

Economists find critique of gun buyback flawed

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A 2006 study claiming that Australia's gun buyback had no effect on homicide or suicide rates was seriously flawed, according to new research.

Economists Dr Christine Neill, of Wilfrid Laurier University in Canada and Dr Andrew Leigh from The Australian National University, have revisited a study published by Dr Jeanine Baker and Dr Samara McPhedran in the *British Journal of Criminology*.

“Baker and McPhedran claimed to have shown that the gun buyback had no impact on either gun homicide or suicide rates. But their statistical models were not appropriate to analysing death rates, and their results don't hold up once we make minor specification changes,” Dr Neill said.

“Part of the problem with the original study was that it drew strong conclusions from data that covered a very short period of time – starting from a time when firearm death rates were high by historical standards.”

Baker and McPhedran claim that their conclusions account both for the possibility of that people who intended to commit homicide or suicide might have switched to alternative methods (method substitution), and for underlying trends in death rates caused by social changes.

Leigh and Neill show that relying solely on changes in death rates over time makes it impossible to do both. But, said Dr Leigh, “Since the gun buyback, the non-firearm homicide rate has stayed stable, and the non-

firearm suicide rate has fallen. This does not appear to point to any substantial method substitution.”

Although a simple analysis of changes in death rates since 1997 alone cannot conclusively answer the question of whether the NFA cut gun deaths, Leigh and Neill argue that the only fair conclusion given the available evidence is that there was a substantial drop in firearm deaths after 1997.

“We find reductions in both gun homicide and gun suicide rates that are statistically significant, meaning that they are larger than would have been expected by mere chance,” Dr Leigh said. “Our best estimates are that the gun buyback has saved between 128 and 282 lives per year.”

These findings can be used to assess the cost-effectiveness of the gun buyback. Economists typically put the value of a life saved at around \$2.5 million. At a one-off cost of approximately \$500 million, this suggests that the gun buyback has proved a good use of public money.

A copy of the paper, *Weak Tests and Strong Conclusions: A Re-Analysis of Gun Deaths and the Australian Firearms Buyback*, is available at: econrsss.anu.edu.au/~aleigh/

Christine Neill and Andrew Leigh have no affiliations with pro-gun or anti-gun associations.

Source: Australian National University

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