Joint Impacts of Minimum Legal Drinking Age and Beer Taxes on US Youth Traffic Fatalities, 1975 to 2001

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ABSTRACT

Background: There is a considerable body of prior research indicating that a number of public policies that limit alcohol availability affect youth traffic fatalities. These limitations can be economic (e.g., beverage taxation), physical (e.g., numbers or operating hours of alcohol outlets), or demographic (e.g., minimum legal drinking age). The estimated impacts of these policies differ widely across studies. A full-price theoretical approach suggests that people weigh the benefits of drinking against the sum of all the associated costs, including the price of the beverages themselves plus the difficulty of obtaining them and any additional risks of injury or punishment related to their use. This study tested one prediction of this model, namely that the impact from changing one availability-related cost depends on the level of other components of full cost.

Methods: The current analyses concentrate on 2 forms of limitations on availability that have been shown to affect youth traffic fatalities: minimum legal drinking age (MLDA) laws and beer taxes. The interdependence between the impacts of MLDA and taxes is investigated using a panel of 48 US states over the period 1975 to 2001. All age-group–specific models control for numerous other variables previously shown to affect vehicle fatalities, as well as fixed effects to account for unexplained cross-sectional and time-series variation.

Results: The analyses showed that raising either MLDA or beer taxes in isolation led to fewer youth traffic fatalities. As expected, a given change in MLDA causes a larger proportional change in fatalities when beer taxes are low than when they are high.

Conclusions: These findings suggest that a community's expected benefit from a proposed limitation on alcohol availability depends on its current regulatory environment. Specifically, communities with relatively strong existing policies might expect smaller impacts than suggested by prior research, while places with weak current regulations might expect larger benefits from the same policy initiative.

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