

Economic Perspectives on Alcohol Taxation

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Rationales for Alcohol Taxation

- Revenue Generation
- Public Health Improvement
- Economic Efficiency

Revenue Generation

1791 First federal excise tax:
9 cents per gallon

1794 “Whiskey Rebellion”
response to near tripling of tax

Raised several times during both
World Wars, Korean War

1951 federal taxes for:

- Beer: \$9 per barrel
- Distilled spirits: \$10.50 per proof gallon
- Wine (unfortified): 17 cents per gallon

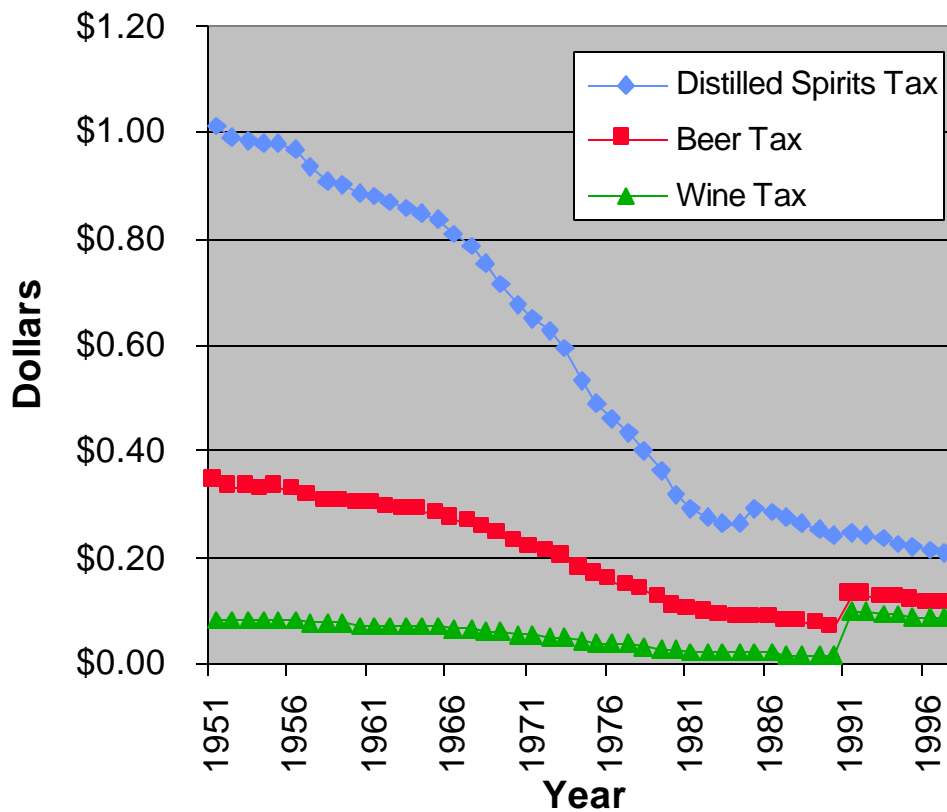
Revenue Generation (continued)

More recent increases for deficit reduction

Current federal taxes for:

- Beer: \$18 per barrel
- Distilled spirits: \$13.50 per proof gallon
- Wine (unfortified): \$1.07 per gallon

Federal Alcohol Taxes Per Ounce of Ethanol June 1997 Dollars



Price Elasticity of Demand

- Revenue generating potential of alcohol taxes depends on price sensitivity of demand for alcoholic beverages
- Price Elasticity of Demand defined as the percentage change in consumption resulting from a one percent increase in price

Price Elasticity of Demand for Alcohol

- Estimated price elasticities (Leung and Phelps, 1993):
 - Beer: -0.3
 - Wine: -1.0
 - Distilled Spirits: -1.5
- Larger long-run effects of price on addictive consumption (Grossman, Chaloupka and Sirtalan, 1998)

Taxing Alcohol to Improve Public Health

- Based on argument that higher alcoholic beverage taxes reduce morbidity, mortality, and other consequences of alcohol use and abuse
- Large/growing literature from economics examining effects on accidents, violence/other crime, health consequences, illicit drug use, and more

Public Health: Accidents

- Large economics literature on impact of alcohol prices and taxes on drinking and driving and alcohol-related motor vehicle accidents
- 10 percent increase in price would reduce probability of drinking and driving by 7.4 percent (males) and 8.1 percent (females). Larger impact on underage drinkers (Kenkel, 1993).

Public Health: Accidents (continued)

- Policy indexing federal beer tax to inflation since 1951 would reduce total annual motor vehicle accident fatalities by 11.5 percent (32.1 percent for 18-20 year olds) (Chaloupka, Saffer and Grossman, 1993)
- Youth non-fatal motor vehicle accidents inversely related to beer taxes (Chaloupka and Laixuthai, 1997)

Public Health: Accidents

Less extensive literature suggests higher alcoholic beverage taxes would reduce injuries and deaths in other accidents:

Example:

25 percent increase in 1992 federal beer tax would have reduced work-loss days from non-fatal workplace accidents by 4.6 million and lost productivity by \$491 million (Oshfeldt and Morrissey, 1997).

Public Health: Violence

- Large literature linking alcohol abuse to violence
- Early estimates suggest higher taxes would reduce violent crime (Cook and Moore, 1993)
- Doubling federal beer tax would reduce homicides by 3 percent, rapes by 2 percent, robberies by 4.7 percent, and total crime by 1.3 percent (Chaloupka and Saffer, 1992)

Public Health: Violence (continued)

- 10 percent rise in federal beer tax would reduce probability of child abuse by 2.2 percent and all violence towards children by 1.1 percent, or 1.1 million (Markowitz and Grossman, 1997)
- 10 percent rise in price of pure alcohol would reduce the probability of wife abuse by 10 percent or more (Markowitz, 1999)

Public Health: Violence (continued)

- Higher beer prices would reduce violence and other problem behaviors on college campuses (Markowitz and Grossman, 1998)

Public Health: Liver Cirrhosis and Other Alcohol-Related Disease

- \$1 increase in distilled spirits tax would lower cirrhosis deaths by 5.4 to 10.8 percent (Cook and Tauchen, 1982)
- Long-run price elasticity of cirrhosis deaths -1.3 (Chaloupka, Grossman, Becker and Murphy, 1992)
- Higher taxes reduce other alcohol related deaths (Sloan, Reilly and Schenzler, 1994)

Public Health: Polysubstance Use

- Higher beer taxes reduce the likelihood of marijuana use among young adults (Pacula, 1998) and adults (Chaloupka and Saffer, 1997). They also reduce the current likelihood of cocaine and heroin use (Chaloupka and Saffer, 1997).
- Recent evidence suggests that higher beer taxes may reduce future marijuana use as well (Pacula, 1998).

Economic Efficiency and Alcohol Taxation

- Alcoholic beverage taxes can correct for the external costs associated with alcohol consumption (in absence of taxes, prices understate the social costs of alcohol use)
- Complicated in the case of alcohol since not all drinking results in external costs (external benefits of moderate drinking?)

Economic Efficiency and Alcohol Taxation

- “Optimal” (economically efficient) tax depends on:
 - magnitude of social costs of alcohol use and abuse
 - relative numbers of abusive and non-abusive drinkers
 - relative price responsiveness of abusive and non-abusive drinkers

(Pogue and Sgontz, 1989)

Economic Efficiency (continued)

- Pogue and Sgontz (1989) estimate that 1983 alcohol taxes were about half the efficient level of these taxes based on their model/”best guess” using a wide range of estimates.
- Manning, et al. (1989) estimate on optimal tax of 48 cents per ounce in 1985 (compared to average tax of 23 cents per oz.)
- Kenkel (1996) estimates optimal tax of about 106 percent of net of tax price

Economic Efficiency (continued)

- Saffer and Chaloupka (1994) extend the Pogue and Sgontz approach to examine the relative taxation of distilled spirits, wine, and beer.
- Estimate weighted average optimal tax 2.3 times the 1991 level
- Estimates support tax system closer to equalization across all alcoholic beverages

Summary

- Increases in alcoholic beverage taxes and prices lead to significant reductions in drinking
- Increases in alcohol taxes will generate significant new tax revenues
- Long-run effects of price on alcohol demand larger than short-run effects
- Youth and young adults more responsive to price changes than adults

Summary (continued)

- Increases in alcoholic beverage taxes and prices reduce many consequences of alcohol use and abuse, including accidents, violence and other crime, alcohol-related morbidity and mortality, illicit drug use, and more
- Estimates of optimal alcoholic beverage taxes well above the current levels of these taxes

Policy Options

- Economic and Public Health arguments support:
 - significant increases in alcoholic beverage tax rates
 - indexing of alcohol taxes to the rate of inflation
 - equalization of taxes on alcohol contained in different alcoholic beverages
 - tax increases as part of a comprehensive program aimed at reducing alcohol use and abuse