



## Regulating the availability of beer, wine, and spirits in grocery stores: Beverage-specific effects on prices, consumption, and traffic fatalities

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American Association of Wine Economists Working Paper No. 95, December 2011

[http://www.wine-economics.org/workingpapers/AWE\\_WP95.pdf](http://www.wine-economics.org/workingpapers/AWE_WP95.pdf)

**Background.** Policies on alcohol sales in grocery stores vary by state, and changes to existing laws can be controversial. Some states do not allow the sale of any alcoholic beverages in grocery stores, while others allow the sale of beer, the sale of wine and beer, or the sale of wine, beer, and spirits. When policy changes are considered, one concern is that increased consumer access to alcohol will subsequently increase the social problems associated with alcohol, including traffic fatalities. Our goals were to understand how policies that affect the availability of alcohol affect alcohol prices, how these influence total alcohol consumption, the type of alcohol consumed, and traffic fatalities. Using this data, we predict how wine and beer sales in grocery stores would affect alcohol prices, alcohol consumption, and traffic fatalities.

**Experimental design.** We used data from the 48 contiguous states from 1982 to 2000. Data included alcohol price data from American Chamber of Commerce Researchers Association, information on state-level consumption of beer, wine and spirits from the National Institutes of Health National Institute on Alcohol Abuse and Alcoholism, traffic fatality information from the National Highway Traffic Safety Administration. In addition, we incorporated data on alcohol taxes and markups, demographics, and alcohol policies, such as the maximum legal blood alcohol levels and hours of sale.

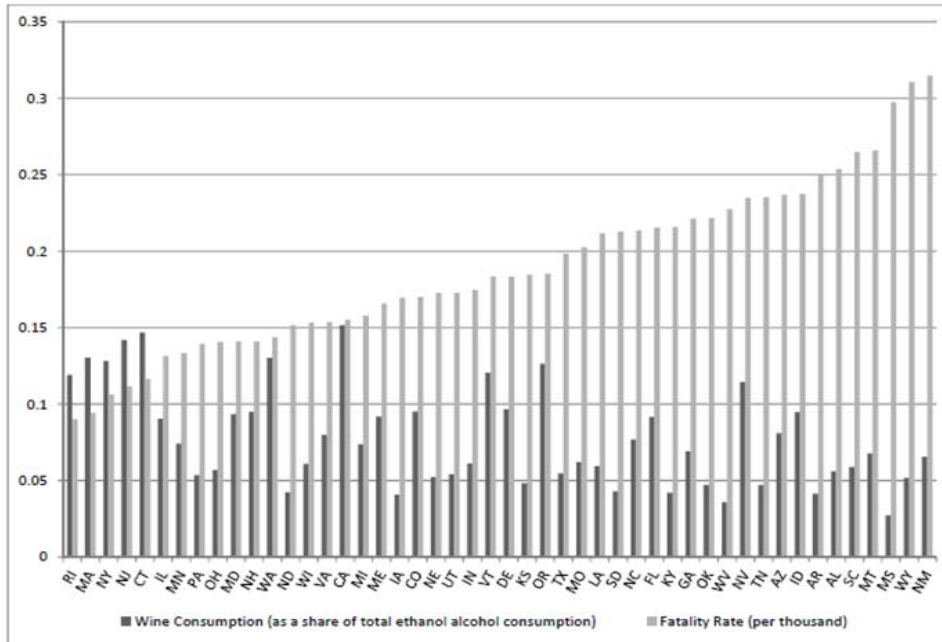
### Results

***How does grocery store alcohol availability affect beer, wine and spirit prices?*** In states with wine sales in grocery stores, the price of beer is 5.1% lower, the price of wine is 6.8% lower, and the price of spirits is 4.4% higher (Table 1). This is due to competition between beer and wine sales in grocery stores, as well as a competition from wider distribution of wine, and the fewer outlets available for spirits purchases.

***How does grocery store alcohol availability affect beer, wine and spirit consumption?*** Wine sales in grocery stores cause a large increase in wine consumption (48.6% higher), with smaller but significant boosts in beer (12.9%) and spirits (16.3%) consumption. Other factors with a positive effect on alcohol consumption are tourism and certain demographic factors.

***How does alcohol consumption, including the relative shares of beer, wine and spirits, influence traffic fatalities?*** Increases in total alcohol consumption increase traffic fatalities, and higher rates of beer and spirits consumption as a share of total alcohol consumption are linked to higher rates of traffic fatalities. States with higher rates of wine consumption as a share of total alcohol consumption have lower rates of traffic fatalities Figure 1. Other factors contributing to higher rates of traffic fatalities are alcohol sales after 10 p.m. and the number of vehicle miles traveled, but seat belt laws decrease traffic fatalities. Alcohol sales after 10 pm were particularly important in youth fatalities.

Figure 1: Average number of traffic fatalities and wine as a share of total alcohol consumption, 1982 to 2000



Sources: NIH-NIAAA (2010); NHTSA (2010).

**Simulating the effects of introducing wine into grocery stores (Table 1).** If beer and wine sales are allowed in grocery stores, and alcohol sales hours are held constant, beer and wine prices are predicted to decrease, total alcohol consumption would increase, a portion of the beer consumption would be displaced by wine sales, and in certain cases there would be a small and negative effect on traffic fatalities.

**Table 1. Predicted changes in alcohol prices, alcohol consumption, and traffic fatalities if beer and wine are sold in grocery stores.**

|                                  | Policy change from “no alcohol sales in grocery stores” to “grocery sales of beer and wine” | Policy change from “only beer available in grocery stores” to “grocery sales of beer and wine” |
|----------------------------------|---|--|
| <b>Beer prices</b>               | -5.1%   | -4.1%  |
| <b>Wine prices</b>               | -6.8%   | -13.3%   |
| <b>Spirits prices</b>            | 4.4%  | -2.5%  |
| <b>Beer consumption share</b>    | -3.6%   | no significant effect  |
| <b>Spirits consumption share</b> | no significant effect   | no significant effect  |
| <b>Total consumption</b>         | 21.3%   | 21.8%  |
| <b>Total traffic fatalities</b>  | no significant effect   | no significant effect  |
| <b>Weekend</b>                   | no significant effect   | no significant effect  |
| <b>Total non-weekend</b>         | no significant effect   | no significant effect  |
| <b>Youth total</b>               | no significant effect   | no significant effect  |
| <b>Youth weekend</b>             | -1.0078%  | no significant effect  |
| <b>Youth non-weekend</b>         | 1.0633%   | no significant effect  |

**Conclusions:**

- States which allow sales of wine in grocery stores have lower wine prices and also higher wine consumption rates.
- States with higher consumption of beer and spirits as a share of total alcohol consumption have higher traffic fatality rates, indicating that the common wisdom that beverages with higher alcohol content increase the incidence of traffic fatalities is not supported by data.
- Youth fatalities are most closely tied to beer and spirit consumption and are particularly sensitive to alcohol sale hours.

**The bottom line:** The alcohol content of a beverage is not a good indicator of its relative impact on traffic fatalities, and arguments against the wider distribution of wine for the reason of reducing traffic fatalities may not be justified based on data. The hours at which alcohol is available for sale impacts traffic fatalities.