

POLICY NOTES

Notes on Important Policy Issues in Georgia

VOL. 1, NO. 3

Increasing the Speed Limit in Georgia Have Rural Highways Become More Dangerous?

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Responding to the repeal of the National Maximum Speed Limit, many states rushed to increase speed limits within their borders.

In November of 1995, the 104th Congress of the United States passed—and President Clinton signed—a bill to repeal the National Maximum Speed Limit (NMSL). Many states, including Georgia, rushed to increase speed limits within their borders. Montana responded by setting no numerical speed limit during daylight hours. While many Americans applauded the new legislation and the subsequent increases in state speed limits, public safety organizations expressed concern over the possibility of increases in fatalities, injuries, and property damages that would likely occur on rural interstates.

A brief review of basic statistics shows that public safety advocates have sufficient reason to be concerned. The National Center for Statistics and Analysis reports that over 41,000 Americans were killed and 2 million injured on U.S. highways in 1998. The same report lists Georgia as having 1,415 fatal crashes resulting in 1,569 fatalities in 1998. According to the U.S. Department of Transportation, automobile accidents in the United States cause, on average, over \$150.5 billion in property damages each year. The National Center for Statistics and Analysis estimates that speed-related accidents in Georgia alone accounted for 332 fatalities and over \$744 million in property damages during 1998.

The question of whether higher speed limits affect highway safety may be a foregone conclusion for most. The most common assumption is that increasing speed limits will necessarily lead to drivers going faster. And, the faster a car travels, the more likely it is to be involved in a crash. Further, higher speeds mean less reaction time to recognize and avoid hazards as well as greater force when crashes do occur. It would seem logical, then, that combining a greater probability of crashing with more force on impact should lead to greater numbers of crashes, injuries, and fatalities on highways. Since 30 percent of fatal crashes are caused in part by traveling too fast, it is possible that excessive speed was an important factor in approximately 11,205 fatal crashes and 12,572 fatalities in the United States in 1996.

The consequences of speed limit changes on highway safety statewide are not so straightforward. The overall effects of speed limits become more difficult to identify when one considers how states have chosen to regulate speed. Like most other states, Georgia chooses to set different speed limits on different types of rural highways. Varying posted limits by road type allows researchers to determine the effects of new speed limits on highway safety statewide as well as on highways with raised speed limits. Since conditions are not equal on each type of highway, it is possible that higher speed limits may decrease highway safety on roads with the new limits but increase overall highway safety within the state. This might occur, for example, if speed limit increases are limited to higher quality highways, thereby attracting more drivers to highways with safety features like wide medians, large shoulders, and limited access. New legislation passed by the Georgia General Assembly in 1996 allows higher speed limits only on high-quality highways with these safety features.

This study of the impact of Georgia's change of the speed limit was undertaken for several reasons. The results of past empirical tests on speed limit changes are inconclusive, with some showing decreases in highway safety while others show benefits to increasing speed

	Fatalities per 100,000 Population	Estimated Cost of Speeding Crashes (Millions)
Ga.	21.05	\$744
U.S.	15.69	\$27,650

Like most other states, Georgia sets different speed limits on different types of rural highways.

limits. The inconclusive results suggest that the outcome of speed limit changes may depend on state or regional characteristics or the types of highways with higher limits. Furthermore, it is unclear how significant a speed limit increase from 65 mph to 70 mph is in terms of highway safety. That no recent studies have been conducted to measure the effects of speed limit changes in Georgia—a state with a population of seven million—was justification enough for research efforts.

This study examines whether the changes in speed limits on Georgia's rural interstate highways have led to significant increases in the number of crashes, injuries, and fatalities throughout the state's rural highway system. Based on time series analysis of crash, injury, and fatality data from January 1993 to December 1997, it was found that

- the average speed and the percentage of drivers choosing speeds greater than 86 mph increased significantly on Georgia's rural interstates;
- fatalities increased by almost two per month on Georgia's rural interstates, but there were no significant changes in crashes or injuries;
- the percentage of drivers traveling at speeds of more than 10 mph over the speed limit and greater than 86 mph increased significantly on Georgia's primary arterials;
- crashes, injuries, and fatalities remained unchanged on Georgia's primary arterials;
- crashes, injuries, and fatalities increased significantly on Georgia's minor arterials, but there were no changes in driver behavior variables on those highways; and
- there were no significant changes in statewide measures of crashes, injuries, and fatalities in Georgia.

Given that statewide measures of highway safety have not changed, the study might easily conclude that no policy changes are necessary. However, the research findings presented here highlight areas with a potential for substantial improvements in rural highway safety despite the increased speed limit. Any policy changes in Georgia should focus on reducing the incidence of drivers traveling at the highest rates of speed, especially on rural interstate highways. This focus should reduce speed variance; it would also benefit drivers by protecting the fastest drivers from themselves while reducing the risks to drivers who choose more reasonable speeds. The most obvious policy change is to increase the level of patrols on interstate highways. While Lave and Elias (1994) suggest this has worked in other states, the approach ignores the significant increase in drivers traveling 86+ mph on primary arterials and the significant decreases in highway safety on minor arterials. Another policy option might be Georgia Sen. Mary Margaret Oliver's suggestion that police officers reduce or do away with the "buffer zone" that allows drivers to exceed speed limits without fear of sanction. Since speed choice is related to the probability of being sanctioned, a strict adherence to speed limits may lead the fastest drivers to slow down. Finally, policy makers in Georgia should explore highway design options that make it less comfortable to travel at the highest rates of speed. Epidemiologist William Haddon (1972) has suggested that changes in the driving environment may provide the best chance for significant improvements in highway safety over the long run.

This Note summarizes a forthcoming paper in the Institute's Public Policy Research Series, which will be available from the Institute or at www.cviog.uga.edu/pprs.

...Georgia should focus on reducing the incidence of drivers traveling at the highest rates of speed...

Selected Resources

- Friedland, Martin, Michael Trebilcock, and Kent Roach. 1990. *Regulating traffic safety*. Toronto: University of Toronto.
- Haddon, William. 1972. A logical framework for categorizing highway safety phenomena and activity. *Journal of Trauma* 12(1).
- Lave, C.A., and P. Elias. 1994. Did the 65 mph speed limit save lives? *Accident Analysis and Prevention* 26(1).

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