Final Project Step 1

Stewart Wilson

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Introduction

For my research paper, I will be investigating the global war on terror and whether the increased national security measures that have been implemented since 9/11 have had an effect on terrorism worldwide.

Following the unprecedented attack on the Twin Towers on 9/11, the USA declared a War on Terror. They passed laws such as the PATRIOT ACT, invaded two sovereign nations, expanded the surveillance apparatus, and cracked down domestically and abroad on any and all hints of terrorist action.

20 years later, however, and questions of its efficacy, cost, and morality loom large. Setting questions of morality aside momentarily, what effect has the War on Terror had on terrorism? The answer to this question is of severe import because it offers insight into how the US should continue to operate. If the tactics implemented are both costly and ineffective, it can hardly be justified to continue.

Furthermore, this is a question pertaining to data science because, through analyzing data related to and influenced by War on Terror policies, we can determine the statistical effect that these policies have had on terrorism.

Research Questions

1. What were the largest effects (i.e. policy outcomes) of the declared War on Terror
2. How much does increase in military spending affect terrorism rates?
3. How did the invasion of Afghanistan affect terrorism rates?
4. How did he invasion of Iraq affect terrorism rates?
5. How do costs of War on Terror and terrorism rates relate?
6. Do casualties resulting from War on Terror outweigh potential casualties of terrorist acts?

Approach

I will be splitting my analysis into three main parts. I will be investigating the general costs associated with the War on Terror in relation to terrorism rates generally. The next two parts will focus individually on US actions domestically and abroad to observe more closely the effectiveness of the War on Terror.

To accomplish this I will first define what policies were implemented domestically and which were implemented abroad. Domestically, this will mostly mean observing the PATRIOT ACT and agencies such as the Department of Homeland Security. I will be measuring their effect on terrorism as well as such metrics as cost and effectives.

For actions taken outside the US, I will mainly be observing the war in Afghanistan and the War in Iraq, though it may also expand to consider operations in Libya, Syria, Yemen, and Somalia. Once again, cost and effectiveness are my top metrics, in addition to the effect these actions have had on terror abroad. Note that more research will need to be done to understand just what "effective" means.

How Does This Address the Problem?

Taking a look at the War on Terror through three lenses, generally, abroad, and domestically will offer a look into the past 20 years of US action. Through this analysis, I hope to glean what factors influence global terrorist rates and whether or not those factors are significant enough to warrant the cost, both financially and in lives lost for the actions the US has taken. The three different angles are meant to be a more exhaustive analysis in case there are factors domestically that are not present abroad, and vice versa.

Data Used

I have found 3 data sets that will serve as the foundation of this research.

1. Global Terrorism Database

- Obtained From: Kaggle
- The Global Terrorism Database is a collection of terrorist attacks from 1970 through 2017. It is maintained by the National Consortium for the Study and Responses to Terrorism (START).
- There are greater than 100 variables for each attack specifying things such as tactics, perpetrators, targets, and outcomes
- This data is collected through unclassified media articles
- It uses the definition of terrorism as,

   "The threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation."

2. US Military Spending by Year (1960-2020)

- Obtained From: Kaggle
- A collection of US military spending by year from 1960-2020
- 4 variables tracked: Year, Defense Budget, GDP, and Population
- Possible issue could be how small the data set is. It will probably be wise to merge this data set with another somehow.

3. Troop Deployment USA

- Obtained From: Kaggle
- A collection of US military deployment from 2006-2015
- 9 variables that provide further detail on the nature of the military deployment
- nan's are 0's

Required Packages

I will most likely require these packages:

- ggplot2
- dplyr
- coefplot
- lm.beta
- purrr
- readxl
- stringr
- reshape2

Plots and Tables Needed

I will need to use plots such as histograms, scatterplots, and qq plots.

I will also need to utilize tables to display information regarding summary statistics such as p-values, r^2, correlation coefficients, etc.

Questions for Future Steps

A big question moving forward is how to anlayze variables across time. Since a large portion of my analysis rests on the effect on terrorism rates over time I will need to learn how to do analysis over a certain time span.