The Effects of Alcohol Excise Tax Increases on Public Health in Maryland

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Contents

Executive Summary

This report summarizes the results of hundreds of studies of alcohol excise taxes, health and safety. The evidence is clear: alcohol excise tax increases save lives, reduce health care costs, create and preserve jobs, and prevent alcohol-related problems. These tax increases are a win-win for the State: they prevent and reduce drinking and death among young people as well as among heavy drinkers, and they bring in additional revenues which can be used to create and preserve jobs and services.

Alcohol use is responsible for 1,278 deaths per year in Maryland and 7,470 violent crimes. An estimated 313,000 Marylanders fit the criteria for alcohol dependence (addiction) or abuse. Alcohol use is the leading drug problem among youth in Maryland. One in 6 Marylanders ages 12 to 20, and 1 in 4 young people in grades 9 through 12 are binge drinkers (consumed five or more drinks within two hours at least once in the past 30 days). Every year, a third of deaths among 15 to 20 year-olds are caused by alcohol.

There is a robust research literature regarding what happens to alcohol consumption and alcohol-related problems when alcohol excise taxes go up. This literature has found that alcohol excise tax increases prevent motor vehicle crash deaths, liver cirrhosis fatalities, sexually-transmitted diseases (especially among youth), severe violence towards children, alcohol dependence, male suicides, hospital admissions, and a variety of other crimes and attendant public safety costs. A recent review of 110 studies of alcohol price or tax effects concluded that when alcohol taxes go up, drinking goes down – including among problem drinkers and among youth.

Based on this literature, we estimate the effects of several alcohol excise tax increase scenarios. The largest effects would come from a dime a drink increase in Maryland's alcohol excise taxes. This would reduce alcohol consumption by 4.8 percent, raise $214.4 million new revenues for the state, and result in a savings of an additional $249 million in costs incurred in the state as a result of alcohol consumption. Specifically, such an increase would annually prevent 14,987 cases of alcohol dependence, 37 deaths, 13 forcible rapes, 316 assaults, 21 robberies, 67 incidents of severe violence against children, and 19 cases of fetal alcohol syndrome. The impact could be even larger among youth, since they are less likely to be addicted to alcohol than older drinkers, and also have less disposable income – both factors that make them more sensitive to increases in the cost of alcohol.

Recent polls have found public opinion in Maryland strongly in favor of alcohol excise tax increases, across party lines, when the funds are used to increase access to alcohol

and other drug treatment or to expand access to health care. The principal opponents of alcohol excise tax increases are alcoholic beverage producers and sellers, who donated more than $1.3 million to members of the state legislature between 2001 and 2007.

The funds resulting from an increase in alcohol excise taxes -- $214.4 million in the case of a dime a drink increase – would undoubtedly create and preserve jobs in other sectors, such as social services, public safety, education, and other important state services.

Congress empanelled a special committee of the National Research Council and Institute of Medicine to study the most effective ways to reduce and prevent underage drinking. In 2003, this committee concluded that the failure of alcohol excise taxes to keep pace with inflation has "…considerably exacerbated the underage drinking problem. Raising these tax rates at both the federal and state level is justified by established principles of public finance, by public health considerations, and by the specific goals of Congress in creating this committee."

Introduction

Maryland's state alcohol excise taxes are currently less than a penny a drink for beer, and less than two cents per drink for wine and distilled spirits. These rates are substantially lower than those of neighboring states. The taxes brought approximately $28 million to state coffers in 2006, a figure which has declined in real dollars and as a percentage of state revenues every year.[1] At the same time, alcohol-related harm costs the state of Maryland more than $5 billion each year,[2, 3] and alcohol companies make more than $130 million annually in profits in the state from underage drinking alone.[4]

In this context, this paper asks what effects an alcohol tax increase would have in Maryland – both positive effects on state revenues, public health, and the State's economy, and negative effects in terms of jobs and other economic indicators. It provides a comprehensive analysis for policymakers and interested citizens on the likely effects of an alcohol tax increase on health, safety, and the economy in Maryland. Revenue and consumption estimates with elasticities are provided for various scenarios of tax increases, accompanied by estimates of the economic and health impact of these increases.

1. Background – Alcohol Use and Consequences in Maryland

A. Alcohol and the General Population

Marylanders are slightly more likely to drink, but less likely to binge drink (defined as five or more drinks within two hours in the past 30 days) than their fellow Americans. In the U.S. in 2006, 51 percent of adults drank alcohol in the past month, compared to 53 percent of Marylanders, while 20 percent of Marylanders reported binge drinking – compared to 23 percent nationwide.[5]

According to the Centers for Disease Control and Prevention (CDC), excessive alcohol use is responsible for approximately 1,278 deaths per year in Maryland, or three percent of total deaths.[6] In 2007, 179 traffic deaths – or 29 percent of total traffic deaths that year – were caused by alcohol use.[7] From 2002 to 2006, 30 percent of homicides (an average of 160 deaths per year) were alcohol-related.[8] In 2006, 23 percent of reported forcible rapes (271) were attributable to alcohol, as were 30 percent of aggravated assaults (6,603 assaults). Of the State's 38,111 violent crimes reported in 2006, 7,470 were attributable to alcohol use.[8] Approximately 313,000 Marylanders age 12 and above (6.8 percent of the population) fit the criteria for alcohol abuse or dependence in 2006. Approximately 308,000 people in the State need, but have not received, treatment for alcohol use.[9]

B. Alcohol and Youth

In 2006, slightly more than one in four (26 percent) Marylanders ages 12 to 20 drank alcohol in the past month, and 16 percent (approximately 111,000 young people) reported binge drinking.[10] Nationally, 28 percent of 12 to 20 year-olds reported past-month drinking and 19 percent were binge drinkers.[5] Among Maryland high school students in grades 9 through 12, 43 percent reported drinking in the past month and 24 percent were binge drinkers.[11]

According to the federal Centers for Disease Control and Prevention, alcohol is directly responsible for one out of every three deaths among Marylanders between the ages of 15 and 20.[6, 12] Nearly 100 young people between the ages of 12 and 20 die in the state every year because of alcohol use, most commonly because of alcohol-related homicides, motor vehicle crashes, and suicides (in that order). In 2005, underage drinkers consumed 12.5 percent of all alcohol sold in Maryland, accounting for $269 million in sales. Sales to underage drinkers provided profits of $130 million to the alcohol industry.[13]

2. Alcohol Taxes in Maryland – History and Impact

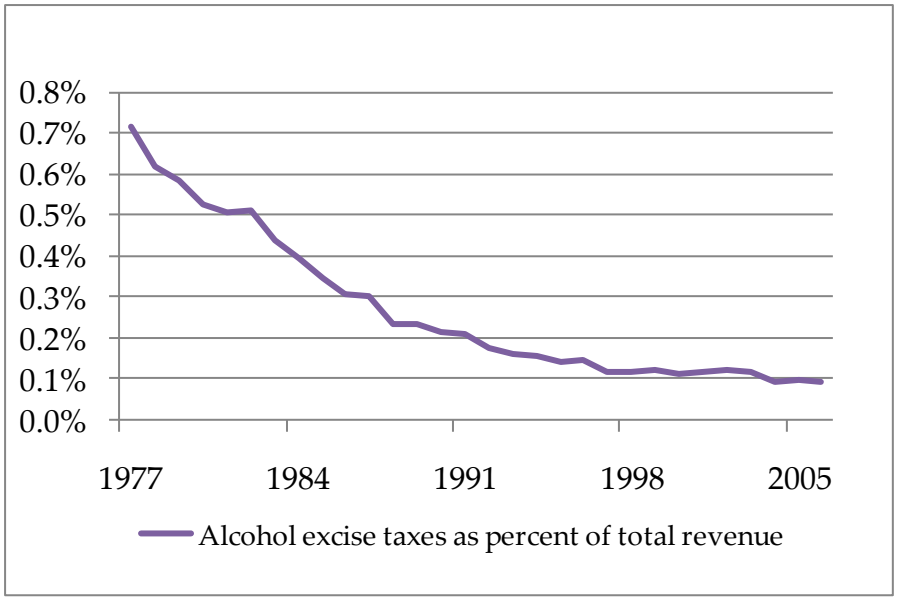
A. History

Excise taxes are special taxes placed on particular commodities, in addition to whatever sales taxes may exist. Unlike income or sales taxes, however, excise taxes are based on the quantity purchased rather than on income or purchase price. Because they are typically based on the volume of alcohol sold, the effective tax rate declines over time due to the impact of inflation unless the rate is either raised or indexed to the inflation rate. Over the last 50 years, effective alcohol excise tax rates have been steadily declining at every level of government (federal, state, and local), because governments – with rare exceptions – have failed to address this erosion effect caused by inflation.

For example, the federal tax on beer was set at $9 per barrel in 1951. Congress increased the rate to $18 per barrel in 1991. However, had the tax kept pace with inflation, the rate in 2007 would have been more than $71 per barrel. Similarly, the federal excise tax on liquor was set at $10.50 per proof gallon in 1951, and increased to $12.50 per proof gallon in 1991; the inflation-adjusted tax rate based on the 1951 tax would be $82.87 per gallon in 2007. If Maryland's beer tax had kept pace with inflation, it would be $0.38 per gallon today; in fact it is just 0.09 per gallon, or less than a penny per drink. Similarly, the tax on wine would be $1.68 per gallon, rather than the $0.40 that it is today – and the tax on distilled spirits would be $9.50 per gallon, rather than just $1.50

(or less than two cents a drink). Thus while alcohol-related harm costs the state more than $5 billion per year, alcohol's share of state revenues has fallen steadily over the past 30 years (see Figure 1 below).

Figure 1: Alcohol Tax Revenues as a Percent of Total Maryland Revenues, 1977-2006 [1]



The Center for Science in the Public Interest estimates that, if alcohol taxes had in fact kept up with inflation since 1955 (for spirits) and 1972 (for beer and wine), then State revenues from alcohol taxes in 2001 could have reached $128 million – rather than the $24.5 million that was actually collected that year.[14] Currently, Maryland's excise tax on spirits is the 47th lowest in the nation. The wine excise tax is 37th among the states and the lowest in the region; and the beer tax is 44th and lower than all the neighboring states except Pennsylvania.[15] Appendix A provides alcohol excise tax rates for the 50 states and the District of Columbia as of July 1, 2009.

Table 1. Excise Tax Rates, Maryland and Neighboring States, 2009 [15]

State	Tax per Gallon		
	Spirits	Table Wine	Beer
Delaware	$3.75	$0.97	$0.16
District of Columbia	$1.50	$0.30	$0.09
Maryland	**$1.50**	**$0.40**	**$0.09**
Pennylvania	$6.54 (a)	(b)	$0.08
Virginia	$20.13 (a)	$1.51	$0.26

(a) Pennsylvania is one of the states where the state government controls all sales. The implied excise tax rate is calculated using methodology designed by the Distilled Spirits Council of the United States (DISCUS).

(b) All wine sales are through state-run stores. Revenue is generated from various taxes, fees and net profits.

B. Impact on Consumption

Limited empirical evidence suggests that producers pass alcohol excise taxes on to consumers at a ratio ranging from 1 to 2 (i.e. a 10 percent increase in tax leads to a 10-20 percent increase in price).[16] These price increases influence alcohol consumption – a recent review of 110 studies containing 1,003 estimates of the relationship between alcohol consumption and the tax and price of alcohol concluded that, like other commodities, alcohol sales increase when prices fall, and decrease when prices (or taxes) increase.[17] The same review also concluded that alcohol prices influence heavy drinking as well as alcohol consumption in general.

Evidence also suggests that alcohol tax increases will lead to reductions in the quantity and frequency of drinking among youth, who are among the most price-sensitive consumers.[18-20] This is why the National Research Council and Institute of Medicine made increasing excise taxes a central recommendation of their landmark report to Congress, *Reducing Underage Drinking: A Collective Responsibility*.[21]

The amount that consumption will decline as a result of tax increases depends on how *price elastic* alcohol consumption is in response to prices. Table 2, below, shows price elasticities for alcohol based on estimates from different sources. A price elasticity of –0.50 means that consumption declines by 5 percent for every 10 percent increase in the price of alcohol.

Table 2. Summary of Elasticities [17, 20, 22-25]

	Wagenaar et al 2009	Wette et al 1993	NIAAA 2000	Community Guide	Cook 2007	Meier et al 2008
By type of drink:						
Beer	-0.46	-1.10	-1.50	-0.50	-0.74	
Wine	-0.69			-0.64	-0.49	
Distilled spirits	-0.80			-0.79	-1.47	
Wine and Distilled spirits		-1.10				
By type of drinker:						
Moderate						-0.23 to -0.52
Hazardous / Heavy	-0.28					-0.30 to -0.61
Harmful						-0.41 to -0.70

Because the purchase of alcohol by youth under the age of 21 is not legal in the U.S., there is little empirical evidence of the effects of price and taxation on consumption for this age group. There is both conceptual and empirical evidence that youth are more sensitive to price than older individuals, and therefore that a tax increase will have a differentially greater impact on alcohol consumption by young people than for the population in general. Conceptually, younger people are less likely to be addicted to alcohol than older drinkers, and also have less disposable income – both factors that make them more sensitive to price.[26-28] The empirical evidence that is available supports the finding that youth are more affected by price and tax increases than the general population is. One study price estimated alcohol price elasticities for 18 to 20 year olds at -1.26 for males and -2.11 for females.[29] Because we have not attempted to estimate effects on youth separately, our estimates of the overall effects of an alcohol excise tax increase on consumption and harm are likely conservative.

C. Impact on Alcohol-Related Harm

Because alcohol taxes can have such a significant impact on consumption, they also have a substantial impact on the negative health outcomes of alcohol use. An analysis of 30 years of state data found that alcohol tax increases reduced overall mortality.[30]

Numerous studies over the past two decades in the United States have found that changes in alcohol excise taxes influence specific health conditions. Cook (2007) used data sets covering multiple phenomena over time (panel data) in the 50 states from 1981 to 2000 to estimate the impact of an increase of 10 cents per ounce, or approximately a nickel a drink, in alcohol excise taxes.[20] He estimated that motor vehicle fatalities would decline by seven percent and mortality from liver cirrhosis by 32 percent. The size of the effect on cirrhosis mortality is indicative of the impact alcohol tax increases can have on even the heaviest of drinkers, who are most vulnerable to liver cirrhosis.

Historically, beer has been the beverage of choice among both drinking drivers and youth, although there is evidence that these dynamics are now changing.[31] Because of this history, a number of studies have looked at the impact of changes in beer tax rates on health outcomes. Some of the strongest associations are with motor vehicle crash rates. In fact, Ruhm argues convincingly that the reason that various measures to deter driving under the influence during the 1980s did not change the percent of crashes attributable to alcohol between 1980 and 1990 was because of declining real beer taxes.[32] Cook reports on at least four other studies of the impact of beer taxes on motor vehicle fatalities, all of which found significant effects.[20]

Beer taxes increases have a particularly strong impact on young people. Grossman (1989) estimated that if the federal excise tax on beer had simply kept pace with the rate of inflation from 1951 to 1981, alcohol-related motor vehicle fatalities among 18- to 20-year-olds would have been reduced by 15 percent, saving approximately 1,000 lives per year.[33] Beer tax rates also influence the spread of sexually-transmitted diseases. A separate study found that an increase in the beer tax of $0.20 per six-pack (less than a nickel a drink) could reduce gonorrhea infection rates by 8.9 percent, and syphilis rates by 32.7 percent, with the impact coming primarily from reductions in transmission among 15-19 year-olds and 20-24 year-olds.[34]

Other health problems influenced by alcohol tax rates include severe violence towards children (for every 10 percent increase in the beer excise tax rates, the probability of this decreases by 2.3 percent[35, 36]); alcohol dependence (higher state beer taxes are associated with lower prevalence of alcohol dependence symptoms for both men and women[37]), and male suicides (higher beer taxes are associated with fewer suicides among males ages 10 to 24[38]). A modeling exercise in England, funded by the Department of Health, examined the potential economic impact of alcohol pricing policies and found that setting a minimum price of 40 U.K. pence (approximately $0.58) per drink would result in a decrease in hospital admissions of 40,000 admissions per year, or 5.2% of all hospital admissions, as well as 16,000 fewer crimes.[25] In contrast, researchers have

found that alcohol tax increases had no effect on possible health benefits from moderate alcohol consumption among persons age 35 and over.[30]

D. Economic Impact

Studies documenting the economic effects of alcohol abuse have used a broad range of categories of costs. Much of the difference in terms of the overall estimates made by the studies reviewed in this report was due to the inclusion or exclusion of different categories of costs, rather than to different methodologies in tracking costs.

Cost categories can be broadly grouped into direct and indirect costs. The most commonly cited direct costs are medical care and the costs of the judicial and penal systems. Indirect costs include long-term effects such as lost wages and pain and suffering.[39] The last comprehensive study of the costs associated with alcohol use in the United States dates to 2000; it found a total of $184 billion in costs for the U.S. in 1998, increasing at an annual rate of 3.8 percent. Health care spending accounted for $18.8 billion. If costs had increased at the same 3.8 percent rate since 1998, these estimates would be equivalent to $277 billion in total costs in 2009, or approximately $924 per person for the U.S. population.[40] In Maryland, with 5.6 million people, this is equal to $5.2 billion.[3] Over half of this amount is in productivity losses. More recently, the costs of alcohol to the state of California were estimated at $38.5 billion, or $1,075 per Californian.[41, 42]

Estimates from the international literature – not adjusted for inflation or exchange rate variations – indicate that in France, for instance, the costs of alcohol to society were US$19.2 billion in 1997, or US$328 per resident.[43, 44] In Scotland, the costs of alcohol misuse were estimated at US$1.6 billion in 2001-2002 dollars, or US$316 per resident.[45, 46]

In the U.S., the total costs caused by underage drinking alone have been estimated to be $60.3 billion in 2005 – and $1.25 billion in Maryland.[13] The categories include medical treatment (11.0 percent), lost productivity (24.1 percent), and psychological costs – pain and suffering (65.0 percent). With 1.6 million individuals under the age of 21 living in Maryland, these costs translate to an annual cost of $750 per youth.[47] Other consequences of alcohol abuse are also very expensive – fetal alcohol syndrome disorders alone have been estimated to cost the state of Maryland $141.6 million per year.[48]

According to an analysis by Ensuring Solutions to Alcohol Problems, a group funded by The Pew Charitable Trusts and based at George Washington University, an average company in Maryland with 100 employees would have 7 problem drinkers in its

workforce. The same firm would lose one working day per month because of drinking-related problems, and would incur alcohol-related medical treatment costs of $60,573 per year.[49]

3. Impact of the Proposed Tax Scenarios

We modeled three different proposals to increase the alcohol tax in Maryland, as follows:

(1) **HB 791 – introduced by Del. William Bronrott (D – Montgomery County) in 2009.** HB 791 calls for an increase of 2.5¢ per beer, 4.7¢ per glass of wine, and 5.3¢ per mixed drink. The current state excise tax would increase to $0.0338 on a beer, $0.0625 on a glass of wine, and $0.0703 for a drink of spirits.

(2) **Increase of 10 cents per drink (HB 951 introduced in 2009):** This bill, introduced by Del. James Hubbard (D – Prince George's County) would increase the tax on all alcoholic beverages by 10¢ per drink. The new tax per drink would be approximately 11 cents for beer, and 12 cents for wine and spirits.

(3) **Increasing Maryland's tax rates to the national average:** Appendix A shows that Maryland's current excise tax rates for alcohol lag behind national averages. Maryland's tax rates would need to increase by 209 percent to reach the national average level of roughly 2.6 cents a drink for beer, by 100 percent to close to the national average of 3.1 cents a drink for wine, and by 348 percent to the national average of approximately 7.9 cents a drink for spirits. Our modeling shows what would happen if Maryland were to increase to the national average for all three types of alcoholic drinks.

A. Impact on Price, Consumption, and Revenue

Table 3, below, shows the 2008 levels of alcohol taxes, consumption, and revenues in Maryland. Maryland's excise tax is equivalent to less than a penny per beer, and between one and two cents per glass of wine or drink of distilled spirits. Our estimates show that over two billion drinks were consumed in the State in 2008 – or approximately 380 drinks per capita annually. The State received $26.9 million in tax revenue from this consumption.

Table 3: Current (2008) Tax, Drinks Consumed, and Tax Revenues [50]

	Current tax per gallon	Drinks per gallon	Current tax per drink	Current Number of Drinks	Current Annual Tax Revenues
Beer	$0.09	10.67	$0.0084	1,095,780,437	$9,410,393
Wine	$0.40	25.60	$0.0156	327,397,581	$5,221,571
Distilled spirits	$1.50	85.33	$0.0176	808,085,931	$14,334,222
Totals				**2,231,263,949**	**$28,966,186**

Table 4, below, summarizes the results, in terms of tax and price increases, consumption decreases, and revenue increases for each of these three scenarios. For these calculations we use elasticities of -0.50 for beer, -0.64 for wine and -0.80 for spirits.

Table 4: Modeling Results – Tax, Price, Consumption, and Revenues

Scenario	Current price per drink	New price per drink	Price increase	Consumption decrease	Increase in Annual Revenues
HB 791					
Beer	$1.4505	$1.4758	1.75%	-0.87%	$27,902,744
Wine	$1.3617	$1.4086	3.44%	-2.20%	$15,204,574
Distilled spirits	$1.2066	$1.2593	4.37%	-3.50%	$40,997,867
Totals				**-2.02%**	**$84,105,186**
Dime a Drink Increase (HB 951)					
Beer	$1.4505	$1.5508	6.92%	-3.46%	$107,685,154
Wine	$1.3617	$1.4617	7.34%	-4.70%	$31,602,041
Distilled spirits	$1.2066	$1.3065	8.28%	-6.63%	$75,161,262
Totals				**-4.79%**	**$214,448,457**
Maryland Tax at the National Average					
Beer	$1.4505	$1.4682	1.22%	-0.61%	$19,531,089
Wine	$1.3617	$1.3774	1.15%	-0.73%	$5,147,774
Distilled spirits	$1.2066	$1.2677	5.07%	-4.06%	$47,280,227
Totals				**-1.88%**	**$71,959,090**

Table 4 shows that even small price increases would yield a considerable amount of revenue for the State, and would result in modest decreases in consumption. Using the elasticities from Table 2, above, we calculate that HB 791 would reduce overall alcohol consumption by 2.0%; the dime a drink increase would reduce consumption by 4.8%, and increasing Maryland to the national average would reduce consumption by 1.9%. At the same time, revenues would increase, respectively, by $84.1 million, $214.4 million, and $72.0 million, in each of the three scenarios.

B. Economic Impact

An increase in the alcohol tax would have multiple economic benefits for the State. As shown in Table 4 above, the State would receive between $48.7 and $214.4 million in

additional tax revenue annually. Under legislation currently envisioned, these funds could be used to fund health care expansion, for increased support for persons with developmental disabilities, an addiction treatment and prevention fund, or the State General Fund. All of these activities would likely generate new and/or preserve existing jobs in the state.

As detailed in Section 2B above, alcohol abuse costs an estimated $924 per capita in the United States annually. In Maryland, this amounts to $5.2 billion.[40] House Bill 791 cites a more conservative estimate – that alcohol misuse costs $3.5 billion per year in Maryland. The bill points out that an estimated 50 percent of mental health problems are confounded by alcohol and other substance abuse, and that approximately one percent of births in the State are affected by Fetal Alcohol Syndrome.[51]

C. Impact on Health Status

Table 4 above indicates that the proposed tax increases would reduce the consumption of alcoholic beverages in Maryland by 2.02% (HB 791), 4.79% (dime a drink increase), and 1.88% (increasing the tax to the national average). These reductions would have a potentially large impact on health outcomes and would likely disproportionately benefit poorer segments of the population. In his comprehensive analysis of the effects of alcohol misuse and the impact of alcohol control policies in the United States, Philip Cook finds that a 10 percent increase in the price of alcohol (per ounce of ethanol) would result in a seven percent decrease in the motor vehicle fatality rate, a six percent decrease in suicides, and a 32 percent decrease in cirrhosis cases.[20]

Table 5 below presents available evidence concerning mortality, health conditions, and crimes that are known to be related to alcohol misuse. Assuming that the decreases in consumption were evenly distributed across the population, the three alcohol tax increases would prevent annually from 3 to 9 estimated traffic deaths, between 3 and 8 homicides, and up to 20 deaths from liver disease and cirrhosis in the State of Maryland. In addition, the tax increases would prevent between 3 and 13 forcible rapes; between 133 and 316 cases of aggravated assault; from 8 to 21 robberies; 26 to 67 cases of severe violence against children; 7 to 19 cases of Fetal Alcohol Syndrome; and between 5,872 and 14,987 cases of alcohol dependence (Table 5).

Table 5. Modeling Results – Reductions in Mortality, Illness, and Violence

Condition	Total Number	Percent Related to Alcohol Consumption	Total Related to Alcohol Consumption	Total Decrease -- by Scenario		
				HB 791	Dime a Drink Increase	Tax at National Average
Mortality						
Traffic Deaths	614	29%	179	4	9	3
Homicides	547	30%	164	3	8	3
Deaths from Liver Disease and Cirrhosis	459	91%	418	8	20	8
Illness and Violence						
Forcible Rapes	1,178	23%	271	5	13	5
Aggravated Assault	22,011	30%	6,603	133	316	124
Robbery	14,375	3%	431	9	21	8
Severe Violence against Children	10,751	13%	1,398	28	67	26
Fetal Alcohol Syndrome	390	100%	390	8	19	7
Alcohol Dependence or Abuse	313,000	100%	313,000	6,317	14,987	5,872

Sources for Table 5: Traffic Deaths[7]; homicides[8]; cirrhosis and liver disease deaths[52, 53]; forcible rapes[8]; aggravated assault [8]; robbery[8]; reports of severe violence against children[54, 55]; fetal alcohol syndrome (conservative estimate of percent of total births in Maryland [56] that have fetal alcohol syndrome[57]); alcohol dependence or abuse[8]

In reality, the decreases in mortality and morbidity would likely be significantly greater, because the impact of the tax would not be evenly distributed, and would affect problem drinkers more than it would affect occasional drinkers. As described in Section 2B above, alcohol abuse costs the State of Maryland $5.2 billion annually. Even if the effect of a tax increase was distributed proportionately among all drinkers, the results of the proposals detailed here would be reduced loss to the State of $97.6 to $249.0 million, depending on the proposal implemented. In fact, the savings would be far more.

These figures do not take account of the productivity impact related to early mortality. It is both difficult and controversial to put dollar figures on the value of a human life, but economists do often estimate the productivity loss associated with mortality. The value of life is most commonly calculated using estimates of the quality of life, wage premiums for risky jobs, willingness to pay for safety measures, and individual behavior related to safety and prevention measures.[58] The values used in peer-reviewed studies generally range from $3.1 million to $6.8 million.[59] Following Table 5, above, the proposed tax increases would prevent between 9 and 37 deaths annually in Maryland – equivalent to a range of $27 million to $248 million in terms of the value of human life saved.

4. Public Support for Alcohol Taxes

Public opinion polling has consistently found substantial levels of support for increasing alcohol excise taxes, particularly if the proceeds or some portion thereof are dedicated to preventing and treating alcohol problems or expanding access to health care. In Maryland, the National Council on Alcoholism and Drug Dependence-Maryland and the Maryland Developmental Disabilities Coalition released a poll of 833 registered voters in September 2009. In response to the question, "would you favor or oppose an increased tax on alcohol in Maryland to improve access to alcohol and drug treatment?" 71 percent of respondents favored the increase, including 78 percent of Democrats, 63 percent of Republicans and 62 percent of Independents.[60] Lake Research Partners surveyed 700 likely Maryland voters in June of 2009, and found that voters "clearly approve" of partially funding health care reform with an increase in the alcohol excise tax.[61]

The Open Society Institute commissioned a poll of 1,214 likely voters in Maryland in 2006. The poll found that 67 percent favored an alcohol tax increase to improve access to alcohol and other drug treatment. Support for the tax again crossed party lines: 73 percent of Democrats, 57 percent of Republicans, and 62 percent of Independents supported such a tax.[62]

These results replicate what has consistently been found at the national level. In 2005, the Washington, D.C.-based Center for Science in the Public Interest (CSPI) asked a national sample of adults age 18 and above about their support for a nickel a drink increase in federal alcohol tax rates, and reported that 71 percent in favor of the measure.[63] A 2001 national opinion poll of 900 adults found slightly lower but still strong support for increasing excise taxes as long as the funds went to designated purposes: 63% favored alcohol tax increases designated for prevention and treatment; 53% favored them for tax relief; and 47% still favored them if the funds were used for general government purposes. Women, infrequent drinkers, and persons with lower incomes were among the groups most likely to support the increases.[64]

Another national survey, done in the late 1990s, queried a substantially larger sample of 7,021 adults age 18 and above on a variety of alcohol policies. When asked if they supported increasing alcohol taxes and earmarking the funds for addressing problems resulting from alcohol use, 82 percent of respondents were in favor of a nickel-a-drink tax increase. Support dropped to 69 percent if the funds were used for to provide tax relief, and 37 percent if no specific purpose is designated.[65] Women, infrequent

drinkers, and those concerned about teens showed the highest levels of support; younger age, student status, and knowledge about teens were also strong predictors of support.[66]

The public does not appear to be aware, however, of evidence that alcohol tax increases in and of themselves can reduce alcohol-related problems. A national survey conducted in 1996 found that 78% of respondents did not believe that raising alcohol taxes would reduce injuries, even though the study population accurately assessed alcohol's role in fatal falls, drowning and poisoning, and overestimated the role of drinking in motor vehicle fatalities.[67]

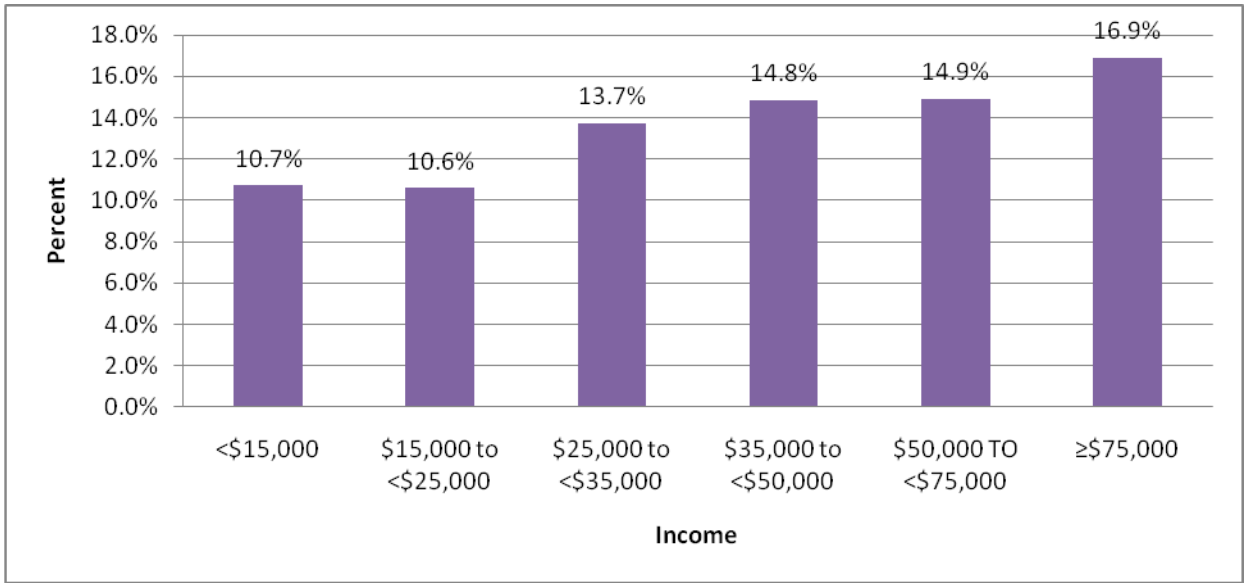
5. Voices and Arguments against Alcohol Taxes

Despite public support for alcohol tax increases, distilled spirits taxes in Maryland have not been raised since 1955, and beer and wine taxes have not been increased since 1972. The alcohol industry has been the primary opposition to alcohol tax increases both nationally and at the state level. Because alcohol tax increases reduce alcohol consumption, they have the potential to impact negatively the industry's bottom line. From 2000 to 2008, the alcohol industry donated more than $48 million to federal political campaigns.[68] From 2000 to 2006, alcohol companies (primarily producers, wholesalers and retailers) contributed $84 million to state political campaigns.[69] In Maryland, between 2001 and 2007, beer, wine and distilled spirits companies contributed nearly $600,000 to the state legislature,[70] while restaurant associations/drinking establishments gave close to $750,000.[71]

Alcoholic beverage interests use their access to policy makers to dispute the economic benefits coming from an excise tax increase. They claim that the industry employs 1.8 million people nationally, accounts for economic activity totaling $137 billion per year, and generates state and local taxes of $16.3 billion nationwide.[72, 73] If alcohol consumption falls, they argue, employment and income tax collections will decline as well. However, these arguments are based on the problematic assumption that the money currently spent on alcohol would disappear from the economy if it were not spent on alcohol. Instead, funds saved in household budgets – and for caregivers of various types involved in caring for alcohol-related illnesses the consequences of alcohol abuse – would be spent in different parts of the economy, and would generate additional economic activity. Additional state revenues generated through an increase in the alcohol tax would realize a "multiplier" effect as they were spent, and provide an overall significant boost to the State's economy.

The industry also argues that a key economic impact of increased alcohol taxes is a heavier tax burden for lower income households. In fact, alcohol excise tax increases paradoxically both do not fall most heavily on the poorest families, and have the greatest likelihood of improving the lives and health of those families. This is because first, both alcohol consumption and binge drinking are most likely to be found, not among the poorest households, but among the wealthiest,[74] as the data for Maryland in Figure 2 demonstrate. Second, alcohol taxes have their greatest impact on people who drink in an unhealthy way. If poor people drink, they are more likely to binge drink than higher income groups. They are also more likely to suffer from negative health and economic consequences of alcohol use.[75] Thus, for the small minority of lower-income people who drink, the tax increases will depress consumption and decrease the disproportionate burden of consequences from alcohol use born by the lowest income groups. Interestingly, poor people are the most likely to support alcohol excise taxes in national public opinion polling.[64]

Figure 2. Prevalence in Binge Drinking (Five or More Drinks within Two Hours) in the Past 30 Days among Marylanders Age 18 and Above, 2007-2008 [76]



6. Conclusions

Alcohol taxes have the potential to raise much-needed funds for the State of Maryland. Even a modest tax increase of a nickel per drink would be expected to add $84 million to the state's coffers, while decreasing alcohol consumption by two percent. Increasing the tax by a dime a drink would raise more than $214 million in new revenues, and save the state as much as $249 million in healthcare costs. A dime a drink tax increase would also prevent 37 premature deaths and nearly 15,000 cases of alcohol abuse or dependence.

The evidence presented here indicates that increasing alcohol excise taxes will be good for health, safety and the economy in Maryland. While this finding is specific to Maryland, the concept of raising excise taxes for health has been endorsed at the highest levels of the nation's public health research infrastructure. In 2003, the National Research Council and Institute of Medicine produced at the request of Congress a comprehensive plan for reducing underage drinking and its negative consequences. Created by a national committee of experts, the report included increasing excise taxes as a central part of its recommendations. The conclusion of this section of the report provides an apt conclusion to this report as well:

> …state and federal excise taxes are potentially important instruments for preventing underage drinking and its harmful consequences and for generating revenue to fund a broad prevention strategy. We believe the long downward slide in the actual cost of these taxes to consumers has considerably exacerbated the underage drinking problem. Raising these tax rates at both the federal and state level is justified by established principles of public finance, by public health considerations, and by the specific goals of Congress in creating this committee. Of course, the amount of any increase is not a scientific question; rather it is a policy question.[21]

Appendix – Excise Tax Rates by State – as of July 1, 2009 [15]

State	Tax per Gallon		
	Spirits	Table Wine	Beer
Alabama	$18.78 (a)	$1.70	$1.05 (h)
Alaska	$12.80	$2.50	$1.07
Arizona	$3.00	$0.84	$0.16
Arkansas	$2.58	$0.77	$0.21
California	$3.30	$0.20	$0.20
Colorado	$2.28	$0.28	$0.08
Connecticut	$4.50	$0.60	$0.20
Delaware	$3.75	$0.97	$0.16
District of Columbia	$1.50	$0.30	$0.09
Florida	$6.50	$2.25	$0.48
Georgia	$3.79	$1.51	$1.01 (i)
Hawaii	$5.98	$1.38	$0.93
Idaho	$10.96 (a)	$0.45	$0.15
Illinois	$8.55	$0.73	$0.19
Indiana	$2.68	$0.47	$0.12
Iowa	$12.47 (a)	$1.75	$0.19
Kansas	$2.50	$0.30	$0.18
Kentucky	$6.46 (b)	$0.50 (b)	$0.08 (b)
Louisiana	$2.50	$0.11	$0.32
Maine	$5.21 (a)	$0.60	$0.35
Maryland	**$1.50**	**$0.40**	**$0.09**
Massachusetts	$4.05	$0.55	$0.11
Michigan	$10.91 (a)	$0.51	$0.20
Minnesota	$5.08	$0.30	$0.15

continued on next page

Mississippi	$6.75 (a)	$0.43	$0.43
Missouri	$2.00	$0.42	$0.06
Montana	$8.62 (a)	$1.06	$0.14
Nebraska	$3.75	$0.95	$0.31
Nevada	$3.60	$0.70	$0.16
New Hampshire	(d)	(c)	$0.30
New Jersey	$5.50	$0.88	$0.12
New Mexico	$6.06	$1.70	$0.41
New York	$6.44	$0.30	$0.14
North Carolina	$13.39 (a)	$0.79	$0.53
North Dakota	$2.50	$0.50	$0.16
Ohio	$9.04 (a)	$0.32	$0.18
Oklahoma	$5.56	$0.72	$0.40
Oregon	$24.63 (a)	$0.67	$0.08
Pennylvania	$6.54 (a)	(c)	$0.08
Rhode Island	$3.75	$0.60	$0.11
South Carolina	$4.97 (g)	$1.08	$0.77
South Dakota	$3.93 (f)	$0.93 (f)	$0.27
Tennessee	$4.46	$1.21	$0.14 (e)
Texas	$2.40	$0.20	$0.20
Utah	$11.41 (a)	(c)	$0.41
Vermont	$0.68 (a)	$0.55	$0.27
Virginia	$20.13 (a)	$1.51	$0.26
Washington	$26.45 (a)	$0.87	$0.26
West Virginia	$1.85 (a)	$1.00	$0.18
Wisconsin	$3.25	$0.25	$0.06
Wyoming	(d)	(c)	$0.02
State Median	**$4.97**	**$0.67**	**$0.19**
State Average	**$6.72**	**$0.80**	**$0.28**

Notes to Appendix A:

(a) States where the state government controls all sales. The implied excise tax rate is calculated using methodology designed by the Distilled Spirits Council of the United States (DISCUS).

(b) There is an additional 11% wholesale sales tax on all alcoholic beverages.

(c) All wine sales are through state-run stores. Revenue in these states is generated from various taxes, fees and net profits.

(d) Control state where the implied excise tax rate as calculated by DISCUS is less then zero.

(e) There is an additional 17% wholesale tax on beer.

(f) There is an additional 2% wholesale tax on wine and spirits.

(g) Includes a wholesale tax of $5.36 per case.

(h) Includes a local rate of $0.52 per gallon statewide.

(i) Includes a local rate of $0.53 per gallon statewide.

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