Issue # 7: Numerator Data - Trends and Event Studies
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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; $<=0.5$ Non-SNAP)

1. Figures: Monthly average of ...

   - level/log total spending winsorized
   - level/log Food spending winsorized
   - level/log Food on EBT winsorized
   - level/log Soda spending winsorized
   - level/log Soda on EBT winsorized
   - prop. food spending
   - prop. food on EBT
   - prop. soda
   - prop. soda on EBT
   - level/log soda spending by SNAP/Non-SNAP
   - level/log soda spending by state $\times$ SNAP
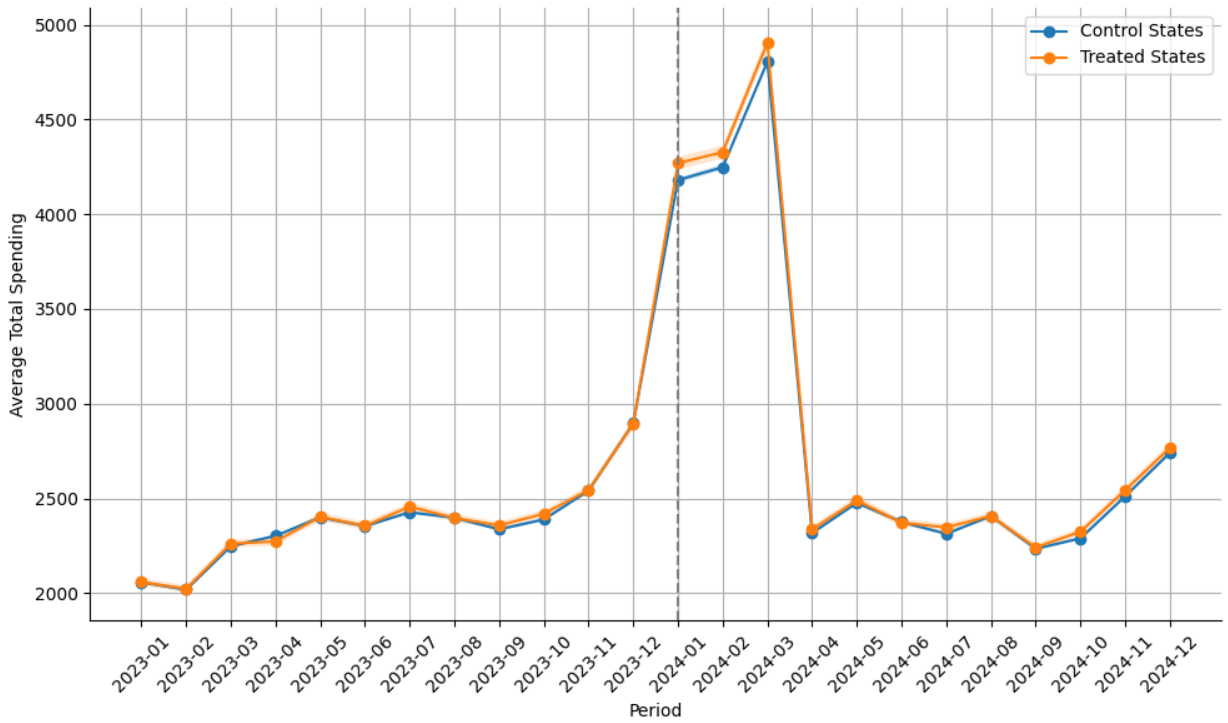
2. Figures: Event Studies

   - 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 Food Spending

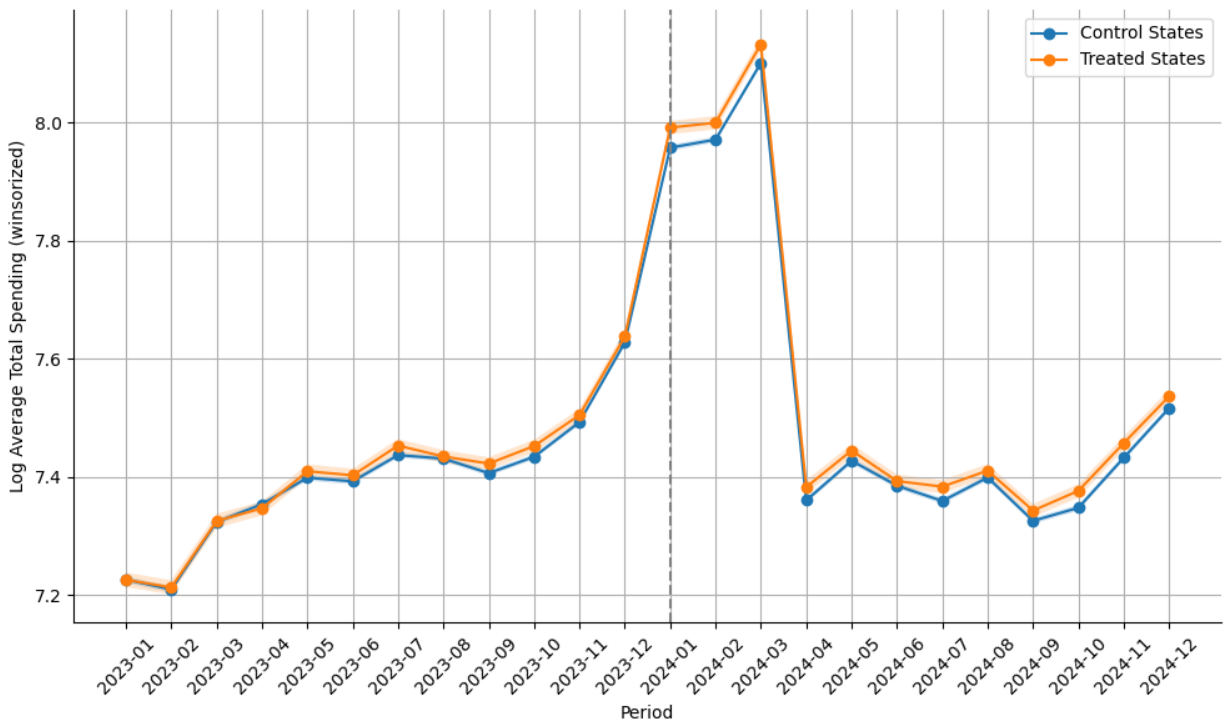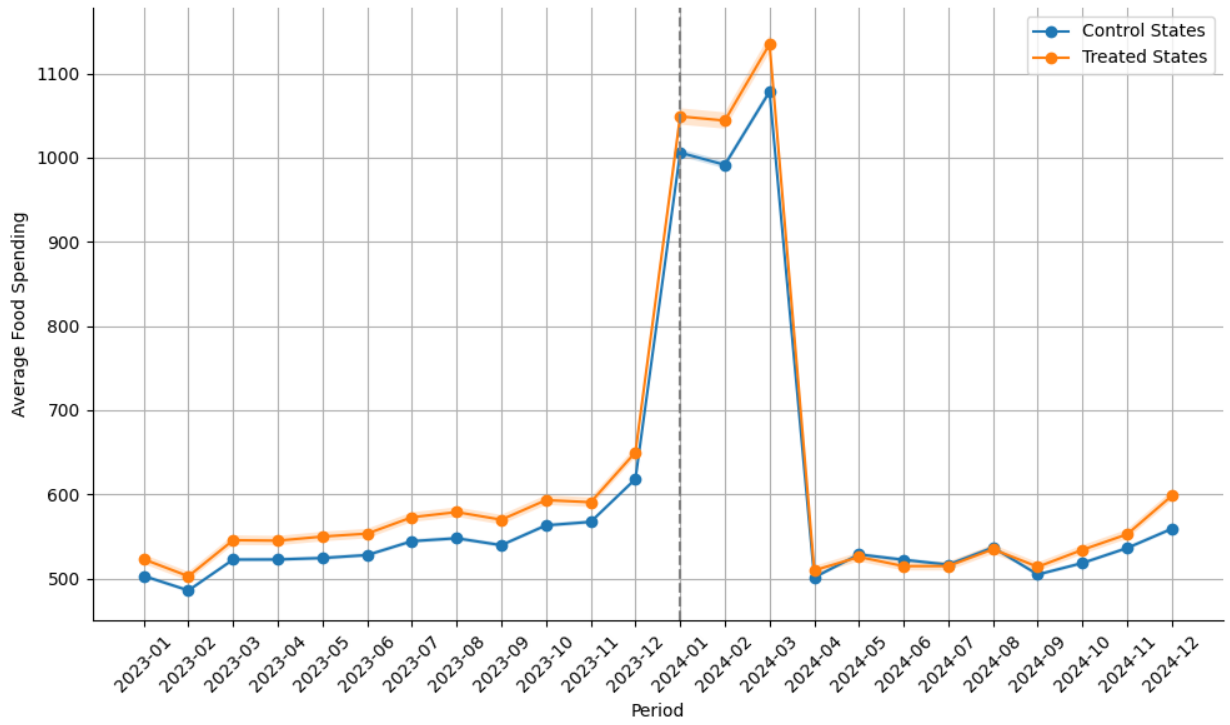### (a) level

(b) log

Figure 2: Monthly Average of Food Spending
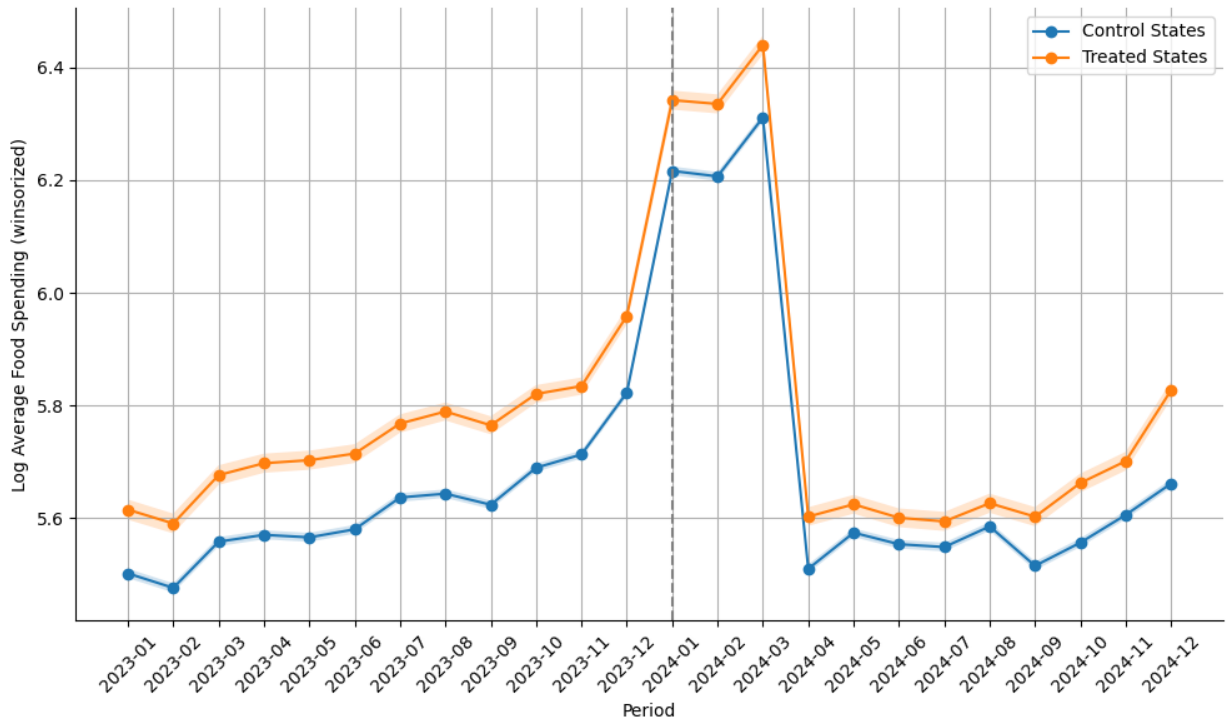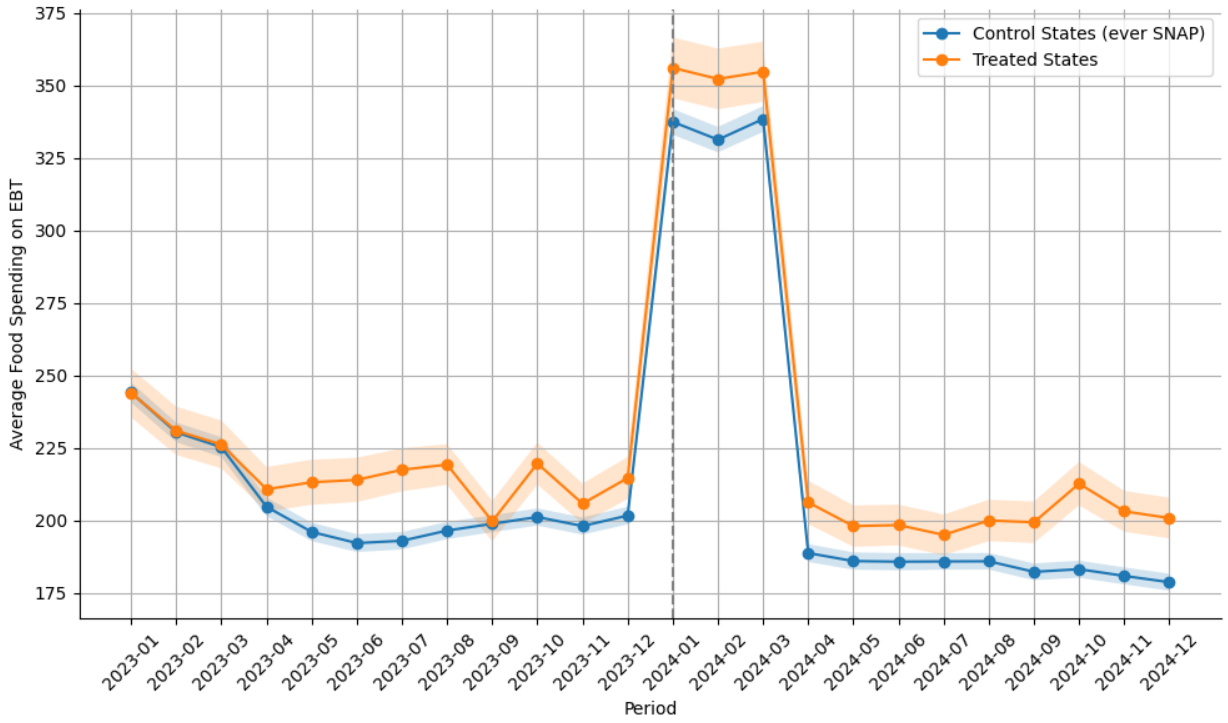
(a) level

(b) log

Figure 3: Monthly Average of Food Spending on EBT
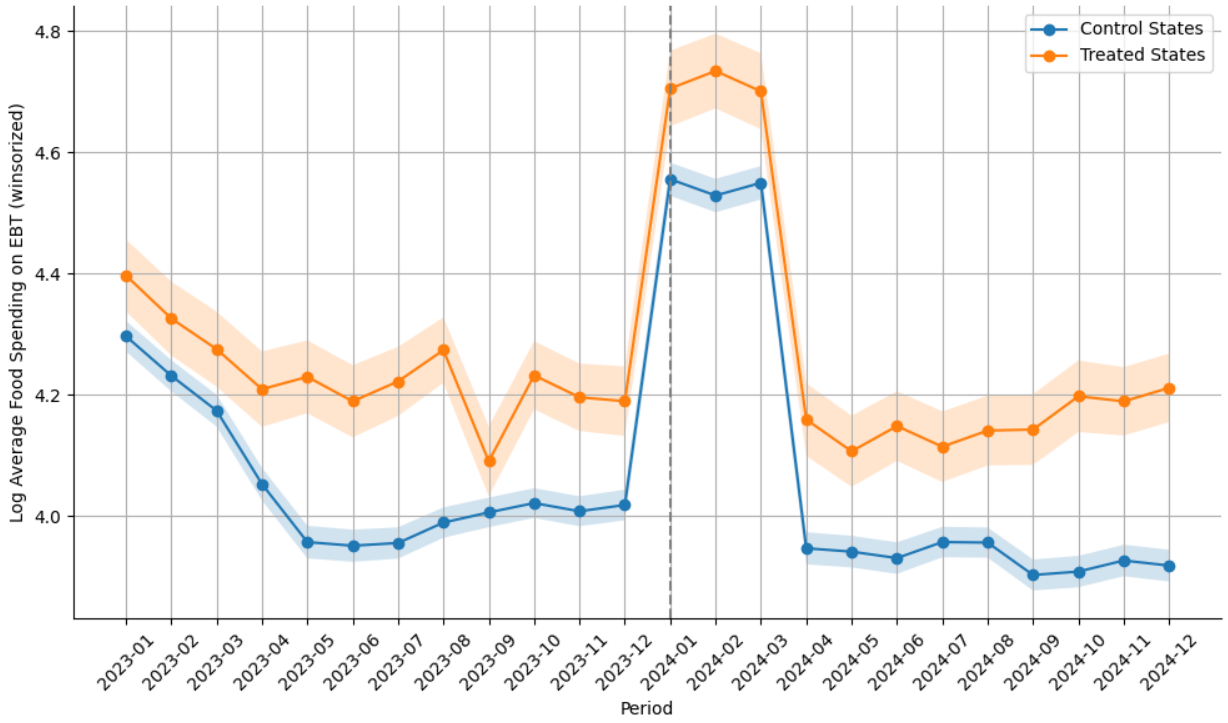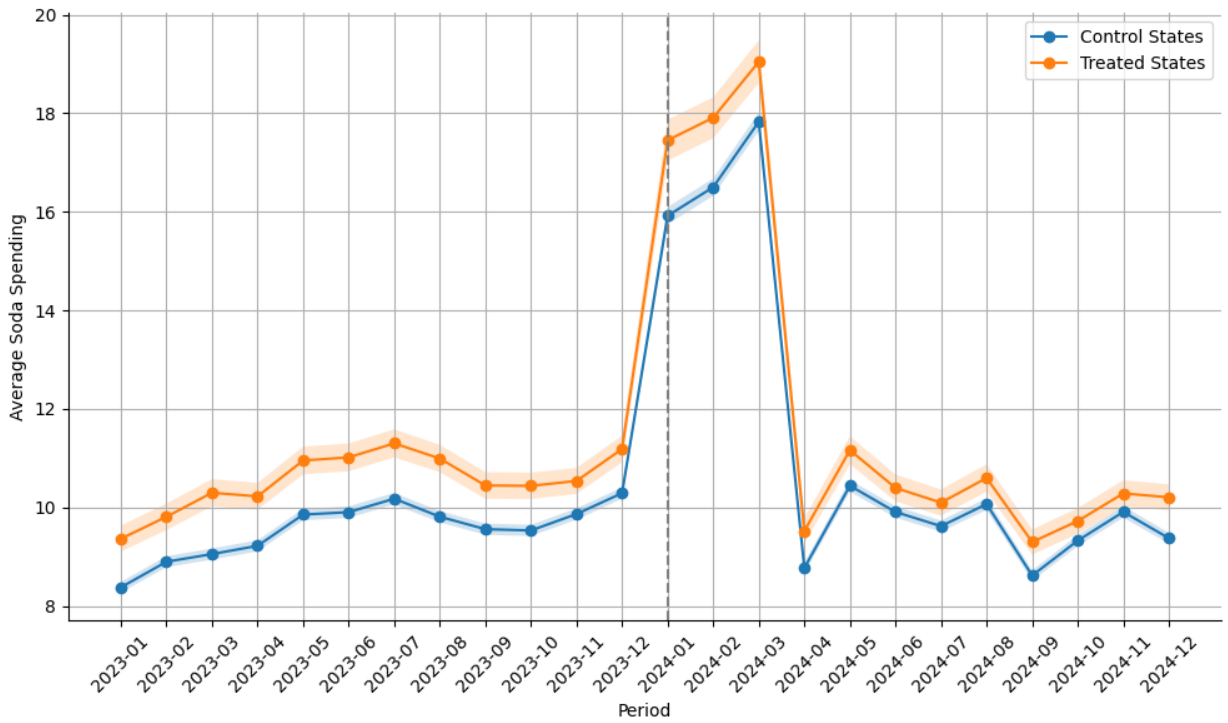
(a) level

(b) log

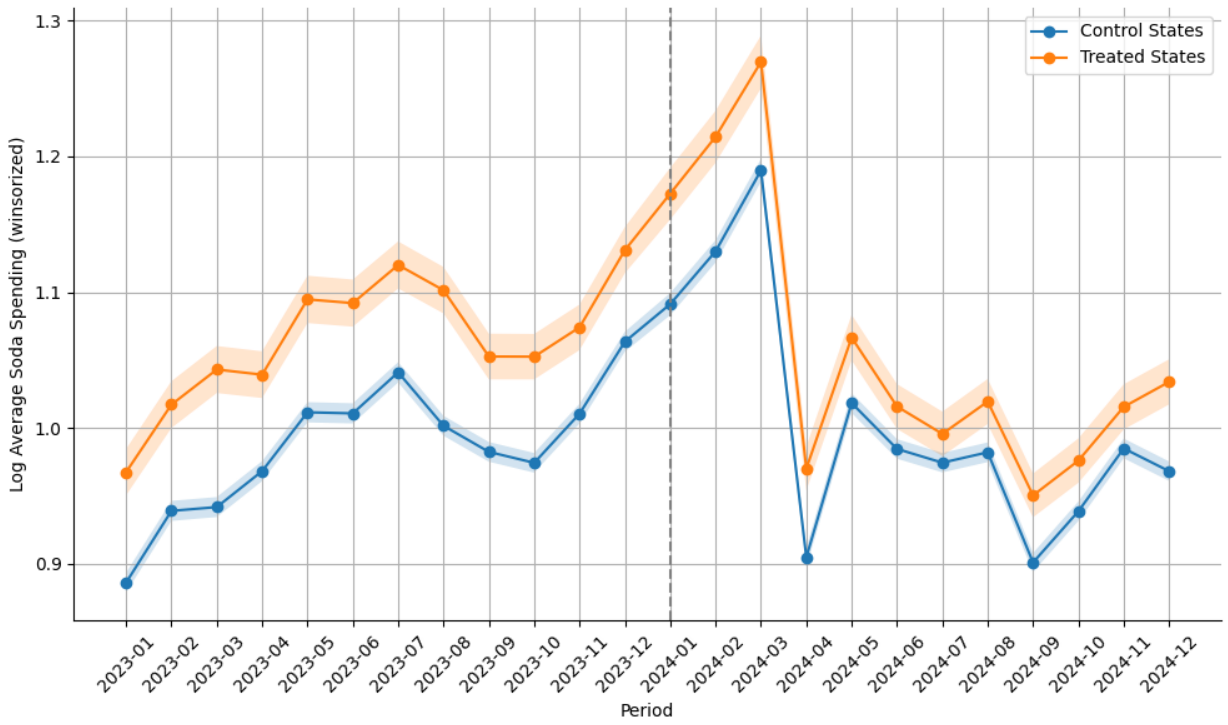Figure 4: Monthly Average of Soda Spending
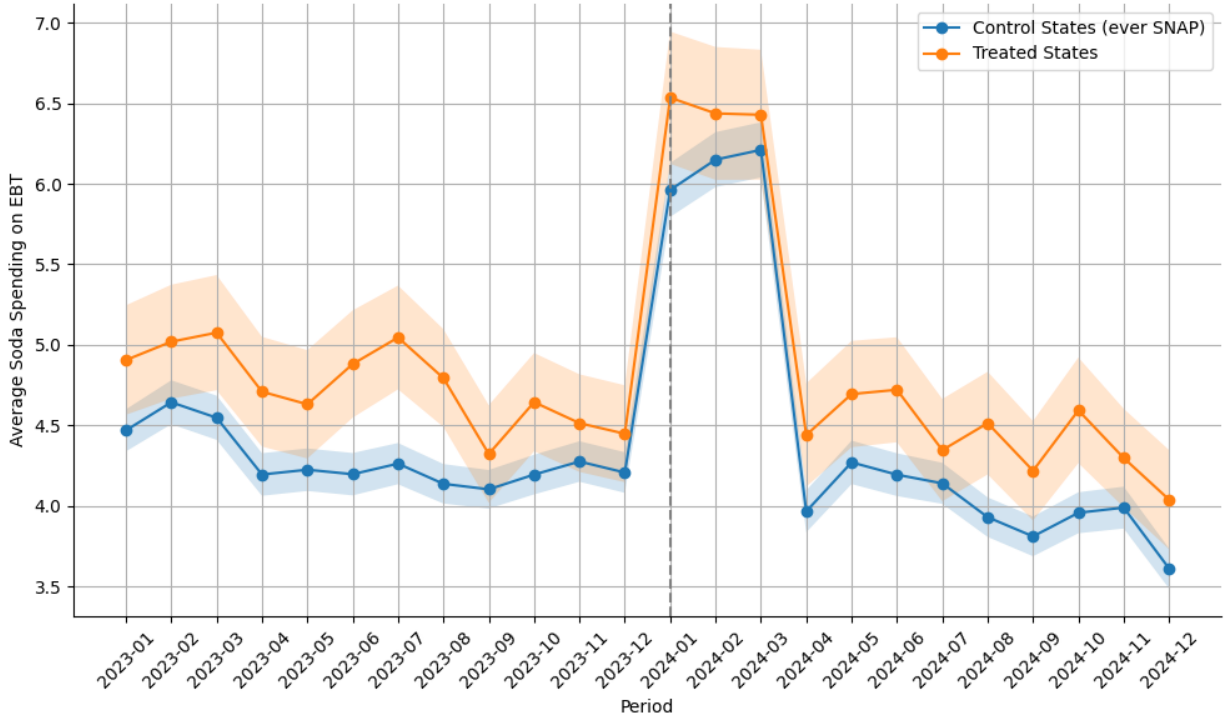
(a) level

(b) log

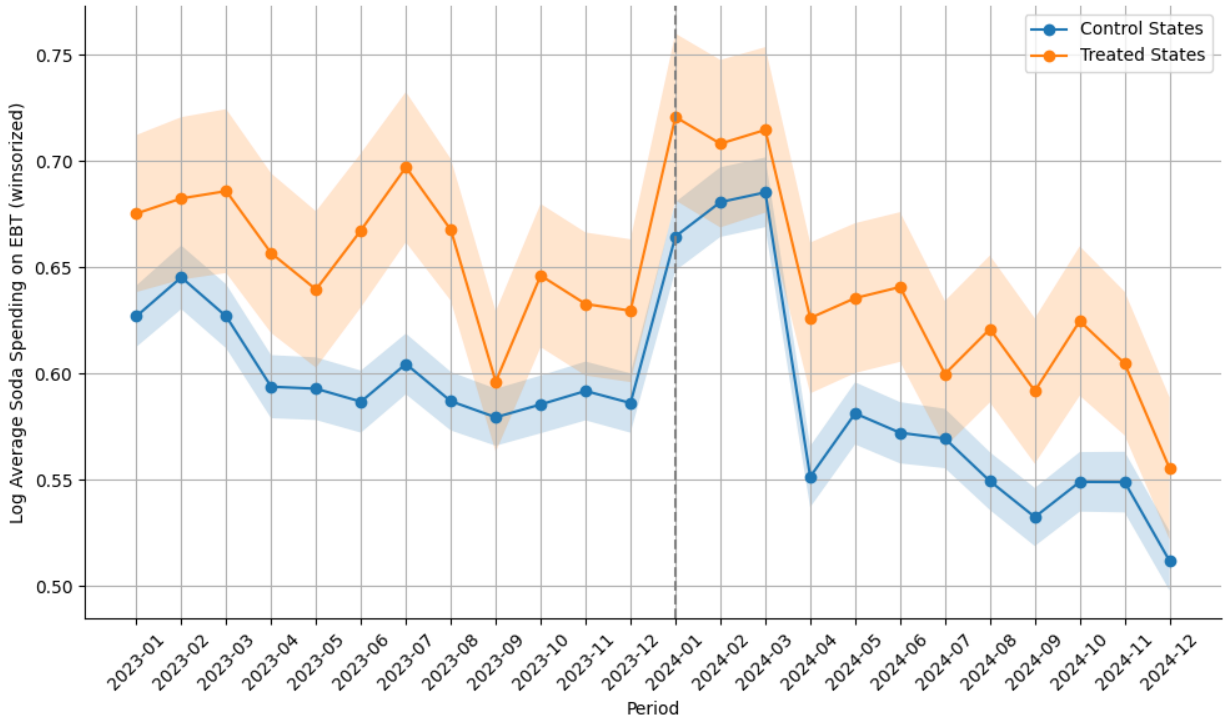Figure 5: Monthly Average of Soda Spending on EBT
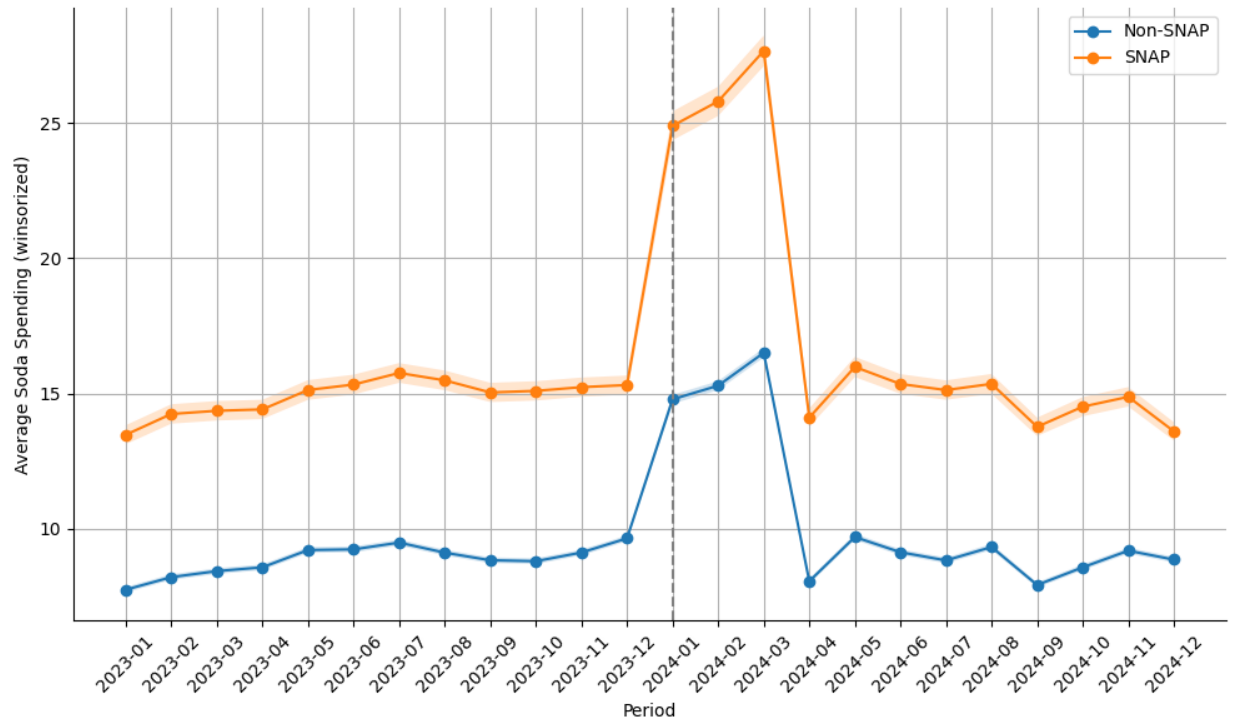
(a) level

(b) log

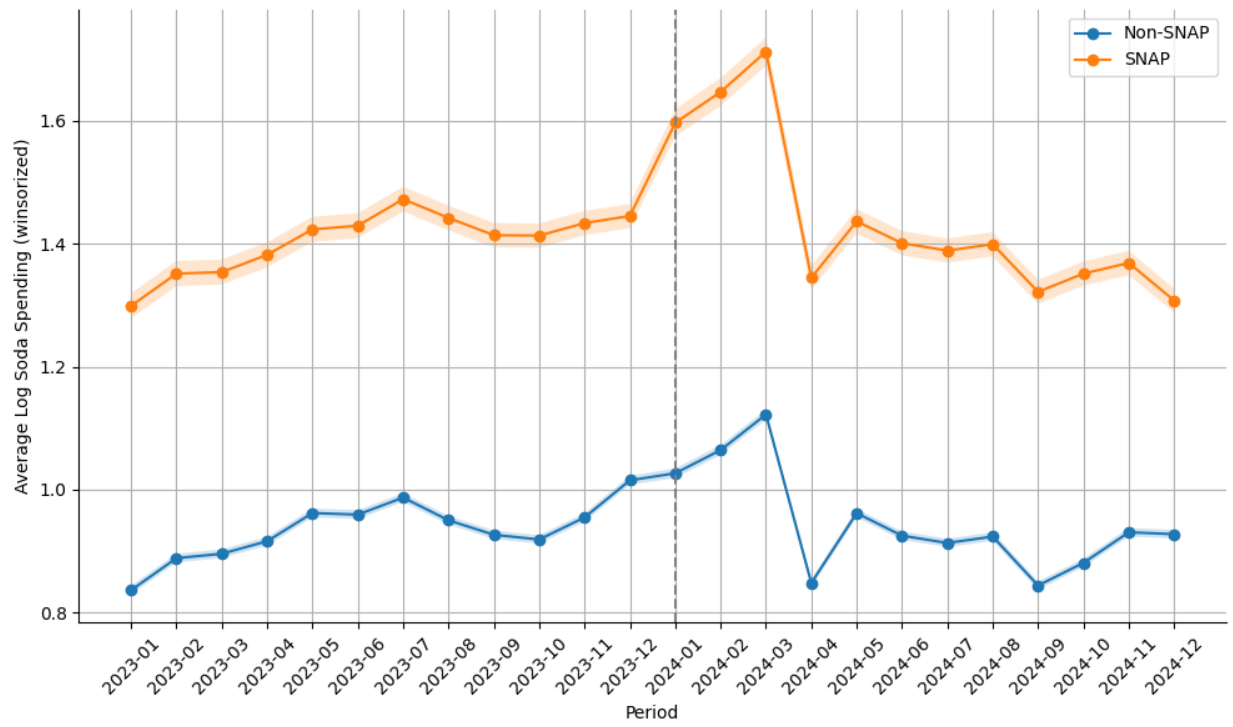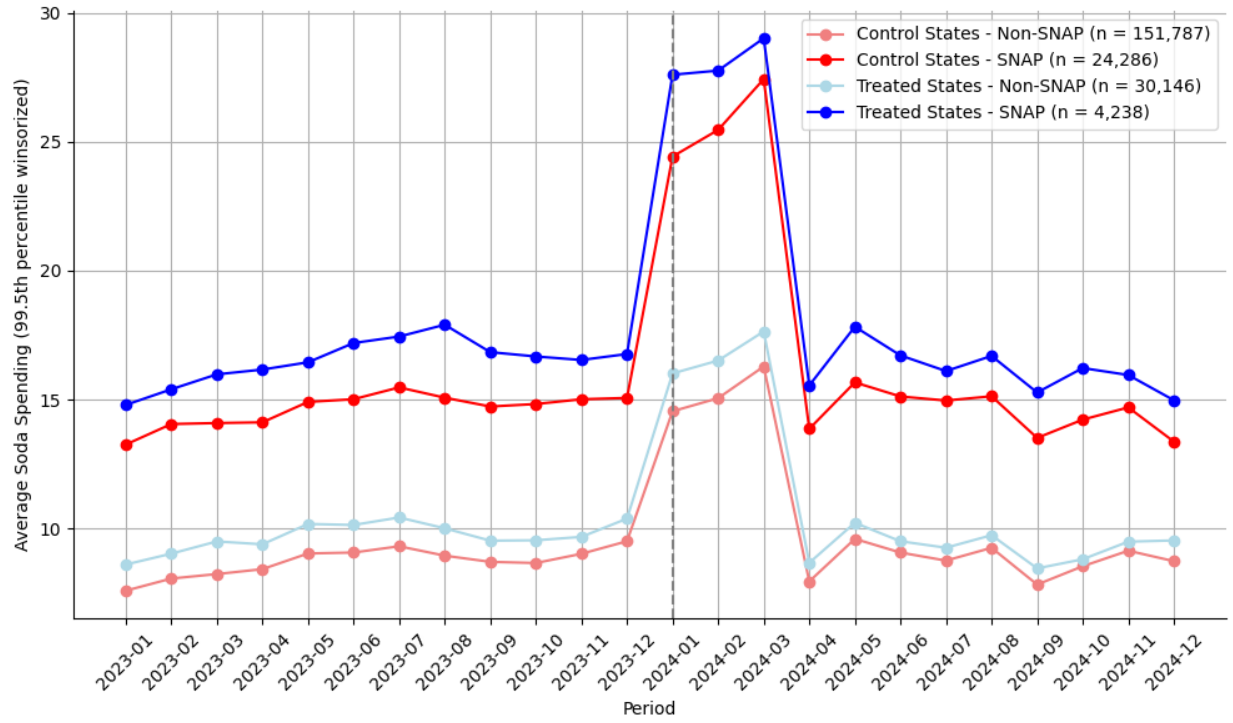Figure 6: Monthly Average of Soda Spending by SNAP/Non-SNAP

(a) level

(b) log

Figure 7: Monthly Average of Soda Spending by SNAP × state
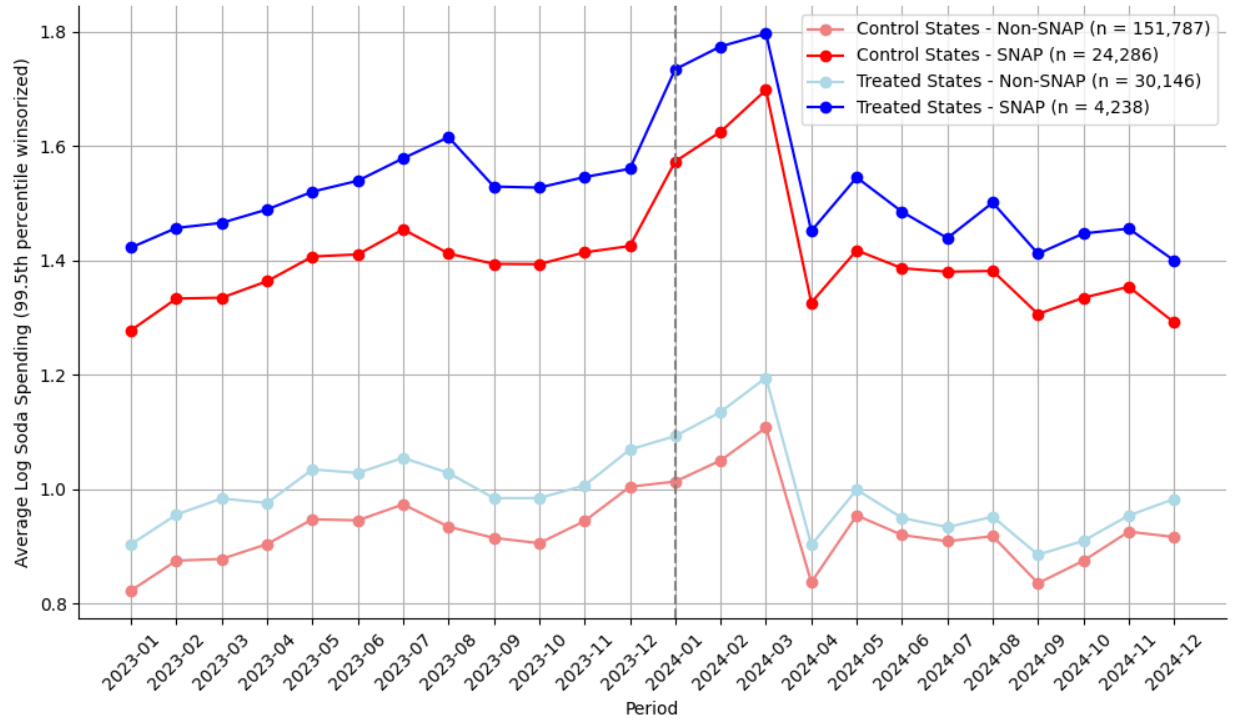
(a) level

(b) log

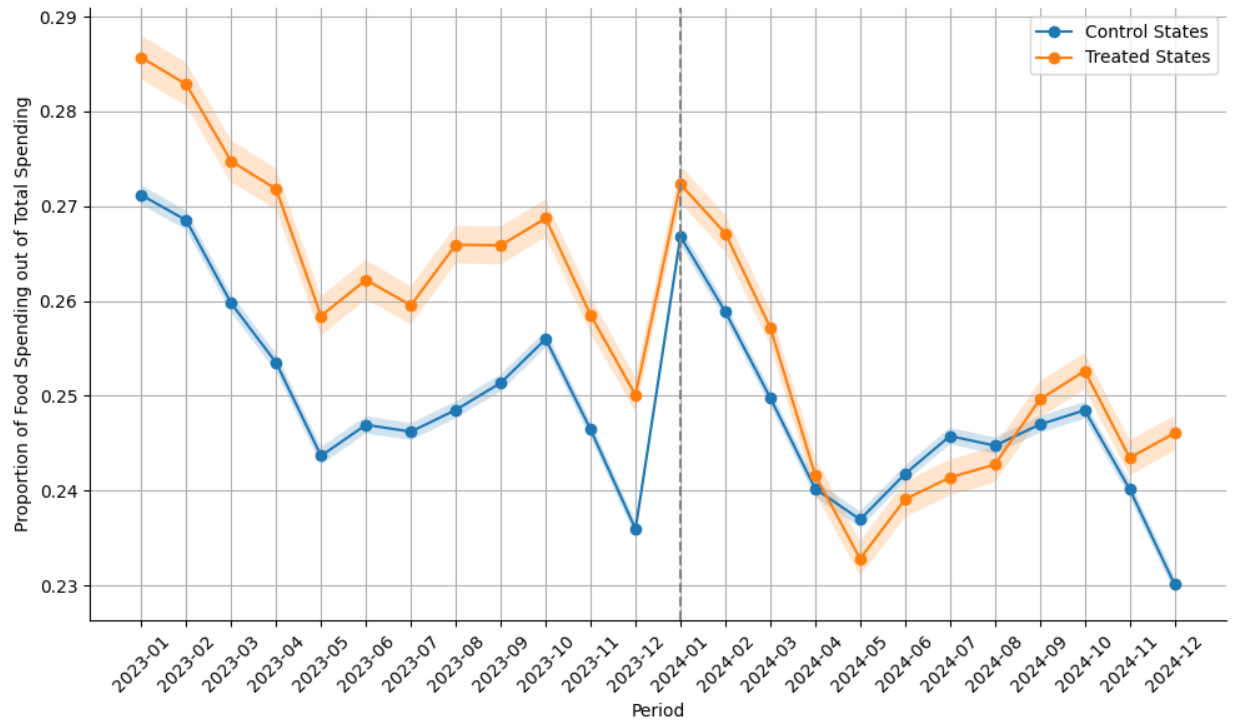Figure 8: Proportion of Food Spending out of Total Spending

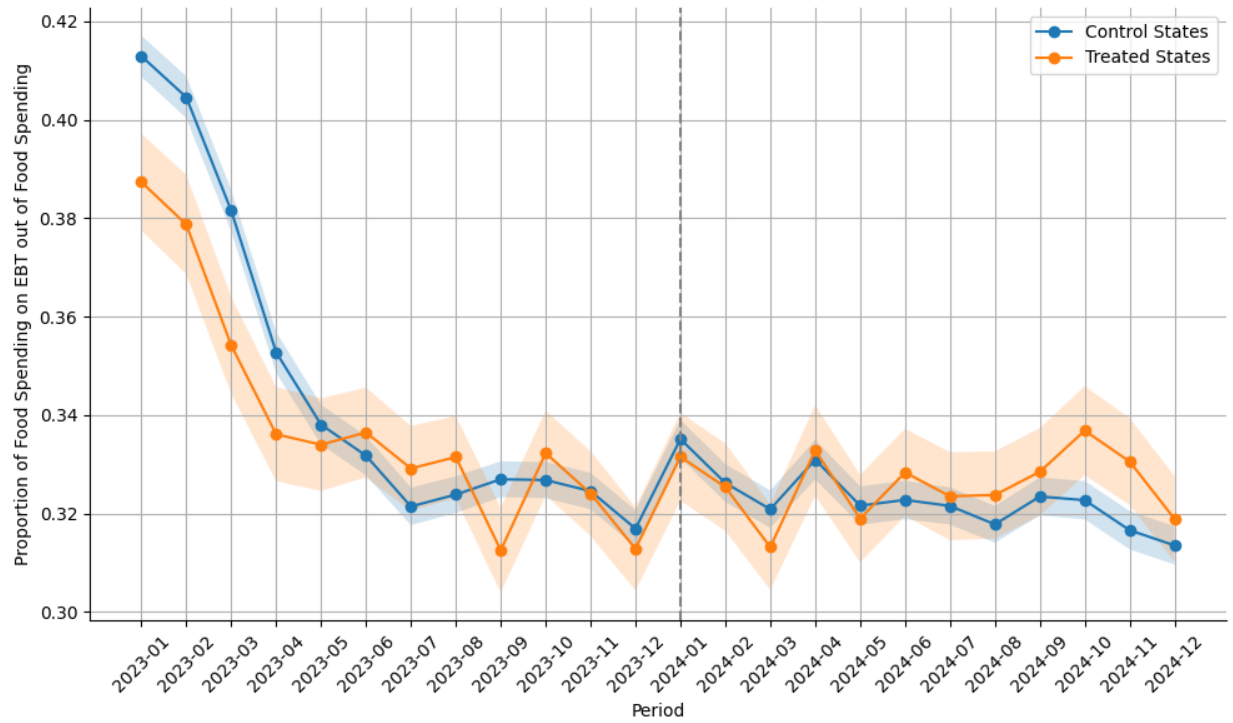Figure 9: Proportion of Food Spending on EBT out of Total Food Spending

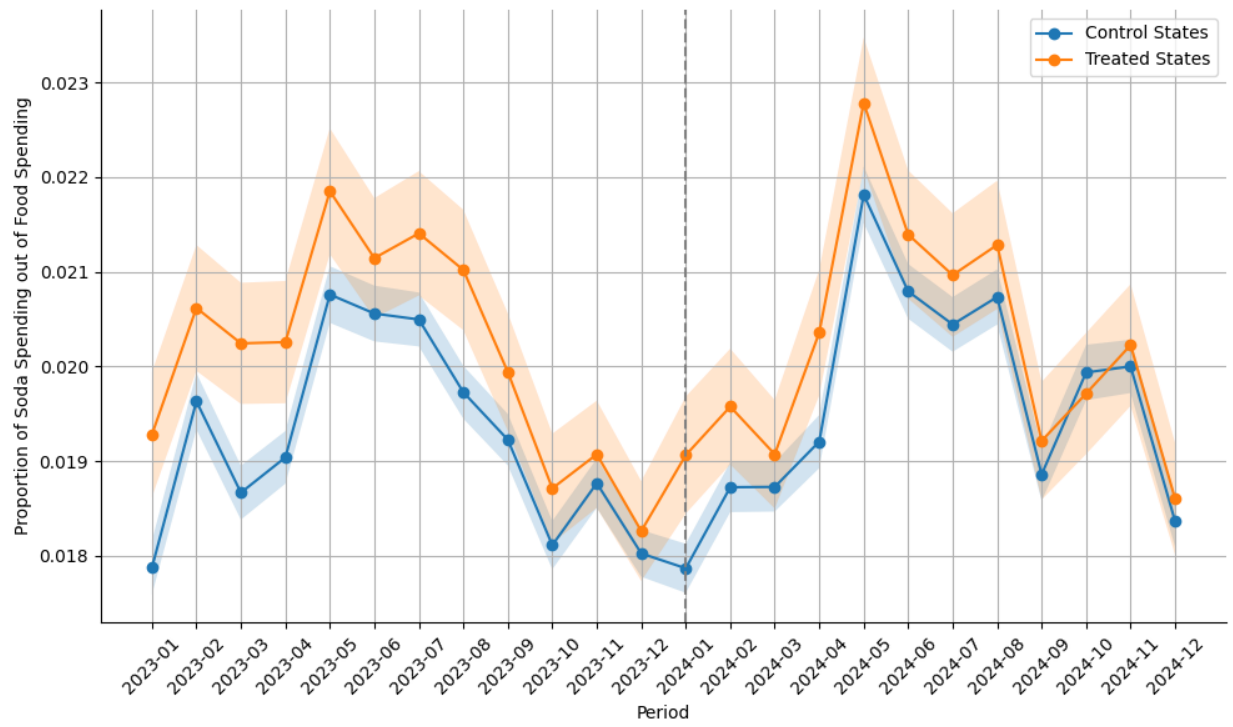Figure 10: Proportion of Soda Spending out of Total Food Spending

Figure 11: Proportion of Soda Spending out of Total Soda Spending
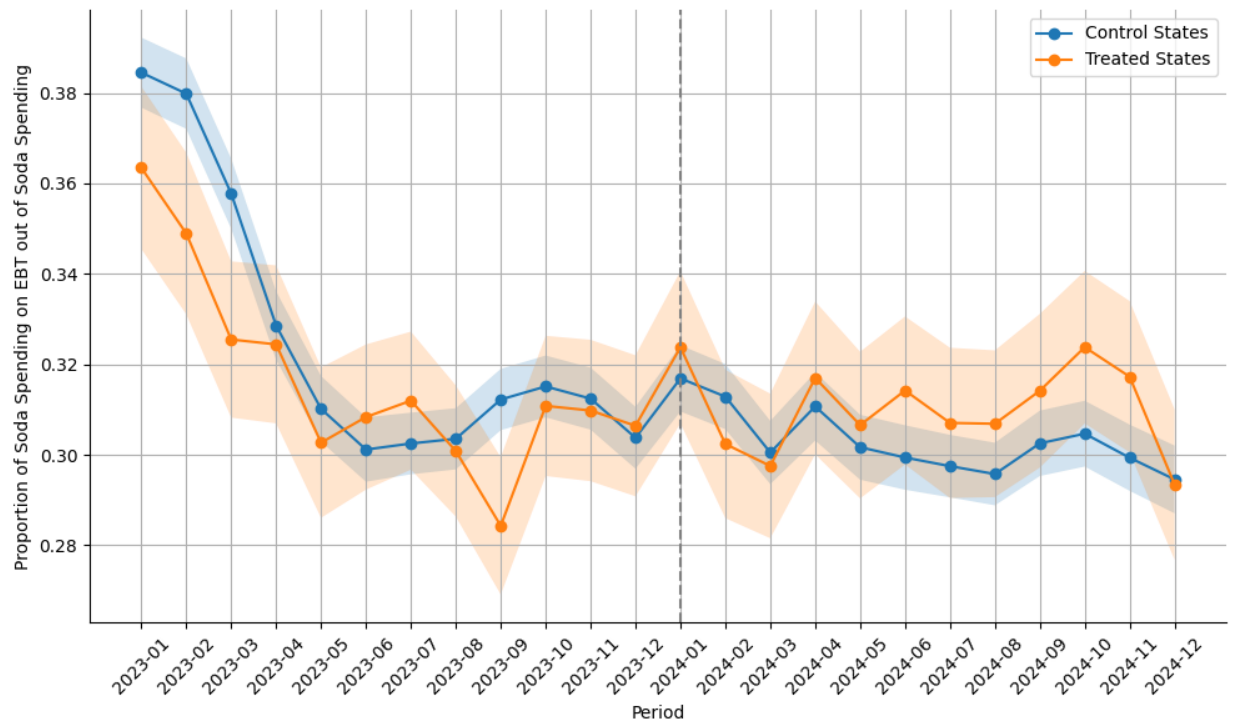
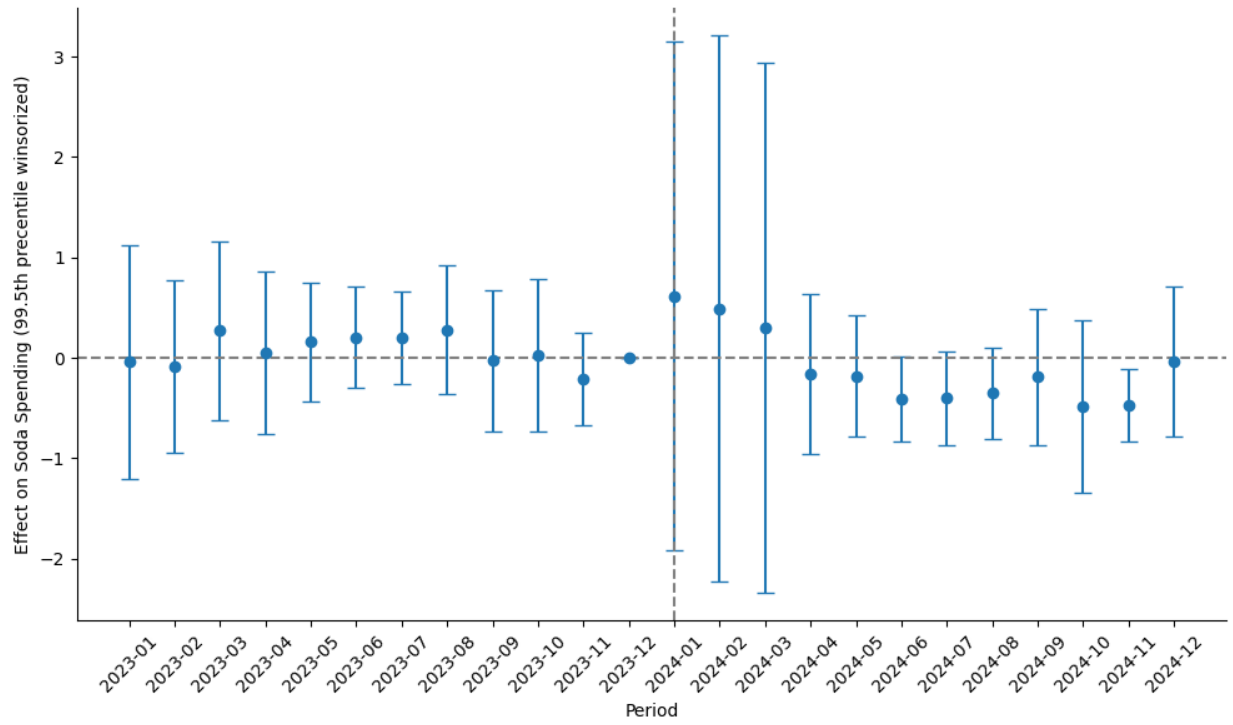# Figure 12: Event Study - TWFE

(a) level

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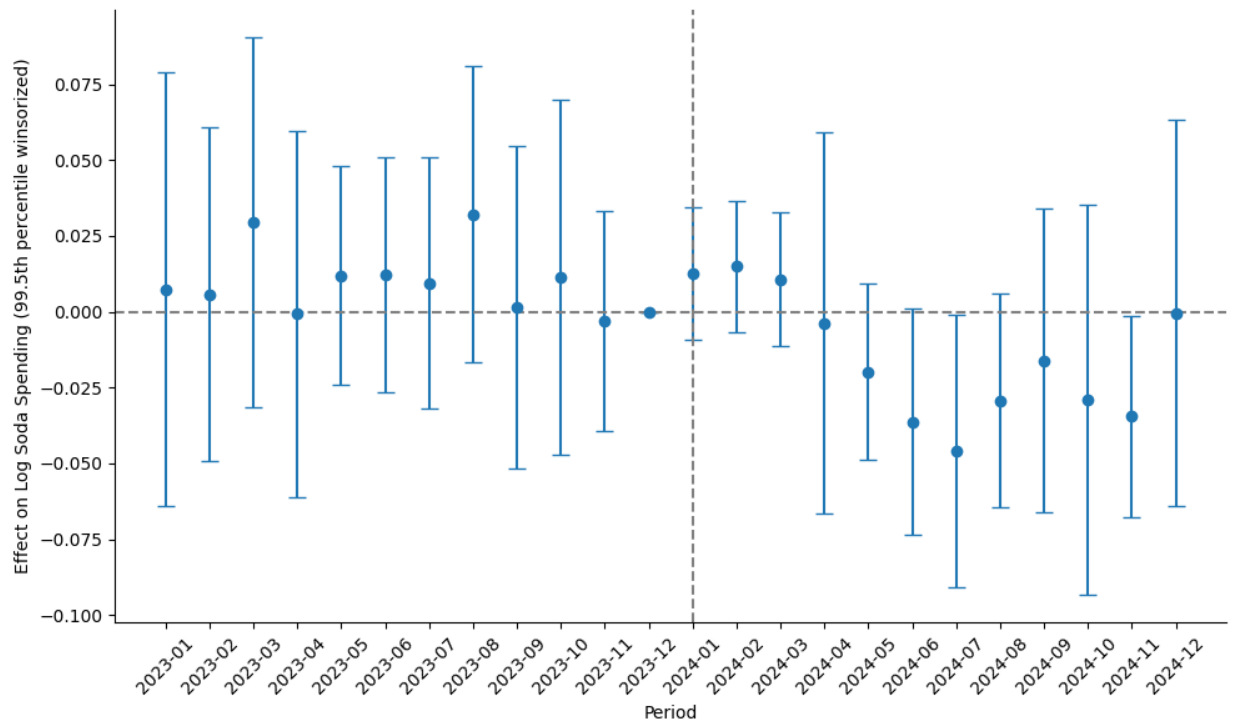
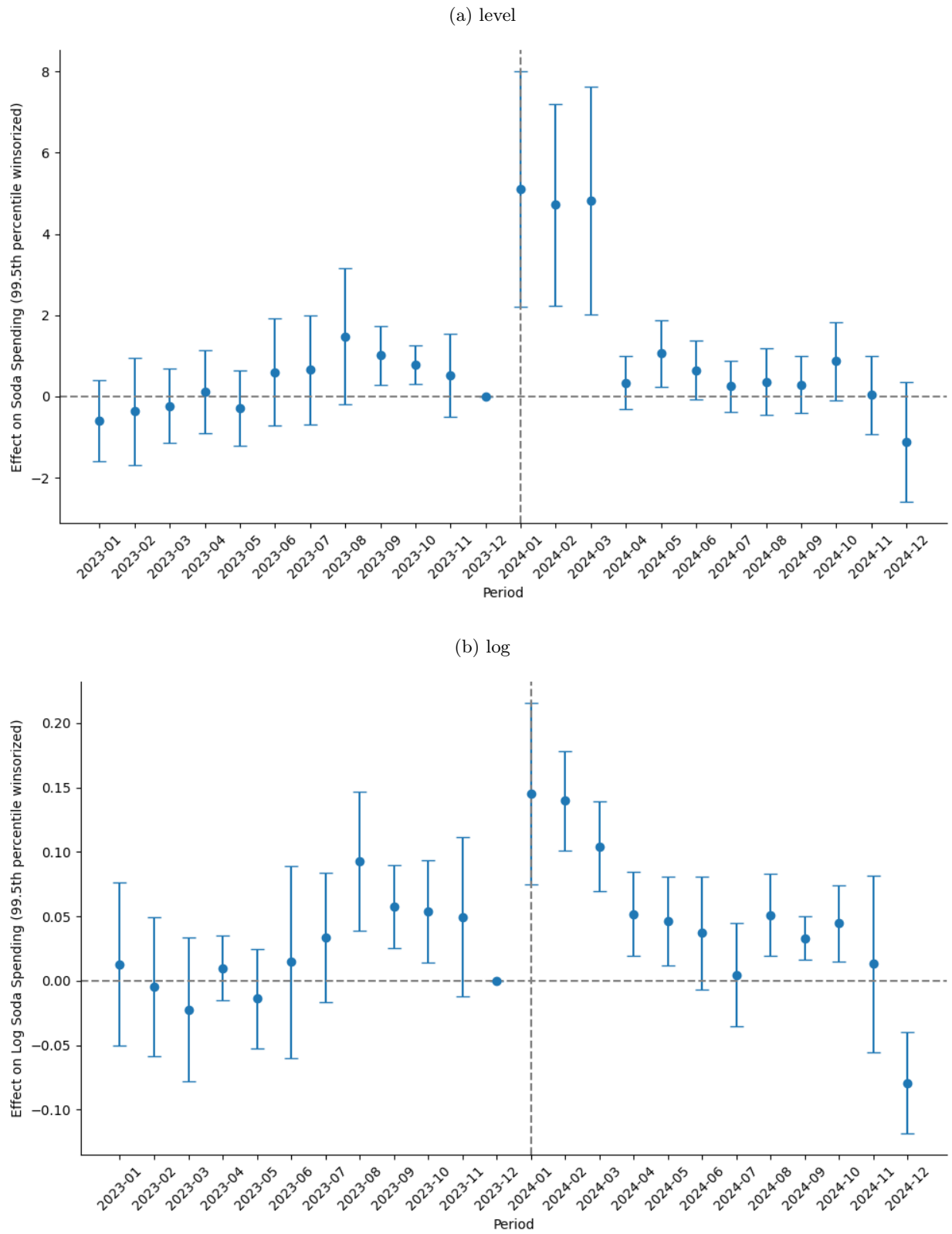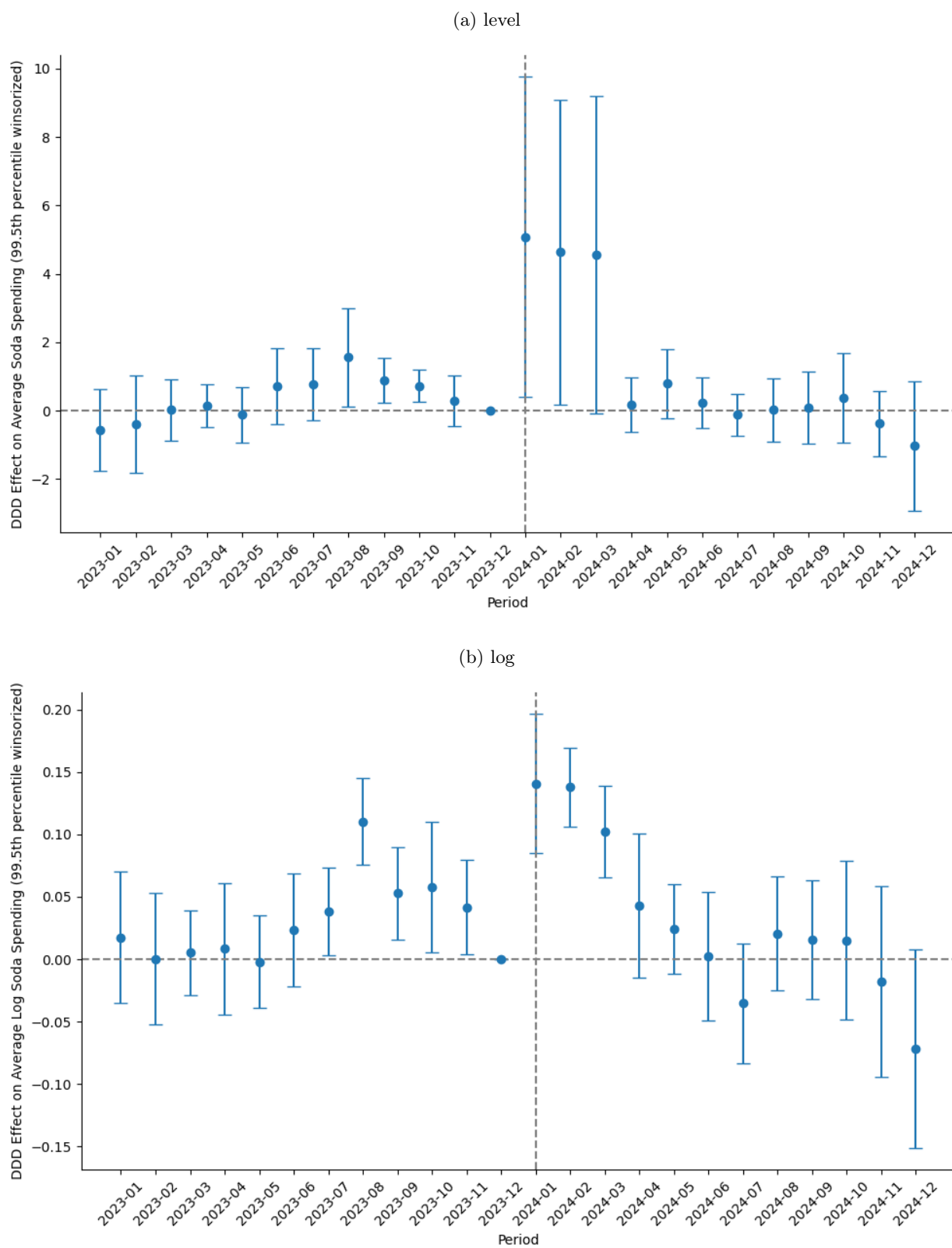Figure 13: Event Study - TWFE (Treatment Assignment = SNAP/Non-SNAP) within treated states

(a) level

(b) log

Figure 14: Event Study - DDD

(a) level

(b) log

Table 1: Model Estimates

Term	TWFE	TWFE Log	TWFE	TWFE Log	DDD	DDD Log
Post	2.1462*** (0.1367)	0.0354*** (0.0059)	1.8319*** (0.5177)	0.0080 (0.0123)	2.1004*** (0.1462)	0.0314*** (0.0060)
State × Post	-0.1682 (0.5301)	-0.0242** (0.0120)				
SNAP × Post			1.1765*** (0.1336)	0.0259* (0.0154)		
State × SNAP × Post					0.9080* (0.4905)	0.0024 (0.0100)
N	4,646,511	4,646,511	757,102	757,102	4,646,511	4,646,511
R^2	0.0033	0.0002	0.0028	0.0000	0.0033	0.0002
User FE	Yes	Yes	Yes	Yes	Yes	Yes
Period FE	No	No	No	No	No	No
SE Cluster	state	state	state	state	state	state