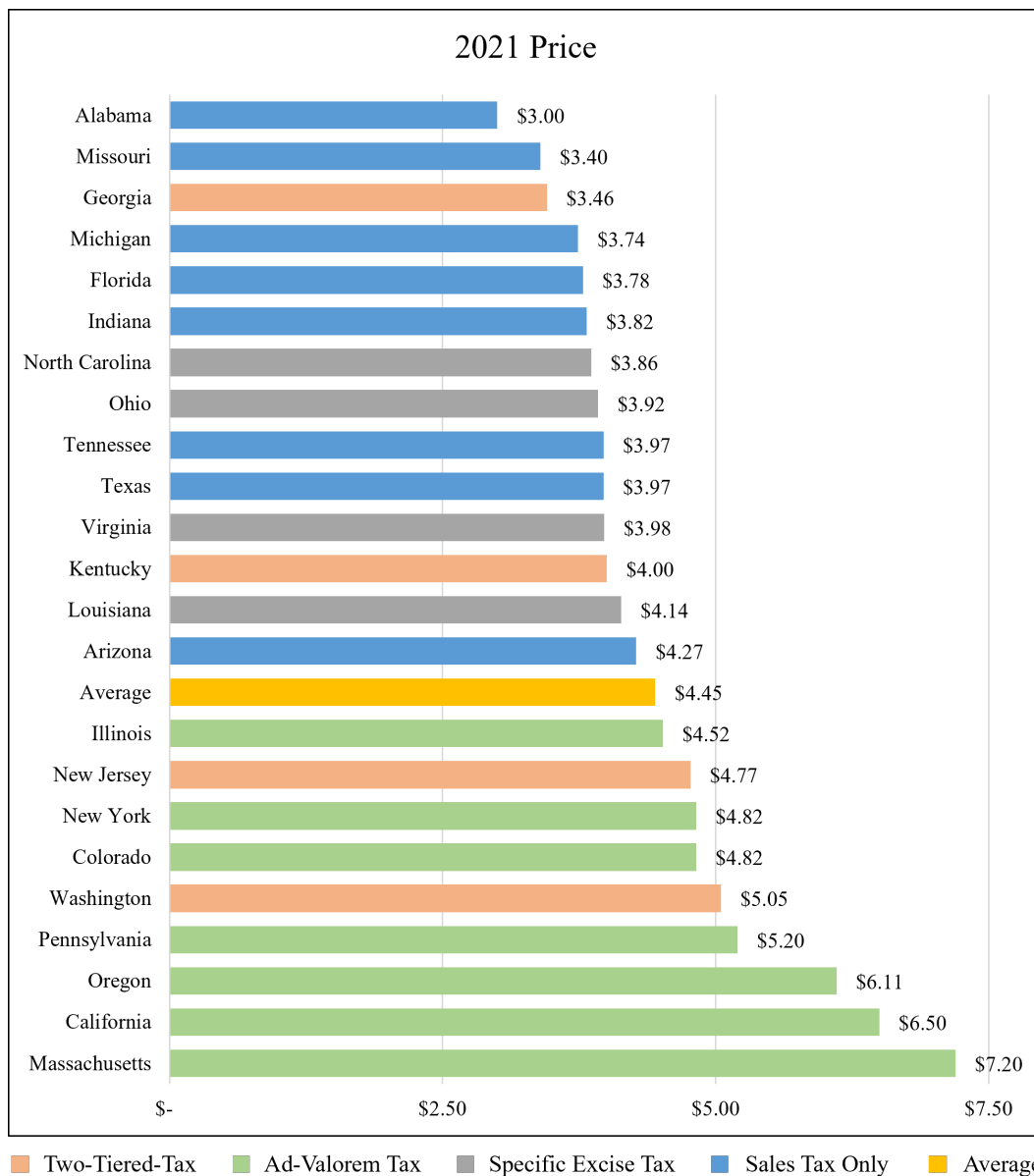
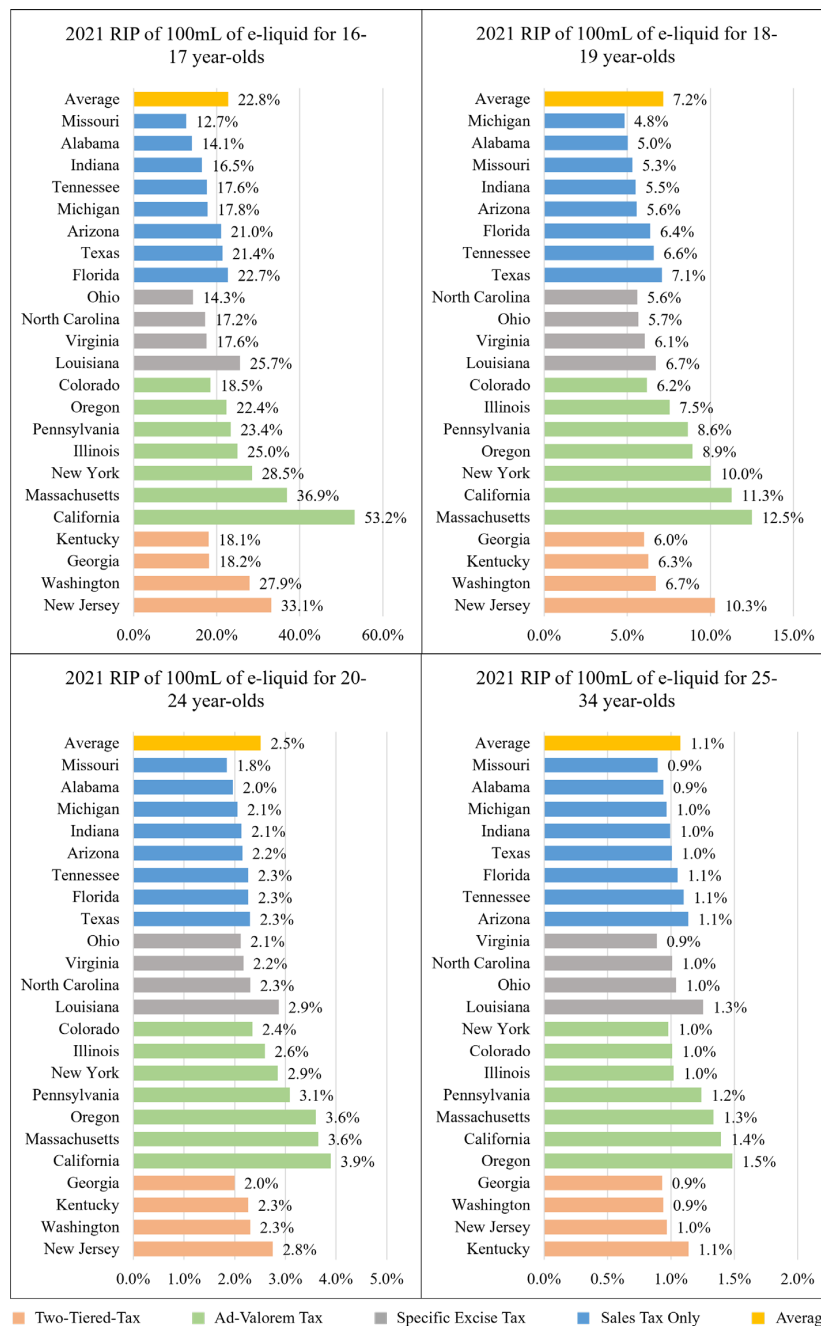


Supplemental Figure 1. Real Price (2021 US dollars) of 1mL of E-Liquid in 23 US States in 2021 Using NielsenIQ Stateline Data



States with two-tiered, *ad-valorem*, and specific excise tax also include sales taxes; blue shaded states only tax e-cigarettes through state sales taxes.

Supplemental Figure 2. Relative Income Price Using NielsenIQ Stateline Data and IPUMS Total Personal Income by Age Group for 2021



States with two-tiered, *ad-valorem*, and specific excise tax also include state sales taxes; blue shaded states only tax e-cigarettes through sales taxes.

Supplemental Table 1. Sales weighted average real (2021 US dollars) Price of 1mL of e-liquid in 23 US States Using NielsenIQ Stateline Data from 2015–2021

State	Year							Sales Weighted Average Real Price per 1mL (2021 US dollars)	State E-Cigarette Tax Structure Tax Rate (Effective Date)
	2015	2016	2017	2018	2019	2020	2021		
Alabama	\$3.34 (3.9%)	\$4.27 (3.9%)	\$4.95 (3.9%)	\$6.24 (3.9%)	\$5.57 (3.9%)	\$5.22 (3.9%)	\$3.00 (3.9%)	\$4.66 (3.9%)	State Sales Tax Only
Arizona	\$3.52 (5.3%)	\$4.48 (5.3%)	\$5.27 (5.3%)	\$6.25 (5.3%)	\$5.64 (5.3%)	\$4.92 (5.3%)	\$4.27 (5.3%)	\$4.91 (5.3%)	State Sales Tax Only
California	\$5.29 (7.0%)	\$6.02 (7.0%)	\$7.40 (2.7%)	\$8.97 (27.0%)	\$9.35 (25.0%)	\$8.59 (25.4%)	\$6.50 (30.8%)	\$7.45 (21.4%)	Ad-Valorem Tax 27.3% of wholesale price (4.1.2017) 65.08% of wholesale price (7.1.2017) 62.78% of wholesale price (7.1.2018) 59.27% of wholesale price (7.1.2019) 56.93% of wholesale price (7.1.2020) 63.49% of wholesale price (7.1.2021) California resets the rate at the beginning of each fiscal year (July 1)
Colorado	\$4.91 (2.8%)	\$5.64 (2.8%)	\$5.09 (2.8%)	\$6.02 (2.8%)	\$5.51 (2.8%)	\$4.97 (2.8%)	\$4.82 (19.0%)	\$5.28 (5.1%)	Ad-Valorem Tax 30% of manufacturer price (1.1.2021) 35% of manufacturer price (1.1.2022) 50% of manufacturer price (1.1.2023)* 56% of manufacturer price (1.1.2024)* 62% of manufacturer price (1.1.2025)* * not in our study period
Florida	\$5.14 (5.7%)	\$5.44 (5.7%)	\$5.22 (5.7%)	\$6.34 (5.7%)	\$5.82 (5.7%)	\$5.12 (5.7%)	\$3.78 (5.7%)	\$5.27 (5.7%)	Sales Tax Only
Georgia	\$3.85 (3.9%)	\$4.47 (3.9%)	\$5.01 (3.9%)	\$6.21 (3.9%)	\$5.36 (3.9%)	\$4.41 (3.9%)	\$3.46 (5.3%)	\$4.68 (4.1%)	Two-Tiered Tax 7% of wholesale price (1.1.2021) \$0.05 per mL for consumable vapor products for use in a closed system (1.1.2021)
Illinois	\$4.35 (5.9%)	\$4.93 (5.9%)	\$5.67 (5.9%)	\$6.17 (5.9%)	\$5.89 (12.9%)	\$5.71 (13.0%)	\$4.52 (14.5%)	\$5.32 (9.1%)	Ad-Valorem Tax 15% of wholesale price (7.1.2019)
Indiana	\$4.16 (6.5%)	\$4.97 (6.5%)	\$6.15 (6.5%)	\$6.48 (6.5%)	\$5.75 (6.5%)	\$4.90 (6.5%)	\$3.82 (6.5%)	\$5.18 (6.5%)	Ad-Valorem Tax 25% of wholesale price (7.1.2022)* 15% of retail price (7.1.2022)* * not in our study period
Kentucky	\$3.45 (5.7%)	\$3.80 (5.7%)	\$4.11 (5.7%)	\$5.67 (5.7%)	\$5.62 (5.7%)	\$5.47 (29.6%)	\$4.00 (43.1%)	\$4.59 (14.4%)	Two-Tiered Tax

									15% of wholesale price applied to open system and e-liquid solution (8.1.2020) \$1.50 per cartridge applied to closed systems (8.1.2020)
Louisiana	\$4.36 (5.2%)	\$4.76 (5.3%)	\$4.55 (6.0%)	\$6.06 (5.4%)	\$5.75 (5.2%)	\$5.17 (5.3%)	\$4.14 (5.5%)	\$4.97 (5.4%)	Specific Excise Tax \$0.05 per mL (8.1.2015)
Massachusetts	\$5.28 (5.9%)	\$5.19 (5.9%)	\$5.04 (5.9%)	\$6.05 (5.9%)	\$6.52 (5.9%)	\$7.00 (28.8%)	\$7.20 (33.0%)	\$6.04 (13.0%)	Ad-Valorem Tax 75% of wholesale price (6.1.2020)
Michigan	\$4.99 (5.7%)	\$5.58 (5.7%)	\$5.26 (5.7%)	\$5.72 (5.7%)	\$6.07 (5.7%)	\$5.12 (5.7%)	\$3.74 (5.7%)	\$5.21 (5.7%)	Sales Tax Only
Missouri	\$4.26 (4.1%)	\$5.23 (4.1%)	\$5.56 (4.1%)	\$6.25 (4.1%)	\$4.81 (4.1%)	\$5.07 (4.1%)	\$3.40 (4.1%)	\$4.94 (4.1%)	Sales Tax Only
New Jersey	\$4.75 (6.5%)	\$4.70 (6.5%)	\$4.53 (6.4%)	\$5.73 (8.1%)	\$6.01 (8.0%)	\$5.66 (8.1%)	\$4.77 (8.3%)	\$5.17 (7.4%)	Two-Tiered Tax 10% of the listed retail price applied to nicotine e-liquid (non-nicotine e-liquid is exempt) (11.1.2019) \$0.10 per mL (9.29.2018) \$0.10 per mL (11.1.2019)
New York	\$5.14 (3.9%)	\$4.93 (3.9%)	\$4.80 (3.9%)	\$5.89 (3.9%)	\$6.11 (8.5%)	\$5.63 (18.9%)	\$4.82 (20.7%)	\$5.33 (9.1%)	Ad-Valorem Tax 20% supplemental sales tax based on retail price (12.1.2019)
North Carolina	\$4.57 (5.5%)	\$5.00 (5.7%)	\$4.99 (5.6%)	\$5.86 (5.5%)	\$5.53 (5.5%)	\$4.87 (5.6%)	\$3.86 (5.8%)	\$4.95 (5.6%)	Specific Excise Tax \$0.05 per mL (6.1.2015)
Ohio	\$4.81 (5.4%)	\$5.13 (5.4%)	\$5.03 (5.4%)	\$5.91 (5.4%)	\$5.54 (7.4%)	\$4.90 (7.6%)	\$3.92 (8.0%)	\$5.04 (6.4%)	Specific Excise Tax \$0.10 per mL (10.1.2019)
Oregon	4.27 (0.0%)	\$4.94 (0.0%)	\$5.92 (0.0%)	\$6.07 (0.0%)	\$5.99 (0.0%)	\$5.55 (0.0%)	\$6.11 (22.8%)	\$5.55 (3.3%)	Ad-Valorem Tax 65% of wholesale price (1.1.2021)
Pennsylvania	\$4.82 (5.7%)	\$5.39 (27.6%)	\$7.58 (21.0%)	\$7.80 (20.2%)	\$6.91 (21.8%)	\$6.50 (22.6%)	\$5.20 (25.9%)	\$6.32 (20.7%)	Ad-Valorem Tax 40% of wholesale price (10.1.2016)
Tennessee	\$3.49 (6.5%)	\$4.05 (6.5%)	\$5.25 (6.5%)	\$6.20 (6.5%)	\$5.75 (6.5%)	\$5.04 (6.5%)	\$3.97 (6.5%)	\$4.82 (6.5%)	Sales Tax Only
Texas	\$4.43 (5.9%)	\$4.61 (5.9%)	\$4.23 (5.9%)	\$5.80 (5.9%)	\$5.39 (5.9%)	\$4.93 (5.9%)	\$3.97 (5.9%)	\$4.77 (5.9%)	Sales Tax Only
Virginia	\$3.76 (5.0%)	\$4.51 (5.0%)	\$4.93 (5.0%)	\$6.15 (5.0%)	\$6.15 (5.0%)	\$5.42 (6.3%)	\$3.98 (6.7%)	\$4.99 (5.5%)	Specific Excise Tax \$0.066 per mL (7.1.2020)
Washington	\$4.35 (6.1%)	\$5.36 (6.1%)	\$5.65 (6.1%)	\$6.55 (6.1%)	\$6.32 (10.6%)	\$6.05 (10.8%)	\$5.05 (11.5%)	\$5.62 (8.2%)	Two-Tiered Tax \$0.09 per ml applied to open container, greater than 5 mL (10.1.2019) \$0.27 per ml applied to closed system, less than 5mL (10.1.2019)
Year Average	\$4.41 (5.1%)	\$4.93 (6.1%)	\$5.31 (6.7%)	\$6.28 (6.7%)	\$5.97 (7.5%)	\$5.49 (10.1%)	\$4.45 (13.2%)	\$5.26 (7.9%)	Sales Tax Only

Mean (Tax Burden). States with two-tiered, *ad-valorem*, and specific excise tax also include sales taxes.

Supplemental Table 2. Average Real Income (2021 US dollars) Using IPUMS Total Personal Income by Age Group from 2015–2021

Age Group:	Year							Age Group Average
	2015	2016	2017	2018	2019	2020	2021	
16-17	\$1,577.63 (73.860)	\$1,645.82 (54.090)	\$1,672.34 (67.855)	\$1,759.94 (70.589)	\$1,943.60 (95.691)	\$1,888.07 (74.153)	\$2,064.05 (84.565)	\$1,793.06 (30.821)
18-19	\$5,118.64 (157.840)	\$5,569.83 (185.323)	\$5,706.77 (172.203)	\$5,708.46 (166.893)	\$6,162.62 (175.203)	\$5,880.72 (202.609)	\$6,353.93 (177.807)	\$5,785.85 (72.090)
20-24	\$14,987.82 (252.093)	\$15,676.8 (297.489)	\$16,218.83 (349.442)	\$16,886.01 (342.059)	\$17,750.23 (395.607)	\$17,952.72 (352.655)	\$17,752.20 (338.769)	\$16,746.37 (150.353)
25-34	36,416.21 (1003.667)	\$37,397.46 (1046.349)	\$38,259.90 (1129.780)	\$38,968.13 (1143.460)	\$40,718.18 (1291.468)	\$42,330.26 (1337.897)	\$41,287.11 (1303.866)	\$39,339.61 (467.543)
Year Average	\$14,525.08 (1444.753)	\$15,072.48 (1478.972)	\$15,464.46 (1516.536)	\$15,830.64 (1545.075)	\$16,643.66 (1613.614)	17,012.94 (1688.420)	\$16,864.32 (1630.375)	\$15,916.22 (588.580)

Mean (Standard Errors)