## Issue # 7: Numerator Data - Trends and Event Studies 2023-2024 (normalized)

Ron Huang September 21, 2025

This Write-up contains tables and plots for trend and event study analyses of the Numerator data. The original user-trip-item level data is transformed to user- month level data, with variables summarized at the monthly level for each user. SNAP and Non-SNAP treatment is determined by SNAP participation rate of each user over the periods of the data (>0.5 on SNAP; <=0.5 Non-SNAP)

- 1. Figures: Monthly average of ...
  - total spending winsorized
  - Food spending winsorized
  - Food on EBT winsorized
  - Soda spending winsorized
  - Soda on EBT winsorized
  - soda spending by SNAP/Non-SNAP
  - $\bullet$  level/log soda spending by state  $\times$  SNAP
- 2. Figures: Event Studies
  - soda spending winsorized
  - $\bullet$  soda spending by SNAP  $\times$  post (conditional on treated states)
  - soda spending DDD
- 3. Tables
  - TWFE/DDD Model Estimates

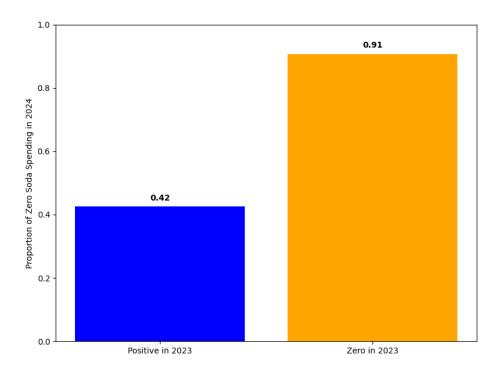


Figure 1: Proportion of households with 0 soda consumption conditional on Whether 0 consumption in previous year

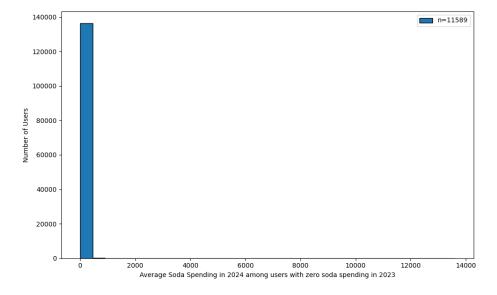


Figure 2: Number of Household with Positive consumption given 0 consumption in previous year

Figure 3: Monthly Average of Total Spending

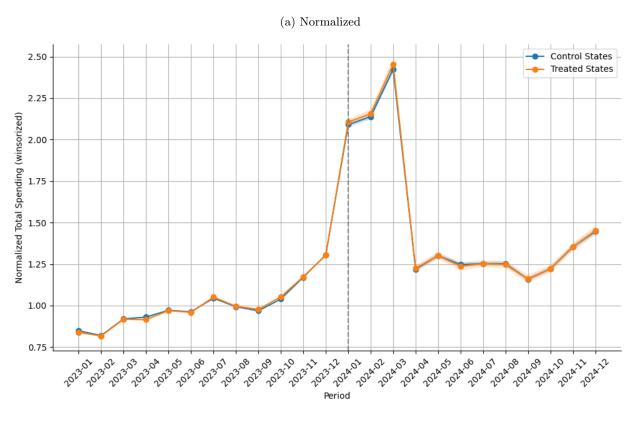


Figure 4: Monthly Average of Food Spending

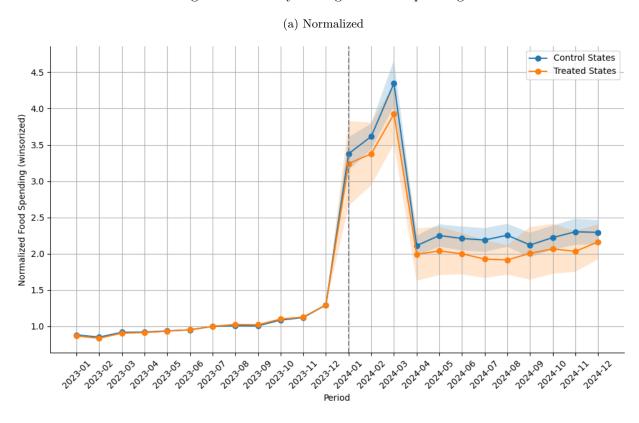


Figure 5: Monthly Average of Food Spending on EBT

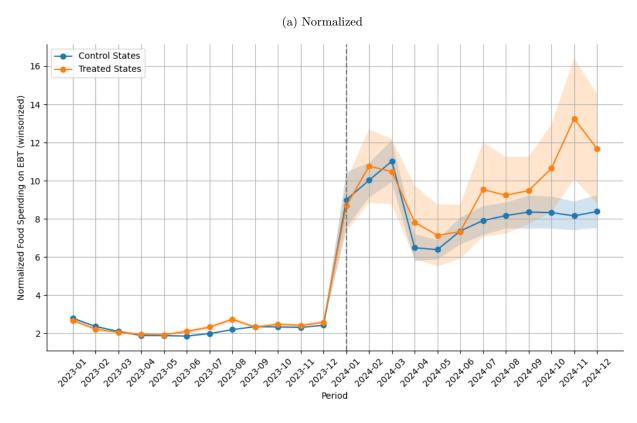


Figure 6: Monthly Average of Soda Spending

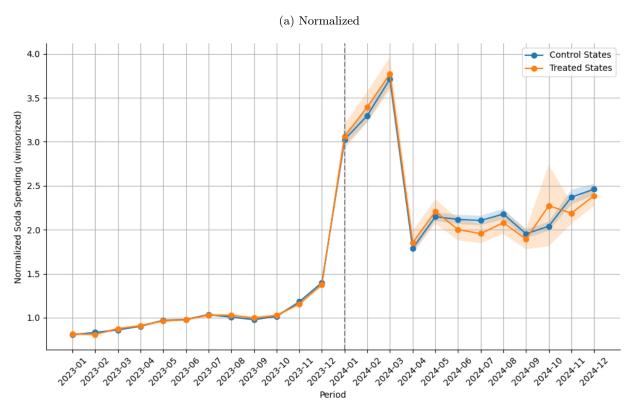


Figure 7: Monthly Average of Soda Spending on EBT

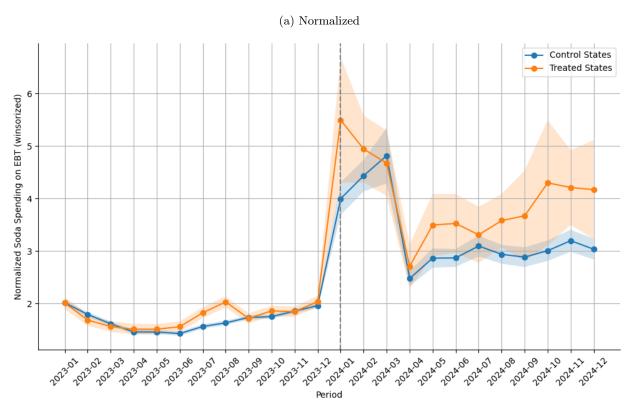


Figure 8: Monthly Average of Soda Spending by SNAP/Non-SNAP

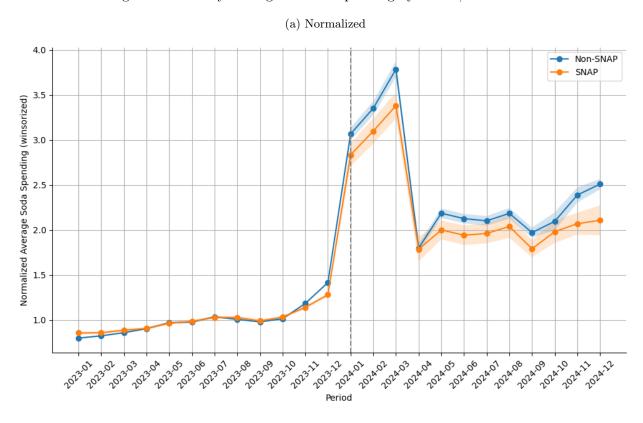


Figure 9: Monthly Average of Soda Spending by SNAP  $\times$  state

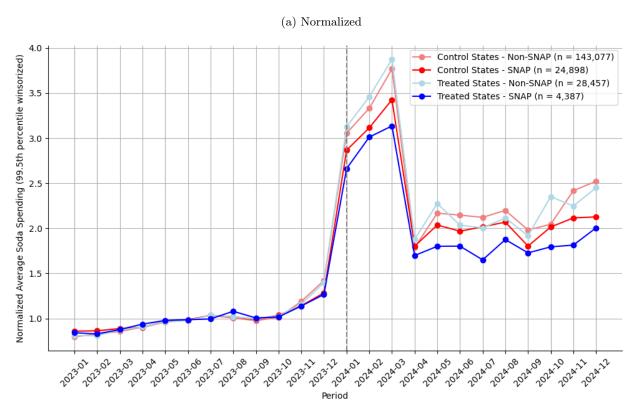


Figure 10: Event Study - TWFE

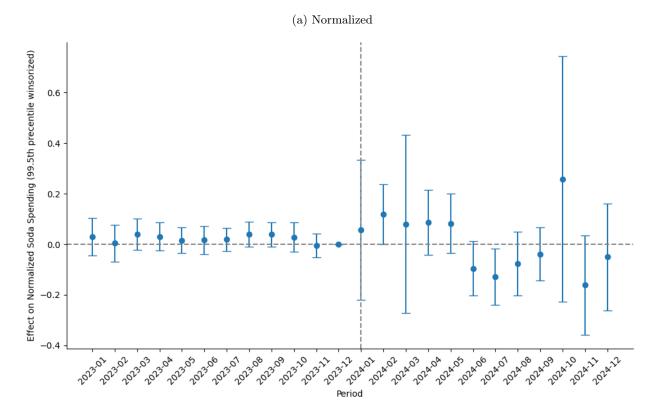


Figure 11: Event Study - TWFE (Treatment Assignment =  $\mathrm{SNAP/Non\text{-}SNAP})$  within treated states

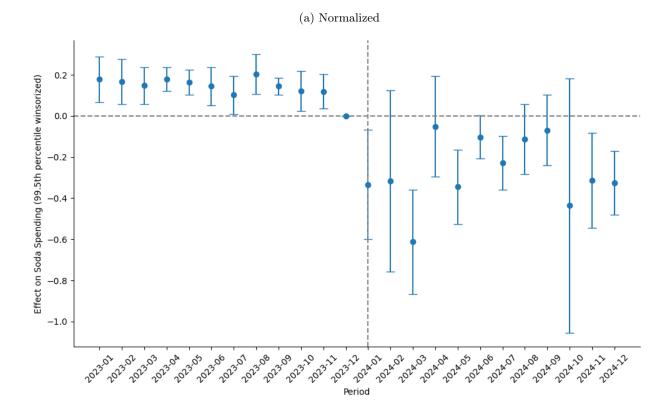


Figure 12: Event Study - DDD

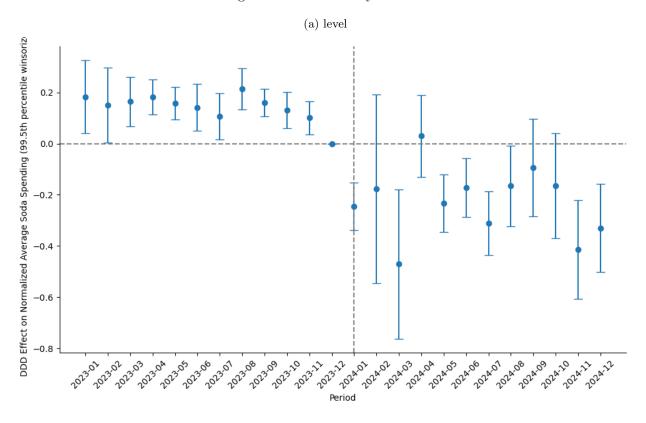


Table 1: Model Estimates

Term	TWFE	TWFE (SNAP)	DDD
Post	1.4205***	1.4680***	1.4274***
	(0.0451)	(0.0662)	(0.0399)
$State \times Post$	-0.0092		
	(0.0721)		
$SNAP \times Post$		-0.4090***	
		(0.0768)	
$State \times SNAP \times Post$			-0.3684***
			(0.0682)
N	$4,\!313,\!135$	714,591	$4,\!313,\!135$
$R^2$	0.0067	0.0042	0.0068
User FE	Yes	Yes	Yes
Period FE	No	No	No
SE Cluster	state	state	state