

The Association Between Length of Traffic Stop and Residency Status of Connecticut

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Introduction

- The relationship between traffic stop reasons and length of the stop can be a very complicated and can be explained by multiple factors. A main factor of pretextual stops among police are based solely on a certain police department and its efforts to reduce crime (Kirk Miller, 2009)
- If a police officer keeps you at a stop for an unnecessary amount of time and it does not relate to the original crime, that is deemed unconstitutional (Rodriguez v. United States)
- A police officer cannot legally keep you at a stop for an excessive amount of time and must conduct the original stop in a timely manner which should be around 15-20 minutes if there are no other crimes identified by the officer (CTData 2020)
- One explanation for targeting out of state drivers is because they are less likely to contest a ticket in court so the money will end up going to the local community and this was described as a "political economy" approach to highway patrol behavior (Roach M. 2015)

Research Questions

- Is there a relationship between the length of time you are held at a traffic stop and your residency status in the state of Connecticut?
- Is there a relationship between length of stop and state police or local police?
- How does this relationship change when a state police encounters a resident?

Methods

Sample

- The sample uses data taken from a study by Central Connecticut State University that took traffic stops all over the state of Connecticut from the years of 2013-2019
- The sample includes 3.1 million rows, each being a specific traffic stop
- The Institute for Municipal and Regional Policy (IMRP) at CCSU conducted this study with the National Highway Traffic and Safety Administration (NHTSA).

Measures

- Intervention duration** is length of the traffic stop was turned into a binary to differentiate short and long stops: 0 (0-15 minutes) and 1 (15 minutes and up)
- The **resident indicator** is a binary variable for whether participant is a resident of Connecticut (true: yes, false: no)
- The **State Police** variable is created as a binary representing if the stop involved a State Police officer (1) or not (0).
- The **statute reason** is a categorical variable with 15 levels indicating the traffic violation committed.

Results

Univariate

- 30% of stops were conducted by State Police
- 15% of people pulled over were not residents of Connecticut
- 27% of crimes were speed related and 10% had to do with registration
- 90% of stops were short stop that were less than 15 minutes

Bivariate

Figure 1. Association between intervention duration and residency

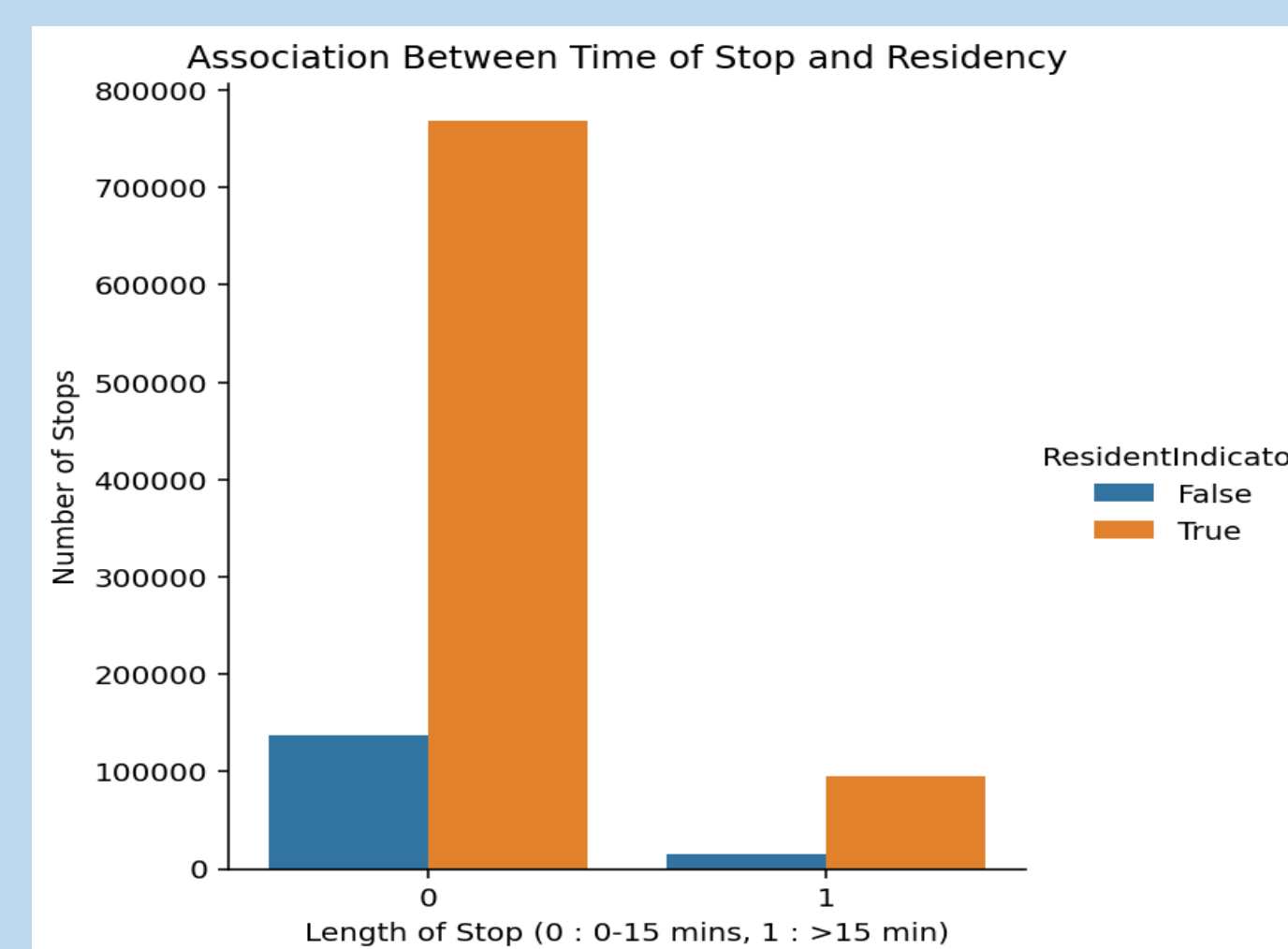
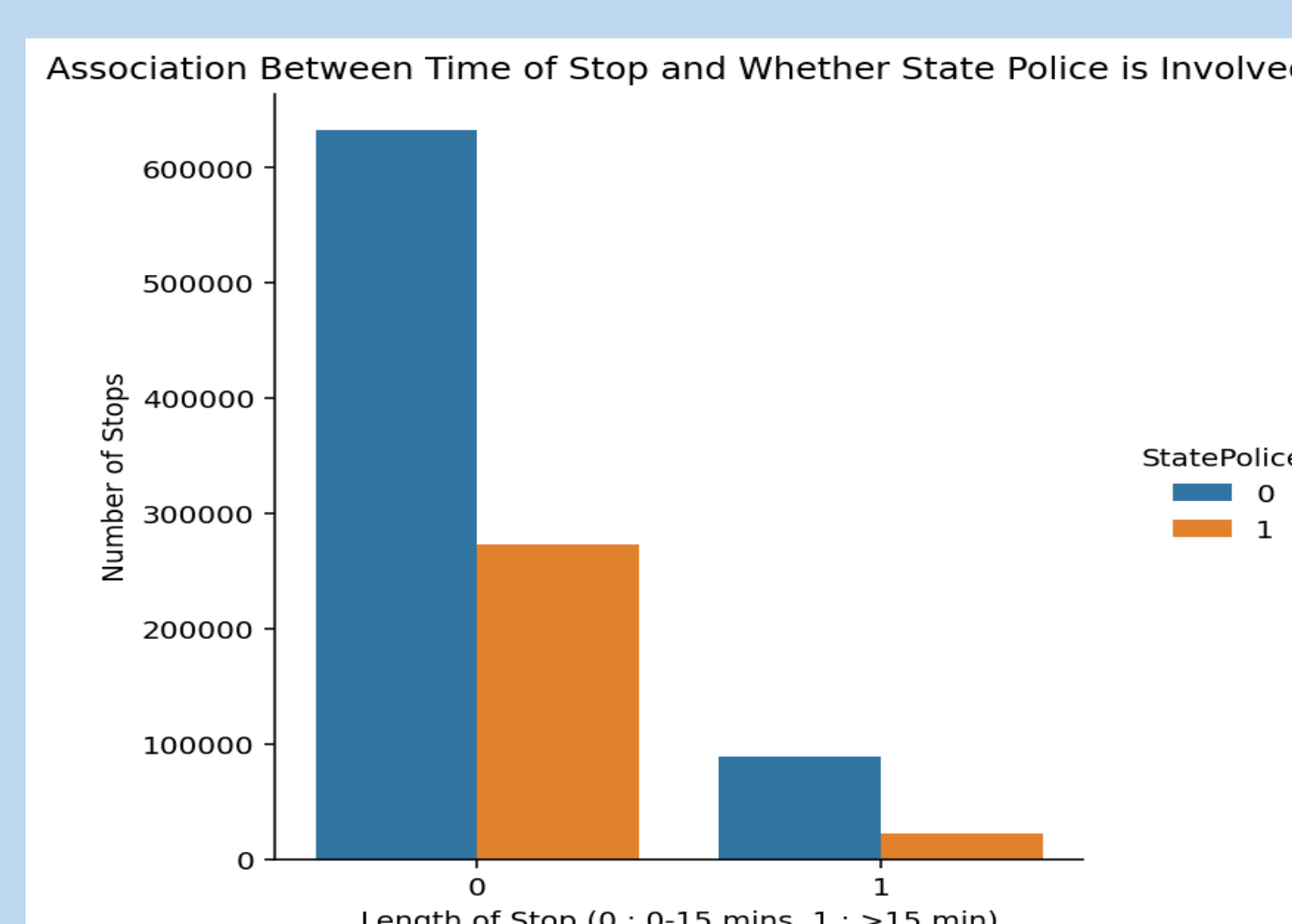


Figure 2. Association between intervention duration and if State Police is present



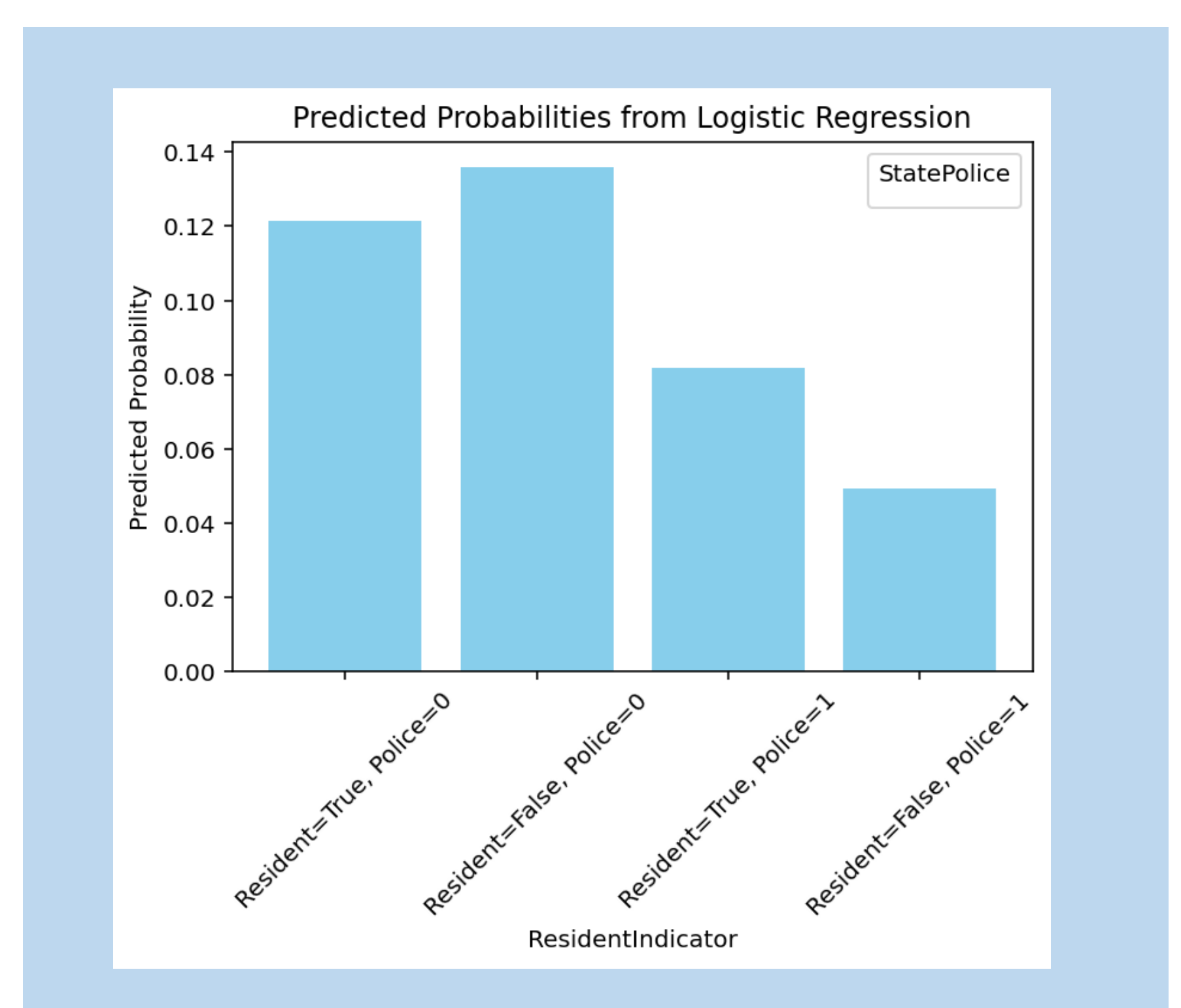
- When examining the association between intervention duration and a stop conducted by state police, a chi square test of independence revealed that the relationship is significantly significant with a p-value of 0.0 and a chi-square value of (4984.3).
- When examining the association between intervention duration (categorical response) and residency status (categorical explanatory), a chi square test of independence revealed that the relationship is significantly significant with a p-value of 2.6e-27 and a chi-square value of (117.1)

- Figure 1 shows that for stops that lasted longer than 15 minutes, 14% are residents and 86% are not compared to 15% and 85% respectively for stops that lasted less than 15 minutes
- Figure 2 shows that for stops that lasted longer than 15 minutes, 20% involved State Police and 80% did not compared to 30% and 70% respectively for stops that lasted less than 15 minutes

Figure 3. Logistical Regression showing state police versus local police and how long they keep someone at a stop

Multivariate

- True or false is used for resident indicator and 0 for local police and 1 for state police
- For local police, they are most likely to keep an out of state resident for longer at a traffic stop
- For state police, the opposite is true, and they are more likely to keep a resident of Connecticut at a stop for longer
- When controlling for statute reason, or the crime committed, in a logistical regression, there was no significance between state and local police



Discussion

- Being a resident of the state and an out of state resident has a significant effect on whether you will be kept longer or shorter at a traffic stop
- In the statute reason variable, there was a section called "other", and this had the most long stops so this is something that could be looked further into
- One piece of research that could be further looked into would be the difference of efficiency and timing between state police and local police, and could more extensive training effect how fast a department conducts a stop
- The multivariate results are very surprising because prior evidence suggests that state police have tendencies to target out of state license plates, so the fact that state police is less harsh to out of state residents was surprising
- Another piece of research to look into would be the differences in registration between states and how this could affect intervention duration