Open **home page**. Get free **e-mail alerts** about new studies. Search studies by **topic** or **free text**

▶ **The fatal toll of driving to drink: the effect of minimum legal drinking age evasion on traffic fatalities.**

DOWNLOAD PDF
for saving to
your computer

Lovenheim M.F., Slemrod J.
Journal of Health Economics: 2010, 29, p. 62–77.

Unable to obtain a copy by clicking title? Try asking the author for a reprint by adapting this prepared e-mail or by writing to Dr Lovenheim at mfl55@cornell.edu. You could also try this alternative source.

This meticulous analysis reveals that increasing the legal drinking age can cause traffic accident deaths if underage drinkers can drive to a nearby jurisdiction with a lower age limit to legally buy and drink alcohol, returning too intoxicated to drive safely. The message is that such limits need to be uniform to have the maximum beneficial impact.

Summary Introduction of the uniform 21 years minimum legal drinking age in the United States has generated much controversy and research over its impact on traffic fatalities among teenagers. An important but unexamined dimension in this debate is the degree to which cross-state differences in the age limit rather than the national level induce teenage drunk driving, the other side of which is the extent to which imposing a uniform national age has reduced deaths not just by raising the age, but also by equalising drinking ages across most localities in the country.

This issue arises because the presence of nearby lower-age localities might induce teenagers to avoid local restrictions by crossing a border to buy alcohol. Driving to get the alcohol and, more importantly, driving back often under the influence, makes alcohol-related accidents more likely. Depending on its extent, cross-border evasion of the local age limit can substantially undermine the main objective of state alcohol policies – preventing alcohol-related accidents, especially among young drivers.

To evaluate the effect of state polices on minimum legal drinking ages, from 1977 to 2002 for each US county the featured analysis mapped the distance to the nearest place where an 18, 19, or 20-year-old could legally buy alcohol. This data was then related to records of the number of people in those counties who died in a traffic accident. Accidents among drivers over 25 also vary with the minimum drinking age, so the approach taken was to compute the likelihood that an 18, 19 or 20-year-old driver is involved in a fatal accident relative to older drivers, then to relate this to changes in the minimum age and distances to lower age jurisdictions. The intention is to eliminate factors common to all drivers and to isolate the impact of those impinging only on young drivers, the main one presumed to be the inducement to drive to a place where they can legally buy alcohol. To focus on alcohol-related causes, the analysis concerned only accidents occurring at night.

Main findings

All else being equal, the analysis found that the presence of a nearby jurisdiction with a lower drinking age increases the number of youth driving fatalities. Specifically, in counties within 25 miles of a lower-age jurisdiction, raising the legal drinking age actually *increases* the chances that an 18 or 19-year-old (but not a 20-year-old) driver will be involved in a fatal accident, relative to drivers over 25 years old. In contrast, in counties over 25 miles from a lower-age jurisdiction, raising the drinking age reduces the risk of a teenage driver being involved in a fatal accident.

Based on these relationships it is possible to estimate how much of the reduction in teen-involved traffic fatalities from 1977–1988 to 2002 was due to due to states *equalising* the minimum age rather than due to states *raising* the age. From the late 1970s and early 1980s, about 23% of the decline in traffic fatalities involving an 18-year-old driver was due to equalisation, and for 19-year-olds about 16%. These estimates imply that previous studies which ignored evasion effects significantly underestimated the reduction in teenage drink-driving and related deaths which can be achieved when teenagers' access to alcohol is *completely* restricted, not just in the state where they live, but also in neighbouring areas.

The authors' conclusions

While determining the full costs and benefits of a given minimum legal drinking age is outside of the scope of the analysis, the results imply that unequal drinking age restrictions across states in the United States results in significant loss of life. The effect of changes in the age limit depends substantially on the fraction of a state's population who need not travel far to reach a state with a lower age limit. Other things being equal, these results argue for setting a standard minimum legal drinking age across all states.

Cross border evasion of regulations and pricing/tax policies is common, but being able to drink legally across a border has special implications, because the act of drinking and then driving home drunk can be dangerous, even fatal, both to the cross-border consumers and to other drivers and pedestrians.

Thanks for their comments on this entry in draft to featured study author Michael Lovenheim of Cornell University at Ithaca in the USA. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

Last revised 11 July 2013. First uploaded 10 July 2013

▶ Comment on this entry
▶ Give us your feedback on the site (one-minute survey)
▶ Open home page and enter e-mail address to be alerted to new studies

---

Top 10 most closely related documents on this site. For more try a subject or free text search

Achieving positive change in the drinking culture of Wales STUDY 2011

The effectiveness of tax policy interventions for reducing excessive alcohol consumption and related harms REVIEW 2010

Polarized drinking patterns and alcohol deregulation. Trends in alcohol consumption, harms and policy: United Kingdom 1990–2010 REVIEW 2010

Independent review of the effects of alcohol pricing and promotion STUDY 2008

Effectiveness of policies maintaining or restricting days of alcohol sales on excessive alcohol consumption and related harms REVIEW 2010

Effectiveness of policies restricting hours of alcohol sales in preventing excessive alcohol consumption and related harms REVIEW 2010

Effects of alcohol tax and price policies on morbidity and mortality: a systematic review REVIEW 2010

The government's alcohol strategy DOCUMENT 2012

Alcohol-use disorders: Preventing the development of hazardous and harmful drinking REVIEW 2010

Effect of the increase in 'alcopops' tax on alcohol-related harms in young people: a controlled interrupted time series STUDY 2011