participation arises from households that are federally eligible or expansion-only eligible. A priori, we might expect both groups of households to participate in SNAP following the expansions. Among households with low income (i.e., gross income below 200 % FPL), we show with the SIPP data that nearly 50 percent of households are expansion-only eligible, so more generous eligibility criteria could bring in households that would not qualify for SNAP in the absence of the expansion. On the other hand, in our setting, we expect the frictions associated with documenting asset holdings to be particularly pronounced for older adults even if they were eligible under federal rules. Given these considerations, we hypothesize that eliminating the asset test could be particularly effective at increasing participation among older households who are federally eligible because of reduced ordeals. Further, the BBCE program typically involves an informational campaign through the distribution of brochures to likely eligible populations. This, combined with low initial participation rates, supports the hypothesis that federally eligible households might be induced to participate under BBCE.

Though we cannot directly test this in the ACS, we leverage our simulation exercise to approximate which categories of household gross income experienced the largest changes in eligibility and examine participation responses in the ACS by these household gross income categories. We find evidence consistent with much of the increased participation arising from older adults who likely would not be eligible for SNAP without the expansion. To further examine whether new participation is arising from expansion-only eligible participants, we exploit the USDA Quality Control (QC) detailed administrative data extracts. We illustrate SNAP participation among older households in BBCE expansion states with net income above the federal minimum, again illustrating that expansion-only eligible households do participate. Finally, using a subset of post-expansion SIPP data among households that are federally eligible, we show that the SNAP participation rates

in BBCE and control states are statistically indistinguishable, suggesting that there is little to no "welcome mat" or "woodwork" effect for older households. At the same time, among the group who are simulated to be eligible only under the full BBCE expansions, the participation rate is basically zero in control states and is sizable and statistically significant in the BBCE states. Together, we conclude that, among these older households, the entire increase in participation *could* be due to households who gained eligibility from the expansion.

These results provide insights on how to increase the take-up of social safety net benefits for older adults by demonstrating eligibility expansions that eliminate asset limits and allow small households to receive a minimum benefit at higher levels of income effectively increase participation among older adults. As a cornerstone of the social safety net, understanding what parameters are effective at increasing take-up among older adults can inform policy more broadly.

2 Background and Data

2.1 SNAP Federal Eligibility Policies for Households with Older Adults

SNAP is one of the largest social safety net programs, is a near-universal component of the social safety net, and is positioned to provide benefits to at-risk households quickly following economic shocks (see, e.g., Schanzenbach 2017). According to the USDA's FY2025 Budget Summary,[9] federal expenditures in FY2025 were projected to be around $123 billion; SNAP program spending is higher than spending for the Supplemental Security Income (SSI) program (57.1 billion) or the Unemployment Insurance (UI) program (36.2 billion). In FY2025, one in eight Americans (and one in six households) receive SNAP benefits; the average SNAP benefit was 216 dollars/person/month[10] and the maximum benefit was 292 dollars/month (for a single adult/household of one).[11] According to a 2023 USDA report, older adults (age 60+) comprise approximately 20

[9] See `https://www.usda.gov/sites/default/files/documents/2025-usda-budget-summary.pdf`, [accessed August 1, 2025]

[10] https://www.usda.gov/sites/default/files/documents/2025-usda-budget-summary.pdf

[11] https://fns-prod.azureedge.us/sites/default/files/media/file/FY2025-Maximum-Allotments-Deductions.pdf

percent of SNAP recipients (Monkovic and Ward 2025).

Table 1 provides a summary of SNAP eligibility criteria in FY2018, the applicable year for our simulation analysis below for households whose oldest member is at least 60 years old. [12][13] First, there is no general work requirement and no gross income test for these older households.[14] The SNAP program also considers "net income," which is income net of: a standard deduction, 20 percent of earned income, costs for dependent care (if working), shelter costs that exceed half of the household's net income, and medical expenses in excess of $35 dollars/month.[15] A household's net income must be below 100% of the FPL (for a single adult in FY2018 $1,005; FY2025 $1,255). And, assets must be below $3,500 in FY2018 ($4,500 in FY2025) (one's residence and tax-preferred retirement accounts are excluded; in many states, vehicles are excluded, as well).

For SNAP, the state and federal governments share administrative costs, but the federal government pays all benefits and states determine eligibility and distribute benefits. The federal government pays all benefits even in states that adopt the eligibility expansions described below. Benefit amounts are constructed as the maximum allowable benefit for a household (based on size) minus 30 percent of calculated net income. The maximum monthly benefit for a single household was $192/month in FY2018 ($292/month in FY2025) and $352/month for a two-person household in FY2018 ($536/month in FY2025).

For SNAP households with three or more members, the computed benefit reaches zero when net income is around 100 percent of the federal poverty level. There is no guaranteed minimum

[12]These criteria also apply to younger households that have at least one person with a disability, but they are not the focus of this analysis.

[13]Values are derived from policy memos "SNAP - Fiscal Year 2018 Cost-of-Living Adjustments," `https://www.fns.usda.gov/snap/allotment/fy-2018-cost-of-living-adjustments` and 2025 `https://www.fns.usda.gov/snap/fy-2025-cola`. The federal fiscal year runs from October 1 through September 30, so FY2018 aligns most closely with calendar year 2018.

[14]SNAP General Work Requirements require household members age 16-59 who are not working at least 30 hours per week to either register for work or participate in workfare or SNAP Employment and Training. Until the Fiscal Responsibility Act (FRA) in 2023, SNAP's Able-Bodied Adults Without Dependents (ABAWD) work requirements applied only to those under age 50. Households may be excused from the general work requirements if they are taking care of a young child or person who is incapacitated, have a physical or mental limitation that prevents them from working, are participating in an alcohol or drug treatment program, are at least half-time in a school or training program, or are meeting TANF or unemployment insurance work requirements. See (`https://www.fns.usda.gov/snap/work-requirements`, accessed August 2025) for further information on SNAP work requirements for non-elderly households.

[15]See the Data Appendix for details on how net income is calculated.

benefit for households of three or more persons, so larger households with negative or zero computed benefits do not receive SNAP. Smaller households, SNAP units of 1 and 2 persons, with negative or zero computed benefits receive the guaranteed minimum benefit of $15/month in FY2018 ($23/month FY 2025) if they meet the other eligibility criteria. Using data from the USDA's Quality Control Database (see Data Appendix) for 2018, Figure 1 illustrates the SNAP benefits received by one- or two-person SNAP households whose oldest member is ages 60-79 as a function of net income separately for BBCE-adopting and control states. The control states illustrate the benefit schedule under the federal eligibility criteria only: benefits are higher for larger households, are a declining function of income until reaching a minimum benefit level, and are terminated when net income exceeds 100% of the FPL.

2.2 State Eligibility Expansions

This paper leverages variation in income and asset rules generated by states' staggered adoption of Broad-Based Categorical Eligibility (BBCE) expansions. This option was established in 1999 and permits states to expand SNAP eligibility beyond the federal criteria, with the first states adopting in 2000. The state expansions allow states to create a new pathway to SNAP eligibility beyond the federal eligibility criteria. In order to implement this expansion, states must use Maintenance of Effort (MOE) funds from the Temporary Assistance for Needy Families (TANF) program to promote program awareness. Many states do this with a brochure that lists SNAP as one of several benefits available to families with low income.[16]

Under these expansions, states may choose to raise or eliminate the asset limit and eliminate or keep the net income test, as shown in column 2 of Table 1. Eliminating the net income test effectively means that states expand access to the minimum benefit for smaller households at higher income levels. For households with older adults, who face no gross income test under the federal criteria, states can choose to *impose* a gross income limit of between 130 and 200 percent of

[16]Appendix Figure A1 provides an example of the type of brochure used for these purposes. https://www.fns.usda.gov/snap/broad-based-categorical-eligibility

federal poverty level.[17] Most states (two-thirds) eliminate the asset and net income tests. Most states impose a gross income limit on older households.[18]

The main estimates in this study utilize data from 17 states that adopted standard BBCE policies between 2008 and 2011 and did not have major subsequent modifications.[19] As of July 2020, 9 states had not adopted BBCE policies, and we use these states as a common control group (of these, Alaska, Arkansas, and Virginia adopted a BBCE policy between July 2020 and July 2025). Appendix Table A1 lists the dates of adoption for all 45 states (including the District of Columbia) that adopted BBCE at any point before fall 2025, as well as the asset, gross income, and net income limits at initial adoption.[20,21] We exclude eight states that expanded eligibility during this time period (between 2008 and 2011) from the main analysis but include them in robustness checks. These states either tightened the eligibility criteria during the study period, had policy parameters that were inconsistent across policy data sources, or were the only state that expanded during this period to raise–but not eliminate–the asset limit.

We exclude 17 states from all analyses; 14 states expanded SNAP either before 2008 (13 states) or after 2012 (one expanded in 2018). The remaining three states adopted the expansion between 2008 and 2011, but two expanded only to households with children (California, in the first few years, and New Hampshire), and one ended the expansion in 2014 (Louisiana).

Table 2 lists the state policies used in this analysis. Because the ACS data are reported as yearly data, we assign states to four treatment timing groups (2008-2011). States that adopted

[17]For younger households, states can choose to keep the gross income limit at 130 percent of poverty or raise it up to 200 percent of the federal poverty level.

[18]Most states raise the gross income limit for younger households. Since states can make different choices for households with/without a senior, a state might have the most generous features for older households but be less generous in the expansion for younger households (or vice versa).

[19]We begin with the 2008 expansions so that we can examine SNAP participation for two years before the first state expansion (the first year of the ACS data is 2006).

[20]The footnotes to Appendix Table A1 indicate groupings of state policies and the reasons for excluding states from the main analysis. In Section 4.4 below, we illustrate robustness to including and excluding states based on these groupings.

[21]Data on state adoption of BBCE and treatment of assets and gross income are from two sources: (1) the SNAP Policy Database and (2) Quality Control Technical Documentation. The SNAP Policy Database is compiled by the US Department of Agriculture and tracks monthly status of state BBCE adoption, treatment of assets, and treatment of gross income. The Quality Control Technical Documentation describe how eligibility and net income are computed in the Quality Control database, "... a raw data file of monthly case reviews that are conducted by State SNAP agencies to assess the accuracy of eligibility determinations and benefit calculations for their SNAP caseloads."

the expansion in the second half of the year are assigned as treated in the following year so that treatment equals one in states and years in which the expansion is in place for more than six months. There are nine common control group states.

All 17 of these states used in the main analysis eliminated the asset limit. 11 states adopted the most generous criteria possible on every dimension: eliminated the asset limit, eliminated the net income limit (i.e., permitted increased access to minimum benefits at higher levels of income), and imposed the highest possible gross income limit–200% of the FPL. Four states adopted very similar criteria but chose a gross income limit between 160 and 185% of the FPL instead of 200% of the FPL. Two states (Colorado and Oklahoma) did not eliminate the net income of 100% of the FPL, which meant no expanded access to the minimum benefit at higher levels of income for small households.

2.3 Data

This study leverages data from two large household surveys, the American Community Survey (ACS) and the Survey of Income and Program Participation (SIPP), described below. Additionally, we benchmark the survey values with administrative data from the USDA's Quality Control (QC) database.[22] The Data Appendix provides details on all three datasets, and Appendix Tables B1 and B2 provide descriptive statistics comparing values between the surveys and administrative records.

Throughout the analysis, the unit of observation is a household (i.e., not an individual) because SNAP benefits are provided at the household level. We note that the SNAP program definition of household does not necessarily align with the definition of household or family in the major survey datasets used in this analysis.[23] SNAP uses the definition of household as a group of people who share meals, while household-level surveys typically group based on shared living quarters or by familial relationships.[24] To address this concern, we restrict our analysis to households that are

[22] As noted above, Anders and Rafkin (forthcoming) also use data from the QC data to study SNAP participation in response to BBCE eligibility expansions.

[23] As outlined in a 1986 report on an early version of the Survey of Income and Program Participation (SIPP) (Carlson 1986), differences in reference period and unit composition may explain part of this disparity.

[24] For details, see (`https://www.fns.usda.gov/snap/recipient/eligibility`, accessed January 2025).

likely to be only a single potential SNAP-receiving unit: single males, single females, and married couples without any other household members. We restrict attention to households whose oldest member is between 60 and 79 years old, because they are all subject to the same federal SNAP criteria for older households and because they are most likely to be living in the community and not an assisted living or nursing facility. In the 2018 QC data, almost 90 percent of SNAP receiving units whose oldest member was age 60-79 meet our definition of "one-unit" household. In both the 2018 ACS and SIPP, approximately 70 percent of households whose oldest member is ages 60-79 meet this definition of being a "one-unit" household.

2.3.1 USDA's Quality Control (QC) Data

The U.S. Department of Agriculture (USDA) collects monthly case review data from a representative sample of SNAP households to audit eligibility determinations and benefit calculations. The SNAP Quality Control (QC) Database provides administrative data on household structure, income, assets, deductions, and benefit amounts. The QC is publicly available, released annually, and is representative at both the state and national level. The QC data include both "raw" (reported and unedited) and "cleaned" variables, where the latter adjust income and deductions to be internally consistent. The data provide a comprehensive picture of participating households, which provides an appropriate benchmarking for the smaller SIPP dataset. However, the QC data only include households participating in SNAP and do not include asset information for households living in states with the BBCE expansion policies.

2.3.2 American Community Survey (ACS)

One of the contributions of this paper is to conduct the analysis using data that, while widely used to study other policy areas, are new to studying SNAP participation: the American Community Survey (ACS) (Ruggles et al. 2023).[25] The ACS is administered by the U.S. Census Bureau and is an annual mandatory survey that is sampled from the same inventory of known living quar-

[25]Two recent papers, Li, Zuo, and Heflin (2023) and Schmidt, Shore-Sheppard, and Watson (2024), use the ACS to study SNAP participation.

ters as the Decennial Census. The ACS is representative at the state level, so that analysis of policies in small groups of states are more likely to have statistical power. And, the ACS has sufficient sample size to study policy effects by single year of age.

The ACS captures household receipt of SNAP benefits and detailed information on household composition. The Data Appendix contains detail on sample construction and Appendix Table B1 provides a benchmarking of the ACS to our two other datasets. As described above, we restrict our analysis to single adults or married couples living alone without other household members so that the definition of household more closely aligns with a SNAP unit. Because SNAP eligibility criteria differ based on the age of the oldest household member (or disability status of persons under age 60), we group households by the age of the oldest member. We exclude households that include anyone who is not a U.S. citizen because only U.S. citizens and some lawfully present noncitizens are eligible to receive SNAP (approximately 4% of older households in the ACS). We also exclude households where any member is self-employed because for self-employed persons, self-employment income net of business expenses is considered for eligibility and we do not observe business expenses in the data.[26]

This study examines the time period 2006 through 2019. The ACS data began in 2006, and we end in 2019 in order to explicitly consider the pre-pandemic period. Beginning in 2020, several emergency measures were implemented that temporarily changed the SNAP program. We also do not consider modifications to SNAP following the passage of the One Big Beautiful Bill Act (P.L. 119-21).

2.3.3 Survey of Income and Program Participation (SIPP)

To provide a more detailed characterization of eligibility, we use the 2018 Survey of Income and Program Participation (SIPP), Wave I data to estimate hypothetical policy regimes on a common sample.[27] As with the ACS, we restrict our attention to households that likely only com-

[26]For data quality purposes, we also remove households whose youngest member is younger than age 50 when restricting the dataset to oldest member is ages 60-79.

[27]The Data Appendix includes details on sample construction and a comparison between datasets.

prise one SNAP unit (singles or married couples),[28] and we exclude households with non-citizen members and those with any self-employment earnings. For the SIPP simulations, we also drop households from Alaska or Hawaii (63 observations) because those states have different poverty threshold rules. Thus, the SIPP simulation analysis sample includes one-unit households whose oldest member is between ages 60-79, leaving a final analysis sample of 5,553 households.[29] We include program participation and income values from Wave I, which includes responses as of December 2017.

With the SIPP, we can calculate net income by applying a standard deduction, the earned income deduction (20 percent of earned income), the medical deduction (older households may deduct out of pocket medical expenses over 35 dollars per month), and the shelter deduction (shelter costs net of half of adjusted net income).[30] The SIPP also contains measures of assets, which we compute as the sum of the value of stocks and mutual funds, bank accounts, and bonds. Countable assets do not include one's primary residence, nor do they include tax-preferred retirement accounts. Appendix Table B2 illustrates the components of net income from both administrative QC records and the SIPP survey data. The values for income, deductions, SNAP benefit levels, and countable assets (where collected in the QC) are quite similar even though the datasets are derived from very different sources.[31] This provides support for the use of the SIPP data for simulation exercises below.

[28] For the Survey of Income and Program Participation we can group household members who receive SNAP benefits into a "SNAP unit," but we cannot appropriately group persons within households that do not currently receive SNAP benefits but might under different policy regimes.

[29] As with the ACS, we exclude households whose youngest member is younger than 50 years old for data quality purposes.

[30] When calculating net income, we apply the higher of the reported utility expenses and the standard utility allowance in that state.

[31] We note that there is no evidence from the SIPP that survey responses differ systematically from values reported in the administrative records once we restrict the sample to "one-unit" households (i.e., married couples or single adults living alone). For example, we do not find evidence that households strategically under-report income to increase the value of their benefit.

3 Results: Simulated Eligibility

To begin, we leverage household-level survey data from the 2018 Survey of Income and Program Participation (SIPP) to characterize how the different policy components change predicted SNAP eligibility. We take all one-unit households in the 2018 SIPP whose oldest member is between the ages of 60 and 79 and calculate what share of them would be eligible for SNAP under different eligibility criteria, given their actual household composition, total assets, and gross- and imputed net income. This yields the percent of a nationally representative sample of households that would be eligible under different eligibility criteria.[32]

The first bar in Figure 2 shows that among all SIPP households whose oldest member is between ages 60-79, 18.7 percent would be eligible for SNAP under the federal income and asset criteria. To simulate the effect of the BBCE expansions on eligibility, we use the values of the modal state BBCE expansion (see Table 2): the typical state eligibility expansion eliminates both the net income limit and the asset limit and often imposes a gross income limit of 200 percent (this is imposed so that it is not the case that every older household is eligible for SNAP under these state eligibility expansions).[33] The rightmost long bar indicates that, under the typical 'full' BBCE expansion, eligibility is almost double, from 18.7 percent to 35 percent of one-unit households. Figure 2 shows that eliminating the net income limit and asset limit alone have pretty similar effects on eligibility of about six percentage points each. The remaining four percentage point increase in eligibility arises from newly eligible households that benefit from eliminating both the net income and asset limits.[34]

This exercise illustrates how *eligibility* is affected by different policies, which in turn provides a prediction for SNAP participation. We expect that states adopting BBCE will see meaningful increases in SNAP participation for older adults because eligibility nearly doubles. If the new

[32] See the Data Appendix for a detailed discussion of how we calculate net income and assets in the SIPP and for a comparison of the SIPP values with the SNAP Administrative Quality Control (QC) Database.

[33] Appendix Table A1 shows the policy parameters for all BBCE adopting states.

[34] As shown in Table 2, in our sample only Colorado and Oklahoma do not eliminate the net income limit. If we model a version of BBCE that imposes a *gross income* limit of 160% of the FPL, as in Iowa, the total eligibility rises to 29 percent.

participation from the state expansions is among those who were not already federally eligible, then we would expect to see these effects among higher income households that likely have net income above the poverty level and among households that are likely to have assets above $3,500. We test these predictions with respect to heterogeneity empirically in section 5. The evidence suggests that patterns in participation largely mirror these eligibility differences.

3.1 Simulated Eligibility Gains by Household Gross Income Level

Next, Table 3 disaggregates the eligibility increases show in Figure 2 by household gross income level and provides more detail on the net income and asset holdings of the simulation sample. Note that gross income is the only eligibility criteria we observe in the ACS data, so it is important to understand how eligibility is affected within these categories. Row 1 of Panel A shows the share of households that would be eligible for SNAP under either the federal rules or the full BBCE provisions (eliminate asset limit, eliminate net income limit, impose gross income limit of 200% of the FPL). Note that all households with gross income under 200% of the FPL are eligible under "full BBCE" criteria. As seen in row 2, the 1.4 percent of households with gross income above 200% of the FPL who are eligible for SNAP in this simulation are only eligible under federal rules.

Row 2 shows the share by each category of gross income that are eligible under federal rules (i.e., net income is below 100% of the FPL and assets below $3,500 or eligible under pure public assistance designation). Note that we see non-monotonicity: in column (3) only 69.2 percent of households with gross income between 0-50% of the FPL qualify for SNAP under federal rules, but in column (4), 82 percent of households with gross income between 50-115% of the FPL qualify.

The third row shows the difference between rows 1 and 2, which is the share that are predicted to be expansion-only eligible in each gross income category. Between 69-82 percent of households with gross income below 115% of the FPL are federally eligible. The largest gains are for households with gross incomes above 115 and below 200% of the FPL. However, it is clear that in all gross income categories, some households gain eligibility due to the BBCE expansions.

In Panel B of Table 3, we examine whether the federal net income test and/or the asset limit

is binding for households in these gross income categories.[35] For households with gross income below 115% of the FPL, the asset test is the most binding (i.e., nearly all of these households have net income below the 100% of the FPL threshold). In fact, the households with the lowest gross income (0-50% of the FPL) are more likely to exceed the federal asset limit of $3,500 than households with gross income between 50-115% of the FPL. For households with gross income between 115 and 150% of the FPL, eliminating the income and asset limits have similar effects on eligibility; 22 percent gain eligibility because of the asset test alone; 26 percent gain eligibility because of the net income test alone; and 12.5 percent gain eligibility only when both provisions are eliminated. For the households with gross income between 150-200% of the FPL, the income limit binds for 76 percent of them, and they are split roughly evenly by whether or not they satisfy the asset test.

Panel C of Table 3 shows that the households with the lowest gross incomes may have substantial assets. For example, as shown in Panel C, column 3, 9 percent of households with gross income between 0-50% of the FPL have assets worth over $100,000, and 7 percent of these households have assets between $ 30,000 and $ 100,000. Looking across columns 3-7, we see that asset levels are non-monotonic in household gross income.

4 Results: The Impact of Eligibility Expansions on SNAP Participation

4.1 Methodology

To estimate the impact of the state eligibility expansions, this study implements an estimation strategy that is robust to staggered adoption with time-varying treatment effect heterogeneity.

[35]Note that the predicted percent federally eligible in row 2 of Panel A does not always match the first row of Panel B because we classify households who are "pure public assistance" as being eligible for benefits under federal rules irrespective of income and assets. As described in detail in the Data Appendix, in the SIPP we classify Pure PA households as those who receive SSI income. This closely matches the fraction classified as Pure PA in the Quality Control data, see Appendix Table B2.

Specifically, we estimate a stacked difference-in-differences (SDD) regression design.[36] To create the data for the estimation, each expansion year between 2008 and 2011 is considered to be its own "treatment timing" group. We first create a separate sample of treatment and control households for each treatment timing group. Appendix Table B3 shows the sample sizes in the ACS data for each treatment timing group and for the common control group. Appendix Table B4 shows how these data are then leveraged to construct a "stacked" sample of all four treatment timing groups. The treatment group includes older households in the treatment states in the two years prior to expansion and the six periods post expansion. We also include a copy of the common control group for each treatment timing group in the relevant years. This process yields our final stacked sample of 1,526,467 one-unit households from the 2006-2016 ACS.

The main estimating equation takes the form:

$$(1) \quad Pr(SNAP_{hset} = 1) = \sum_{e=2008}^{2011} [\beta_0 + X_{hset}\gamma + \beta_1 BBCE_{set} xPOST_{et} + \alpha_{se} + \alpha_{te} + \varepsilon_{hset}]$$

The dependent variable, $SNAP_{hset}$ is an indicator of SNAP participation for household h, living in state s, in sub-experiment group e, in the year t. The policy indicator, $BBCE$, is equal to one in the seventeen states that adopt the state eligibility expansions between 2008-2011 and is equal to zero in the nine control states that did not adopt BBCE as of July 2020 (i.e., AK, AR, KS, MO, SD, TN, UT, VA, WY). The post-adoption indicator, $POST$, equals one in years following the treatment-timing year (so is equal to one for both treatment and control in the corresponding calendar years for each treatment timing group). The sample is repeated cross-sections, so we include a vector of household-level characteristics, X: highest level of education of any household member, whether any household member is non-white, household composition, and a linear control for the age of the oldest household member. All regressions include sub-experiment-specific state (α_{es}) and year (α_{et}) fixed effects. The regressions are weighted using ACS household weights and robust standard errors are clustered at the state level. Robustness to alternative specifications is described in Section 4.4 below.

[36] For a summary of the methods used, see Wing, Freedman, and Hollingsworth (2024).

We test for robustness to which states are included in the treatment group and whether results are sensitive to the exclusion of Hawaii and Alaska because they have different values for the poverty level due to their higher cost of living. We also test for robustness to alternative estimation strategies and controlling for other state SNAP provisions that may impact participation and the state unemployment rate.

4.2 Descriptive Results

Figure 3 presents mean SNAP participation in the 17 treatment and 9 control states from 2006 to 2019. The vertical lines mark the window of years these treatment states expanded eligibility (2008-2011). The figure shows that SNAP participation was very similar in the two groups of states in the pre-period years of 2006 and 2007. Between 2008 and 2011, SNAP participation rose rapidly in both groups of states in the wake of the Great Recession. By 2011, nearly eight percent of older households in treatment states were receiving SNAP compared with only six percent of older households in control states. Beginning in 2010, SNAP participation rose more in treatment states and remained elevated throughout the post period. Notably, from 2012 through 2019, the difference in participation across the two groups of states grew as participation continued to rise in the treatment states and fell in the control states. Whereas in 2012, older households in treatment states were two percentage points more likely to receive SNAP, by 2019, treatment state households were nearly three percentage points more likely to receive SNAP than older households in control states.

Table 4 presents means for the treatment and control groups in the pre period (2006-2007) and two post period years (2013-14). Row 1 shows that SNAP participation increased by 3.4 percentage points in treatment states and by 1.3 percentage points in control states. This led to a statistically significant 2.1 percentage point unadjusted difference in difference (column 5). The remaining rows describe one-unit households in our sample and provide a rough balance test of covariates between our treatment and control group states. Among the one-unit households, about half are married couples and about one-third are single females. Between 84-90 percent of households

have a member who has earned at least a high school degree, and nearly half of all households have someone with a college degree. Households in treatment states are more likely to have a household member who is not white, and the average age of the oldest member in these households is 69. These older households have income of between $50,000 and $60,000 per year, which is a little over 300 percent of the poverty level. In both groups of states, income and income as a percent of poverty increased over the period, but income increased by a little bit more in the control states (though the changes are not economically significant).[37]

4.3 Results

The main results are reported in Table 5. We first present results for all households whose oldest member is between the ages of 60 and 79 for the baseline set of 17 treatment and 9 control states. We find that state adoption of these eligibility expansions increased SNAP participation by 1.4 percentage points. From a mean of 5.7 percent of households receiving SNAP benefits in the pre expansion period, this is about a 25 percent increase in participation. This is a meaningful increase in participation given that the rate is so low for these older households, and prior estimates did not conclusively show that these expansions alone increased participation for these older households. Note that this 1.4 percentage point rise in participation is much smaller than the 16.3 percentage point increase in eligibility predicted by the SIPP simulations.

Figure 4 shows that the effect is similar by single year of age of the oldest household member. Panel B of Table 5 shows that this relative increase in SNAP participation is experienced broadly across households with different structures. Recall, as described in detail in Appendix B, our analysis in the ACS is restricted to older adults living alone or as a married couple without other family members present. Both single women and men experience about a 2 percentage point increase in SNAP participation. Although married couples have a smaller percentage point change

[37] See Appendix Table C3; when using the entire post period and controlling for observable characteristics, the magnitude of the relative increase in the likelihood of having income between 50-115% of the FPL falls by more than half, and there is no longer a statistically significant decrease in the likelihood of having income above 200% of the FPL.

(0.5pp), this is actually a larger percent increase relative to a much smaller baseline participation rate of just 1.7 percent.

This basic pattern is consistent across demographic and socioeconomic subgroups explored in Panel C of Table 5. Those households whose members have higher education, who are White, and who are homeowners have smaller percentage point increases but larger percent changes. The final category is a rough proxy for having substantial assets by classifying households as having any non-zero (positive or negative) income from investments (McInerney et al. 2022). Again, we see those with non-zero income have a smaller point estimate but a larger percent change. Together, the results in Table 5 confirm that BBCE has a positive and significant impact on SNAP participation for older households. This impact is broadly experienced by household demographics and socioeconomic status. In Section 5 below, we consider whether the marginal SNAP participant is a household that gained eligibility or whether BBCE is bringing in SNAP participants who were already eligible under federal rules.

4.4 Robustness Checks

Next, we confirm that our main results are robust to the treatment of the policy parameters and to alternative TWFE estimation strategies. First, Table 6 shows that the estimated impact of the state BBCE expansions is not sensitive to which states are included in the treatment group. Column 1 repeats the baseline specification. In column 2, we restrict the sample to include only "full BBCE" states that imposed a gross income limit of 200% of the FPL and removed the asset limit (see Table 2 for the list of 11 states). The point estimate is slightly larger but not statistically significantly higher. Column 3 adds 8 additional treatment states on top of the 17 BBCE states in our main analysis (Alabama, Idaho, Mississippi, Montana, Nebraska, Pennsylvania, Vermont, and West Virginia).[38] These states were not included in our main analysis because they either contracted eligibility during the study period, had conflicting information about eligibility parameters across sources, or were the only state to preserve (though raise) the asset limit. For these reasons,

[38] Appendix Table A1 lists the details on why these states are excluded from the main analysis.

we would expect the effect to be smaller than in the baseline results. Indeed, the point estimate is slightly smaller than the baseline result in column (1), though not statistically significantly different. Finally, in column 4, we show results are not sensitive to excluding Hawaii from the treatment group and Alaska from the common control group (these two states have different poverty limit thresholds and thus the characteristics of eligible households may be different). Appendix Figure C2 shows the estimated coefficient for separate regressions estimated for each treatment state relative to the common control group. Again, we find results are strikingly robust, with most of the states exhibiting smaller BBCE impacts being states that did not implement the modal "full" BBCE parameters.

Next, in Table 7 we present estimates using alternative estimation strategies. Here, the estimation sample includes the simple state by year panel of BBCE-adopting and control states. Column 1 presents the the naive TWFE specification with state and year fixed effects for the sample years 2006-2016, which are the years used in the baseline stacked difference-in-differences estimates.[39] Column 2 is this same naive specification using all the pre-pandemic years available, 2006-2019. As anticipated, by not accounting for time-varying treatment effects the estimates are slightly attenuated but similar and still statistically significant.

The specification in column 3 of Table 7 probes whether the BBCE effect that we estimate might be related to other SNAP-related policies. Our stacked difference-in-differences sample design does not allow for a straightforward method for including covariates that vary at the state by year level. Column 3, therefore, relies on the same naive TWFE estimate as column 2 and includes four additional policy controls from the SNAP Policy Database. The estimated BBCE effect is not sensitive to including these variables, likely due to the fact that these parameters do not change much during our sample period and all specifications include state (and year) fixed effects. The first two policy variables are the median recertification period for older households without earnings and the median recertification period for any household with earnings. Only the latter has a statistically significant positive impact. The estimate indicates that the state having an

[39]The stacked difference in differences estimates consider two years before the expansion and five years after the expansion for expansions taking place between 2008 and 2011. See Appendix Table B3.

additional month longer median recertification period for households with earnings raises SNAP participation by 0.1 percentage point.

The third covariate is an indicator for a state having a Supplemental Security Income- Combined Application Project (SSI-CAP), which is not statistically significant here.[40] Again, we note that this specification does not account for time-varying treatment effect heterogeneity, so this null finding may reflect attenuation bias or Type II error. The final covariate from the SNAP Policy Database that we include is an indicator for whether the state has a policy excluding all vehicles in the calculation of assets. Again, the estimated coefficient is small and not statistically significant. Column 4 includes the state x year unemployment rate from the BLS's Local Unemployment Rate Series to verify robustness to state-level economic shocks that might be correlated with BBCE adoption. In our sample of older adult households, SNAP participation is not significantly related to the local unemployment rate, potentially due to low labor force attachment. In all cases, the estimated impact of BBCE is not changed and the qualitative conclusions are the same. Together, these estimates provide evidence that the impact of BBCE is not spurious and is not the result of other contemporaneous SNAP policy changes or economic conditions.

Finally, Table 7, column 5 presents the regression-adjusted TWFE as in Callaway and Sant'Anna (2021). Here we present the overall average treatment effect on the treated (ATET) within cohort and time (i.e., the default summary weighting scheme). This point estimate is slightly larger than the preferred stacked difference-in-differences estimate. Appendix Figure C1 presents aggregated treatment timing effects using methods described in Callaway and Sant'Anna (2021). Together, the Callaway Sant'Anna results provide support for the pre period trends being parallel for the treatment states in each of the treatment timing groups. The effect grows over time, as seen in Appendix Figure C1 and Appendix Tables C1 and C2. In Appendix Table C1 we show that there is no statistically significant difference in SNAP participation in treatment states in the period right

[40]Prior work has considered the impact of the Supplemental Security Income-Combined Application Project (SSI-CAP), which permits SSI beneficiaries to complete a shortened SNAP application at the Social Security Administration (SSA) office and complete the initial interview at SSA. There are currently 17 states with SSI-CAP programs, and in our sample of 26 states only Arizona (SSI-CAP 2009), Kentucky (BBCE in 2010, SSI-CAP in 2008), New Jersey (BBCE in 2010, SSI-CAP in 2009), and South Dakota (SSI-CAP in 2010) adopted these programs during our study period.

before implementation (e.g., 2007 for the 2008 expanders; 2008 for the 2009 expanders, etc.).

Appendix Table C1 presents results separately for each treatment-timing group and in each year that is included in our preferred specification, as an event-history framework. Similarly, Appendix Table C2 presents estimation results for each treatment-timing group for all years of data 2006-2019. It is reassuring that results are robust to these alternative estimation strategies.

5 Were New SNAP Households Federally Eligible?

Ideally, we would be able to directly characterize which households are beginning to take up SNAP in response to the expanded eligibility criteria through detailed panel data. This would inform whether the program is increasing participation among those who are federally eligible and/or expansion-only eligible and help policymakers understand which loosened eligibility criteria matter for increased participation. With the ACS data, we are unable to identify which households are new participants (because it is a cross-section) and which households were expansion-only versus federally eligible (because it does not have asset information, nor can we construct net income). Instead, we use several different approaches from the SIPP, QC data, and ACS to provide evidence consistent with increased participation among households that gained eligibility (i.e., "expansion-only eligible").

5.1 Quasi-experimental Estimates of Participation Changes by Household Gross Income Level (ACS)

The SIPP simulation results described above suggest broad gains in SNAP eligibility across households with gross income below 200% of the FPL. Further, the largest gains in eligibility are for households with gross income between 115-200% of the FPL. To explore the characteristics of the marginal new participant, we turn back to the ACS and consider the impact of BBCE expansions on SNAP participation for households in the five different gross income categories examined

in the SIPP.[41]

The first two rows of Table 8 present the estimated impact of the state expansions for the subset of households that have very low gross income (0-50 and 50-115% of the FPL); state SNAP expansions increase participation for these groups by 3.1 and 4.1 percentage points, respectively. The SIPP simulations in Table 3 suggested that in these income categories, most households are federally eligible (69.2 and 82%, respectively). Consistent with that, the percent increase in SNAP participation is relatively small for these two groups–19 and 12%.

Next, Table 8, presents estimates for groups of households with higher share expansion-only eligible. As shown in Table 3, 58 percent of households with gross income between 115-150% of the FPL are expansion-only eligible. This group experienced a large absolute (and relative) 5.7 percentage point (63%) gain in SNAP participation. We observe a similarly large relative gain among households with gross income between 150-200% of the FPL; 85% of these households are expansion-only eligible, and the expansions led to a 1.7 percentage point (or 46%) gain in participation. It should not be surprising that the largest relative gains in SNAP participation are among these groups of households with the highest share that are expansion-only eligible.[42,43]

Understanding the characteristics of the marginal participant can also yield insights on which policy parameters are most important for increasing participation. Though all BBCE states in our analysis eliminate the asset limit, there is some variation in treatment of income limits. Eleven

[41] Some households might change their income to gain eligibility. To understand the role this type of income shifting might play, in Appendix Table C3, we examine whether the likelihood a household has gross income in different categories changes post expansion. In this table, the main specification is estimated with the dependent variable being the household gross income category indicated in the column heading. We do observe modest 0.4 percentage point increase in the likelihood household income is between 50-115% of the FPL and a 0.2 percentage point reduction in the likelihood household income is between 115-150% of the FPL. But these coefficient estimates are quite small and not likely to be economically meaningful. If there is slight income shifting to gain eligibility, then the point estimates on SNAP participation for the 50-115% of the FPL group would be slightly biased upward and the point estimates on 115-150% of the FPL group would be slightly biased downward. However, the main effect should not be biased as we pool all income categories together and do not include household gross income as a covariate in our preferred specifications.

[42] Although there is a large relative gain in SNAP participation for households with income above 200% of the FPL, this is economically small and likely reflects measurement error both in SNAP participation and in our measure of household income.

[43] Anders and Rafkin (forthcoming) provide a welfare analysis of BBCE among working-age populations using only those households whose gross income is 50-115% of the FPL. Our simulation results suggest that roughly 18% of older households with gross incomes in that range do not qualify for SNAP under federal eligibility rules due to the stringent asset tests.

states adopt the "full BBCE" parameters of eliminating the net income limit and imposing a gross income limit of 200% of the FPL, four states eliminate the net income limit but impose a lower gross income limit between 160 and 185% of the FPL, and two states (Colorado and Oklahoma) keep the net income limit of 100% of the FPL.

In Appendix Table C4, we examine whether the effect of BBCE on SNAP participation differs across each of these policy regimes, relative to the "full BBCE" parameters.[44] The first two BBCE policy types eliminate the asset and net income limits but impose a gross income limit. Conditional on eliminating the net income limit, there are no statistically significant differences in the estimated effect of BBCE on SNAP participation by whether the gross income limit is 200% of the FPL, as in full BBCE states, or somewhat lower, between 160-185% of the FPL. However, there are differences in the effect of BBCE on SNAP participation by treatment of the net income limit. As shown in Table 3, the net income limit does not begin to bind until gross income exceeds 115% of the FPL. Accordingly, there is no statistically significant difference in the effect of BBCE between "full BBCE" states and the states that keep the net income for the lowest income households (i.e., below 115% of the FPL).[45] As shown in Table 3, the net income limit binds for 38.7% of households with gross income between 115-150% of the FPL. Although the effect on SNAP participation is not significant and the upper bound of the 95 percent confidence interval is a 5.5 percentage point increase, this effect is statistically significantly different than the effect in full BBCE states (p=0.06). And for households in the 150-200% of the FPL group, a range over which the net income limit binds for 78% of households, the estimated coefficient estimate is -0.00005, and this is statistically significantly different than the effect of BBCE on SNAP participation in full BBCE states (p=0.002). This suggests that in addition to eliminating the asset test, eliminating the net income limit is an important policy lever to increase SNAP participation.

[44] As described in footnote 41, it is possible that households adjust their income in response to the policy. In results not shown, a parallel estimation to Appendix Table C3, there is a similar pattern of economically small, but statistically significant income shifting.

[45] Given there are only two states in this group, these estimates are quite noisy; note that we cannot rule out effects as large as a 4.9 percentage point increase in lowest income group in these states and a 5 percentage point increase in the 50-115% of the FPL group.

5.2 Observed SNAP Participation among Expansion-Only Eligible Households (QC and SIPP)

The Quality Control (QC) administrative dataset provides further suggestive evidence that some of the increased SNAP participation is likely from expansion-only eligible households beginning to participate. As shown earlier, Figure 1 uses the 2018 administrative QC data on households that participate in SNAP to show the relationship between net income on the horizontal axis and the actual SNAP benefit level (per person) on the vertical axis. One of the ways that BBCE expands eligibility is by eliminating the net income limit of 100% of the FPL. In control states, there are no households participating in SNAP who have a net income above the poverty level. However, in the treatment states, there are many households receiving benefits with net income above the poverty level. The administrative data shows that at least some SNAP households in treatment states are only expansion-eligible because they fail to meet the federal net income test.[46]

We present a final piece of evidence on the extent to which the higher SNAP participation rates are due to those who are eligible only under the expansion versus being federally eligible. Here, we utilize the 2018 SIPP to provide a snapshot of SNAP participation rates in the "post" period by comparing SNAP participation among households in control versus BBCE states (N = 2,744).[47] As described in the data appendix, the SIPP collects information on SNAP participation in December of 2017, so the measure is similar to the ACS.

In Table 9, Panel A, we first see that SNAP participation rates are 4.3 percentage points higher in BBCE states compared with the control states (10.1% vs. 5.9%). These estimates are similar in magnitude to the differences shown in Figure 3 using the ACS data. Next, we find that in BBCE states more older households are *eligible* for SNAP under federal rules. Thus, some of the net difference in SNAP participation can be explained by residents in BBCE states being poorer, on average. The difference is meaningfully sized and statistically significant; predicted eligibility for

[46]The QC does not collect asset information in treatment states so we cannot observe participation by asset level. Since net income is used to compute benefit amount, it is captured in the QC administrative data.

[47]Note that by restricting to only the BBCE and control states, we exclude part of our simulation sample.

SNAP benefits under federal rules is almost 50 percent higher in BBCE states.

In Panel B of Table 9, we restrict only to the households that we impute as eligible under federal rules by calculating their net income and assets. Among this subset, we see SNAP participation rates are statistically indistinguishable, although the mean is higher in BBCE states. Of one-unit households that are eligible for SNAP under federal rules, in control states 42 percent participate compared with 45 percent in BBCE states. Thus, we fail to find evidence that households eligible under federal rules are induced to participate in SNAP through welcome mat or other spillover effects, although this could reflect Type II error as the sample size is small.

Finally, in Panel C of Table 9, we estimate SNAP participation among households that we impute would be eligible for SNAP only under the full BBCE expanded set of rules and not under federal rules. The mean of SNAP participation in the control states is small and statistically insignificant (this estimate represents only 1 household out of 123 who would only be eligible under the full BBCE criteria but reside in a non-expansion state). In contrast, the mean in BBCE states suggests that among those who are eligible for SNAP under full BBCE rules only, 3.5 percent are participating. This latter estimate is also noisy (it represents 13 out of 353 households), but the difference in SNAP participation between this expansion-only eligible only group in BBCE versus control states is 2.8 percentage points and is statistically significant. We interpret this statistically significantly higher SNAP receipt among those households that are eligible only under the expanded criteria in treatment states as additional evidence supporting the claim that higher participation under BBCE is being driven by those who gain eligibility under the program.

6 Discussion and Conclusions

In this paper, we examine the effects of optional state SNAP eligibility expansions on older household eligibility and participation. These expansions eliminated asset limits and loosened income limits. We illustrate how removing the net income limit while imposing a gross income limit effectively permitted smaller households with higher levels of net income to receive a minimum

benefit, thus expanding eligibility. SNAP eligibility criteria for older households differ than those for younger households, and since one-third of SNAP households have an older adult member, it is important to separately estimate their eligibility and participation.

We first conduct simulations of eligibility among a nationally representative sample of older households under federal rules and after eliminating asset and loosening income limits. This is the first evidence of how these parameters change *eligibility*. We show that these expansions double eligibility and that both provisions are equally important. We also examine simulated eligibility separately by household gross income categories and show that it is households with income between 115-200% of the FPL who experience the largest gains in eligibility.

Using estimation methods that are robust to time-varying treatment effect heterogeneity, we provide new evidence that these optional state expansions increase SNAP participation among older households by about 25 percent, and these gains are similar by age of the oldest householder and broad demographic group. We provide three pieces of evidence that are consistent with the expansion increasing participation among households that are only expansion-only eligible (i.e., not eligible under federal policies due to exceeding the net income or asset limits). First, using the ACS, we show that the largest relative increases in participation are among households in the gross income categories that experienced the largest gains in eligibility. Second, using the administrative QC data, we show that post-expansion there are some households of 1-2 persons that are receiving the minimum benefit at higher levels of net income. Third, using the SIPP, we show that among the group who are simulated to be eligible only under the full BBCE expansions, the participation rate is basically zero in control states and is sizable and statistically significant in the BBCE states. Together, all of this evidence is suggestive that the entire increase in participation *could* be due to households who gained eligibility from the expansion.

Our results show that net income limits bind for older households, and they respond to loosened net income limits which increase access to minimum benefits. SNAP benefits are a function of net income and household size, and for smaller households of 1 or 2 persons, computed benefits reach zero at values of net income around the poverty level. These smaller households receive a

guaranteed minimum benefit of $23 per month (if they meet other eligibility criteria). Using the administrative QC data, we find many SNAP households in BBCE states have net income above the poverty level and receive only the minimum benefit. It might be surprising that households participate in SNAP despite receiving such small benefits. However, SNAP benefits often confer double value at farmer's markets[48] and extend beyond food purchases.[49] For example, local programs include using the EBT card for reduced transit fares,[50] reduced broadband costs through the Lifeline program and energy costs through LiHEAP,[51] and even free museum entries.[52]

Our evidence from the SIPP is consistent with asset limits being binding for many older households. Additionally, eligible households may have been discouraged from applying if they did not realize they were eligible or found the administrative burden of proving they satisfied the asset criteria too burdensome. When considering eligibility for SNAP, one's residence and retirement accounts are not considered to be assets, though this may not be widely known. Future work should examine the relative importance of these eligibility versus behavioral channels in explaining why eliminating the asset limit increases SNAP participation among older households. In related work, McInerney and Morrill (2025) illustrate that SNAP *eligibility* declines smoothly as households age, despite federal rules that expand eligibility for households with a member over age 60. That work shows that eligibility falls as households age as a result of changing demographics, income and asset portfolios, and differential mortality.

Evidence of policy changes that increase SNAP participation among older households is of first order importance. In a special issue of the journal *Applied Economic Perspectives and Policy* dedicated to senior hunger, the editors describe the importance of this issue in the introduction: "In terms of program participation, increasing SNAP participation rates among older Americans has remained a stubborn hurdle and is the first open question in this research area" (Ziliak, Gun-

[48] See, e.g.,https://www.fns.usda.gov/snap/attracting-snap-customersandhttps://thefoodproject.org/snap-hip/.

[49] Project Bread provides an extensive list of programs, see https://gettingsnap.org/benefits-of-snap.

[50] See, e.g., https://www.mbta.com/fares/use-your-ebt-card-the-mbta/.

[51] See https://www.lifelinesupport.org/do-i-qualify/#programs and https://liheapch.acf.hhs.gov/delivery/income_categorical.htm

[52] see, https://museums4all.org/participating-museums/

dersen, and Ismail 2022). This study builds on this work and shows that eliminating asset limits and loosening net income limits increases both eligibility and participation for older households, demonstrating that policy levers can effectively increase participation in SNAP for older households.

These findings offer important lessons for SNAP policy and also inform how program participation might change in other social safety net programs if they eliminate the asset limit. Several state Medicaid programs have eliminated the asset limit for Medicare beneficiaries who will dually enroll in both Medicare and Medicaid. Between 2016 and 2025, six states eliminated asset limits for "partial" Medicaid (i.e., Medicare Savings Programs); as of 2025, 15 states have no asset limit for partial Medicaid.[53] In January 2025, California fully eliminated the asset limit for dual enrollment in Medicare and "full" Medicaid, but due to budgetary pressures the state reinstated an asset limit of 130,000 dollars one year later in January 2026.[54] SNAP provides an ideal setting to examine how older adults respond to eliminating asset limits due to the program's large size, the ability to generate causal estimates from optional state elimination of asset limits, and because eliminating asset limits generated large changes to eligibility.

Recent work considers the welfare implications of program targeting (see, e.g., Rafkin, Solomon, and Soltas forthcoming). Anders and Rafkin (forthcoming) estimate a high Marginal Value of Public Funds (MVPF) for BBCE expansions among low-income households (of all ages), driven by their estimated "welcome mat" and "woodwork" effects. Finkelstein and Notowidigdo (2019) conducted an RCT among Medicaid participants in Pennsylvania who were likely eligible for, but not participating in, SNAP. Despite finding that individuals responding to the outreach had higher incomes and were less sick on average, they estimate a reasonably high MVPF for the information and assistance intervention. Given these prior MVPF estimates for SNAP-related policies and interventions, we would expect a similar value in our setting. In our study, we focus specifically on

[53] https://www.macpac.gov/wp-content/uploads/2020/07/Data-Book-Beneficiaries-Dually-Eligible-for-Medica pdf; https://www.macpac.gov/wp-content/uploads/2025/12/Dec25_MedPAC_MACPAC_DualsDataBook-WEB508-FINAL.pdf. Viewed February 24, 2026.

[54] https://www.dhcs.ca.gov/services/medi-cal/eligibility/letters/Documents/I25-23.pdf; https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB133 Viewed February 24, 2026

estimating whether older households are sensitive to income and asset rules, rather than developing a structural model that would yield an explicit MVPF calculation. We note that the benefits of increased SNAP participation among older households are likely substantial, as food insecurity has been rising at a faster rate among older adults than other age groups. At the same time, the costs to the government of additional participants may be lower than in other contexts because many older adults receive the minimum benefit level. Further, from the state's perspective, administrative costs may be reduced following BBCE. For example, Geller et al. (2019) find that BBCE states have lower total administrative costs despite higher caseloads because of reduced documentation requirements associated with asset tests.

As a final caveat, this paper explicitly considers the pre-pandemic period, providing evidence on patterns before the implementation of emergency measures that changed the SNAP program and prior to programmatic changes under the One Big Beautiful Bill Act (P.L. 119-21) in 2025. To better understand SNAP participation responses to eligibility contractions, future work should consider post-pandemic responses and estimate whether there are symmetric participation effects when states eliminate the program, as in Louisiana and Mississippi, or tighten eligibility criteria.[55] An additional limitation of this study is that the ACS data lack information on household asset holdings, net income, and food security. Future work should consider whether the SNAP program is meeting the needs of households with older adults, as they have lower earned income but more assets and higher receipt of Social Security and pension income.

[55]For example, over the time period of our analysis, Pennsylvania initially eliminated the asset limit and then imposed an asset limit of $5,500 in 2012. In results not shown, we find evidence that participation increased in Pennsylvania irrespective of that asset limit, but estimates are noisy and sensitive to specification choices. Event studies of Louisiana do not show any positive impact of having a BBCE policy in place from 2010-2015. Mississippi eliminated their BBCE program in 2019, after our period of analysis.

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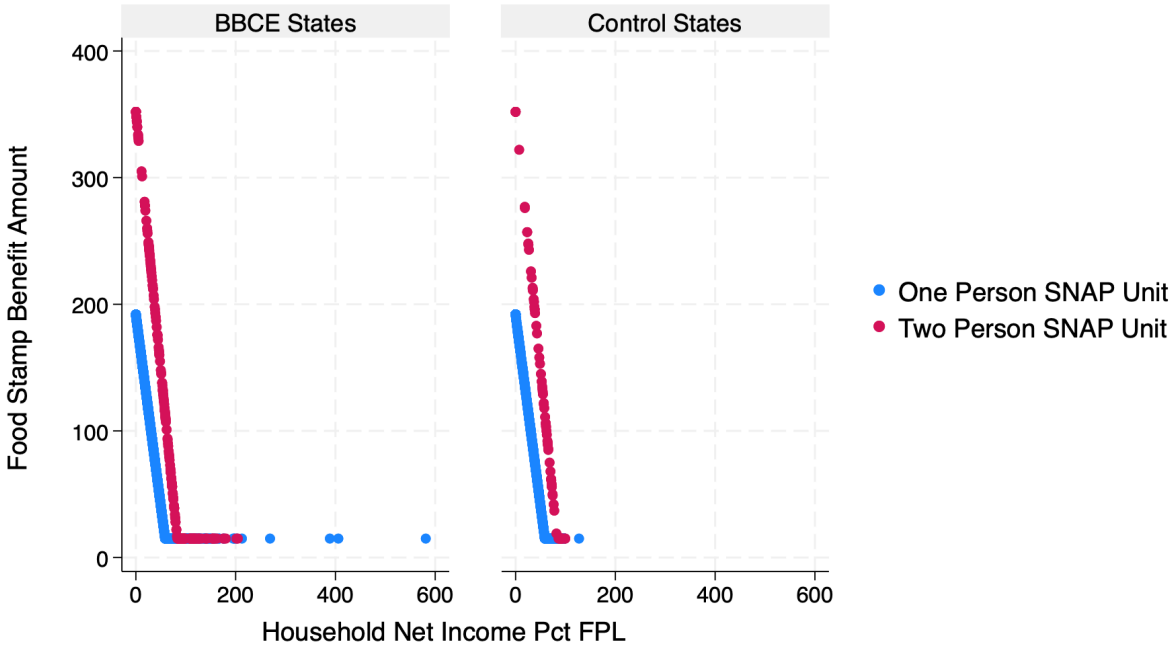
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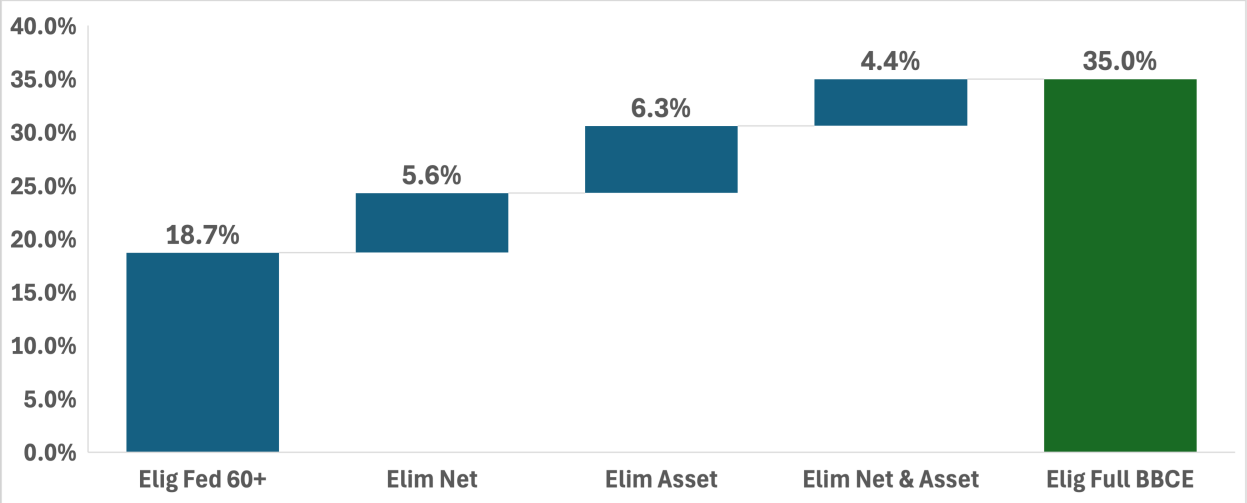
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Figure 1: Minimum benefit receipt BBCE vs. Control States



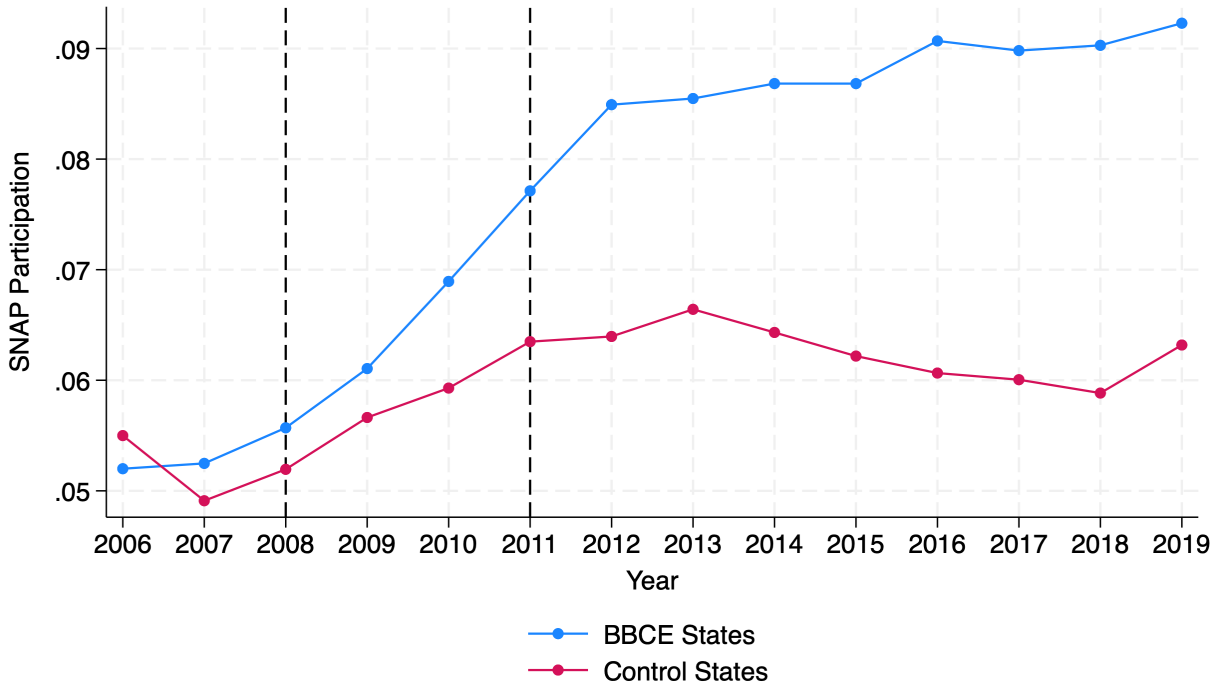
Notes: Data are from the USDA's 2018 Quality Control (QC) database for all one-unit households whose oldest member is ages 60-79, residing in BBCE or Control States.

Figure 2: Simulated SNAP Eligibility



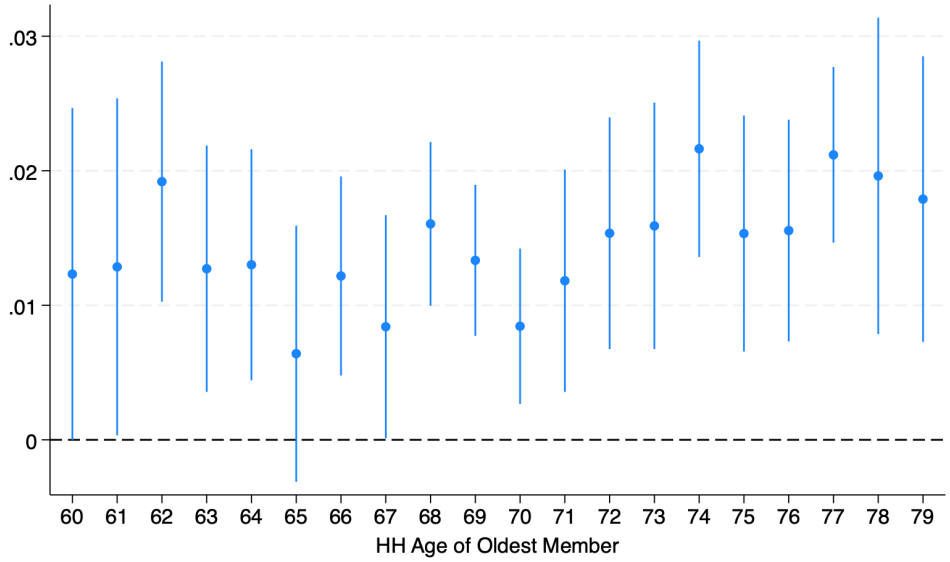
Notes: Data are from the 2018 Survey of Income and Program Participation (SIPP) and are restricted to one-unit (single or married couple) households whose oldest member is ages 60-79. The Data Appendix provides details on how predicted eligibility is calculated.

Figure 3: Raw Means over Time



Notes: The sample is the 2006-2019 ACS for all one-unit households whose oldest member is ages 60-79.

Figure 4: State SNAP BBCE Eligibility Expansions and SNAP Participation by Age of Oldest HH Member



Notes: See Table 5 for a description of the estimation sample. Coefficients are age-specific treatment effects using the stacked difference-in-differences estimation.

Table 1: Comparison of Federal and Full BBCE SNAP Eligibility Rules for Older Households

	Federal Rules	Full BBCE Rules
Gross income limit	None	200% FPL
Net income limit	100% FPL	None
Asset limit	$3,500	None
Main Deductions	Earned Inc., Shelter, Medical	Earned Inc., Shelter, Medical
Work requirements	None	None

Notes: Eligibility rules apply to households with an adult over age 60. Full BBCE refers to the most expansive set of rules (highest gross income limit and remove net income and asset limits). Table 2 presents the income and asset limits for all states used in the main analysis, and Appendix Table A1 presents the income and asset limits for each state that has adopted BBCE. Federal asset limit values presented are for FY2018.

Table 2: States Adopting BBCE Policies 2008-2011

State Name	Date of expansion	Treatment timing group	Net Inc (at adoption)	Gross Inc (at adoption)
Colorado	Mar 2011	2011	100	200
Connecticut	Jul 2009	2010	.	185
DC	Apr 2010	2010	.	200
Florida	Jul 2010	2011	.	200
Georgia	Mar 2008	2008	.	200
Hawaii	Oct 2010	2011	.	200
Illinois	Mar 2010	2010	.	200
Iowa	Jan 2011	2011	.	160
Kentucky	Jun 2010	2010	.	200
Nevada	Apr 2009	2009	.	200
New Jersey	Apr 2010	2010	.	185
New Mexico	Apr 2010	2010	.	165
New York	Jan 2008	2008	.	200
North Carolina	Jul 2010	2011	.	200
Ohio	Oct 2008	2009	.	200
Oklahoma	Jun 2009	2009	100	None
Rhode Island	Apr 2009	2009	.	200

Notes: The nine common control group states are AK (2), AR (5), KS (20), MO (29), SD (46), TN (47), UT (49), VA (51), WY (56) – states that had not adopted BBCE as of July 2020. These data are from the SNAP Policy Database. This table presents policy information only for the states that are included in our main analysis; Appendix Table A1 presents full BBCE parameters for all states.

Table 3: SIPP 2018 Simulated Eligibility Gains by Household Gross Income Level

			HH Gross Income as % of the FPL Category:				
	All	≤ 200% of the FPL	0-50	50-115	115-150	150-200	>200%
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Imputed Eligibility under Different Schemes							
Predicted Elig Full BBCE	0.350	1.000	1.000	1.000	1.000	1.000	0.014
Predicted Elig Federal 60+	0.187	0.522	0.692	0.820	0.424	0.153	0.014
Predicted Expansion-Only Elig	0.163	0.478	0.308	0.180	0.576	0.847	0.000
Panel B: Population Income and Asset Eligibility							
Net income≤100 & Assets≤3500	0.176	0.504	0.692	0.814	0.390	0.124	0.006
Net income≤100 & Assets>3500	0.074	0.190	0.308	0.185	0.223	0.116	0.014
Net income>100 & Assets≤3500	0.225	0.177	0.000	0.001	0.262	0.408	0.250
Net income>100 & Assets>3500	0.525	0.129	0.000	0.000	0.125	0.352	0.729
Panel C: Population Asset Values							
Asset ≤3500	0.401	0.681	0.692	0.815	0.652	0.532	0.256
Asset 3500-11K	0.122	0.095	0.096	0.048	0.118	0.134	0.136
Asset 11K-30K	0.109	0.071	0.051	0.038	0.087	0.107	0.129
Asset 30K-100K	0.134	0.068	0.072	0.048	0.054	0.101	0.168
Asset 100K+	0.234	0.085	0.085	0.051	0.088	0.125	0.310
N	5,553	2,000	249	729	461	561	3,553

Notes: Data are from the 2018 Survey of Income and Program Participation (SIPP) and are restricted to one-unit (single or married couple) households whose oldest member is ages 60-79. The Data Appendix provides details on how net income and predicted eligibility are calculated.

Table 4: Basic Comparison of Means, Difference-in-Differences

	Treat-Pre (1)	Treat-Post (2)	Cntrl-Pre (3)	Cntrl-Post (4)	DD [(2-1) - (4-3)]
SNAP Participant	0.052	0.086	0.052	0.065	0.021
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
HH Structure:					
One Male	0.151	0.176	0.145	0.170	-0.000
	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)
One Female	0.349	0.331	0.330	0.308	0.004
	(0.001)	(0.001)	(0.003)	(0.003)	(0.004)
Married Couple	0.499	0.493	0.525	0.522	-0.004
	(0.001)	(0.001)	(0.003)	(0.003)	(0.004)
HH Demographics and Education					
Has at least HSD	0.851	0.908	0.836	0.905	-0.011
	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)
Has College Degree	0.465	0.562	0.444	0.543	-0.002
	(0.001)	(0.001)	(0.003)	(0.003)	(0.004)
Any Non-White	0.182	0.206	0.127	0.152	-0.001
	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)
Oldest Age	68.994	68.545	68.809	68.328	0.032
	(0.017)	(0.016)	(0.033)	(0.030)	(0.050)
HH Gross Income					
HH Income (1K)	50.173	60.532	48.366	59.191	-0.466
	(0.163)	(0.207)	(0.301)	(0.345)	(0.528)
Gross Inc. Pct Poverty	306.881	312.498	301.768	310.896	-3.511
	(0.462)	(0.456)	(0.911)	(0.875)	(1.420)
0-50%	0.028	0.037	0.026	0.033	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
50-115%	0.118	0.111	0.123	0.106	0.009
	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)
115-150%	0.078	0.070	0.080	0.075	-0.002
	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)
150-200%	0.098	0.094	0.105	0.096	0.004
	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)
>200%	0.677	0.688	0.666	0.690	-0.013
	(0.001)	(0.001)	(0.003)	(0.003)	(0.004)
Observations	162,019	193,087	42,370	52,222	

Notes: Data are from the 2006-2007 and 2013-2014 ACS. The means are weighted using ACS household weights; robust standard errors clustered by state are in parentheses.

Table 5: The Effect of BBCE on SNAP Participation among Older Households

	Estimated Coef. (SE) (1)		N (2)	Mean (3)	% Change (4)
Panel A: Main Effect:					
One-unit HH	0.014***	(0.002)	1,526,467	0.057	25%
Panel B: HH Structure:					
One Female	0.023***	(0.003)	485,826	0.104	22%
One Male	0.020***	(0.004)	234,221	0.085	24%
Married Couple	0.005***	(0.001)	806,420	0.017	31%
Panel C: HH Demographics and Socioeconomic Status					
No HSD	0.038***	(0.009)	166,573	0.205	18%
Has HSD	0.012***	(0.002)	1,359,894	0.035	34%
No College	0.022***	(0.003)	741,616	0.089	25%
Has College	0.007***	(0.001)	784,851	0.024	30%
Any Non-White	0.027***	(0.005)	235,543	0.140	19%
No Non-White	0.010***	(0.002)	1,290,924	0.038	25%
Own Home Free & Clear	0.007***	(0.001)	735,242	0.021	32%
Own Home w/ Mortgage	0.005***	(0.001)	522,193	0.018	27%
Rent	0.037***	(0.006)	269,032	0.197	19%
No Inc from Invest.	0.019***	(0.002)	1,017,102	0.086	22%
Non-Zero Inc from Invest.	0.003***	(0.001)	509,365	0.005	54%

Notes: The sample is the stacked difference-in-differences estimation sample using the 2006-2016 ACS for one-unit households, as described in Appendix B. Each row represents estimates from a separate regression on the subgroup indicated. All specifications include sub-experiment specific state and year fixed effects and, where appropriate, controls for household race/ethnicity, education, family structure, and age of oldest member. All specifications are weighted using ACS household weights; robust standard errors clustered by state are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6: Robustness Checks: Heterogeneity by State Groups

	(1) Baseline	(2) 11 Full BBCE	(3) +Other BBCE	(4) -HI/AK
BBCE State x Post	0.014***	0.015***	0.013***	0.014***
	(0.002)	(0.002)	(0.002)	(0.002)
Observations	1,526,467	1,368,354	1,925,215	1,510,654
Pre-Treat Mean	0.057	0.061	0.056	0.057

Notes: See Table 5 for a description of the baseline sample and specification. Column (1) repeats the baseline specification. Column (2) includes only the 11 states that had the full version of BBCE with gross income limit at 200% FPL and no asset or net income limit, which excludes 6 treatment states with the not-full BBCE. Column (3) includes the 17 main BBCE states and 8 additional states that had BBCE policies that were not standard. Column (4) drops Alaska and Hawaii from the main sample. All specifications include sub-experiment specific state and year fixed effects and controls for household race/ethnicity, education, family structure, and age of oldest member. All specifications are weighted using ACS household weights; robust standard errors clustered by state are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7: Robustness Checks: Alternative Estimation Strategies

	(1) TWFE 2006-2016	(2) TWFE 2006-2019	(3) (2) + Policy Cntrls	(4) (2) + State Urate	(5) C-S ATET
BBCE State x Post	0.008**	0.010**	0.010**	0.010**	0.016***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.001)
Other SNAP-related state policies:					
Median Recertification Period (no earnings)			-0.0002		
			(0.0001)		
Median Recertification Period (earnings)			0.001*		
			(0.0004)		
SSI-CAP			-0.005		
			(0.004)		
Exclude All Vehicles			0.003		
			(0.002)		
Unemp. Rate				0.0004	
				(0.001)	
Observations	1,279,513	1,697,688	1,697,688	1,697,688	1,697,688
Pre-Treat Mean	0.052	0.052	0.052	0.052	0.052

Notes: ACS data on one-unit households in the BBCE and control states from 2006-2019 (see Appendix Table B3). All specifications include state and year fixed effects and controls for household race/ethnicity, education, family structure, and age of oldest member. Policy variables are derived from the SNAP Policy Database, and the unemployment rate is from the BLS Local Area Unemployment Statistics. All specifications are weighted using ACS household weights; robust standard errors clustered by state are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: The Effect of BBCE by Household Gross Income Categories

	Estimated Coef. (SE) (1)		N (2)	Mean (3)	% Change (4)
HH Gross Income					
0-50%	0.031**	(0.012)	45,400	0.164	19%
50-115%	0.041***	(0.009)	161,334	0.341	12%
115-150%	0.057***	(0.008)	113,166	0.090	63%
150-200%	0.017***	(0.005)	149,658	0.037	46%
>200%	0.003***	(0.001)	1,056,909	0.006	46%

Notes: The sample is the stacked difference-in-differences estimation sample using the 2006-2016 ACS for one-unit households without self-employment income, as described in Appendix B. Each row represents estimates from a separate regression on the subgroup indicated. All specifications include sub-experiment specific state and year fixed effects and controls for household race/ethnicity, education, family structure, and age of oldest member. All specifications are weighted using ACS household weights; robust standard errors clustered by state are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: SNAP Participation using Simulated Eligibility (SIPP 2018)

	(1) Control States	(2) BBCE States	(3) Difference
Panel A: Full Sample			
Observations	603	2,141	
SNAP Participation	0.059***	0.101***	0.043***
	(0.009)	(0.007)	(0.011)
Predicted Elig Fed 60+	0.137***	0.200***	0.063***
	(0.014)	(0.009)	(0.017)
Panel B: Eligible under federal rules			
Observations	90	449	
SNAP Participation	0.418***	0.452***	0.034
	(0.054)	(0.025)	(0.059)
Panel C: Eligible under full BBCE rules only			
Observations	123	353	
SNAP Participation	0.007	0.035***	0.028*
	(0.007)	(0.010)	(0.012)

Notes: Data are from the 2018 Survey of Income and Program Participation (SIPP), as described in Appendix B. Here the sample is restricted to one-unit households residing in BBCE expansion or control states. SNAP participation is measured as of December 2017. Means are weighted by household-level sample weights, standard errors are in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

ONLINE APPENDIX

Eliminating Limits: How Removing Asset and Income Tests Affects Older Households' SNAP Participation

A BBCE Policies

Figure A1: Example BBCE Brochure

United Way Infoline 2-1-1
2-1-1 provides information and referral services about basic needs (food, clothing and shelter), child care, energy assistance, disability services, suicide prevention, senior services, veteran's services, health services and much more. Available 24 hours a day, 7 days a week dial 2-1-1 or visit their website at www.211ct.org.

Connecticut Energy Assistance Program (CEAP)
CEAP helps households pay for primary heating bills. If your primary heating cost is included in your rent, you may also apply for CEAP. Visit the website at www.dss.ct.gov/staywarm, or for more information call 1-800-842-1132, or dial 2-1-1.

Family Planning and Pregnancy Prevention
For information about family planning call Planned Parenthood at 1-800-230-PLAN, the Connecticut Department of Public Health at 860-509-8000, or dial 2-1-1. You can also visit the University of Connecticut teen pregnancy prevention website at: www.teenpregnancy-ct.org.

Free Tax Preparation Services
From January 15 to April 15 each year, the Volunteer Income Tax Assistance (VITA) program offers free tax help to people who make less than $55,000 a year need help with their tax returns. For more information about VITA visit: http://www.irs.gov/Individuals/free-tax-return-preparation-for-you-by-volunteers or call 1-800-906-9887.

Food Banks
Foodshare and the Connecticut Food Bank provide safe and nutritious food to food pantries, soup kitchens and shelters throughout Connecticut. To find a food pantry near you, dial 2-1-1 or visit www.211ct.org

The Department of Social Services does not discriminate on the basis of race, color, religion, sex, gender identity or expression, marital status, age, national origin, ancestry, political beliefs, sexual orientation, intellectual disability, mental disability, learning disability or physical disability, including, but not limited to, blindness. Deaf and hearing-impaired persons may use a TDD/TTY by calling 1-800-842-4524. Auxiliary aids are also available for blind or visually impaired persons.

State of Connecticut

Ned Lamont
Governor

Department of Social Services
[redacted], MD, MPH
Commissioner

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Publication 09-02, revised March 2019

Help for People in Need



The Department of Social Services, along with other Connecticut agencies and organizations, provide a wide range of programs that may benefit you and your family.

Access Health CT (AHCT) and HUSKY Programs
Connecticut residents who need medical insurance should apply online at www.accesshealthct.com or by calling 1-855-805-4325. Residents may apply in person at AHCT Enrollment Centers or DSS offices. Benefits include preventive care, physician visits, prescriptions, vision care, dental care, physicals, mental health and substance abuse services, durable medical equipment, emergency and hospital care. Those who have pre-existing conditions cannot be denied. If you have questions call 1-855-805-4325.

Housing
For information about the Housing Choice Voucher program visit the Department of Housing website at www.ct.gov/doh. There you may register your email address to be notified when a Housing Choice Voucher waiting list opens. You can also dial 2-1-1 or visit www.211ct.org for information about low-cost housing options, as well as other housing services such as eviction and foreclosure prevention, security deposits and shelters for the homeless or victims of domestic violence.

Care 4 Kids Child Care
Care 4 Kids helps low-to-moderate income families in Connecticut pay for child care costs. To learn more about Care 4 Kids, visit the website at: www.ctcare4kids.com or call 1-888-214-KIDS (5437) Monday, Tuesday, Wednesday, Friday 8 am- 5 pm, Thursdays 8am - 6pm.

Women Infants & Children (WIC)
WIC is a special supplemental food program that provides nutritious foods, milk, juice, formula and other items to low-income pregnant or breastfeeding women, infants and children up to age 5. To get more information visit www.ct.gov/dph or call 1-800-741-2142.

Supplemental Nutrition Assistance Program (SNAP)
SNAP is a nutrition program that helps low-income individuals and families buy food. SNAP is funded by the U.S. Department of Agriculture and administered in Connecticut by DSS. Benefits are provided through an Electronic Benefits Transfer (EBT) card that works just like a regular debit card. You can use your EBT card at most grocery stores and at some farmer's markets. All SNAP recipients are eligible to receive free nutrition education.

For more information and to find out where to apply, visit www.ct.gov/SNAP or dial 2-1-1.

SNAP Employment & Training (E&T)
In addition to direct food benefits, SNAP recipients, not receiving Temporary Family Assistance, may be eligible for free vocational training. DSS partners with all community colleges and several community based organizations to provide training opportunities to SNAP recipients. E&T is a voluntary work program designed to help participants gain skills needed to find employment. SNAP recipients may self-enroll with an approved provider.

For more information visit www.ct.gov/SNAP

School Breakfast and School Lunch Programs
These programs provide nutritionally balanced meals to school children for free or at a small cost. Families may apply for the programs by submitting a Household Income Application which is provided by the school. The school is then responsible for certifying the student for free, reduced-price, or paid meals. If you are currently receiving Temporary Family Assistance (TFA), SNAP or Medicaid from DSS, your children are automatically eligible for free meals. Contact your child's school for more information or visit www.fns.usda.gov/school-meals/child-nutrition-programs.

Fatherhood Initiative
The Connecticut Fatherhood Initiative is a broad-based, statewide program led by the Department of Social Services that is focused on changing the systems that can improve fathers' ability to be fully and positively involved in the lives of their children. The goal of the initiative is to promote the positive involvement and interaction of fathers with their children by providing dads with the skills and support they need to get involved and stay connected to their children.

For more information about the Connecticut Fatherhood Initiative and programs in your area, please visit our website: www.ct.gov/fatherhood or call 1-866-6CTDADS / (1-866-628-3237).

Domestic Violence
The Connecticut Coalition Against Domestic Violence (CTCADV) is a statewide network of community-based programs that provide a full array of services to victims of domestic violence. Those services include a 24-hour toll free hotline, safety planning, emergency shelter, crisis intervention, individual counseling, support and/or educational groups, children's programs, court advocacy, information and referrals, and community education.

To get help or for more information call CTCADV at 1-888-774-2900 or visit: www.ctcadv.org.

Legal Assistance
For legal assistance call 1-800-453-3320 or go online at www.slsct.org.

Table A1: State BBCE Parameters at Adoption for SNAP Households with Older Adults (60+)

State name	Date of expansion	Asset limit	Gross income limit	Net income limit
Alabama[a]	02/2010	Eliminate	200	Eliminate
Alaska[b]	07/2025	Eliminate	200	Eliminate
Arizona	06/2007	Eliminate	185	Eliminate
Arkansas	04/2025	$5,500	165	Eliminate
California[c]	07/2009	Eliminate	200	Eliminate
Colorado[d]	03/2011	Eliminate	200	100
Connecticut[d]	07/2009	Eliminate	185	Eliminate
DC[e]	04/2010	Eliminate	200	Eliminate
Delaware	02/2000	Eliminate	200	Eliminate
Florida[e]	07/2010	Eliminate	200	Eliminate
Georgia[e]	03/2008	Eliminate	200	Eliminate
Hawaii[e,b]	10/2010	Eliminate	200	Eliminate
Idaho[a]	06/2009	Eliminate	200	100
Illinois[e]	03/2010	Eliminate	100	Eliminate
Indiana[f]	01/2018	$5,000	200	100
Iowa[d]	01/2011	Eliminate	160	Eliminate
Kansas	.	.	.	.
Kentucky[e]	06/2010	Eliminate	200	Eliminate
Louisiana[g]	06/2010	Eliminate	None	100
Maine	07/2000	Eliminate	200	Eliminate
Maryland	03/2001	Eliminate	200	Eliminate
Massachusetts	11/2001	Eliminate	200	100
Michigan	11/2006	Eliminate	200	Eliminate
Minnesota	12/2006	Eliminate	165	Eliminate
Mississippi[a,h]	06/2010	Eliminate	None	100
Missouri	.	.	.	.
Montana[a]	03/2009	Eliminate	None	100
Nebraska[a]	10/2011	$25,000	None	100
Nevada[e]	04/2004	Eliminate	200	Eliminate
New Hampshire[c]	05/2009	.	.	.
New Jersey[d]	04/2010	Eliminate	185	Eliminate
New Mexico[d]	04/2010	Eliminate	165	Eliminate
New York[e]	01/2008	Eliminate	200	Eliminate
North Carolina[e]	07/2010	Eliminate	200	Eliminate
North Dakota	10/2000	Eliminate	None	100
Ohio[e]	10/2008	Eliminate	200	Eliminate
Oklahoma[d]	06/2009	Eliminate	None	100
Oregon	12/2000	Eliminate	185	Eliminate
Pennsylvania[a]	04/2008	Eliminate	200	Eliminate
Rhode Island[e]	04/2009	Eliminate	200	Eliminate
South Carolina	04/2001	Eliminate	200	Eliminate
South Dakota	.	.	.	.
Tennessee	.	.	.	.
Texas	09/2001	$5,000	165	Eliminate
Utah	.	.	.	.
Vermont[a]	01/2009	Eliminate	185	100
Virginia	07/2021	Eliminate	200	Eliminate
Washington	05/2004	Eliminate	130	Eliminate
West Virginia[a]	10/2008	Eliminate	200	Eliminate
Wisconsin	07/2004	Eliminate	200	Eliminate
Wyoming	.	.	.	.

[a]: BBCE state only used in sensitivity test because either contracted eligibility, sources had conflicting information, or only state with asset limit
[b]: Since Hawaii and Alaska have different dollar values corresponding to the poverty level threshold than the lower 48 states, we exclude these two states from some analyses
[c]: California's (in first two years) and New Hampshire's expansions only applied to households with children, excluded from analyses
[d]: 8 BBCE states with gross income limit <200% FPL, used in most analyses (expanded between 2008-11 and did not contract eligibility)
[e]: 11 full BBCE states (i.e., expanded between 2008-2011; did not contract eligiblity; eliminate net income limit and asset limit; 200% FPL gross income limit)
[f]: Indiana's expansion was implemented in 2018, excluded from the analyses
[g]: Louisiana ended the expansion in 2014, excluded from analysis
[h]: Mississippi ended the expansion in July 2019.

B Dataset Construction and Sample Restrictions

B.1 American Community Survey

ACS 2006-2019: Using iPUMS public-use files, the files begin with 43,495,556 observations representing 18,765,041 unique households.

Sample restrictions: Keep only households with a single woman (2,698,344), single man (1,954,760), or a married couple with both partners interviewed and one male and one female partner (4,200,348) (N = 8,853,452). Drop households with non-citizen members (N = 8,526,449) Drop households with any self-employed member (N = 7,521,369).

Analysis sample 2006-2019: Keep only SNAP units whose oldest member is between ages 60-79 and the youngest member is older than 50 (N=3,381,874). For comparison, keep SNAP units whose oldest member is between ages 50-59 (N = 1,449,222). When restricting to the 17 BBCE and 9 control states used in the main analysis: older adults sample is N = 1,697,688; comparison younger adults ages 50-59 households, N = 720,542.

Stacked DiD sample, N = 1,526,467: The main empirical strategy used in this paper is Stacked Difference-in-Differences and follows the treatment in Wing, Freedman, and Hollingsworth (2024) and Deshpande and Li (2019). We include four distinct treatment timing groups, 2008 - 2011, and the set of common control states that do not implement BBCE during the 2006 - 2019 window (see Table 2). The treatment states are included for two time periods prior to policy adoption and for six time periods following. So, for example, the treatment timing group for 2008 includes data for the pre-period 2006 and 2007 and for the post-periods 2008-2013. The control group is "copied" for the corresponding years for each treatment timing group. Appendix Tables B3 and B4 illustrate how the sample is constructed with each cell presenting the number of unique observations included in the analysis dataset. The data are stored relative to event time and then stacked.

B.2 SNAP Quality Control Database

To provide benchmarking for our SIPP simulation data, we present statistics for a parallel sample of SNAP recipients using the SNAP Quality Control (QC) administrative data. The QC data provide a host of "raw" variables — reported and unedited income amounts, benefit receipt, etc., and include a measure of total household size for each SNAP-receiving unit. Then, the QC data provide "cleaned" variables that adjust income and deductions to be internally consistent. Importantly, we restrict our attention to SNAP-receiving units that do not reside with other household members. Practically speaking, in the QC data we restrict to single-person households or two-person households of opposite sex without children (marital status is not observed).

QC administrative data: Using FY2018 public-use files, we begin with 43,738 SNAP units with positive food stamp benefit receipt (fsben).

Sample restrictions: Drop SNAP units from Alaska, Hawaii, and the territories (N=41,879). Drop SNAP units with children (composition) (17,042) or non-citizen members (fsnoncit) (859) (N=23,978). Restrict to SNAP units of one or two persons (fsusize) (173) and remove units with "raw household size" (rawhsize) that exceeds the SNAP unit size (1,546) and remove two-person units with two same-sex adults (264) (N = 21,995).

Analysis sample: Keep only SNAP units whose oldest member is between ages 60-79 (14,404) and the youngest member is older than 50 (76) (N=7,515). Remove SNAP units with missing net income (336) or missing information for earnings deductions (80). Remove SNAP units with any self-employment income (113). **Final analysis sample: N=6,986**

Adjustments are made to the formulas for calculating net income, so the QC administrative data reports income in both "raw" and "calculated" variables (these values differ for approximately 32% of the analysis sample). Thus, we present both sets of variables for comparison to the SIPP data. Also note that nearly all observations report using the standard allowance for utility costs (a component of shelter costs), which are specific to the state of residence. In Appendix Table B2, we

use the QC database labeling of variables and denote the raw versus calculated variables, although note that all of these values are drawn directly from the QC data.

Appendix Table B2, columns 1-3 presents statistics for the QC data. Column (1) includes descriptive statistics for the sample of citizen one-unit households in the treatment and control states between 2006-2019. Column (2) includes only SNAP units whose households are residing in our control group states, while column (3) presents statistics for SNAP units residing in the BBCE states. Note that 2018 is in the "post " period for all BBCE states. The QC data include cleaned versions of SNAP benefit receipt and an indicator for receiving the minimum benefit level (fsben and fsminben), along with an unedited benefit receipt amount (rawben). The QC data only collect asset information in non-BBCE states. Thus we present asset income only for SNAP units residing in control-group (i.e., never BBCE) states.

B.3 Survey of Income and Program Participation (SIPP) 2018

The 2018 Survey of Program Participation (SIPP), Wave I data are used for two primary purposes. First, we use the full dataset to estimate hypothetical policy regimes on a common sample for the simulated eligibility exercise. Second, SNAP participation and state of residence are observed in these data, allowing for a close comparison with the administrative QC data and an analysis of the characteristics of SNAP households.

Because the SIPP data are collected at the household level, we restrict our attention in this study to households that likely only comprise one SNAP unit (singles or married couples). The SIPP data include an indicator for the person in the household who "owns" the SNAP benefit and a link from that owner to the other recipients. This makes it straightforward to calculate a "SNAP unit" that may reside with other persons not part of the SNAP unit. Approximately 20% of SNAP receiving units co-reside with persons who are not part of the SNAP unit.

SIPP 2018 simulation data: Responses are from Wave 1, month code 12 (December of prior year), one observation per household (ssuid), lives in primary HH in wave 1 (ehresidenceid and eresidenceid both equal "10001") (N = 25,193)

Basic sample restrictions: Restrict to households with likely only one potential SNAP units: households with only members single male (3,398), single female (4,241), or two opposite sex adults (5,474), (N = 13,113). Drop households with non-citizen members (876) (N=12,546).

Analysis samples: Drop households from Alaska or Hawaii (N=12,485). Oldest member is between ages 60-79 (6,262) and the youngest member is older than 50 (33) (N=6,190). Drop households with self-employment earnings (637). Analysis sample all states: N=5,553. Restricted to the BBCE and control states studied in the analysis in Table 9: N=2,747. SNAP recipient one or two-person households (N=502).

B.3.1 SIPP variable definitions:

Calculate household gross income: To calculate household gross income, we first take the reported person-level income for all adult household members (over age 18). We then adjust for the SIPP processing error that double counts the Medicare deductions from the Social Security payment values.[56]

Calculating net income: To calculate net income and a predicted benefit amount, we apply SNAP deductions:

Standard deduction $160

Earned income deduction 20% of earned income

Medical deduction (60+ only): For elderly households only, out-of-pocket medical expenses (divided by 12) above $35: health care and supplies (tmdpay) and OTC health products (totcmdpay).

Shelter deduction: shelter costs net of half of adjusted net income (applying the deductions above). For non-elderly, shelter deductions are capped at $535. Shelter expenses are the

[56] See: https://www.census.gov/programs-surveys/sipp/tech-documentation/user-notes/2023-usernotes/2023-processing-error-affecting-soc-self-amounts.html, [accessed July 1, 2025].

sum of rent/mortgage (trentmort), utilities, and property tax (1.17% of tprval manually top-coded to $100,000 and divided by 12). We use the state x household-size median HCSUA standard shelter allowance for households with positive utility costs (tutils) derived from the QC data or the reported utility expenses (tutils), whichever is higher. Note that there is wide variation in the standard utility allowance across states and over time, so we apply the state-specific values to calculate net income throughout the simulation exercises.

Total deductions: Each deduction bottom-coded at zero. Net income is household gross income minus total deductions.

Indicator for public assistance receipt: The household is classified as "pure pa" if all members receive SSI benefits, and all pure pa households are considered federally eligible for SNAP.

Adjust net and gross income as a percent of the federal poverty limit: For the 2018 data, the federal poverty limit was $1,005 for one-person households and $1,354 for two-person households. Net and gross income are adjusted to be relative to the federal poverty limit.

Reported SNAP benefits: For units receiving SNAP benefits, the SNAP benefit amount is reported in the SIPP data (tsnap_amt). We construct an indicator for receiving the minimum benefit level if the reported SNAP benefit amount is between $0-$16. Note that the minimum benefit level is $15 in FY2018, which is the modal amount, but many households report $16.

Imputed SNAP benefits: The maximum benefit amount of $192 for one-person households or $352 for two-person households minus 30% of calculated net income.

Household countable assets: The sum of the value of stocks and mutual funds (thval_stmf), bank accounts (thval_bank), and bonds (thval_bond).

Table B1: Basic Comparison of Means: ACS, SIPP, and QC

	(1) ACS	(2) SIPP	(3) QC
Full Sample			
Single Male HH	0.172	0.198	.
Single Female HH	0.326	0.311	.
Married Couple	0.502	0.491	.
Any Non-White Member	0.192	0.235	.
Age of Oldest	68.600	68.730	.
Age of Youngest	66.675	66.854	.
Gross Inc Pct Pov.	316.015	430.555	.
GrossInc <50% FPL	0.034	0.041	.
GrossInc 50-115% FPL	0.108	0.112	.
GrossInc 115-150% FPL	0.069	0.070	.
GrossInc 150-200% FPL	0.092	0.100	.
GrossInc >200% FPL	0.697	0.677	.
SNAP HH	0.068	0.083	.
Observations	3,366,533	5,553	.
SNAP Participants			
Single Male HH	0.265	0.298	0.320
Single Female HH	0.590	0.592	0.577
Married Couple	0.145	0.110	0.104
Any Non-White Member	0.426	0.473	0.545
Age of Oldest	67.982	67.996	67.273
Age of Youngest	67.238	67.389	66.770
Gross Inc Pct Pov.	116.167	94.349	88.856
GrossInc <50% FPL	0.094	0.152	0.090
GrossInc 50-115% FPL	0.576	0.607	0.723
GrossInc 115-150% FPL	0.149	0.128	0.125
GrossInc 150-200% FPL	0.082	0.048	0.054
GrossInc >200% FPL	0.099	0.065	0.008
SNAP Amt		105.289	109.049
Rec Min Ben.		24.316	24.497
Observations	210,730	502	6,986

Notes: All three datasets using 2018 data and are restricted to one or two-person households with the oldest member ages 60-79 and who do not reside with other household members and do not have self-employment income; see Appendix B for details. In this table, all datasets exclude AK and HI due to differences in poverty thresholds in those states.

Table B2: SNAP Participants, Comparison of Income and Deductions in QC and SIPP

	Quality Control Data 2018			**SIPP 2018 SNAP Units**		
	All States (1)	Control States (2)	BBCE States (3)	All States (4)	Control States (5)	BBCE States (6)
Gross Inc (Calc)	929	860	929	991	729	989
Gross Pct Pov (Calc)	89	83	89	94	69	95
Net Inc (Calc)	425	458	407	509	395	478
Net Pct Pov (Calc)	40	44	38	48	37	45
Pure PA (%)	30	38	33	33	34	35
Earned Inc	48	21	57	63	0	78
Earned Inc Ded.	10	4	11	13	0	16
Medical Ded.	28	42	23	28	46	21
Shelter Ded.	358	219	383	427	246	502
Total Deds.	557	428	578	628	452	698
Rec Min Ben. (Raw)	24	29	22	24	25	23
SNAP Amt (Raw)	109	89	114	105	83	116
SNAP Amt (Calc)	103	82	108	113	110	122
HH Countable Assets		231		1165	224	1515
Assets $3,500 (%)		0		3	0	3
Observations	6986	1028	2457	502	40	231

Notes: Both datasets are from 2018 and are restricted to one or two-person households with the oldest member ages 60-79 and who do not reside with other household members and do not have self-employment income; see Appendix B for details. The QC data report both cleaned and unedited (raw) variables. SIPP calculated values are the authors' calculations based on the provided information on income and deductions. SIPP "raw" values are SNAP benefit information provided in the SIPP data for SNAP participating units. To calculate the shelter deduction and net income in the SIPP, we use the median utility costs in the actual state of residence (derived from the QC data).

Table B3: ACS Treatment and Control Group Data

	(1) 2008 Treat	(2) 2009 Treat	(3) 2010 Treat	(4) 2011 Treat	(5) Control	(6) Total
2006	17,357	13,805	20,622	27,531	20,657	99,972
2007	18,277	14,425	21,422	28,580	21,713	104,417
2008	18,929	14,768	22,167	29,957	22,707	108,528
2009	19,386	15,300	22,648	31,054	23,395	111,783
2010	19,482	15,452	22,598	31,147	23,755	112,434
2011	20,599	16,242	24,050	32,330	24,982	118,203
2012	20,703	16,358	24,081	33,225	25,301	119,668
2013	20,860	16,391	23,791	33,598	25,704	120,344
2014	21,673	16,969	24,937	34,868	26,518	124,965
2015	22,037	17,491	25,523	35,904	27,015	127,970
2016	22,497	17,835	26,185	36,908	27,804	131,229
2017	23,103	18,128	26,708	37,565	28,143	133,647
2018	23,824	18,686	27,513	38,742	29,129	137,894
2019	25,084	19,909	29,272	41,454	30,915	146,634
Total	293,811	231,759	341,517	472,863	357,738	1,697,688

Notes: Data are numbers of observations in the American Community Survey (ACS).

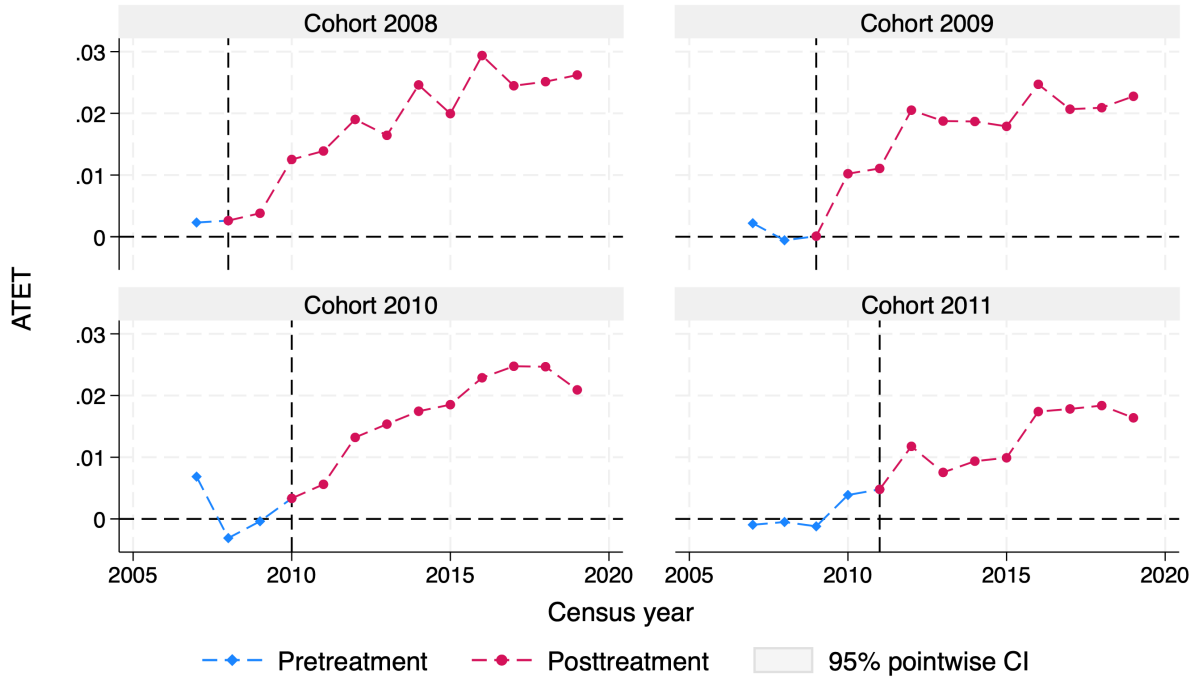
Table B4: Stacked DiD Sample Construction

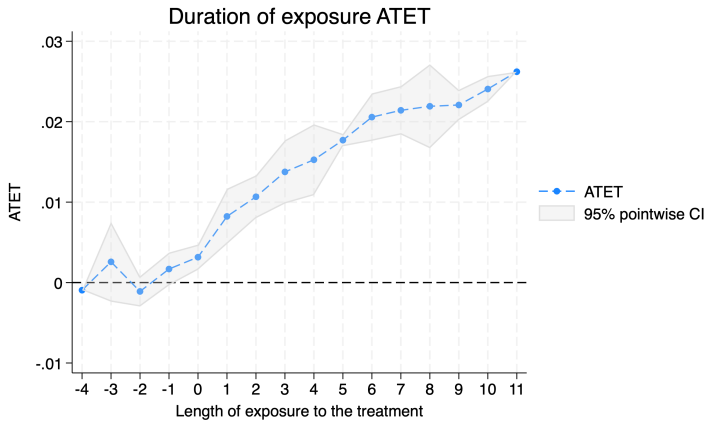
	2008		2009		2010		2011		
	Treat	Cntrl	Treat	Cntrl	Treat	Cntrl	Treat	Cntrl	Total
2006	17,357	20,657							38,014
2007	18,277	21,713	14,425	21,713					76,128
2008	18,929	22,707	14,768	22,707	22,167	22,707			123,985
2009	19,386	23,395	15,300	23,395	22,648	23,395	31,054	23,395	181,968
2010	19,482	23,755	15,452	23,755	22,598	23,755	31,147	23,755	183,699
2011	20,599	24,982	16,242	24,982	24,050	24,982	32,330	24,982	193,149
2012	20,703	25,301	16,358	25,301	24,081	25,301	33,225	25,301	195,571
2013	20,860	25,704	16,391	25,704	23,791	25,704	33,598	25,704	197,456
2014			16,969	26,518	24,937	26,518	34,868	26,518	156,328
2015					25,523	27,015	35,904	27,015	115,457
2016							36,908	27,804	64,712
Total	155,593	188,214	125,905	194,075	189,795	199,377	269,034	204,474	1,526,467

Notes: Data are numbers of observations in the American Community Survey (ACS) and illustrate the construction of the "stacked" sample for Stacked Difference-in-Differences estimation.

C Supplemental Results

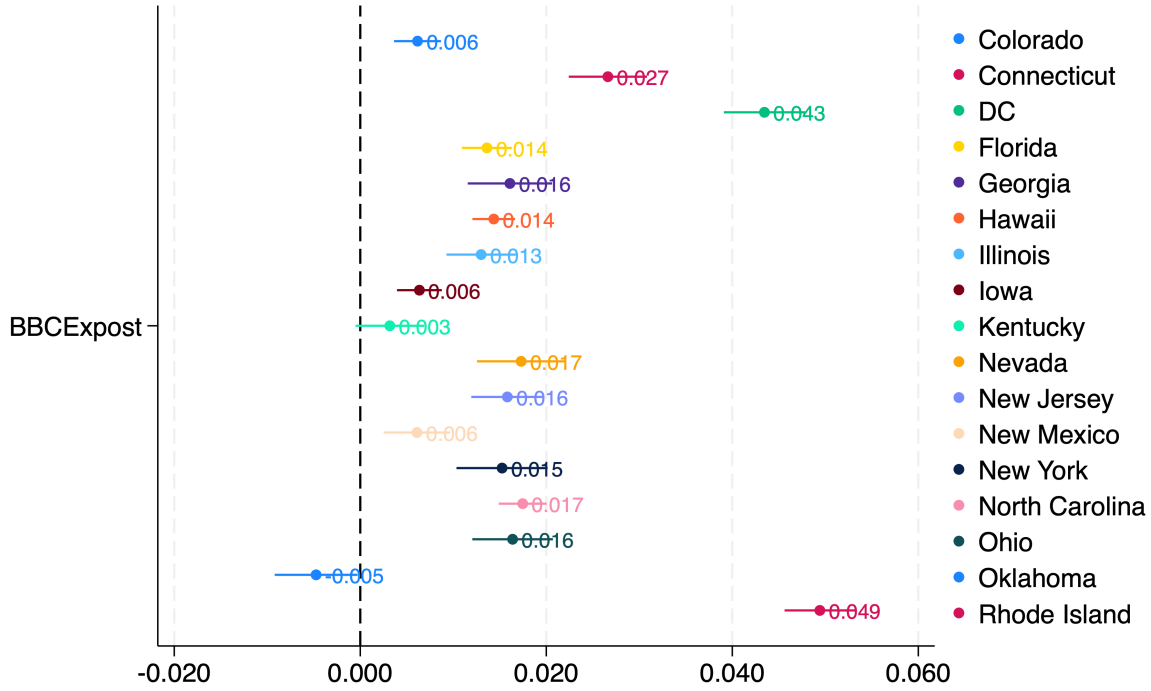
Figure C1: Callaway-Sant'Anna Event Studies





Notes: Data and estimation correspond to the estimates reported in Table 7, column 5 and use the Callaway and Sant'Anna estimation techniques. Data is derived from the 2006-2019 ACS restricting to one-unit households in the BBCE and control states (see Appendix Table B3. All specifications include state and year fixed effects and controls for household race/ethnicity, education, family structure, and age of oldest member. All specifications are weighted using ACS household weights. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure C2: State-Specific Estimates: 17 BBCE Treatment States



Notes: See Table 5 for a description of the baseline sample and specification. Each value is a separate regression that compares the indicated state to the common control group.

Table C1: Stacked DiD: Time Since Event Studies

	(1) T2008	(2) T2009	(3) T2010	(4) T2011
BBCExYear2006	-0.006			
	(0.003)			
BBCExYear2007	0.000	0.001		
	(.)	(0.002)		
BBCExYear2008	0.002	0.000	-0.000	
	(0.003)	(.)	(0.003)	
BBCExYear2009	0.005*	0.001	0.000	-0.004
	(0.002)	(0.006)	(.)	(0.003)
BBCExYear2010	0.009***	0.013**	0.004	0.000
	(0.003)	(0.005)	(0.003)	(.)
BBCExYear2011	0.016***	0.013	0.006	0.003
	(0.004)	(0.007)	(0.003)	(0.003)
BBCExYear2012	0.020***	0.021***	0.014**	0.012***
	(0.006)	(0.006)	(0.005)	(0.003)
BBCExYear2013	0.022***	0.017***	0.015***	0.008**
	(0.003)	(0.006)	(0.004)	(0.004)
BBCExYear2014		0.020***	0.020***	0.010***
		(0.006)	(0.005)	(0.002)
BBCExYear2015			0.022***	0.013***
			(0.004)	(0.003)
BBCExYear2016				0.019***
				(0.003)
Observations	343,807	319,980	389,172	473,508
Pre-Treat Mean	0.078	0.049	0.052	0.052

Notes: Data are from the 2006-2016 ACS one-unit households living in treatment or control states. Each column is a separate treatment timing group and the common control group, here included only for the two years prior and five years post policy change. All specifications include state and year fixed effects and controls for household race/ethnicity, education, family structure, and age of oldest member. All specifications are weighted using ACS household weights; robust standard errors clustered by state are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C2: All Years, 17 BBCE States, By Treatment Timing Groups

	(1) T2008	(2) T2009	(3) T2010	(4) T2011
BBCExYear2006	-0.005	-0.006	-0.007**	-0.004
	(0.003)	(0.004)	(0.003)	(0.003)
BBCExYear2007	0.000	0.001	0.001	-0.002
	(.)	(0.002)	(0.003)	(0.005)
BBCExYear2008	0.002	0.000	-0.000	-0.001
	(0.003)	(.)	(0.003)	(0.005)
BBCExYear2009	0.005*	0.001	0.000	-0.004
	(0.002)	(0.006)	(.)	(0.003)
BBCExYear2010	0.009***	0.013**	0.004	0.000
	(0.003)	(0.005)	(0.003)	(.)
BBCExYear2011	0.016***	0.013	0.006	0.003
	(0.004)	(0.007)	(0.003)	(0.003)
BBCExYear2012	0.020***	0.021***	0.014**	0.012***
	(0.006)	(0.006)	(0.005)	(0.003)
BBCExYear2013	0.023***	0.017***	0.015***	0.008**
	(0.003)	(0.006)	(0.004)	(0.004)
BBCExYear2014	0.026***	0.020***	0.020***	0.010***
	(0.003)	(0.006)	(0.005)	(0.002)
BBCExYear2015	0.025***	0.018**	0.022***	0.014***
	(0.003)	(0.006)	(0.004)	(0.003)
BBCExYear2016	0.031***	0.026***	0.025***	0.019***
	(0.002)	(0.006)	(0.006)	(0.003)
BBCExYear2017	0.027***	0.024***	0.027***	0.018***
	(0.002)	(0.006)	(0.007)	(0.005)
BBCExYear2018	0.029***	0.024***	0.030***	0.020***
	(0.002)	(0.008)	(0.006)	(0.003)
BBCExYear2019	0.030***	0.025***	0.025**	0.018***
	(0.003)	(0.006)	(0.008)	(0.005)
Observations	651,549	589,497	699,255	830,601
Pre-Treat Mean	0.078	0.049	0.049	0.047

Notes: Data are from the 2006-2019 ACS one-unit households living in treatment or control states. Each column is a separate treatment timing group and the common control group, here included for all years. All specifications include state and year fixed effects and controls for household race/ethnicity, education, family structure, and age of oldest member. All specifications are weighted using ACS household weights; robust standard errors clustered by state are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C3: Robustness Check: Endogenous Income

	(1) <50%	(2) 50-115%	(3) 115-150%	(4) 150-200%	(5) >200%
BBCE State x Post	0.001	0.004**	-0.002**	0.001	-0.004
	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)
Observations	1,526,176	1,526,176	1,526,176	1,526,176	1,526,176
Pre-Treat Mean	0.164	0.341	0.090	0.037	0.006

Notes: Data are the main ACS sample, described in Table 5. Each column is a separate regression with the dependent variable having household gross income as a percent of the federal poverty limit in the range indicated in the column heading. All specifications are weighted using ACS household weights; robust standard errors clustered by state are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table C4: BBCE Policy Variation and Household Gross Income Categories

	(1) <50%	(2) 50-115%	(3) 115-150%	(4) 150-200%	(5) >200%
BBCE Elim Net G200 x Post (11)	0.030**	0.041***	0.056***	0.017***	0.003***
	(0.011)	(0.008)	(0.008)	(0.005)	(0.001)
BBCE Elim Net LT200 x Post (4)	0.048	0.057***	0.083***	0.025	0.002*
	(0.041)	(0.014)	(0.018)	(0.015)	(0.001)
BBCE Keep Net x Post (2)	0.012	0.007	0.016	-0.00005	0.0003
	(0.019)	(0.022)	(0.020)	(0.005)	(0.001)
Observations	45,400	161,334	113,166	149,658	1,056,909
P-Diff (11)=(4)	0.684	0.157	0.175	0.617	0.398
P-Diff (11)=(2)	0.346	0.109	0.060	0.002	0.003

Notes: The sample is the stacked difference-in-differences estimation sample using the 2006-2016 ACS for one-unit households without self-employment income, as described in Appendix B. Each column represents estimates from a separate regression on the subgroup indicated. In each specification, the BBCE variable is separated into three BBCE types: (1) *BBCE Elim Net G200* is equal to one in the 11 states that eliminated the asset and net income test and imposed a gross income limit of 200% of the FPL; (2) *BBCE Elim Net LT200* is equal to one in the 4 states that eliminated the asset and net income limit and imposed a gross income limit between 160-185% of the FPL; and (3) *BBCE Keep Net* is equal to one in the 2 states that eliminated the asset limit but retained the net income limit. The statistical significance of the pairwise tests of equality of coefficients is presented at the bottom of the table. All specifications include sub-experiment specific state and year fixed effects and controls for household race/ethnicity, education, family structure, and age of oldest member. All specifications are weighted using ACS household weights; robust standard errors clustered by state are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$