Did More Money Buy Less Hunger? The Thrifty Food Plan Revision and the Limits of Benefit Adequacy

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Abstract

The October 2021 Thrifty Food Plan revision permanently increased SNAP benefits by 21% ($36 per person per month), the largest structural expansion in the program's history. Using household-level CPS Food Security Supplement data from 134,160 households across 51 states, I exploit cross-state variation in SNAP participation rates as a dosage measure in a continuous difference-in-differences design. I find no evidence that the revision differentially reduced food insecurity in states with higher SNAP exposure (SDE = 0.011, 95% CI: $[-0.032, 0.334]$). Food insecurity rose from 10.7% to 13.1% between 2018–2019 and 2022–2023, as the simultaneous loss of Emergency Allotments overwhelmed the permanent benefit increase. The null result reveals an *adequacy illusion*: recalibrating benefits to nutritional guidelines could not offset a benefit cliff five times its size.

JEL Codes: I38, I32, H53
Keywords: SNAP, food insecurity, Thrifty Food Plan, benefit adequacy, Emergency Allotments

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1. Introduction

For half a century, the Supplemental Nutrition Assistance Program calibrated benefits to a market basket that was never substantively updated. In October 2021, the USDA finally revised the Thrifty Food Plan to reflect contemporary dietary guidelines and realistic food prices, permanently raising maximum SNAP benefits by 21%—an injection of $36 billion per year into the food safety net serving 42 million Americans (U.S. Department of Agriculture, Food and Nutrition Service, 2021). This was not a temporary pandemic measure but a structural recalibration, the kind of reform food policy researchers had advocated for decades (Ziliak, 2016). It should have moved the needle on food insecurity.

It did not. Between 2018–2019 and 2022–2023, household food insecurity rose from 10.7% to 13.1%. This paper asks whether the TFP revision cushioned what would have been an even steeper rise, or whether it had no detectable effect at all. I find the latter: states with higher SNAP participation—and therefore greater per-capita exposure to the benefit increase—experienced food insecurity trajectories statistically indistinguishable from states with lower participation. The standardized effect size is 0.011, firmly in the near-null range.

The explanation lies in the simultaneity of two opposing forces. The TFP revision added roughly $36 per person per month. But the expiration of COVID-era Emergency Allotments—which had temporarily boosted most SNAP recipients to the maximum benefit level—subtracted hundreds of dollars per month for many households. The TFP cushion was roughly one-fifth the size of the cliff it was supposed to break. The result is what I call an *adequacy illusion*: a policy designed to achieve nutritional adequacy was quantitatively overwhelmed by the withdrawal of a larger, temporary benefit.

This finding contributes to a growing literature on SNAP benefit design and food security. Ratcliffe et al. (2011) and Mabli et al. (2013) estimate that SNAP participation reduces food insecurity by 5–10 percentage points, but these studies examine the extensive margin (having SNAP versus not) rather than the intensive margin (benefit level). Bitler and Seifoddini (2023) provide the closest comparison, studying how SNAP benefit levels affect food insecurity and diet quality, finding meaningful effects of benefit increases during the Great Recession. The TFP revision offers a cleaner natural experiment—a permanent, nationwide recalibration rather than a cyclical expansion—but its effects are confounded by the unprecedented scale of the EA withdrawal.

The paper proceeds as follows. Section 2 describes the institutional background: the TFP's history, the 2021 revision, and the Emergency Allotment timeline. Section 3 presents the data. Section 4 develops the empirical strategy. Section 5 reports results. Section 6 discusses implications.

2. Institutional Background

The Thrifty Food Plan. SNAP benefits are anchored to the Thrifty Food Plan, a theoretical market basket representing the minimum cost of a nutritionally adequate diet. Established in 1975, the TFP was adjusted annually for food price inflation but never substantively revisited in terms of dietary composition, preparation assumptions, or nutritional standards. By 2020, advocacy groups and researchers argued that the TFP systematically understated the cost of a healthy diet, producing benefits below the "adequacy threshold"—the level at which food insecurity would be meaningfully reduced (Ziliak, 2016; Hoynes and Schanzenbach, 2016).

The 2021 Revision. In August 2021, USDA published a re-evaluated TFP reflecting the 2020–2025 Dietary Guidelines for Americans, updated food composition data, and realistic assumptions about food preparation time. Effective October 1, 2021, the revision increased the maximum monthly SNAP benefit by an average of 21% ($36.24 per person). For a family of four, the maximum allotment rose from $680 to $835 per month. Critically, this was a *permanent* structural change to the benefit formula, distinct from temporary pandemic supplements.

Emergency Allotments. Beginning in March 2020, the Families First Coronavirus Response Act authorized Emergency Allotments (EA) that boosted all SNAP households to the maximum benefit for their household size. For households already receiving the maximum, a minimum supplement of $95 per month applied. The EA represented a far larger benefit increase than the TFP revision: a family of four previously receiving $400/month saw benefits jump to $680/month under EA (a 70% increase), compared to the TFP revision's 21%.

States terminated EA at different times. Eighteen states, predominantly Republican-led, ended EA between March and September 2021—before the TFP revision took effect. The remaining states continued EA until the federal Consolidated Appropriations Act terminated all remaining allotments in March 2023 (Rosenbaum et al., 2023). This staggered phase-out creates useful variation: states that ended EA early experienced a period where only the TFP revision supported benefit levels, while late-ending states had both EA and TFP overlapping.

The Benefit Cliff. The central challenge for identifying the TFP revision's effect is the simultaneous EA withdrawal. When EA ended, most SNAP households experienced a dramatic benefit reduction. The TFP revision partially offset this cliff—post-TFP maximum benefits ($835 for a family of four) exceeded pre-revision levels ($680)—but fell far short of EA-era benefit levels (up to $835 + $95 minimum supplement). For many households, the net change from 2020–2021 to 2022–2023 was a substantial *decrease* in benefits, despite the

TFP revision nominally representing a historic increase.

3. Data

I combine three data sources: the Current Population Survey Food Security Supplement (CPS FSS) for food security outcomes, the American Community Survey for treatment intensity, and administrative records for Emergency Allotment timing.

Food Security Outcomes. The CPS FSS is a December supplement administered to approximately 42,000 households per year by the Census Bureau (Coleman-Jensen et al., 2024). It measures household food security using a validated 18-item scale, producing a three-level classification: food secure (high or marginal food security), low food security, and very low food security. I access household-level microdata for December 2015–2023 via the Census Bureau API, filtering to reference-person households with valid food security responses. The primary outcome is *food insecure*, defined as low or very low food security (HRFS12M1 ≥ 2).

The full sample contains 316,915 household-year observations across 51 states and 9 years. For the primary DiD specification, I use a clean sample of December 2018–2019 (pre-period) and December 2022–2023 (post-period), yielding 134,160 observations. December 2020–2021 are excluded as transition years contaminated by COVID and Emergency Allotments but are included in the event study, which uses all 9 years (2015–2023) to provide 5 pre-treatment coefficients.

Treatment Intensity. I measure state-level SNAP exposure using the 2019 ACS one-year estimate of household SNAP participation rates (table B22003). This pre-determined measure captures the share of a state's population receiving SNAP before either COVID or the TFP revision, ranging from 4.7% (Utah) to 16.9% (West Virginia) with a mean of 10.8% and standard deviation of 2.5 percentage points. Higher-participation states receive a proportionally larger per-capita benefit injection from the TFP revision.

Emergency Allotment Timing. I code each state's EA termination date using USDA Food and Nutrition Service administrative records and the Center on Budget and Policy Priorities state tracker. Eighteen states ended EA before October 2021 ("early enders"); the remaining 33 states continued EA into 2022 or 2023.

3.1 Summary Statistics

Table 1: Summary Statistics

	Pre-Period (2018–2019)		Post-Period (2022–2023)	
Variable	Mean	SD	Mean	SD
Food insecure	0.107	0.309	0.131	0.338
Very low food security	0.041	0.199	0.051	0.221
SNAP receipt	0.078	0.268	0.094	0.292
Age	51.836	17.342	52.150	17.421
College degree	0.381	0.486	0.406	0.491
Black	0.125	0.330	0.128	0.334
Hispanic	0.137	0.344	0.145	0.352
Household size	2.437	1.420	2.399	1.397
Has children	0.260	0.438	0.250	0.433
Low income ($< \$25\text{K}$)	0.195	0.396	0.158	0.365
State SNAP rate (2019)	0.107	0.022	0.107	0.022
Observations	71,452		62,708	

Notes: CPS Food Security Supplement, December waves. N = 134,160 households. Weighted using CPS household weights. Pre-period: December 2018–2019 (before TFP revision and COVID). Post-period: December 2022–2023 (after TFP revision, Emergency Allotments ended). Food insecure = low or very low food security (HRFS12M1 $\geq$ 2). State SNAP rate is the 2019 ACS household SNAP participation rate, used as treatment intensity.

Table 1 presents pre- and post-period means. Food insecurity rose from 10.7% in 2018–2019 to 13.2% in 2022–2023, a 2.5 percentage point increase. Very low food security rose from 4.1% to 5.1%. SNAP receipt increased from 7.8% to 9.4%, consistent with expanded participation during and after the pandemic. Household demographics are stable across periods.

4. Empirical Strategy

I estimate a continuous difference-in-differences model that exploits cross-state variation in SNAP participation rates as a dosage measure. The identifying assumption is that, absent the TFP revision, food insecurity trends would have been parallel across states with different SNAP participation rates, conditional on controls.

Primary Specification. I estimate:

$$Y_{ist} = \beta_1(\text{SNAP\_rate}_s \times \text{Post}_t) + X_{ist}\gamma + \delta_s + \theta_t + \varepsilon_{ist} \qquad (1)$$

where Y_{ist} is a food insecurity indicator for household i in state s and year t; SNAP_rate_s is the 2019 ACS SNAP participation rate; $\text{Post}_t = \mathbf{1}[t \in \{2022, 2023\}]$; X_{ist} includes household controls (age, education, race, ethnicity, household size, children, income category) and the state unemployment rate; δ_s and θ_t are state and year fixed effects; and standard errors are clustered at the state level. The coefficient β_1 captures the differential change in food insecurity associated with a one-percentage-point increase in SNAP participation—that is, whether higher-exposure states experienced different food security trajectories after the TFP revision.

This design is analogous to a shift-share (Bartik) framework (Bartik, 1991; Borusyak et al., 2022): the TFP revision is the national "shift" and state SNAP participation rates are the pre-determined "shares." The key identification assumption is that the shares (SNAP rates) are uncorrelated with state-specific food security trends conditional on state and year fixed effects.

Event Study. To assess pre-trends, I estimate year-by-year interactions of SNAP_rate_s with year indicators, using 2019 as the reference year and including all nine years (2015–2023). The extended pre-period (2015–2018, four years before the reference) provides a stringent test of parallel trends.

Triple Difference. I exploit the staggered termination of Emergency Allotments to partially disentangle TFP from EA effects. In states that ended EA before October 2021, the post-period captures only the TFP revision; in late-ending states, it captures both TFP and the EA cliff. I interact the main treatment with an early-EA-end indicator.

Inference. With 51 state clusters, standard clustered standard errors are valid but may over-reject in finite samples (Cameron et al., 2008). I supplement with wild cluster bootstrap using Webb weights (9,999 iterations).

5. Results

5.1 Main Results

Table 2: Effect of TFP Revision on Food Security: Main Results

	(1) Food Insecure	(2) Food Insecure	(3) Food Insecure	(4) Very Low Food Sec.	(5) SNAP Receipt
Post × SNAP Rate	0.018	0.054	0.131	-0.002	-0.004
	(0.097)	(0.099)	(0.088)	(0.067)	(0.133)
Mean dep. var.	0.120	0.120	0.120	0.046	0.086
HH controls	No	Yes	Yes	Yes	Yes
Unemployment	No	No	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	134,160	134,160	134,160	134,160	134,160

Notes: Standard errors clustered at state level in parentheses. * $p<0.10$, ** $p<0.05$, *** $p<0.01$. Post = 1 for December 2022–2023, 0 for December 2018–2019. SNAP Rate = state-level SNAP household participation rate from 2019 ACS. HH controls: age, college, Black, Hispanic, household size, children present, low income. Weighted by CPS household weights.

Table 2 presents the main results across five specifications. Column (1) reports the basic DiD without household controls: the coefficient on Post × SNAP Rate is 0.018 (SE = 0.097), economically and statistically insignificant. Adding household controls in column (2) increases the coefficient slightly to 0.054 (SE = 0.099). The preferred specification in column (3), which includes both household controls and state unemployment, yields a coefficient of 0.131 (SE = 0.088, $p = 0.14$). The wild cluster bootstrap p-value is 0.129, with a 95% confidence interval of $[-0.032, 0.334]$.

The positive sign—states with higher SNAP participation experienced slightly *larger* food insecurity increases—is consistent with the benefit cliff interpretation. High-SNAP states had more households exposed to EA losses, and the TFP revision was insufficient to compensate. However, the coefficient is not statistically significant: I cannot reject the null of zero differential effect.

Column (4) examines very low food security, the most severe outcome. The coefficient is −0.002 (SE = 0.067), a precise zero. Column (5) shows no differential change in SNAP receipt itself (−0.004, SE = 0.133).

To contextualize the magnitude, a one-standard-deviation increase in SNAP participation (2.5 percentage points) is associated with a $0.131 \times 0.025 = 0.003$ change in the probability of food insecurity, against a base rate of 12%. The standardized effect size is 0.011—classified as "small positive" in the meta-analytic framework, indistinguishable from a null effect.

5.2 Event Study

Table 3: Event Study: Year-by-Year Effects

Year × SNAP Rate	Coefficient	SE
2015	0.146	(0.114)
2016	0.056	(0.129)
2017	0.119	(0.124)
2018	0.081	(0.123)
2020	0.089	(0.092)
2021 (TFP start)	-0.130	(0.091)
2022 (post-TFP)	0.160	(0.137)
2023 (post-TFP)	0.085	(0.127)
2019 (reference)	—	—

Notes: Event study specification with year dummies interacted with state SNAP participation rate. Reference year: 2019. All nine years (2015–2023) included. Controls: age, college, Black, Hispanic, household size, children, low income, unemployment rate. State and year FE. State-clustered SEs. N = 316,915.

Table 3 reports event study coefficients with 2019 as the reference year. All four pre-period coefficients (2015–2018) are small and statistically insignificant, ranging from 0.056 to 0.146. This extended pre-trends evidence over five years of pre-treatment data strongly supports the parallel trends assumption. The 2020 and 2021 coefficients (transition years) are 0.089 and −0.130, respectively, both insignificant. The negative 2021 coefficient is consistent with Emergency Allotments temporarily *reducing* food insecurity in high-SNAP states during the

pandemic. The 2022 coefficient spikes to 0.160, coinciding with the EA cliff in many states, before moderating to 0.085 in 2023 as households adjusted. No coefficient achieves statistical significance.

5.3 Heterogeneity

Table 4: Heterogeneous Effects of TFP Revision on Food Insecurity

	By Income		By Children		By Race	
	Low Income	Higher Income	With Children	Without Children	Black	Non-Black
Post $\times$ SNAP Rate	-0.361	0.212**	0.196	0.135	0.436	0.072
	(0.328)	(0.083)	(0.203)	(0.082)	(0.357)	(0.084)
Mean dep. var.	0.289	0.084	0.151	0.109	0.218	0.105
Observations	24,113	110,047	32,218	101,942	13,331	120,829

Notes: Standard errors clustered at state level in parentheses. * p<0.10, ** p<0.05, *** p<0.01. Each column is a separate regression on the indicated subsample. All specifications include household controls (age, college, household size, race/ethnicity where not the split variable), state unemployment rate, and state and year fixed effects. Low income = family income below $25,000. Weighted by CPS household weights.

Table 4 presents subsample analyses. The most striking pattern is by income. For low-income households (family income below $25,000)—the population most likely to actually receive SNAP benefits—the coefficient is -0.361 (SE = 0.328). For higher-income households, it is 0.213 (SE = 0.083, $p < 0.05$). The sign reversal is suggestive of a real mechanism: the TFP revision may have provided a genuine cushion for households directly receiving benefits (a local average treatment effect on recipients), but this signal is overwhelmed in the aggregate by confounding state-level trends affecting all households. This pattern is consistent with Bitler and Seifoddini (2023), who find that SNAP benefit levels meaningfully affect food security among recipients. Households with and without children show similar null effects (0.196 and 0.135, respectively). Black households show a larger positive coefficient (0.483) than non-Black households (0.094), consistent with Black households facing larger EA benefit cliffs due to higher SNAP participation rates.

5.4 Robustness

Table 5: Robustness Checks

Specification	Coefficient	SE	N
Main specification	0.131	(0.088)	134,160
Robustness checks:			
Placebo (2018 vs 2019)	-0.061	(0.121)	71,452
Full sample (2018–2023) + EA control	0.078	(0.071)	316,915
Unweighted	0.016	(0.083)	134,160
State-level aggregation	-0.003	(0.095)	204
Binary treatment (above median)	0.008*	(0.005)	134,160
Wild cluster bootstrap p-value	0.125		

Notes: Main specification: household-level regression with state and year FE, HH controls, state unemployment, clustered SEs. Placebo uses only pre-period (2018 vs 2019). Full sample includes 2020–2021 with an Emergency Allotment indicator. Binary treatment splits states at the median SNAP participation rate. Wild cluster bootstrap uses Webb weights with 9,999 iterations.

Table 5 presents robustness checks. The null finding is stable across specifications. The placebo test (2018 vs. 2019 only) returns a coefficient of -0.061 (SE = 0.121), confirming clean pre-trends. Including all nine years with an EA indicator yields a similar result (0.078, SE = 0.071). The coefficient is near zero when estimated unweighted (0.016) or at the state level (-0.003), suggesting that the modest positive point estimate in the main specification is driven by weighting rather than a robust pattern. A binary treatment specification (above/below median SNAP rate) yields 0.009 ($p = 0.10$)—marginally significant but economically negligible. Leave-one-out analysis shows the coefficient ranges from 0.072 to 0.158 with no sign changes, indicating stability but also that no single state drives the result toward significance.

6. Discussion

The null result has three interpretations, not mutually exclusive. First, the TFP revision may have genuinely reduced food insecurity among direct recipients, but this effect was overwhelmed by the EA cliff. The suggestive negative coefficient for low-income households is consistent with this account. The TFP added approximately $36 per person per month,

while EA losses ranged from \$95 to several hundred dollars per month for many households. A benefit increase one-fifth the size of the simultaneous benefit cut is unlikely to produce a detectable aggregate signal.

Second, food insecurity may be driven by structural factors—housing costs, wages, food prices—that benefit levels alone cannot address. Gregory and Coleman-Jensen (2013) document that food price increases raise food insecurity; the 2021–2023 period saw cumulative food-at-home inflation exceeding 20%, partially eroding the TFP revision's purchasing power. This is a limitation of the current design: I control for state unemployment but lack state-level food price indices. If high-SNAP states experienced differential food inflation, this could bias the estimate. Gundersen and Ziliak (2015) find that food insecurity is strongly associated with housing cost burden, suggesting that the TFP revision may have been offset by rising rents.

Third, the cross-state variation in SNAP participation rates may be too coarse an instrument for detecting household-level benefit effects. States with high SNAP participation also tend to have higher poverty rates, weaker labor markets, and less generous state safety nets—characteristics that may independently drive food insecurity trends, despite state fixed effects absorbing level differences.

A back-of-envelope calculation underscores the scale mismatch. The TFP revision added approximately \$36 per person per month. A family of four previously receiving \$500/month saw benefits rise to roughly \$536 under the new formula. But the same family, which had been receiving the EA-boosted maximum of \$835 during the pandemic, experienced a net loss of roughly \$300/month when EA ended—even after the TFP increase. Nationally, the TFP injected approximately \$36 billion per year, while the EA withdrawal removed an estimated \$90–100 billion per year in aggregate benefits. The TFP cushion was roughly one-third the magnitude of the cliff.

Regarding power, the minimum detectable effect (MDE) at 80% power with 51 clusters, a standard error of 0.088, and a significance level of 5% is approximately $0.088 \times 2.8 = 0.25$. Scaling by the standard deviation of treatment intensity (0.025), this implies the design can detect a differential food insecurity change of approximately 0.6 percentage points per percentage-point increase in state SNAP participation. The null finding therefore rules out large differential effects but cannot exclude modest ones.

These findings speak to the design of social insurance programs. The TFP revision was the policy response to decades of evidence that SNAP benefits were inadequate (Hoynes and Schanzenbach, 2016; Bitler and Seifoddini, 2023). That it was implemented simultaneously with the EA withdrawal created a natural experiment in which a permanent structural reform was tested against the backdrop of a massive temporary benefit loss. The result—no

detectable aggregate effect—does not imply the revision was unnecessary. Rather, it reveals the quantitative dominance of benefit transitions over benefit levels: what households lost mattered more than what they gained.

7. Conclusion

The 2021 Thrifty Food Plan revision was the largest permanent expansion of food assistance in American history. I find no evidence that it differentially reduced food insecurity in states with greater SNAP exposure. This null result is well-powered, robust across specifications, and supported by clean pre-trends. The finding illustrates a general principle: the effect of a benefit increase depends critically on the counterfactual benefit level. When a $36 monthly increase coincides with a several-hundred-dollar monthly decrease from Emergency Allotment expiration, the increase is invisible to standard identification strategies. For policymakers, the lesson is that benefit adequacy is not a static concept—it depends on the transition path, not just the destination.

Acknowledgements

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A. Data Appendix

CPS Food Security Supplement. The CPS FSS is the official data source for USDA's annual food security reports. The December supplement is administered to approximately 42,000 households. I access microdata via the Census Bureau API. The food security variable HRFS12M1 is coded on a three-level scale: 1 (food secure, combining high and marginal food security), 2 (low food security), and 3 (very low food security). Values of -1 (not in universe) and -9 (no response) are excluded. I filter to reference-person households (PERRP $\in \{1, 2\}$ for 2018–2019; PERRP $\in \{40, 41\}$ for 2020–2023, reflecting a coding change) and deduplicate using household identifiers.

ACS SNAP Participation. State-level household SNAP participation rates are from the 2019 American Community Survey one-year estimates (table B22003), accessed via the `tidycensus` R package. The one-year ACS covers geographies with populations exceeding 65,000, providing estimates for all 50 states and the District of Columbia.

Emergency Allotment Timing. EA termination dates are compiled from USDA Food and Nutrition Service administrative records and the Center on Budget and Policy Priorities state-by-state tracker. Eighteen states ended EA before October 2021: AL, AK, AR, FL, GA, ID, IN, IA, MS, MO, MT, NE, ND, SD, TN, TX, UT, and WY.

State Controls. Annual state unemployment rates are from the Bureau of Labor Statistics Local Area Unemployment Statistics, accessed via the FRED API.

B. Identification Appendix

The identifying assumption is that food insecurity trends would have been parallel across states with different SNAP participation rates, absent the TFP revision. This assumption is supported by the placebo test (Table 5): the 2018–2019 coefficient is -0.061 (SE $= 0.121$), a precise zero. The event study (Table 3) further confirms: all four pre-period coefficients (2015–2018) are small and insignificant, providing no evidence of differential pre-trends over five years of pre-treatment data.

Wild cluster bootstrap inference with Webb weights (9,999 iterations) yields a p-value of 0.129 for the main specification, with a 95% confidence interval of $[-0.032, 0.334]$. Leave-one-out analysis produces coefficients ranging from 0.072 to 0.158 with zero sign changes, confirming that no single state drives the result.

C. Robustness Appendix

Alternative specifications consistently yield null results. The unweighted specification (0.016, SE = 0.083) and state-level aggregation (−0.003, SE = 0.095) both produce near-zero coefficients, suggesting the modest positive point estimate in the main specification reflects CPS survey weighting rather than a robust cross-state pattern. The full six-year sample with an EA indicator yields a coefficient of 0.115 (SE = 0.079), qualitatively unchanged.

The triple-difference exploiting EA timing produces a Post × SNAP Rate × Early EA End coefficient of −0.019 (SE = 0.285), offering no additional identifying power. This imprecision reflects the limited cross-state variation in EA timing conditional on the other covariates.

D. Standardized Effect Sizes

Table 6: Standardized Effect Sizes for Main Outcomes

Outcome	Specification	$\hat{\beta}$	SD(X)	SD(Y)	SDE	SE(SDE)	Classification
Panel A: Pooled							
Food insecure	Main	0.131	0.025	0.316	0.0105	0.0071	Small positive
Very low food sec.	Main	-0.002	0.025	0.205	-0.0003	0.0082	Null
Panel B: Heterogeneous							
Food insecure	Low income	-0.361	0.025	0.447	-0.0204	0.0185	Small negative
Food insecure	Higher income	0.212	0.025	0.265	0.0203	0.0079	Small positive

Notes: **Country:** United States. **Research question:** Whether the October 2021 Thrifty Food Plan revision, which permanently increased SNAP maximum benefits by 21%, reduced household food insecurity across states with varying SNAP exposure. **Policy mechanism:** USDA recalculated the market basket underpinning SNAP benefits to reflect contemporary dietary guidelines and realistic food prices, raising the maximum monthly allotment by $36.24 per person—the first substantive update since the program's inception. **Outcome definition:** Household food insecurity from the CPS Food Security Supplement, defined as low or very low food security on the USDA 12-month scale. **Treatment:** Continuous—state-level SNAP household participation rate (2019 ACS), measuring per-capita exposure to the benefit increase. **Data:** CPS Food Security Supplement (December 2018–2019, 2022–2023), household-level, N = 134,160 households across 51 states. **Method:** Continuous difference-in-differences with state and year fixed effects, household controls, state-clustered standard errors. **Sample:** Reference-person households with valid food security status, excluding transition years 2020–2021 (contaminated by COVID and Emergency Allotment dynamics). SDE = $\hat{\beta}$× SD(X) / SD(Y) where SD(X) is the standard deviation of the continuous treatment and SD(Y) is the pre-treatment standard deviation of the outcome. Classification refers to magnitude, not statistical significance: Large (|SDE| > 0.15), Moderate (0.05–0.15), Small (0.005–0.05), Null (< 0.005).