
An examination of the effects of concealed weapons laws and assault weapons bans on state-level murder rates

Mark Gius

Department of Economics, Quinnipiac University, Hamden, CT 06518, USA
E-mail: Mark.gius@quinnipiac.edu

The purpose of the present study is to determine the effects of state-level assault weapons bans and concealed weapons laws on state-level murder rates. Using data for the period 1980 to 2009 and controlling for state and year fixed effects, the results of the present study suggest that states with restrictions on the carrying of concealed weapons had higher gun-related murder rates than other states. It was also found that assault weapons bans did not significantly affect murder rates at the state level. These results suggest that restrictive concealed weapons laws may cause an increase in gun-related murders at the state level. The results of this study are consistent with some prior research in this area, most notably Lott and Mustard (1997).

Keywords: gun control; assault weapons; concealed weapons

JEL Classification: K14

I. Introduction

On 14 December 2012, a young man carrying a Bushmaster XM15-E2S (Bushmaster Firearms, Madison, NC, USA) semi-automatic rifle shot his way into an elementary school in Newtown, Connecticut, killing 26 people, 20 of whom were children. Since a semi-automatic weapon was used in the commission of this crime, there have been debates both in Congress and in various state legislatures regarding the potential enactment of assault weapons bans. One of the measures that were considered at the Federal level was a revival of the 1994 Federal assault weapons ban, which expired in 2004. This firearms ban was part of the Violent Crime Control and Law Enforcement Act of 1994, and this act outlawed semi-automatic weapons and prohibited large capacity magazines that held more than 10 rounds of ammunition.

Regarding state-level bans, no state had an assault weapons ban before 1989. Then, in that year, California

enacted the first state-level ban on assault weapons. Several states followed suit, and shortly thereafter Connecticut, Hawaii and New Jersey enacted their own bans. In 1994, the Federal ban was enacted, thus rendering state laws moot. After the Federal ban expired in 2004, several states enacted their own bans once again.

Of course, there are many other types of gun control measures, both at the state and Federal level. One state-level gun control measure that was very common years ago but, in recent years, has become much less prevalent is the restrictive concealed carry weapons (CCW) law. These laws concern how permits are issued to individuals who want to carry concealed weapons, primarily handguns. There are four broad types of CCW laws. The first is unrestricted; individuals in these states do not need a permit to carry a concealed handgun. For years, the only state that had no CCW restrictions was Vermont. The next type of CCW law is a 'shall issue' law. In a 'shall issue' state, a permit is required to carry a concealed weapon, but state and local

IV. Results and Concluding Remarks

Results are presented on Table 1. The CCW dummy variable is significant and positive, but the assault weapons ban is insignificant. Given that the average gun-related murder rate over the period in question was 3.44, the results of the present study indicate that states with more restrictive CCW laws had gun-related murder rates that were 10% higher. In addition, the Federal assault weapons ban is significant and positive, indicating that murder rates were 19.3% higher when the Federal ban was in effect. These results corroborate the findings of Lott and Mustard (1997). These results suggest that, even after controlling for unobservable state and year fixed effects, limiting the ability to carry concealed weapons may cause murder rates to increase. There may, however, be other explanations for these

Table 1. Fixed effects regression gun-related murder rate

Constant	-3.02 (-3.20)***
Assault weapons ban	-0.29 (-1.57)
Federal assault weapons ban	0.66 (2.42)**
Restrictive concealed carry laws	0.365 (3.74)***
Proportion of population that is white	0.172 (1.76)*
Proportion of population that is rural	1.93 (3.97)***
Real per capita median income	0.00021 (6.03)***
Proportion of population with college degree	-1.367 (-1.20)
Unemployment rate	3.397 (1.34)
Proportion of population >18 and <25	11.45 (2.27)**
Proportion of population >24 and <35	-2.876 (-0.91)
Per capita alcohol consumption	0.688 (4.05)***

Notes: $R^2 = 0.797$.

Test statistics in parentheses.

* 5% < p -value < 10%; ** 1% < p -value < 5%; *** p -value < 1%.

results. Laws may be ineffective due to loopholes and exemptions. The most violent states may also have the toughest gun control measures. Further research is warranted in this area.

References

- Bartley, W. and Cohen, M. (1998) The effect of concealed weapons laws: an extreme bound analysis, *Economic Inquiry*, **36**, 258–65.
- Bronars, S. and Lott, J. (1998) Criminal deterrence, geographic spillovers, and the right to carry concealed handguns, *The American Economic Review*, **88**, 475–9.
- Dezhbakhsh, H. and Rubin, P. (1998) Lives saved or lives lost? The effects of concealed handgun laws on crime, *The American Economic Review*, **88**, 468–74.
- Donohue, J. (2003) The impact of concealed-carry laws, in *Evaluating Gun Policy: Effects on Crime and Violence*, Ludwig, J. and Cook, P. (Eds), The Brookings Institution, Washington, DC, pp. 287–341.
- Kleck, G. and Hogan, M. (1999) National case-control study of homicide offending and gun ownership, *Social Problems*, **46**, 275–93.
- Koper, C. and Roth, J. (2001) The impact of the 1994 federal assault weapon Ban on Gun violence outcomes: an assessment of multiple outcome measures and some lessons for policy evaluation, *Journal of Quantitative Criminology*, **17**, 33–74.
- Kwon, I.-W., Scott, B., Safranski, S. *et al.* (1997) The effectiveness of gun control laws: multivariate statistical analysis, *American Journal of Economics and Sociology*, **56**, 41–50.
- Lott, J. and Mustard, D. (1997) Crime, deterrence, and right-to-carry concealed handguns, *The Journal of Legal Studies*, **26**, 1–68.
- Ludwig, J. (1998) Concealed-Gun-Carrying laws and violent crime: evidence from state panel data, *International Review of Law and Economics*, **18**, 239–54.
- Ludwig, J. and Cook, P. (Eds) (2003) *Evaluating Gun Policy: Effects on Crime and Violence*, The Brookings Institution, Washington, DC.
- Miller, M., Azrael, D. and Hemenway, D. (2002) Rates of household firearm ownership and homicide across US regions and states, 1988–1997, *American Journal of Public Health*, **92**, 1988–93.
- Moody, C. (2001) Testing for the effects of concealed weapons laws: specification errors and robustness, *Journal of Law and Economics*, **44**, 799–813.
- Moorhouse, J. and Wanner, B. (2006) Does gun control reduce crime or does crime increase gun control?, *Cato Journal*, **26**, 103–24.