Prepared for the Taxation Committee
LC# 21.9401.01000
September 2020

EFFECTIVENESS OF SIN TAXES IN DETERRING BEHAVIOR

This memorandum summarizes various studies and findings regarding the effectiveness of sin taxes in deterring behavior.

West's Tax Law Dictionary defines a "sin tax" as an "[e]xcise tax on tobacco, alcohol, and gambling, or other goods and activities considered harmful or sinful."[1] Sin taxes generally are imposed to discourage individuals from purchasing certain goods or engaging in certain activities. Sin taxes also are imposed to generate revenue. Sin tax revenue occasionally is dedicated to funding treatment or prevention options relating to the sin being taxed. More often, sin tax revenue is used to fund a state's general expenses. Sin taxes typically are imposed as a flat tax with very few deductions or exemptions. Thus, sin taxes are classified as a regressive tax because an individual pays the same amount of tax per product or service regardless of the individual's income. As a result, sin taxes are disproportionately burdensome on lower-income populations.

In recent years, the application of sin tax has broadened beyond the traditional alcohol, tobacco, and gaming sin taxes to include sin taxes on other products. These products include marijuana, vapor products, sugary drinks, and even plastic bags. Several studies have been conducted to evaluate the effectiveness of sin taxes in raising revenue and deterring behavior. Studies have generally concluded sin tax revenue is volatile, and while it might provide a revenue boost for states in the short term, it should not be relied on as a long-term revenue source to address reoccurring state budget needs.[2] A variety of studies provide insight on the effectiveness of sin taxes in deterring behavior.

A 2016 study[3] published in the American Journal of Public Health evaluated the impact on consumer behavior of an excise tax imposed on sugar-sweetened beverages. An excise tax of one cent per ounce was imposed on sugar-sweetened beverages in Berkeley, California, beginning in March 2015. The study indicated the consumption of sugar-sweetened beverages decreased by 21 percent in Berkeley in the 4 months following the imposition of the tax. The study also revealed the consumption of sugar-sweetened beverages increased in surrounding cities in which the tax was not imposed by 4 percent over the same period. A subsequent 2019 study[4] showed a sustained decrease in the level of sugar-sweetened beverage consumption in Berkeley 3 years after the tax was initially imposed.

A study[5] of the impact of an excise tax on sugar-sweetened and artificially sweetened beverages on consumer behavior in Philadelphia revealed similar findings to the Berkeley study. Sales of sugar-sweetened beverages fell by 1.3 billion ounces, or 51 percent, in Philadelphia in the year following the imposition of a 1.5 cent per ounce excise tax on sugar-sweetened beverages. During the same period, sales of sugar-sweetened beverages in neighboring cities where the tax was not imposed increased by 308.2 million ounces compared to sales made in the prior year.

---

[1] *West's Tax Law Dictionary* § S1865 (February 2020 Update).

[2] Kil Hul, Adam Levin, Mary Murphy, Alexandria Zhang, The Pew Charitable Trusts, "Are Sin Taxes Healthy for State Budgets?" (July 2018).

[3] Jennifer Falbe, Hannah R. Thompson, Christina M. Becker, Nadia Rojas, Charles E. McCulloch, Kristine A. Madsen, "Impact of the Berkeley Excise Tax on Sugar-Sweetened Beverage Consumption", *American Journal of Public Health* 106, No. 10 (October 1, 2016).

[4] Matthew M. Lee, Jennifer Falbe, Dean Schillinger, Sanjay Basu, Charles E. McCulloch, Kristine A. Madsen, "Sugar-Sweetened Beverage Consumption 3 Years After the Berkeley, California, Sugar-Sweetened Beverage Tax", *American Journal of Public Health* 109, No. 4 (April 1, 2019).

[5] Roberto CA, Lawman HG, LeVasseur MT, et al. "Association of a Beverage Tax on Sugar-Sweetened and Artificially Sweetened Beverages With Changes in Beverage Prices and Sales at Chain Retailers in a Large Urban Setting", *JAMA,* (May 14, 2019).

Numerous studies also have been conducted regarding the impact of taxation on the use of tobacco products. A 2014 study[6] by the Office of the Surgeon General reviewed the impact of taxation on the rate of cigarette use and found a resulting 3 to 5 percent reduction in cigarette consumption for every 10 percent increase in the price of cigarettes. Another comprehensive 2011 study[7] compiled research from over 20 experts on economics, epidemiology, public policy, and tobacco control to assess the impact of price and taxes on the consumption of tobacco products. The study concluded there was sufficient evidence to link increased taxation to reduced tobacco consumption.

As illustrated by the Berkeley and Philadelphia studies, reductions in consumption associated with increased taxation should be viewed with a critical eye to determine whether decreased consumption in the jurisdiction applying the tax is being offset by increased consumption in jurisdictions in which a similar tax is not imposed.

[6] U.S. Department of Health and Human Services, "The Health Consequences of Smoking: 50 Years of Progress. A Report of the Surgeon General" Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health (2014) Printed with corrections, January 2014.

[7] Chaloupka FJ, Straif K, Leon ME, "Effectiveness of tax and price policies in tobacco control", *Tobacco Control* (2011).