

Does violent crime relate to Macroeconomics performance?

In the United States

Introduction

There are previous studies purpose that

A nation's Economic Performance may somehow related to its crime rate.

This research aims to give insight into the **state-level correlation** between violent crime rate and economic performance, hence to purpose **suggestions on government measures** to control crime rate.

Current Conditions

- Significant declining crime rate since the 1990s until 2015
- In 2018, the estimated number of violent crime offenses was 1,206,836, where
Crime Rate = 368.9 per 100,000 inhabitants

4 Categories of Violent Crime

Robbery

Aggravated Assault

Killing

Rape

High proportion of involvement of **Firearms!**

i.e.
72.7% of Murder
38.5% of Robbery
26.1% of Assault



Research Method

Regression

→ Evaluate the correlation between

Dependent Variable (Y) & Independent Variables (X)

(+, -) = Expected Sign of coefficient

* = Data regressed at state level

Violent Crime Rate
(violent crimes per
100,000 Inhabitant)



Macroeconomic Indicators	Firearm Ownership Related Variable
Unemployment Rate* (+)	The National Instant Criminal Background Check System (NICS) firearm background check frequency* (+)
Real GDP per capita* (-)	National Rifle Association (NRA) lobbying expenditure (+)
Gini coefficient* (+)	National Firearms Act Tax Revenues (+)

Fixed Effect Model

$Violent\ Crime\ Rate_{it}$

$$= B_0 + B_1 Unemploy_{it} + B_2 RealGDP_{it} + B_3 Gini_{it} + B_4 LobbyExpenditure_{it} + B_5 BackgroundChecks_{it} + B_6 Tax + \alpha_i + u_{it}$$

α = time constant factor

u = other unobserved factors

Regression Result

Variable	Coefficient	p - value
Unemployment rate	-4.056721***	0.000
Real GDP per capita	0.0030386***	0.000
Gini Coefficient	-568.8332*	0.085
NICS background checks	-0.0000112	0.210
Lobbying Expenditure	-1.45e-6	0.838
Tax Revenue	2.19e-7	0.881
Constant	-1.00e-7	1.000

The sign of Real GDP per capita is not Negative as expected?!

The sign of unemployment rate is not Positive as expected?!

Firearm Ownership is unrelated to violent crime rate?!

Literature Reviews

GDP per capita & Crime rate The Economist (2011)

Crime rate falls greatly during the recession, Support +ve relationship between Per-person income & incentive to commit crime.

Crime & inequality University of Chicago (2002)

Significant correlation between income inequality and homicide.

Provides a reliable reference for the US cases.



Result Analysis

In the 2008 Financial Crisis,
30 out of 50 states ↓ Real GDP per capita,
while 19 out of the 30 states ↓ violent crime rate

The Results of the 3 Firearm Ownership Related Variables are **all insignificant** (P-value > 0.05).

↓ Individual Wealth does not necessarily drive up crime rate or create criminal incentives

No Correlation to Violent Crime Rate

∴ The US crime rates largely attribute to the State-fixed Factor (α)