

*In this case, coercive federalism did not improve public welfare.*

# Did the Federal Drinking Age Law Save Lives?

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In 1984, President Ronald Reagan signed the Federal Uniform Drinking Age Act, a law that threatened to withhold federal highway funds from states that failed to increase their minimum legal drinking age (MLDA) to 21. Many states objected to this federal intrusion and provided for rollback of their MLDA21 if the federal law was repealed or held unconstitutional, or if the federal sanctions expired. South Dakota went so far as to sue Reagan's secretary of transportation, Elizabeth Dole, to prevent implementation of the act. In *South Dakota v. Dole* (1987), however, the U.S. Supreme Court ruled the act constitutional. The Court decided that the "relatively small financial inducement offered by Congress" was not so coercive "as to pass the point at which pressure turns into compulsion." The Court argued, in particular, that promoting "safe interstate travel" was sufficient reason for the federal government to set alcohol policy, a responsibility traditionally reserved to the states under the 21st Amendment.

Research subsequent to the Court's decision appears to confirm that raising the drinking age to 21, and the 1984 federal law in particular, saved lives. Relying on this research, the National Highway Traffic Safety Administration attributes substantial declines in motor vehicle fatalities to federal and state traffic-safety policies, especially the MLDA21. NHTSA estimates the cumulative number of lives saved by the drink-

ing age law at over 25,000 through 2008. Thus, the conventional view attributes enormous benefit to federal intervention in an area that had traditionally been left to the states.

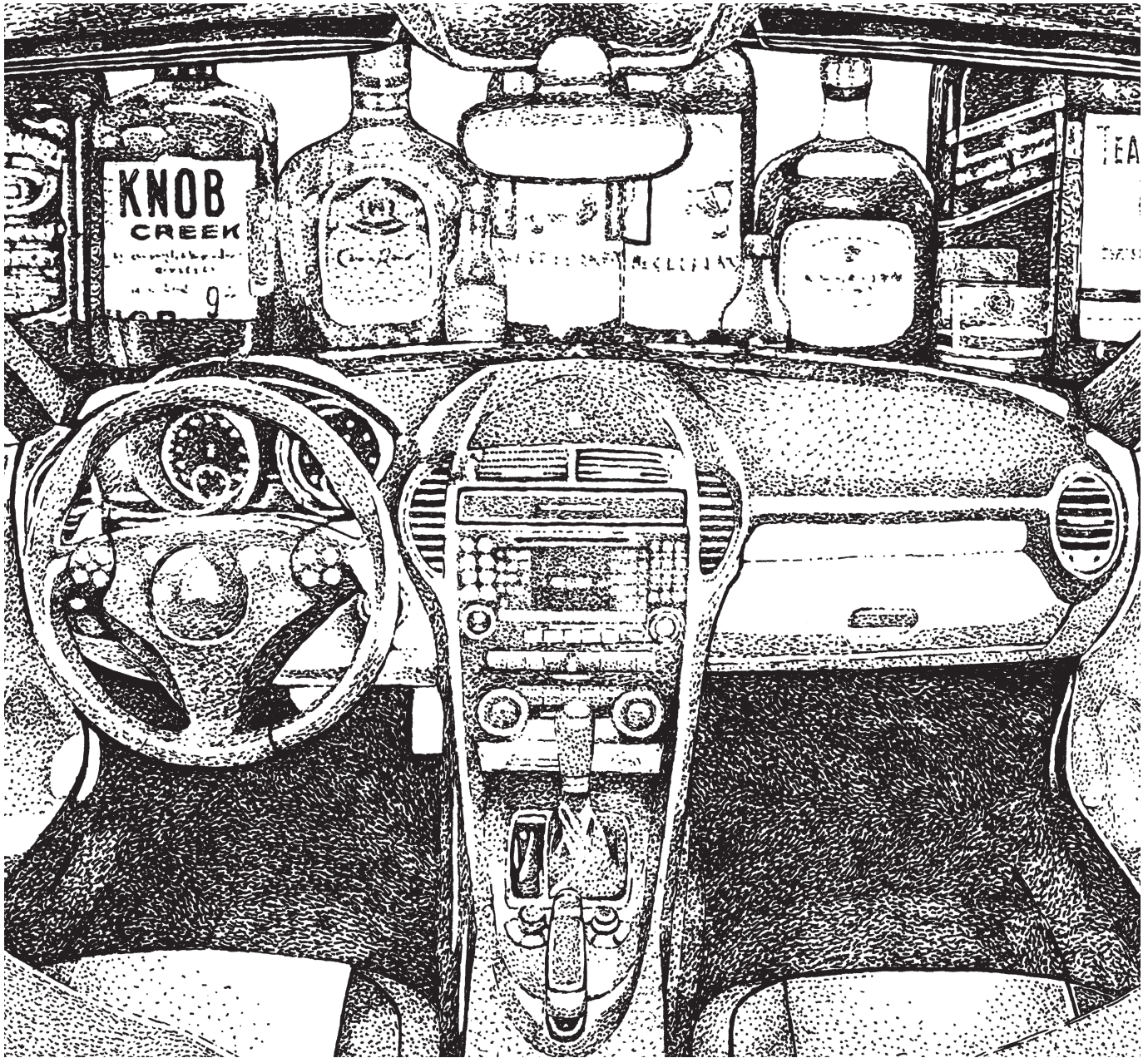
Our recent research reexamines whether the 1984 act reduced traffic fatalities by pushing states to adopt a minimum legal drinking age of 21. As in earlier work, we compare traffic fatality rates in states before and after they changed their MLDA to 21. In contrast to earlier work, however, we look separately at the effect in states that adopted the higher drinking age on their own versus those pressured to do so by the 1984 law. This is a crucial comparison because the argument for federal imposition rests on the assumption that the act itself reduced fatalities, not just that an MLDA21 reduced fatalities in some states.

The results of our analysis are striking. Virtually all the life-saving effect of the MLDA21 came from a few states that adopted the restriction before the federal law was passed, not from the larger number of states that adopted the restriction under federal pressure. Further, any life-saving effect in the early-adopting states was temporary, occurring largely in the first few years after adoption of the MLDA21. Thus the MLDA21 did not produce its main claimed benefit overall, and any such benefit was in precisely those states where no federal coercion occurred.

Our results therefore challenge the value of coercive federalism. While we cannot rule out a short-term, life-saving effect of the MLDA21 when adopted by states of their own volition, we find no evidence that it saves lives when the federal government compels this policy. This makes sense if a higher MLDA works only when state governments can set a drinking

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age that reflects local attitudes and concerns, and when states are energized to enforce such laws. A policy imposed from on high — especially one that is readily evaded and opposed by a large fraction of the citizenry — is virtually guaranteed to fail.

### **HISTORICAL BACKGROUND**

When the United States repealed Alcohol Prohibition in 1933, the 21st Amendment left states free to legalize, regulate, or prohibit alcohol. Most states chose to legalize but regulate. This new regulation typically included an MLDA, although state reaction to Prohibition's repeal varied. Alabama, for example, maintained state-level prohibition, while Colorado legalized alcohol without adopting a minimum drinking age. Most states set an MLDA between 18 and 21, with 32 adopting an MLDA of 21 and 16 adopting an MLDA between 18 and 20. With few exceptions, those MLDA laws persisted through the late 1960s.

Between 1970 and 1976, 30 states lowered their MLDA

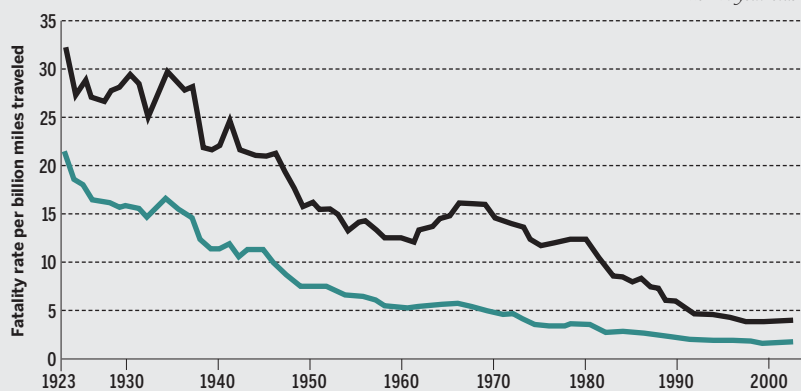
from 21 to 18. The policy changes coincided with national efforts toward greater enfranchisement of youth, exemplified by the 26th Amendment granting 18–20 year-olds the right to vote. The reasons for lowering the MLDA are not well understood and may have varied by state. Perhaps the changes reflected Vietnam-era logic that a person old enough to die for America is old enough to drink. Whatever the reasons, the lower MLDA “enfranchised” over five million 18–20 year-olds to buy alcohol.

Soon after the reductions in the MLDA, empirical studies claimed that traffic collisions and fatalities were increasing in states that lowered their MLDA, and those findings played a key role in reversing the trend toward lower MLDA. The justification for the 1984 act, espoused by organizations including the Presidential Commission on Drunk Driving, the American Medical Association, and the National Safety Council, was that higher MLDA resulted in fewer traffic fatalities among 18–20 year-olds.

Figure 1

### Traffic Fatality Rate per Vehicle Miles Traveled

1923–2003



SOURCE: National Safety Council

All states adopted an MLDA21 by the end of 1988. Several states were early adopters (Michigan, Illinois, Maryland, and New Jersey), increasing their MLDA long before passage of the 1984 act. Other states were less eager to change. For example, Colorado, Iowa, Louisiana, Montana, South Dakota, Texas, and West Virginia passed MLDA21 legislation, but each provided for repeal if the federal law were held unconstitutional. Texas and Kansas enacted “sunset provisions” allowing the MLDA to drop back to previous levels once federal sanctions expired. When the Supreme Court upheld the act’s constitutionality, states faced a strong incentive to maintain an MLDA of 21.

Over the past several decades, a large body of literature has examined the effect of the MLDA on traffic fatalities for 18–20 year-olds. This literature concludes that the MLDA21 saves lives and that the federal decision to compel a higher minimum drinking age was instrumental in expanding the benefits of the policy. That conclusion, however, relies on an incomplete

examination of the historical record.

### AGGREGATE DATA

Figure 1 presents the traffic fatality rate (TFR) for the total population and for 15–24 year-olds for the period 1913–2006. We would ideally examine the TFR for 18–20 year-olds, because that is the age range affected by a change in the MLDA from 18 to 21. Unfortunately, data on that age range are not available until the 1970s. The TFRs have been adjusted for vehicle miles travelled, although this adjustment is not age-specific.

The overall fatality rate and the “youth” fatality rate follow similar patterns over the past 90 years, with both falling systematically over almost the entire period. The similarity in trends fails to suggest a major effect of the 1984 law, since this policy should have

affected the 15–24 TFR more than the total TFR.

Figure 2 plots the average MLDA for all 50 states against the TFR for the 15–24 year-old age cohort. Although the average MLDA remained at approximately 20 between 1944 and 1970, traffic fatalities decreased substantially for many years but then increased. In the early 1970s, several states lowered their MLDA, reducing the average to below 19. A brief increase in traffic fatality rates did occur in the latter half of the 1970s, consistent with prior claims about the MLDA, but the increase looks modest in comparison to the larger downward trend that preceded the changes to the MLDA. Previous studies, which focused on the late 1970s and the early 1980s, were unlikely to see this longstanding trend. In the late 1980s and beyond, when there were no changes in any state’s MLDA, the fatality rate continued the same downward trend it displayed during the earlier part of the sample. Overall, the TFR has been decreasing steadily for over 75 years, even though most of the variation in the MLDA occurred in the 1980s. The

one major increase in traffic fatalities, from 1961 to 1967, occurred while the average MLDA remained constant.

The key fact, therefore, is that TFRs have been trending downward for decades and display little correlation with changes in the MLDA. This evidence is only suggestive because it does not link fatalities in a given state to MLDA policy in that state. We therefore turn to state-level data.

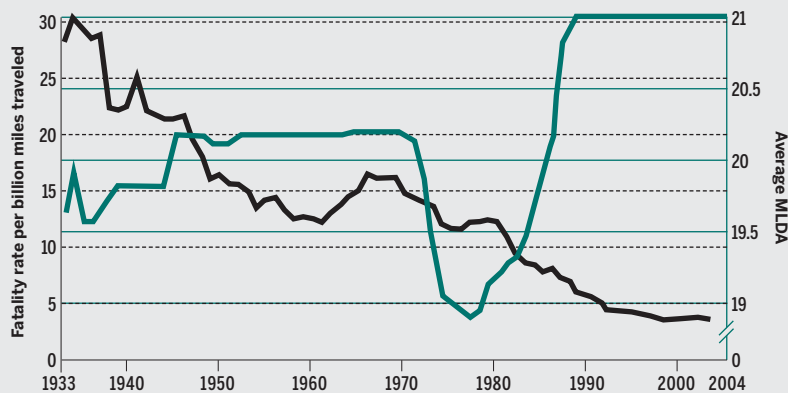
### STATE-LEVEL RESULTS

Figure 3 graphs the TFR for 18–20 year-olds in four states, along with an indicator for whether the state adopted an MLDA21. In South Carolina, the TFR for 18–20 year-olds was increasing rapidly prior to adoption and then began a marked decline, consistent with an effect of the MLDA21 in reducing fatalities for 18–20 year-olds. In California, however, the TFR for the

Figure 2

### Young Motorist Fatalities and the Drinking Age

1933–2004

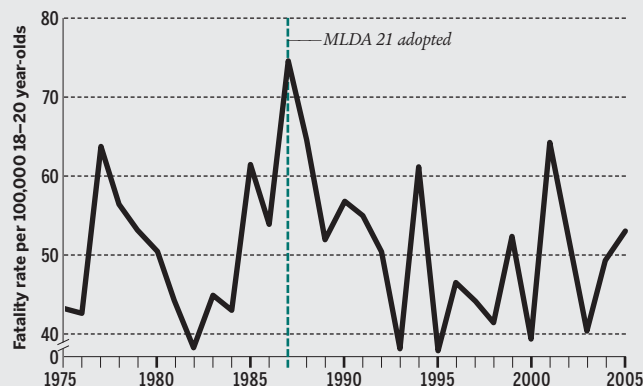


SOURCE: National Safety Council

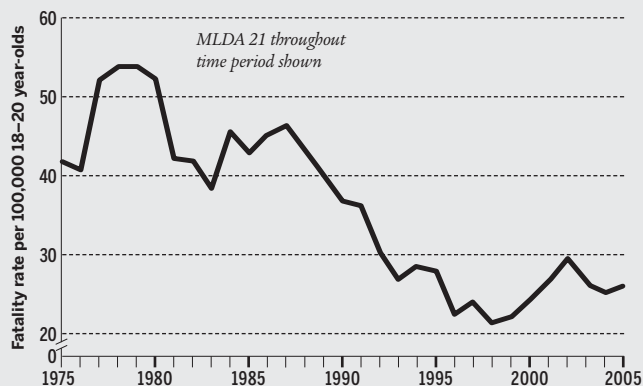
Figure 3

## Fatality Rates for 18–20 Year-Olds, Sample States

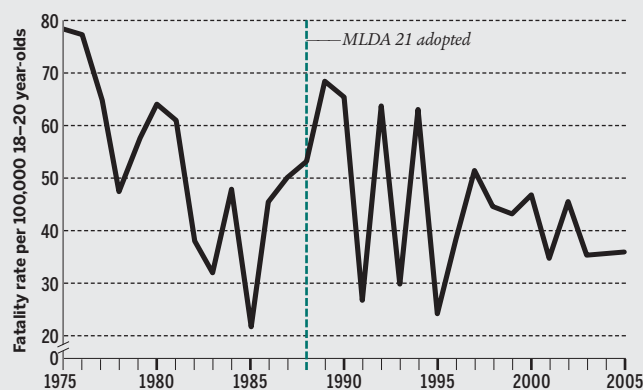
### A. South Carolina, 1975–2005



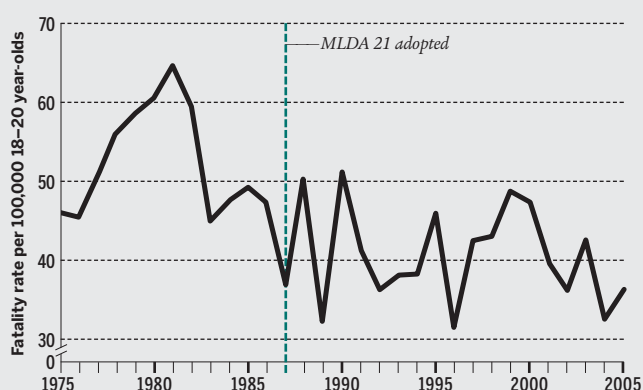
### B. California, 1975–2005



### C. South Dakota, 1975–2005



### D. Louisiana, 1975–2005



SOURCE: National Safety Council

same age group also declined dramatically, even though the MLDA was 21 throughout. In South Dakota and Louisiana, the TFR for 18–20 year-olds began to decline *prior* to the increase in the MLDA and seems to have decreased at a slower rate after MLDA21 adoption. The graphs for these four states, therefore, show a wide range of “effects” of the MLDA.

This heterogeneity suggests that prior results on the relation between MLDA and traffic fatalities have been driven by a few states in which the effect is sufficiently negative to outweigh the positive or small effect in most states. The question is whether this heterogeneity is just sampling variation or something more systematic.

Our research shows that the overall negative effect comes from states that adopted the MLDA21 before 1984 – that is, before the federal law. Figure 4 illustrates this result. The graphs for Michigan and Illinois, two states that adopted an MLDA21 before the 1984 law, appear to show an effect of the MLDA21 in reducing traffic fatalities. Contrast this with Figure 5. The graphs for New York and Texas, two states that were pressured to adopt an MLDA21 by the federal law, suggest no effect of the MLDA21, since fatalities were decreasing before adoption and decreased, if anything, more slowly after adoption. A regression that we conducted for our forthcoming *Economic Inquiry* paper confirms that this result is

systematic and holds after controlling for other factors that might also affect traffic fatality rates, such as unemployment rates, vehicle miles traveled, per-capita income, and other state alcohol policies.

Thus any effect of the MLDA21 occurred in states where it was adopted endogenously rather than adopted because of federal pressure. This makes sense, since the MLDA21 in early-adopting states may have been enacted in response to grassroots concern about drunk driving or implemented alongside other efforts to reduce traffic fatalities. Additionally, states that adopted the law on their own may have been states that devoted significant resources to enforcement.

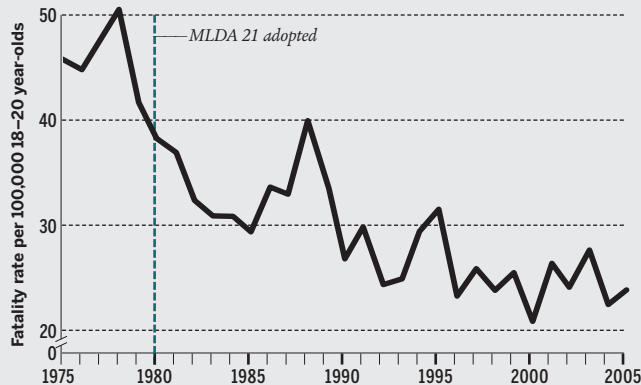
Even in the early-adopting states, moreover, the effect of MLDA21 adoption appears to have been transitory rather than long-term. This is apparent from the graphs for Michigan and Illinois in Figure 4, which show that traffic fatalities many years after MLDA21 adoption were not obviously different than implied by the general downward trend that occurred in all states.

Our *Economic Inquiry* paper also documents that the MLDA21 appears to *increase* traffic fatalities among 17-year-old drivers. An explanation for this is that when the MLDA is 18, high school students have access to alcohol through peer networks, including 18-year-olds. When the MLDA is 21, those

Figure 4

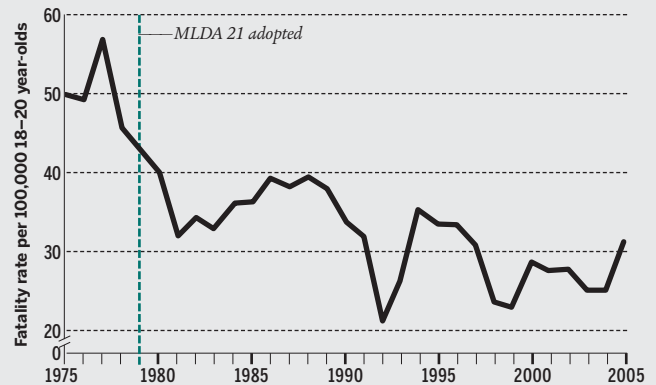
## Fatality Rates for 18–20 Year-Olds, Sample Early-Adopting States

### A. Illinois, 1975–2005



SOURCE: National Safety Council

### B. Michigan, 1975–2005



peer networks are less effective, so individuals younger than 18 feel pressure to drink intensely at each drinking occasion. Alternatively, when the MLDA is 18, law enforcement monitors the drinking behavior of individuals aged 17 and younger. When the MLDA is 21, this monitoring is spread more thinly, resulting in more drinking among 17-year-olds. Still further, teenagers might care both about respecting the law and about how long they must postpone drinking in order to comply with the law. If the drinking age is 18, 17-year-olds know they can obey the law by postponing for only one year, and some choose that path. If the drinking age is 21, however, 17-year-olds know they have to postpone drinking for four years to comply with the law, so more decide to become law-breakers.

The bottom line, therefore, is that neither the increases in the MLDA caused by the 1984 law, nor the MLDA21 generally, has had a significant live-saving effect. Indeed, the results for

17-year-olds suggest this policy may actually be counterproductive.

## DISCUSSION

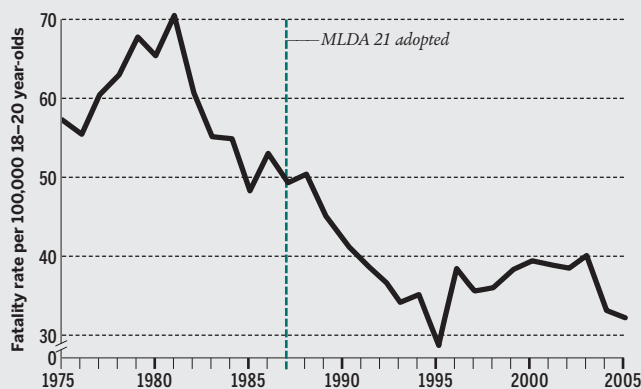
Whether government policy should be set at the state or federal level is the subject of ongoing debate. The main argument for federal intervention is that leaving policy choices to states permits a “race to the bottom” in which states choose insufficient regulation, such as lax pollution controls, for fear of driving away business. A different argument for federal regulation is avoidance of conflicting or varied regulation across states that might burden businesses or confuse consumers.

The main argument for state-level policymaking is that economic and social problems vary in their nature and intensity from state to state, so the appropriate policy should also vary. States with little industry, for example, might have less reason to limit air pollution than their more densely populated neigh-

Figure 5

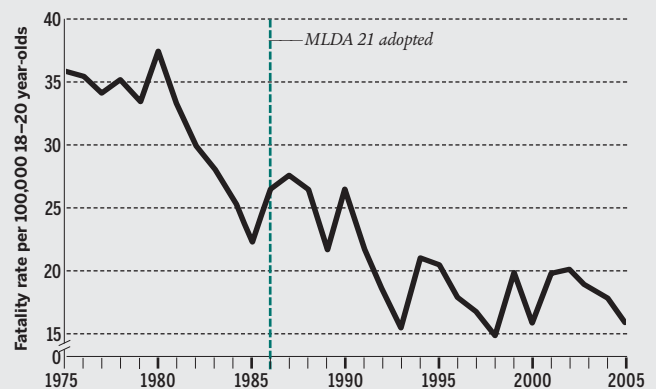
## Fatality Rates for 18–20 Year-Olds, Sample Late-Adopting States

### A. Texas, 1975–2005



SOURCE: National Safety Council

### B. New York, 1975–2005



bors. States with wide-open highways can allow higher speed limits without generating large numbers of traffic accidents. State-level policymaking is also desirable if political forces cause some interventions to expand excessively. In this case, the race to the bottom counters a different tendency toward overexpansion.

Advocates of state-level policies also note that, in practice, states do not consistently choose as little regulation or redistribution as possible. Several states have minimum wages or unemployment insurance benefits at levels above the federal standard, just as several states, like California, have stricter pollution regulation. Many state constitutions go beyond the U.S. Constitution in protecting individual liberties, such as Connecticut's guarantee for public education and South Carolina's commitment to public court proceedings. In the 1920s and 1930s, more than 30 states adopted Social Security programs even at the risk of attracting recipients from other states. Thus, states may be willing to bear the costs of regula-

public policy debates, including the appropriateness of the 2001 No Child Left Behind Act (NCLB). When Utah's governor attempted to ignore NCLB provisions that conflicted with Utah's own education policy, the Department of Education threatened to withhold federal education funding. In a 2005 *Peabody Journal of Education* paper, Lance Fusarelli argues that such actions demonstrate that in just "a few short years, federal education policy had shifted from minimal federal involvement (President Reagan wanted to abolish the U.S. Department of Education) to the development of voluntary national standards (under President Clinton) to the new law mandating testing of all students in Grades 3–8." The empirical strategy employed in our work might tease out whether the successes attributed to the NCLB are similarly driven by states that proactively adopted education reforms prior to the federal mandate.

Additionally, this empirical approach might help establish whether other federal policies promote "the general wel-

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tion or redistribution out of altruism or public spiritedness.

It is thus an empirical question as to whether state versus federal regulation is preferable, and the right answer presumably differs to some degree across policies (e.g., national defense versus education). We have challenged here the notion that the drinking age needs to be legislated federally, arguing that federal pressure for states to adopt an MLDA21 did not save lives as has previously been suggested.

The general trend in the United States, however, has been toward an expanded federal role. The extent of legitimate federal regulation is inextricably linked to the U.S. Supreme Court's jurisprudence on the Interstate Commerce Clause. As described in *Gonzales v. Raich* (2005), "Interpretation of the sixteen words of the Commerce Clause has helped define the balance of power between the federal government and the states.... As such, it has a direct impact on the lives of American citizens." While the outer limits of the Commerce Clause power will be shaped, in part, by the future appointments to the Supreme Court, the debate will also be informed by empirical analyses of just how substantially related to interstate commerce a proposed federal policy is. Where the Commerce Clause fails to legitimize federal intervention into state policy, the taxing and spending power that saved the 1984 act may become the favored mechanism to compel policies across states.

Thus in challenging the effectiveness of the federal drinking age law, our results challenge the value of coercive federalism. The case of the drinking age law informs several other

fare" enough to satisfy the *South Dakota v. Dole* restrictions on when Congress can condition funding for states. If the case of the Federal Uniform Drinking Age Act is any indication, the federal government may at times be working against its own policy objectives and against the general welfare. **R**

### Readings

- "Does the Minimum Drinking Age Affect Traffic Fatalities?" by P. Asch and D. T. Levy. *Journal of Policy Analysis and Management*, Vol. 6, No. 2 (1987).
- "Does the Minimum Legal Drinking Age Save Lives?" by Jeffrey A. Miron and Elina Tetelbaum. *Economic Inquiry*, forthcoming.
- "Gubernatorial Reactions to No Child Left Behind: Politics, Pressure, and Educational Reform," by Lance Fusarelli. *Peabody Journal of Education*, Vol. 80, No. 2 (2005).
- "The History of Youthful-Drinking Laws: Implications for Current Policy," by J. F. Mosher. In *Minimum Drinking Age Laws*, edited by Henry Wechsler (Lexington Books, 1980).
- "The Minimum Purchase Age for Alcohol and Young-Driver Fatal Crashes: A Long-term View," by M. Males. *Journal of Legal Studies*, Vol. 15, No. 1 (1986).