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 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

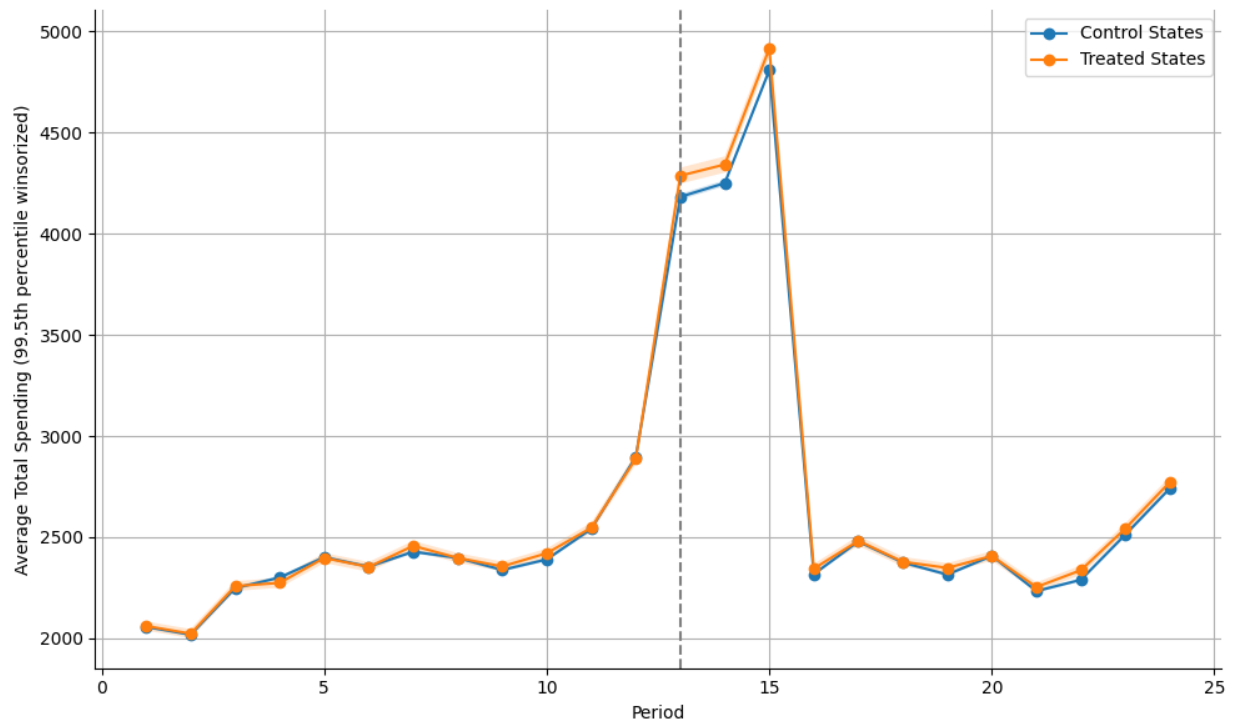2. Figures: Event Studies

   - 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 Food Spending
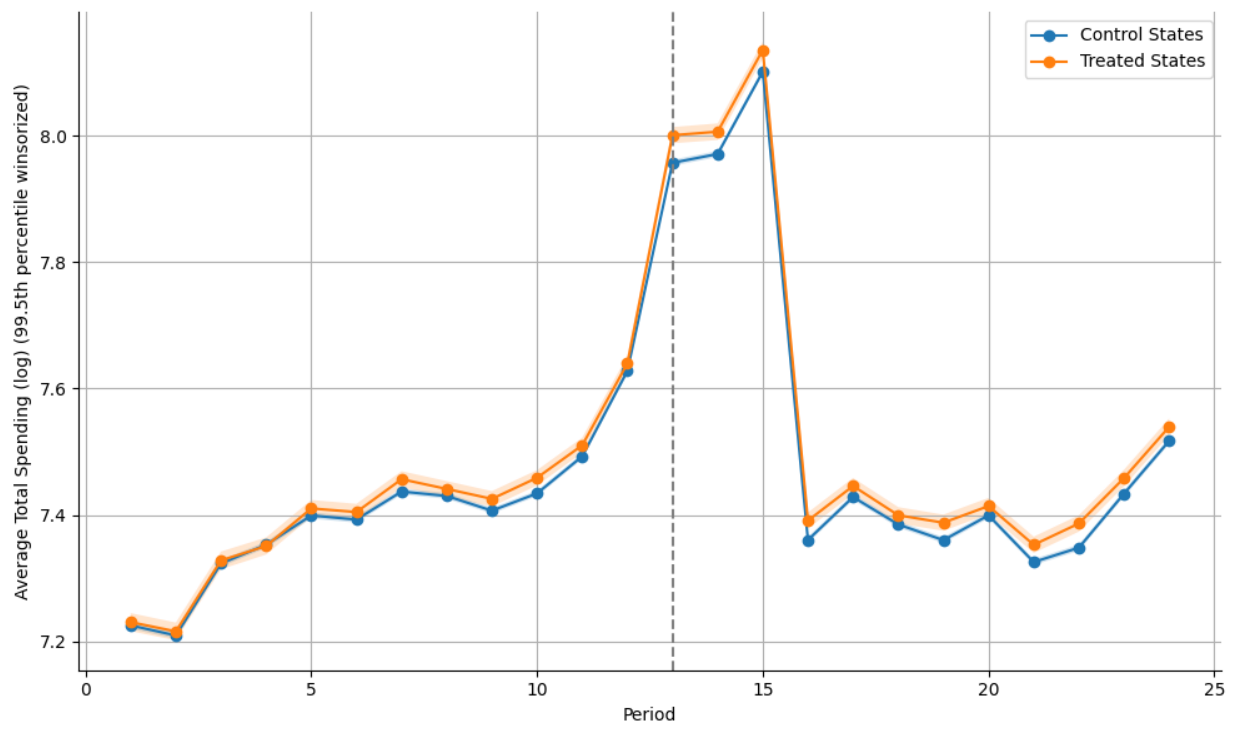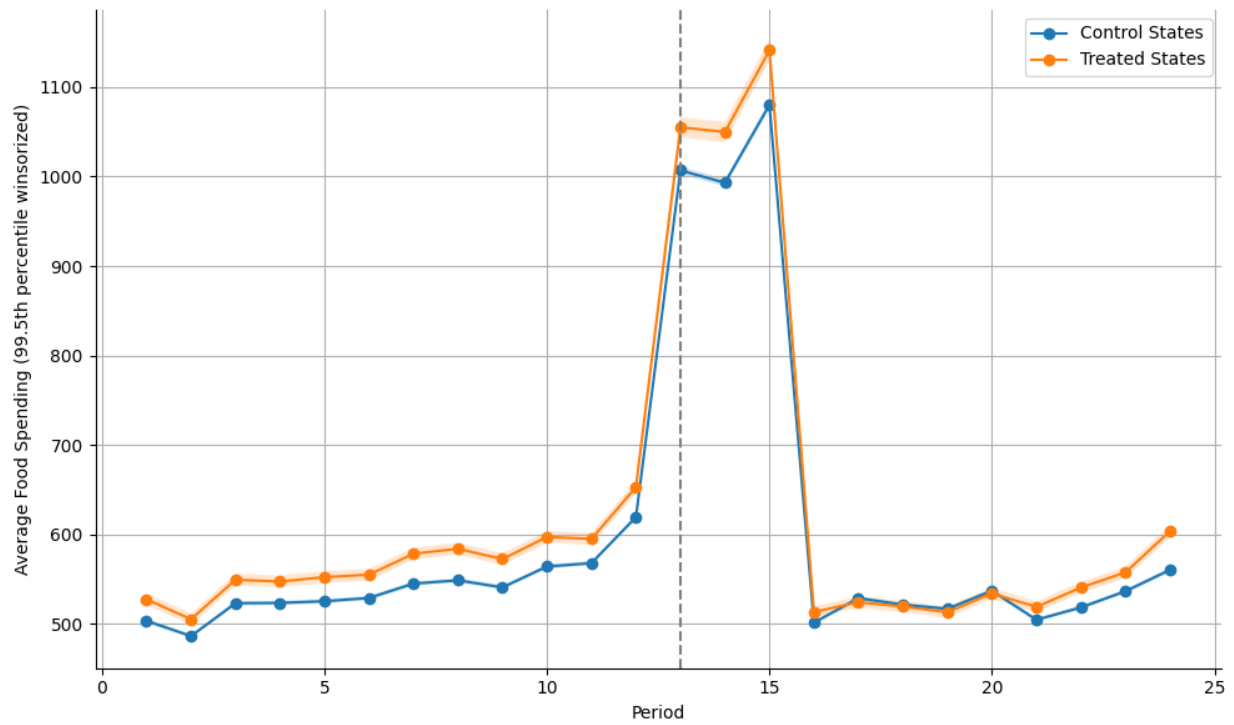
(a) level

(b) log

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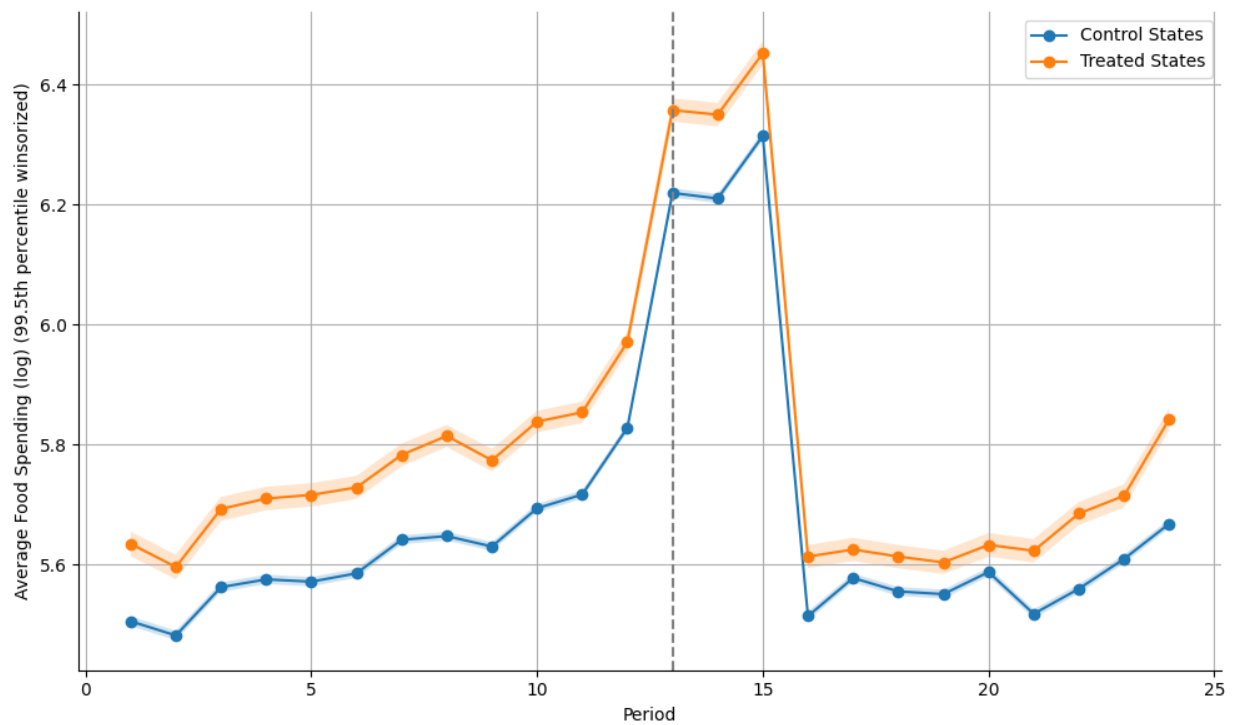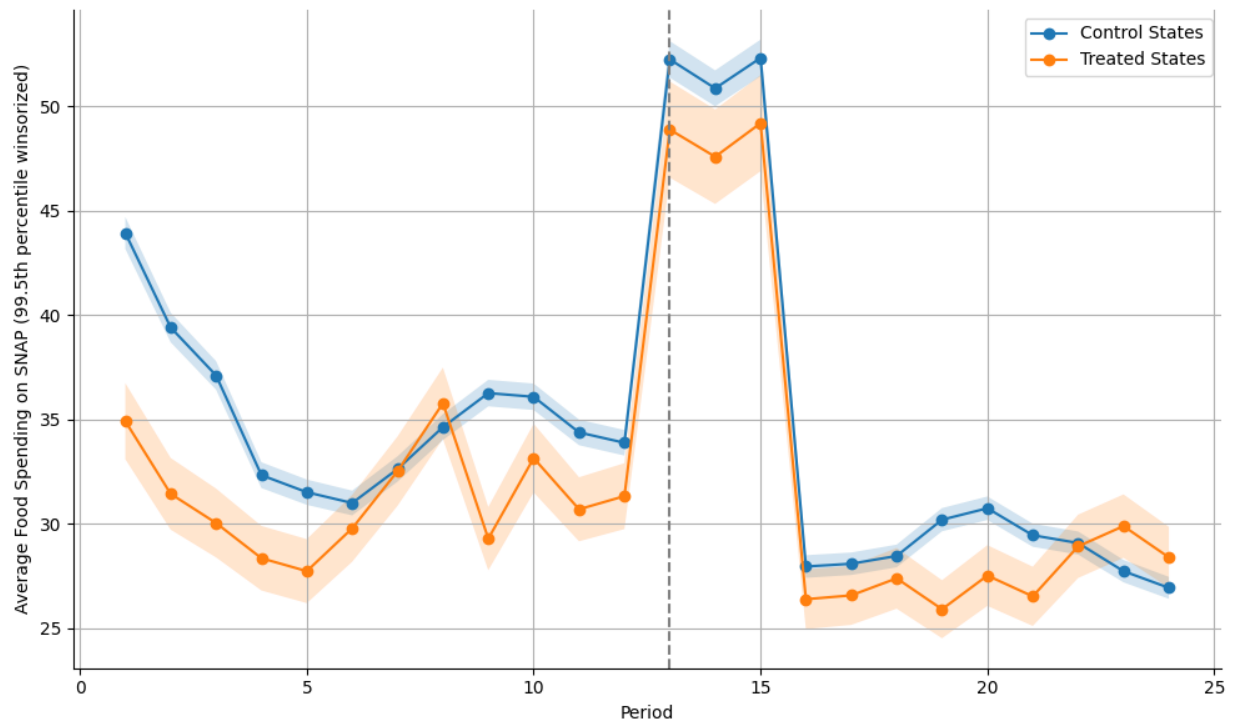
(a) level

(b) log

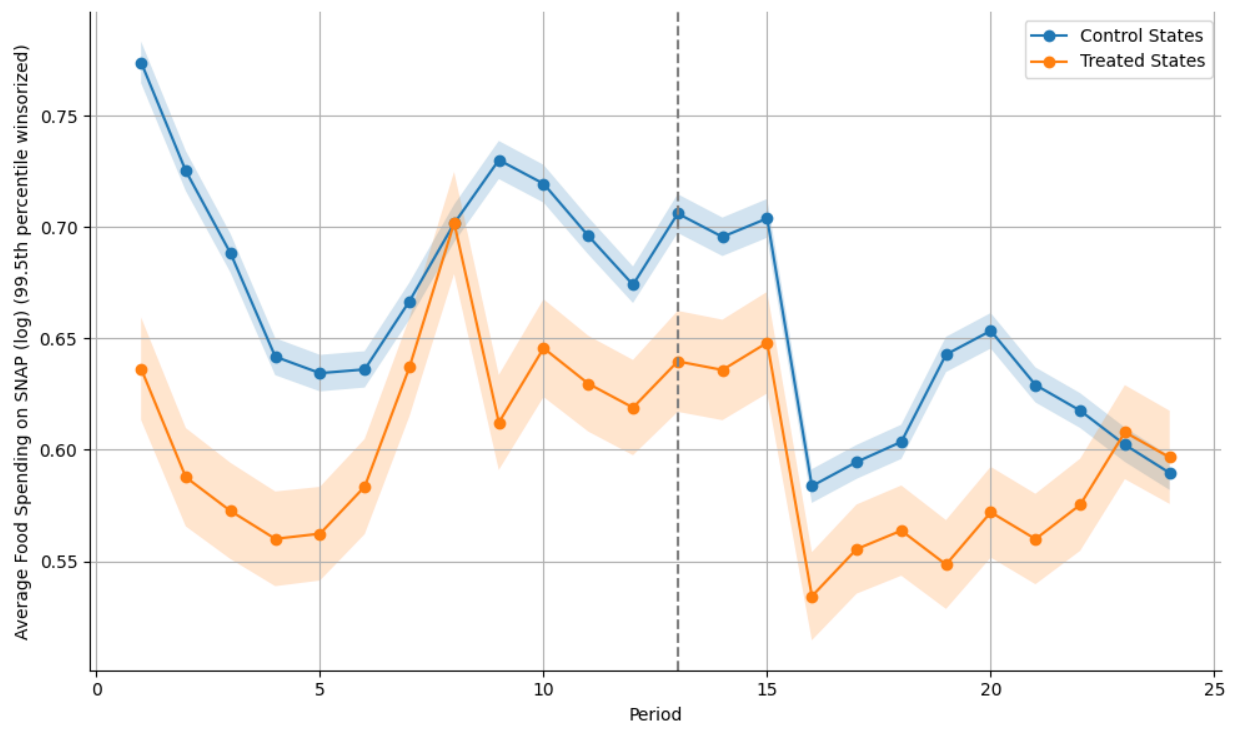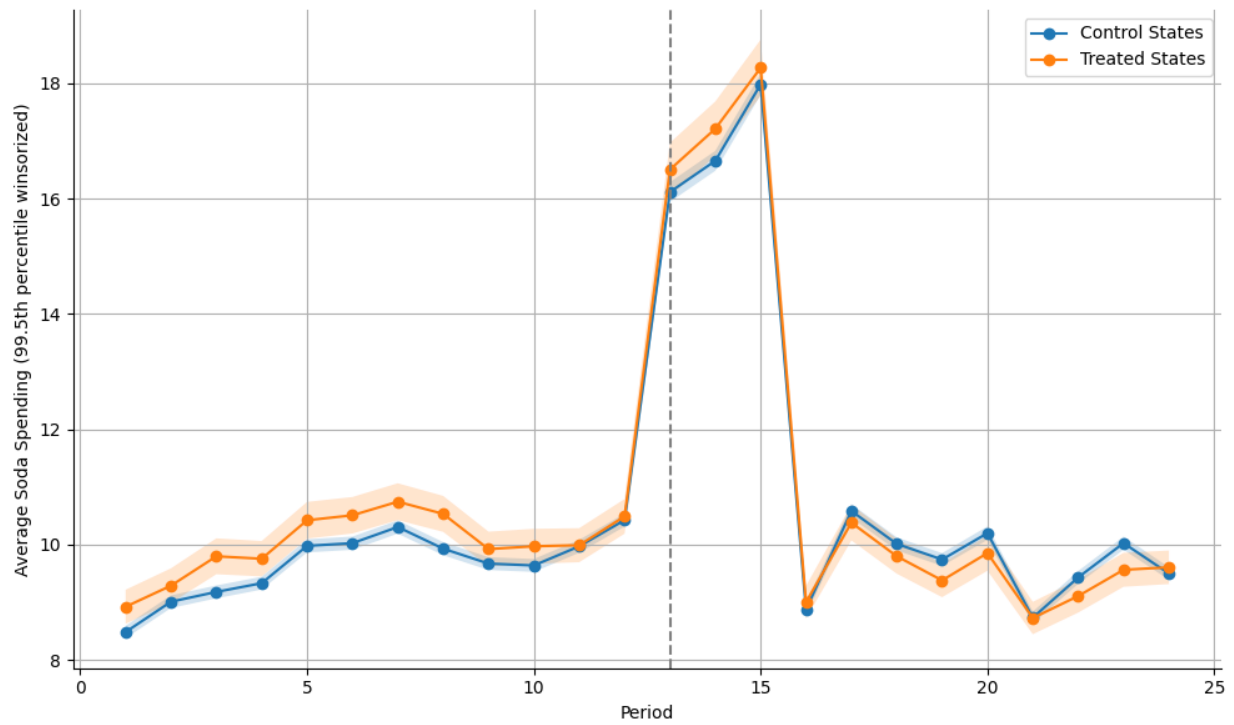Figure 3: Monthly Average of Food Spending on SNAP

(a) level

(b) log

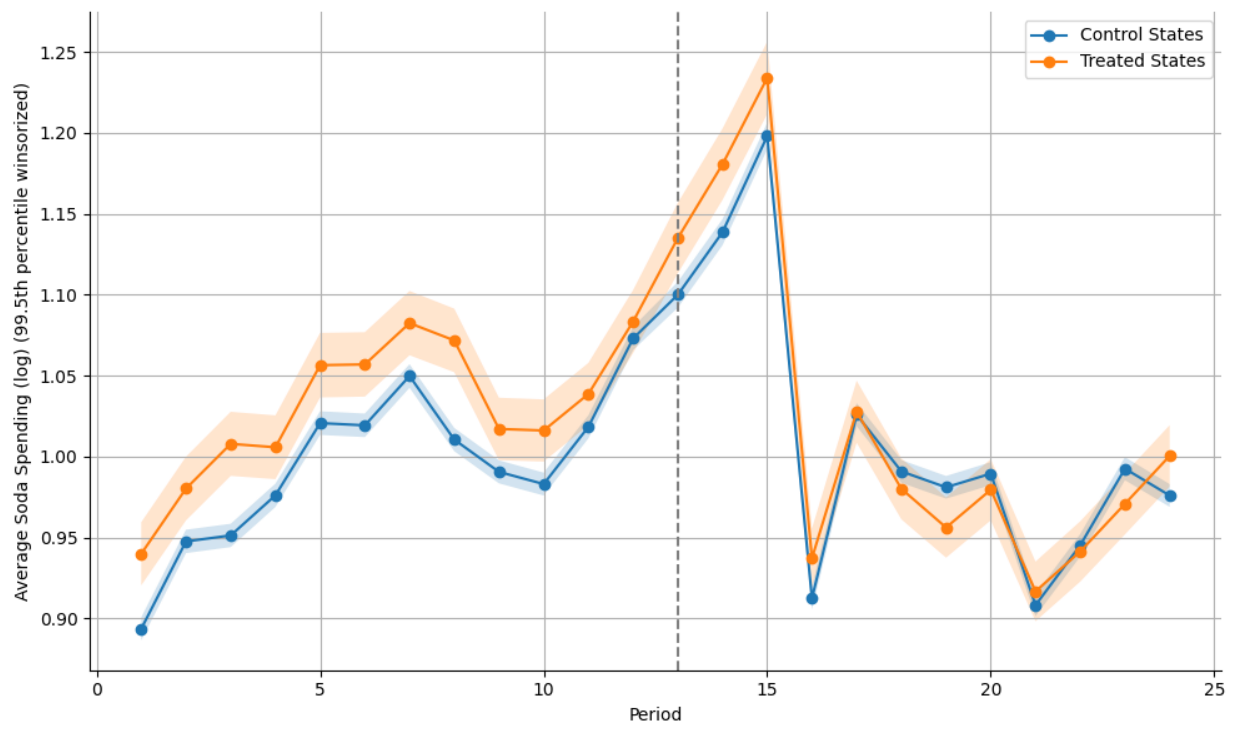Figure 4: Monthly Average of Soda Spending
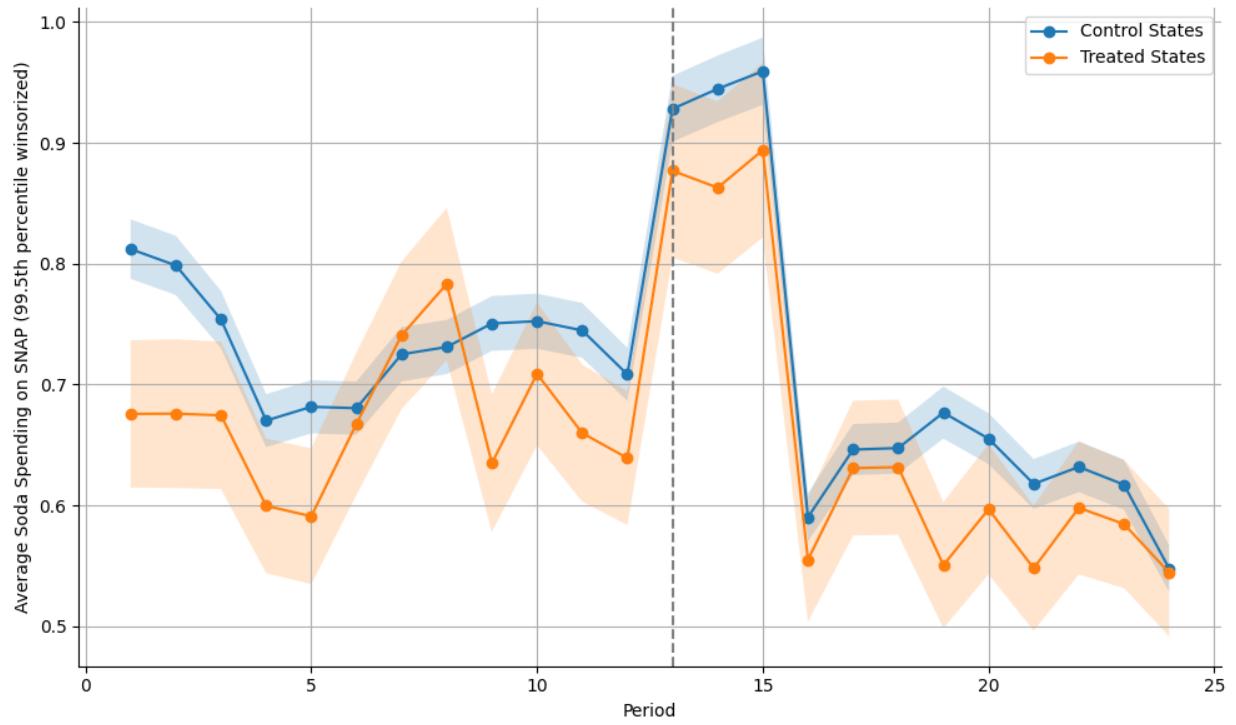
(a) level

(b) log

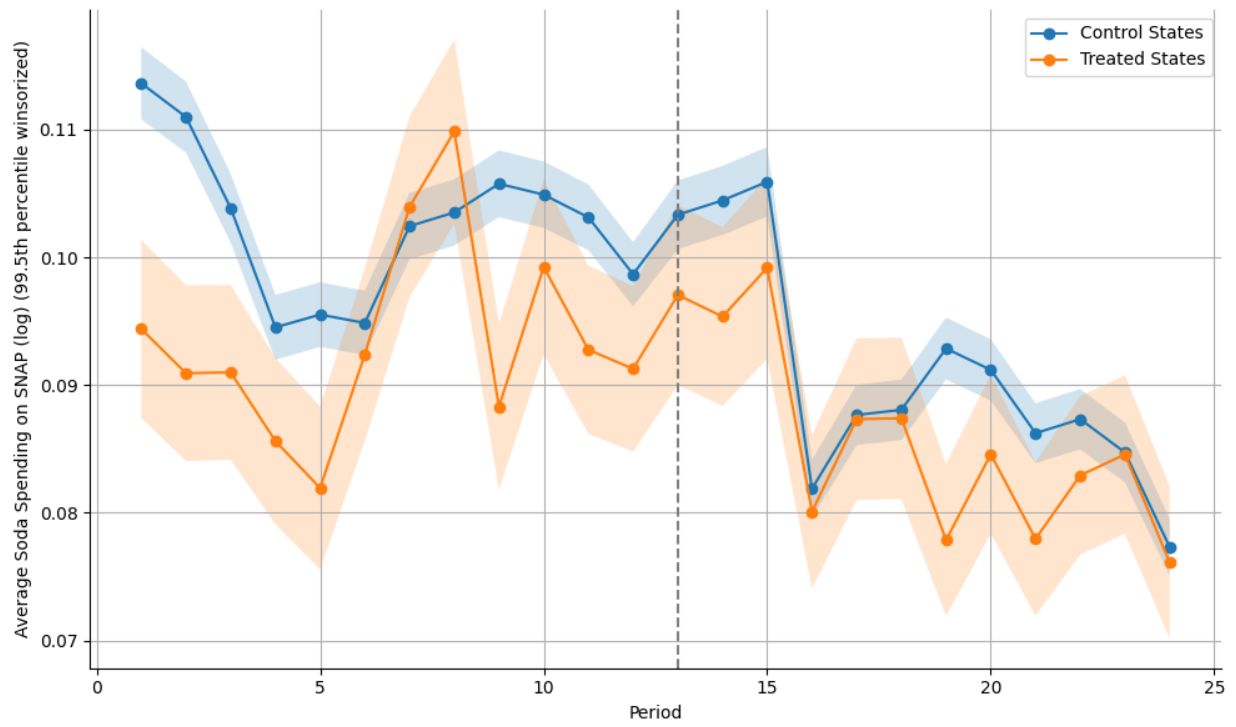Figure 5: Monthly Average of Soda Spending on SNAP

(a) level

(b) log

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

(a) level

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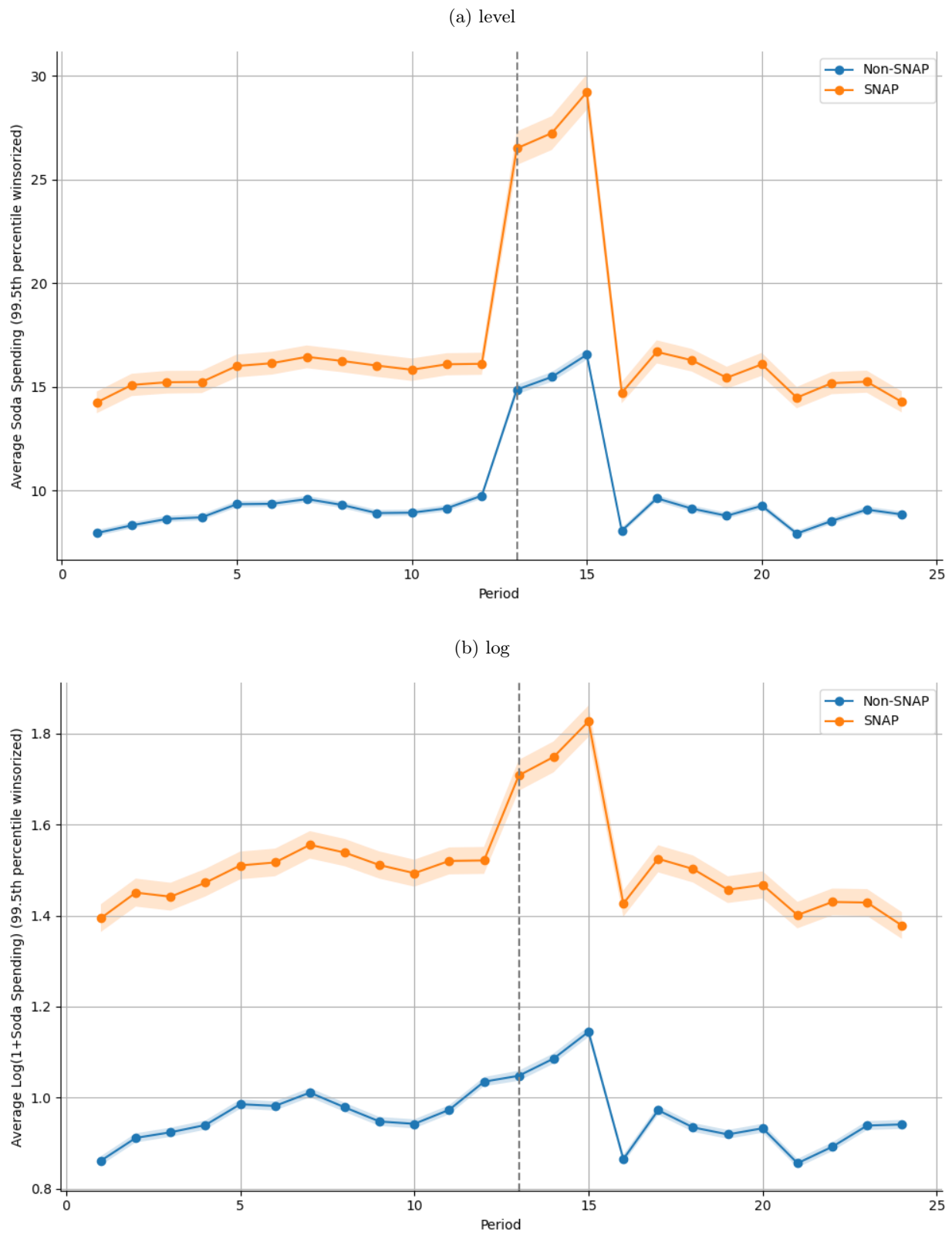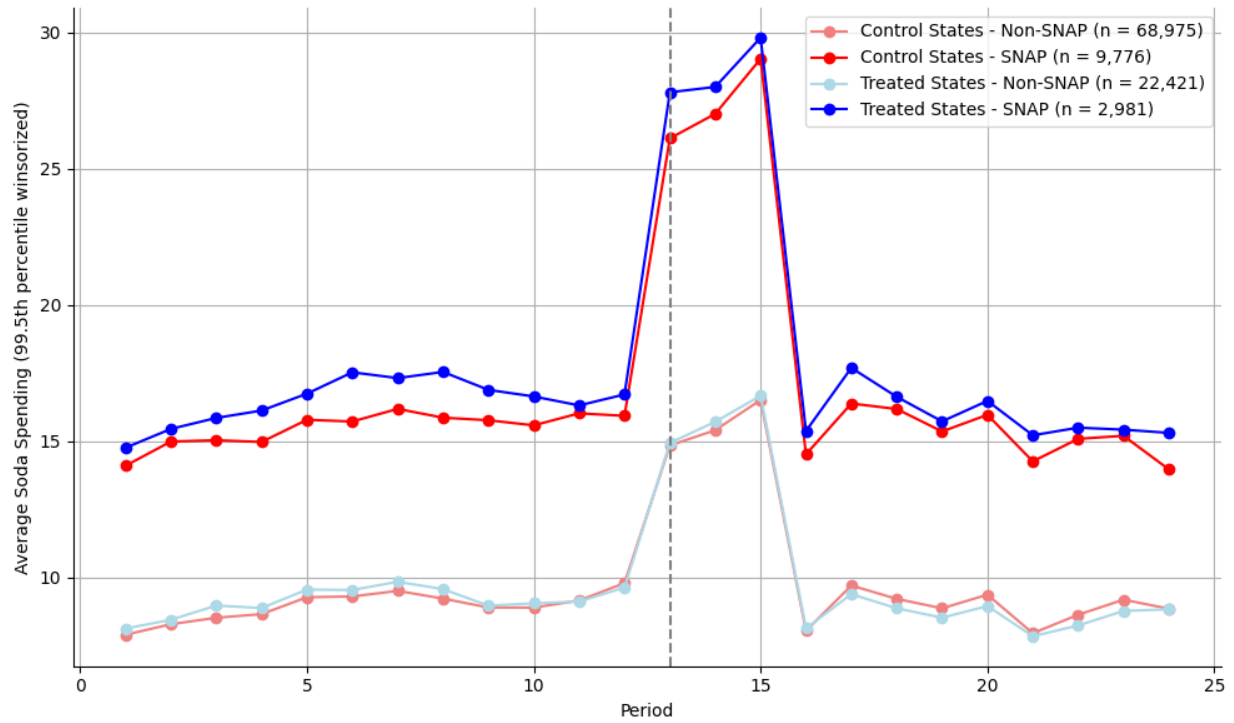
Figure 7: Monthly Average of Soda Spending by SNAP × state
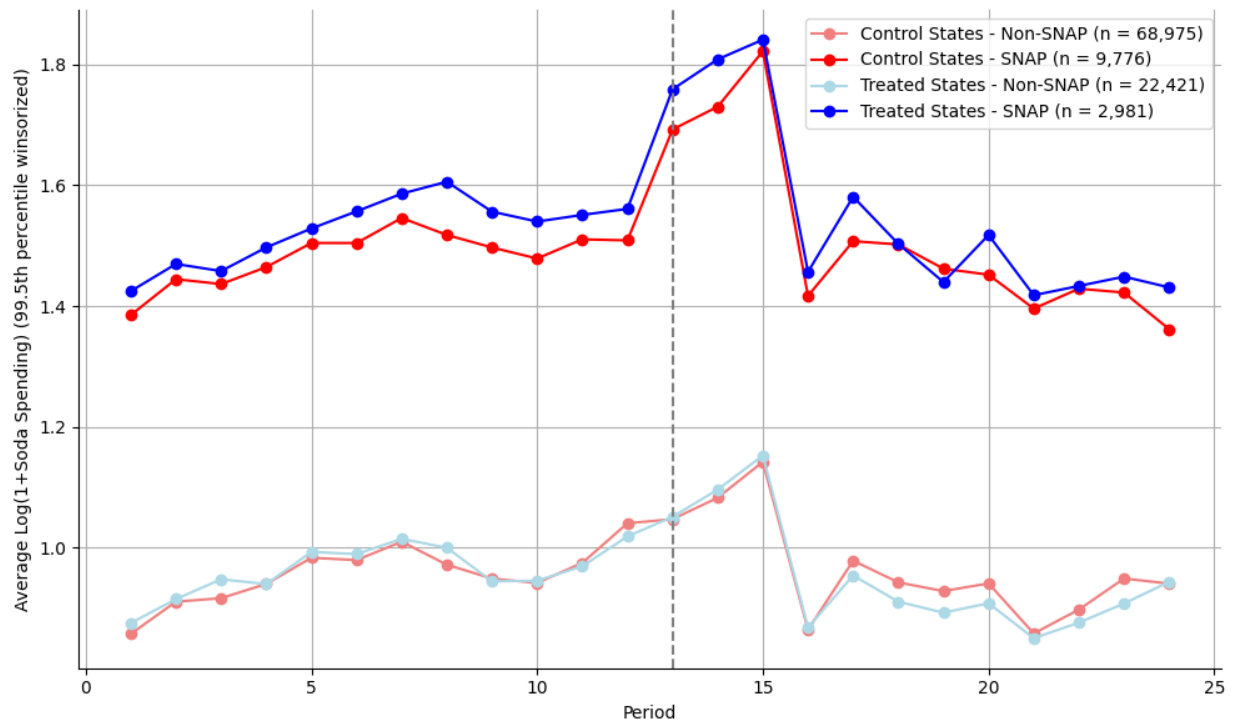
(a) level

(b) log

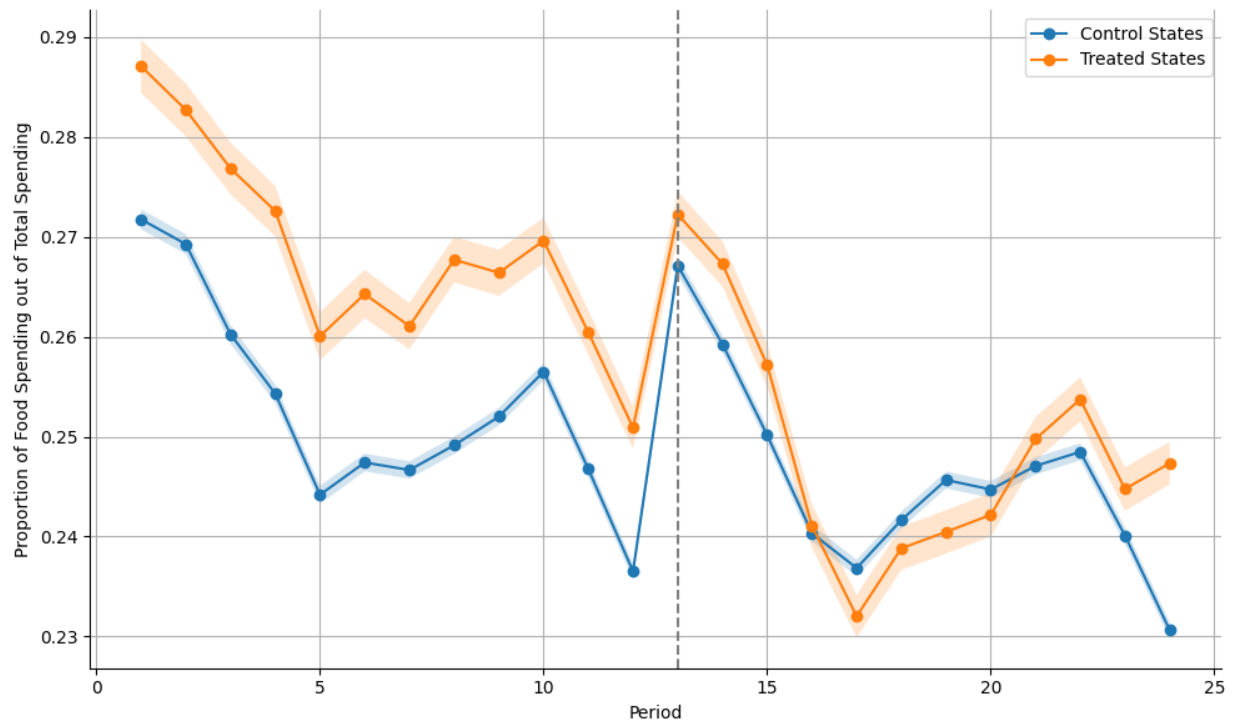Figure 8: Proportion of Food Spending out of Total Spending

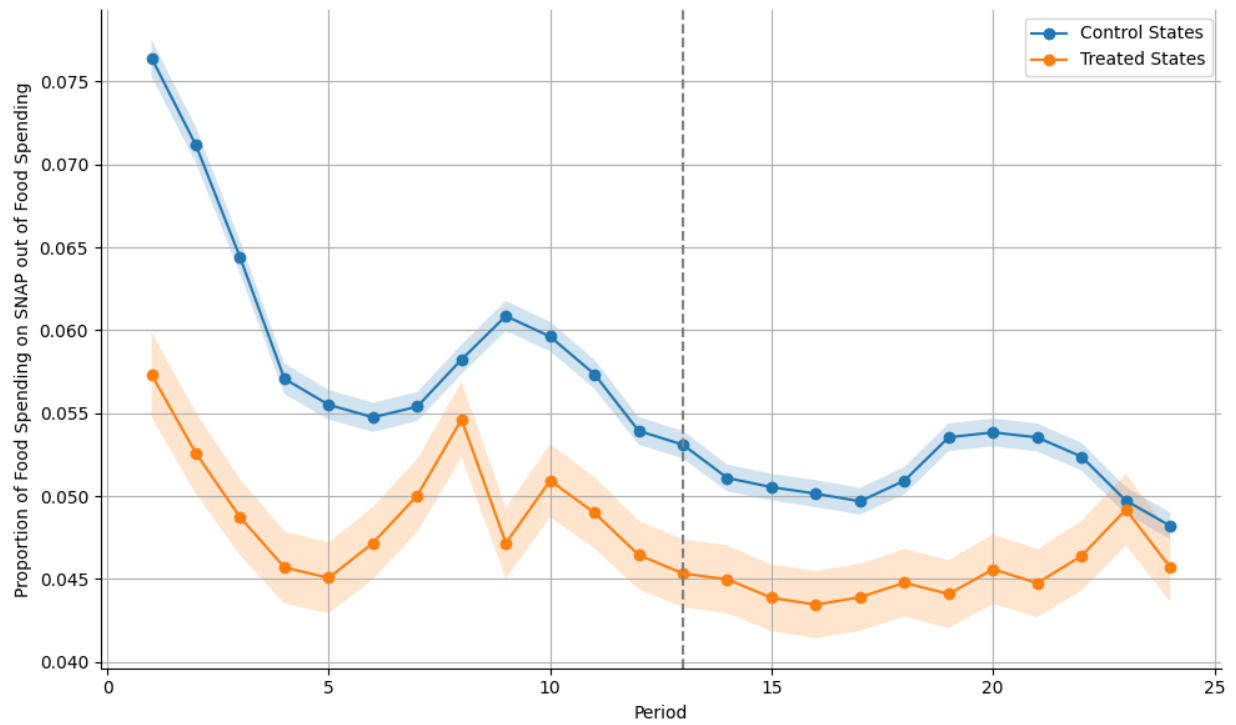Figure 9: Proportion of Food Spending on SNAP out of Total Food Spending

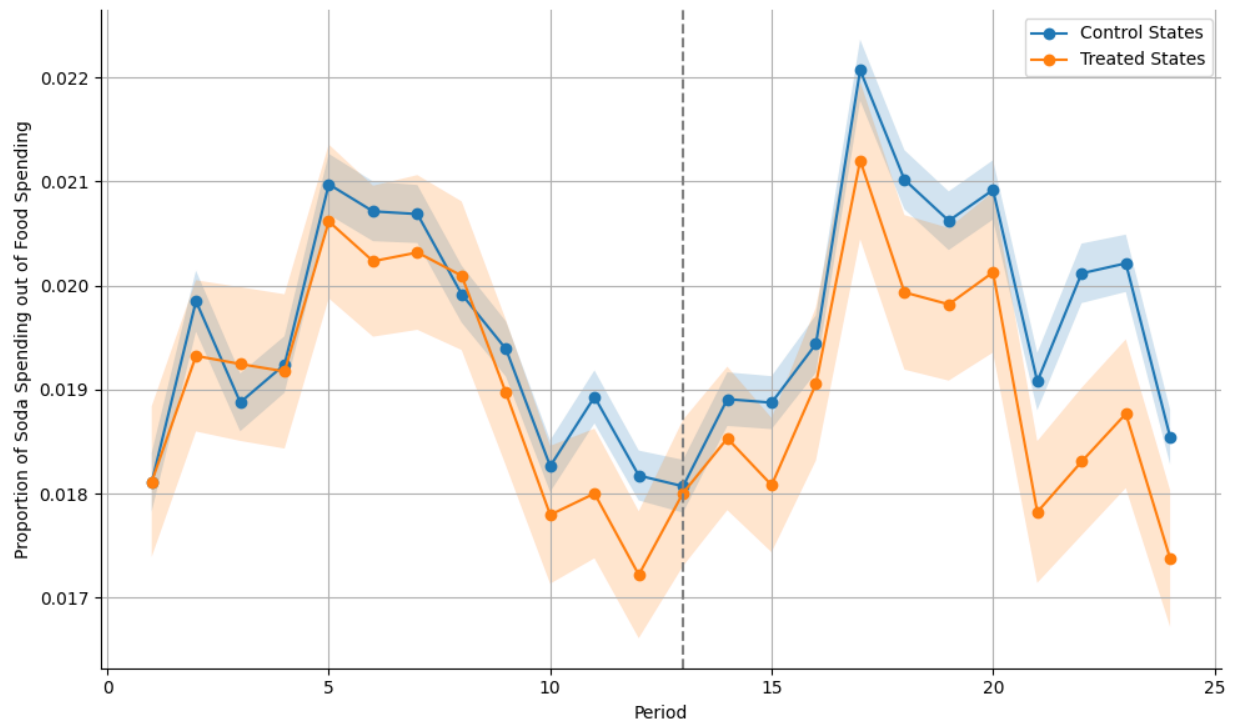Figure 10: Proportion of Soda Spending out of Total Food Spending
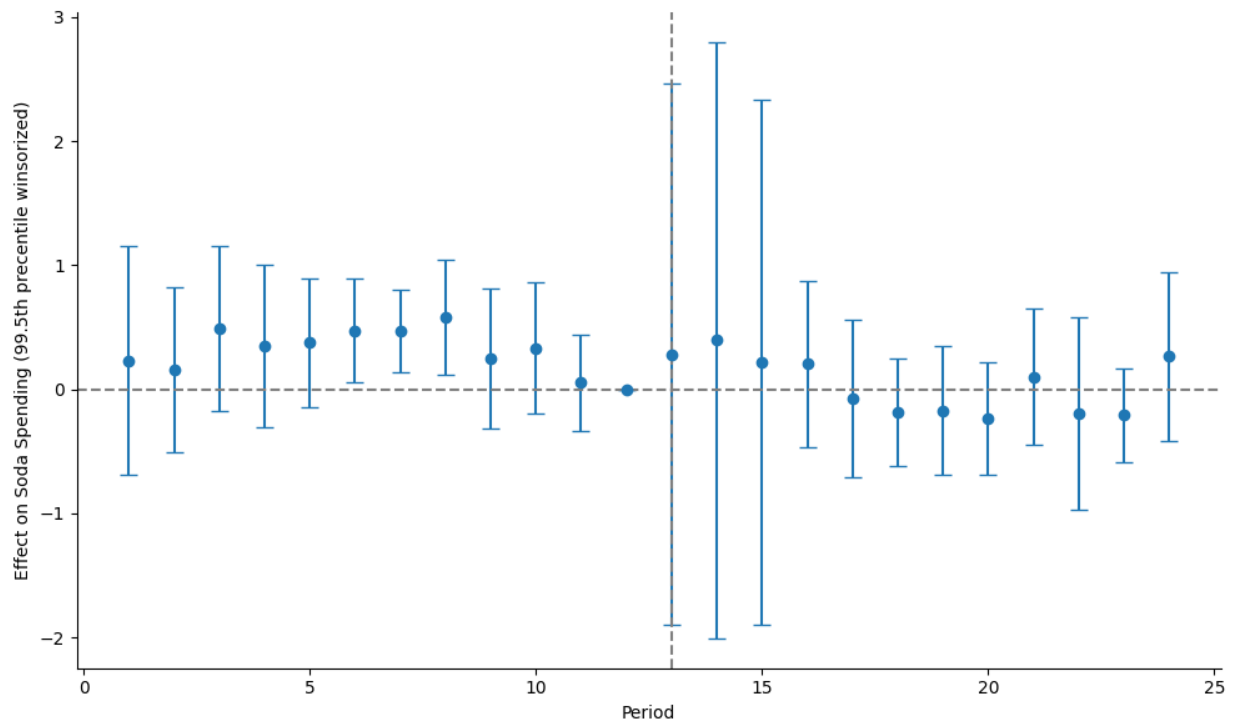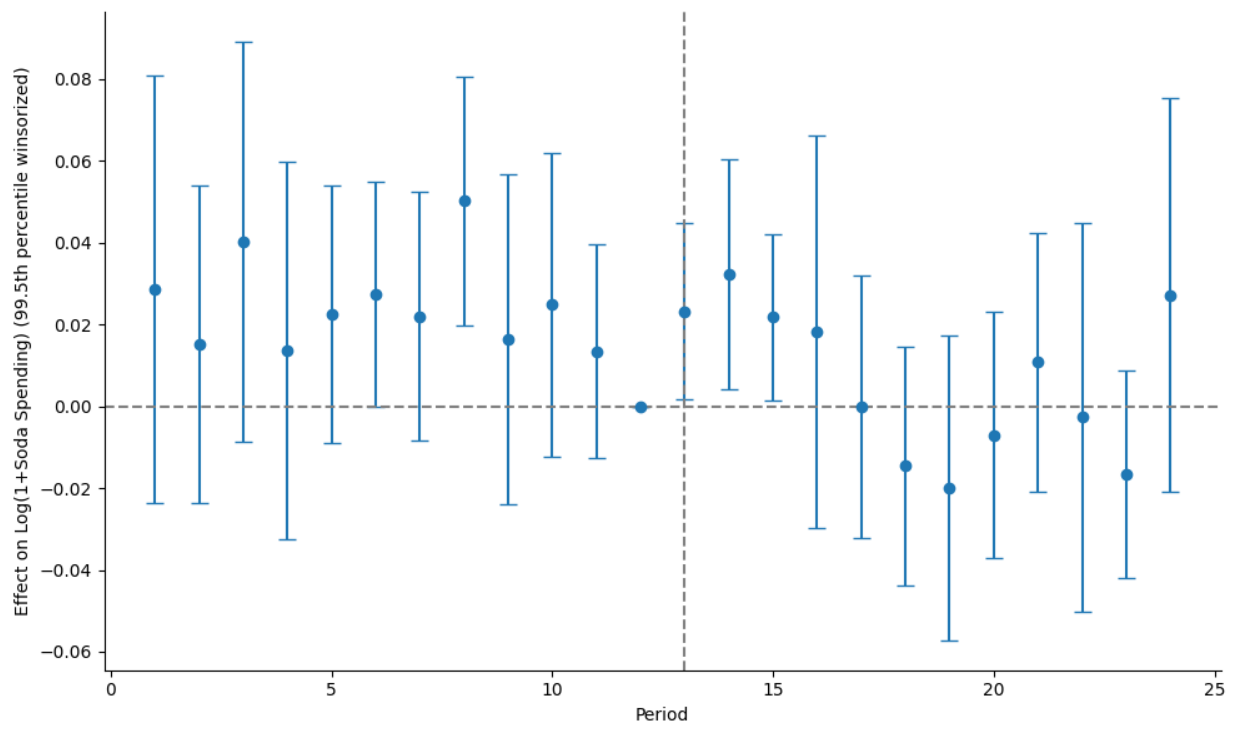
Figure 11: Event Study - TWFE

(a) level

(b) log

Figure 12: Event Study - TWFE (Treatment Assignment = SNAP/Non-SNAP) within treated states

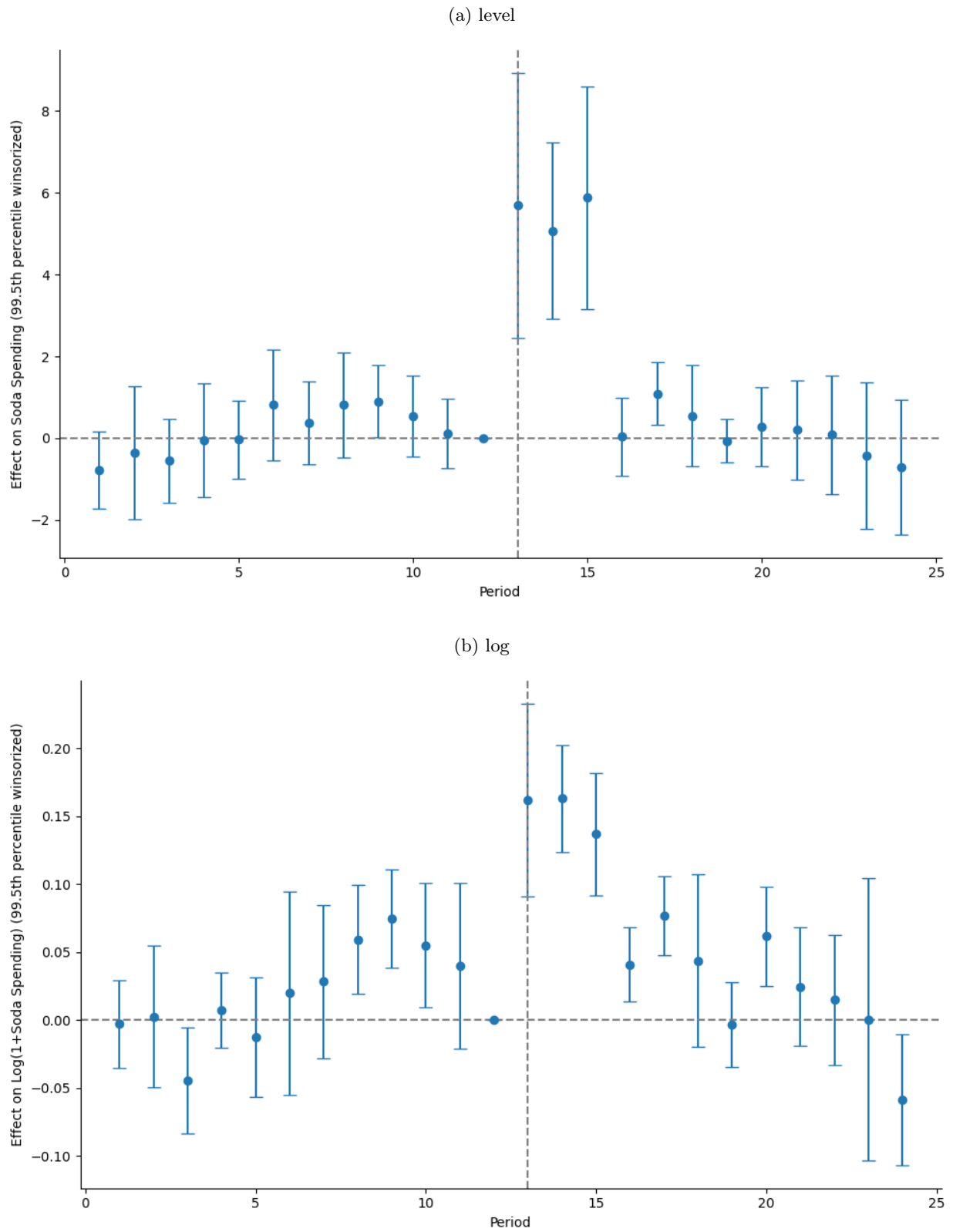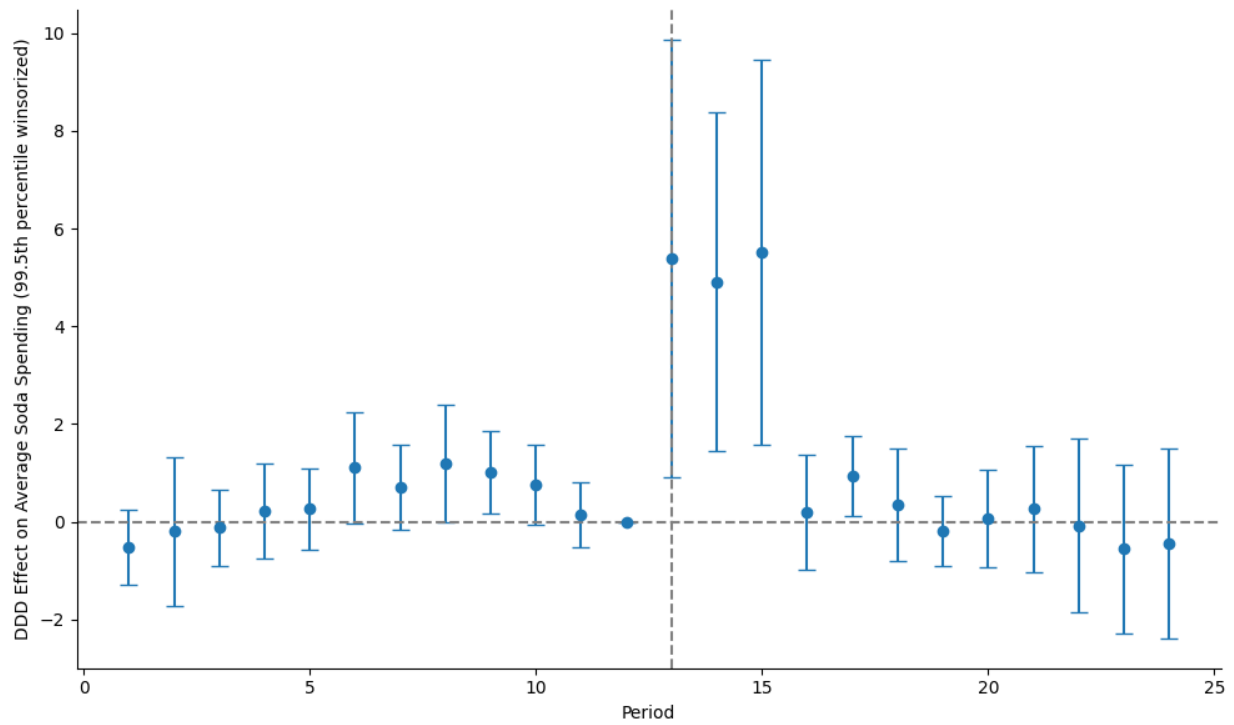(a) level

(b) log

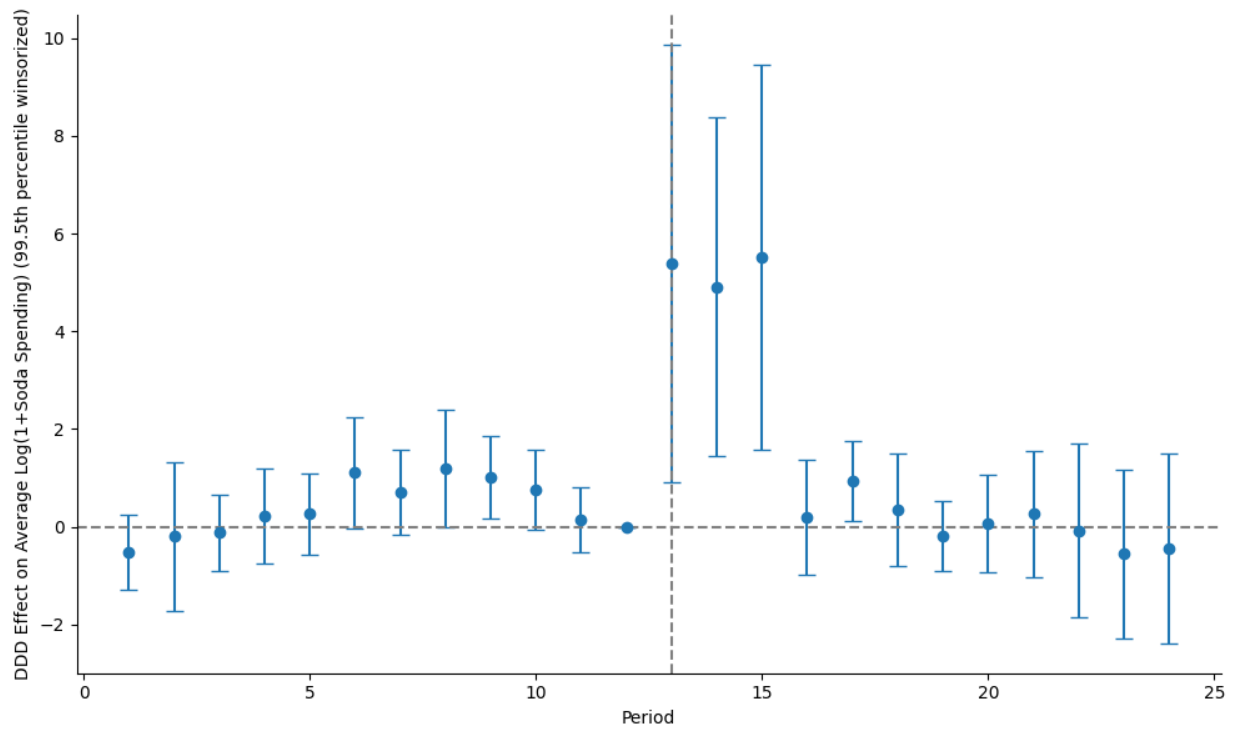Figure 13: Event Study - DDD

(a) level

(b) log

Table 1: Model Estimates

	TWFE	TWFE Log	TWFE	TWFE Log	DDD	DDD Log
Post	2.0500***	0.0258***	1.6091***	0.0047	1.9527***	0.0211***
	(0.1240)	(0.0058)	(0.4304)	(0.0113)	(0.1609)	(0.0062)
State × Post	-0.2780	-0.0166				
	(0.4293)	(0.0112)				
SNAP × Post			1.3724***	0.0372**		
			(0.1652)	(0.0165)		
State × SNAP × Post					1.0288***	0.0208*
					(0.2280)	(0.0121)
N	2,306,511	2,306,511	561,218	561,218	2,306,511	2,306,511
R^2	0.0029	0.0001	0.0024	0.0000	0.0029	0.0001
User FE	Yes	Yes	Yes	Yes	Yes	Yes
Period FE	No	No	No	No	No	No
SE Cluster	state	state	state	state	state	state