

## Issue # 7: Numerator Data - Trends and Event Studies 2021-2022

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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;  $\leq 0.5$  Non-SNAP)

### 1. Figures: Monthly average of ...

- level/log total spending winsorized
- level/log Food spending winsorized
- level/log Food on SNAP winsorized
- level/log Soda spending winsorized
- level/log Soda on SNAP winsorized
- prop. food spending
- prop. food on SNAP
- prop. soda
- prop. soda on SNAP
- level/log soda spending by SNAP/Non-SNAP
- level/log soda spending by state  $\times$  SNAP

### 2. Figures: Event Studies

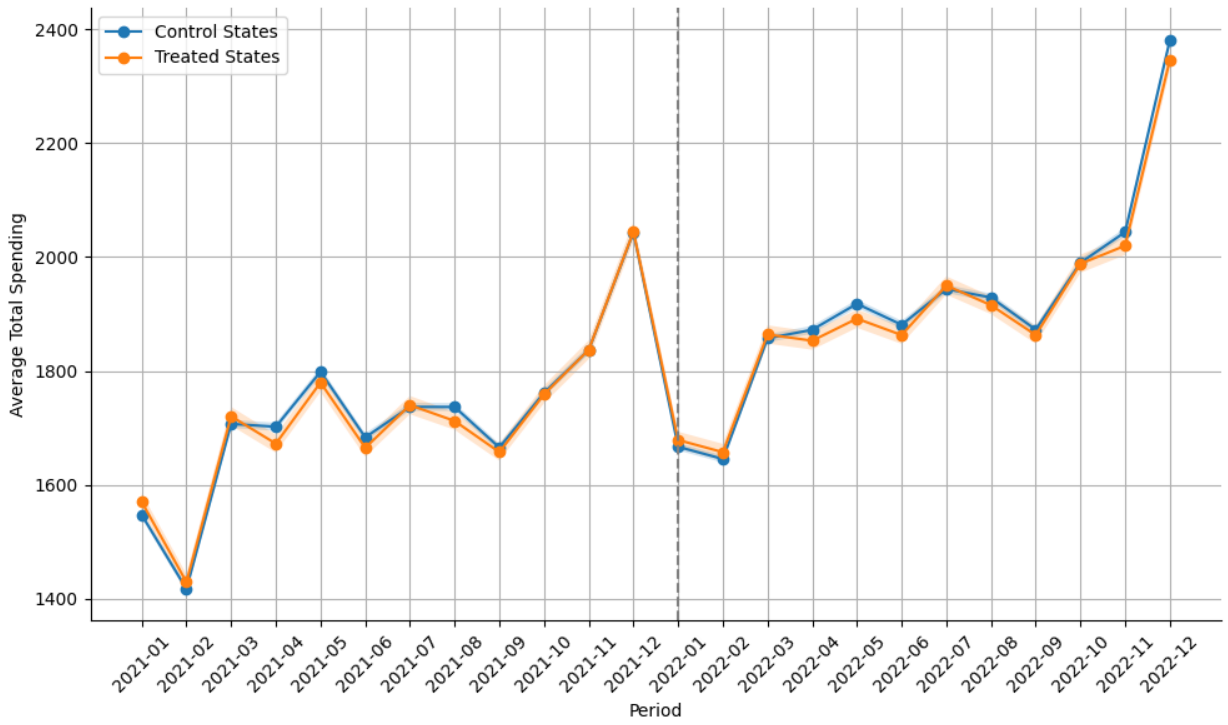
- level/log soda spending winsorized
- level/log soda spending by SNAP  $\times$  post (conditional on treated states)
- level/log soda spending DDD

### 3. Tables

- TWFE/DDD Model Estimates

Figure 1: Monthly Average of Total Spending

(a) level



(b) log

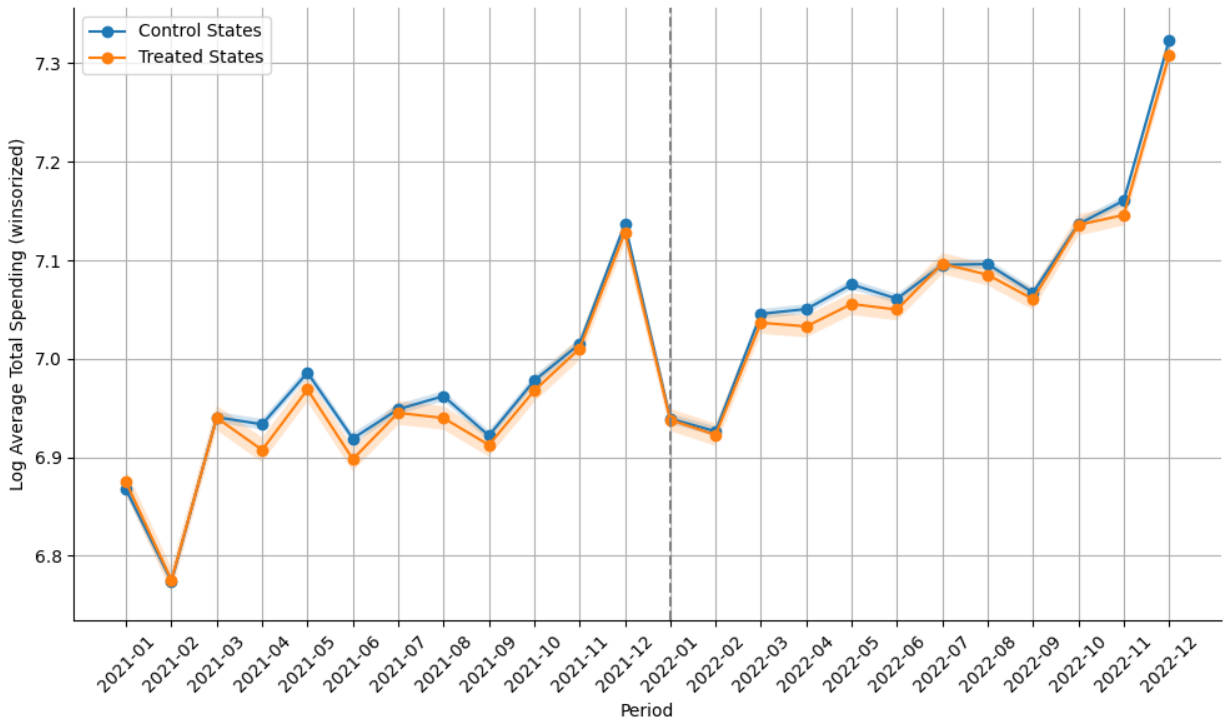
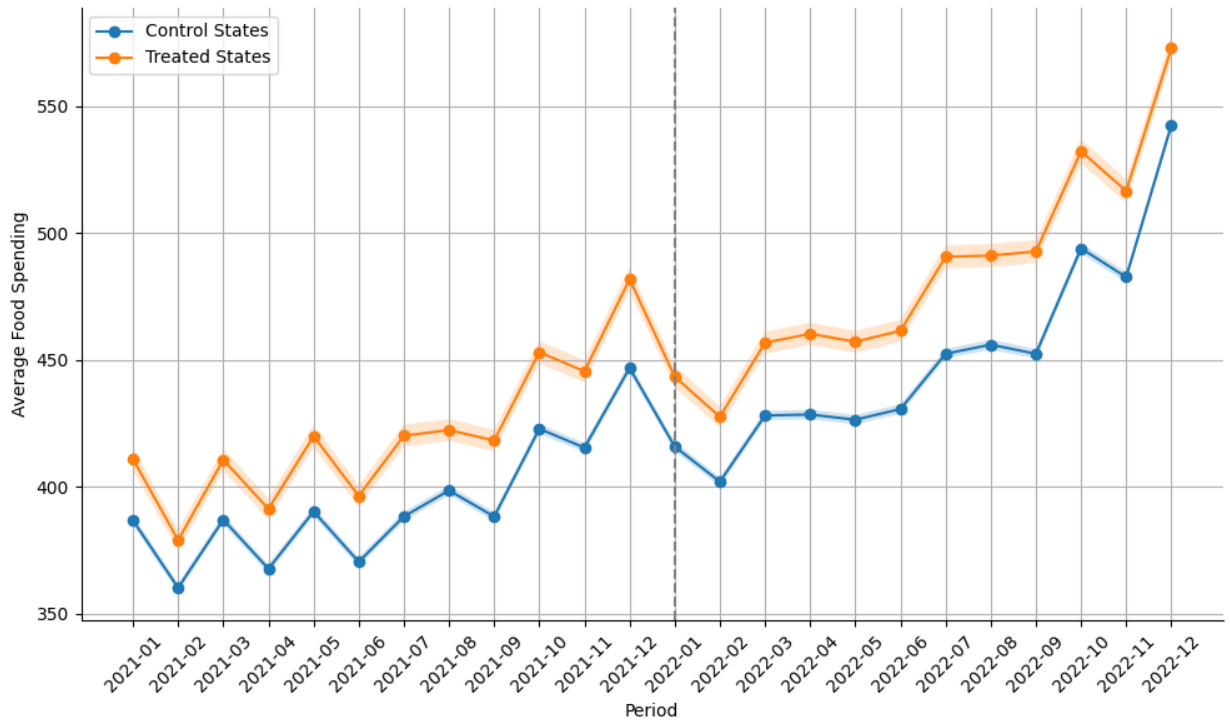


Figure 2: Monthly Average of Food Spending

(a) level



(b) log

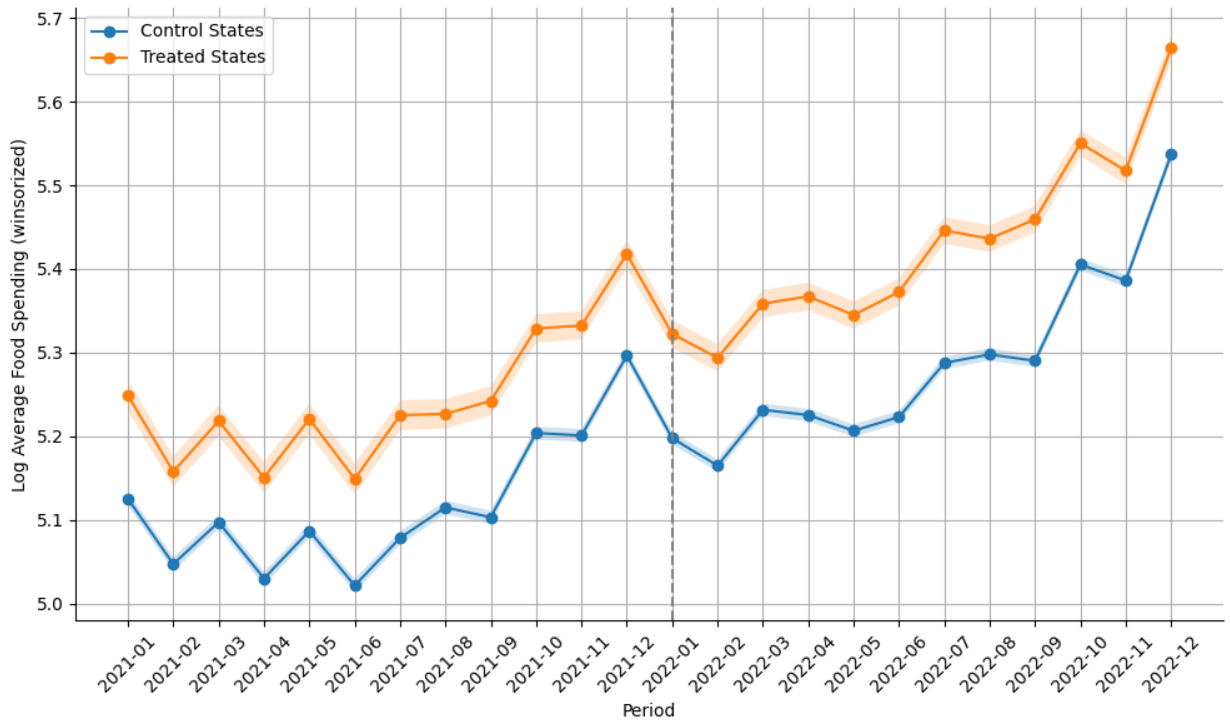
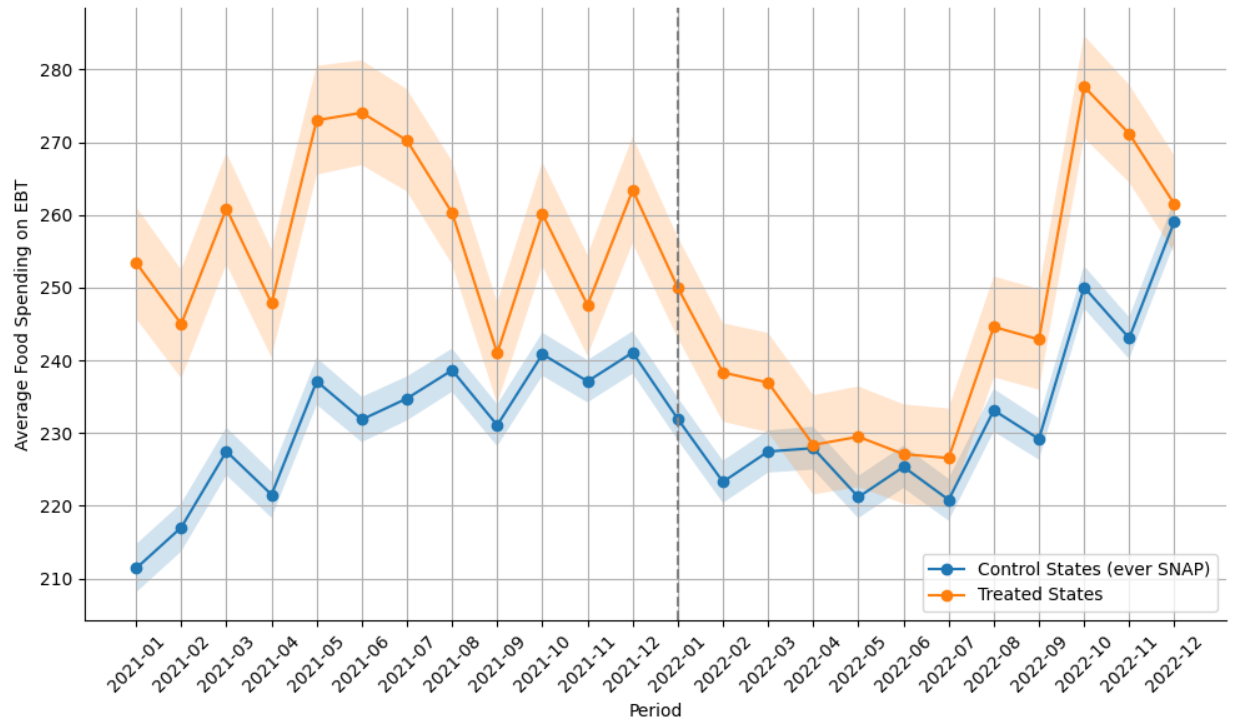


Figure 3: Monthly Average of Food Spending on SNAP

(a) level



(b) log

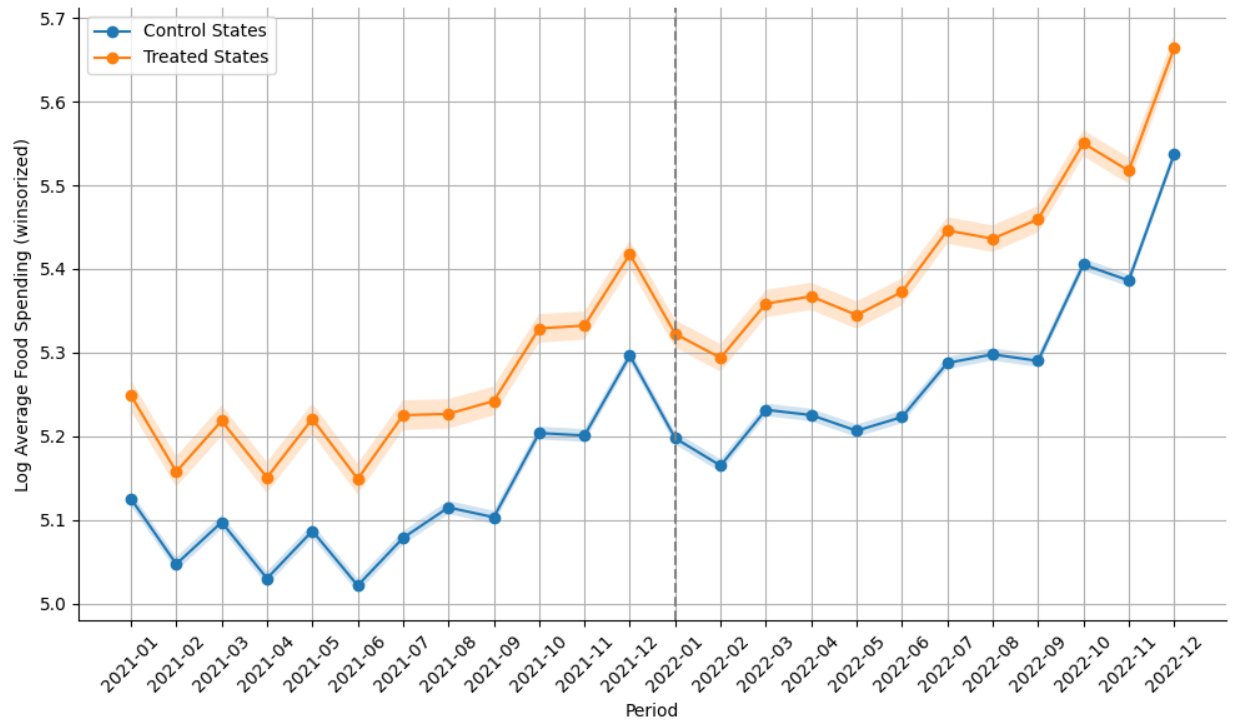
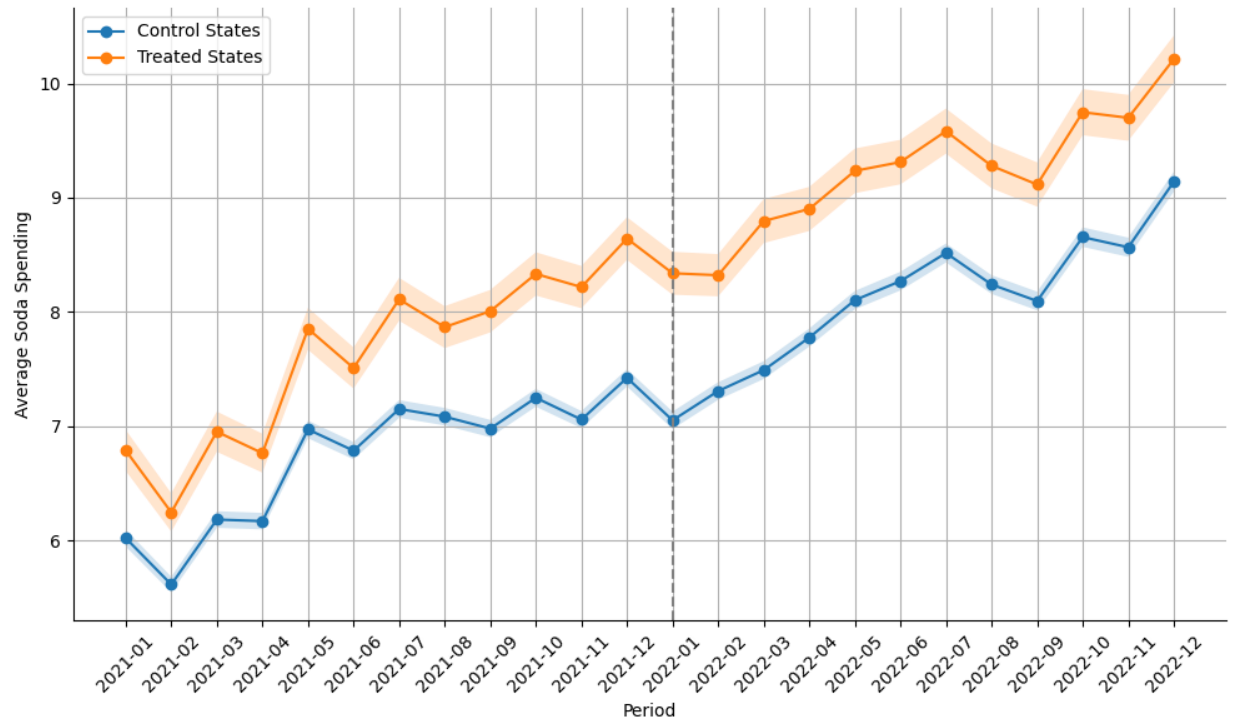


Figure 4: Monthly Average of Soda Spending

(a) level



(b) log

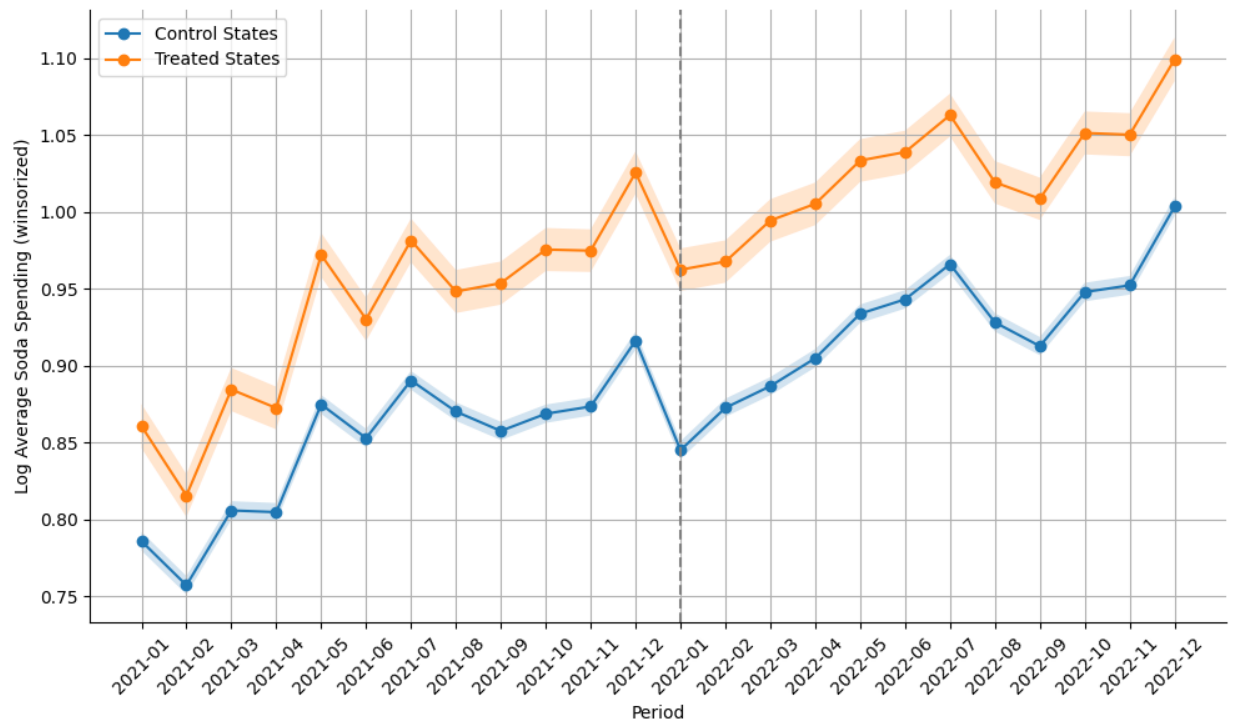
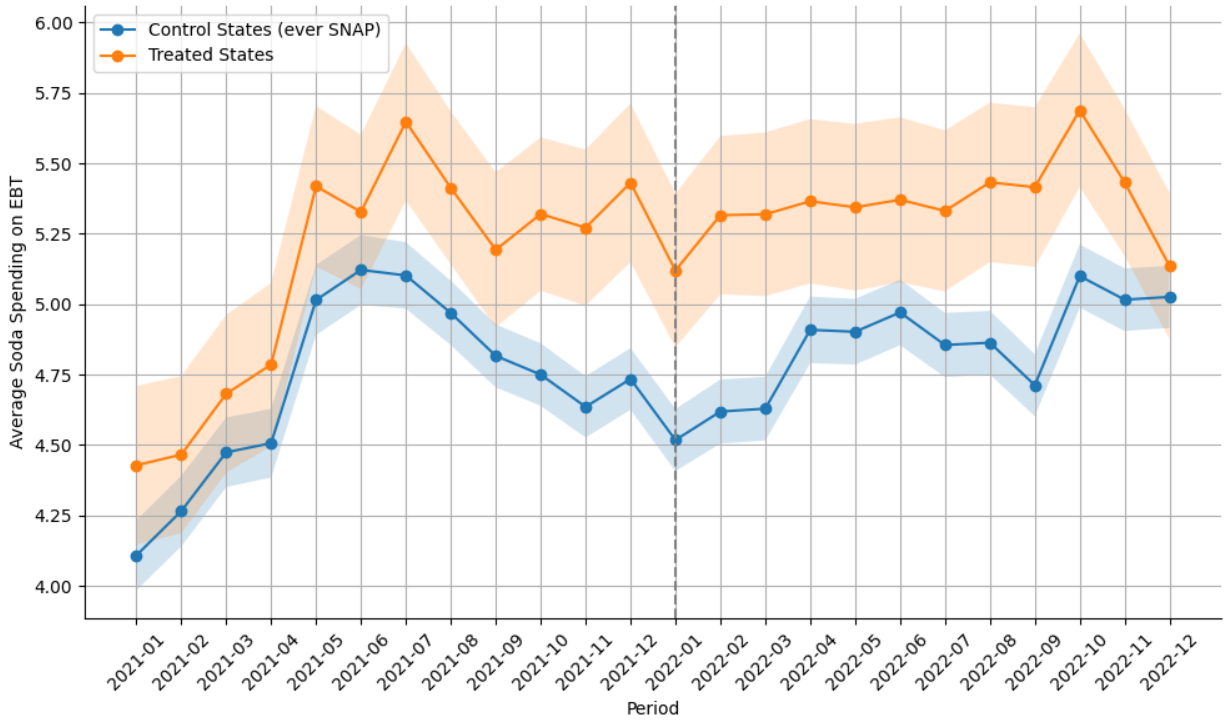


Figure 5: Monthly Average of Soda Spending on SNAP

(a) level



(b) log

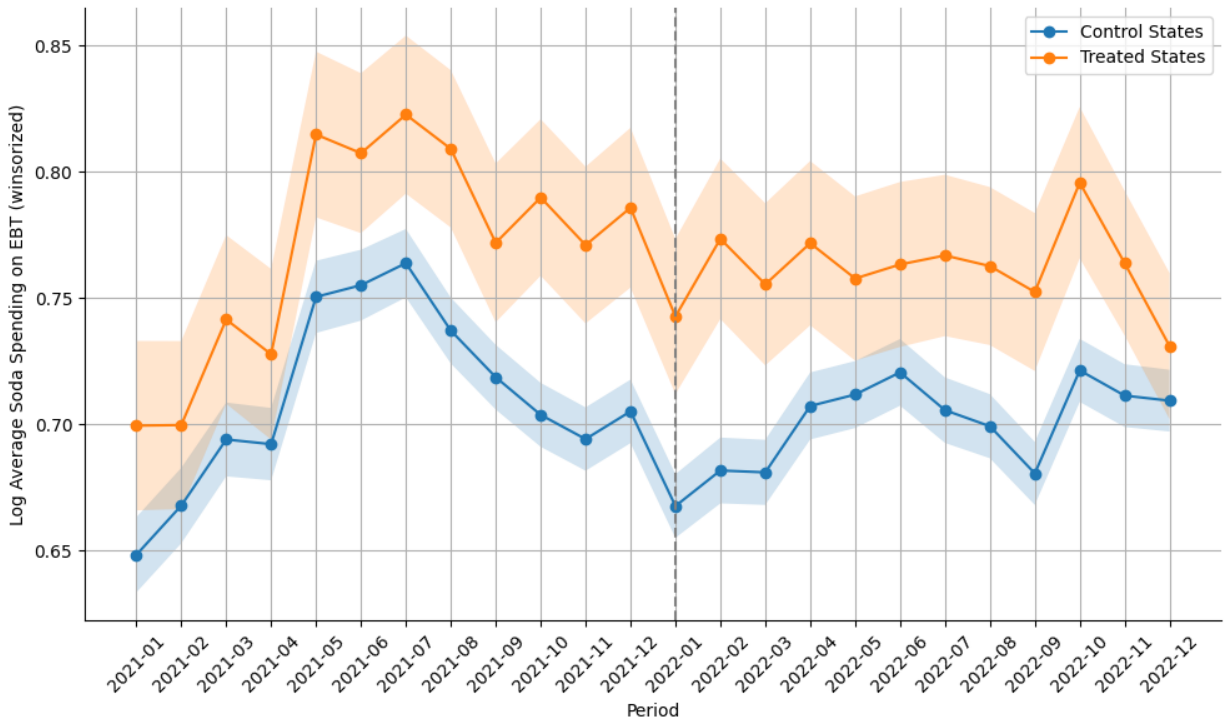
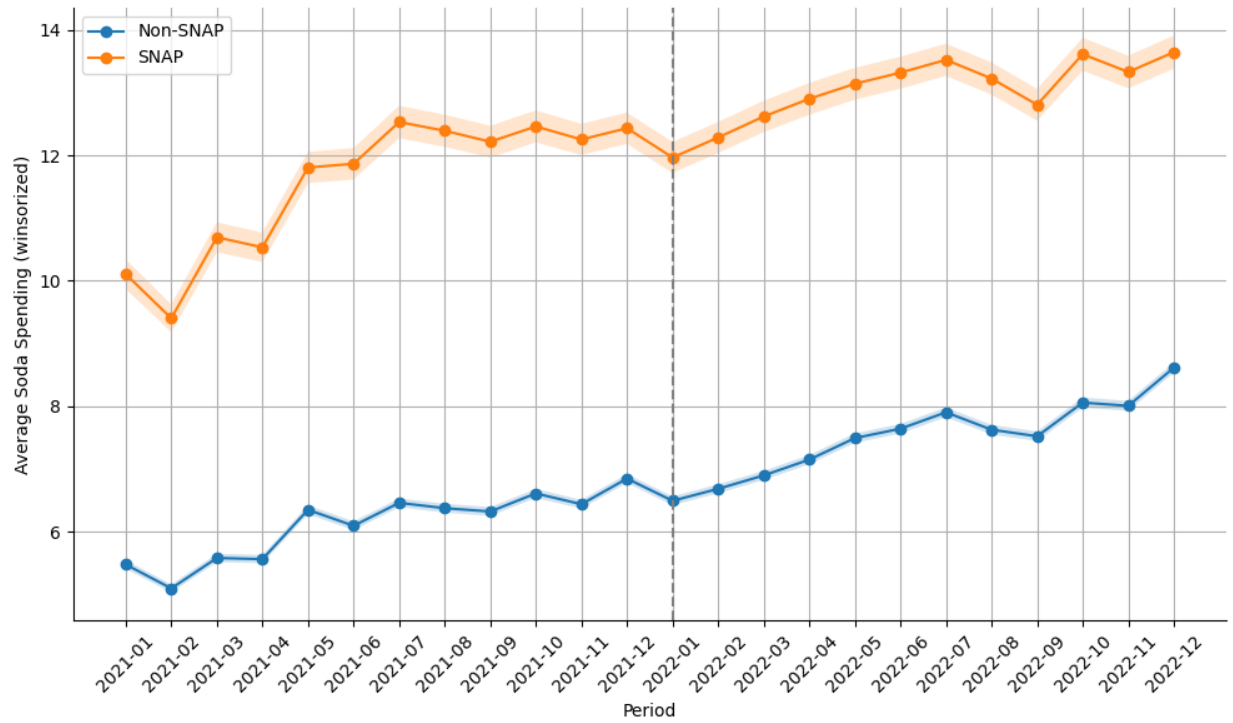


Figure 6: Monthly Average of Soda Spending by SNAP/Non-SNAP

(a) level



(b) log

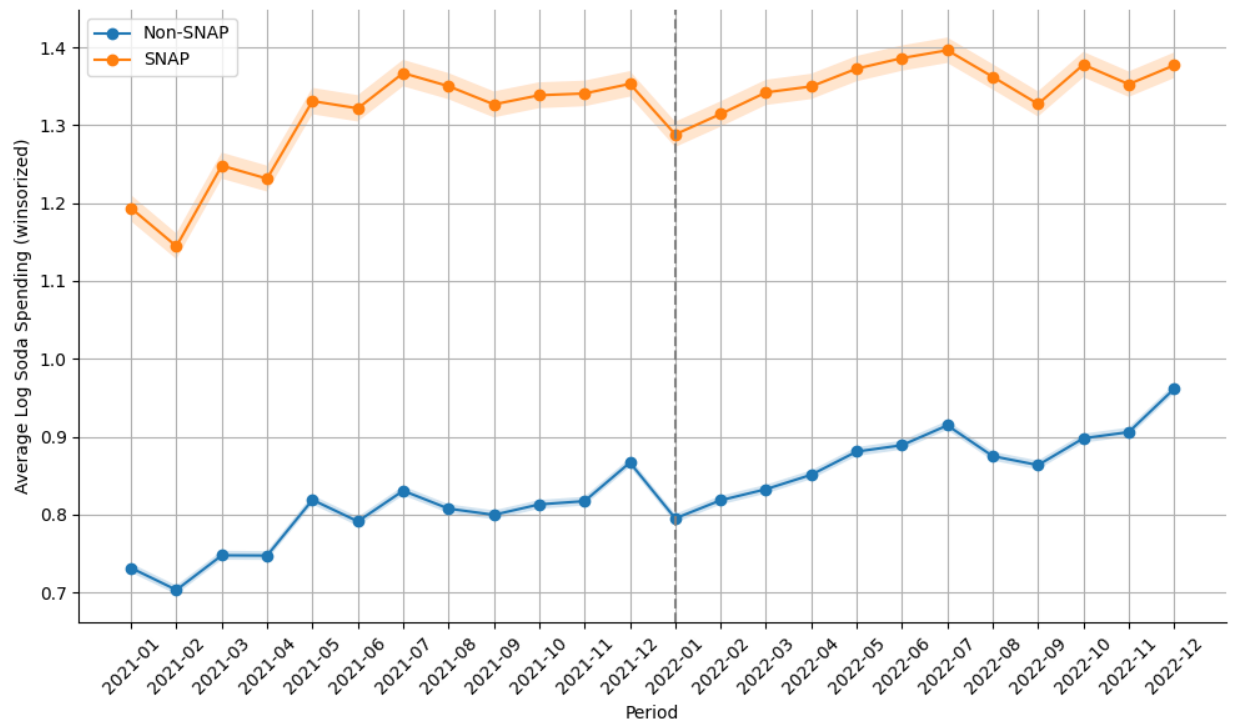
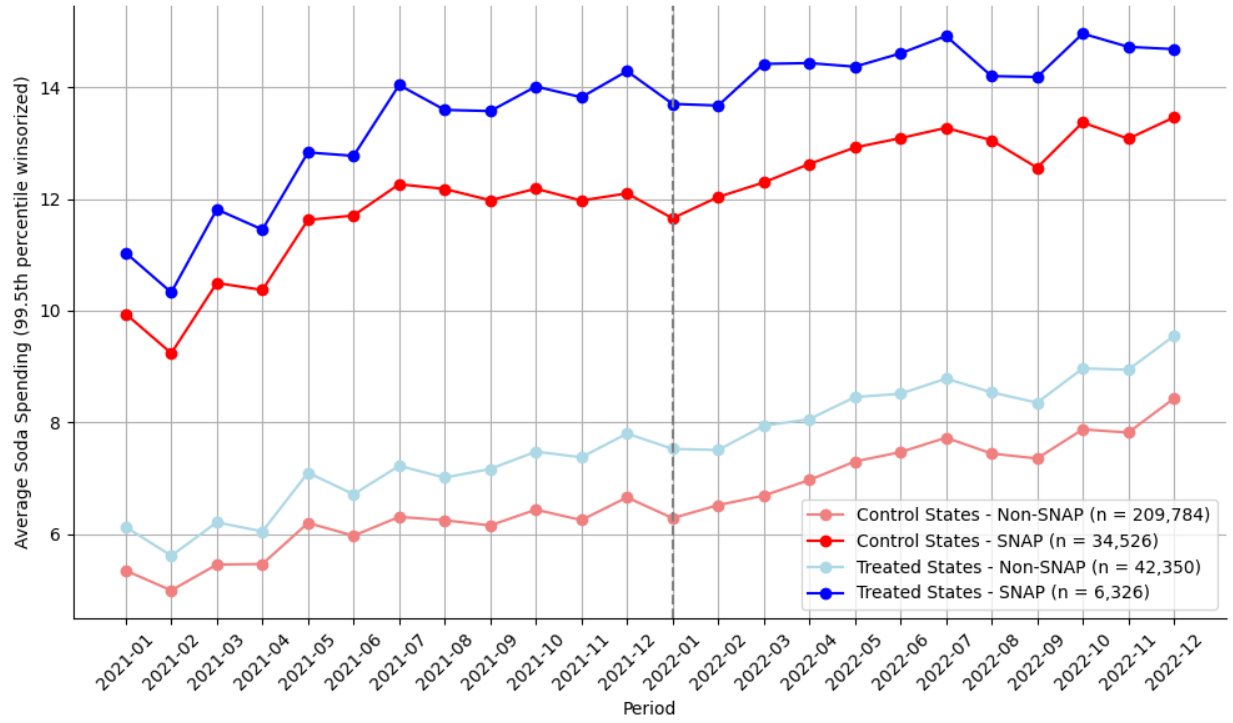


Figure 7: Monthly Average of Soda Spending by SNAP  $\times$  state

(a) level



(b) log

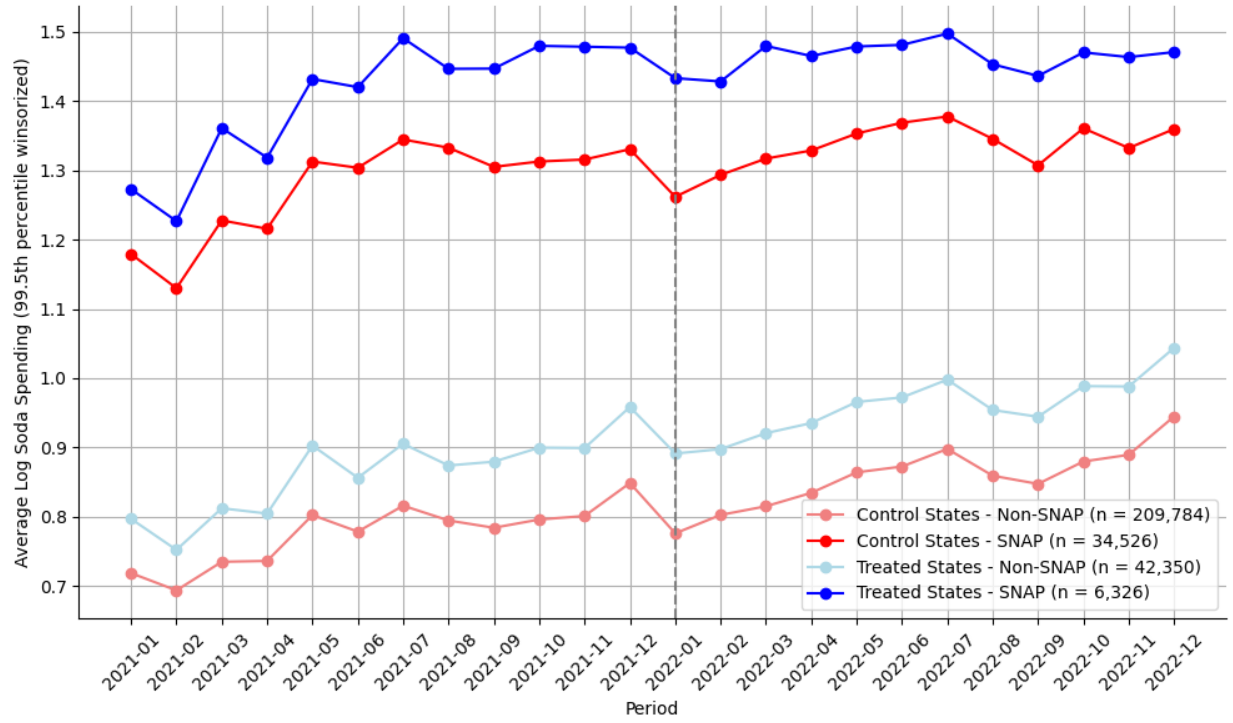




Figure 8: Proportion of Food Spending out of Total Spending

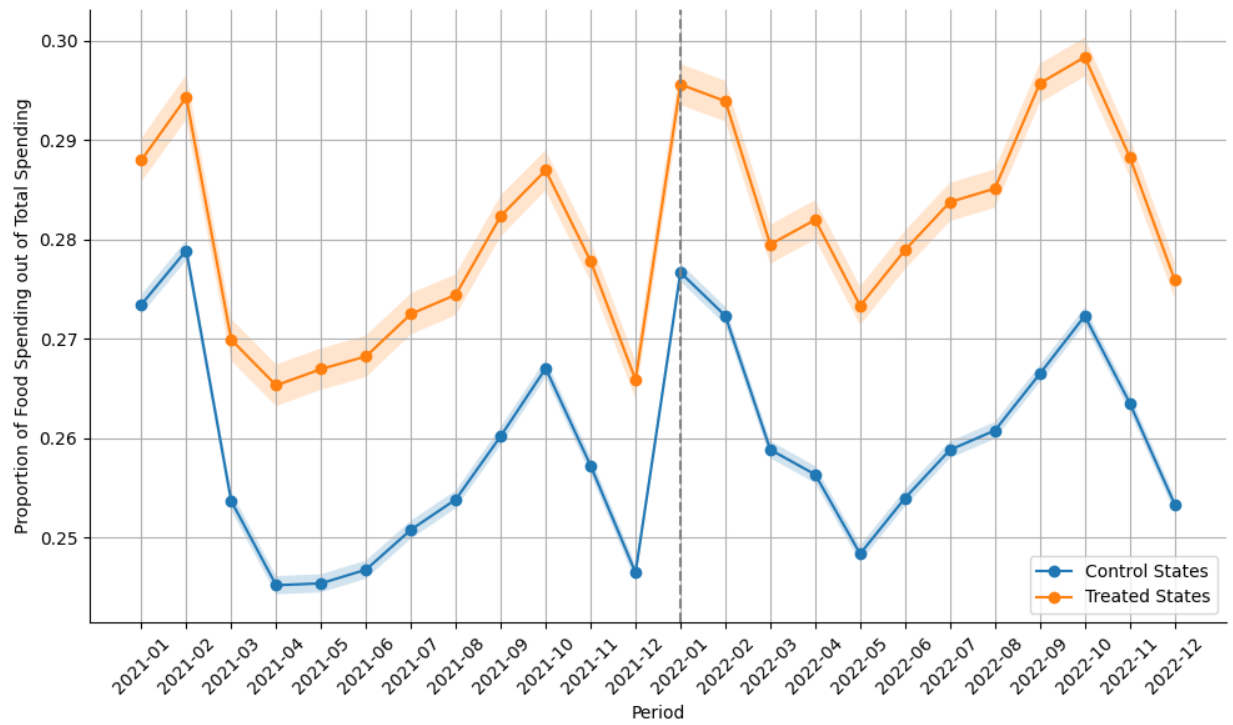


Figure 9: Proportion of Food Spending on SNAP out of Total Food Spending

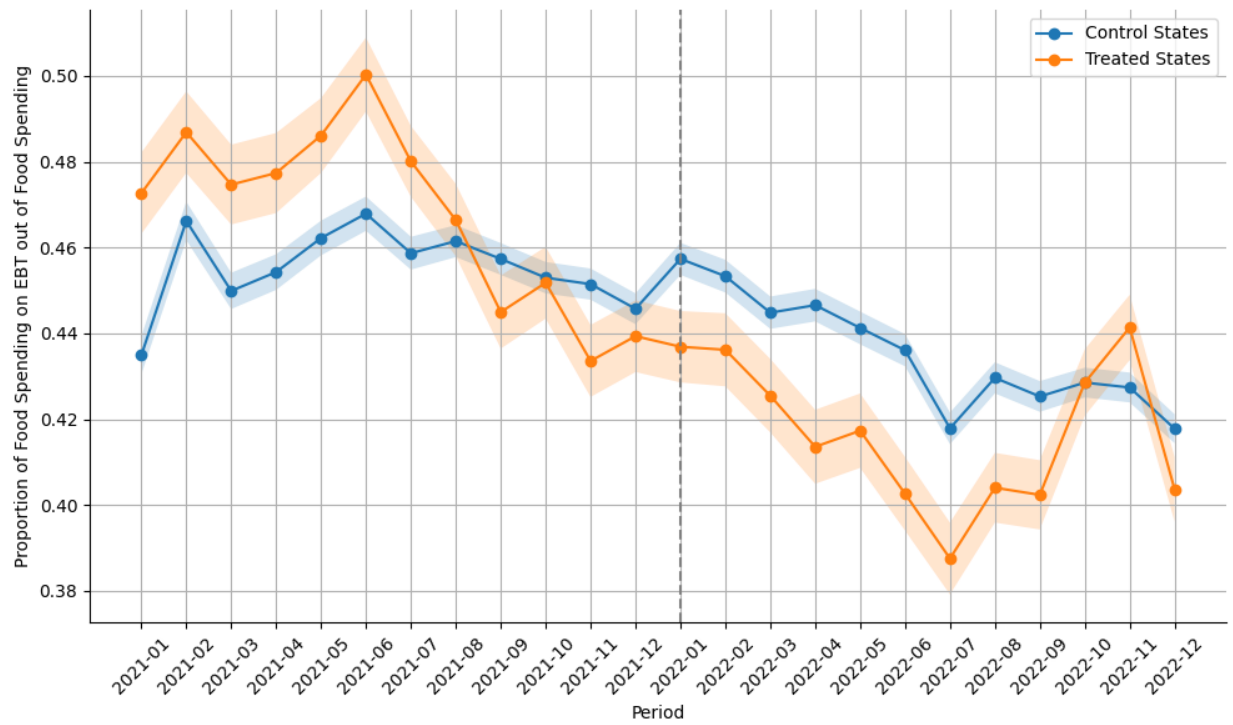


Figure 10: Proportion of Soda Spending out of Total Food Spending

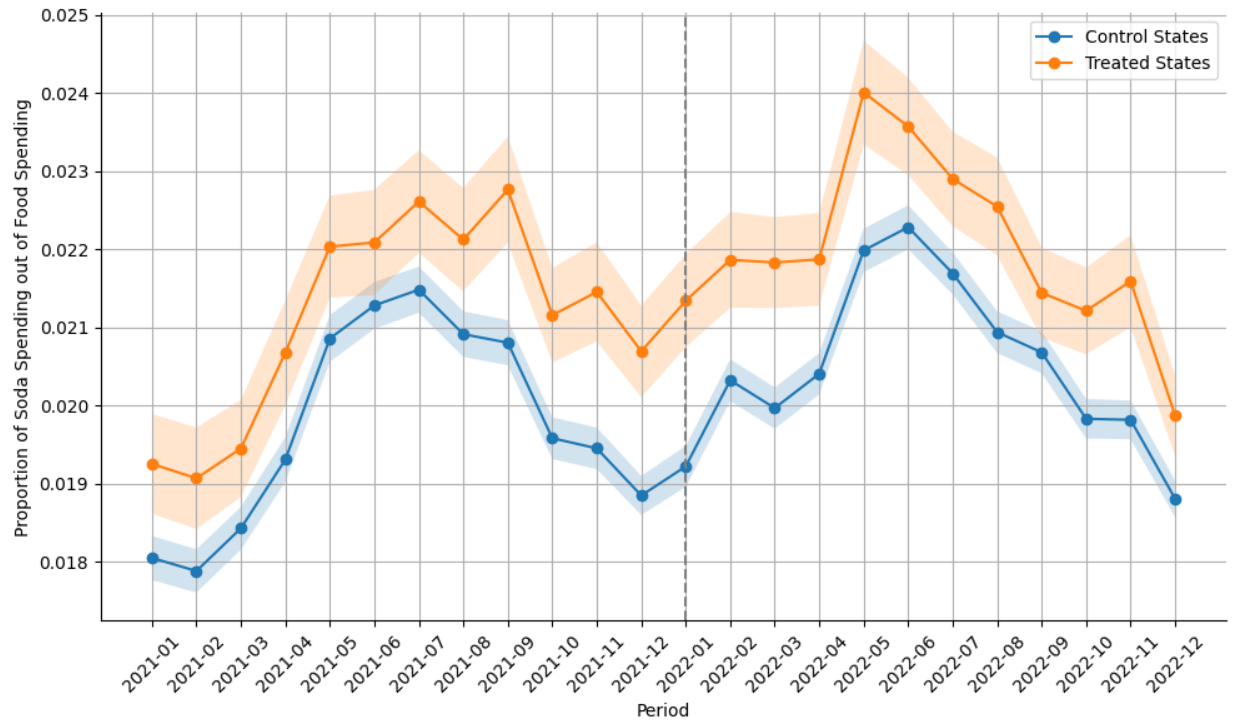


Figure 11: Proportion of Soda Spending out of Total Soda Spending

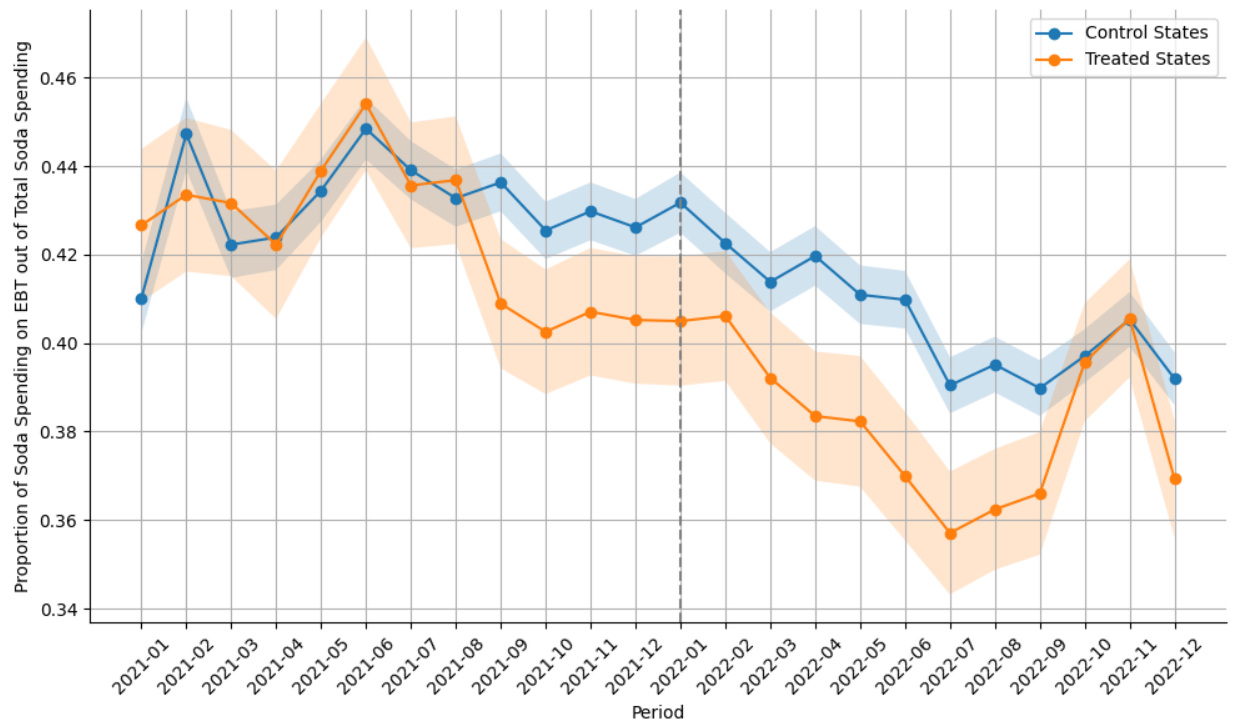
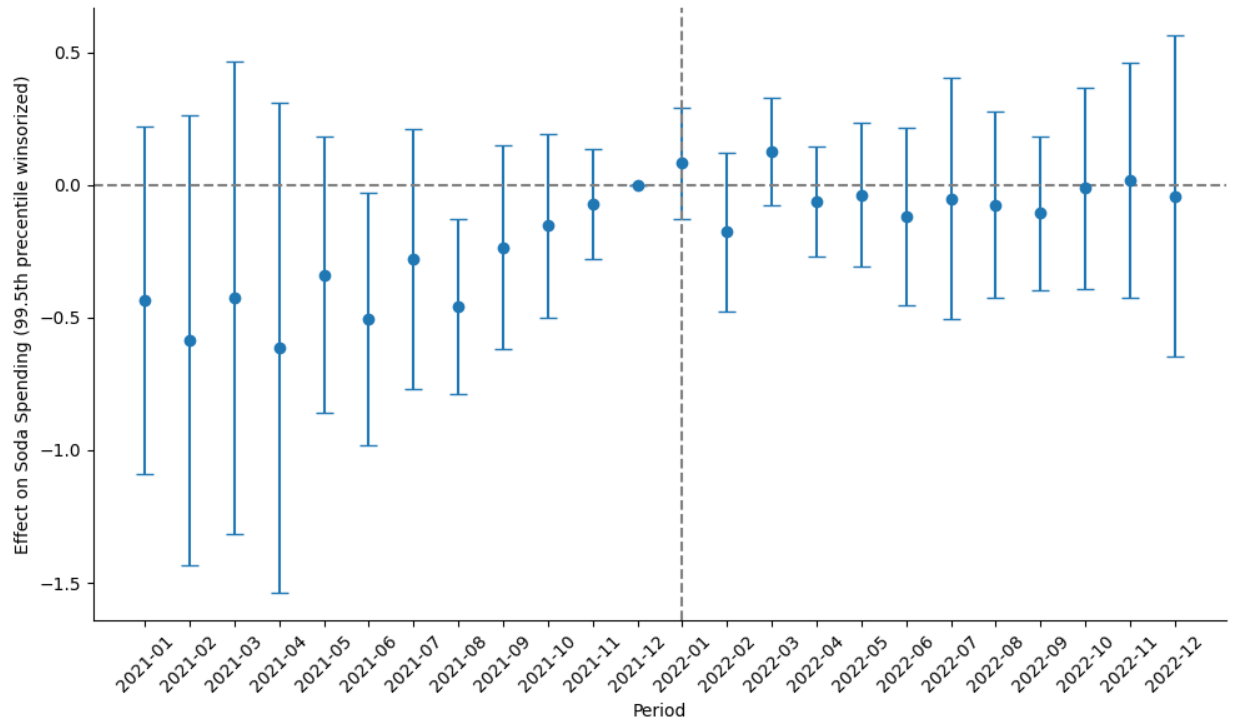


Figure 12: Event Study - TWFE

(a) level



(b) log

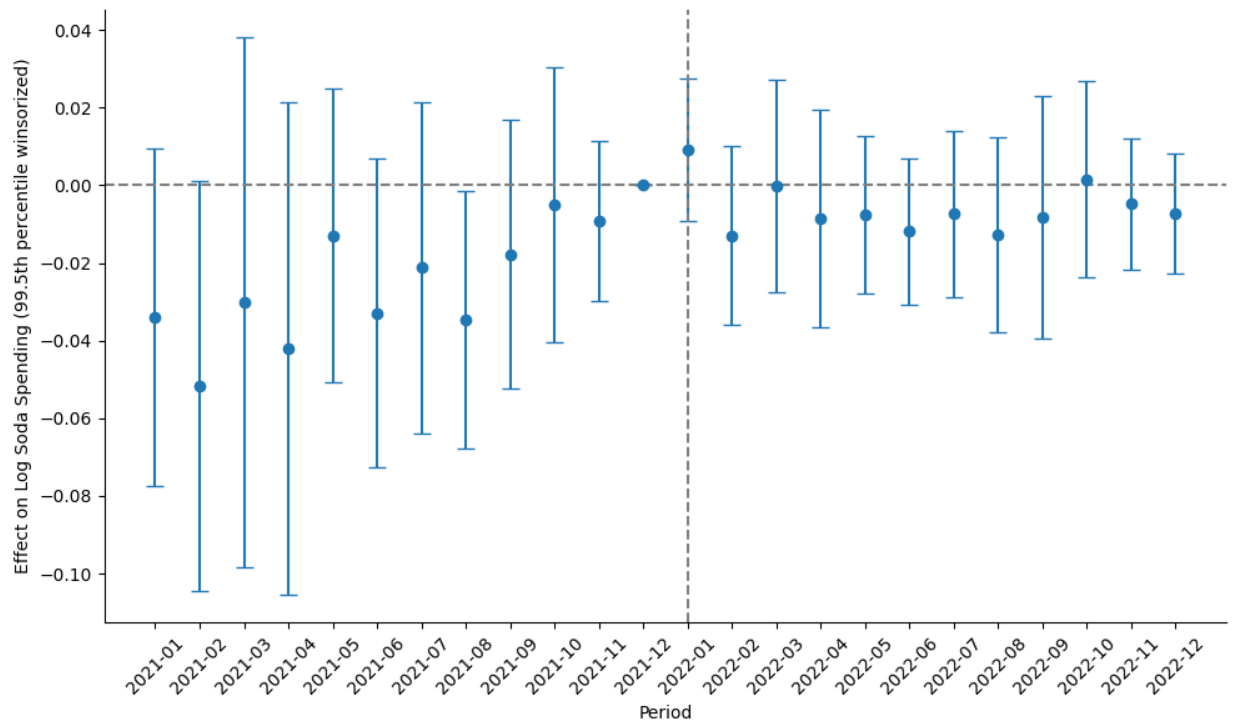


Figure 13: Event Study - TWFE (Treatment Assignment = SNAP/Non-SNAP) within treated states

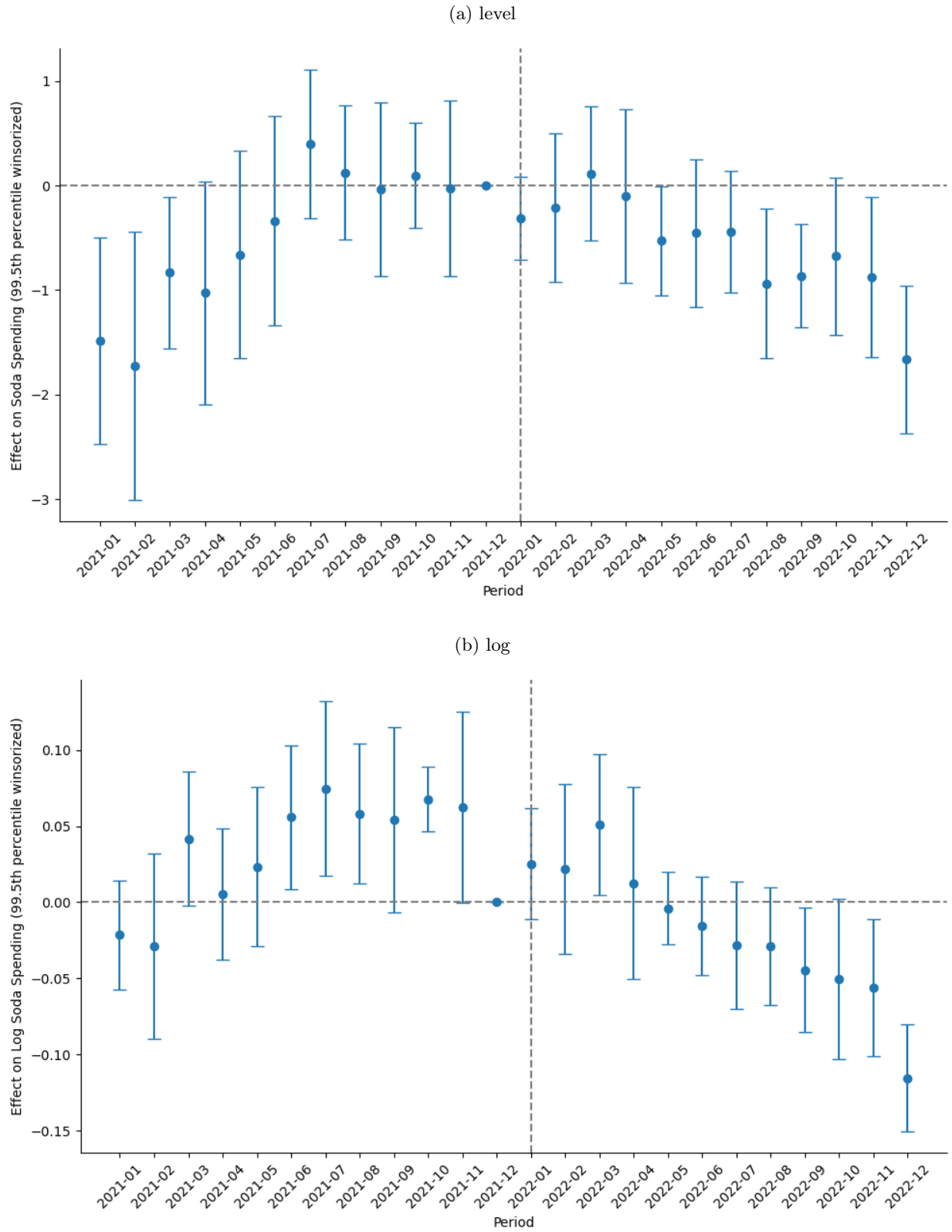


Figure 14: Event Study - DDD

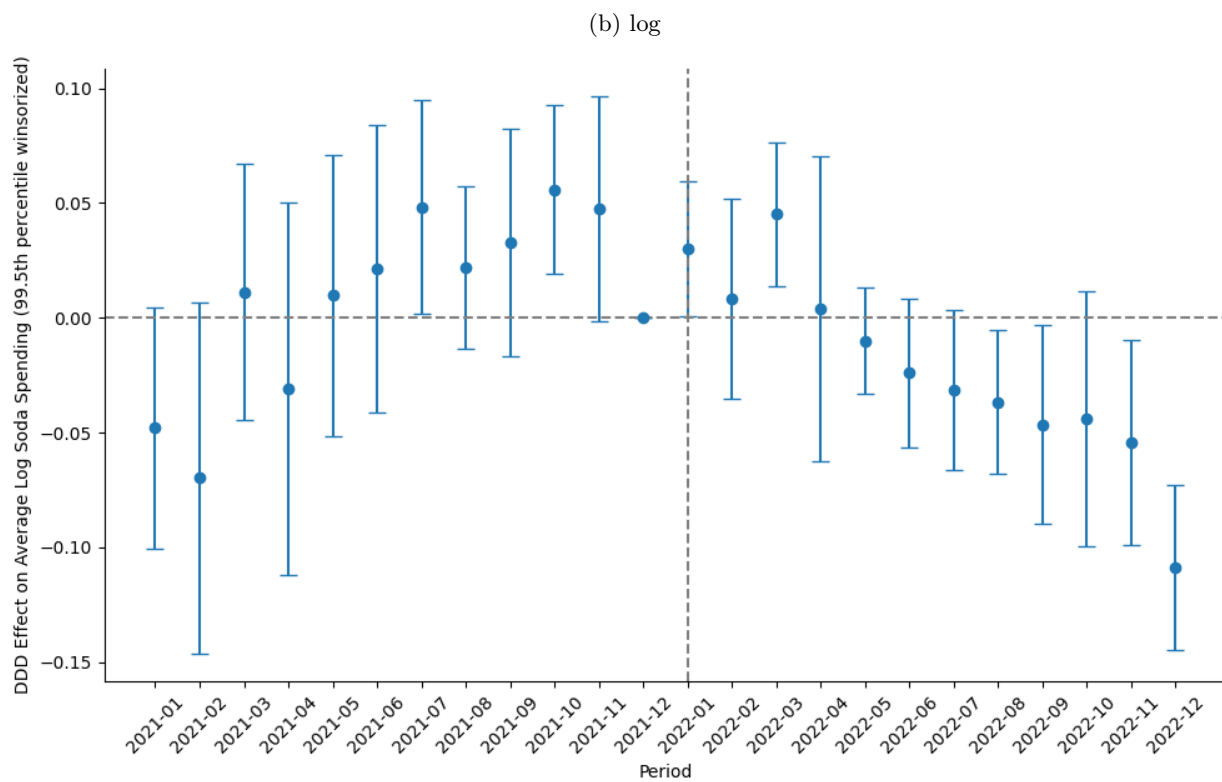
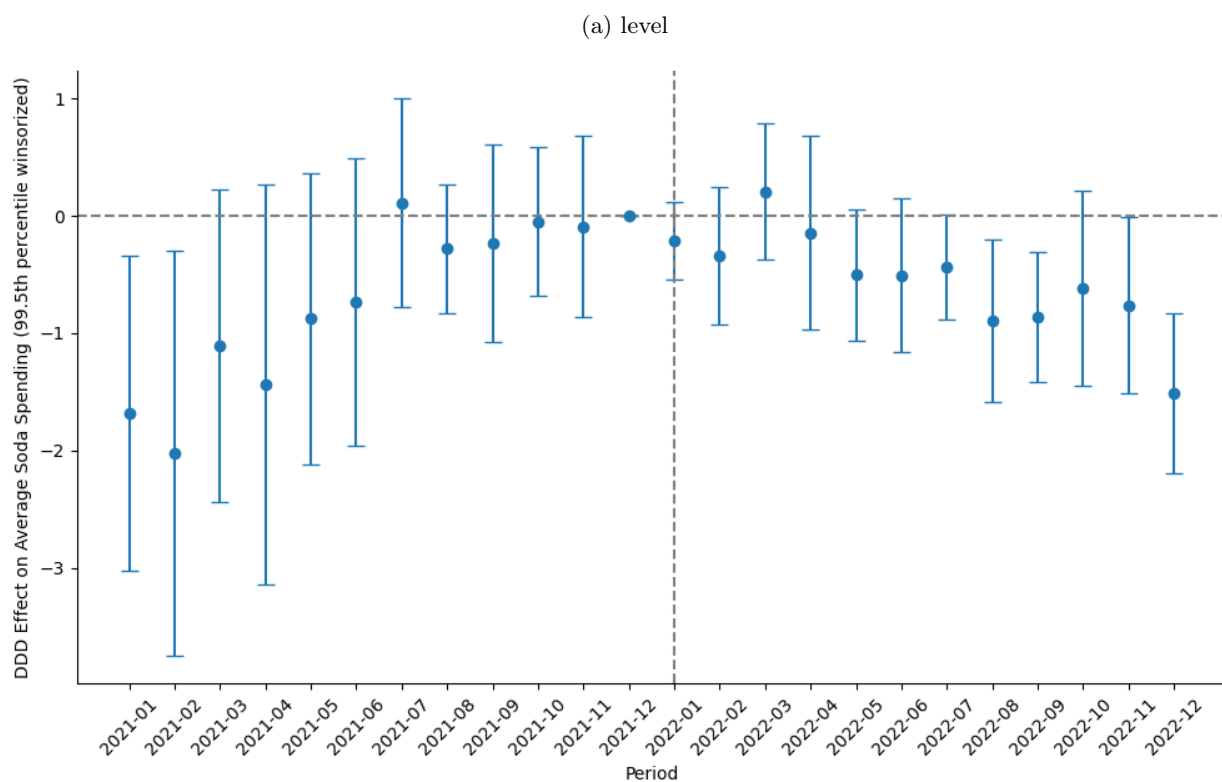


Table 1: Model Estimates

Term	TWFE	TWFE Log	TWFE	TWFE Log	DDD	DDD Log
Post	1.4469*** (0.1295)	0.0871*** (0.0062)	1.7569*** (0.2563)	0.1114*** (0.0120)	1.4920*** (0.1183)	0.0907*** (0.0058)
State $\times$ Post	0.2907 (0.3034)	0.0174 (0.0139)				
SNAP $\times$ Post			-0.1483 (0.2494)	-0.0523*** (0.0098)		
State $\times$ SNAP $\times$ Post					0.1166 (0.4286)	-0.0316** (0.0153)
N	5,879,887	5,879,887	966,630	966,630	5,879,887	5,879,887
$R^2$	0.0034	0.0019	0.0040	0.0025	0.0034	0.0019
User FE	Yes	Yes	Yes	Yes	Yes	Yes
Period FE	No	No	No	No	No	No
SE Cluster	state	state	state	state	state	state