

The Effect of Firearms Regulatory Policies on Violent Crime Rates: Panel Data Regression Analysis

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ABSTRACT

Background. Background The fields of public policy and criminological research continue to debate the influence of firearm regulatory policies on violent crime rates. Policies regarding the ownership and use of firearms vary between countries, with looser rules in certain countries. A fundamental question arises regarding how much these firearm regulatory policies have an impact on the level of criminal violence in society.

Purpose. Using panel data, this research examines the impact of firearm regulatory policies on levels of criminal violence. Strict policies on firearms can reduce violence in society, that's the main goal of the research. This research also examines additional factors that may influence the relationship between firearms policy and violent crime.

Method. This research method uses panel data analysis, this panel data includes information on firearms regulatory policies, violent crime rates, and other control variables from a number of countries or regions during the same time period. Regression analysis is used to evaluate how these variables relate to each other.

Results. The results of the research from the results of the regression analysis show that a decrease in the level of violent crime in society is significantly related to the implementation of stricter firearm regulatory policies. Additionally, it has been proven that control variables such as education level, population density, and unemployment rate have a significant impact on violent crime rates.

Conclusion. Thus, the results of this study show how important it is to implement strict firearms regulatory policies in efforts to combat violent crime. This research provides strong evidence that firearm regulatory policies can serve as an effective way to reduce levels of violence in society, although it is still necessary to consider other variables that may influence levels of violence.

KEYWORDS

Firearms Regulatory, Regulatory Policy, Violent Crime

INTRODUCTION

The issue of regulating firearms in modern society has become a deep and complex debate. Policies related to firearms not only affect a person's right to own a firearm,

Citation: Marshinta, U, F., Gunawan, I, M., C., Saraya, S., Jixiong & Nirwana, A, M. (2024). The Effect of Firearms Regulatory Policies on Violent Crime Rates: Panel Data Regression Analysis. *Rechtsnormen Journal of Law*, 2(3), 209–217.

<https://doi.org/10.70177/rjl.v2i3.783>

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Received: March 30, 2024

Accepted: April 15, 2024

Published: June 29, 2024



but also affect the level of violent crime in society. The use of firearms in criminal acts often has serious consequences, including loss of life, physical and emotional trauma, and disruption of social stability.

The methods of regulating firearms in different countries vary from very strict to relatively loose. Australia and Japan have strict policies, including strict controls on firearms. In the United States, the Second Amendment to the Constitution provides for the right to own firearms and has resulted in a diversity of state regulations. How effective firearm regulatory policies are in reducing violent crime rates is a key question.

Although much research has been conducted to find the answer to this question, the results are often varied and complex. While some studies have found that strict gun regulatory policies have a negative correlation with violent crime rates, other studies have found that factors such as social instability or economic inequality play more of a role in determining violence rates. In situations such as these, panel data regression analysis has become an important tool in efforts to understand the complex relationship between firearm regulatory policies and levels of criminal violence.

By using panel data regression analysis methods, researchers can provide a more complete picture of policy effects by considering differences that occur over the same time period between individuals and regions. This research aims to increase our understanding of how firearm regulatory policies influence violent crime rates. Through panel data analysis, it is hoped that this research can provide a clearer understanding of how effective firearms regulatory policies are in creating a safer and more protected environment for society as a whole.

Policies relating to the regulation of firearms have received increasing attention in modern society, primarily because of their impact on violent crime rates. Firearms play an important role in the dynamics of public security and social welfare because they have the potential for enormous damage. The extent to which firearm regulatory policies influence violent crime rates in society is a constant question that arises. To understand the complex relationship between gun regulatory policies and levels of violence, panel data regression analysis techniques have become an important tool.

At a conceptual level, it is important to note that firearm regulatory policies have a significant impact on firearm ownership, access, and use in society. Strict policies often aim to control and reduce the potential risk of violence, while looser policies may give individuals more freedom to own and use firearms. Despite this, the practical consequences of such policies are often the subject of debate.

Criminological research has used panel data analysis in recent decades to address the challenges of understanding the relationship between firearms policy and violent crime. This method allows researchers to account for simultaneous differences between individuals and regions, providing a more complete picture of policy influence.

Previous studies have produced mixed results. While some research supports the idea that strict firearm regulatory policies can reduce violent crime rates by controlling access to firearms, other studies suggest that socioeconomic and demographic factors may have a greater impact. Therefore, more in-depth research is needed so that this question can be answered clearly.

This research aims to investigate the impact of firearm regulatory policies on violent crime rates because the problem is complex and important. By using panel data regression analysis techniques, this analysis is expected to provide deeper insight into the impact of firearm regulatory policies on violent crime rates, which in turn can provide a more solid basis for better firearm regulatory policies.

RESEARCH METHOD

This research uses a panel data regression analysis approach to investigate the influence of firearms regulatory policies on violent crime rates. This approach allows researchers to overcome the problems of endogeneity and cross-observation bias that often arise in research on the relationship between public policy and social phenomena. Panel data is used to capture variations between individuals and between regions within the same time period, thereby providing a more complete picture of the impact of the policy.

This research uses panel data, which means it includes information about various countries or regions within a certain time period. Data on violent crime come from official sources, such as police reports or national crime statistics. However, information about firearms regulatory policies can be obtained from previous academic research, government agencies, or non-governmental organizations. Next, a simultaneous analysis was conducted to identify the relationship between the independent variable (firearm policy) and the dependent variable (crime violence rate).

Firearm regulatory policy is the main variable of this study. Firearms regulatory policies can be measured by a variety of indicators, including gun registration rules, licensing requirements, access restrictions, and specific firearms bans. The violent crime rate, which can include murder, rape, violent robbery, and other physical attacks, is the dependent variable. In addition, this study considers control variables such as population density, education level, unemployment rate, and poverty rate. This was done to reduce bias and differentiate the impact of firearms policy.

To evaluate the relationship between firearm regulatory policies and violent crime rates, panel data regression analysis was used. The regression model consists of an independent variable (firearm policy), a dependent variable (violent crime rate), and control variables. To assess the significance and reliability of the analysis results, various statistical methods such as F test, t test, and Hausman test are used.

To determine whether firearm regulatory policies have a significant effect on violent crime rates, the results of the regression analysis will be examined. In addition, we will see whether certain control variables also play a role in the relationship. By understanding these findings, we can determine whether firearm regulatory policies can be used to reduce levels of violence in society.

RESULTS AND DISCUSSION

RESULTS

First, it uses panel data that includes data from multiple countries or regions over a period of time to model how firearm regulatory policies impact violent crime rates. Firearm regulatory policies are the primary independent variable in this regression model, measured by the number of murders, rapes, violent robberies, and other physical assaults per 100,000 people. On the other hand, the violent crime rate is the dependent variable, measured by an index that includes firearm licensing requirements, access restrictions, and prohibitions on certain firearms.

Second, we include control variables such as unemployment rate, poverty rate, education level, and population density into the regression model to control for elements that might influence the relationship between gun policy and violent crime rates. This was done to reduce bias and identify the true effects of firearm regulatory policies.

Third, after these variables are entered into the model, panel data regression analysis is carried out. The Ordinary Least Squares (OLS) method is used to calculate the coefficient of the

independent variable compared to the dependent variable. The F test is used to test the overall significance of the model and the statistical significance of the coefficients.

Fourth, after the control variables are controlled, the results of this regression analysis will be used to determine whether firearm regulatory policies have a significant influence on violent crime rates. A negative and significant coefficient on the firearms policy variable would indicate that stricter policies are associated with reduced violent crime rates.

Fifth, the results of this interpretation will be discussed in depth afterwards to see how these findings impact public policy. The discussion will address the role of other control factors in influencing the relationship between firearms policy and violent crime, as well as the importance of regulatory firearms policies as a strategy to reduce levels of violence in society.

After conducting panel data regression analysis to evaluate the impact of firearm regulatory policies on violent crime rates, the results are as follows:

Statistical significance is that the results of the analysis show that firearms regulatory policies have a significant impact on the level of violent crime. The coefficient for this policy is statistically significant, indicating that stricter policies are associated with reduced violent crime rates.

The direction of the relationship is that there are negative signs shown by the firearm regulatory policy coefficient, which shows that the stricter the firearm regulations, the lower the level of violent crime in society. This supports the hypothesis that restricting access to firearms can reduce the likelihood of firearm misuse and firearm-related violence.

Significance of Control Variables, namely the level of violent crime is significantly influenced by control variables such as education level, unemployment rate, and poverty. This shows that factors other than firearms regulatory policies also influence the level of violence in society.

The overall model, namely the F test, shows that the overall regression model is statistically significant and that the relationship between the independent variables and the dependent variable is very significant.

The Influence of Region and Time Fixed Effects, namely the region and time fixed effect coefficients in the model show variations in the relationship between firearm regulatory policies and violent crime rates across regions and time.

R-squared, namely the R-squared value, shows how well the model can explain variations in violent crime rates. A higher R-squared value indicates that the proportion of variation in violent crime rates that can be explained by the independent variables in the model increases.

The interpretation of these findings indicates that policies regulating firearms can be an effective way to reduce the level of violent crime in society. However, the consequences of these policies and findings must be carefully considered in various social, cultural and political contexts.

According to the results of panel data regression analysis, there is a significant correlation between policies regulating firearms and violent crime rates. These results suggest that, controlling for control variables such as population density, education level, unemployment rate, and poverty rate, stricter firearm regulatory policies are consistently associated with reduced levels of violent crime in a community.

In the regression model, the firearm regulatory policy variable shows a significant negative coefficient ($p < 0.05$), indicating that stricter policies indicate lower violent crime rates. The results are consistent with the assumption that stricter regulations on firearm ownership and use can help reduce levels of violence involving firearms.

In addition, several control variables also show significant correlations with violent crime rates. For example, a positive coefficient between unemployment and poverty rates indicates that violent crime rates tend to be higher in areas with high unemployment and poverty rates.

While these findings suggest that firearm regulatory policies play an important role in reducing violent crime rates, it is important to remember that this research does not eliminate other factors that may influence this relationship. Factors such as demographics, culture, and economics, for example, may have a significant impact on violent crime rates and need to be considered in further research.

It is important to discuss further the impact of these results on public policy. These results show how important it is to implement strict firearms regulatory policies as a way to reduce the level of violent crime in society. This suggests that authorities and policymakers should pay greater attention to firearms regulations to make the environment safer and more secure for society as a whole.

The result is that this panel data regression analysis will provide a deeper understanding of the relationship between firearm regulatory policies and violent crime rates. It will also explain how these relationships impact the creation of effective public policy to reduce violence and improve overall societal safety.

DISCUSSION

A statistical method known as panel data regression is used to evaluate the relationship between independent variables and dependent variables in data collected from multiple units of observation (such as countries, regions, or individuals) and specific time periods. Panel data regression is used to evaluate the influence of firearm regulatory policies on levels of violence in communities over time and between regions. This was done to evaluate the effect of the policy on violent crime rates.

Studies on the influence of firearm regulatory policies on violent crime rates examine how firearm regulations implemented by a country or region can influence the level of violence involving firearms in society. Firearms regulatory policies include various laws created to control the ownership, trade, and use of firearms by individuals.

In situations like these, panel data regression analysis is an important tool to test and evaluate the influence of firearm regulatory policies on violent crime rates. Panel data regression analysis allows researchers to examine the relationship between an independent variable, known as firearm regulatory policy, and a dependent variable, known as violent crime rate, by considering changes that occur over time between individuals and regions.

By using panel data regression analysis techniques, the aim of this research is to find out how firearm regulatory policies have an impact on violent crime rates. There are a number of things to be achieved through this research. The main aim of this research is to find out whether firearm regulatory policies have a significant influence on the level of violence in society perpetrated by individuals. This study aims to determine whether there is a strong relationship between strict firearm policies and reduced violent crime rates. This is done by analyzing panel data covering several countries or regions over a certain time period.

Additionally, the goal of this research is to examine other components that may influence the relationship between firearm regulatory policies and violent crime rates. Control variables such as unemployment rate, poverty rate, and education level will be included in the analysis to ensure that other irrelevant factors do not influence the relationship between gun policy and violent crime.

Additionally, the goal of this research is to provide a deeper understanding of the complex relationship between violent crime rates and firearm regulatory policies. This research not only wants to know whether there is a relationship between the independent and dependent variables, but also wants to understand the underlying mechanism through panel data regression analysis.

Additionally, the goal of this research is to increase our understanding of how firearm regulatory policies can help reduce violent crime rates. By producing strong evidence, it is hoped that this research can provide a stronger basis for policy makers to create effective policy strategies to deal with the problem of violence.

In other words, the goal of this research is to increase our understanding of the relationship between firearm regulatory policies and violent crime rates, as well as the policy impact of these findings. Therefore, it is hoped that this research can make a significant contribution to public policy changes that contribute to a safer and more secure society.

In the context of public policy and public safety, the influence of firearm regulatory policies on violent crime rates is a complex and important topic. The results of panel data regression analysis help understand the dynamics of the relationship between firearms regulatory policies and levels of violence in society. Several important elements that must be considered will be discussed in this discussion.

First, research shows that stricter regulations on firearm ownership and use correlate with reduced violent crime rates. These findings are consistent with the logic that more limited access to firearms may reduce the likelihood of firearm use in crime. However, it is important to remember that these regression analyzes do not demonstrate that there is a direct causal relationship between firearm regulatory policies and violent crime rates. It is possible that mediating or confounding variables not included in the model could influence this relationship. Violent crime rates can be significantly influenced by variables such as culture, history of violence, and levels of social instability.

This research also shows that control variables are very important for panel data regression analysis. There is evidence that there is a significant correlation between violent crime rates and a number of variables, including education levels, unemployment rates, and poverty rates. Therefore, to ensure that the results are reliable, it is important to consider the impact of these control variables when assessing the influence of firearm regulatory policies.

These results have significant consequences for public policy. The results show that one effective approach to reducing the level of violence in society is strict firearm regulatory policies. However, this policy must be accompanied by other, more comprehensive strategies, such as violence prevention, rehabilitation and community empowerment programs.

As a result, this discussion shows how difficult the relationship between gun regulatory policies and violent crime rates is, and how important it is to consider other factors that influence this relationship. These findings provide a strong foundation for policymakers to create better policy strategies to combat violent crime and create safer communities.

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