



DOAA

Georgia Department
of Audits & Accounts

Greg S. Griffin
State Auditor

January 9, 2023

Michelle Au
Representative-Elect
Atlanta, GA 30334

SUBJECT: Fiscal Note
House Bill (LC 43 2472)

Dear Representative-Elect Au:

The bill would increase the current 37¢ excise tax on cigarettes to \$1.72. The increase would be effective upon enactment, but for purposes of this note an effective date of July 1, 2023 is assumed.

Impact on State Revenue

Georgia State University’s Fiscal Research Center (FRC) estimated the revenue gains resulting from the bill (Table 1). The analysis considers the change in the cost of cigarettes, the reduction in cigarette purchases resulting from the higher prices, and the increase in the use of vape products resulting from higher cigarette taxes. FRC presents two scenarios that assume different changes in demand. The appendix provides details of the analysis.

Table 1. Projected Revenue Effects of LC 43 2472

(\$ millions)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Low-Behavioral-Response Case	\$484.9	\$474.7	\$464.6	\$454.5	\$444.7
High-Behavioral-Response Case	\$448.0	\$377.9	\$372.3	\$366.6	\$360.8

Impact on State Expenditures

The Department of Revenue (DOR) would enact the provisions of the bill with existing resources. However, changes would require eight weeks of staff time, equating to approximately \$72,000.

Respectfully,

Greg S. Griffin
State Auditor

Kelly Farr, Director
Office of Planning and Budget

GSG/KF/mt

Analysis by the Fiscal Research Center

The use of tobacco has been in decline in Georgia since 2005, according to the Centers for Disease Control's State Tobacco Activities Tracking and Evaluation System (STATE). CDC data through 2017 together with Georgia Department of Revenue (DOR) data beginning in 2018 suggest that per capita cigarette consumption in Georgia has been declining by about 3.16 percent annually since 2013. Absent a change in cigarette taxes, this rate of decline is expected to continue.

According to DOR data, this decline in use resulted in slowly declining revenues from the current excise tax on tobacco products between FY 2005 and FY 2020 of about 0.5% percent per year. Total tobacco excise tax revenue (from all product types) increased in FY's 2021 and 2022 because vapor products became taxable effective January 1, 2021. Cigarette stamp taxes, on the other hand, declined by about 2.7 percent per year between FY 2017 and 2022, on average.

In addition to the expected continuation of this decline in tobacco consumption, an increase in excise tax rates would be expected to have behavioral effects due to higher retail prices as more people reduce the amounts they consume, quit outright, or switch to alternatives. Recent empirical research measures smoker's responsiveness to price changes in a marketplace that includes a taxable potential substitute for cigarettes not available in the past, so-called e-cigarettes. Cotti et al. (Journal of Health Economics, 2022) estimated an own-price elasticity for cigarettes of around -0.4, meaning that a 1 percent increase in price would be expected to result in a 0.4 percent decrease in cigarette purchases. This estimate is close to the "consensus" range of earlier literature reviewed by Chaloupa and Warner (Handbook of Health Economics, 2000) of -0.4 to -0.7 and the mean of studies reviewed by Gallet and List (Health Economics, 2003) of -0.48. Another study by Tauras et al. (NBER, 2016) estimated materially larger own-price elasticities that became larger at higher prices, suggesting elasticities of around -0.7 at then-prevailing prices and larger than -1.0 at \$6 per pack. Finally, Huang et al. (Preventive Medicine, 2018) estimated an own-price elasticity for cigarettes of about -1.48. However, DeCicca et al. (Journal of Economic Literature, 2022) suggest, based on their review of papers published since 2000, that studies based on larger, tax-induced price changes and using more advanced empirical methods support a smaller-magnitude price elasticity than the prior consensus.

Given the wide range of estimates in the literature, the relatively recent emergence of a close substitute for cigarettes (i.e., e-cigarettes), and the likely smaller short-run than long-run response to price changes, the analysis proceeds with two cases, high- and low-behavioral-response cases with own-price elasticity assumptions of -0.9 and -0.2, respectively, with a further assumption in the high-response case of a smaller short-run elasticity of -0.45 in the first year.

The availability of e-cigarettes as a close-substitute product and the fact that these products are now taxed in Georgia requires that we also consider potential gains in tax revenues from e-cigarettes. For this step in the analysis, we rely on Cotti et al. (2022) and assume a cross-price elasticity of 1.5 in the high-response case after the first year and half that, 0.75, in the first year. In other words, we assume that for each percent of increase in the price of regular cigarettes due to the tax increase, consumption of e-cigarettes will rise by 0.75 percent in the first year and 1.5 percent thereafter compared to the baseline. For the low-response case, we assume a 0.75 cross-price elasticity for all periods.

Other assumptions made in regard to cigarette sales are as follows:

- The increases in taxes are assumed to be fully passed through to consumers in higher retail prices. The proposed tobacco excise tax increases are estimated to increase the retail price on a pack of cigarettes by approximately 23.2 percent in FY 2024 over the baseline price.
- According to the CDC's STATE data, the average retail price of cigarettes in Georgia increased at an average annual rate of about 2.43 percent between 2013 and 2019. Historical price trends are assumed to continue in the absence of the proposed increase.

- Own-price elasticities were used to calculate per capita consumption changes and forecasted Georgia populations from OPB were then used to calculate statewide expected consumption.

Table 2 presents baseline prices and consumption, projected prices after the increase in the excise tax, and projected unit sales under the alternate behavioral-response cases. Table 3 presents the baseline projected cigarette tax revenues and proforma projections under the two cases.

Table 2. Cigarette Price/Consumption Baselines, and Alternate Behavioral Response Cases

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Cigarette Retail Price Per Pack					
Current Law and Baseline Trend	\$5.82	\$5.96	\$6.11	\$6.26	\$6.41
Under LC 43 2472	\$7.17	\$7.31	\$7.46	\$7.61	\$7.76
Cigarette Consumption (millions of packs)					
Baseline	379.7	371.1	362.6	354.3	346.1
Low-Behavioral-Response Case	362.6	354.7	347.0	339.4	331.9
High-Behavioral-Response Case	341.1	297.3	292.2	287.1	282.1

Table 3. Cigarette High- and Low-Behavioral-Response Projected Revenue Changes

(\$ millions)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Baseline Revenues	\$483.1	\$472.8	\$462.6	\$452.6	\$442.8
Low-Response Case Gains	\$446.1	\$374.0	\$368.4	\$362.8	\$357.1
High-Response Case Gains	\$483.1	\$472.8	\$462.6	\$452.6	\$442.8

Baseline revenues from the tax on e-cigarettes under current law, whereby vapor products are subject to a 7 percent tax on the wholesale price except in the case of vapor products in a closed system, on which the tax is 5¢ per fluid milliliter, are projected as follows:

- As reported by DOR, taxes on these products generated approximately \$9.4 million in revenues during FY 2022.
- Baseline growth assumptions are based on a vaping product sales forecast from Statista for the U.S. market. The forecast, adjusted to state fiscal years, calls for growth of 9.1 percent for 2023 with slowing growth after that to an average of 2.2 percent per year for FY 2026-28. For closed-system product taxes, which again are unit-based, we adjust the Statista sales growth forecast to reflect only expected unit growth.

Table 4 presents baseline revenues from vapor product taxes as well as the gains from substitution from cigarettes to e-cigarettes in response to the cigarette tax increase under the two behavioral-response cases, as discussed above. Combined gains from cigarette and e-cigarette taxes are provided in Table 1.

Table 4. Consumable Vapor Products Baseline Revenues and Substitution-Effect Gains

(\$ millions)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Baseline Revenues	\$10.9	\$11.5	\$11.9	\$12.0	\$12.2
Revenue Gains from Substitution Effects:					
Low-Behavioral-Response Case	\$1.8	\$1.9	\$1.9	\$1.9	\$1.9
High-Behavioral-Response Case	\$1.8	\$3.8	\$3.8	\$3.8	\$3.8