



Evalumetrics Research Report

Estimated Effects of Equalizing New York State's Alcohol Excise Tax

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Prepared by:

**Rob Lillis
Evalumetrics Research
58 Scotland Road
Canandaigua, New York 14424
585-394-5811
rlillis@rochester.rr.com
www.evalumetrics.org**

Summary

New York State Government, like most states, has long been interested in maximizing the short term profits from alcohol tax and license fees while giving little consideration to the societal costs resulting from alcohol use and abuse. Now, in the current fiscal crisis, it is time to look at a rational alcohol tax policy. Societal problems and the resulting costs are related to the amount of ethanol consumed, regardless of the type of beverage used. This report presents an analysis of a rational tax policy in which taxes are assessed based on the ethanol content of beverages and set to the current rate for distilled spirits. This “equalization” would generate over \$300 million annually in new revenue while making those who drink the most...those who contribute to the societal costs...pay their fair share of the costs.

Background

New York is deep in a fiscal crisis. One of the major components of the State budget crisis is the soaring cost of healthcare. These costs are a burden to the publicly funded system as well to employers who provide health insurance benefits to employees. Alcohol is a significant contributing factor in many health problems, and correspondingly, healthcare costs. Alcohol is also a major factor in crime, violence, lost productivity, divorce, school failure and virtually every societal problem. State and local governments spend hundreds of millions of dollars annually to treat the consequences of alcohol abuse.

Joseph Califano, Chairman, National Center on Addiction and Substance Abuse (CASA) at Columbia University and former U. S. Secretary of Health Education and Welfare, called on State governments to recognize the following when looking for ways to make a permanent impact on healthcare and prison costs:

- *Some 30 percent of Medicaid health care dollars are spent to treat the injuries from violence and accidents and the 70 plus diseases caused or aggravated by substance abuse and addiction. Medicaid patients with drug and alcohol problems cost \$5,000 to \$10,000 a year more in health care costs than those without such problems. Most Medicaid hospital patients readmitted within 30 days are those with drug and alcohol problems. In New York, Governor Andrew Cuomo estimates that on average each such patient costs Medicaid \$100,000 a year.*
- *Some 80 percent of inmates are incarcerated for violent and other crimes committed while they were high on alcohol or other drugs, stole to get money to buy drugs, violated the alcohol or drug laws, or are alcohol or drug addicts or abusers.*
- *Of all state substance abuse related expenditures, 94 percent goes to shovel up the burden of substance abuse and addiction in crime, health care, education and social services, while only 2.4 percent is spent on prevention, treatment or research. (3.6 percent is used to regulate alcohol and tobacco sales, collect taxes and operate liquor stores.)*
- *For each dollar that states collect in tobacco and alcohol taxes and liquor store revenues, they spend more than seven dollars on the health care and criminal justice consequences of smoking and alcohol abuse and addiction. (Califano, 2011).*

Some have argued that those who drink alcohol, especially those who abuse alcohol or drink to excess, should be expected to pay their fair share of the public costs of treating the negative consequences of that use. This is the same logic as the fuel tax. Those who drive the most are assumed to cause the most damage to the roadways. They also use the most fuel and therefore pay the most tax.

New York State Alcohol Excise Taxes

Currently, sales of alcohol beverages in New York generate over \$230 million in State tax revenues annually. The current New York State alcohol excise tax structure is based on set rates per gallon of beverage sold at the wholesale level. Table 1 shows the current rates and approximate tax revenues collected. Distilled spirits are taxed at a rate that is significantly higher than that for beer or wine. There are several reasons for this differential. Saffer and Chaloupka (1994) reported justifications such as the common misperception that different public health effects are related to each beverage type and that there is a differential in production costs for different beverages. In New York State, wine is given preferential tax rates in order to promote the State's growing wine industry.

**Table 1
New York Alcohol Tax**

	Current Rate/Gal(1)	Estimated Gals. Of Bev. Sold	Estimated Tax Revenues (2)
Beer	\$0.14	328,000,000	\$45,920,000
Wine	\$0.30	58,000,000	\$17,400,000
Distilled Spirits	\$6.44	26,000,000	\$167,440,000
Total		412,000,000	\$230,760,000

However, the result of the current policy is that the real price, that is the price taking into account consumer product inflation, has decreased steadily and beer and wine sales have increased steadily while distilled spirits sales have been relatively steady for the past decade.

Tax Based on Ethanol Instead of Volume of Beverages

For many years public health advocates have pointed out that societal costs related to use and abuse of alcohol are due to the ethanol content of a beverage, not to the beverage itself. Thus, if the basic logic behind collecting a separate excise tax on alcoholic beverages is, at least in part, to offset societal costs associated with alcohol, then it is the ethanol that should be taxed. It follows that those who consume the most ethanol will be responsible for the greatest health

consequences, criminal justice costs, lost productivity and other societal costs.

Wagenaar, Salois and Komro (2009) reviewed over 100 research articles that addressed the relationship between tax and price and alcohol sales or consumption. Using statistical meta-analyses the authors determined that there is a strong relationship between price and consumption. This logic has led to proposals to set the excise tax on ethanol content of beverages. Thus, the alcohol excise tax would be “equalized.” Legislation to equalize the federal excise tax has been introduced a number of times (Saffer and Chaloupka, 1994). However, no legislation has passed and federal excise tax remains on a beverage-specific basis.

Estimated Impact of Equalized Tax

In order to estimate the impact of equalizing the New York State excise tax on alcohol, a formula was developed that included several steps. First, given that the current tax rates are based on gallons of beverage sold, the current gallonage rates were converted to equivalent rates for the corresponding ethanol in each gallon of each beverage. Table 2 shows the results of conversion from gallonage tax rates to ethanol tax rates. These conversions were based on the following assumptions. Beer contains an average of five percent ethanol; wine contains an average of 13% ethanol and distilled spirits average 40% ethanol. Thus, the rate of \$.14 per gallon of beer converts to \$2.80 per gallon of ethanol in beer; the rate of \$.30 per gallon of wine converts to \$2.31 per gallon of ethanol in wine and the rate of \$6.44 per gallon of distilled spirits converts to \$16.10 per gallon of ethanol in distilled spirits. Based on figures from 2007, the last year for which complete data were available, over 412 million gallons of alcoholic beverages were sold in New York State. This is the equivalent of over 34 million gallons of ethanol.

The most common proposal for equalization sets the ethanol rates on all beverage types equal to the current rate for distilled spirits (\$16.10). Table 2 shows the results of this process and converting the ethanol rate back to the new equivalent rate per gallon of beverage. The resulting rate for beer would be set at \$.805 per gallon; for wine at \$2.093 per gallon and; for distilled spirits the rate would remain at \$6.440.

Table 2
New York Alcohol Tax -Equalization

	Current Rate/Gal. Beverage	Gals. Of Beverage Sold	Gals. Of ETOH(1)	Tax/Gal. of Ethanol	Equalized Rate/Gal. Ethanol	Equivalent Tax/Gal. of Beverage
Beer	\$0.13	328,061,000	16,403,050	\$2.50	\$16.10	\$0.805
Wine	\$0.19	57,880,000	7,524,400	\$1.46	\$16.10	\$2.093
Dis Sp	\$6.44	25,594,000	10,237,600	\$16.10	\$16.10	\$6.440
Total		411,535,000	34,165,050			

- (1) Based on the following:
Beer 5% alcohol
Wine 13% ethanol
Spirits 40% ethanol

To determine the effect on excise tax collection, the new rates were applied to total sales for 2007, the most recent figures available for this analysis. Table 3 shows that applying the equalized rate of \$16.10 to the 16.4 million gallons of ethanol sold as beer, tax collections would increase from \$46 million to \$264 million while the equalized rate applied to the 7.5 million gallons of ethanol sold as wine, tax collections would increase from \$17 million to \$121 million. There would be no change in distilled spirits tax collections. The total increase would be over \$322 million annually. The impact on consumers would be an increase of \$.67 on a six pack of beer and \$1.79 on a quart of wine. There would be no change in the price of distilled spirits due to equalization.

Table 3
New York Alcohol Tax - Estimate of Revenues From Equalization

	Gals. Of Beverage Sold	Gals. Of ETOH(1)	Current Tax Collected	Equalized Rate/Gal. Ethanol	Estimated Tax Collected	Difference	Increase in Unit Price	Unit
Beer	328,000,000	16,400,000	\$45,920,000	\$16.10	\$264,040,000	\$218,120,000	\$0.665	Six Pack
Wine	58,000,000	7,540,000	\$17,400,000	\$16.10	\$121,394,000	\$103,994,000	\$1.793	Quart
Dis Sp	26,000,000	10,400,000	\$167,440,000	\$16.10	\$167,440,000	\$0	\$0.000	
Total	412,000,000	34,340,000	\$230,760,000		\$552,874,000	\$322,114,000		

Adjustments to the Estimates

Numerous studies have shown that alcohol is price elastic, that is, as the price of alcohol increases demand will decrease. The relationship of price to demand is not one-to-one and differs by beverage. Meta-analysis of numerous studies on alcohol price elasticity (Wagenaar, Salois and Komro, 2009) determined that beer is elastic at -.30, that is, for every one percent increase in price, demand will decrease .3 percent. Wine is elastic at -1.0 and distilled spirits at -1.5. Table 4 shows the adjusted estimates for tax collections based on increased tax rates and decreased demand resulting from price elasticity. New tax collections are estimated at \$213.6 million for beer and \$100.8 million for wine. These estimates also take into account the markup of .075% that retailers place on new costs, in this case, the new tax.

Additional Benefits

The proposed equalization of the New York State excise tax on alcohol would result in over \$314 million in new tax collections annually. In addition, the decrease in beer and wine sales would result in an estimated 5.8% decrease in total ethanol consumption. There is a strong relationship between total or per capita consumption and population rates of alcohol related problems. In a review of literature, Chaloupka, Grossman and Saffer (2002) concluded, “studies determined that increases in the total price of alcohol can reduce drinking and driving and its consequences among all age groups; lower the frequency of diseases, injuries, and deaths related to alcohol use and abuse; and reduce alcohol-related violence and other crime” (p. 22). These

decreased societal costs are an additional potential benefit from equalizing the alcohol tax rate in New York.

Table 5

	Gallons of Beverage	Gallons of Ethanol	Change in Demand Due to Tax	Decrease in Ethanol Consumed	Decrease in Ethanol Consumed
Beer	328,061,000	16,403,050	10.00%	1,640,305	10.00%
Wine	57,880,000	7,524,400	4.54%	341,823	4.54%
Dis Sp	25,594,000	10,237,600	0.00%	0	0.00%
Total	411,535,000	34,165,050		1,982,128	5.80%

Markup = 0.075

Current Avg. Retail Price per Gallon = Beer: \$14.87, Wine: \$40.22, Liquor: \$142.53 (Total on- & off-premise sales divided by total consumption per Adams Beverage Handbooks, 2008).

Elasticity = Beer: -0.46, Wine: -0.69, Liquor: -0.80. Based on Wagenaar (2009).

Table 4.
New York Alcohol Tax - Adjusted Estimate of Revenues From Equalization

	(New Tax Collected)	Retail Price Per Gallon(1)	Change in Unit Price Due to Increased Tax	Adjusted Price Due to tax	Change in Price Due to Markup(2)	% Change in Price	Price Elasticity	Change in Demand Due to Tax	Adjusted (New Tax Collected)	Adjusted Change in Unit Price	
Beer	\$218,120,000	\$14.87	\$0.665	\$15.535	\$0.715	4.5%	0.46	2.06%	\$213,632,918	\$0.71	Six Pack
Wine	\$103,994,000	\$40.22	\$1.793	\$42.013	\$1.927	4.5%	0.69	3.08%	\$100,795,137	\$1.93	Quart
Dis Sp	\$0	\$142.53	\$0.000	\$142.530	\$0.000	0.0%	0.80	0.00%	\$0	\$0.00	
Total	\$322,114,000								\$314,428,055		

(1) From Wagenaar - Total on- & off-premise sales divided by total consumption per Adams Beverage Handbooks, 2008

(2) Markup=.075%

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