

A photograph of a road at night, illuminated by a warm, yellowish light. In the foreground, a car's headlight is blurred, suggesting motion. The road stretches into the distance, with a few other vehicles visible in the background. The overall atmosphere is dark and moody.

# Is Alcohol Consumption Undertaxed?

**IAN W.H. PARRY**

**D**ue to the failure to increase nominal rates in line with inflation, federal and state alcohol taxes have fallen from about 22 percent of the pretax retail price of alcoholic beverages in 1980 to about 10 percent at present. Is it time to reverse this declining trend and substantially raise tax rates?

Alcohol taxation is warranted if its consumption causes broader societal costs that are not taken into account by individual drinkers. The main categories of such costs are medical treatments for alcohol-related illnesses, reduced workplace productivity, and accidents caused by drunk driving.

The costs of medical treatments for liver cirrhosis and other alcohol-induced problems are largely borne by third parties and not the drinkers themselves. Studies suggest that the annual medical burden from these patients is roughly equal to federal and state revenues from alcohol excise taxes (about \$15 billion a year).

On the other hand, heavy drinkers tend to die younger, which lowers medical costs over their life cycle. Based on evidence that accounts for this, the appropriate tax to address medical burdens seems to be, at most, a few percent of pretax alcohol prices. Moderate consumption may also have health benefits, though whether this implies lower or higher life cycle medical costs is unclear, if moderate drinking increases life expectancy.

Alcohol abuse may also impair workplace productivity. Heavy drinkers themselves bear much of this cost in terms of less take-home pay, and should take this into account, but the government also bears a cost from forgone income and payroll tax revenues. However, disentangling the productivity impacts of alcohol consumption from other factors that affect productivity has proven difficult.

For example, for some people higher wages (which are a proxy for productivity) may be positively associated with alcohol consumption, if they drink more when they have more money. Based on available studies, the appropriate tax to reflect productivity impacts could be anywhere between zero and about 40 percent of pretax alcohol prices.

### **Drunk Driving**

Alcohol-related crashes account for around 40 percent of the 40,000 or so people killed each year on U.S. highways. However, most of these fatalities occur in single-vehicle crashes where risks should be taken into account by individual drivers. Broader costs from accident risks that drunk drivers do not take into account include injury risks to other road users, third-party medical burdens for treating injuries, and property damages to automobiles. Accounting for these factors, the risks to society from drunk drivers appear to war-

rant an alcohol tax of about 30 percent of pretax prices.

A more direct response is to penalize drunk drivers themselves and devote more resources to their apprehension, rather than taxing all drinkers. According to our calculations, the average (14-mile) trip by a drunk driver should ideally be taxed at about \$20. Unfortunately, however, only an estimated 1 in 1,500 trips by drunk drivers results in a police-reported accident and subsequent court conviction.

This low detection rate for intoxicated trips implies that, on average, the optimal fine for convicted drivers (that is, the fine that, when multiplied by the probability of actually paying it, results in an expected penalty of \$20 per trip) would be about \$30,000. This level of fine is well beyond the means of many people; in fact, the average fine per conviction is only about \$300 at present. Moreover, a dramatic increase in the fine for a conviction would likely protract the judicial process, which already imposes significant costs in judges' time, for example.

Alternatively, the expected drunk-driver penalty could be increased by raising the likelihood of apprehension (through sobriety checkpoints and Breathalyzer testing, for example), although this involves significant policing costs. Netting out policing and judicial costs lowers the optimal fine by about 25 percent (implying an optimal expected penalty of about \$15 per drunk-driver trip).

Convicted drunk drivers may also receive nonmonetary penalties like license suspensions and jail terms (or community service in lieu of jail). Averaged across first-time and repeat offenders, the typical license suspension is about 6 months and jail terms are about 10 days (or alternatively, about 40 days of community service). Still, when valued in monetary terms, these penalties imply an expected cost of only about \$3 per drunk-driver trip. Moreover, unlike fines,

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nonmonetary penalties impose an extra cost on society because the loss of utility to the individual from the penalty is not offset by a corresponding gain in revenue to the government.

The practical difficulties of imposing stiff drunk-driver penalties, and the resource costs involved in implementing them, suggest that alcohol taxes still have a valuable role to play in deterring drunk driving. Based on the discussion so far, it seems that an alcohol tax of roughly three times the current level might be justified on economic efficiency grounds, and perhaps more if workplace productivity impacts are important.

## Fiscal Considerations

Are even higher levels of taxation warranted on fiscal grounds? Leaving aside broader societal impacts, whether it is better to finance some of the government's budget through alcohol taxes depends on the economic costs of alcohol taxes compared with other policies, such as income taxes. Taxes on labor income cause economic costs by distorting the overall level of employment (for example, by reducing take-home pay they deter labor force participation, particularly for secondary workers in the family). Product taxes also cause economic costs by inducing people to consume less of the

taxed product than they would otherwise prefer. They can also reduce (albeit slightly) labor supply by raising the general level of product prices and lowering the real returns to work effort.

Up to a point, product taxes are warranted on revenue-raising grounds when they have less impact on economywide employment than the employment effects of raising an equivalent amount of extra revenue from labor taxes. Our work suggests that alcohol is one of these cases. In fact, fiscal considerations may contribute as much to the optimal alcohol tax as drunk driving and other societal costs.

This assumes productive use of alcohol tax revenues, in particular, using them to reduce distortions created by income and payroll taxes. If instead revenues are wasted in pork-barrel spending projects, the fiscal argument for alcohol taxes is undermined. In short, the fiscal rationale for higher alcohol taxes really hinges on revenue-neutrality provisions requiring automatic and offsetting reductions in other taxes (or alternatively, spending on projects with favorable cost-benefit ratios).

## Impacts of Higher Taxes

Summing up, the case for substantially higher alcohol taxes is nuanced as it depends on the continued failure to severely punish drunk drivers as well as the productive use of revenues. Suppose, for the sake of argument, that alcohol taxes were tripled? Ideally, the tax would be levied on alcohol content as this is what matters for the ability to drive and the broader societal costs of alcohol abuse. Current (federal and state) taxes amount to about \$20 per gallon of alcohol for beer, \$18 per gallon for wine, and \$35 per gallon for spirits. This kind of increase would add roughly \$1.20 to the price of both a six-pack of beer and a bottle of wine.

Empirical studies suggest that each 1 percent increase in price might reduce nationwide alcohol consumption and drunk driving by about 0.4 to 0.7 percent. This implies that tripling alcohol taxes from 10 to 30 percent would reduce consumption by about 8 to 15 percent. This would raise about \$20 billion a year in extra government revenue and, according to our estimates, generate annual net economic benefits of at least \$10 billion if the revenue displaces other distorting taxes. Even higher taxes might also be warranted if people misperceive the risks of alcohol addiction, though evidence on this is mixed. ■

## Further Reading

Parry, Ian W.H., Ramanan Laxminarayan, and Sarah E. West. 2009. Fiscal and Externality Rationales for Alcohol Taxes. *B.E. Journal of Economic Analysis & Policy/Contributions*. 9. Article 29. 1-45. ▶ Related RFF Discussion Paper 06-51.