How Place and Poverty Intersect

Geographic Barriers and Low SNAP Take-up

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Motivation

- US somewhat unique within advanced economies in design of safety net. System very federalized with various levels of government running programs.
- People apply to many programs and rules not harmonized and application is not automatic as in much of the developed world $\Rightarrow$ low take-up is more of issue in US than other places (Currie, 2006; Currie and Gahvari, 2008).
- Social program take-up: Hot topic in public econ, yet understudied.
    - Emphasis on understanding role of barriers to accessing safety net.
- Barriers impact both **take-up** (how many people enroll) and **targeting** (what types of people enroll).

Competing Models to Explain Low Take-Up

Neoclassical model

- People make decisions balancing costs and benefits in a utility maximizing framework.
- Incomplete take-up is a function of barriers:
  - **Incomplete information**: Program existence, eligibility rules.
  - **Stigma**: Either concerns about whether you should participate or about how others will judge you.
  - **Transaction costs**: E.g., travel costs, difficultly with documentation, time costs.

Under this framework, **barriers could be efficient if improve targeting**, i.e., deter those without need or target those in need (Ackerlof, 1978; Nichols & Zeckhauser, 1982; Besley & Coate, 1992; Kleven & Kopczuk, 2011).

Literature

Finkelstein and Notowidigdo (2019)

- Model for social welfare incorporates social costs and perceptions of costs of application (looking at targeting is not enough).
- Fit parameters with RCT on Medicaid participants not on SNAP.
- Did information and application help affect take-up and targeting?
- Assistance $>$ information $>$ status quo; Compliers are better off.
- Worse targeting for all interventions.
- Quantify costs of assessing eligibility?
  - Understanding expense of eligibility assessment would help determine size of wedge between social and private welfare.
  - Efforts to cut cost of eligibility would help shrink wedge.
  - SNAP average administrative costs low relative to benefit amount.

Literature

Remaining literature can be conceptualized as studying how different types of barriers impact take-up and targeting.

Barriers Impact Take-Up

Information Barriers

- SNAP-eligible people often don't realize eligibility (Bartlett et al., 2004); providing information increases take-up (Daponte, Sanders, & Taylor, 1999; Finkelstein and Notowidigdo, 2019).

- Informational interventions matter in some other contexts as well: **EITC** (Bhargava and Manoli, 2015) and **SSDI** (Armour, 2018), but not others: **FAFSA** (Bettinger et al., 2012).

Barriers Impact Take-Up

Transaction Costs in SNAP

- Reducing transaction costs in **SNAP** increases take-up via: application help (Schanzenbach, 2001; Finkelstein and Notowidigdo, 2019), certification periods (Kabbani and Wilde, 2003), certification reporting requirements (Gray, 2018; Hanratty, 2006; Unrath, 2021).
- Less time for **SNAP** recertification interviews leads to more churning (Homonoff and Somerville, 2021)
- Switching to automated **SNAP** application process decreases take-up (Wu, 2021)

Barriers Impact Take-Up

Transaction Costs in Other Programs

- Learning costs with **WIC**, relative to SNAP, influenced by what stores carry (Barnes, 2021).
- **WIC** participation during COVID affected by pick up and enrollment rules (in person/not) (Barnes and Petry, 2021; Whaley and Anderson, 2021; Vasan, Kenyon, and Roberto, 2021).
- Access to program offices matters: **SSA** offices (Deshpande and Li, 2019) and **WIC** program offices/vendors (Rossin-Slater, 2013; Ambrozek, 2021).

Barriers Impact Targeting

Information Barriers

- Complexity worsens targeting of low-income cases for EITC (Bhargava and Manoli, 2015).
- Information mailers induce less-needy households to enroll in SNAP (Finkelstein and Notowidigdo, 2019).

Barriers Impact Targeting

Transaction Costs

- Closing SSA offices had mixed impacts on who is deterred (Deshpande and Li, 2019).
- SNAP application assistance reduces targeting across all dimensions (Finkelstein and Notowidigdo, 2019).
- Automated application system reduces take-up, but it improves targeting efficiency for new recipients and worsens among recertifiers (Wu, 2021).
- Recertification rules reduce take-up and lower retention, but improve targeting (Unrath, 2021).

To our knowledge, no documented **SNAP** interventions **increase take-up** and **improve targeting**.

Our Contribution

- First assessment of how access to in-person assistance via opening/closing SNAP offices and SNAP-authorized stores (coming soon) impacts participation and targeting.
- Provide evidence that reducing transaction costs via access to SNAP offices **increases participation** and **improves targeting**.
- Our setting includes multiple relevant actors: SNAP-authorized stores and program offices.
    - Literature has looked at one of these in isolation with limited focus on private actors (Handbury & Moshary, 2021; Beatty, Bitler, and van Der Werf, 2021; Meckel, 2020).

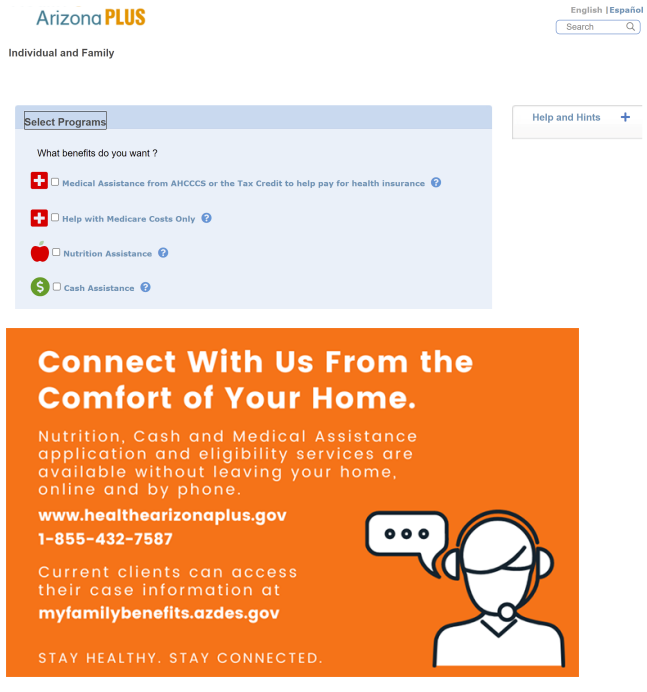
Institutional Background

SNAP

- Backbone of US safety net.
- Only US safety net program available to nearly all low-income households.
- Means tested (income and asset tests) and includes work requirements for some households (i.e., ABAWDs).
- Certification periods typically 6-12 months (seniors 24+ months; ABAWD 3 months).
    - In-person or phone interview required along with income verification.

Application Process

- Some heterogeneity across states.
- Many states have online application portals and hotlines.
    - Most people still submit applications in person.
- Most states have switched from face-to-face to phone interview.
- Provide household information and records of income/assets.



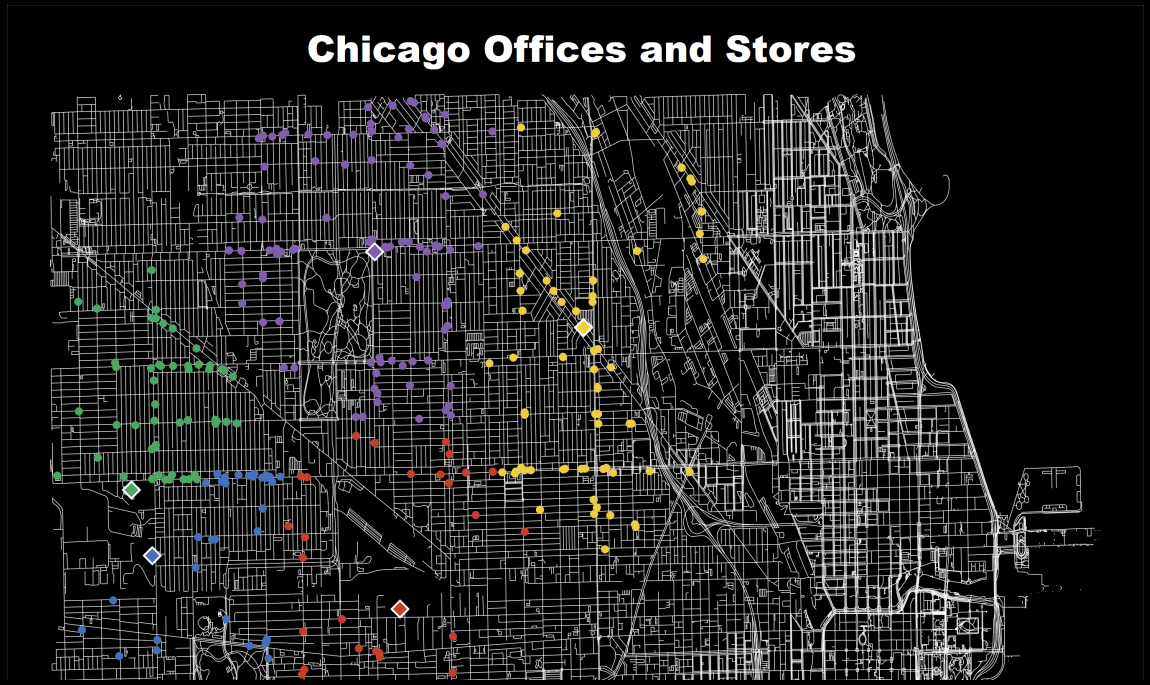
Source: Arizona Department of Economic Security Website.

Data

Measuring Access to SNAP Offices

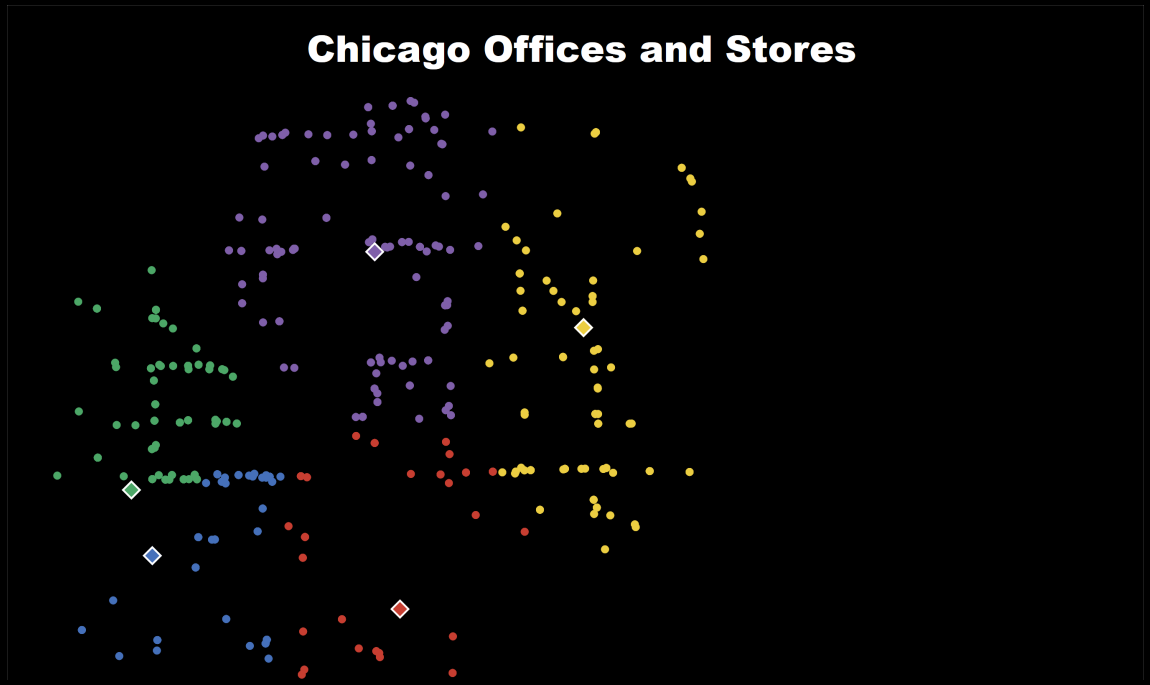
Measuring Access to SNAP Offices

- We count number of SNAP recipients in administrative records residing within given distance to each SNAP office in each year.
- In the case of overlap, we assign case to the closest office (i.e., "No Overlap").
    - Show robustness to counting cases multiple times if overlap
- Perform similar exercise for any person with a Census PIK to use as denominator (awaiting disclosure).
- Next, we illustrate method for counting cases within a ring of an office using data on SNAP offices and SNAP-authorized stores.
    - Use SNAP-authorized stores for this example to avoid Census disclosure issues



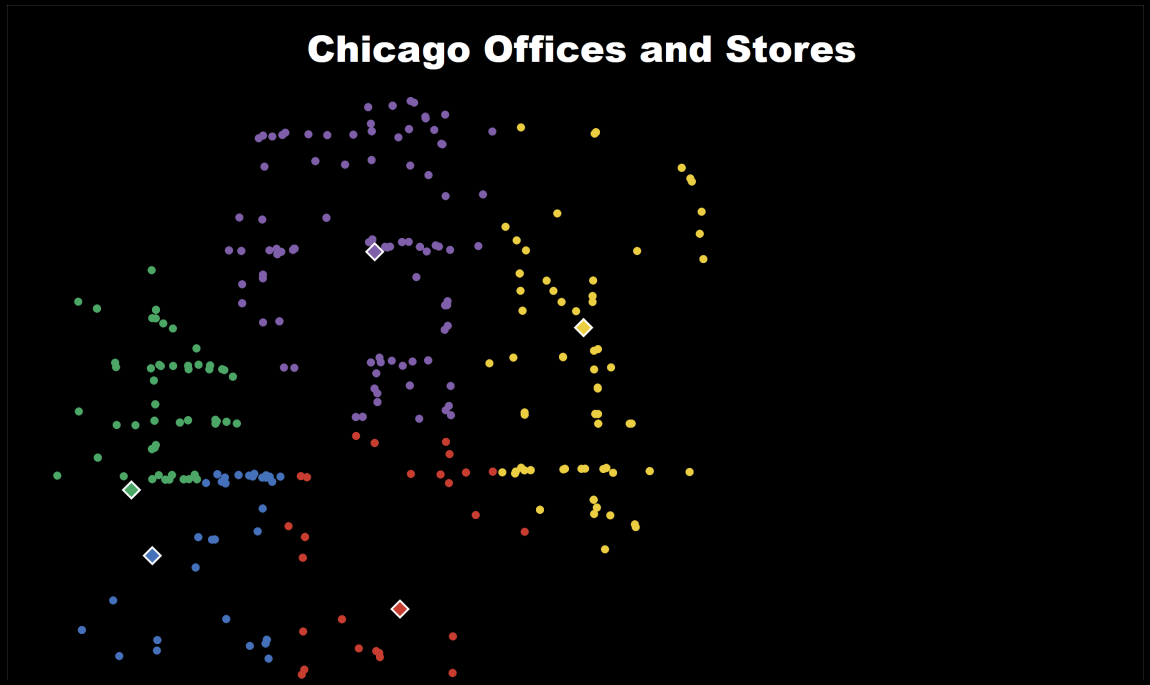
Data Source: *SNAP-Authorized Stores* - USDA's Store Tracking and Redemption System (STARS); *SNAP Offices* - Collected by authors.

- Here, SNAP-authorized stores (dots) in 1 mile of SNAP Offices (diamonds).



Data Source: *SNAP-Authorized Stores* - USDA's Store Tracking and Redemption System (STARS); *SNAP Offices* - Collected by authors.

- Here, SNAP-authorized stores (dots) in 1 mile of SNAP Offices (diamonds).
- We assign dots to closest SNAP Office (signified by matching color).
- We then count number of dots assigned to each SNAP office each year.



Data Source: *SNAP-Authorized Stores* - USDA's Store Tracking and Redemption System (STARS); *SNAP Offices* - Collected by authors.

- In context of paper, the dots are SNAP admin cases.
- Compute counts for offices both before they open and after they close.
- Compute counts for various case types (e.g., no gross income)

Share Affected by Openings/Closings

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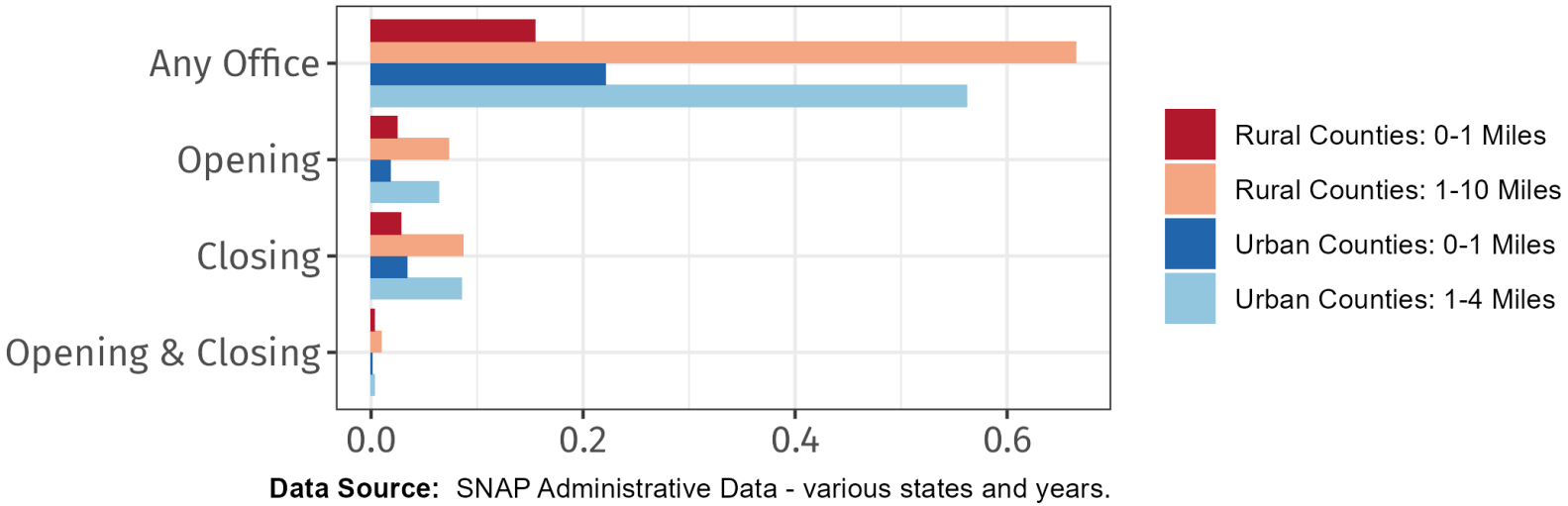
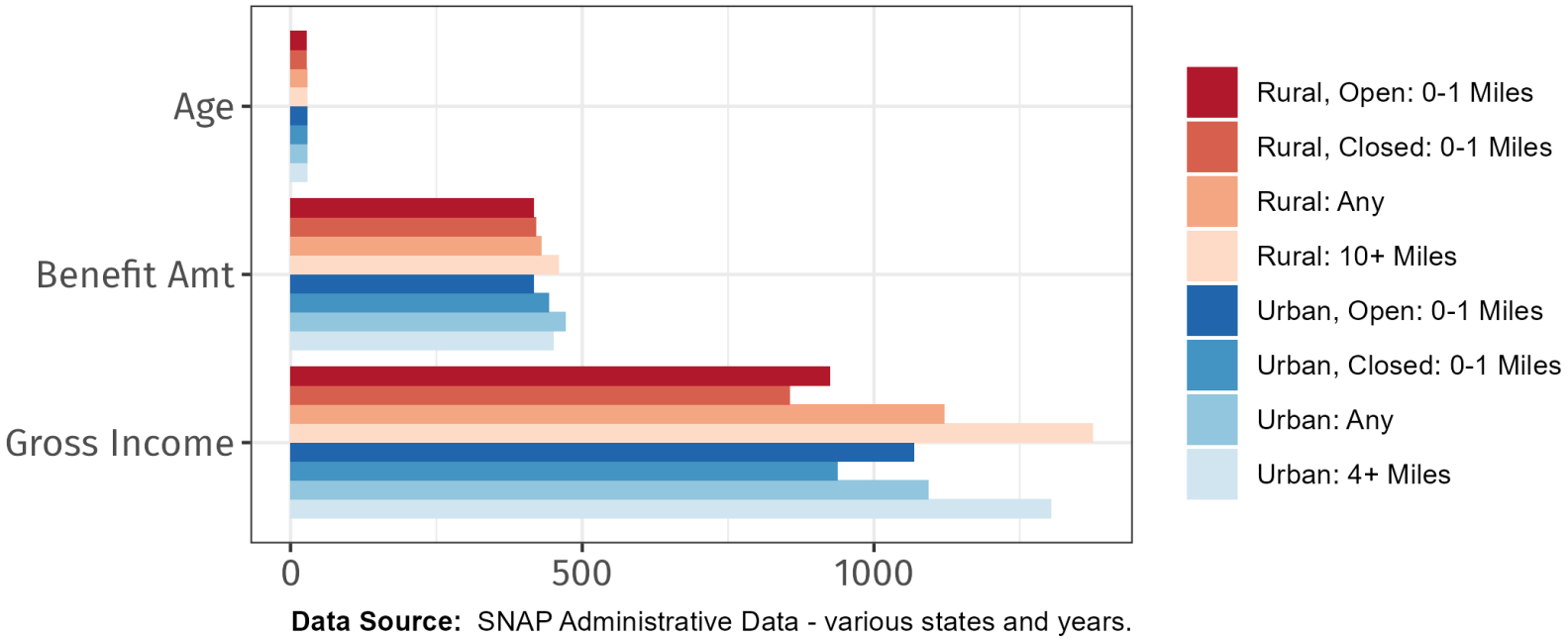


Data Source: SNAP Administrative Data - various states and years.

- **"Any Office":** All offices, including those that neither open nor close.
- **Meaningful share of recipients live near SNAP offices.**
- Of the **27,540,000 rural cases** we observe: *
  - 695,000 live < 1 mile of opening office (781,000 for closing office).
- Of the **24,590,000 urban cases** we observe:
  - 452,000 live < 1 mile of opening office (843,000 for closing office).

* Recall we only observe a subset of states in administrative data.

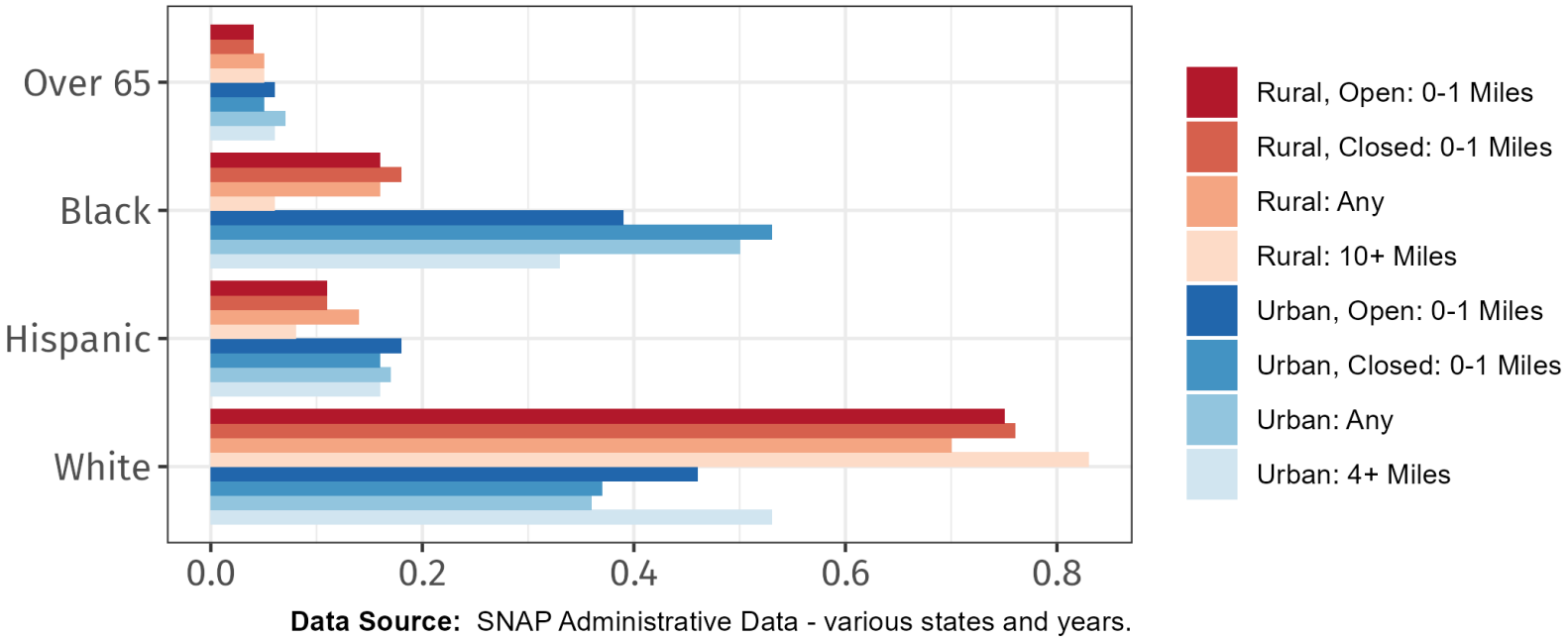
Case Characteristics by SNAP Office Type



Data Source: SNAP Administrative Data - various states and years.

- **Rural**: Monthly income ~ $200 lower near **opening/closing** offices.
- **Urban**: Monthly income ~ $100 lower near **closing** offices.
- **All**: Monthly income higher for recipients far away from offices.

Case Characteristics by SNAP Office Type



Data Source: SNAP Administrative Data - various states and years.

- **Urban Counties**: Lower share of Black recipients near opening offices.
- **Both**: Recipients far away from offices are less likely to be Black/Hispanic and more likely to be White.

Empirical Design

Empirical Design

Preferred Specification - Two-way Fixed Effects

$$y_{it} = \sum_{\tau, \tau \neq 1} \beta_\tau 1(t - E_i = \tau) + \gamma_i + \theta_t + \epsilon_{it}$$

- i – SNAP office
- t – calendar year
- E_i – year of opening/closing
- Panel design hinges on exogenous timing of openings/closings.
    - Unobserved determinants of SNAP participation not differentially trending across office types.

Empirical Design

$$y_{it} = \sum_{\tau, \tau \neq 1} \beta_\tau 1(t - E_i = \tau) + \gamma_i + \theta_t + \epsilon_{it}$$

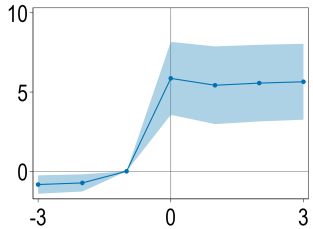
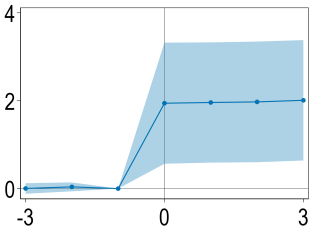
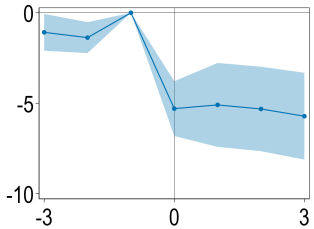
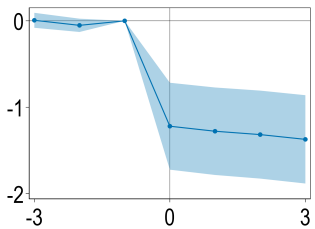
- Run on a panel balanced over main event times $\tau \in [-3, 3]$.
- Coefficients estimated for all event times, but only report $\tau \in [-3, 3]$.
- Cluster standard errors by SNAP office (location where SNAP office will be/is/used to be).
- Sample includes all SNAP offices and event time is only calculated for treated offices (i.e., opening or closing).
- Test robustness to heterogeneous treatment effects (de Chaisemartin and D'Haultfœuille, 2020).

Results

Mean Distance to Office (Miles)

- **Goal:** Measure how travel distances are impacted by SNAP office openings/closings.
- Use the Census Master Address file (MAFX); a static file of all known residential locations in US.
- Measure average travel distance from every MAFX address within 1 of SNAP Office during years leading up to and following opening/closing.

Mean Distance to Office (Miles)

	Closing Rural	Closing Urban	Opening Rural	Opening Urban
Distance	0-1	0-1	0-1	0-1
Model	TWFE	TWFE	TWFE	TWFE
Avg. Estimate	5.63*** (1.16)	1.97*** (0.70)	-5.35*** (1.03)	-1.30*** (0.26)
Baseline Y	.56	.63	5.3	1.6
Event Study				

Data Source: SNAP Administrative Data - various states and years; Census Master Address File (MAFX).

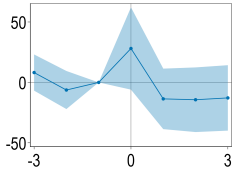
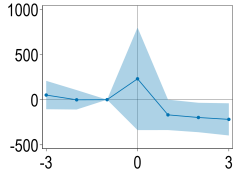
Mean Distance to Office (Miles)

- **Rural Counties**: Open/closings change average distance by 5 miles.
- **Urban Counties**: Open/closings change average distance by 1-2 miles.
- Distances change enough to move from office being walkable to requiring transit to access.

Next, we explore impact of SNAP office closings and openings on total counts of new SNAP clients living within a mile radius.

of New SNAP Clients - Short Distance

Office Closings

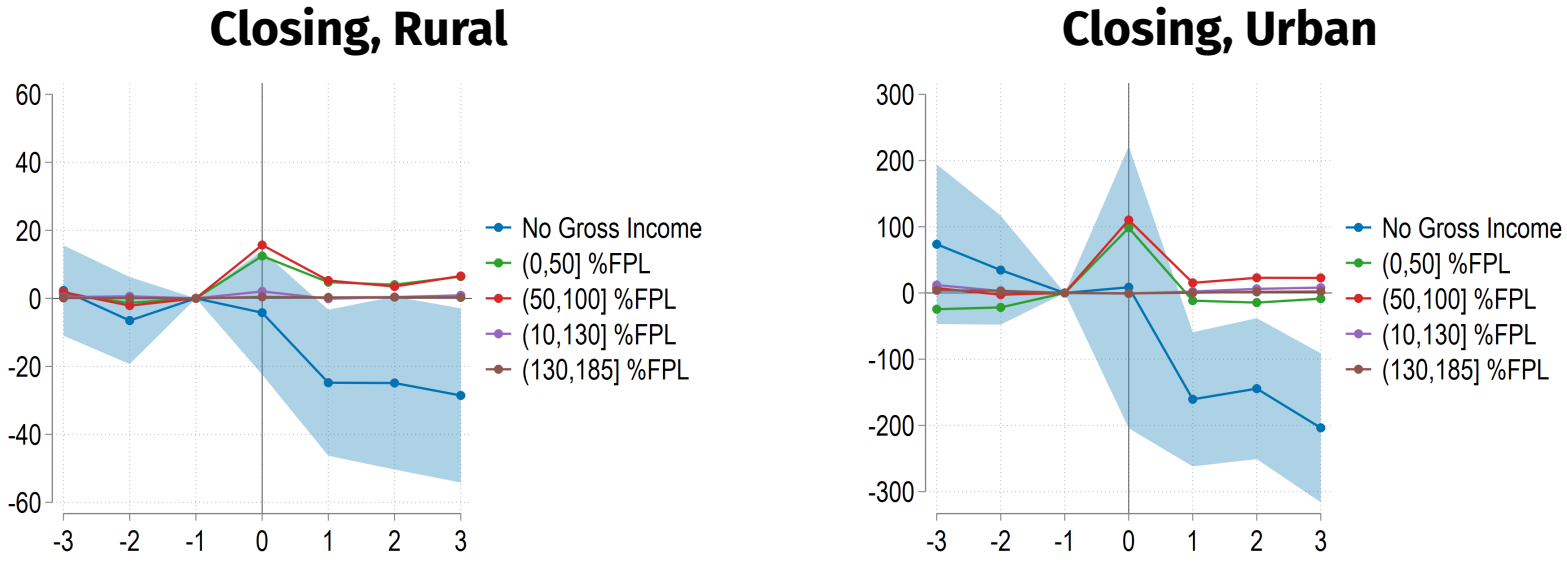
	Closing Rural	Closing Urban
Distance	0-1	0-1
Model	TWFE	TWFE
Avg. Estimate	-3.17 (12.6)	-88.0 (62.5)
Baseline Y	224	1,020
Event Study		

Data Source: SNAP Administrative Data - various states and years.

- **Rural & Urban Counties**: Temporary spike during closing year.
- **Urban Counties:** 3 years after closing, roughly 90 fewer clients (8.8% decrease relative to baseline).

of New SNAP Clients - Short Distance

Heterogeneity by Gross Income

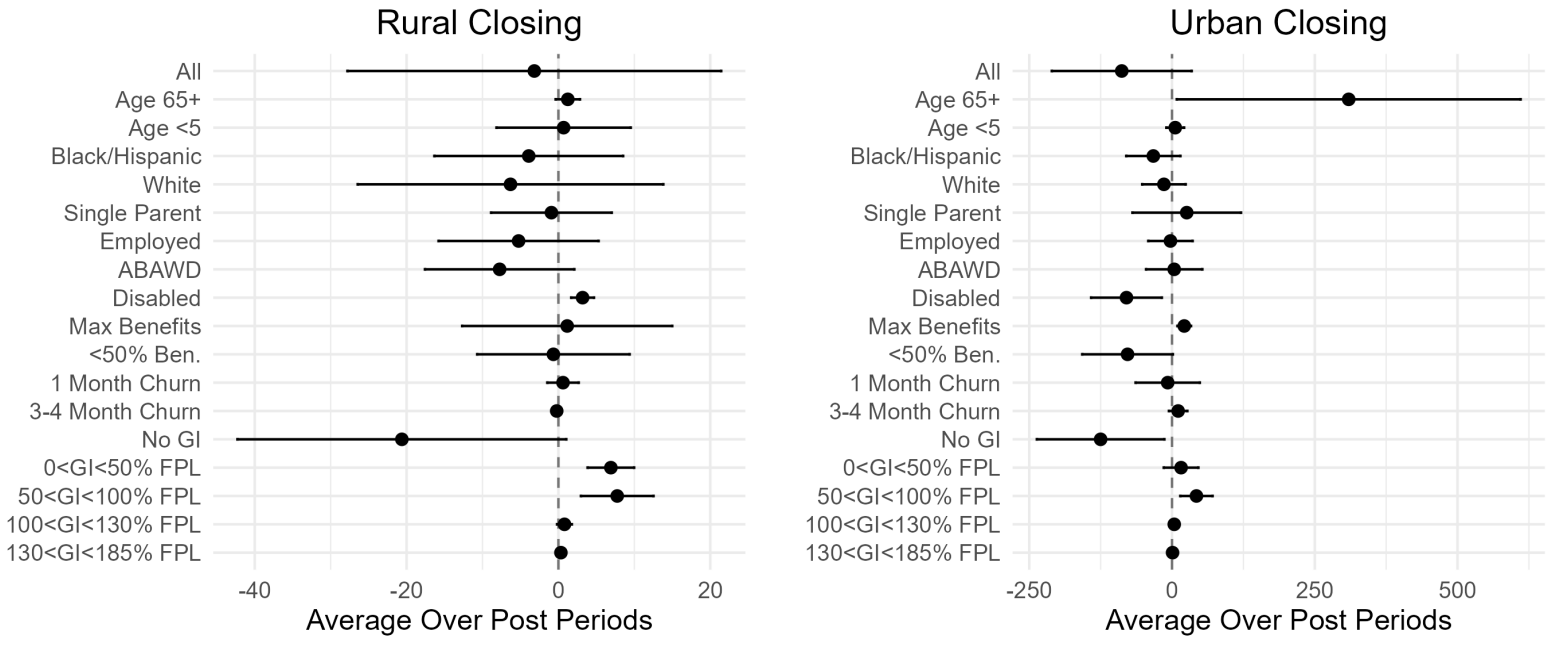


Data Source: SNAP Administrative Data - various states and years.

- **Puzzle:** Temporary spike driven by cases with gross income $\in (0, 100]$ %FPL.
- Participation falls for clients with no gross income.

of New SNAP Clients - Short Distance

Heterogeneity

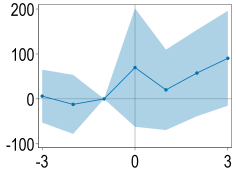
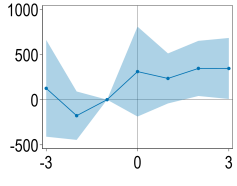


Data Source: SNAP Administrative Data - various states and years.

- Cases with no gross income fell the most.
- Elderly case increase is driven by mobility (awaiting disclosure).

of New SNAP Clients - Long Distance

Office Closures

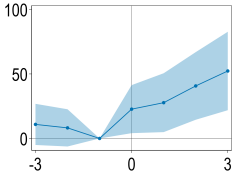
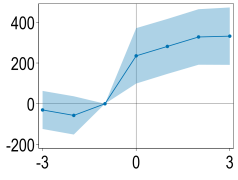
	Closing Rural	Closing Urban
Distance	1-10	1-4
Model	TWFE	TWFE
Avg. Estimate	59.5 (48.2)	309.4** (153.6)
Baseline Y	596	1,710
Event Study		

Data Source: SNAP Administrative Data - various states and years.

- Persistent increase in caseloads.
- Similarly driven by cases with some gross income (awaiting disclosure).
- Currently working on testing robustness to population changes and short-distance office relocations.

of New SNAP Clients - Short Distance

Office Openings

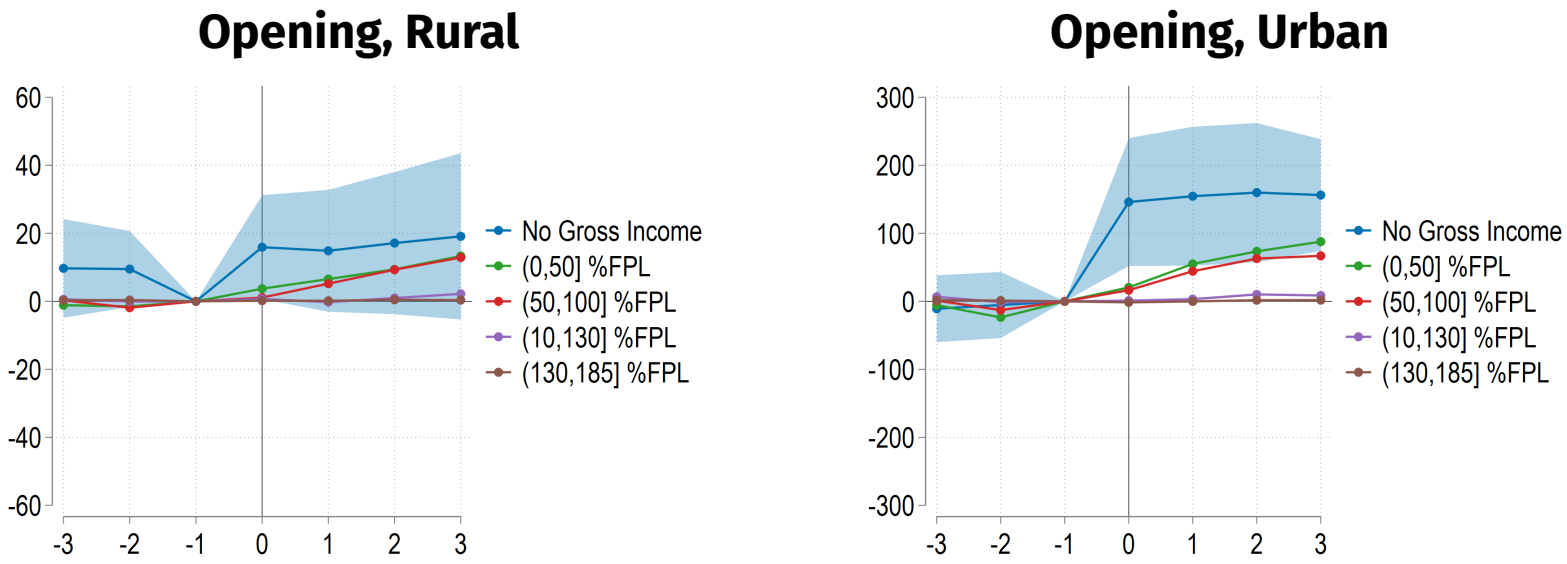
	Opening Rural	Opening Urban
Distance	0-1	0-1
Model	TWFE	TWFE
Avg. Estimate	35.9*** (11.9)	294.2*** (60.7)
Baseline Y	153	466
Event Study		

Data Source: SNAP Administrative Data - various states and years.

- **Rural & Urban Counties**: Large, immediate impacts that increase with time.
- By **three years** after opening:
  - **Rural Counties**: 53 additional SNAP clients (35% increase).
  - **Urban Counties**: 332 additional SNAP clients (71% increase).

of New SNAP Clients - Short Distance

Heterogeneity by Gross Income

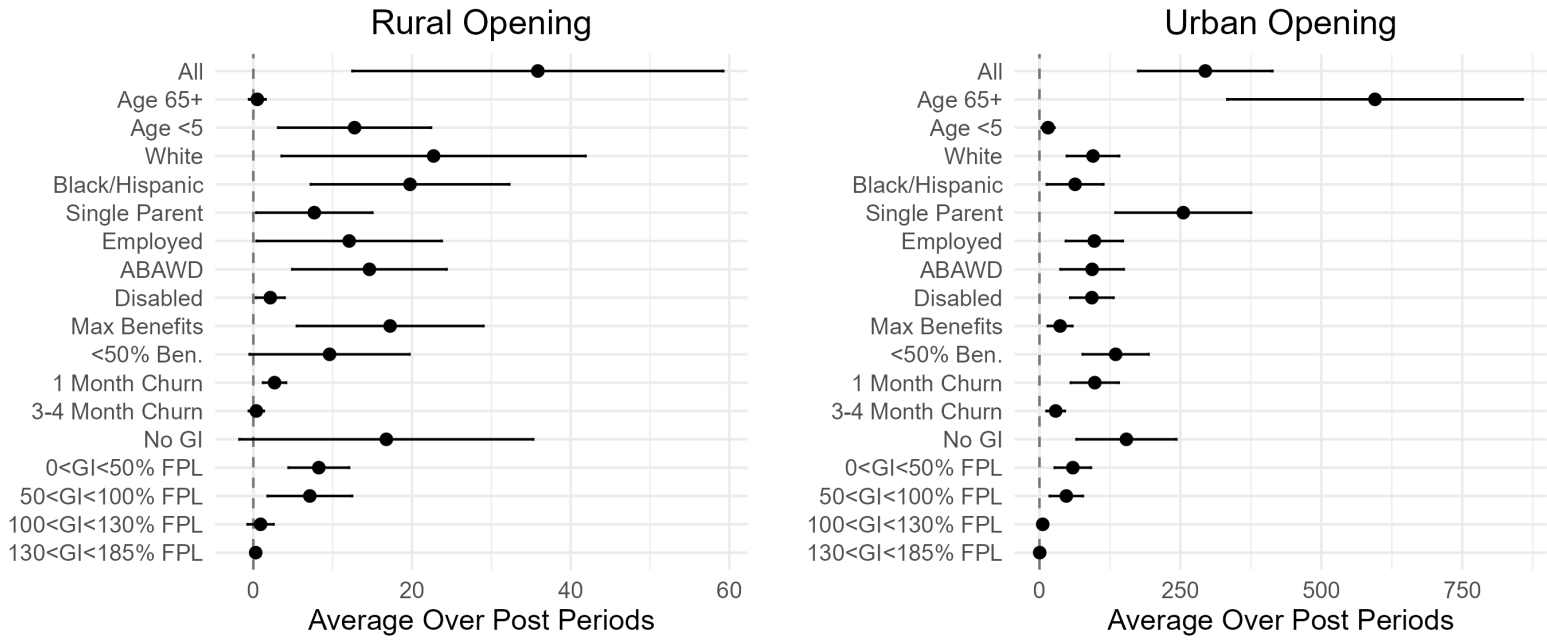


Data Source: SNAP Administrative Data - various states and years.

- Biggest participation impacts for cases without gross income.
- Evidence of improved targeting.

of New SNAP Clients - Short Distance

Heterogeneity

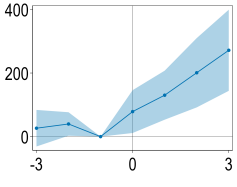
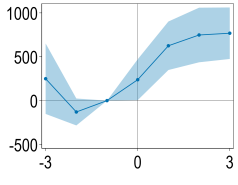


Data Source: SNAP Administrative Data - various states and years.

- Increases in program participation across many subgroups.

of New SNAP Clients - Long Distance

Office Openings

	Opening Rural	Opening Urban
Distance	1-10	1-4
Model	TWFE	TWFE
Avg. Estimate	170.4*** (47.4)	595.1*** (133.6)
Baseline Y	405	1,731
Event Study		

Data Source: SNAP Administrative Data - various states and years.

- Similar pattern as for 1 mile rings.
- By **three years** after opening:
  - **Rural Counties**: 271 additional SNAP clients (67% increase).
  - **Urban Counties**: 768 additional SNAP clients (44% increase).

Robustness

Robustness

Next, we test robustness to changing:

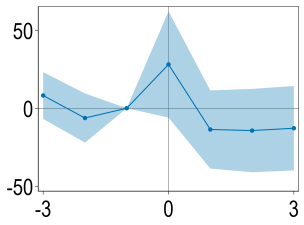
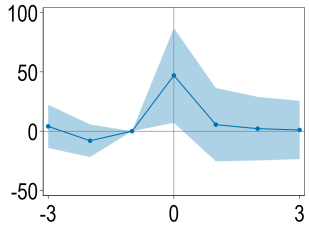
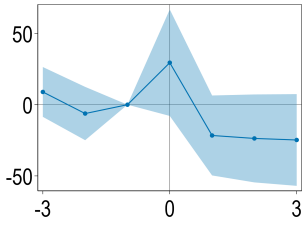
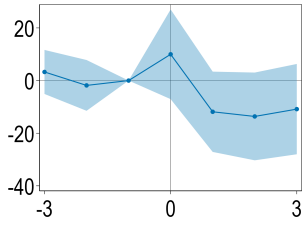
1. **Model:** Use de Chaisemartin and D'Haultfœuille, 2020 estimator that is robust to heterogeneous treatment effects.

2. **Overlap:** Allowing cases to be counted multiple times if within a mile of multiple offices.

3. **Outcome:** Measuring number of cases as opposed to number of clients.

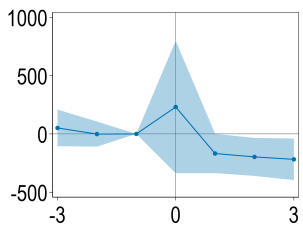
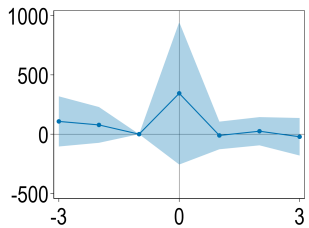
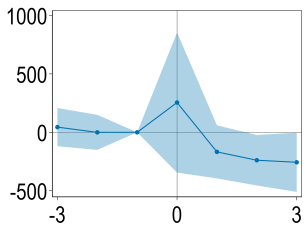
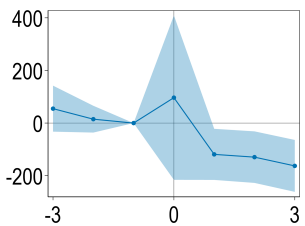
Summary: Results are not substantially impacted.

Rural Closings - Robustness

	New Clients	New Clients	New Clients	New Cases
Distance	0-1	0-1	0-1	0-1
Model	TWFE	deCh/DH (AER)	TWFE	TWFE
Overlap	No	No	Yes	No
Avg. Estimate	-3.2 (12.6)	13.9 (13.0)	-10.1 (14.5)	-6.6 (7.7)
Baseline Y	223.6	204.5	295.4	121.6
Main Specification	X			
Event Study				

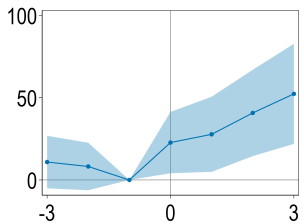
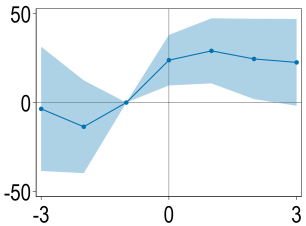
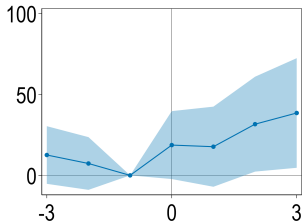
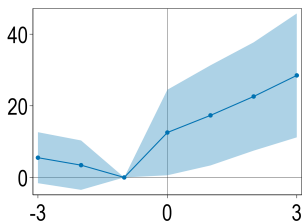
Data Source: SNAP Administrative Data - various states and years.

Urban Closings - Robustness

	New Clients	New Clients	New Clients	New Cases
Distance	0-1	0-1	0-1	0-1
Model	TWFE	deCh/DH (AER)	TWFE	TWFE
Overlap	No	No	Yes	No
Avg. Estimate	-88.0 (62.5)	84.2 (82.9)	-101.9 (67.3)	-78.7 (48.0)
Baseline Y	1,020	856	1,250	651
Main Specification	X			
Event Study				

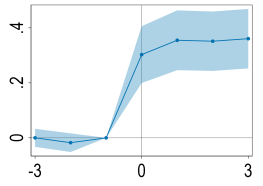
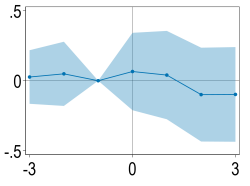
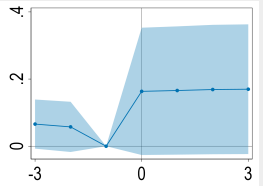
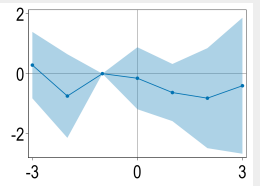
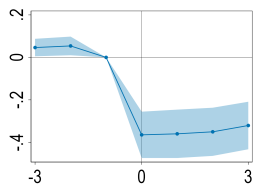
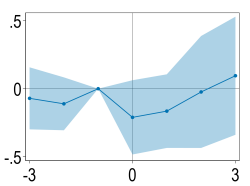
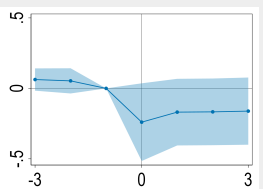
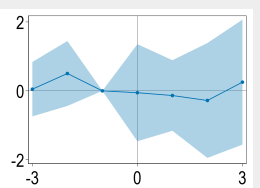
Data Source: SNAP Administrative Data - various states and years.

Rural Openings - Robustness

	New Clients	New Clients	New Clients	New Cases
Distance	0-1	0-1	0-1	0-1
Model	TWFE	deCh/DH (AER)	TWFE	TWFE
Overlap	No	No	Yes	No
Avg. Estimate	35.9*** (11.9)	26.5*** (9.2)	26.7** (13.1)	20.2*** (7.1)
Baseline Y	153	144	235.2	121.6
Main Specification	X			
Event Study				

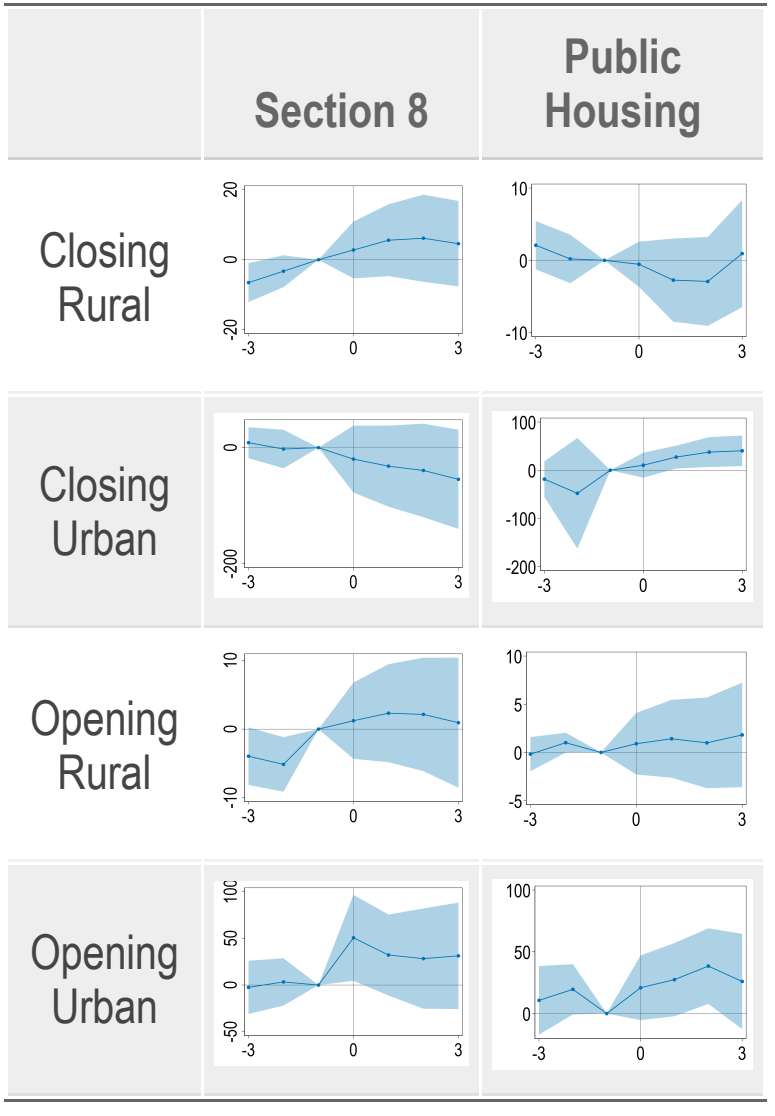
Data Source: SNAP Administrative Data - various states and years.

Further outcomes which provide context

	SNAP Offices	SNAP Stores
Closing Rural		
Closing Urban		
Opening Rural		
Opening Urban		

Data Sources: SNAP Admin - various states & years; HUD PICS/TRACS Admin; USDA's Store Tracking and Redemption System (STARS)

- Count of SNAP offices within a mile of focal office increases for closings and decreases for openings.
  - Result of offices relocating short distances.
  - Working on robustness to eliminating short-distance relocations.
- No clear pattern for SNAP-authorized stores.



Data Source: SNAP Admin - various states & years; HUD PICS/TRACS Admin; USDA's Store Tracking and Redemption System (STARS)

- Noisy increase in HUD program participation for SNAP office openings.
- Recall that offices connect applicants to other programs, sometimes can even apply directly.

Conclusion

- Access to SNAP offices **substantially increases program participation**.
- Particularly important for families without income (i.e., **improved targeting**).
- Interesting because many states are fully online with active help phone lines.
- Face-to-face assistance may provide additional aid overcoming transaction costs? (Wu, 2021)
- Policy implications to increase in-person assistance for applications.
    - Similar to mobile WIC clinics?

References

Rossin-Slater, M. (2013). "WIC in your neighborhood: New evidence on the impacts of geographic access to clinics". In: *Journal of Public Economics* 102, pp. 51-69.