Current Draft: June 2026

SNAP Purchasing Power and Household Time Allocation

Georgina Cisneros*

Abstract

SNAP benefits are set uniformly across the contiguous United States, but geographic variation in food prices creates substantial disparities in the program's real purchasing power. This paper exploits this variation using a triple-difference strategy that compares SNAP-eligible to near-eligible households across 35 local markets. A 10-percent increase in SNAP purchasing power was associated with a 7-percent reduction in daily purchasing time and a 4-percent increase in leisure time, with no meaningful results on market work, home production, childcare, or sleep. Heterogeneity analysis reveals that these associations differ by gender and parental status. These findings suggest that geographic disparities in benefit adequacy affect not only what households can purchase but how they allocate their time.

JEL Codes: D13; I32; I38; J22
Key Words: SNAP; food stamps; time allocation; purchasing power

* Cisneros is a PhD student at American University (gc6737a@american.edu). I thank Brandyn Churchill, Seth Gershenson, Samuel Mann, Dave Marcotte, Taryn Morrissey, and Claudia Persico, as well as seminar participants at American University and ASHEcon 2026, for helpful comments on earlier versions of this manuscript. All interpretations, errors, and omissions are my own.

1. Introduction

The Supplemental Nutrition Assistance Program (SNAP) is the largest food assistance program in the United States, serving over 42 million Americans and accounting for more than $120 billion in federal expenditures in 2023 (U.S. Department of Agriculture, 2025). By offering a cash-like voucher for food items to be prepared at home, SNAP's primary objective is to reduce food insecurity among low-income households, and a substantial body of research has documented its effectiveness in achieving this goal (Mykerezi and Mills, 2010; Ratcliffe and McKernan, 2011; Schmidt et al., 2016; Swann, 2017; Gregory and Smith, 2019). Yet SNAP's reach may extend well beyond nutrition to other dimensions of wellbeing.

Standard labor supply theory offers clear predictions about how income transfers should affect time use. In the canonical framework developed by Becker (1965), households allocate time among market work, home production, and leisure to maximize utility subject to time and budget constraints. Because SNAP benefits are largely inframarginal for most recipient households (i.e., recipients typically spend at least as much on food as the value of their benefits), the program effectively operates as an income transfer (Hoynes and Schanzenbach, 2009) and should affect how households allocate time across a range of activities. Indeed, both classical economic models of time allocation (Becker, 1965) and behavioral frameworks emphasizing cognitive scarcity (Mullainathan and Shafir, 2013) suggest that financial resources and time decisions are closely linked. By relaxing household budget constraints, greater SNAP benefit could enable households to shift time away from labor market activities toward leisure or other non-market-related activities. This is especially true for members of low-income households who are at a relative

disadvantage in terms of both time and money compared to their higher-income peers (Becker, 1993).

This paper investigates how SNAP benefits affect household time allocation by exploiting substantial geographic variation in their purchasing power. Under current policy, SNAP benefits are largely uniform across the 48 contiguous states and adjusted primarily by household size. However, local food prices vary considerably across space and over time, generating significant differences in the real value of these benefits. Estimates suggest that SNAP's purchasing power differs by 5 to 9 percent between the lowest- and highest-cost states (Li and Çakır, 2024), and more than 25 percent of SNAP households cannot afford a minimum bundle of food items to support a healthy diet at the stores where they typically shop (Christensen and Bronchetti, 2020). These geographic disparities mean that two otherwise identical households receive differing levels of effective support depending on their location.

To examine the relationship between SNAP purchasing power and time use, I utilize the Quarterly Food-at-Home Price Database (QFAHPD), which provides regional food price information, and the American Time Use Survey, which records detailed time diaries for a nationally representative sample. Using the QFAHPD, I construct local measures of the cost of the Thrifty Food Plan – the USDA's reference food basket used to determine SNAP benefit levels – for 35 market areas from 2003 to 2010 (the latest year for which this dataset is available). Following Bronchetti et al. (2019), I define SNAP purchasing power as the ratio of maximum SNAP benefits to local costs and merge this measure with individual-level time use data on constructed categories of purchasing time, home production, market work, leisure, childcare, and

sleep.[2] My empirical strategy exploits variation in SNAP purchasing power across geographic markets over time controlling for market-specific, month-specific and year-specific factors. Because local food prices may affect time use for all households, I follow the literature and leverage an additional comparison between SNAP-eligible and near-eligible households within the same local markets (Gennetian et al., 2016; Hamrick and Andrews, 2016; Miller and Morrissey, 2021; Engel, 2025). My identifying assumption is that, conditional on the fixed effects and controls, the gap in time use between eligible and near-eligible households would not have changed systematically with local purchasing power shocks in the absence of differential SNAP access. Because both groups face the same local food prices, local price changes should affect them similarly unless SNAP access creates an additional margin of response.[3]

I show that SNAP purchasing power affects time allocation along two distinct activities – purchasing time and leisure. Specifically, I show that a 10-percent increase in purchasing power was associated with a 7-percent reduction in the daily time that SNAP-eligible households spend making purchases and a 4-percent increase in daily leisure time. These patterns are robust to alternative controls for spatial heterogeneity, exclusion of years when SNAP benefits were increased as part of the American Recovery and Reinvestment Act of 2009, alternative measures of the main outcomes, and methods for statistical inference. Moreover, I do not uncover any changes in time use when using higher-income households as a falsification group. Heterogeneity analysis reveals that these associations differ by gender and parental status. For women, greater

[2] These categories are comparable to prior studies (see, for example: Aguiar and Hurst, 2007; Ramey and Francis, 2009; Aguiar et al., 2013; Soni and Morrissey, 2022; and Lee et al., 2022).

[3] To qualify for SNAP, households must generally have gross income at or below 130 percent of the Federal Poverty Level (FPL), net income at or below 100 percent of the FPL, and countable assets below specified limits. Benefit amounts are calculated as the maximum allotment for the household's size minus 30 percent of the household's net income, with the maximum allotment set nationally by the USDA based on the Thrifty Food Plan. As discussed later, several states have adopted Broad-Based Categorical Eligibility (BBCE) that expands income limits up to 200 percent of the FPL and relaxes asset tests.

SNAP purchasing power was associated with increased market work and reduced childcare time. For men, the pattern resembles the main result, with decreases in purchasing time and increases in leisure. Among parents, greater purchasing power was associated with an increase in purchasing time, consistent with evidence that parents' direct additional resources toward child-related investments when budget constraints relax (Krause et al., 2025; Ver Ploeg and Zhen, 2022).

The remainder of this paper proceeds as follows. In Section 2, I provide background on the SNAP program. I also summarize the evidence on how income transfers affect household time use and how geographic price variation shapes the real value of SNAP benefits. In Section 3, I describe the Quarterly Food-at-Home Price Database and the American Time Use Survey data and explain how I construct local measures of SNAP purchasing power and identify SNAP-eligible households. I then explain my empirical strategy. Next, in Section 4, I report the main results showing that an increase in SNAP purchasing power was associated with decreases in purchasing time and increases leisure time for SNAP-eligible households compared to near-eligible households in the same local markets, as well as heterogeneity analyses showing that these associations differ by gender and parental status. Finally, in Section 5, I summarize my results, discuss their limitations, and conclude.

2. Policy Background and Existing Literature

2.1 Policy Background

The Supplemental Nutrition Assistance Program provides monthly benefits to eligible low-income individuals and families to help them afford a nutritionally adequate diet. The program is administered federally by the U.S. Department of Agriculture's Food and Nutrition Service but is implemented at the state level, introducing variation in certain administrative features (U.S.

Department of Agriculture, 2025). Eligibility is primarily based on household income, assets, and size. Generally, households must have gross incomes at or below 130 percent of the federal poverty level and meet net income and asset tests, though requirements can vary by state due to policies allowing higher income limits.

SNAP benefit levels are calculated based on the Thrifty Food Plan, a USDA-developed market basket that estimates the minimum cost of a nutritionally adequate diet. The maximum monthly benefit depends on household size and is reduced by 30 percent of the household's net income. Benefits are issued through Electronic Benefit Transfer cards and can be used to purchase mostly unprepared food items.[4] Critically for this study, SNAP benefits are uniform across the 48 contiguous states, and therefore the same maximum benefit applies whether a household lives in urban California or rural Arkansas. Although SNAP includes deductions for certain expenses, these adjustments fail to fully compensate for differences in food prices, especially in high-cost areas (Hoynes et al., 2017). As a result, the purchasing power of SNAP benefits varies substantially across locations.

2.2 Existing Literature

Becker (1965) conceptualized time as a scarce resource that households allocate among labor market, home production, and leisure to maximize utility. In this framework, in-kind transfers of food assistance to households function similarly to cash, particularly for those already spending at least as much on food as the value of the transfer (Hoynes et al., 2016). Moreover, recent advances in behavioral economics have emphasized how resource scarcity not only affects utility but also reduces cognitive bandwidth, impairing decision-making and long-term planning

[4] SNAP benefits cannot be used to purchase beer, wine, liquor, cigarettes, tobacco, hot foods, vitamins, medicines, pet foods, or non-food household items like soap, cleaning supplies, hygiene items and cosmetics.

(Mani et al., 2013; Mullainathan and Shafir, 2013). In this way, poverty can shape households' daily choices, such as meal preparation, caregiving, and self-care (Gennetian and Shafir, 2015). Within this framework, in-kind transfers have the potential to mitigate the mental burden of scarcity, enabling recipients to allocate time more deliberately toward activities that enhance well-being.

Building on these foundations, researchers have begun examining how public assistance programs affect how households allocate their time. Using data from the American Time Use Survey and a difference-in-differences approach, Soni and Morrissey (2022) showed that the 2014 Affordable Care Act (ACA) Medicaid expansions increased time spent on home production and childcare. Relatedly, Colman and Dave (2018) found that the ACA's dependent coverage provision permitting children to remain on their parents' insurance till the age of 26 led young adults to spend 15 percent less time on full-time work and 10 percent more time on education and leisure. In the case of Earned Income Tax Credit (EITC), Bastian and Lochner (2022) found that increases in the maximum benefit led unmarried mothers to work more each week. Similarly, Morrissey (2023) found that high-EITC-outlay months predicted an increase in mothers' reading time with children.

Although there is a large body of work linking SNAP receipt to reductions in food insecurity and food hardship (Mykerezi and Mills, 2010; Ratcliffe and McKernan, 2011; Schmidt et al., 2016; Swann, 2017; Gregory and Smith, 2019), there has been comparably less work exploring how SNAP may affect household time allocation, with a few notable exceptions.[5] First,

[5] Although there is little evidence that SNAP improves nutritional quality (Condon et al., 2015; Hastings et al., 2021), it has been connected to improvements in physical health (Almond et al., 2011; Hoynes et al., 2016; East, 2020) and psychological well-being (Engel, 2025).

Kim et al. (2020) studied the expiration of the SNAP temporary benefit increase enacted during the Great Recession by comparing changes in outcomes for SNAP participants to eligible nonparticipants.[6] Following the benefit cut, they found that SNAP households spent less time on food preparation and more time working. Similarly, using state-level variation in the date of benefit issuance, Lee et al. (2022) found that SNAP participants spent less time grocery shopping and more time on leisure during the first half of the benefit month. Finally, Farbmacher et al. (2022) used variation in monthly SNAP issuance dates to show that SNAP participation increased average sleep duration, which they attributed to reductions in financial stress.

Because SNAP is set at the national level, but food costs vary locally, there is substantial geographic variation in SNAP's real value. As a result, Christensen and Bronchetti (2020) found that more than 25 percent of SNAP households were unable to afford the Thrifty Food Plan bundle of goods at stores where they typically shopped. Among these households, the average shortfall was $160 per month relative to an average benefit of approximately $230. Similarly, Li and Çakır (2024) documented a five to nine percent difference in SNAP's real value between the lowest- and highest-cost states and showed that this variation affected program participation. These purchasing power differences have meaningful consequences, with prior work showing that geographic variation attenuates the health benefits of SNAP for those residing in higher price areas (Farkhad and Meyerhoefer, 2018; Bronchetti et al., 2019).

[6] As part of the measures included in The American Recovery and Reinvestment Act (ARRA) in 2009 the maximum monthly benefits of SNAP were increased by 13.6 percent. This increase remained constant in nominal terms and its value decreased with inflation. However, the enhanced benefits were terminated in November 2013.

3. Data and Methods

3.1 Data: Quarterly Food at Home Database

The Quarterly Food-at-Home Price Database (QFAHPD), developed by the Economic Research Service of the U.S. Department of Agriculture, provides detailed information on regional variation in food prices across the United States. The database uses scanner-based retail data to produce quarterly estimates of the average food prices for 52 categories purchased for home consumption. Each observation in the QFAHPD corresponds to a food-group-by-market-by-quarter price, where markets are clusters of one or more counties sharing similar retail food environments; each county belongs to exactly one market. The dataset covers up to 35 market areas across the United States, and these markets were unchanged during the sample period used in this paper (see Appendix Figure 1).

I use QFAHPD data from 2003 to 2010 (the latest period for which it is available) to construct a local measure of the cost of the Thrifty Food Plan. Following prior work, I map the 52 QFAHPD food categories to the food groups used by USDA to construct the Thrifty Food Plan (Gregory and Coleman-Jensen, 2013; Bronchetti et al., 2019), so that the QFAHPD price data aligns with the Thrifty Food Plan's cost structure.[7] For each TFP food group, I compute the expenditure share of each QFAHPD subcategory using price and quantity data available for each market and quarter, then average these shares across all markets to obtain a single set of national expenditure weights. Following Bronchetti et al. (2019), I apply these fixed national weights to

[7] I map the 52 categories to 24 of the 29 food groups used to construct the Thrifty Food Plan. The remaining five TFP food groups contain foods that are accounted for elsewhere in the QFAHPD basket structure and do not require separate price entries. To define the food groups, I referenced the 2006 Thrifty Food Plan construction methodology. In previous research, Bronchetti et al. (2019) linked 22 Thrifty Food Plan groups (not including "Coffee and Tea" and "Dry Soups" categories) while Gregory and Coleman-Jensen (2013) matched 23 food groups (not including the "Coffee and Tea" category).

each market's prices when aggregating within TFP groups. This approach avoids confounding local price variation with local differences in consumption patterns or quality choices, so that the resulting SNAP-PP measure reflects a standardized basket priced at local costs rather than local purchasing behavior. Using these national weights, I compute a weighted average price for each TFP food group in every market-year.

Because the nominal SNAP benefit schedule is uniform across states, differences in the ratio of benefits to local Thrifty Food Plan costs reflect real differences in purchasing power. I define SNAP purchasing power in market m and year t as:

$$\text{SNAP-PP}_{mt} = \frac{\text{Snapbacks}_t}{\text{TFP}_{mt}} \tag{1}$$

where SNAPmax_t corresponds to the maximum benefit on a given year t for a family of four, while TFP_{mt} corresponds to the Thrifty Food Plan cost for a family of four on market m during year t. Values below one ($\text{SNAP-PP}_{mt} < 1$) indicate that the maximum benefit cannot fully cover the cost of the local basket, while values above one ($\text{SNAP-PP}_{mt} > 1$) imply that benefits exceed the local cost of food. Figure 1 illustrates the spatial distribution of SNAP purchasing power for selected years of the sample period.[8] As expected, there is heterogeneity between markets and across years. More than 90 percent of the markets in all years have a SNAP purchasing power below one, indicating that SNAP benefits were insufficient to purchase the full Thrifty Food Plan basket in most areas.[9] The figure also shows that purchasing power increased over the sample

[8] Appendix Figure 2 displays maps for the remaining years from 2004 through 2010.

[9] These estimates are similar to those in Bronchetti et al. (2019) who showed using a longer sample that in lower-cost areas the SNAP benefit covers up to 80 percent of the cost of the TFP, while in higher cost areas this ratio falls to less than 65 percent.

period, as the maps become progressively lighter from 2003 to 2010, reflecting nominal benefit increases outpacing local food price growth in most markets.

Figure 2 presents the average, minimum, and maximum SNAP purchasing power across market areas over the 2003-2010 period. Across nearly all markets, mean purchasing power is below one, implying that the maximum SNAP benefit generally falls short of covering the full cost of the Thrifty Food Plan in most market-years. Market-level means range from approximately 0.59 in San Francisco to about 0.80 in the Metro South 3 region (Oklahoma City-Tulsa), indicating that SNAP recipients in the Oklahoma City-Tulsa area effectively receive 35 percent more assistance than those in San Francisco. The figure also highlights substantial geographic heterogeneity that aligns with regional cost-of-living differences. High-cost metropolitan areas are concentrated in the lower half of the distribution, whereas non-urban markets in the South and Mountain regions tend to have higher purchasing power.[10]

3.2 American Time Use Survey (ATUS) 2003 to 2010

The American Time Use Survey (ATUS) provides nationally representative time diaries recording the total number of minutes respondents spent on various activities over a 24-hour period. The surveys, which began in 2003, include randomly selected households who have completed their final interview for the Current Population Survey. Within these households, an individual aged 15 or older is selected to participate in an interview detailing how that person spent time during the previous 24-hour period beginning and ending at 4:00am. I use the 2003-2010

[10] Appendix Table 1 reports the full set of summary statistics for all 35 market areas.

ATUS to create measures of time spent (in minutes) on six mutually exclusive activities: 1) Purchasing, 2) Home Production, 3) Market Work, 4) Leisure, 5) Childcare, and 6) Sleep.[11]

ATUS respondents are assigned to the SNAP purchasing power calculated for their county's corresponding market area and survey year. Because the public-use ATUS data only include county-level identifiers for respondents living in counties with populations of at least 100,000, respondents from smaller counties are excluded. Finally, I restrict the sample to U.S. citizens aged 18 or older; this restriction applies only to the diary respondent and does not remove children from the household roster used to construct household composition measures (e.g., household size and number of children).[12]

Because eligible individuals can select into SNAP participation (Schanzenbach, 2023; Engel, 2025), I focus on program eligibility rather than participation. I define SNAP-eligible and near-eligible households based on their income relative to the Federal Poverty Level, an approach that has been used widely in the literature (Gennetian et al., 2016; Hamrick and Andrews, 2016; Miller and Morrissey, 2021; Engel, 2025). Although the federal baseline threshold is 130 percent of the FPL, several states have expanded eligibility through policies that allow higher income limits.[13] To account for this heterogeneity, I apply the state-specific eligibility threshold in place

[11] I follow prior work in classifying activities (Aguiar and Hurst, 2007; Aguiar et al., 2013; Soni and Morrissey, 2022; Lee et al., 2022). Appendix Table 2 contains a complete description of the classification of activities.

[12] Non-citizens face significant restrictions on SNAP eligibility. Most lawful permanent residents must wait five years after obtaining qualified immigration status before becoming eligible, and undocumented immigrants are ineligible entirely. I restrict the sample to U.S. citizens because the ATUS does not provide sufficient detail on immigration status to accurately determine eligibility among non-citizens.

[13] During my sample period, several states had Broad-Based Categorical Eligibility (BBCE) policies that expanded income eligibility thresholds above the federal baseline of 130 percent of the Federal Poverty Level. Five states maintained expanded limits throughout the entire 2003-2010 period: Delaware, Michigan, and North Dakota (all at 200 percent FPL); Oregon (185 percent FPL); and Texas (165 percent FPL). Maryland and Massachusetts also maintained expanded limits at 200 percent FPL throughout the sample period, though their BBCE pathways applied to households with children and elderly or disabled members. Additional states adopted BBCE over time, with the number of states with expanded limits growing from 9 in 2003 to 25 by 2010. I apply state- and year-specific eligibility thresholds when classifying households as SNAP-eligible, drawing on the USDA Economic Research Service SNAP Policy Database (USDA, 2024).

for each year. Households are classified as SNAP-eligible if their total household income is at or below the income eligibility threshold applicable to their state and year, and households are classified as near-eligible if their income lies between the state's eligibility threshold (whether 130 percent or a higher state-specific limit) and 250 percent of the Federal Poverty Level.[14] Near-eligible households serve as a within-market comparison group in the empirical strategy, as they face similar local price environments as eligible households but cannot access SNAP benefits.

Table 1 presents descriptive statistics for SNAP-eligible and near-eligible households. The two groups are broadly similar in age and household size but differ on other characteristics. SNAP eligible households are more likely to be female-headed (63.7 versus 59.6 percent) and have substantially lower employment rates (39.3 versus 55.8 percent). The diary respondent in SNAP eligible households is also more likely to identify as Black or Hispanic, less likely to be married, and has lower educational attainment on average.

SNAP-eligible and near-eligible households also differ in how they use their time. Compared to near-eligible households, SNAP-eligible households spend approximately six fewer minutes per day on purchasing activities, 39 fewer minutes per day on market work, and seven fewer minutes on home production. Instead, SNAP-eligible households spend 28 more minutes on leisure and 22 more minutes sleeping than their near-eligible counterparts. Overall, these patterns suggest that SNAP-eligible and near-eligible households have substantially different labor market attachments and daily routines.

[14] Following the SNAP program rules, eligibility is determined at the household level. I therefore use total household income, rather than individual or family income, from the ATUS. Also, to determine a household FPL I use the household size, and the federal poverty guidelines published by the US Department of Health and Human Services. Given that the ATUS data report household income as a range, rather than as a specific amount, I follow Engel (2025) and use the midpoints.

3.3 Empirical Methods

To isolate the association between SNAP purchasing power and time use among eligible households I exploit variation in purchasing power across geographic markets. Because local food prices may affect time use for all low-income households regardless of eligibility, I leverage the differential response between SNAP-eligible and near-eligible households within the same markets to separate the SNAP-specific association from broader local price effects. Formally, I estimate:

$$Y_{imezt} = \alpha + \beta_1 \log(\text{SNAP-PP}_{mt}) + \beta_2 \text{Eligible}_i \times \log(\text{SNAP-PP}_{mt}) + \mathbf{X}'_{imt}\lambda \text{ Eligible} \times \mathbf{X}'_{imt} \gamma + Z'_{cst}\,\delta + \text{Eligible}_i \times Z'_{cst}\,\mu + \theta_{me} + \sigma_{ze} + \tau_{te} + \varepsilon_{imezt} \quad (2)$$

where Y_{imet} is the time-use outcome (e.g., minutes spent purchasing,) for individual i with eligibility e residing in market m in year t and month z. The indicator, Eligible_i, denotes whether the individual i belongs to a SNAP-eligible household, and $\log(\text{SNAP-PP}_{mt})$ is the natural logarithm of SNAP purchasing power in market m and year t, as defined in equation (1). The coefficient of interest, β_2, captures the average difference in time-use between the SNAP-eligible and near-eligible individuals for every percentage increase in SNAP purchasing power.

The vector $\mathbf{X}_{imt}$ contains a set of controls for individual and household-level characteristics such as age, an indicator for female, indicators for race and ethnicity (Black, Hispanic, and other race, with White as the reference category), indicators for educational attainment (high school diploma, some college, and college degree), an indicator for marital status, an indicator for employment status, and the number of children in the household. Similar to Bronchetti et al. (2019) the vector Z_{cst} include county- and state-level economic and policy controls, including the average county HUD fair market rent, the income limits for Medicaid eligibility, and the regional Consumer Price Index. Additionally, the specification includes market-by-eligibility fixed effects, θ_{me} , to account for time-invariant characteristics across markets, month-by-eligibility fixed effects σ_{ze} to

account for seasonal variation in time use and to absorb seasonal patterns in local food prices, and year-by-eligibility fixed effects, τ_{te} , to account for aggregate temporal shocks and nationwide trends in time use that affect all markets equally. Standard errors are clustered at the market level (Bertrand et al., 2004). Because the specification includes year-by-eligibility fixed effects, national year-to-year changes in SNAP benefit levels are absorbed and do not contribute to the identification of β_2. The coefficient is therefore identified from within-year, cross-market variation in local Thrifty Food Plan costs.

Under this specification, purchasing power can be thought of as a continuous treatment variable where identification comes from comparing changes in time use across markets experiencing different magnitudes of change in purchasing power. Because treatment intensity varies continuously across markets and over time, the conventional discrete difference-in-differences comparison between treated and untreated units does not apply. Instead, I follow recent guidance for difference-in-differences settings with a continuous treatment variable (Callaway et al., 2024; Haxhiu and Helgerman, 2024) and adopt a strong parallel trends assumption where in the absence of changes in SNAP purchasing power, the difference in time use trends between eligible and near-eligible households would have evolved similarly across markets experiencing different levels of purchasing power change.

4. Results

4.1 Changes in Time Spent Purchasing

I begin by examining the relationship between SNAP purchasing power and time spent purchasing.[15] Table 2 examines the results across three progressively richer specifications, including only fixed effects (column 1), adding demographic covariates (column 2), and adding time-varying state and county-level controls (column 3). Across all three specifications, I find that an increase in SNAP purchasing power was associated with a reduction in the amount of time that households spend purchasing. In the most saturated model, I find that a 10-percent increase in SNAP purchasing power was associated with a 2.5-minute reduction in total daily purchasing time among SNAP-eligible individuals relative to those in near-eligible households – an approximate 7-percent reduction relative to the sample mean among SNAP-eligible households.

To build confidence that I am uncovering a statistically meaningful relationship, I adopt a variant of Fisher's (1935) permutation test whereby I matched observations in a given market *m* in year *t* to the SNAP purchasing power in a random market in year *t*. I then re-estimated equation (2) using this placebo variable and saved the resulting coefficient. Figure 3 plots the distribution of these placebo coefficients (gray bars) obtained from repeating this process 100 times (Panel A). Because the actual estimate (vertical black line) is far outside the placebo distribution, this exercise indicates that the estimated relationship is unlikely to have arisen by chance.

The observed reduction in time spent purchasing is consistent with empirical findings on purchasing behavior of low-income households. Beatty et al. (2013) found that a 10-percent

[15] Because the outcome is in minutes and SNAP purchasing power enters the model in logs, the coefficient β_2 in equation (2) cannot be interpreted directly as the effect of a 10-percent increase. Specifically, a 10-percent increase in SNAP purchasing power corresponds to a change of $\log(1.10) \times \beta_2 \approx 0.095 \times \beta_2$ minutes. To make the results easier to read, all tables rescale the reported coefficients to correspond to a 10-percent change in purchasing power.

increase in SNAP benefits translated into 2 percent fewer minutes spent on non-grocery shopping for married households. Additionally, Aguiar and Hurst (2007) showed that low-income households paid lower prices for identical goods precisely because they invest more time in price searching at stores. Consistent with this, Hastings and Shapiro (2018) showed that SNAP receipt reduced shopping effort for food items, suggesting that benefit receipt lowered the intensity of price-searching behavior. When SNAP purchasing power increases, the marginal return to this time investment potentially falls because households no longer need to range as widely or shop as frequently to meet their food needs, which generates the reduction in purchasing time documented here.

4.2 Changes in a Broader Set of Time Use Outcomes

Having shown that increases in SNAP purchasing power reduce the time that SNAP-eligible households spend making purchases, I now consider whether greater SNAP purchasing power affects a broader set of time use outcomes. The results in Table 3 reveal that a 10-percent increase in SNAP purchasing power was associated with an approximate 12-minute (4.1-percent) increase in the amount of time that individuals spent on leisure activities (column 4). This result is consistent with recent empirical research demonstrating that relaxing budget constraints reduces the opportunity cost of non-market time, enabling households to substitute toward leisure (Hoynes and Schanzenbach, 2012; Han, 2022). Indeed, Lee et al. (2022) showed that SNAP participants spend more time on leisure during the first half of the month when benefits are issued than non-participants. However, there is no evidence of systematic changes in the amount of time spent on market work (column 3), home production (column 2), childcare (column 5), or sleep (column

6).[16] Similar to the finding that increasing SNAP purchasing power reduces the time spent purchasing, Figure 3 shows that the estimated increase in leisure time is robust to randomization inference (Panel B).[17]

To illustrate the scale of these associations, I compare markets at the extremes of the purchasing power distribution. San Francisco had the lowest mean purchasing power in the sample (0.59), while the Oklahoma City-Tulsa area had the highest (0.80). The log difference between these two markets is approximately 0.30, which is roughly equivalent to three 10-percent increases in purchasing power. Applying the Table 3 estimates to this difference suggests that SNAP-eligible households in Oklahoma City-Tulsa spent approximately 8 fewer minutes per day on purchasing and had around 36 more minutes of leisure relative to otherwise similar households in San Francisco. The difference between the leisure gain (~36 min/day) and the purchasing reduction (~8 min/day) implies additional reallocation from activities not captured by the six main categories, including residual miscellaneous activities in the ATUS, which is consistent with a broad relaxation of the time burden of budget management (Beatty et al., 2013).

In Table 4, I explore the sensitivity of these relationships to alternative empirical specifications and sample restrictions. In Panel A, I utilize the fact that market areas do not overlap with state boundaries and account for time-varying state-specific policies with the inclusion of state-by-year fixed effects. The results are largely unchanged, indicating that the estimated relationships are not driven by time-varying state-level policies and conditions that could be correlated with both local food prices and household time use. As previously mentioned, the

[16] Appendix Table 3 presents the results for all six outcomes under different specifications. Panel A shows results only considering market-by-eligibility, month-by-eligibility and year-by-eligibility fixed effects. Panel B adds the vector demographic covariates and Panel C adds the vector of county/state level covariates. In all cases the results remain stable and similar to those in Table 3.

[17] Appendix Figure 3 reports the corresponding placebo distributions for the four null outcomes.

American Recovery and Reinvestment Act of 2009 temporarily increased the maximum SNAP benefit which may have altered local food price dynamics in ways that differ across markets during this period. However, Panel B shows that the results are robust to excluding these years. Finally, I show in Panel C that the results are robust to instead using the untransformed SNAP purchasing power variable as the independent variable of interest.

Another possible concern is that the relationship between SNAP purchasing power and time use could be driven by unobserved confounding factors that are not particular to SNAP-eligible households. In Table 5, I explore this possibility by using individuals with incomes far above the SNAP eligibility threshold as falsification groups. Specifically, I redefine "eligible" and "near-eligible" groups using alternative Federal Poverty Level bandwidths and compare changes for individuals with incomes 250-400 percent of the FPL to those with incomes 400-550 percent of the FPL (Panel A). I make a similar comparison for those with incomes 550-700 percent of the FPL to those with incomes 700-850 percent of the FPL. The estimates are smaller in magnitude and not statistically significant, suggesting the relationship I detect for SNAP-eligible households is not capturing a broad local change.

4.3 Heterogeneity

In the prior section, I showed that a 10-percent increase in SNAP purchasing power was associated with a 7-percent reduction in daily purchasing time and a 4-percent increase in daily leisure time among SNAP-eligible households, with no detectable associations with market work, home production, childcare, or sleep. Time reallocation in response to changes in SNAP purchasing power may, however, differ across demographic groups depending on how households divide food-related responsibilities and time constraints. Women spend disproportionately more time on home production tasks including food shopping and preparation (Taillie, 2018), while

households with children face additional time demands related to child-related care investments (Krause et al., 2025; Ver Ploeg and Zhen, 2022). As such, I explore whether there were meaningful differences by gender and parental status.

Table 6 reveals different responses by gender. For women (Panel A), I find greater SNAP purchasing power was not associated with statistically significant changes in purchasing time or leisure. Instead, I find that a 10-percent increase in SNAP purchasing power was associated with a statistically significant 8.3-minute (9.3-percent) increase in market work and a 4.0-minute (9.0-percent) reduction in childcare time. For men (Panel B), the response is similar to the main results using the full sample, where a 10-percent increase in SNAP purchasing power was associated with a 23-minute (7.1-percent) increase in leisure time and a 4.7-minute (16.3-percent) reduction in purchasing time. The contrast between men and women is notable. Because women serve as primary food managers in low-income households (Taillie, 2018), higher purchasing power may allow them to redirect food-related effort toward quality rather than reducing shopping time, maintaining their role in household food management while experiencing relief from the cognitive burden of price management (Mullainathan and Shafir, 2013). The association with increased market work and reduced childcare time is consistent with the hypothesis that higher purchasing power relieved the cognitive burden of budget management among women, freeing attentional resources that may have contributed to greater labor market engagement. Because purchasing time does not fall significantly for women, the reallocation appears to operate through cognitive capacity rather than measured time.

Next, in Table 7, I explore whether the relationship varied by parental status. For parents (Panel A), I find that SNAP purchasing power was associated with a statistically significant 2.0-minute (4.9-percent) increase in purchasing time alongside a marginally significant 6.8-minute

(3.1-percent) leisure gain. Rather than reducing shopping effort, parents appear to expand it when their budgets increase. This is consistent with experimental evidence that showed how parents' direct additional resources toward child-related investments when budget constraints relax, with the largest behavioral responses concentrated among the most resource-constrained households (Krause et al., 2025; Ver Ploeg and Zhen, 2022). For non-parents (Panel B), the pattern is similar to the full sample: a 15.3-minute (4.3-percent) increase in leisure time, and a 3.8-minute (4.7-percent) increase in home production. While purchasing time does not fall significantly for this group, the pattern is broadly consistent with greater flexibility to expand discretionary activities when purchasing power rises. [18]

5. Conclusion

This paper examines whether geographic variation in SNAP purchasing power affects household time allocation. Though SNAP benefits are set uniformly across the contiguous United States, substantial variation in local food prices generates meaningful differences in the real value of benefits across regions (Farkhad and Meyerhoefer, 2018; Bronchetti et al., 2019; Christensen and Bronchetti, 2020; Li and Çakır, 2024). I exploit this variation using a triple-difference strategy that compares SNAP-eligible households to near-eligible households within the same local markets, allowing me to separate responses directly related to SNAP purchasing power from general responses to local food prices that affect all low-income households. The main findings reveal that SNAP purchasing power affects time allocation by reducing the time that individuals spend purchasing and increasing their time spent on leisure. Specifically, I find that a 10-percent

[18] I also explored whether the relationship varied by race/ethnicity. The results generally indicated larger responses among non-White individuals. However, given the small number of Asian, Black, Hispanic, and other race/ethnicity individuals in the ATUS, I report these estimates in Appendix Table 4.

increase in SNAP purchasing power was associated with a 7-percent reduction in purchasing time and a 4-percent increase in leisure time per day, all relative to near-eligible households experiencing the same price environment. In contrast, I generally find no statistically significant relationships between SNAP purchasing power and market work, home production, childcare, or sleep activities.

The reduction in purchasing time and increase in leisure time are consistent with the expected household behavior under models of household time allocation (Becker, 1965). When SNAP purchasing power rises, food becomes effectively cheaper for eligible households, reducing the need to spend time searching for low prices, visiting multiple stores, or carefully timing purchases around sales. This time saved from shopping can be redirected toward leisure activities. Indeed, the results are consistent with other evidence showing that SNAP benefits affect how households make purchases (Aguiar and Hurst, 2007; Beatty et al., 2013; Hastings and Shapiro, 2018) and that relaxing budget constraints reduce the opportunity cost of non-market time, enabling households to substitute away toward leisure (Hoynes and Schanzenbach, 2012; Han, 2022; Lee et al., 2022).

These findings offer important insights. Under current law, SNAP benefits are set uniformly across the 48 contiguous states based on a national average Thrifty Food Plan cost, with no adjustment for the substantial geographic variation in food prices. Even following the first substantive update to the Thrifty Food Plan in over a decade (U.S Department of Agriculture, 2021), substantial benefit disparities remain. A recent study from Urban Institute (2024) found that 78 percent of counties still have gaps between SNAP benefits and the cost of a modestly priced meal, and the average meal still costs approximately 20 percent more than the maximum national benefit. Moreover, the budget reconciliation legislation enacted in 2025 imposed significant cuts

to SNAP benefit levels and tightened eligibility requirements (Wheaton et al., 2025).[19] The evidence in this paper implies that benefit reductions of this kind would increase the time burden of shopping and reduce discretionary time, particularly for households in high-cost urban markets.

This study is subject to some limitations. Because I use SNAP eligibility, rather than participation, to define treatment status, the relationships are estimated by averaging over participants and non-participants. As a result, the relationships are likely larger for those who actually participate in the program.[20] Moreover, measurement error in self-reported household income may lead to misclassification of some households near the eligibility threshold, introducing noise into the comparison between eligible and near-eligible groups. Additionally, because the public-use ATUS only identifies counties with populations of at least 100,000, the analysis is restricted to households in larger urban and suburban areas. If rural households respond differently to purchasing power variation, the associations documented here may not generalize for rural populations. Despite these limitations, this study demonstrates that SNAP benefits matter not only for what they enable households to purchase but also for how they allocate their time. By showing that geographic disparities in SNAP purchasing power can affect purchasing and leisure time among SNAP-eligible households, the findings suggest that studies related to food assistance programs should consider effects on time use as an important dimension of household well-being.

[19] The One Big Beautiful Bill Act (H.R. 1, Public Law 119-21), signed into law on July 4, 2025, represents the largest reduction in SNAP funding in the program's history. The legislation makes four categories of changes with direct implications for benefit adequacy: 1) Expansion of work requirements, 2) Cost-sharing requirements with states, 3) Restriction of future updates to the Thrifty Food Plan, and 4) Elimination of SNAP eligibility for certain categories of non-citizens. According to microsimulations in Wheaton et al. (2025), these changes would cause 22.3 million families would lose some or all of their SNAP benefits with around 5.3 million of these families losing at least $25 per month.
[20] In fiscal year 2010, of the nearly 51 million individuals eligible for SNAP benefits in an average month, 38 million (75 percent) participated and nearly 13 million (25 percent) did not (Eslami et al., 2010).

6. References

Aguiar, M., & Hurst, E. (2007). Measuring trends in leisure: The allocation of time over five decades. *The Quarterly Journal of Economics, 122*(3), 969–1006.

Aguiar, M., Hurst, E., & Karabarbounis, L. (2013). Time use during the Great Recession. *American Economic Review, 103*(5), 1664-1696. https://doi.org/10.1257/aer.103.5.1664

Almond, D., Hoynes, H. W., & Schanzenbach, D. W. (2011). Inside the war on poverty: The impact of food stamps on birth outcomes. *Review of Economics and Statistics, 93*(2), 387-403. https://doi.org/10.1162/REST_a_00089

Bastian, J., & Lochner, L. (2022). The earned income tax credit and maternal time use: More time working and less time with kids? *Journal of Labor Economics, 40*(3), 573–611. https://doi.org/10.1086/717729

Becker, G. S. (1965). A theory of the allocation of time. *The Economic Journal, 75*(299), 493-517. https://doi.org/10.2307/2228949

Becker, G. S. (1993). *Human capital (3rd ed.)*. University of Chicago Press.

Beatty, T. K. M., Nanney, M. S., & Tuttle, C. (2013). Time to eat? The relationship between food security and food-related time use. *Public Health Nutrition, 17*(1), 66–72. https://doi.org/10.1017/S1368980012005599

Bertrand, M., Duflo, E., & Mullainathan, S. (2004). How much should we trust differences-in-differences estimates? *The Quarterly Journal of Economics 119(1)*, 249-275. https://doi.org/10.1162/003355304772839588

Bronchetti, E. T., Christensen, G., & Hoynes, H. W. (2019). Local food prices, SNAP purchasing power, and child health. *Journal of Health Economics, 68*, 102231. https://doi.org/10.1016/j.jhealeco.2019.102231

Callaway, B., Goodman-Bacon, A., & Sant'Anna, P. H. C. (2024). *Difference-in-differences with a continuous treatment* (NBER Working Paper No. 32117). National Bureau of Economic Research. https://doi.org/10.3386/w32117

Christensen, G., & Bronchetti, E. T. (2020). Local food prices and the purchasing power of SNAP benefits. *Food Policy, 95*, 101937. https://doi.org/10.1016/j.foodpol.2020.101937

Colman, G., & Dave, D. (2018). It's about time: Effects of the Affordable Care Act dependent coverage mandate on time use. *Contemporary Economic Policy, 36*(2), 356-373. https://doi.org/10.1111/coep.12281

Condon, E. M., Drilea, S. K., Jowers, K., Lichtenstein, C., Mabli, J., Madden, E., & Niland, K. (2015). *Diet quality of Americans by SNAP participation status: Data from the National Health and Nutrition Examination Survey, 2007-2010*. U.S. Department of Agriculture.

East, C. N. (2020). The effect of food stamps on children's health: Evidence from immigrants' changing eligibility. *Journal of Human Resources, 55*(3), 887-928. https://doi.org/10.3368/jhr.55.3.0416-7828R2

Eslami, E., Leftin, J., & Strayer, M. (2010). *Supplemental Nutrition Assistance Program participation rates: Fiscal year 2010* (Report No. FSP-10-PA). U.S. Department of Agriculture, Food and Nutrition Service.

Engel, K. (2025). The time cost of nutrition assistance: Evidence from subjective well-being data. *Review of Economics of the Household, 23*(1), 85-116. https://doi.org/10.1007/s11150-024-09642-0

Farbmacher, H., Hartmann, M., & Kögel, H. (2022). Economic hardship, sleep, and self-rated health: Evidence from the Supplemental Nutrition Assistance Program (SNAP). *American Journal of Health Economics, 8*(2), 216-251. https://doi.org/10.1086/718267.

Farkhad, B., & Meyerhoefer, C. D. (2018). The impact of food prices and SNAP benefits on food security and diet quality among low-income households. *Applied Economic Perspectives and Policy, 40*(2), 269-286. https://doi.org/10.1093/aepp/ppx044

Fisher, R. A. (1935). *The design of experiments*. Oliver & Boyd.

Gennetian, L. A. & Shafir, E. (2015). The persistence of poverty in the context of financial instability: A behavioral perspective. *Journal of Policy Analysis and Management, 34*(4), 904-936.

Gennetian, L. A., Seshadri, R., Hess, N. D., Winn, A. N., and Goerge, R. M. (2016). Supplemental

Nutrition Assistance Program (SNAP) Benefit Cycles and Student Disciplinary Infractions. *Social Service Review, 90*(3), 403-433.

Gregory, C. A., & Coleman-Jensen, A. (2013). Do high food prices increase food insecurity in the United States? *Applied Economic Perspectives and Policy, 35*(4), 679-707. https://doi.org/10.1093/aepp/ppt014

Gregory, C. A., & Smith, T. A. (2019). Salience, food security, and SNAP receipt. *Journal of Policy Analysis and Management, 38*(1), 124-154. https://doi.org/10.1002/pam.22093

Hamrick, K. S., & Andrews, M. (2016). SNAP participants' eating patterns over the benefit month: A time use perspective. *PLOS ONE*, 11(7).

Han, J. (2022). The impact of SNAP work requirements on labor supply. *Labour Economics, 74*, 102089. https://doi.org/10.1016/j.labeco.2021.102089

Hastings, J. S., & Shapiro, J. M. (2018). How are SNAP benefits spent? Evidence from a retail panel. *American Economic Review, 108*(12), 3493-3540. https://doi.org/10.1257/aer.20170866

Hastings, J., Shapiro, J. M., & Washington, E. (2021). The effect of SNAP on the composition of purchased foods: Evidence and implications. *American Economic Journal: Applied Economics, 13*(2), 277-307. https://doi.org/10.1257/app.20190211

Haxhiu, E., & Helgerman, T. (2024). *Continuous treatment difference-in-differences with unknown controls: A data-driven approach.* [Unpublished working paper]. https://elirdhaxhiu.github.io/elirdhaxhiu.com/haxhiu_JMP.pdf

Hoynes, H. W., & Schanzenbach, D. W. (2012). Work incentives and the Food Stamp Program. *Journal of Public Economics, 96*(1-2), 151-162. https://doi.org/10.1016/j.jpubeco.2011.08.006

Hoynes, H. W., Bronchetti, E., & Christensen, G. (2017). *The real value of SNAP benefits and health outcomes* (DP2017-03). University of Kentucky Center for Poverty Research.

Hoynes, H. W., Schanzenbach, D. W., & Almond, D. (2016). Long-run impacts of childhood access to the safety net. *American Economic Review, 106*(4), 903-934. https://doi.org/10.1257/aer.20140575.

Hoynes, H. W., & Schanzenbach, D. W. (2009). Consumption responses to in-kind transfers: Evidence from the introduction of the food stamp program. *American Economic Journal: Applied Economics, 1*(4), 109-139. https://doi.org/10.1257/app.1.4.109

Kim, J., Rabbitt, M. P., & Tuttle, C. (2020). Changes in low-income households' spending and time use patterns in response to the 2013 sunset of the ARRA-SNAP benefit. *Applied Economic Perspectives and Policy, 42*(4), 777–795. https://doi.org/10.1093/aepp/ppz007

Krause, P. K., Rhodes, E., Miller, S., Bartik, A. W., Broockman, D. E., & Vivalt, E. (2025). *The impact of unconditional cash transfers on parenting and children* (NBER Working Paper No. 34040). National Bureau of Economic Research. https://www.nber.org/papers/w34040

Lee, J. Y., Nayga, R. M., Jo, Y., & Restrepo, B. J. (2022). Time use and eating patterns of SNAP participants over the benefit month. *Food Policy, 106*, Article 102186. https://doi.org/10.1016/j.foodpol.2021.102186

Li, Q., & Çakır, M. (2024). Estimating SNAP purchasing power and its effect on participation. *American Journal of Agricultural Economics, 106*(2), 779-804. https://doi.org/10.1111/ajae.12391

Mani, A., Mullainathan, S., Shafir, E., & Zhao, J. (2013). "Poverty impedes cognitive function." *Science, 341*(6149), 976-980.

Miller, D. P., & Morrissey, T. W. (2021). SNAP participation and the health care utilization of low-income adults and children. *Public Health Nutrition*, *24*(18), 6543-6554. https://doi.org/10.1017/S1368980021003815.

Morrissey, T. W. (2023). The earned income tax credit and short-term changes in parents' time investments in children. *Journal of Family and Economic Issues, 44*, 412-433. https://doi.org/10.1007/s10834-022-09830-7.

Mullainathan, S., & Shafir, E. (2013). *Scarcity: Why having too little means so much*. Times Books.

Mykerezi, E., & Mills, B. (2010). The impact of food stamp program participation on household food insecurity. *American Journal of Agricultural Economics, 92*(5), 1379-1391. https://doi.org/10.1093/ajae/aaq067

Ramey, V. A., & Francis, N. (2009). A century of work and leisure. *American Economic Journal: Macroeconomics*, 1(2), 189-224.

Ratcliffe, C., & McKernan, S. M. (2011). How much does SNAP reduce food insecurity? *American Journal of Agricultural Economics, 93*(4), 1082-1098. https://doi.org/10.1093/ajae/aar026

Schanzenbach, D. W. (2023). Understanding SNAP: An overview of recent research. *Food Policy, 114*, 102397. https://doi.org/10.1016/j.foodpol.2022.102397

Schmidt, L., Shore-Sheppard, L., & Watson, T. (2016). The effect of safety-net programs on food insecurity. *Journal of Human Resources, 51*(3), 589-614. https://doi.org/10.3368/jhr.51.3.1013-5987R1

Soni, A., & Morrissey, T. (2022). The effects of Medicaid expansion on home production and childcare time. *Southern Economic Journal, 87*(4), 1204-1231. https://doi.org/10.1002/soej.12489

Swann, C. A. (2017). Household history, SNAP participation, and food insecurity. *Food Policy, 73*, 1-9. https://doi.org/10.1016/j.foodpol.2017.09.007

Taillie, L. S. (2018). Who's cooking? Trends in US home food preparation by gender, education, and race/ethnicity from 2003 to 2016. *Nutrition Journal, 17*(1), 41 https://doi.org/10.1186/s12937-018-0347-9

Urban Institute (2024). Does SNAP Cover the Cost of a Meal in Your County? https://www.urban.org/data-tools/does-snap-cover-cost-meal-your-county

U.S. Department of Agriculture. (2021). *USDA modernizes the Thrifty Food Plan, updates SNAP benefits* [Press release]. https://www.usda.gov/about-usda/news/press-releases/2021/08/16/usda-modernizes-thrifty-food-plan-updates-snap-benefits

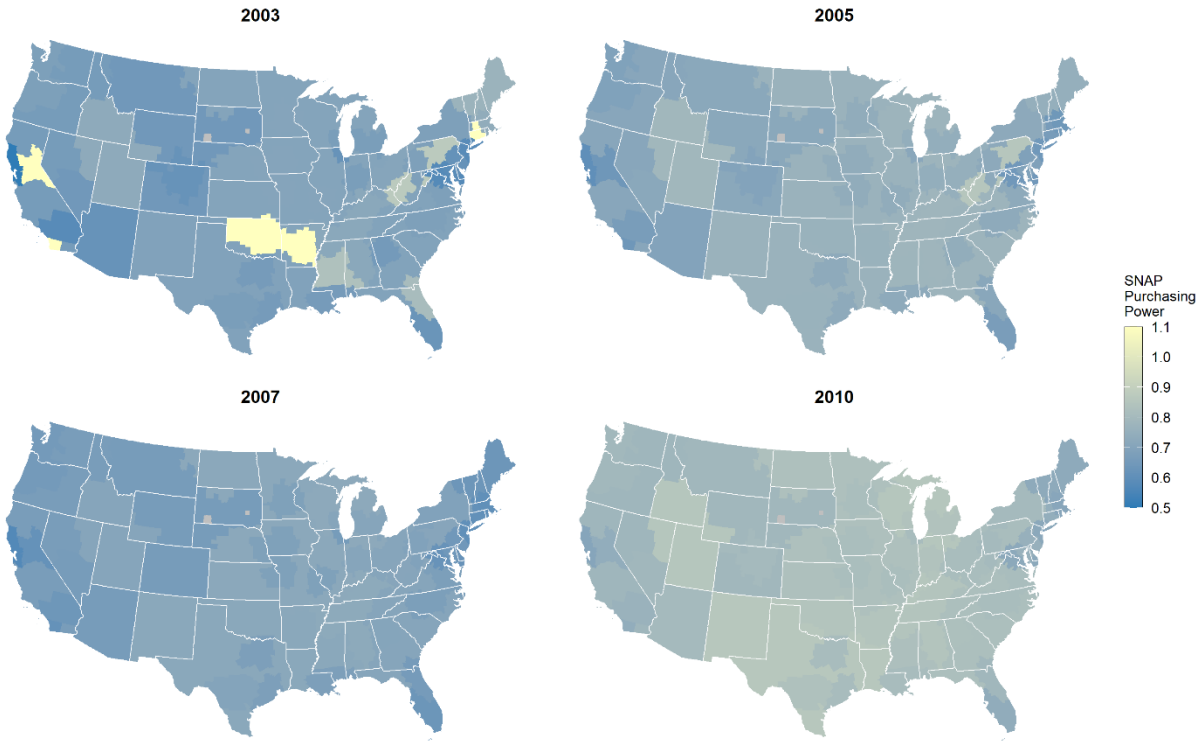
U.S. Department of Agriculture, Economic Research Service. (2025). *Supplemental Nutrition Assistance Program (SNAP)*. https://www.ers.usda.gov/topics/food-nutrition-assistance/supplemental-nutrition-assistance-program-snap

Ver Ploeg, M., & Zhen, C. (2022). *Changes in SNAP benefit levels and food spending and diet quality: Simulations from the National Household Food Acquisition and Purchase Survey (EIB-235)*. USDA, Economic Research Service

Wheaton, L., Giannarelli, L., & Minton, S. (2025). *How the Senate budget reconciliation SNAP proposals will affect families in every US state: A summary of preliminary research findings*. Urban Institute. https://www.urban.org/research/publication/how-senate-budget-reconciliation-snap-proposals-will-affect-families-every-us-state.

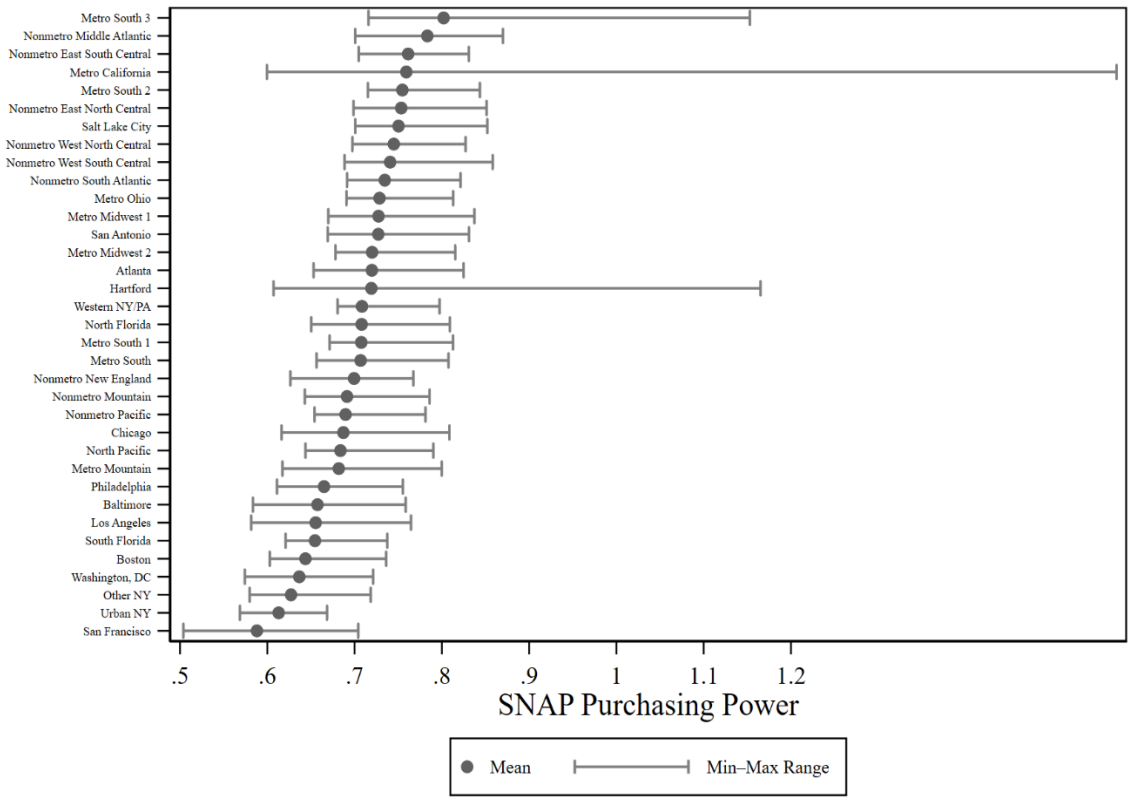
7. Figures

Figure 1. SNAP Purchasing Power Across Regions, Selected Years.



Source: Quarterly Food-at-Home Price Database.
Note: Maps present the geographical distribution of SNAP purchasing power for selected years. SNAP purchasing power is defined as the ratio of the maximum SNAP benefit for a four-person household to the local cost of the Thrifty Food Plan. Values below 1 indicate that the maximum benefit is insufficient to purchase the full Thrifty Food Plan basket. Darker shading indicates lower purchasing power. Market definitions follow USDA QFAHPD market regions.

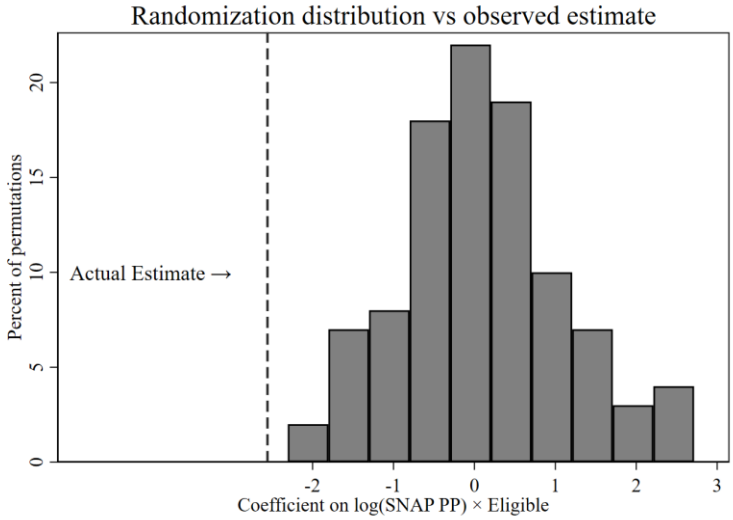
Figure 2. Average SNAP Purchasing Power, All Markets. 2003-2010



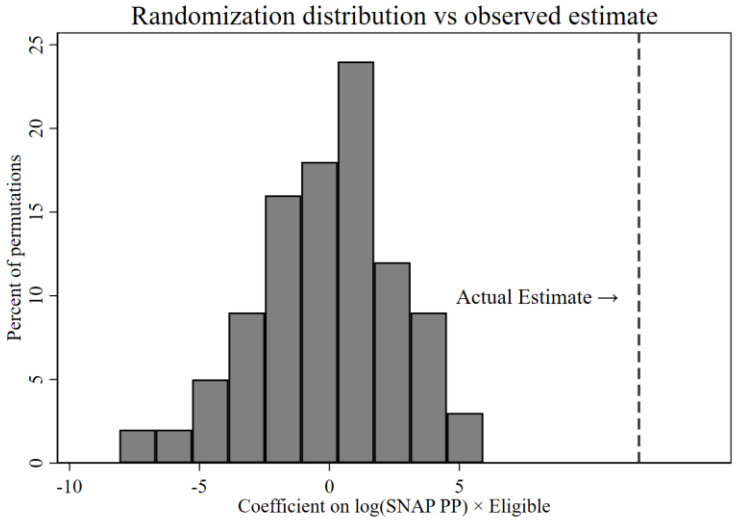
Source: Quarterly Food-at-Home Price Database.
Note: The figure plots market-level mean SNAP purchasing power over 2003-2010, with horizontal bars indicating the minimum and maximum values within each market during the sample period. SNAP purchasing power is defined as the ratio of the maximum SNAP benefit for a household of four to the local cost of the Thrifty Food Plan for a household of four.

Figure 3. Randomization Inference Exercise

(A) Purchasing



(B) Leisure



Source: American Time Use Survey.

Note: The figure compares the actual triple-difference estimate for log SNAP-PP × Eligibility to a distribution of placebo coefficients obtained via 100 random permutations of SNAP purchasing power. In each permutation, every observation in market m in year t is assigned the SNAP purchasing power observed in a randomly selected different market in the same year *t*. Equation (2) is then re-estimated using the permuted purchasing power values and the resulting coefficient is saved. Panel A shows results for purchasing time and Panel B shows results for leisure. The dashed vertical line marks the actual estimate from the main specification. For both outcomes, the actual estimate lies far outside the placebo distribution, indicating that the observed associations are unlikely to have arisen from a spurious correlation between local purchasing power and household time use. Coefficients are rescaled to correspond to a change in minutes/day per a 10 percent change in SNAP purchasing power.

8. Tables

Table 1. Descriptive Statistics, by SNAP Eligibility

Sample Includes →	SNAP-Eligible Households	Near-Eligible Households	p-value
Purchasing	36.53	42.29	0.000
Home production	77.23	83.77	0.000
Market work	105.30	144.60	0.000
Leisure	287.35	259.71	0.000
Childcare	71.58	72.44	0.018
Sleep	551.92	529.65	0.000
Female	63.7%	59.6%	0.000
Race/Ethnicity			
White	68.5%	78.6%	0.000
Black	26.0%	16.0%	0.007
Hispanic	24.4%	18.3%	0.007
Education			
Less than HS	32.2%	18.9%	0.000
HS	32.7%	36.8%	0.008
Some college	19.1%	21.9%	0.007
College	14.1%	21.8%	0.006
Age	46.3	46.4	0.808
Employed	39.3%	55.8%	0.000
Unmarried	74.5%	55.1%	0.000
Number of members in HH	2.7	2.9	0.000
Number of children	1.4	1.2	0.000
Observations	6,494	6,748	

Source: American Time Use Survey.
Note: Means are reported for SNAP-eligible and SNAP near-eligible households. Time-use outcomes are reported in minutes per day. Binary and categorical variables are reported as percentages. Age, number of household members, and number of children are reported as whole numbers. P-values correspond to two sample t-tests of equality in means across the two groups.

Table 2. The Relationship Between SNAP Purchasing Power and Time Spent Purchasing

	(1)	(2)	(3)
SNAP-PP × Eligibility	-2.94***	-2.63***	-2.55***
	(0.84)	(0.80)	(0.75)
% Change	-8.0***	-7.2***	-7.0***
Mean	36.53	36.53	36.53
R^2	0.013	0.027	0.027
Observations	13,242	13,192	13,192
Market FE?	Y	Y	Y
Year FE?	Y	Y	Y
Demographic Controls?		Y	Y
Economic & Policy Controls?			Y

Source: American Time Use Survey.

Note: This table reports triple-difference estimates from equation (2). The coefficient on SNAP-PP × Eligibility measures the differential response of eligible vs. near-eligible households to changes in log SNAP purchasing power within the same market and year. All models include market-by-eligibility fixed effects, month-by-eligibility fixed effects and year-by-eligibility fixed effects, column 2 includes demographic controls and column 3 includes demographic and economic and policy controls described in Section 3. Standard errors are clustered at the market level. Coefficients on log purchasing power are rescaled to correspond to a change in minutes/day per a 10 percent change in SNAP purchasing power. ATUS weights applied.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 3. The Relationship Between SNAP Purchasing Power and Other Types of Time Use

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome →	Purchasing	Home Production	Market Work	Leisure	Childcare	Sleep
SNAP-PP ×	-2.55***	0.83	1.55	11.91***	-1.97	-0.86
Eligibility	(0.75)	(2.14)	(3.07)	(3.81)	(1.74)	(3.71)
% Change	-7.0***	1.1	1.5	4.1***	-2.8	-0.2
Mean	36.53	77.23	105.30	287.36	71.58	551.92
R^2	0.027	0.087	0.392	0.234	0.174	0.056
Observations	13,192	13,192	13,192	13,192	6,633	13,192

Source: American Time Use Survey.

Note: This table reports triple-difference estimates from equation (2). The coefficient on SNAP-PP × Eligibility measures the differential response of eligible vs. near-eligible households to changes in log SNAP purchasing power within the same market and year. All models include market-by-eligibility fixed effects, month-by-eligibility fixed effects and year-by-eligibility fixed effects, and the full set of demographic and economic controls described in Section 3. Standard errors are clustered at the market level. Coefficients on log purchasing power are rescaled to correspond to a change in minutes/day per a 10 percent change in purchasing power. ATUS weights applied.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 4. The Relationship is Robust to Alternative Controls, Sample Restrictions, and Treatment Definitions

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome →	Purchasing	Home Production	Market Work	Leisure	Childcare	Sleep
	Panel A: Include State-by-Year Fixed Effects					
SNAP-PP × Eligibility	-2.53*	0.13	2.64	10.10***	-2.11*	-3.31
	(1.28)	(1.24)	(4.38)	(3.61)	(1.20)	(2.47)
% Change	-6.9*	0.16	2.5	3.5***	-2.9*	-0.60
Mean	36.53	77.23	105.30	287.36	71.58	551.92
R^2	0.071	0.145	0.428	0.275	0.256	0.113
Observations	13,192	13,192	13,192	13,192	6,633	13,192
	Panel B: Exclude Years When ARRA Increased SNAP Levels					
SNAP-PP × Eligibility	-2.28**	1.39	1.10	9.58**	0.41	-2.41
	(0.88)	(1.12)	(3.87)	(4.51)	(0.83)	(1.76)
% Change	-6.0**	1.7	1.0	3.4**	0.6	-0.4
Mean	37.83	78.50	104.71	285.43	69.72	552.84
R^2	0.041	0.097	0.395	0.246	0.227	0.062
Observations	9,499	9,499	9,499	9,499	4,814	9,499
	Panel C: Define Treatment Based on SNAP in Levels Instead of ln(SNAP)					
SNAP-PP × Eligibility	-2.60***	1.45	2.04	13.23***	-0.86	-2.13
	(0.61)	(1.70)	(2.79)	(2.51)	(0.89)	(2.92)
% Change	-7.1***	1.9	1.9	4.6***	-1.2	-0.4
Mean	36.53	77.23	105.30	287.36	71.58	551.92
R^2	0.035	0.091	0.395	0.239	0.224	0.061
Observations	13,192	13,192	13,192	13,192	6,633	13,192

Source: American Time Use Survey.

Note: This table reports triple-difference estimates from equation (2) using alternative specifications and sample restrictions. Panel A includes State-by-Year Fixed Effects, Panel B excludes ARRA years, and Panel C defines SNAP purchasing power in levels instead of log. All panels include the full set of demographic and economic controls described in Section 3. Standard errors are clustered at the market level. For Panels A and B, coefficients on log purchasing power are rescaled to correspond to a change in minutes/day per 10 percent change in SNAP purchasing power. For Panel C, the treatment variable enters in levels, so the coefficient represents the change in minutes/day associated with a one-unit increase in SNAP purchasing power. ATUS weights applied.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 5. The Relationship is Robust to Alternative Placebo Groups

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome →	Purchasing	Home Production	Market Work	Leisure	Childcare	Sleep
	Panel A: FPL bandwidth 250% to 550 %					
SNAP-PP × Eligibility	0.65	0.39	0.09	-1.61	0.01	-2.29
	(6.34)	(9.02)	(2.15)	(26.55)	(0.85)	(1.45)
R^2	0.040	0.080	0.313	0.203	0.208	0.060
Observations	14,882	14,882	14,882	14,882	7,325	14,882
	Panel B: FPL bandwidth 550% to 850 %					
SNAP-PP × Eligibility	-0.68	0.68	-1.598	3.97	-6.37	0.35
	(0.83)	(1.54)	(1.31)	(2.66)	(23.22)	(1.57)
R^2	0.058	0.097	0.288	0.180	0.213	0.081
Observations	5,898	5,898	5,898	5,898	2,769	5,898

Source: American Time Use Survey.

Note: Placebo tests assign "eligibility" and "near-eligibility" using high-income bandwidths far above the SNAP threshold (eligible: 250-400% vs. near eligible: 400-550% of FPL; eligible: 550-700% vs. 700-850 % of FPL). These groups should not be affected by SNAP purchasing power. Standard errors clustered at the market level. Coefficients on log purchasing power are rescaled to correspond to a change in minutes/day per 10 percent change in SNAP purchasing power. ATUS weights applied.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 6. Heterogeneity by Gender: Estimates of SNAP Purchasing Power on Time Use

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome →	Purchasing	Home Production	Market Work	Leisure	Childcare	Sleep
	Panel A: Women					
SNAP-PP × Eligibility	-1.73	-2.72	8.34***	4.16	-3.99**	1.00
	(1.09)	(1.80)	(2.59)	(2.65)	(1.93)	(2.95)
% Change	-4.2	-3.1	9.3***	1.6	-9.0**	0.2
Mean	40.85	87.71	89.87	268.13	44.47	549.27
R^2	0.038	0.083	0.404	0.224	0.166	0.060
Observations	8,131	8,131	8,131	8,131	4,213	8,131
	Panel B: Men					
SNAP-PP × Eligibility	-4.73***	3.83	-6.52	22.93***	-0.26	-3.08
	(1.64)	(2.77)	(6.65)	(6.52)	(2.13)	(5.08)
% Change	-16.3***	6.5	-4.9	7.1***	-1.4	-0.6
Mean	28.93	58.86	132.35	321.07	18.99	556.54
R^2	0.050	0.089	0.401	0.262	0.174	0.096
Observations	5,061	5,061	5,061	5,061	2,420	5,061

Source: American Time Use Survey.

Note: Each panel reports triple-difference estimates from equation (2) estimated separately by women and men. All specifications include market-by-eligibility fixed effects, month-by-eligibility fixed effects, and year-by-eligibility fixed effects, and the full set of demographic and economic controls described in Section 3. Standard errors are clustered at the market level. Subsample sizes are smaller relative to the pooled specification; results should therefore be interpreted with caution due to reduced statistical power. Coefficients are rescaled to correspond to a change in minutes/day per 10 percent change in SNAP purchasing power. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 7. Heterogeneity by Parental Status: Estimates of SNAP Purchasing Power on Time Use

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome →	Purchasing	Home Production	Market Work	Leisure	Childcare	Sleep
			Panel A: Parents			
SNAP-PP × Eligibility	2.04**	-2.45	2.73	6.82*	-1.96	1.78
	(0.85)	(3.55)	(6.12)	(3.43)	(1.35)	(3.27)
% Change	4.9**	-3.34	2.0	3.1*	-2.7	0.3
Mean	41.85	73.20	136.20	216.70	71.58	554.59
R^2	0.364	0.111	0.184	0.101	0.137	0.054
Observations	6,633	6,633	6,633	6,633	6,633	6,633
			Panel B: Non-Parents			
SNAP-PP × Eligibility	-2.34	3.81**	1.84	15.27***	0.55	-2.35
	(4.71)	(1.75)	(4.97)	(5.24)	(0.41)	(4.71)
% Change	-7.4	4.7**	2.4	4.3***	35.5	-0.4
Mean	31.59	80.97	76.69	352.76	1.55	549.44
R^2	0.446	0.105	0.034	0.059	0.224	0.044
Observations	6,559	6,559	6,559	6,559	6,559	6,559

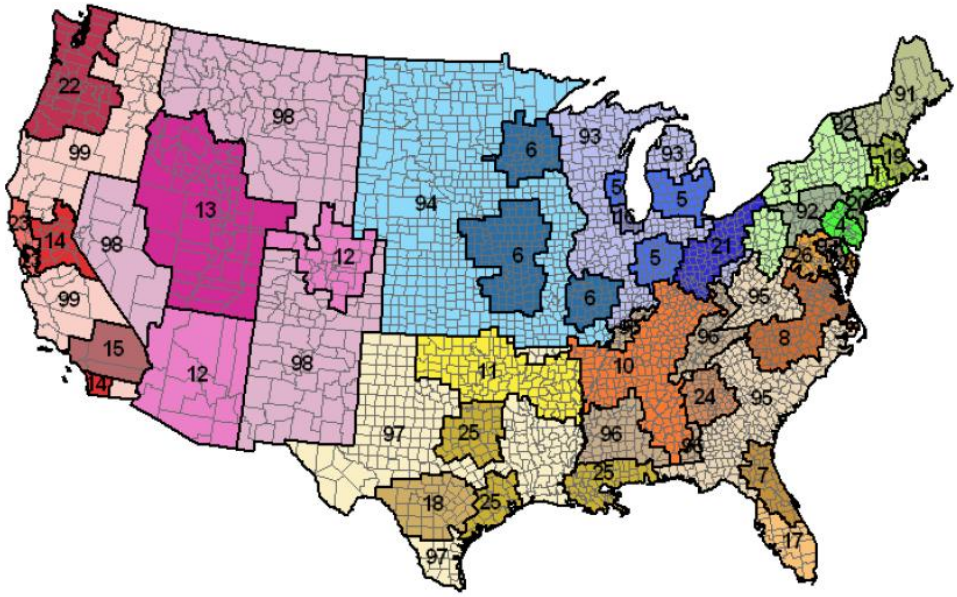
Source: American Time Use Survey.

Note: Each panel reports triple-difference estimates from equation (2) estimated separately by parents and non-parents. All specifications include market-by-eligibility fixed effects, month-by-eligibility fixed effects, and year-by-eligibility fixed effects, and the full set of demographic and economic controls described in Section 3. Standard errors are clustered at the market level. Coefficients are rescaled to correspond to a change in minutes/day per a 10 percent change in SNAP purchasing power.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

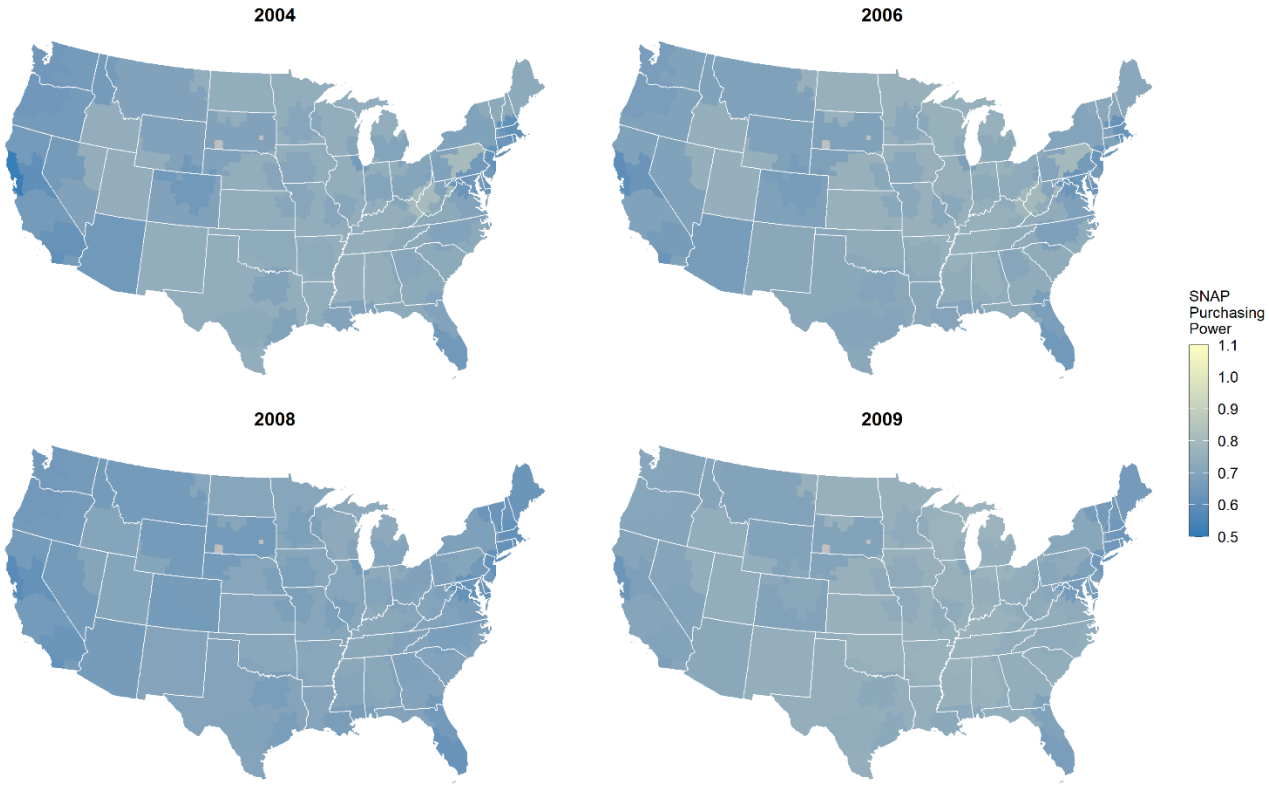
9. Appendix Figures

Appendix Figure 1. Quarterly Food at Home (QFAHPD) Market Groups



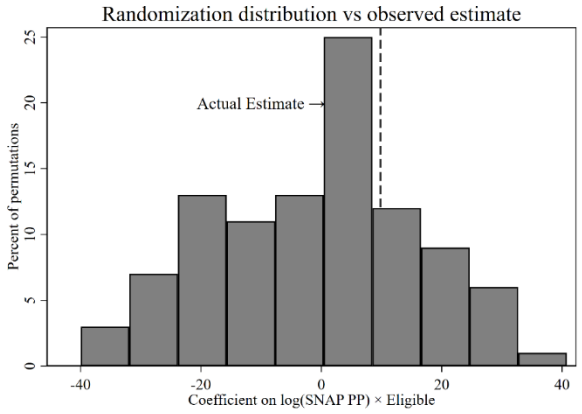
Source: Gregory and Coleman-Jensen (2013).
Note: Numbers indicate QFAHPD market group identifiers. Metropolitan markets are defined around major cities; non-metropolitan markets (IDs 81-99) are aggregated by Census division.

Appendix Figure 2. SNAP Purchasing Power Across Regions, 2004-2010.

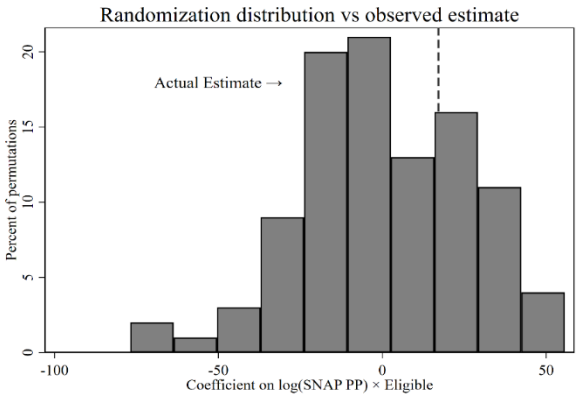


Source: Quarterly Food-at-Home Price Database.
Note: Maps present the geographical distribution of SNAP purchasing power for the remaining sample years not shown in Figure 2. SNAP purchasing power is defined as the ratio of the maximum SNAP benefit for a four-person household to the local cost of the Thrifty Food Plan. Values below 1 indicate that the maximum benefit is insufficient to purchase the full Thrifty Food Plan basket. Darker shading indicates lower purchasing power. Market definitions follow USDA QFAHPD regions.

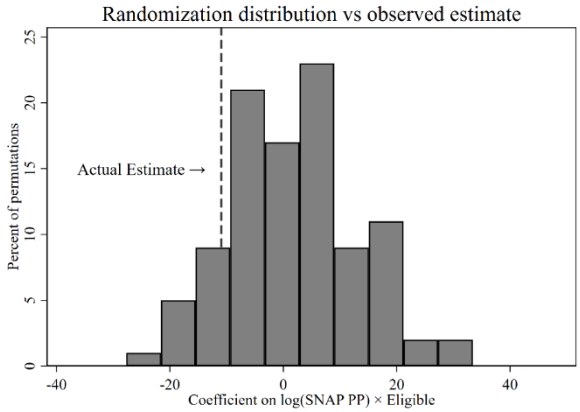
Appendix Figure 3. Randomization Inference Exercise, Other Outcomes



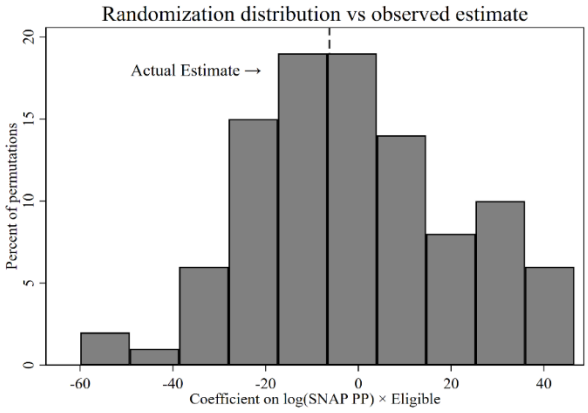
(A) Home Production



(B) Market Work



(D) Childcare



(D) Sleep

Source: American Time Use Survey.

Note: The figure compares the actual triple-difference estimate for log SNAP-PP × Eligibility to a distribution of placebo coefficients obtained via 100 random permutations of SNAP purchasing power. In each permutation, every observation in market *m* in year *t* is assigned the SNAP purchasing power observed in a randomly selected different market in the same year t. Equation (2) is then re-estimated using the permuted values and the resulting coefficient is saved. Panel A shows results for home production, Panel B shows results for market work, Panel C shows results for childcare, and Panel D shows results for sleep. The dashed vertical line marks the actual estimate from the main specification. For all four outcomes, the actual estimates lie within the placebo distribution, consistent with the absence of systematic associations between SNAP purchasing power and these time-use categories. Coefficients are rescaled to correspond to a change in minutes/day per a 10 percent change in SNAP purchasing power.

10. Appendix Tables

Appendix Table 1. SNAP Purchasing Power by Market Area, 2003-2010

Market ID	Market Name	Mean	Min	Max	Median	SD
1	Hartford	0.719	0.607	1.165	0.655	0.175
2	Urban NY	0.613	0.569	0.668	0.612	0.031
3	Western NY/PA	0.708	0.681	0.797	0.693	0.036
4	Philadelphia	0.665	0.611	0.755	0.652	0.040
5	Metro Midwest 1	0.727	0.670	0.837	0.714	0.048
6	Metro Midwest 2	0.720	0.678	0.815	0.710	0.041
7	North Florida	0.708	0.650	0.809	0.690	0.055
8	Metro South 1	0.708	0.671	0.813	0.686	0.045
9	Baltimore	0.658	0.583	0.759	0.649	0.047
10	Metro South 2	0.755	0.715	0.844	0.749	0.039
11	Metro South 3	0.802	0.716	1.153	0.748	0.138
12	Metro Mountain	0.682	0.617	0.800	0.662	0.053
13	Salt Lake City	0.750	0.701	0.852	0.741	0.046
14	Metro California	0.759	0.600	1.573	0.632	0.312
15	Los Angeles	0.655	0.582	0.765	0.648	0.053
16	Chicago	0.687	0.616	0.809	0.667	0.055
17	South Florida	0.655	0.621	0.737	0.645	0.035
18	San Antonio	0.727	0.669	0.831	0.714	0.047
19	Boston	0.644	0.603	0.736	0.627	0.048
20	Other NY	0.627	0.580	0.718	0.619	0.039
21	Metro Ohio	0.729	0.691	0.813	0.716	0.037
22	North Pacific	0.684	0.644	0.790	0.672	0.045
23	San Francisco	0.588	0.504	0.704	0.587	0.059
24	Atlanta	0.720	0.653	0.825	0.708	0.048
25	Metro South	0.707	0.656	0.808	0.698	0.042
26	Washington, DC	0.637	0.574	0.721	0.630	0.039
81	Nonmetro East	0.699	0.626	0.767	0.719	0.050
92	Nonmetro Middle Atlantic	0.783	0.701	0.870	0.799	0.061

93	Nonmetro East North Central	0.753	0.699	0.851	0.745	0.044
94	Nonmetro West North Central	0.745	0.697	0.827	0.746	0.038
95	Nonmetro South Atlantic	0.735	0.691	0.821	0.729	0.041
96	Nonmetro East South Central	0.761	0.705	0.831	0.753	0.043
97	Nonmetro West South Central	0.741	0.688	0.858	0.728	0.050
98	Nonmetro Mountain	0.690	0.654	0.781	0.688	0.042
99	Nonmetro Pacific	0.690	0.654	0.781	0.678	0.042

Source: American Time Use Survey and the Quarterly Food-at-Home Price Database.
Note: SNAP purchasing power defined as ratio of maximum SNAP benefit for a four-person household to local Thrifty Food Plan cost. Values below 1 indicate benefits are insufficient to purchase the full TFP basket. Statistics calculated across all years (2003-2010) within each market. Market definitions follow the QFAHPD classification.

Appendix Table 2. Classification of ATUS Activities into Time-Use Categories

Subcategory		ATUS Code(s)	Activity Description
	PURCHASING		
Shopping		070104	Shopping, except groceries, food and gas
		070105	Waiting associated with shopping
		070199	Shopping, n.e.c.
		070101	Grocery shopping
Researching Purchases		070201	Comparison shopping
		070299	Researching purchases, n.e.c.
Travel		180782	Travel related to shopping (except grocery shopping)
		180202	Travel related to grocery shopping
	HOME PRODUCTION		
Food Preparation		020201	Food and drink preparation
		020202	Food presentation
		020203	Kitchen and food clean-up
		020299	Food & drink prep, presentation, & clean-up, n.e.c.
Housework		020101	Interior cleaning
		020102	Laundry
		020103	Sewing, repairing, & maintaining textiles
		020104	Storing interior household items, including food
		020199	Housework, n.e.c.
		180201	Travel related to housework

Home & Vehicle Maintenance		020301	Interior arrangement, decoration, & repairs
		020302	Building and repairing furniture
		020303	Heating and cooling
		020399	Interior maintenance, repair, & decoration, n.e.c.
		020401	Exterior cleaning
		020402	Exterior repair, improvements, & decoration
		020499	Exterior maintenance, repair & decoration, n.e.c.
		020701	Vehicle repair and maintenance (by self)
		020799	Vehicles, n.e.c.
		020801	Appliance, tool, and toy set-up, repair, & maintenance (by self)
		020899	Appliances and tools, n.e.c.
		180203	Travel related to interior maintenance
		180204	Travel related to exterior maintenance
		180207	Travel related to vehicle maintenance
		180208	Travel related to appliances
Lawn & Garden		020501	Lawn, garden, and houseplant care
		020502	Ponds, pools, and hot tubs
		020599	Lawn and garden, n.e.c.
		180205	Travel related to lawn & garden
Pets		020681	Care for animals and pets (not veterinary care)
		020699	Pet and animal care, n.e.c.
		180206	Travel related to pet care

Household Management		020901	Financial management
		020902	Household & personal organization and planning
		020903	Household & personal mail & messages (except e-mail)
		020904	Household & personal e-mail and messages
		020905	Home security
		020999	Household management, n.e.c.
		029999	Household activities, n.e.c.
		180209	Travel related to household management
		180299	Travel related to household activities, n.e.c.
	MARKET WORK		
Working		050101	Work, main job
		050102	Work, other job(s)
		050103	Security procedures related to work
		050189	Working, n.e.c.
		180501	Travel related to working
Work-Related Activities		050201	Socializing, relaxing, and leisure as part of job
		050202	Eating and drinking as part of job
		050203	Sports and exercise as part of job
		050204	Security procedures as part of job
		050289	Work-related activities, n.e.c.
		180502	Travel related to work-related activities

		180589	Travel related to work, n.e.c.
	LEISURE		
Socializing & Communicating		120101	Socializing and communicating with others
		120199	Socializing and communicating, n.e.c.
		181201	Travel related to socializing and communicating
Social Events		120201	Attending or hosting parties/receptions/ceremonies
		120202	Attending meetings for personal interest (not volunteering)
		120299	Attending/hosting social events, n.e.c.
		181202	Travel related to attending or hosting social events
Relaxing & Leisure		120301	Relaxing, thinking
		120302	Tobacco and drug use
		120303	Television and movies (not religious)
		120304	Television (religious)
		120305	Listening to the radio
		120306	Listening to to/playing music (not radio)
		120307	Playing games
		120308	Computer use for leisure (except games)
		120309	Arts and crafts as a hobby
		120310	Collecting as a hobby
		120311	Hobbies, except arts & crafts and collecting
		120312	Reading for personal interest

		120313	Writing for personal interest
		120399	Relaxing and leisure, n.e.c.
		181283	Travel related to relaxing and leisure
Arts & Entertainment		120401	Attending performing arts
		120402	Attending museums
		120403	Attending movies/film
		120404	Attending gambling establishments
		120405	Security procedures related to arts & entertainment
		120499	Arts and entertainment, n.e.c.
		181204	Travel related to arts and entertainment
Waiting (Leisure)		120501	Waiting associated with socializing & communicating
		120502	Waiting associated with attending/hosting social events
		120503	Waiting associated with relaxing/leisure
		120504	Waiting associated with arts & entertainment
		120599	Waiting associated with socializing, n.e.c.
		129999	Socializing, relaxing, and leisure, n.e.c.
		181299	Travel related to socializing, relaxing, & leisure, n.e.c.
Sports & Exercise		130101–130136	Participating in sports, exercise, and recreation
		130199	Playing sports, n.e.c.
		181301	Travel related to participating in sports/exercise/recreation

Attending Sports Events		130201–130232	Watching/attending sporting events
		130299	Attending sporting events, n.e.c.
		181302	Travel related to attending sporting/recreational events
		130301–130302	Waiting related to sports or attending sporting events
		130399	Waiting associated with sports, exercise, & recreation, n.e.c.
		139999	Sports, exercise, & recreation, n.e.c.
		181399	Travel related to sports, exercise, & recreation, n.e.c.
	CHILDCARE		
Physical Care & Supervision		030101	Physical care for household children
		030109	Looking after household children (as a primary activity)
		030110	Attending household children's events
		030111	Waiting for/with household children
		030112	Picking up/dropping off household children
		030199	Caring for & helping household children, n.e.c.
Enrichment Activities		030102	Reading to/with household children
		030103	Playing with household children, not sports
		030104	Arts and crafts with household children
		030105	Playing sports with household children
		030186	Talking with/listening to household children
		030108	Organization & planning for household children

Education-Related		030201	Homework (household children)
		030202	Meetings and school conferences (household children)
		030203	Home schooling of household children
		030204	Waiting associated with household children's education
		030299	Activities related to household child's education, n.e.c.
Health-Related		030301	Providing medical care to household children
		030302	Obtaining medical care for household children
		030303	Waiting associated with household children's health
		030399	Activities related to household child's health, n.e.c.
Travel		180381	Travel related to caring for and helping household children
	SLEEP		
Sleeping		010101	Sleeping
		010102	Sleeplessness
		010199	Sleeping, n.e.c.

Source American Time Use Survey (ATUS) Activity Lexicon, 2003-2010.
Note: Classification follows methodology similar to Aguiar et al. (2013), Soni and Morrissey (2022) and Lee et al. (2022). Purchases include all shopping-related activities and travel time dedicated to these activities. Home production includes food preparation, housework, home and vehicle maintenance, lawn and garden care, pet care, and household management. Market work includes all work and working related activities. Childcare includes physical care, enrichment activities (reading, playing, arts), education-related activities, and health-related activities for household children. Sleep includes sleeping and sleeplessness. Leisure includes socializing, relaxing, media consumption (TV, radio, music), games, computer use, hobbies, reading, writing for personal interest, and sports/exercise participation and attendance. n.e.c. = not elsewhere classified.

Appendix Table 3. The Relationship Between SNAP Purchasing Power and Time Use Outcomes Under Different Specifications

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome →	Purchasing	Home Production	Market Work	Leisure	Childcare	Sleep
	Panel A: Market, Month and Year FE					
SNAP-PP × Eligibility	-2.94***	-0.36	2.10	10.89**	-3.51	0.04
	(0.84)	(2.11)	(3.87)	(4.56)	(2.30)	(3.81)
% Change	-8.0***	-0.5	2.0	3.8**	-4.9	0.0
Mean	36.53	77.23	105.30	287.36	71.58	551.92
R^2	0.021	0.022	0.027	0.024	0.025	0.023
Observations	13,192	13,192	13,192	13,192	6,633	13,192
	Panel B: Market, Month, Year FE + Demographics					
SNAP-PP × Eligibility	-2.63***	0.87	1.38	12.21***	-2.04	-0.48
	(0.81)	(2.02)	(3.06)	(3.79)	(1.77)	(3.60)
% Change	-7.20***	1.12	1.31	4.25***	-2.84	-0.09
Mean	36.53	77.23	105.30	287.36	71.58	551.92
R^2	0.034	0.090	0.394	0.239	0.178	0.055
Observations	13,192	13,192	13,192	13,192	6,633	13,192
	Panel C: Market, Month, Year FE + Demographics + State/County Covariates					
SNAP-PP × Eligibility	-2.55***	0.83	1.55	11.91***	-1.97	-0.86
	(0.75)	(2.14)	(3.07)	(3.81)	(1.74)	(3.71)
% Change	-6.98***	1.07	1.47	4.15***	-2.75	-0.16
Mean	36.53	77.23	105.30	287.36	71.58	551.92
R^2	0.035	0.091	0.395	0.239	0.180	0.061
Observations	13,192	13,192	13,192	13,192	6,633	13,192

Source: American Time Use Survey.

Note: This table reports triple-difference estimates from equation (2) across three progressively richer specifications for all six time-use outcomes. Panel A includes market-by-eligibility fixed effects, month-by-eligibility fixed effects and year-by-eligibility fixed effects only. Panel B adds individual and household demographic controls. Panel C further adds county- and state-level economic and policy controls described in section 3. Standard errors are clustered at the market level. Coefficients are rescaled to correspond to a change in minutes per day for a 10-percent change in SNAP purchasing power. ATUS weights applied. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Appendix Table 4. Heterogeneity by Race: Estimates of SNAP Purchasing Power on Time Use

	(1)	(2)	(3)	(4)	(5)	(6)
Outcome →	Purchasing	Home Production	Market Work	Leisure	Childcare	Sleep
			Panel A: White			
SNAP-PP ×	-1.30	-0.84	6.09*	8.88**	0.62	3.06
Eligibility	(0.80)	(2.68)	(3.46)	(4.33)	(1.88)	(4.43)
% Change	-3.40	-0.96	5.53*	3.20**	1.72	0.56
Mean	38.23	87.33	109.94	276.66	36.04	545.83
R^2	0.041	0.089	0.407	0.255	0.214	0.064
Observations	9,713	9,713	9,713	9,713	4,906	9,713
			Panel B: Non-White			
SNAP-PP ×	-6.29***	3.99*	4.83	14.69***	-11.36***	-4.96
Eligibility	(1.45)	(2.02)	(5.18)	(4.70)	(2.93)	(5.51)
% Change	-19.2***	7.21*	5.07	4.73***	-33.97***	-0.87
Mean	32.80	55.29	95.21	310.59	33.44	565.12
R^2	0.056	0.089	0.392	0.239	0.171	0.098
Observations	3,479	3,479	3,479	3,479	1,727	3,479

Source: American Time Use Survey.

Note: Each panel reports triple-difference estimates from equation (2) estimated separately by white and non-white households. All specifications include market-by-eligibility fixed effects, month-by-eligibility fixed effects, and year-by-eligibility fixed effects, and the full set of demographic and economic controls described in Section 3. Standard errors are clustered at the market level. Subsample sizes are smaller relative to the pooled specification; results should therefore be interpreted with caution due to reduced statistical power. Coefficients are rescaled to correspond to a change in minutes/day per a 10 percent change in SNAP purchasing power. ATUS weights applied.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.