

Alcohol Excise Taxes: An Overview

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The federal excise tax on alcoholic beverages is imposed at the manufacturer and importer level, based on the per unit production or importation of alcoholic beverages (e.g., distilled spirits, wine, and beer) for sale in the U.S. market. At current rates, the federal tax per ounce of pure alcoholic content for spirits, wine, and beer is 21 cents, 6 cents, and 9 cents, respectively. When converted to standard drink measures, liquor is generally subjected to a federal excise tax of approximately 13 cents per 1.5 ounce shot, wine is taxed at 4 cents per 5 ounce glass, and beer is taxed at 5 cents per 12 ounce can or bottle. Alcohol excise tax collections totaled \$11.1 billion in FY2023, with collections from distilled spirits comprising 61% of that amount. This report provides a brief historical overview of alcohol excise tax policy and describes current law, and analyzes alcohol excise tax rates based on some of the standard criteria for tax evaluation: revenue, economic efficiency, and equity.

Congressional interest in alcohol excise taxes varies with policy motivations and the industry's wide geographic distribution. Since their inception in 1791, federal excise taxes on alcohol have been imposed or increased primarily to fund emergency spending during wartime or in response to concerns over the growth of budget deficits.

Interest in alcohol taxes tends to be motivated by three types of approaches: (1) excise tax rates could be decreased to benefit firms in the industry; (2) excise tax rates could be increased for deficit reduction; or (3) excise tax rates could be increased to discourage the negative spillover effects of alcohol consumption (e.g., drunk driving fatalities, property damage, domestic violence).

Federal alcohol excise tax rates have been subject to three increases since 1951, with the most recent occurring in 1991. Alcohol excise tax revenues have declined in inflation-adjusted value over time. Lowering excise taxes would reduce excise tax collections, reduce some of the regressivity in the federal tax code, and provide alcohol producers and importers with a temporary increase in their profits (due to lower tax rates).

Two alcohol excise tax provisions have reduced revenues in recent years. The “double drawback” on wine allows a rebate of taxes for exports that have not been paid due to an interaction between the excise tax law and the drawback law. An estimate by U.S. Customs and Border Protection and the U.S. Department of the Treasury indicated that the double drawback caused a revenue loss of around 5% of total wine tax collections in FY2018. Recent expansions of lower tax rates aimed at craft beverages—justified to address concentration in the industry—have also reduced revenue. These changes are estimated to reduce taxes on distilled spirits, wine, and beer by 8.7%, 21.4%, and 4.4%, respectively, and to benefit large producers as well.

Economic theory typically supports imposing excise taxes on alcohol consumption to better reflect the costs of an individual's consumption of alcohol to society. While there is much debate surrounding the technical measurement of these linkages, most researchers argue that alcohol excise tax rates are set below the economically efficient level necessary to compensate for social costs. Recent research estimated an external cost of \$1.34 per ounce of pure alcohol, compared with combined federal, state, and local taxes of around 25 cents per ounce.

Analysis suggests that excise tax increases are usually passed forward to consumers through higher prices and are not borne by the owners of alcoholic beverage manufacturers or importers.

Excise taxes are generally regressive, but alcohol taxes are initially progressive, rising from 0.051% of income in the first quintile to 0.063% in the middle quintile. They are regressive after that, falling to 0.046% in the top quintile. Consumers at the same income levels also pay different amounts of federal excise tax on the same amount of alcohol content, based on the type of alcoholic beverages they purchase.

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Introduction

The federal government levies an excise tax on manufacturers and importers of alcoholic beverages (e.g., distilled spirits, wine, and beer) based on the per-unit production of alcohol for sale in the U.S. market. The rate per unit is based on the form that the alcoholic beverage takes and the size of the producer.

Alcohol excise taxes in the United States have a history almost as old as the federal government itself, as alcohol taxes were among the first federal revenue sources in the early republic. For much of U.S. history, alcohol excise taxes have helped to fund emergency levels of spending (such as during wartime) and to reduce budget deficits (such as in 1990).

As the federal government began to rely on other sources of revenue, notably income and payroll taxes, alcohol taxes became a small share of revenue. Currently, alcohol taxes tend to be justified as discouraging the negative spillover effects associated with alcohol consumption (health, safety, crime, etc.). More recently, relief from alcohol taxes has been granted to smaller producers.

A Brief History of Federal Alcohol Excise Tax Rates

Federal alcohol excise tax policy has largely been driven by periodic demand for additional revenue. Public sentiment and empirical research often assert that higher alcohol taxes reduce alcohol consumption's negative spillover effects on society. However, this public health argument has been less prominent in debates about increasing taxes on alcohol as compared with so-called "sin taxes" on tobacco.¹

Excise taxes played a key fiscal role in the early history of the United States. The federal government initially relied primarily on customs duties (tariffs) on foreign trade. In 1791, during the presidency of George Washington, Secretary of the Treasury Alexander Hamilton proposed alcohol excise taxes, and the government implemented the first federal excise tax on whiskey. The whiskey tax was used to fund the fledgling federal government, repay debts from the American Revolution, and help establish federal supremacy over the states.² The burden of the tax was controversial along geographic divisions (Westerners on the frontier tended to both consume more whiskey and use it as a medium of financial exchange) and ideological divisions (Federalists versus Anti-Federalists). This opposition peaked in the "Whiskey Rebellion" of 1794 in southwestern Pennsylvania, during which President Washington led 13,000 troops to suppress an armed rebellion. Over the next two centuries, alcohol excise taxes were reimposed, raised, and repealed, often surrounding periods of wartime.

Shortly after the end of Prohibition in December 1933, Congress enacted a comprehensive alcohol excise tax system.³ These taxes were reenacted during an era of federal budget deficits

¹ For example, increases in tobacco taxes have been clearly linked as an offset to expansions in public health spending. See CRS Report R40226, *P.L. 111-3: The Children's Health Insurance Program Reauthorization Act of 2009*, by Evelyne P. Baumrucker, Elicia J. Herz, and Jane G. Gravelle, and CRS Report 94-214, *Cigarette Taxes to Fund Health Care Reform: An Economic Analysis*, by Jane G. Gravelle and Dennis Zimmerman (out of print, available to congressional clients upon request).

² Steve Simon, "Alexander Hamilton and the Whiskey Tax," U.S. Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau (TTB), <https://www.ttb.gov/public-information/special-feature>.

³ The Beer-Wine Revenue Act was enacted in March 1933 and permitted the sale of beer and wine with no more than 3.2% alcohol by volume (ABV). This law was one of the laws relaxing Prohibition regulations (which were repealed in December 1933). The Liquor Taxing Act was passed in January 1934. For administrative details, see John E. O'Neill, "Federal Activity in Alcoholic Beverage Control," *Law and Contemporary Problems*, vol. 7 (Fall 1940), pp. 570-599.

brought on by the economic stagnation of the Great Depression and federal spending under the New Deal. Although revenue was a major concern, Congress initially sought to set excise tax rates at a level that would enable legal alcohol producers to be competitive with the underground, bootlegging economy that emerged during Prohibition.⁴ Tax rates gradually increased from 1934 to 1951 and helped fund spending associated with World War II and the Korean War.⁵

Distilled Spirits

The tax rate on distilled spirits remained unchanged from the middle of the Korean War in 1951 to 1985.⁶ The Deficit Reduction Act of 1984 (P.L. 98-369), enacted on July 18, 1984, increased the rate of tax on distilled spirits from \$10.50 to \$12.50 per proof gallon (ppg),⁷ effective October 1, 1985. The Omnibus Budget Reconciliation Act of 1990 (OBRA90; P.L. 101-508) increased the rate by \$1.00 to \$13.50 ppg, effective January 1, 1991. The legislative history seems to indicate that Congress raised excise taxes on alcohol (and tobacco) in OBRA90 primarily to raise revenue.⁸

P.L. 115-97 (the 2017 tax revision, sometimes called the Tax Cuts and Jobs Act, or TCJA) provided a lower rate of \$2.70 ppg on the first 100,000 proof gallons a manufacturer or importer produces, \$13.34 ppg for proof gallons in excess of that amount but below 22,130,000 proof gallons, and \$13.50 ppg for amounts thereafter. These amounts are \$0.43, \$2.11, and \$2.14 per 750 milliliter bottle at 80 proof. The Further Consolidated Appropriations Act, 2020 (P.L. 116-94) extended these provisions, and the Consolidated Appropriations Act, 2021 (P.L. 116-260) made them permanent. These provisions were aimed at helping small producers.

Distilled spirits that include alcohol from wine and flavors are eligible for a credit under Section 5010 of the Internal Revenue code to reflect the lower tax rates on wine and flavors.⁹

Wine

Wine is taxed at a variety of rates. The tax rates that applied to wine were unchanged from 1951 until the passage of OBRA90. Pre-OBRA90 tax rates ranged from 17 cents per wine gallon for

⁴ The illicit market was still estimated to have supplied 45 million gallons of bootleg liquor to consumers in 1934. This amount represented approximately 66% of the annual, total tax-paid consumption of 68 million gallons of distilled spirits. See Tun-Yuan Hu, *The Liquor Tax in the United States, 1791-1947* (New York, NY: Columbia University Graduate School of Business, 1950), p. 86. It was not until the IRS organized a large law enforcement effort in 1934, with over 1,000 agents, that the illicit market for spirits began to shrink. By 1937, excise taxes on legal distilled spirits nearly doubled from their 1934 levels. See Philip J. Cook, *Paying the Tab* (Princeton, NJ: Princeton University Press, 2007), pp. 30-31.

⁵ However, the tax rate on wine was halved in 1936 before a series of gradual increases in tax rates through 1951.

⁶ Prior tax rates on distilled spirits, wine, and beer were enacted by the Revenue Act of 1951 (P.L. 82-183).

⁷ A proof gallon is a combination of alcohol content and volume. A proof gallon is the volume in gallons, multiplied by the percent alcohol, multiplied by two, and divided by 100. A standard 80 proof gallon of spirits is 40% alcohol by volume. For conversions, see Department of the Treasury Alcohol and Tobacco Tax and Trade Bureau, Conversion Tables, <http://www.ttb.gov/spirits/convtbl.shtml>.

⁸ U.S. Congress, Conference Committee, *Omnibus Budget Reconciliation Act of 1990*, conference report to accompany H.R. 5835, 101st Cong., 2nd sess., H. Rept. 101-964, October 22, 1990, p. 1028.

⁹ See CRS Insight IN12063, *The Excise Tax Credit for Wine and Flavor Content*, by Anthony A. Cilluffo, and TTB, *Calculating Tax Rates for Distilled Spirits Eligible for Both Craft Beverage Modernization Act Reduced Tax Rates and Tax Credits for Wine and Flavors Content*, Industry Circulars 2022-3, December 29, 2022, <https://www.ttb.gov/public-information/industry-circulars/ttb-industry-circular-2022-3>.

still wine to \$3.40 per wine gallon on sparkling wines.¹⁰ Post-OBRA90, these rates now range from \$1.07 per wine gallon to \$3.40 per sparkling wine gallon. These amounts range from \$0.21 to \$0.67 per 750 milliliter bottle. OBRA90 did not increase the tax rates on champagne and sparkling wines. It provided a small domestic wineries credit equal to 90 cents per wine gallon for the first 100,000 gallons of wine production for small wineries producing not more than 150,000 gallons, with a phaseout for wineries producing between 150,000 and 250,000 wine gallons.

The TCJA temporarily increased the small domestic wineries credit to \$1 for the first 30,000 wine gallons produced annually by any eligible wine producer or importer. The credit is available at \$0.90 on the next 100,000 wine gallons and at \$0.535 on the next 620,000 wine gallons. Wine eligible for these credits has a tax rate reduced by \$0.20, \$0.18, and \$0.11 per 750 milliliter bottle. The credit is not phased out so that wineries of any size can benefit from these lower rates on their first 750,000 wine gallons. These provisions were extended by the Further Consolidated Appropriations Act, 2020 (P.L. 116-94) and made permanent by the Consolidated Appropriations Act, 2021 (P.L. 116-260).

Hard cider is taxed at \$0.226 per wine gallon, \$0.04 per 750 milliliter bottle. For hard cider, the small domestic producer credit rates are adjusted to \$0.062 per gallon for the first 30,000 gallons, \$0.056 per gallon on the next 100,000 gallons, and \$0.033 per gallon on the next 620,000 gallons. These small producer credits reduce the tax to \$0.01 or less per 750 milliliter bottle.

Beer

The Revenue Act of 1951 increased the tax rate on beer from \$8 to \$9 per barrel (a barrel contains 31 gallons). A second, reduced rate structure was enacted in 1977 specifically for small brewers.¹¹ The regular tax rate on beer remained unchanged until OBRA90, which doubled the existing rate, effective January 1, 1991, to the current rate of \$18 per barrel. The rate for small brewers, enacted by OBRA90, was \$7 per barrel for the first 60,000 barrels and \$18 each for barrels from 60,001 to 2 million. Any brewer making more than 2 million barrels per year paid the full tax rate of \$18 per barrel on its total annual production and did not benefit from the lower \$7 per barrel rate.

P.L. 115-97 temporarily reduced the rates for small brewers (producing no more than 2 million barrels) to \$3.50 per barrel on the first 60,000 barrels and \$16 per barrel on the remaining production. These rates are \$0.01 and \$0.04 per 12 ounce can at 5% alcohol. Beer importers and large producers meeting certain requirements may also be eligible for the reduced tax rate. For all other producers or importers, the excise tax rates are \$16 per barrel on the first 6 million barrels and \$18 for production greater than 6 million barrels. The \$18 rate is \$0.05 per 12 ounce can at 5% alcohol. These provisions were extended by the Further Consolidated Appropriations Act, 2020 (P.L. 116-94) and made permanent by the Consolidated Appropriations Act, 2021 (P.L. 116-260).

Hard seltzer is subject to beer tax rates because it is brewed rather than distilled.

Current Law

The tax rates that went into effect in 1991 remain current law for large producers, as summarized in **Table 1**. Tax rates for small producers reflect more recent changes. In addition to listing the tax per volume, as defined in statute, **Table 1** also shows conversions of these tax rates into common

¹⁰ A wine gallon is a measure of liquid volume without regard to the alcohol content. It contains 231 cubic inches at 60°F.

¹¹ P.L. 94-529, signed into law on October 17, 1976, first established the reduced rate for small brewers.

package measures, provided by the Alcohol and Tobacco Tax and Trade Bureau (TTB, within the Department of the Treasury). For example, the excise tax on a 12 oz. can of beer is approximately \$0.05, or \$0.30 for a six-pack of beer (at the regular rate).

Table 1. Current Federal Excise Tax Rates on Alcoholic Beverages

Product	Tax Rate and Unit of Taxation	Tax Per Package Equivalents
Distilled Spirits	Proof Gallon^a	750 ml bottle
Regular rate	\$13.50 less any credit for wine and flavor content	\$2.14 (at 80 proof)
Reduced rate	\$2.70 for first 100,000	\$0.43 (at 80 proof)
	\$13.34 for amounts in excess of 100,000 up to 23,130,000	\$2.11 (at 80 proof)
Beer	Barrel (31 gallons)	12 oz. can
Regular rate	\$18	\$0.05
Reduced rate for smaller producers who produce no more than 2 million barrels	\$3.50 on first 60,000 barrels	\$0.01
Reduced rate	\$16 per barrel after the first 60,000 barrels up to 6,000,000 barrels	\$0.04
Wine	Wine Gallon (w.g.)^b	750 ml bottle
Still Wine 14% Alcohol or Less	\$1.07 ^c	\$0.21
Still Wine Over 14% to 21%	\$1.57 ^c	\$0.31
Still Wine Over 21% to 24%	\$3.15 ^c	\$0.62
Naturally Sparkling	\$3.40 ^c	\$0.67
Artificially Carbonated	\$3.30 ^c	\$0.65
Hard Cider	\$0.226 ^c	\$0.04

Source: “Tax Rates,” U.S. Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau (TTB), <https://www.ttb.gov/taxes/tax-audit/tax-and-fee-rates>. Hard seltzer is taxed as beer.

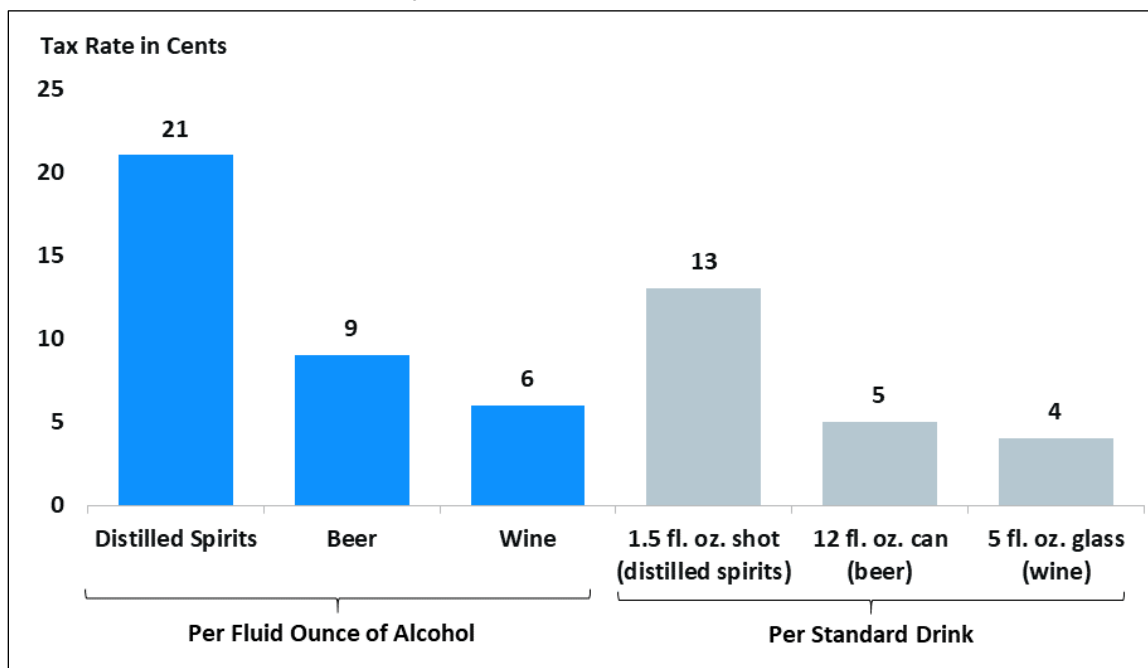
- A proof gallon is a combination of alcohol content and volume. A proof gallon is a gallon in volume that is 50% alcohol. 80 proof spirits are 40% alcohol.
- A wine gallon is the same volume as a standard liquid gallon.
- Up to a \$1 credit (\$0.062 per w.g. for hard cider) may be available for the first 30,000 w.g.; \$0.90 (\$0.56 for hard cider) for 30,000 to 130,000 w.g.; and \$0.535 (\$0.33 for hard cider) for the next 620,000 w.g.

The alcohol content of beer and wine is taxed at a lower rate than the alcohol content of distilled spirits when converted to equivalent measures of alcoholic content, as shown in **Figure 1**. The current maximum excise tax levied on those spirits, \$13.50 per proof gallon, translates to about 21 cents per ounce of pure alcoholic content. Beer is taxed at a maximum of \$18 per gallon, which translates to about 9 cents per ounce of alcohol. The current maximum excise tax on most wine is \$1.07 per wine gallon, or about 6 cents per ounce of alcohol.¹²

¹² These per-ounce tax conversions can be found in Congressional Budget Office (CBO), *Options for Reducing the Deficit, 2023 to 2032: Volume II: Smaller Reductions*, December 2022, p. 68, <https://www.cbo.gov/system/files/2022-12/58163-budget-options-small-effects.pdf>. This CBO report also estimates that setting all alcohol excise taxes to a rate equivalent to \$16 per proof gallon (including beer and wine) would raise \$91.8 billion over 10 years (FY2023-FY2032).

Figure 1 also shows that consumers of different types of alcohol face different tax rates per standard drink, depending on what type of alcohol they consume. When converted to standard drink measures, liquor is generally subjected to a federal excise tax of approximately 13 cents per 1.5-ounce shot, beer is taxed at 5 cents per 12-ounce can or bottle, and wine is taxed at 4 cents per 5-ounce glass.

Figure 1. Maximum Federal Excise Tax Rates on Alcohol
Converted to Equivalent Measures and Standard Drink Amounts



Source: CRS analysis of Congressional Budget Office (CBO), *Options for Reducing the Deficit, 2023 to 2032: Volume II: Smaller Reductions*, December 2022, p. 62, <https://www.cbo.gov/system/files/2022-12/58163-budget-options-small-effects.pdf>, and “What Is A Standard Drink?,” National Institute of Health National Institute on Alcohol Abuse and Alcoholism, accessed July 15, 2024, <https://www.niaaa.nih.gov/alcohol-effects-health/overview-alcohol-consumption/what-standard-drink>.

Notes: For amount per ounce of distilled spirits, \$13.50 divided by 128 ounces times 2. A standard drink assumes 40% alcohol by volume (ABV), or 80 proof, liquor, wine averaging 12.5% ABV, and beer averaging 5% ABV. For wine, the amount per ounce is \$1.07 divided by (128 times 0.125). For beer, the amount per ounce is \$18 divided by (31 times 128 times 0.05).

Other Former Federal Taxes on the Alcohol Industry

In the past, TTB has enforced two other forms of taxes on the alcohol industry. Neither tax, however, is levied today:

- *Floor stocks taxes* were one-time taxes on otherwise untaxed current inventories before application of alcohol excise taxes, and were typically imposed as part of legislation that increased excise tax rates. Floor stocks taxes were a transitional measure that prevented taxable entities from stockpiling the product after the announcement of a tax increase, but prior to its effective date, as a means to reduce their exposure to the higher rates.
- A *special occupational tax (SOT)* was a tax worth a fixed dollar amount per year that was imposed on manufacturers, importers, wholesalers, and retailers in a

certain industry subject to registration and excise taxation under TTB's jurisdiction (e.g., tobacco, firearms). In 2005, Section 11125 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (P.L. 109-59) permanently repealed the SOT for alcoholic beverages (effective July 1, 2008). Recordkeeping and registration requirements for these businesses were *not* repealed. The SOT amounted to a relatively small share of TTB's annual tax collections. For example, total SOT collections comprised 0.016% in 2007 (\$2.8 million).¹³

State and Local Alcohol Excise Tax Rates

In addition to federal excise taxes, all 50 states and some localities levy their own excise taxes on alcoholic beverages. These tax rates vary by state (or locality) and by the type of alcohol.¹⁴ Some states and localities also levy a separate sales tax on sales of alcoholic beverages. Although some states and localities have increased their alcohol excise tax rates recently, these policy changes are relatively infrequent.¹⁵ In addition, some states have controlled sales of certain types of alcoholic beverages via state-run retailers. Retail sales in control states typically include some sort of wholesale “markup” in addition to a sales tax.

In general, state and local excise tax rates are also greater per unit of alcohol on distilled spirits than on beer or wine. States with controlled sales on beer or spirits tend to have higher tax rates than states without controlled sales, but this is not always the case. Differences in tax rates between states could lead some consumers to cross state lines to purchase alcoholic beverages.¹⁶

Revenues

In FY2023, federal excise tax collections on distilled spirits, wine, and beer totaled approximately \$11.1 billion.¹⁷ As shown in **Figure 2**, distilled spirits accounted for 61% of FY2023 alcohol excise tax collections, beer accounted for 30%, and wine accounted for 10%.¹⁸ (Percentages do not sum to 100% due to rounding.)

¹³ See TTB, “Fiscal Year 2007 Tax Collections,” <https://www.ttb.gov/system/files/images/pdfs/statistics/final/final07.pdf>.

¹⁴ The Federation of Tax Administrators provides data on current state alcoholic beverage excise taxes for distilled spirits, wine, and beer. “Tax Rates: Alcoholic Beverage Excise Taxes,” Federation of Tax Administrators, accessed July 15, 2024, <https://taxadmin.org/tax-rates-new/>.

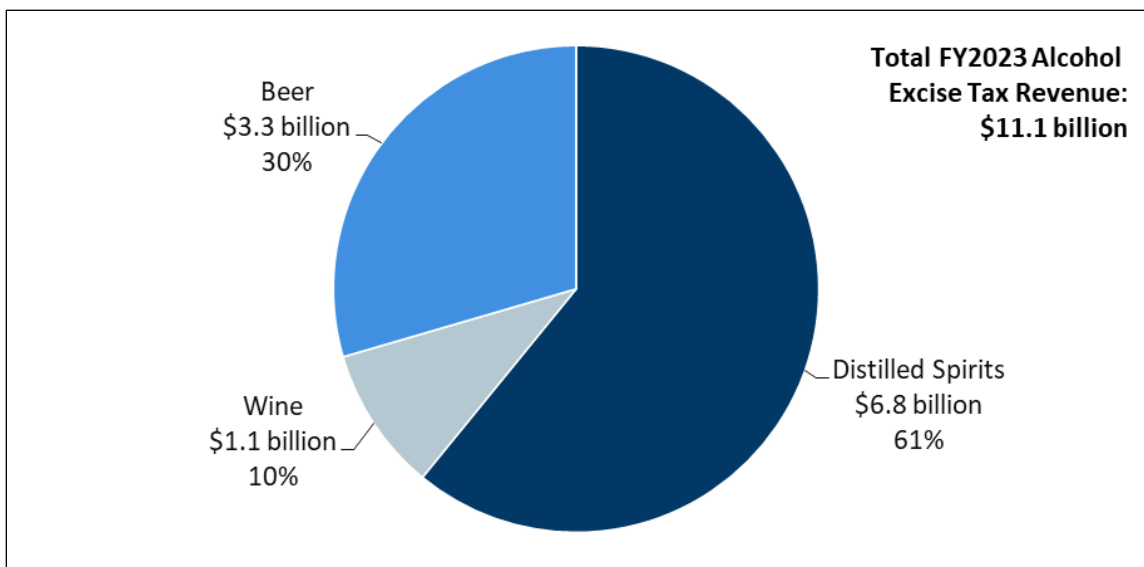
¹⁵ See Jason G. Blanchette, Craig R. Ross, and Timothy S. Naimi, “The Rise and Fall of Alcohol Excise Taxes in U.S. States, 1933–2018,” *Journal of Studies on Alcohol and Drugs*, vol. 81, no. 3 (May 2020), pp. 331–338, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7299191/>.

¹⁶ Researchers who have studied this subject tend to find that the size of this economic activity is generally small in the face of modest tax increases between borders. See Mark Stehr, “The Effect of Sunday Sales Bans and Excise Taxes on Drinking and Cross-Border Shopping for Alcoholic Beverages,” *National Tax Journal*, vol. 60, no. 1 (March 2007), pp. 85–105; and T. Randolph Beard, Paula A. Grant, and Richard P. Saba, “Border-Crossing Sales, Tax Avoidance, and State Tax Policies: An Application to Alcohol,” *Southern Economic Journal*, vol. 64, no. 1 (July 1997), pp. 293–306.

¹⁷ All references to TTB tax collection data in this report refer to *total* tax collections, not *net* tax collections (i.e., total minus overpayment refunds). TTB publicly releases total overpayment data, but it is not disaggregated by types of alcoholic product.

¹⁸ CRS analysis of TTB data from “Tax Collections,” U.S. Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau, http://www.ttb.gov/tax_audit/tax_collections.shtml.

Figure 2. Components of Alcohol Excise Tax Collections, by Product, FY2023



Source: CRS analysis of U.S. Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau, "Statistical Release: Tax Collections FY2023 Final," TTB S 5630-FY-2023, <https://www.ttb.gov/media/78776/download?inline>.

Note: Percentages do not sum to 100% due to rounding.

The majority of alcohol excise taxes are collected on products that were manufactured in the United States, particularly beer. In FY2023, 77% of beer excise tax revenue was from domestic products, compared with 69% for distilled spirits and 61% for wine.¹⁹ In general, the share of consumption from imports has increased over time.²⁰

The reduced rates enacted in 2017 and made permanent in 2021 are estimated to have reduced tax receipts for FY2023 by 8.7% for distilled spirits, 21.5% for wine, and 4.4% for beer.²¹

Federal alcohol excise tax revenue is paid into the General Fund. Some states provide that a portion of revenue from their state-level alcohol excise taxes is hypothecated for programs related to alcohol consumption (such as substance abuse treatment). The federal government supports various substance abuse treatment and prevention services,²² but there is no statutory link between funding for these programs and the federal alcohol excise tax.

Taxes collected on imported rum are rebated (covered over) in part to the territorial governments of Puerto Rico and the U.S. Virgin Islands. Each territory gets a rebate of part of the tax paid on rum from its own territory, and they share part of the tax on other rum imports based on a

¹⁹ CRS analysis of TTB, "Statistical Release: Tax Collections FY2023 Final," TTB S 5630-FY-2023, <https://www.ttb.gov/media/78776/download?inline>.

²⁰ "Tax Collections," U.S. Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau, http://www.ttb.gov/tax_audit/tax_collections.shtml.

²¹ Based on projections of revenue cost for FY2023 by the Joint Committee on Taxation (JCT), *Estimated Budget Effects Of The Revenue Provisions Contained In Rules Committee Print 116-68, The "Consolidated Appropriations Act, 2021"*, JCX-24-20, December 21, 2020, <https://www.jct.gov/publications/2020/jcx-24-20/>. The JCT reduces excise tax revenues by approximately 25% to account for the reduction in income taxes. Therefore the estimates in the JCT report were increased (divided by 0.75) to make them comparable to excise tax collections.

²² See, for example, CRS Report R46426, *Substance Abuse and Mental Health Services Administration (SAMHSA): Overview of the Agency and Major Programs*, by Johnathan H. Duff.

formula. Currently, the federal government rebates \$10.50 of the \$13.50 tax per proof gallon on all rum imports to the territories. These payments amounted to \$670 million in FY2023.²³ They were approximately 10% of total excise tax revenues on distilled spirits and 32% of such revenues from imports of distilled spirits. In the past, the cover-over has been higher—\$13.25—and there are proposals to restore this higher amount.

Effects of Inflation on Tax Rates and Revenues

Alcohol excise tax rates are levied on a dollar-per-unit basis and are not automatically adjusted for inflation. Past increases in alcohol excise tax rates, however, were justified by Congress as a means to partially account for the effects of inflation and to increase general revenue.²⁴

Despite periodic increases in the statutory tax rates, the inflation-adjusted values of these tax rates have declined over time.²⁵ **Table 2** shows what those initial rates would be if they were increased to retain the same real value in 2024. For example, the distilled spirits tax rate of \$10.50 ppg in 1951 would be equivalent to a tax of \$101.33 ppg in 2024. If the 1991 rate of \$13.50 ppg on spirits were adjusted for inflation, then the tax rate would be \$27.61 in 2024.

Table 2. Federal Statutory Increases to Excise Tax Rates on Alcohol and Value If Increased to Reflect Inflation

Type of Alcohol	Year Adjusted		
	1951	1985	1991 (Current Rates)
Distilled Spirits	\$10.50 \$101.33 in 2024 dollars	\$12.50 \$30.82 in 2024 dollars	\$13.50 \$27.61 in 2024 dollars
Beer (Regular Rate)	\$9 \$86.86 in 2024 dollars	NA	\$18 \$36.81 in 2024 dollars
Still Wine (14% ABV or Below)	\$0.17 \$1.64 in 2024 dollars	NA	\$1.07 \$2.19 in 2024 dollars

Source: CRS calculations based on Table I.1.4, “Price Indexes for Gross Domestic Product, Line 1, 2nd Quarter, GDP and Personal Income, Bureau of Economic Analysis,” National Income and Product Accounts, <https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey><https://apps.bea.gov/iTable/?reqid=19&step=2&isuri=1&categories=survey>.

²³ TTB’s FY2023 annual report reports \$362.4 million for Puerto Rico and \$6.5 million for the U.S. Virgin Islands. See TTB, *Annual Report, Fiscal Year 2023*, p. 35, <https://www.ttb.gov/media/78701/download?inline>. The Department of the Interior provides for direct payments and estimates \$300 million for the U.S. Virgin Islands. See U.S. Office of Personnel Management, *Budget of the United States, Fiscal Year 2024, Appendix*, March 13, 2023, p. 674, <https://www.govinfo.gov/app/collection/budget/2024>.

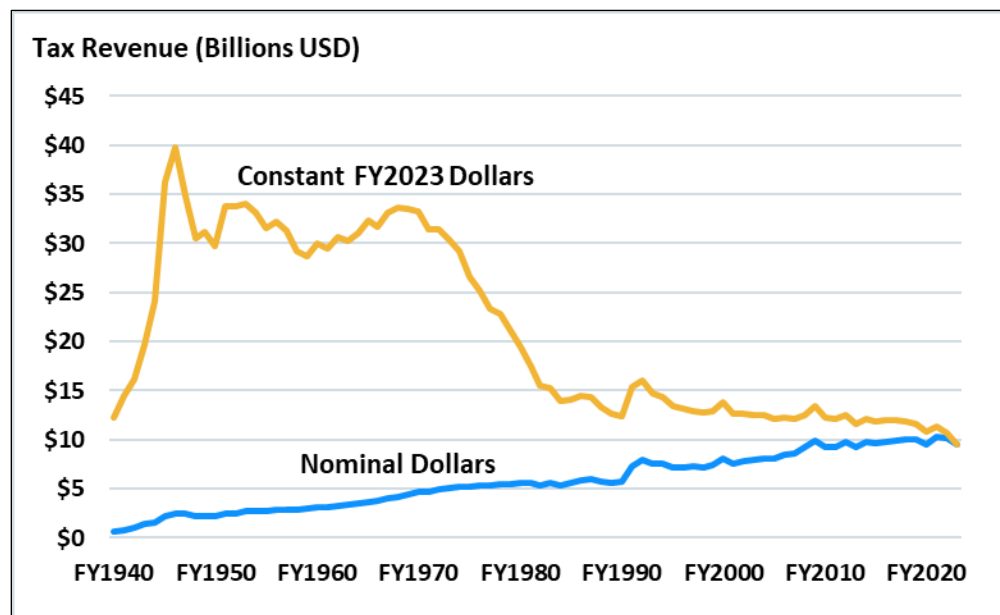
²⁴ For example, in 1984, the Joint Committee on Taxation noted that “the [distilled spirits excise] tax is imposed as a flat amount, rather than as a percentage of sales price, [and] the effective level of the tax had declined by more than 70% in constant dollars since that increase. Congress believed, therefore, that a modest adjustment of \$2.00, to \$12.50 per proof gallon, was appropriate.” See U.S. Congress, Joint Committee on Taxation, *General Explanation of the Revenue Provisions of the Deficit Reduction Act of 1984 (H.R. 4170)*, 98th Congress; P.L. 98-369, JCS-41-84, 98th Cong., 2nd sess., p. 32.

²⁵ Historical rates for all alcohol excise taxes can be found at “Historical Tax Rates,” TTB, http://www.ttb.gov/tax_audit/94a01_4.shtml.

Since the most recent increase in alcohol excise tax rates took effect in 1991, the decline in real tax rates has been a major factor in the decrease in the inflation-adjusted revenue raised by the taxes.

As shown in **Figure 3**, nominal alcohol excise tax collections have generally increased from FY1940 through FY2023. However, after taking inflation into account, real excise tax collections declined from a high of about \$40 billion (in FY2023 dollars) in 1940 to about \$10 billion in FY2023—the lowest inflation-adjusted value in at least 80 years.

Figure 3. Alcohol Excise Tax Collections, Nominal vs. Inflation-Adjusted, FY1940-FY2023



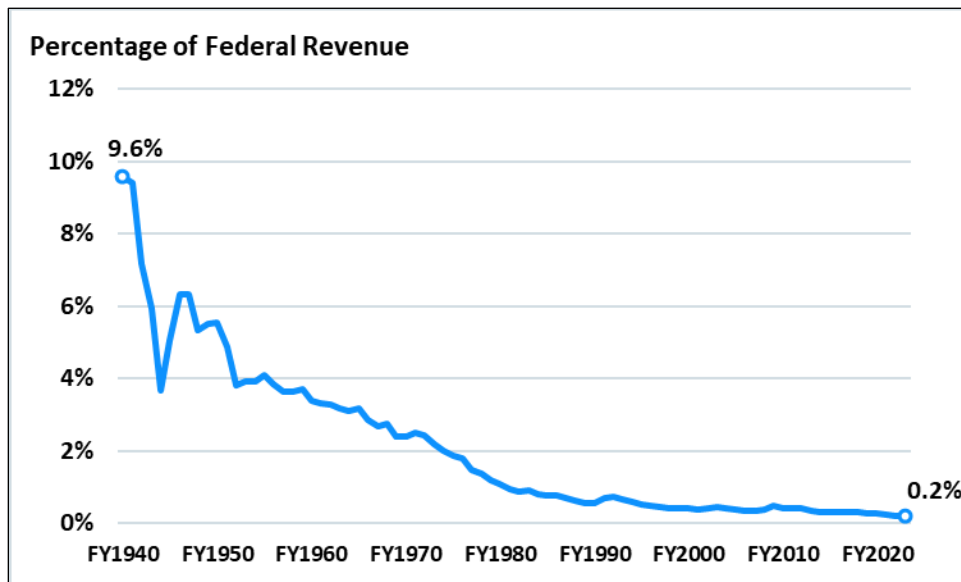
Source: CRS analysis of Office of Management and Budget, “The President’s Budget for Fiscal Year 2025: Historical Tables,” Table 2.4—Composition of Social Insurance and Retirement Receipts and of Excise Taxes: 1940-2029, <https://www.whitehouse.gov/omb/budget/historical-tables/>.

Note: Inflation adjustment to constant FY2023 dollars was done using the composite GDP deflator in Office of Management and Budget, Historical Table I.3.

The federal government has relied less on alcohol excise taxes for revenue over time, as shown in **Figure 4**. In FY1940, alcohol excise taxes comprised around 10% of federal revenue (excise taxes overall comprised 30% of federal revenue in FY1940.) That was largely before the expansion of income taxes (on both individuals and corporations) and social insurance taxes (funding Social Security and other programs) during and after World War II. Alcohol excise taxes were last above 4% of federal receipts in FY1955, and were last above 2% of federal receipts in FY1973. The modern-era low was in FY2022, when alcohol excise taxes comprised 0.2% of total federal revenue.²⁶

²⁶ CRS analysis of Office of Management and Budget, “The President’s Budget for Fiscal Year 2025: Historical Tables,” Table 1.3—Summary of Receipts, Outlays, and Surpluses or Deficits (-) in Current Dollars, Constant (FY2017) Dollars, and as Percentage of GDP: 1940-2029 and Table 2.4—Composition of Social Insurance and Retirement Receipts and of Excise Taxes: 1940-2029, <https://www.whitehouse.gov/omb/budget/historical-tables/>.

Figure 4. Alcohol Excise Tax Collections as a Share of Federal Revenue, FY1940-FY2023



Source: CRS analysis of Office of Management and Budget, “The President’s Budget for Fiscal Year 2025: Historical Tables,” Table 1.3—Summary of Receipts, Outlays, and Surpluses or Deficits (-) in Current Dollars, Constant (FY2017) Dollars, and as Percentage of GDP: 1940-2029 and Table 2.4—Composition of Social Insurance and Retirement Receipts and of Excise Taxes: 1940-2029, <https://www.whitehouse.gov/omb/budget/historical-tables/>.

Wine Imports and “Double Drawback”

Federal alcohol excise taxes can be refunded in certain cases if a taxed beverage is exported.²⁷ The process of refunding customs duties or excise taxes on exported goods is called *drawback* and has a long history—in various forms—dating back to 1789.²⁸ One method of drawback is based on the substitution of unused merchandise. In this method, an entity may be eligible for a drawback of 99% of duties, taxes, or fees paid on the import of goods if that same entity exports or destroys goods that are “commercially interchangeable” and meets other conditions.²⁹

U.S. Customs and Border Protection (CBP) and the Department of the Treasury (Treasury) have identified a situation they call “double drawback” that results from the interaction between alcohol excise tax law and drawback law.³⁰ Imagine a company that imports 100 wine gallons of red wine. That company pays the alcohol excise tax on those 100 gallons and sells the wine to consumers. Thus far, the excise tax treatment is the same as if the company produced the 100 wine gallons domestically and sold that domestic wine to consumers. But next suppose that the same company that imported 100 wine gallons of red wine also domestically produced 100 wine gallons of red wine (that is similar enough to be “commercially interchangeable”). If the company transported the domestically produced wine directly from the manufacturing facility to a bonded

²⁷ 19 U.S.C. §1313(d).

²⁸ U.S. Customs and Border Protection, *Drawback: A Refund for Certain Exports*, July 2013, p. 1, <https://www.cbp.gov/document/guidance/drawback-refund-certain-exports> (hereinafter “CBP, *Drawback*”).

²⁹ 19 U.S.C. §1313(j)(2). See also CBP, *Drawback*, p. 2.

³⁰ U.S. Customs and Border Protection, Department of Homeland Security; and Department of the Treasury, “Modernized Drawback,” 83 *Federal Register* 37886, August 2, 2018, <https://www.federalregister.gov/d/2018-16279> (hereinafter “CBP and Treasury, ‘Modernized Drawback,’ 83 *Federal Register* 37886”).

warehouse for export, excise tax on the domestically produced wine would never be due. The essential factor is that the domestically produced wine never left bonded facilities before export, so the excise tax on it was never due. The company could apply to CBP for a drawback of 99% of the excise taxes paid on the imported wine. Since CBP does not verify if excise tax was paid on the exported wine, the company would effectively be able to bring the imported wine into the United States 99% free of alcohol excise tax.³¹

CBP and Treasury stated that CBP likely first approved drawback claims for wine excise taxes sometime in 2004, and that some of those claims may have included double drawback.³² Because of double drawback, CBP and Treasury expressed “concern that the statutory scheme was being subverted” and “concerns with revenue losses both realized and potential.”³³ They have made several attempts to end the practice:

- From 2001 to 2007, CBP paid drawback claims for wine in cases where the imported and exported wine were the same color and had a similar price (defined as the prices being within 50% of each other). In May 2007, CBP changed its standard of “commercial interchangeability” to requiring the same varietal.³⁴ This reduced the number of wines that were potentially commercially interchangeable. For example, “white wine” could include Riesling, Sauvignon Blanc, or Chardonnay. However, each of these are separate varietals. Partially in response to CBP’s change,³⁵ the Food, Conservation, and Energy Act of 2008 (P.L. 110-234; also known as the 2008 farm bill) codified provisions similar to the 2001-2007 commercial interchangeability for wines.³⁶
- In October 2009, CBP and Treasury issued a notice of proposed rulemaking to end double drawback by preventing entities from making a substitution drawback claim in cases where excise tax either was not paid or was otherwise refunded.³⁷ Treasury’s Alcohol and Tobacco Tax and Trade Bureau issued a notice of proposed rulemaking on the same day to make conforming changes related to the CBP and Treasury proposed rule.³⁸ Both notices of proposed rulemaking were

³¹ This example is adopted from CBP and Treasury, “Modernized Drawback,” 83 *Federal Register* 37886. See also U.S. Customs and Border Protection, Department of Homeland Security; and Department of the Treasury, “Drawback of Internal Revenue Excise Tax,” 74 *Federal Register* 52928, October 15, 2009, <https://www.federalregister.gov/d/E9-24789> (hereinafter “CBP and Treasury, ‘Drawback of Internal Revenue Excise Tax,’ 74 *Federal Register* 52928”).

³² CBP and Treasury, “Modernized Drawback,” 83 *Federal Register* 37886. CBP and Treasury seem to regard this treatment for wine as a mistake, noting (in a heading) that “federal excise taxes have been *improperly refunded*” and that the first case of double drawback may have been related to “a *misunderstanding*” of a law change in 2004 (emphasis added). Since the agencies identified these “improper refund[s],” they have not allowed this treatment for other types of goods with similar excise taxes (notably distilled spirits, beer, tobacco products, and taxable fuels). However, they note the need for a rulemaking to change the treatment for wine due to other statutory provisions: “CBP has never issued a ruling or regulation authorizing the current treatment with respect to wine. Nevertheless, because CBP has approved substitution unused drawback claims based on wine exports for which no excise tax has been paid, its treatment of this issue must be changed through a notice and comment process. See 19 U.S.C. 1625(c).”

³³ CBP and Treasury, “Modernized Drawback,” 83 *Federal Register* 37886.

³⁴ U.S. Congress, Conference Committee, *Food, Conservation, and Energy Act of 2008*, conference report to accompany H.R. 2419, 110th Cong., 2nd sess., H.Rept. 110-267, May 13, 2008, pp. 1094-1095, <https://www.congress.gov/110/crpt/hrpt627/CRPT-110hrpt627.pdf>.

³⁵ *Ibid.*

³⁶ Section 15421 of P.L. 110-234.

³⁷ CBP and Treasury, “Drawback of Internal Revenue Excise Tax,” 74 *Federal Register* 52928.

³⁸ Alcohol and Tobacco Tax and Trade Bureau, Treasury, “Drawback of Internal Revenue Taxes,” October 15, 2009, 74 *Federal Register* 52937, <https://www.federalregister.gov/d/E9-24791>.

withdrawn in March 2010 “to permit further consideration of the relevant issues involved in the proposed rulemaking.”³⁹

- In August 2018, CBP and Treasury issued a notice of proposed rulemaking to change the drawback process generally.⁴⁰ This initiative included changes intended to prevent double drawback. The regulations proposed to limit the amount of excise tax refunded based on a substitution drawback claim to the amount of excise tax paid on the substituted merchandise and not previously returned by refund, credit, or drawback. CBP and Treasury finalized the rule in December 2018.⁴¹ The regulations related to excise tax drawback were effective as of February 19, 2019. The provisions related to preventing double drawback were challenged in the U.S. Court of International Trade. That court held that the challenged provisions of the final rule (relating to excise tax drawback) were unlawful.⁴² The government appealed, and the U.S. Court of Appeals for the Federal Circuit affirmed the U.S. Court of International Trade decision.⁴³

It is not clear how much revenue is lost due to double drawback, since CBP does not collect information on whether excise tax was paid on the substituted goods. However, CBP analyzed unpublished drawback claims data for FY2015 and estimated a potential cost of double drawback of about \$55 million, compared with total wine import excise tax collections of \$335 million. CBP estimated that 13% of bottled wine imports and 25% of bulk wine imports resulted in a double drawback claim.⁴⁴ A subsequent CBP analysis found that almost all of the double drawback claims were attributable to the 20 largest wine importers.⁴⁵ In August 2018, CBP estimated a revenue loss due to wine-related double drawback of between \$51 million and \$69 million annually over 10 years.⁴⁶

As of August 2018, CBP and Treasury stated that double drawback claims have only been allowed for wine. Some distilled spirits producers have submitted similar double drawback claims, but CBP has denied them.⁴⁷ However, CBP and Treasury stated that vodka, gin, and grain alcohol may result in larger behavioral responses to double drawback, including trade rerouting, than higher-value spirits such as brandy, liqueurs, and cordials.⁴⁸ Overall, the agencies estimated possible revenue effects for the federal government of between \$312 million and \$937 million annually over 10 years if double drawback were allowed for distilled spirits.⁴⁹

³⁹ U.S. Customs and Border Protection and Department of the Treasury, “Drawback of Internal Revenue Excise Tax,” March 2, 2010, 75 *Federal Register* 9359, <https://www.federalregister.gov/d/2010-4379>; and Alcohol and Tobacco Tax and Trade Bureau, “Drawback of Internal Revenue Excise Taxes,” March 2, 2010, 75 *Federal Register* 9359, <https://www.federalregister.gov/d/2010-4374>.

⁴⁰ CBP and Treasury, “Modernized Drawback,” 83 *Federal Register* 37886.

⁴¹ U.S. Customs and Border Patrol, Department of Homeland Security; and Department of the Treasury, “Modernized Drawback,” December 18, 2018, 83 *Federal Register* 64942, <https://www.federalregister.gov/d/2018-26793> (hereinafter “CBP and Treasury, ‘Modernized Drawback,’ 83 *Federal Register* 64942”).

⁴² *National Association of Manufacturers v. Department of the Treasury*, No. 19-00053 (Ct. Int’l Trade 2020).

⁴³ *National Association of Manufacturers v. Department of the Treasury*, 10 F.4th 1279 (Fed. Cir. 2021).

⁴⁴ CBP and Treasury, “Modernized Drawback,” 83 *Federal Register* 37886.

⁴⁵ CBP and Treasury, “Modernized Drawback,” 83 *Federal Register* 64942.

⁴⁶ CBP and Treasury, “Modernized Drawback,” 83 *Federal Register* 37886.

⁴⁷ CBP and Treasury, “Modernized Drawback,” 83 *Federal Register* 37886.

⁴⁸ CBP and Treasury, “Modernized Drawback,” 83 *Federal Register* 37886, note 19.

⁴⁹ CBP and Treasury, “Modernized Drawback,” 83 *Federal Register* 37886.

The Congressional Budget Office included an option related to alcohol excise taxes in its December 2022 report on deficit reduction options. Both alternatives for that option—either increasing the alcohol excise tax to \$16 per proof gallon or increasing the alcohol excise tax and then indexing it for inflation—included a provision that would prevent double drawback. Therefore, the revenue estimates for both alternatives included potential savings from preventing double drawback.⁵⁰

The Domestic Alcohol Production Industry

Some recent changes, including the tax reductions for small producers, have been motivated by concerns about concentration in domestic alcohol production.

Industry Concentration

Production of distilled spirits in the United States is relatively concentrated, with four companies responsible for 67% of company revenues. Diageo is responsible for 52.3% of production by value. Other important companies are Brown-Forman (8.5%), Sazerac (3.2%), and Suntory Global Spirits (3.0%).⁵¹ Overall, wine production is less concentrated, with E. & J. Gallo responsible for 13.4%, Constellation Brands for 7.4%, The Wine Group 1.6%, and Bronco Wine Group 0.5%.⁵² Beer production is also less concentrated, with Molson Coors Brewing Company responsible for 11.0%, Anheuser-Busch 8.9%, Sierra Nevada 0.5%, and New Belgium Brewing Company 0.4%.⁵³ By distillery and volume, 66% of distilled spirits are produced by 15 distilleries, 65% of beer is produced by 14 breweries, and 54% of wine is produced by 14 wineries. There are many more wineries and breweries (over 6,000 each) than distilleries (about 2,000).⁵⁴

Geographic Concentration

Wineries and distillers are geographically concentrated. Four states are responsible for more than half of revenues from distilling: Kentucky (32%), Texas (11%), Tennessee (8%), and Illinois (6%).⁵⁵ California accounts for half of winery revenue, with no other state having 5% or more.⁵⁶ Breweries are more widely dispersed, with California accounting for 14%, followed by Texas, Colorado, and Pennsylvania, each with between 6% and 8% of revenue.⁵⁷

⁵⁰ CBO, *Options for Reducing the Deficit, 2023 to 2032: Volume II: Smaller Reductions*, December 2022, p. 68, <https://www.cbo.gov/system/files/2022-12/58163-budget-options-small-effects.pdf>.

⁵¹ IBIS World, "Industry Report, Distilleries in the US," April 2024.

⁵² IBIS World, "Industry Report, Wineries in the US," April 2024.

⁵³ IBIS World, "Industry Report, Breweries in the US," January 2024.

⁵⁴ U.S. Department of the Treasury, *Competition in the Markets for Beer, Wine, and Spirits*, February 2022, <https://home.treasury.gov/system/files/136/Competition-Report.pdf>.

⁵⁵ IBIS World, "Industry Report, Distilleries in the US," April 2024.

⁵⁶ IBIS World, "Industry Report, Wineries in the US," April 2024.

⁵⁷ IBIS World, "Industry Report, Breweries in the US," January 2024.

Craft and Small Producers

Recent tax relief provisions were aimed at assisting small and craft breweries and distilleries. Lower taxes, however, also produce differences in the excise tax within types of alcohol, and favor those who prefer craft products over national brands.

There are no official definitions of craft beer or distilled spirits. The Brewers Association defines craft beer as being produced by independent brewers with 6 million barrels or less; it indicated that craft beer accounted for 13.3% of the market by volume and 24.7% by value in 2023.⁵⁸ The American Craft Spirits Association reports the craft share for distilleries in 2022 was 4.9% by volume and 7.7% by value (based on independent distilleries with less than 750,000 proof gallons).⁵⁹

The limits for the tax provisions are an alternative way to define small and craft alcohol. The estimates are based on data in a Treasury Department study of competition in the alcoholic beverage industry.⁶⁰ For beer, the lower rate of \$3.50 (compared to \$18 a barrel) is for brewers producing 2 million barrels or less and is available for the first 60,000 barrels. According to the distributional data in the Treasury study, brewers with 2 million barrels or less accounted for 21.4% of volume in 2020. Those with 60,000 barrels or less, who receive the lower rate on all their production, accounted for 11.7%. A somewhat lower rate of \$16 per barrel is available for additional production up to 6 million barrels; 35% of beer by volume is produced by brewers who produce 6 million barrels or less.

For spirits, the lower rate of \$2.70 applies to the first 100,000 proof gallons produced or imported, which does not correspond to the categories in the Treasury study. However, the study indicates that 1.3% of production is by distillers with less than 41,600 gallons and 3.5% of production is by distillers with less than 244,875 gallons. Thus only a small percentage (between 1.3% and 3.5%) would receive the lower rate on all their production. Unlike beer, the lower rates apply to all producers, and it appears that most of the lower rates apply to firms that produce more than 100,000 proof gallons.⁶¹

As with spirits, the categories in the Treasury Department study do not match those for wine credits, which are \$1 for the first 30,000 wine gallons of production, \$0.90 for the next 100,000, and \$0.535 for the next 620,000. The data show that 1.5% of production is by wineries that produce 9,664 gallons or less, 4.8% is by those that produce 60,559 or less, 10.3% is by those that produce 379,000 or less, and 23.6% is by those that produce fewer than 2,378,168 gallons. Thus, it appears that the wine credits apply for full production on about 11% of wine production,⁶² the \$0.90 or \$1.00 credits apply to full production on around 5%, and the \$1 credit applies to full production on around 2%. Also, as with spirits, the credit is available for all producers.

Based on estimates by the Joint Committee on Taxation, the revenue losses for lower tax rates on certain distilled spirits, wine, and beer in FY2023 were \$440 million, \$171 million, and \$108

⁵⁸ “National Beer Sales & Production Data,” Brewers Association, <https://www.brewersassociation.org/statistics-and-data/national-beer-stats/>.

⁵⁹ American Craft Spirits Association, *Craft Spirits Data Project*, 2023, <https://americancraftspirits.org/wp-content/uploads/2017/02/2023-CSDP-Final-Presentation-compressed.pdf>.

⁶⁰ U.S. Department of the Treasury, *Competition in the Markets for Beer, Wine, and Spirits*, February 2022, <https://home.treasury.gov/system/files/136/Competition-Report.pdf>.

⁶¹ Assuming that the production in the 41,600 to 244,875 category is produced by larger firms, the share is about 70%.

⁶² Linear interpolation would indicate 11.9%, but given the increasing production as production size goes up, this number is probably too large.

million, respectively.⁶³ Since these estimates assume increased income taxes offset about 25% of lost excise tax revenue, these figures should be divided by about 0.75 to yield total excise tax losses.⁶⁴ The gross excise tax revenue losses from these lower rates equate to 8.7% of excise tax revenues collected for distilled spirits, 31.4% for wine, and 4.4% for beer.⁶⁵ These shares also point to the lower tax rates primarily going to large producers of distilled spirits and wine.

One concern about the lower rates for craft beverages is a provision adopted in 2017 that allowed beer to be transferred among breweries not under common ownership. This provision means beer can be brewed by a large producer but transferred to a small producer for packaging and be eligible for the lower excise taxes.

The craft beer industry (as defined by the Brewers Association) was growing before the provisions were adopted, rising (by volume) from 7.8% in 2013 to 12.7% in 2017, the latter not much different from the current share of 13.2%.⁶⁶ Thus, it is not clear that this sector faced barriers to obtaining a market share. The craft spirits market was also growing rapidly before 2018.⁶⁷

Economic Effects and Issues

A major rationale for alcohol excise taxes is to discourage alcohol consumption and its negative spillover effects (such as accidents, domestic violence, and health effects). Health effects can spill over to others if the costs are paid by third parties, for example, health insurers. Economists often refer to these spillover effects as *externalities*. Taxes will be a more effective deterrent if they are passed on to consumers and consumers respond by reducing consumption in some meaningful way. In general, evidence suggests that alcohol taxes in the United States are significantly lower than the estimated monetary costs of alcohol's negative spillover effects.

Two reservations arise about the use of excise tax to correct externalities. The first is that the negative effects of alcohol are generally traced to heavy drinking or underage drinking, whereas a tax falls on all consumers, including social drinkers. The second is that taxes on consumption tend to be regressive or proportional to income, rather than progressive like the individual income tax (rising as a share of income as income increases).⁶⁸

Is the Tax Shifted to Consumers?

In a competitive market, an excise tax would be shifted to consumers. There is extensive evidence that alcohol taxes are passed on to consumers and are sometimes overshifted (meaning the price

⁶³ Joint Committee on Taxation, *Estimated Budget Effects of the Revenue Provisions Contained in Rules Committee Print 116-68, The "Consolidated Appropriations Act, 2021,"* JCS-24-20, December 21, 2020, <https://www.jct.gov/publications/2020/jcx-24-20/>.

⁶⁴ Given a constant price level in the economy, excise tax raises prices on the product taxed and lowers other prices. The excise tax reduces overall income (labor and capital income) in the economy and thus reduces income taxes.

⁶⁵ "Tax Collections," TTB, <https://www.ttb.gov/taxes/tax-audit/tax-collections>.

⁶⁶ "Craft Beer Share of Beer Production Volume in the United States from 2013 to 2022," Statista, <https://www.statista.com/statistics/267519/craft-beer-volume-share-of-us-beer-production/>. Note that the Brewer's Association data on which the Statista chart is based reports a 13.1% share for 2022, the same as the 2021 share in the Statista chart, but a rise in the share to 13.3% in 2023, see <https://www.brewersassociation.org/association-news/brewers-association-releases-annual-craft-brewing-industry-production-report-and-top-50-producing-craft-brewing-companies-for-2023/>.

⁶⁷ "Craft Spirits Outpace Growth of Non-Craft Spirits in the U.S.," ISWR, November 22, 2021, <https://www.theiwsr.com/craft-spirits-outpace-growth-of-non-craft-spirits-in-us/>.

⁶⁸ See CRS Report R45145, *Overview of the Federal Tax System in 2022*, by Molly F. Sherlock and Donald J. Marples.

paid by consumers increases by more than the amount of the tax), although there is evidence of some undershifting for low-priced products and overshifting for high-priced products.⁶⁹

Response to Higher Taxes

The response of consumption to price changes is generally reported as a price elasticity, that is, the percentage change in quantity divided by the percentage change in price. Thus, an elasticity of -0.5 indicates that for each 1% increase in price, there will be a 0.5% decrease in consumption. There is a large literature estimating these responses. The most recent literature review found elasticities for beer, wine, and spirits of -0.3, -0.6, and -0.65 (respectively), elasticities for heavy drinkers of -0.28, small substitution effects across different types of alcohol, and no evidence of differences in response by age or sex or on the amount of binge drinking.⁷⁰ One study found taxes on beer to be effective in reducing underage binge drinking and the trajectory of drinking patterns into young adulthood.⁷¹ Another study found larger elasticities for binge drinking.⁷² Another study found that both heavy and light drinkers reduce purchases after a tax increase, and that only low-income drinkers pay more for pure alcohol after the tax increase.⁷³

Studies of direct effects on negative outcomes have been mixed. One study found no long-term reduction in fatal alcohol-related motor vehicle crashes in Illinois following large increases in state alcohol excise taxes in 1999 and 2009. However, the 2009 study found evidence of reductions for counties that do not border a separate state.⁷⁴ This finding is presumably due to individuals in counties bordering another state driving to an adjoining state to consume alcohol.

Spillover Effects from Alcohol Consumption

Some economists justify the imposition of taxes and regulations on alcohol consumption based on the principle of economic efficiency, because alcohol consumption has negative spillover effects on society. From a societal perspective, products with positive externalities (i.e., spillover benefits

⁶⁹ For example, see Alexander C. Wagenaar, Matthew J. Salois, and Kelli A. Komro, “Effects of Beverage Alcohol Price and Tax Levels on Drinking: A Meta-Analysis of 1003 Estimates From 112 studies,” *Addiction*, vol. 104 (2009), pp. 179-190; Donald S. Kenkel, “Are Alcohol Tax Hikes Fully Passed Through to Prices? Evidence from Alaska,” *American Economic Review*, vol. 95, no. 2 (2005), pp. 273-277; Douglas J. Young and Agnieszka Bielinska-Kwapisz, “Alcohol Taxes and Beverage Prices,” *National Tax Journal*, vol. LV, no. 1 (March 2002), pp. 57-73; Philip J. Cook, “The Effect of Liquor Taxes on Drinking, Cirrhosis, and Auto Fatalities,” in *Alcohol and Public Policy: Beyond the Shadow of Prohibition*, ed. Mark Moore and Dean Gerstein (Washington, DC: National Academy of Sciences, 1981), pp. 255-285; Jon P. Nelson and John R. Moran, “Effects of Alcohol Taxation on Prices: A Systematic Review and Meta-Analysis of Pass-Through Rates,” *The B. E. Journal of Economic Analysis and Policy*, vol. 20, no. 1 (January 2020), <https://www.degruyter.com/document/doi/10.1515/bejeap-2019-0134/html>; Ce Shang, Anh Ngo, and Frank J. Chaloupka, “The Pass-Through of Alcohol Excise Taxes to Prices in OECD Countries,” *The European Journal of Health Economics*, vol. 21, no. 6 (2020), p. 855-867; and Luke B. Wilson, “The Effect of Alcohol Tax Changes on Retail Prices: How Do On-Trade Alcohol Retailers Pass Through Tax Changes to Consumers?,” *The European Journal of Health Economics* vol 22, no. 3 (2021), pp. 381-392.

⁷⁰ C. Emmanuel Gidion et al., “Prices, Taxes and Alcohol Use: A Systematic Umbrella Review,” *Addiction*, vol. 117, no. 12 (2022), pp. 3004-3023. See also chart in the Appendix.

⁷¹ Benjamin J. Fairman et al. “State alcohol policies, Taxes, and Availability as Predictors of Adolescent Binge Drinking Trajectories Into Early Adulthood,” *Addiction*, vol 114, no. 7 (2019), pp. 1173-1182.

⁷² Xuan Ziming et al. “The Relationship Between Alcohol Taxes and Binge Drinking: Evaluating New Tax Measures Incorporating Multiple Tax and Beverage Types,” *Addiction*, vol. 110, no. 3 (2015), pp. 441-450.

⁷³ Henry Saffer, Markus Gehrsitz, and Michael Grossman, *The Effects of Alcohol Excise Tax Increases by Drinking Level and by Income Level*, National Bureau of Economic Research, Working Paper No. 30097, May 2022, https://www.nber.org/system/files/working_papers/w30097/w30097.pdf.

⁷⁴ Robert McClelland and John Iselin “Do State Excise Taxes Reduce Alcohol-Related Fatal Motor Vehicle Crashes?,” *Economic Inquiry*, October 2019, vol. 57, no. 4 (October 2019), pp. 1821-41.

to society) tend to be undersupplied in the market, whereas products with negative externalities (i.e., spillover costs to society) tend to be oversupplied, absent policies that adjust prices to reflect these spillover effects.

The costs associated with alcohol consumption have been studied by researchers in a variety of fields, including economics, health, and public safety and crime. Examples of the costs most often featured in studies include the effects of alcohol consumption on motor vehicle crashes, public health, domestic violence, and other crimes. In addition, many researchers have studied these effects among youth, as some of these effects are disproportionately concentrated among younger consumers of alcohol (e.g., involvement in motor vehicle crashes and violent crime).

Nevertheless, there are fewer estimates of *external* costs, because most studies estimate total costs rather than the external costs that spill over to others. Those studies generally find that excise taxes on alcohol in the United States are significantly lower than the total external costs alcohol imposes on society.

External Versus Total Cost

The exact degree to which external costs exceed collections is difficult to measure, as many studies combine internal and external costs into a single, “total cost” of alcohol consumption. According to economic theory, individual consumers with perfect information should take internal costs (e.g., increased risk of cirrhosis, lost time at work due to excess drinking, possible fines for being convicted of driving while intoxicated) into account before determining their demand for alcohol. In contrast, individual consumers might not take into account the costs of their drinking to others (e.g., causing bodily harm or property damage to others while driving while intoxicated). While these studies are useful to understand both the individual and social costs of alcohol consumption, economists are less concerned with the internal costs because they are assumed to be “internalized” in the decisionmaking process of rational individuals. From the perspective of excise taxation, conflating internal and external costs of alcohol consumption could lead policymakers to conclude that the economically appropriate level of taxation is higher than economic theory would suggest.

One of the most prominent initial studies of the *external* costs associated with alcohol consumption was conducted by Manning et al. (1989, 1991), and is hereinafter referred to as the “Manning study.”⁷⁵ Unlike many other studies estimating the “total costs” of alcohol consumption, the Manning study focused solely on *external* costs, and also incorporated some offsets against some of these costs that are associated with excessive drinking (defined as averaging more than two drinks per day for men and one drink per day for women).⁷⁶ The Manning study acknowledges that most of these costs could be due to heavy drinkers, but the authors also note that it is difficult to differentiate between excessive and non-excessive drinking for any one individual. Thus, the Manning study averages the external costs over all alcohol

⁷⁵ See Willard G. Manning et al., *The Costs of Poor Health Habits* (Cambridge, MA: Harvard University Press, 1991); and Willard G. Manning et al., “The Taxes of Sin: Do Smokers and Drinkers Pay Their Way?,” *Journal of the American Medical Association*, vol. 261, no. 11 (March 17, 1989), pp. 1604-1609, <https://www.rand.org/pubs/notes/N2941.html>.

⁷⁶ For federal government definitions of moderate drinking, see U.S. Department of Agriculture and U.S. Department of Health and Human Services, *Dietary Guidelines for Americans, 2020-2025*, 9th Edition (Washington, DC: US Government Printing Office, 2020), p. 40, https://www.dietaryguidelines.gov/sites/default/files/2021-03/Dietary_Guidelines_for_Americans-2020-2025.pdf. Most of the offsets in the Manning study are related to findings that heavy drinking shortens life expectancy. For example, consumers of alcohol who die earlier because of alcohol-related incidents (e.g., car crashes) or diseases (e.g., cirrhosis of the liver) reduce outlays of any pensions or government benefit payments. According to the Manning study, the net external costs of drinking are greater than smoking, in part, because smoking tends to reduce life expectancy more than heavy drinking, thus leading to a higher budgetary offset from smoking than drinking.

consumption to arrive at an estimate of 48 cents per ounce (in 1986 dollars) of alcohol consumed. Converted to current (2024) price levels, that amount would be \$1.40 an ounce.

A more recent study of external costs found a similar result: a cost per ounce of \$0.89 for 2007, which would be \$1.34 if adjusted to current price levels.⁷⁷ Most of the \$1.34 cost is due to violence (46%) and drunk driving (43%). The relatively small share attributable to third-party medical costs due to alcohol consumption is because of the partially offsetting effect of earlier death, which reduces medical costs in the future.

These costs would significantly exceed average current taxes (federal, state, and local), which CRS estimates to be around \$0.25 an ounce.⁷⁸ This finding contrasts with that for tobacco, where current taxes are higher than estimated externalities.⁷⁹

Even if it is accepted that more could be done to compensate for the social costs of alcohol consumption, some might be skeptical as to whether across-the-board increases in federal excise tax rates are the most appropriate remedy.

For example, some could argue that casual drinkers rarely impose the types of negative externalities tabulated by Manning et al., and thus efforts should be targeted toward prevention and treatment of alcohol abuse. To some extent, this notion is supported in the research.⁸⁰ Studies from Columbia University's National Center on Addiction and Substance Abuse find that over half of inmates in prison for violent crime or property damage had a history of alcohol treatment or had an alcohol-use disorder.⁸¹ Still, researchers have not come to the consensus that heavy drinkers are the primary source of these negative externalities.⁸²

In addition, most of the alcohol tax is paid by heavy drinkers. About 10% of the adult population accounts for 60% of alcohol consumption. Nearly one-third of American adults do not drink at all, so among drinkers over 80% of alcohol is consumed by heavy drinkers.⁸³

⁷⁷ Evan Herrstadt, Ian W. H. Parry, and Juha Siikamaki, "Do Alcohol Taxes in Europe and the US Rightly Correct for Externalities?," *International Tax and Public Finance*, February 2015, vol. 22, no. 1, pp. 73-101.

⁷⁸ See Appendix for calculations.

⁷⁹ The Manning study found an external cost for tobacco of 15 cents per pack which would be 44 cents at current prices. The current federal tax is \$1.01 per pack, there are also state and local taxes, which were \$1.78 a pack in 2021 and the Tobacco Settlement Payments tax of 50 cents a pack. See CRS In Focus IF11941, *Proposed Tobacco Excise Tax Changes in H.R. 5376, the Reconciliation Bill*, by Anthony A. Cilluffo.

⁸⁰ One study indicates that heavy drinkers are less responsive to price increases than nonheavy drinkers. In other words, higher prices reduce drinking among the group less likely to cause negative externalities. See Padmaja Ayyagari et al., *Sin Taxes: Do Heterogeneous Responses Undercut Their Value?*, National Bureau of Economic Research, Working Paper 15124, July 2009, <http://www.nber.org/papers/w15124.pdf>.

⁸¹ See The National Center on Addiction and Substance Abuse at Columbia University, *Behind Bars II: Substance Abuse and America's Prison Population*, New York, NY, February 2010, p. 2, <http://www.casacolumbia.org/articlefiles/575-report2010behindbars2.pdf>; and *Behind Bars: Substance Abuse and America's Prison Population*, New York, NY, January 1998, <http://www.casacolumbia.org/articlefiles/379-Behind%20Bars.pdf>.

⁸² The Manning study discusses the difficulty of targeting policies to heavy drinkers as a means to reduce negative externalities. See Willard G. Manning et al., *The Costs of Poor Health Habits* (Cambridge, MA: Harvard University Press, 1991), p. 10. According to results from the 2012 National Survey on Drug Use and Health (NSDUH), "heavy-use" drinking (defined as drinking five or more drinks on at least 5 of the past 30 days) was reported by 5.8% of the population aged 12 or older, or 17.0 million people. See U.S. Department of Health and Human Services, *Results from the 2023 National Survey on Drug Use and Health*, <https://www.samhsa.gov/data/report/2023-nsduh-annual-national-report>. In 2020, an estimated 7.2% of those age 16 or older drove under the influence of alcohol in the year preceding the study. See "Impaired Driving Facts," Centers for Disease Control and Prevention, May 16, 2024, <https://www.cdc.gov/impaired-driving/facts/index.html>.

⁸³ See Philip J. Cook, *Paying the Tab* (Princeton, NJ: Princeton University Press, 2007). The top 10% drink an average of over 10 drinks a day.

Nontax alternatives could mitigate some of these externalities. In the past, many nontax alternatives have been implemented at the state and local level. For example, changes to state-based minimum legal drinking age have been credited with reducing youth-related incidents related to alcohol abuse.⁸⁴ Similarly, some researchers have found that severe legal deterrents and fines have reduced drunk driving.⁸⁵ Nevertheless, estimates indicate that there are still significant external costs of alcohol, and it is unclear the degree to which stricter laws would be acceptable to the public or how many resources can go into apprehending drunk drivers.

In contrast to policies that try to reduce specific externalities (e.g., drunk driving), research indicates that increases in tax rates have the broadest ability to affect the negative externalities of alcohol consumption, mostly because changes in taxes affect the widest range of alcohol consumers.⁸⁶ Elasticity measures of changes in the symptoms of alcohol dependence and abuse in response to changes in price are high enough in the literature to suggest that alcohol price increases significantly reduce the societal effects of problematic drinking (even among youth and underage drinkers).⁸⁷ Federal tax rate increases could be preferable to state increases, as the former reduce opportunities for consumers to seek across-the-border purchases as a means to reduce their exposure to the tax.

Some could argue that alcohol taxes should be increased at different levels across alcoholic beverage categories, based on their respective contributions to overall social costs. According to this logic, beer would bear the largest share of any excise tax increases, as research indicates that it is most linked with various negative outcomes related to excessive drinking.⁸⁸ There could be diminishing returns to such a policy if consumers adjusted their preferences to substitute spirits and wine for beer.

Equity

Economists generally measure tax equity using two criteria: vertical equity and horizontal equity. *Vertical equity* generally implies that households with a greater ability to pay the tax (i.e., a higher income) pay a greater share of their household income in taxes than households with a lesser ability to pay the tax. A tax system is progressive if higher-income households pay a greater share of their income in tax than lower-income households, whereas the converse is true in a regressive tax system. *Horizontal equity* indicates that households with similar abilities to pay actually pay

⁸⁴ See Alexander C. Wagenaar and Traci L. Toomey, “Effects of Minimum Drinking Age Laws: Review and Analyses of the Literature from 1960 to 2000,” *Journal of Studies on Alcohol and Drugs*, vol. 63, supplement 14 (March 2002), pp. 206-225.

⁸⁵ For example, see Frank J. Chaloupka et al., “Alcohol-Control Policies and Motor Vehicle Fatalities,” *Journal of Legal Studies*, vol. 22, no. 1 (1993), pp. 161-186.

⁸⁶ See Xin Xu and Frank J. Chaloupka, “The Effects of Prices on Alcohol Use and Its Consequences,” *Alcohol Research & Health*, vol. 34, no. 2 (2011), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3860576/>.

⁸⁷ Ibid.

⁸⁸ Rogers and Greenfield (1999) found that adult drinkers who have consumed five or more drinks in one day in the past year drink 80% beer, 16% distilled spirits, and 4% wine (using data compiled in 1989, 1990, 1992, and 1993). See Thomas K. Greenfield and John D. Rogers, “Who Drinks Most of the Alcohol in the U.S.? The Policy Implications,” *Journal of Studies on Alcohol*, vol. 60, no. 1 (January 1999), pp. 78-89. Alcohol consumption patterns for all underage drinkers are more similar to patterns among adult drinkers who have consumed five or more drinks in one day in the past year (compared to all adults) based on the findings of Susan E. Foster et al., “Alcohol Consumption and Expenditures for Underage Drinking and Adult Excess Drinking,” *Journal of the American Medical Association*, vol. 289, no. 8 (February 26, 2003), pp. 989-995. In particular, research on youth-related negative externalities as well as drunk driving (generally) has focused on the sensitivity of these outcomes to beer prices, given that beer is most strongly linked to these particular negative externalities. See Philip J. Cook, *Paying the Tab* (Princeton, NJ: Princeton University Press, 2007), pp. 78, 100.

similar amounts in tax. For example, all households with the same number of people earning a particular amount of income would pay the same amount in taxes in a tax system with perfect horizontal equity.

Vertical Equity

Excise taxes are generally regressive, as lower-income households tend to pay a higher share of their income in tax than higher-income households.⁸⁹ **Table 3** uses data from the Tax Policy Center to estimate alcohol taxes as a percentage of income assuming that excise taxes are passed on to consumers in the form of higher prices. It also compares them to tobacco taxes, which are regressive.

Table 3. Federal Excise Taxes on Alcohol and Tobacco as a Percentage of Income

Income Class	Alcohol (%)	Tobacco (%)
Bottom Quintile	0.051%	0.220%
Second Quintile	0.054%	0.107%
Third Quintile	0.063%	0.059%
Fourth Quintile	0.060%	0.047%
Fifth Quintile	0.046%	0.024%
Addendum		
80% to 90%	0.059%	0.031%
90% to 95%	0.051%	0.023%
95% to 99%	0.048%	0.023%
Top 1%	0.033%	0.022%
Top 0.1%	0.025%	0.020%

Source: CRS calculations from Tax Policy Center data. Distributions of excise taxes across income groups from Joseph Rosenberg, *The Distributional Burden of Federal Excise Taxes*, Tax Policy Center, September 2, 2015, <https://www.taxpolicycenter.org/sites/default/files/alfresco/publication-pdfs/2000365-the-distributional-burden-of-federal-excise-taxes.pdf>. Income data from Tax Policy Center, “Table T22-0045 - Baseline Distribution of Income and Federal Taxes, All Tax Units, by Expanded Cash Income Percentile,” 2023, <https://www.taxpolicycenter.org/model-estimates/baseline-distribution-income-and-federal-taxes-october-2022/t22-0045-baseline>. Data on revenue collections from “Tax Collections,” TTB, <https://www.ttb.gov/taxes/tax-audit/tax-collections>.

Although both taxes yield about the same revenue, the tobacco tax is highly regressive, whereas the alcohol tax is initially slightly progressive and then regressive. The lower effective rates in the bottom and second quintiles might reflect that people with lower incomes are more likely to not drink or to drink less frequently. According to a Gallup poll, 79% of Americans with income of \$100,000 or more drink, compared to 58% in the \$40,000 to \$99,999 group, and 53% in the group with incomes below \$40,000.⁹⁰

⁸⁹ The horizontal distribution of excise taxes is discussed more in CRS Report R46938, *Federal Excise Taxes: Background and General Analysis*, by Anthony A. Cilluffo. See also Congressional Budget Office, *The Distribution of Household Income in 2020*, Supplemental Data: Table 7, November 14, 2023, <https://www.cbo.gov/publication/59509>.

⁹⁰ Megan Brennan, “More Than Six in 10 Americans Drink Alcohol,” Gallup, August 15, 2023, <https://news.gallup.com/poll/509501/six-americans-drink-alcohol.aspx>.

Horizontal Equity

Federal alcohol excise tax burden is based upon whether and how much a person purchases alcoholic beverages, and on which alcoholic beverages the person purchases. Therefore, people with a similar ability to pay (income) may have different alcohol excise tax burdens. According to surveys, a third of adults did not drink in the past year, about 15% reported they never drank in their lifetimes, and about 6% reported heavy alcohol use in the previous month.⁹¹ Consumers also pay different amounts of federal excise tax based on the product type or even the specific product purchased, regardless of whether the two products have the same amount of alcohol content. For example, consumers who prefer wine to distilled spirits would likely pay a lower excise tax due to the different effective tax rates per fluid ounce of pure alcohol (see **Figure 1**).

Consumers with similar drink preferences could pay different tax rates due to their specific brand preferences. Consider two consumers who both prefer beer; one prefers major national brands, while the other prefers a local craft beer. The consumer who prefers the major national brands will likely drink beer taxed at the \$18.00 per barrel rate, which is about 5.4 cents per 12 fl. oz. can. Due to the tax preferences for small producers, the consumer who prefers a local craft beer may drink beer taxed at the \$3.50 per barrel rate, which equates to about 1.1 cents per 12 fl. oz. can. Different rates of alcohol consumption and differences in the type of alcohol consumed lead to significant horizontal inequity in the alcohol tax.

Producer Responses

Alcoholic beverages are taxed based on the type of beverage: beer, wine, or distilled spirits. As shown in **Figure 1**, the tax rates per fluid ounce of alcohol and per standard drink vary based on the type of beverage. This creates an economic incentive for producers to change their behaviors in order to pay a lower tax. Economists generally consider actions taken primarily to avoid tax—that would not have been taken otherwise—to be economically inefficient, and therefore a cost to society. This is because, absent the tax, the producers would have done something different that, in theory, better reflects the actual costs and benefits of production options.

Since the alcohol excise tax rate is based on the type of beverage, tax authorities need some way to determine the beverage type of each product. These definitions rely on scientific evaluations of the inputs and production method of the product.⁹² For certain beverage types, especially hybrid products, these input- and process-based definitions can offer an opportunity for producers to affect their excise tax burdens. Since distilled spirits face a higher tax rate per fluid ounce of alcohol, economic theory predicts that producers will alter their product formulations to either reduce the amount of distilled spirits used or otherwise modify the product to avoid the distilled spirits tax. There are examples of both of these cases happening.

The excise tax credit for wine and flavor content provides a way for producers to reduce their alcohol excise tax burdens by reducing the amount of distilled spirits in a product. Generally, before 1980, the inputs to a hybrid distilled spirits product (including distilled spirits, wine, and flavors) were taxed separately before being combined into the final product. The Distilled Spirits Tax Revision Act of 1979 (Subtitle A of Title VIII of P.L. 96-39) changed the tax process to tax only the final product while allowing an excise tax credit for wine or flavor content added to

⁹¹ National Institute on Alcohol Abuse and Alcoholism, “Alcohol Use in the United States: Age Groups and Demographic Characteristics,” <https://www.niaaa.nih.gov/alcohol-effects-health/alcohol-topics/alcohol-facts-and-statistics/alcohol-use-united-states-age-groups-and-demographic-characteristics#prevalence-of-lifetime-drinking>.

⁹² See, for instance the definition of “natural wine” at 27 C.F.R. §24.10 and “beer” at 27 C.F.R. §25.11.

distilled spirits, since these inputs had a lower tax rate before the change.⁹³ The lower rates for additives, using either method, allow producers to reduce the effective tax rate on hybrid products below the statutory distilled spirits tax rate. When the U.S. General Accounting Office (now U.S. Government Accountability Office, GAO) studied the credit in 1990, it found that “[federal government] and industry officials told us that [wine and flavor] ingredients are sometimes added to obtain the tax benefits, rather than in response to product requirements, market demand, or cost.”⁹⁴

Table 4 shows actual production data from 1989 to demonstrate how altering the wine content of a cordial product can affect its total (after-tax) cost.⁹⁵ It would cost a producer about three times as much per gallon in inputs to make a cordial with 50% wine compared with one with no wine (\$0.81 vs. \$0.27). However, the excise tax credit more than offsets the higher production costs. The total (after-tax) cost per gallon is cheaper for the 50% wine drink than for the 0% wine drink (\$3.78 vs. \$5.52). GAO concluded that

this incentive provided by the tax credit distorts the production process because it encourages an inefficient allocation of resources to make these products. Taxing the ingredients differently leads to an inefficient combination of ingredients because production decisions are based on tax rates, not on which ingredients are less costly.⁹⁶

Table 4. Hypothetical Production Costs by Level of Wine Content

Comparative Costs Per Gallon of a 42-Proof Cordial Containing Various Levels of Wine, Costs in 1989

	Distilled Spirits	25% Wine	50% Wine
Cost of Spirits	\$0.27	\$0.20	\$0.13
Cost of Wine	\$0.00	\$0.34	\$0.68
Total Cost of Materials	\$0.27	\$0.54	\$0.81
Tax Expense	\$5.25	\$4.11	\$2.97
Total Cost Per Gallon	\$5.52	\$4.65	\$3.78

Source: Reproduced from U.S. General Accounting Office, *Alcohol Excise Taxes: Simplifying Rates Can Enhance Economic and Administrative Efficiency*, September 1990, GAO/GGD-90-123, <https://www.gao.gov/assets/ggd-90-123.pdf>; using data from U.S. Bureau of Alcohol, Tobacco, and Firearms.

The different tax rates by beverage type also provide an incentive to change production processes so that products that could be made with distilled spirits are instead taxed as either beer or wine. The growing category of nonbeer malt beverages⁹⁷—such as hard seltzer, lemonade, and soda products—might be responding to this incentive. There are (at least) two ways to make similar products: either add distilled spirits to a base (such as vodka to soda), or add flavor to a malt base.

⁹³ This history is adapted from U.S. General Accounting Office, *Alcohol Excise Taxes: Simplifying Rates Can Enhance Economic and Administrative Efficiency*, GAO/GGD-90-123, September 1990, p. 2, <https://www.gao.gov/products/ggd-90-123>.

⁹⁴ Ibid, p.3.

⁹⁵ The input costs of the distilled spirits and wine have likely increased since 1989, but newer actual production data are not available. Although these input costs may have changed, the intuition about the effect they may have on production costs and after-tax costs has not.

⁹⁶ Ibid, p. 6.

⁹⁷ “The Fascinating World of Flavored Malt Beverages,” BevSource, accessed July 29, 2024, <https://www.bevsource.com/news/fascinating-world-flavored-malt-beverages>.

By brewing rather than distilling, the products are taxed (and potentially regulated)⁹⁸ as beer, instead of distilled spirits. Some observers have argued that the tax benefits of being taxed as beer are a primary reason for the production process of nonbeer brewed beverages.⁹⁹

⁹⁸ For example, in at least some states that control sales of distilled spirits via state-run retailers, beer can be sold by nonmonopoly retailers.

⁹⁹ See, for example, Josh Barro, “How Tax Policy Gave Us White Claw,” *New York Magazine*, September 4, 2019, <https://nymag.com/intelligencer/2019/09/how-tax-policy-gave-us-white-claw.html>; and Adam Hoffer, “Modernization of the Alcohol Tax,” Tax Foundation, December 19, 2023, <https://taxfoundation.org/research/all/federal/alcohol-tax-modernization-abv-tax/>.

Appendix. Historical Tax Rates, Supplemental Figures, Technical Calculations

Review of Price Elasticities of Demand for Alcohol

Table A-1. Price Elasticities of Demand for Various Alcoholic Beverages

Study	Scope	Category		
		Spirits	Wine	Beer
Guidion et al. 2022	30 studies surveying additional studies, global	0.65	0.6	0.3
Nelson 2013	189 primary studies	0.54	0.46	0.29
Fogarty 2010	40 studies in the United States	0.60	0.55	0.52
Wagenaar et al. 2009	112 studies over 18 countries	0.80	0.69	0.46
Gallet 2007	132 studies over 24 countries	1.09	1.11	0.83
CBO 1990	3 studies surveying additional studies	0.60-1.00	1.0+	0.30-0.70

Source: G. Emmanuel Guidion, et al., “Prices, Taxes and Alcohol Use: A Systematic Umbrella Review,” *Addiction*, vol. 117, no. 12, 2022, pp. 3004-3023, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9796894/>; Jon P. Nelson, “Meta-Analysis of Alcohol Price and Income Elasticities – With Corrections for Publication Bias,” *Health Economics Review*, vol. 3, no. 17 (2013); Alexander C. Wagenaar, Matthew J. Salois, and Kelli A. Komro, “Effects of Beverage Alcohol Price and Tax Levels on Drinking: A Meta-Analysis of 1003 Estimates From 112 Studies,” *Addiction*, vol. 104 (2009), pp. 179-190; James L. Fogarty, “The Demand for Beer, Wine and Spirits: A Survey of the Literature,” *Journal of Economic Surveys*, vol. 24, no. 3 (2010), pp. 428-478; Craig A. Gallet, “The Demand for Alcohol: A Meta-Analysis of Elasticities,” *Australian Journal of Agricultural and Resource Economics*, vol. 51, no. 2 (June 2007), pp. 121-135; and Congressional Budget Office, *Federal Taxation of Tobacco, Alcoholic Beverages, and Motor Fuels*, August 1990, p. 72, <http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/79xx/doc7951/90-cbo-039.pdf>.

Note: All elasticities are negative, but are reported in absolute value terms for simplification.

The price elasticities are interpreted in the following manner (using Fogarty’s findings): “a 1% increase in the price of spirits results in a 0.60% decrease in the demand for spirits, a 1% increase in the price of wine results in a 0.55% decrease in the demand for wine, and a 1% increase in the price of beer results in a 0.52% decrease in the demand for beer.” These price elasticities do not control for changes in the prices of other categories of other alcoholic beverages.

As shown in in **Table A-1**, beer tends to be more inelastic than either wine or spirits, meaning that increases in beer prices tend to correspond with smaller changes in demand than is the case for either wine or spirits. Variations in elasticities depend on the number of studies analyzed in each meta-analysis, the countries studied (if cross-national), and the time periods studied.¹⁰⁰

¹⁰⁰ Fogarty (2010) finds that the demand for alcoholic beverages has become more elastic, partially due to more substitutes, since the mid-1950s.

Calculation of Average Combined (Federal, State, and Local) Tax Rate on Alcohol

This section estimates current average combined excise tax rates on alcohol so that these levels can be compared with the levels of taxation that might be needed to correct for the external costs of alcohol consumption.

First, the average federal tax rate weighted by product is equal to 13 cents per ounce of alcohol, as derived in **Table A-2**.

Table A-2. Estimate of the Average Federal Tax Rate Per Ounce of Alcohol, 2023

Category	Maximum Tax Rate Per Ounce of Alcohol ^a	Federal Excise Tax Collections (Thousands)	Ounces of Alcohol from Each Source (Excise Tax Collections Divided by Tax Rate)	Share of Alcohol	Average Tax Rate Per Ounce of Alcohol (Weighted by Alcohol Shares)
Distilled Spirits	\$0.21	\$6,768,650	32,231.67	37.3%	\$0.078
Wine	\$0.06	\$1,065,161	17,752.68	20.5%	\$0.012
Beer	\$0.09	\$3,278,590	36,428.78	42.1%	\$0.038
Total	-	\$11,112,391	86,413.13	100.0%	\$0.129

Source: CRS analysis of data from the Congressional Budget Office, *Options for Reducing the Deficit, 2023 to 2032: Volume II: Smaller Reductions*, December 2022, p. 62, <https://www.cbo.gov/system/files/2022-12/58163-budget-options-small-effects.pdf>, and “Tax Collections,” TTB, <https://www.ttb.gov/taxes/tax-audit/tax-collections>.

a. This calculation does not account for the special rates for small amounts.

Next, the average state and local tax rate per ounce of alcohol can be calculated using the following Census Bureau data.

Table A-3. State and Local Tax Collections on Alcoholic Beverage Sales, 2021

Collection Type	Collections	Ratio of State and Local Collections to Federal Tax Collections ^a
Excise Taxes	\$8,248,106	76.6%
Taxes Plus Net Revenue from Liquor Stores	\$10,525,788	96.3%

Source: CRS analysis of data from U.S. Census Bureau, *State and Local Government Finances Summary: 2021*, <https://www.census.gov/data/datasets/2021/econ/local/public-use-datasets.html>.

a. Based on TTB’s total alcohol excise tax collections for FY2021 in **Table A-2**.

By multiplying the ratios of state and local tax collections to federal tax collections in **Table A-3** by the average weighted federal tax rate per ounce of alcohol of \$0.161, the average state and local tax rate per ounce of alcohol can be calculated as

- 9.5 cents using only collections from state and local excise taxes, and

- 12.2 cents when adding the net revenue from state-run liquor stores.¹⁰¹

The U.S. Census Bureau data do not disaggregate these collections based on the type of alcoholic beverage that they were collected from (i.e., TTB's revenue reports). The methodology used above thus serves as an approximate estimate of the state and local average tax rate.

By combining the average weighted federal tax rate with the state and local rates, the combined average tax rate per ounce of alcohol can be calculated as

- 22 cents when only using excise taxes, and
- 25 cents when incorporating net revenue from state-run liquor stores.

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¹⁰¹ State-run monopolies on liquor sales are sometimes viewed as an "implicit tax" on alcohol consumption because the prices in these stores tend to be higher than in states that allow private stores to sell liquor. For the purposes of this report, the analysis is simplified and does not take into account the price effects of different alcohol sales regimes across states. For more information, see Bruce L. Benson, David W. Rasmussen, and Paul R. Zimmerman, "Implicit Taxes Collected by State Liquor Monopolies," *Public Choice*, vol. 115, no. 3/4 (June 2003), pp. 313-331.