Supplementary Materials: Exploring Impacts of Taxes and Hospitality Bans on Cigarette Prices and Smoking Prevalence Using a Large Dataset of Cigarette Prices at Stores 2001–2011, USA

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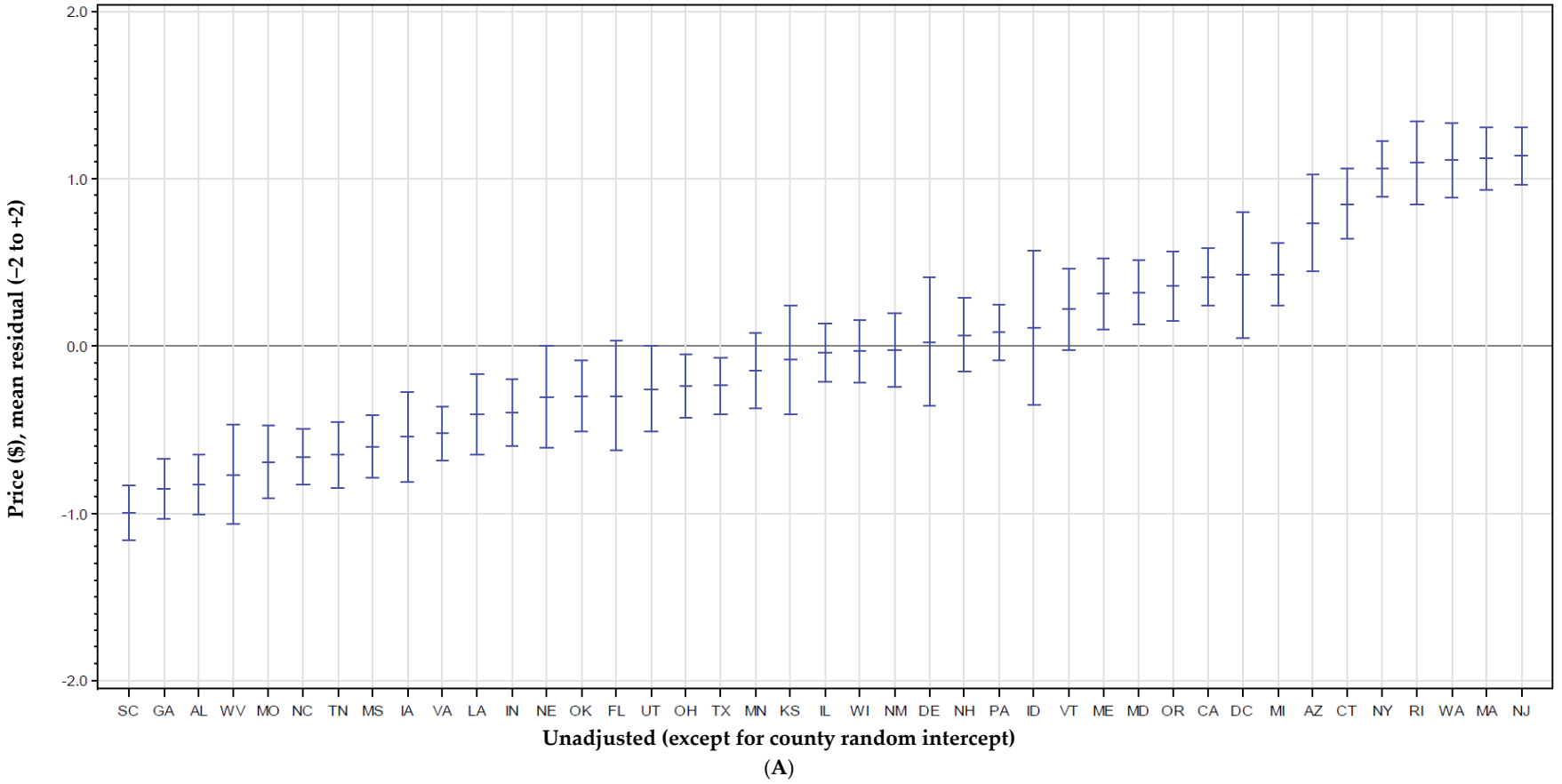

(A)

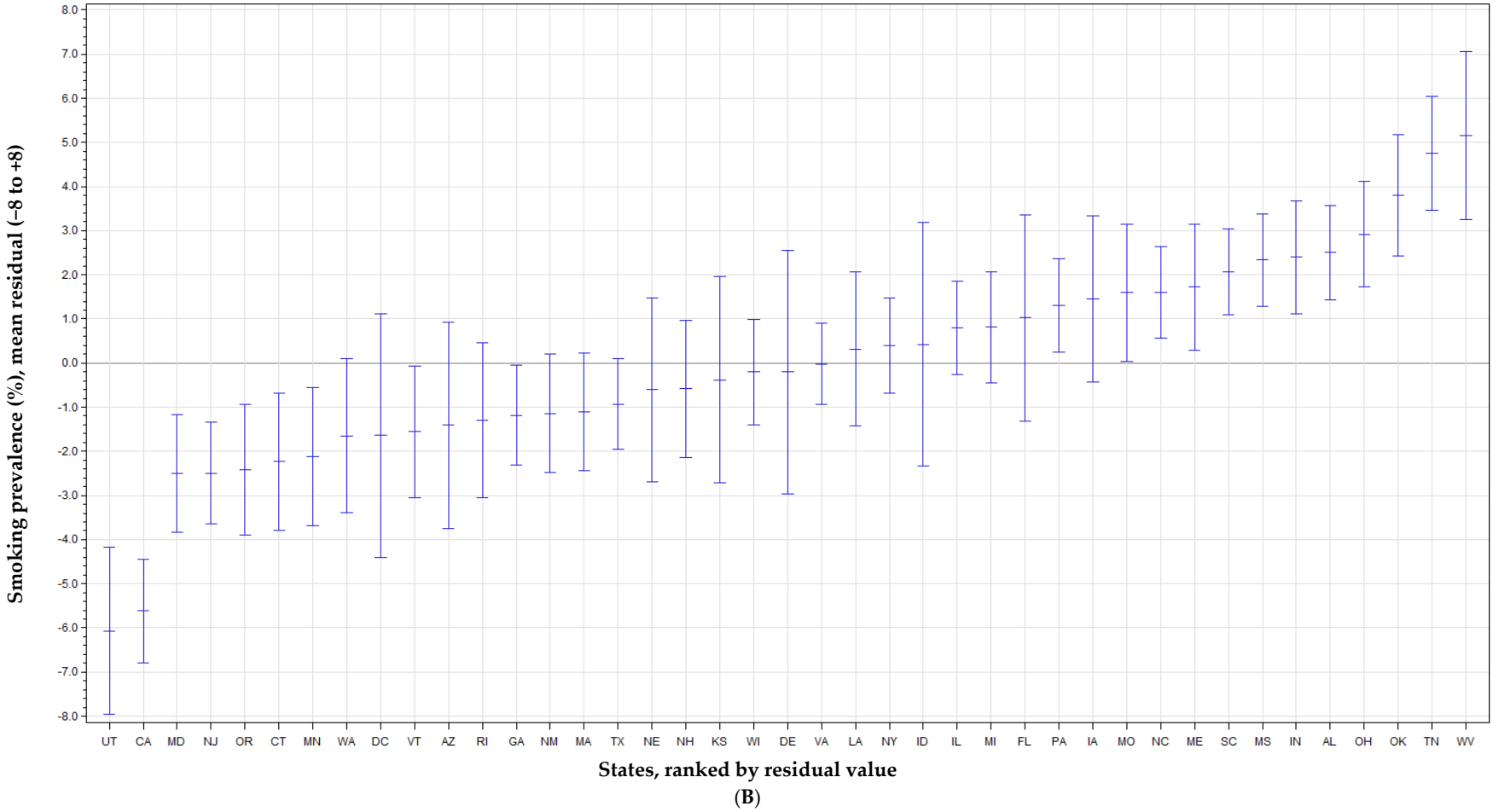

Figure S1. Variation by state in (**A**) average cigarette price per pack by state (**B**) daily smoking prevalence; with 95% confidence intervals. Y-axis is the mean residual and X-axis displays rankings low to high. Y-axis residuals means that 0 is the overall average, −1.0 on the y-axis means the value is −1.0 than average.

Table S1. Sensitivity to using fixed effects. Mean differences in store-level cigarette prices per pack; data from 2001–2011, n = 2973 chain supermarkets and convenience stores; estimates are derived from a fixed effects model *.

Variable	Label	Model 1.2 Base Model † Plus State Tax		Model 1.3 Base Model † Plus Hospitality Smoking Ban		Model 1.4 Base Model † Plus State Tax, Hospitality Smoking Bans, SES Index, Race		Model 1.5 Base Model † Plus State Tax, Hospitality Smoking Bans, SES Index, Race, Interaction Tax × Ban	
		Est	***p*-Value**	**Est**	***p*-Value**	**Est**	***p*-Value**	**Est**	***p*-Value**
State tax	State cigarette tax, per pack	0.920	<0.0001			0.904	<0.0001	0.852	<0.0001
Ban	Hospitality (restaurant and bar) indoor smoking ban			0.313	<0.0001	0.086	<0.0001	−0.077	0.0477
Interaction	Tax × Ban							0.096	<0.0001
Area-level ‡	Socio-economic index					0.001	<0.0001	0.002	<0.0001
	Race non-Hispanic white					0.000	<0.0001	0.000	0.2701

Est = Estimate. Ref = Referent value; * Dummy variables were included for state-county; † Base adjustment. All models include dummy variables for time (year 2001–2011); note that year also accounts for federal cigarette tax. Additional covariates: state tobacco control funding, area-level age (percent of population aged 10–19, 20–39, 40–64, 65+). For each store, region, urbanicity, and store type do not change over time thus are not utilized in the fixed effects model; ‡ Area-level refers to block group cluster. Area-level socio-economic index units are displayed in 10 percentile increments (cigarette price increases $0.02 per 10% increase in socio-economic index).

Table S2. Sensitivity to using fixed effects. Adjusted mean difference in county-level smoking prevalence according to cigarette price, state tax, hospitality ban and interactions, data from 2001–2011. Estimates are derived from a fixed effects model *.

Variable	Label	Model 2.1 Base Adjustment †, Cigarette Price, State Tax		Model 2.2 Base Adjustment †, Cigarette Price, State Tax, Hospitality Bans		Model 2.3 Base Adjustment †, SES Index, Race, Cigarette Price, State Tax, Hospitality Bans, Interaction Tax × Bans	
		Estimate	*p*-Value	Estimate	*p*-Value	Estimate	*p*-Value
A. Daily smoking prevalence							
County cigarette price (after adjustment for taxes)		0.022	0.279	0.023	0.251	0.026	0.187
State tax	State cigarette tax, per pack	−0.459	<0.0001	−0.441	<0.0001	−0.316	<0.0001
Ban	Hospitality (restaurant and bar) indoor smoking ban			−0.122	0.003	0.274	0.001
Interaction	Ban × state tax					−0.249	<0.0001
B. Non-daily (casual) smoking prevalence							
County cigarette price (after adjustment for taxes)		0.04	0.002	0.042	0.001	0.042	0.001
State tax	State cigarette tax, per pack	−0.127	<0.0001	−0.1	<0.001	−0.1	0.001
Ban	Hospitality (restaurant and bar) indoor smoking ban			−0.177	<0.0001	−0.176	0.001
Interaction	Ban × state tax					−0.001	0.981

Est = Estimate. Ref = Referent value; * Dummy variables were included for state-county; † Base adjustment. All models include time which was entered as a linear term for year + year squared + dummy variable to indicate before or after year 2009 (the year when the federal tax increased across all U.S. states); cigarette price; state tobacco control funding; and area-level age (percent of population aged 10–19, 20–39, 40–64, 65+). For each store, region and urbanicity do not change over time thus are not utilized in the model.

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