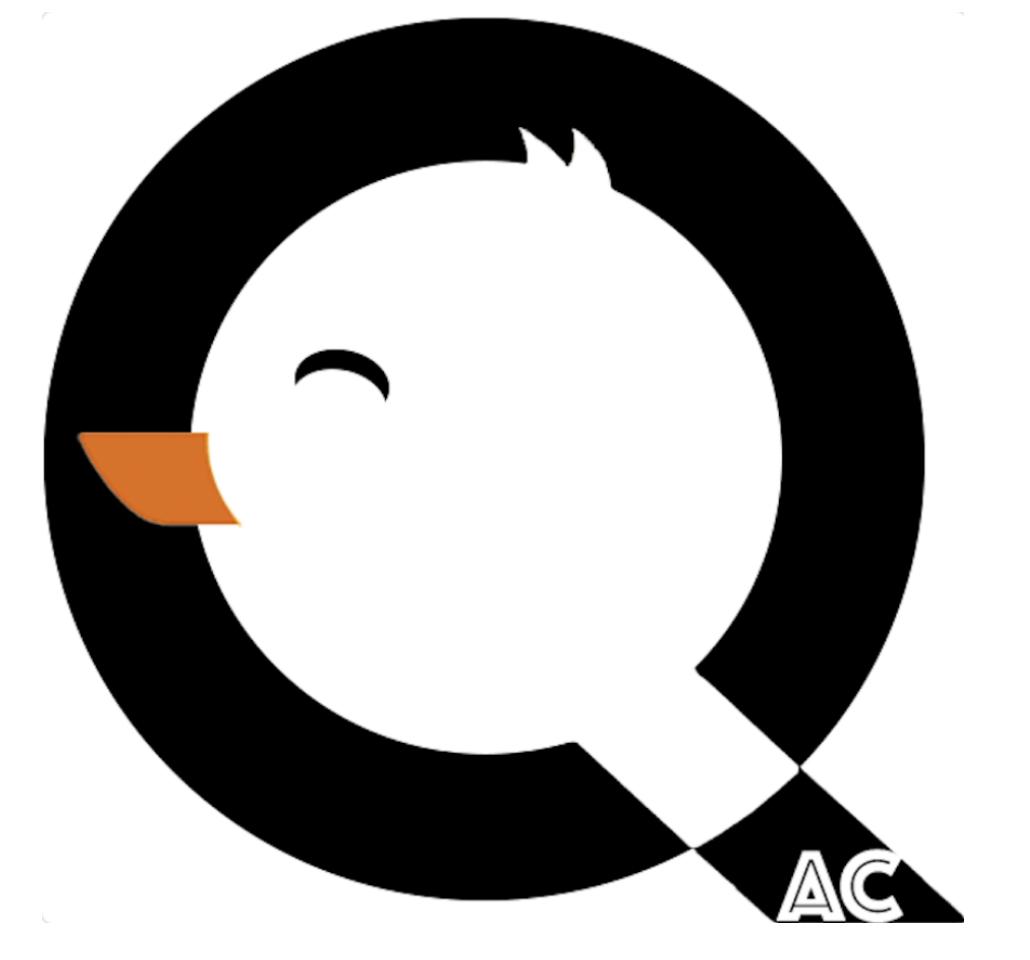




The Relationship Between Race, Arrests, and Cause in Connecticut Police Traffic Stops



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Introduction

- In Connecticut, a 2021 study identified ten local police departments and two state police troops that disproportionately targeted Black drivers in traffic stops (McCabe et al., 2021).
- Racial profiling is contextual. Despite racial profiling being a national issue, targeted interventions and reform must happen at the local level (Parker et al., 2004).
- The National Library of Medicine identified racial profiling as a public health concern due to heightened anxiety and trauma experienced by Black individuals who are disproportionately stopped by the police (Laurencin et al., 2020).

Research Questions

- Are Black Connecticut residents more likely to be arrested at a traffic stop than white residents?
- Does the association between race and arrest change based on the reason for the stop?

Methods

Sample

- The sample consists of all drivers who are state residents (n=350,587) that were stopped by the police in 2024 according to the Connecticut Traffic Stop Data.
- The sample only includes driver who are white (19.8%) and drivers who are black (80.2%)

Measures

- The race of the driver is recorded by the police officer at the traffic stop based on visual observation. The officer also records the reason for the stop and if there was an arrest.
 - Race is recorded as “Black” or “White”
 - Reason for stop is recorded as “Moving Violation,” “Investigative Stop” or “Equipment Violation”
- The driver’s sex (male or female) and Connecticut residential status (yes or no) are based on the driver’s license.

Results

Univariate

- 5,180 drivers from Connecticut were arrested in 2024, or 1.48% of the sample. 98.52% were not arrested.

Bivariate

- According to chi-square analysis, **black drivers are more likely to be arrested than white drivers**. The police arrested 1.87% of black drivers in comparison to 1.38% of white drivers. Race is significantly associated with likelihood of arrest ($X^2 = 93.407$, $df = 1$, $p\text{-value} < 2.2e-16$)
- The reason for the stop is significantly associated with the driver’s race** ($X^2 = 586.92$, $df = 2$, $p\text{-value} < 2.2e-16$). Black drivers are more often stopped for investigative and equipment violations whereas white drivers are more often stopped for moving violations.

Multivariate

- The logistic regression supports the association between race and likelihood of arrest. **White drivers have 24% lower odds of being arrested than black drivers** (OR = 0.76, $p\text{-value} < 2e-16$).
- Sex is also significantly associated with arrest as **female drivers have 47% lower odds of being arrested than male drivers** (OR = 0.53, $p\text{-value} < 2e-16$).
- Investigative stops have 6.6x higher odds of resulting in an arrest than equipment stops (OR = 6.6, $p\text{-value} < 2e-16$). The outcome of moving stops does not significantly differ from equipment stops ($p = 0.269$).
- When testing for interaction terms, the driver’s sex and reason for the stop do not moderate the association between race and the event of an arrest. All the p-values for the potential interaction terms are greater than 0.05.

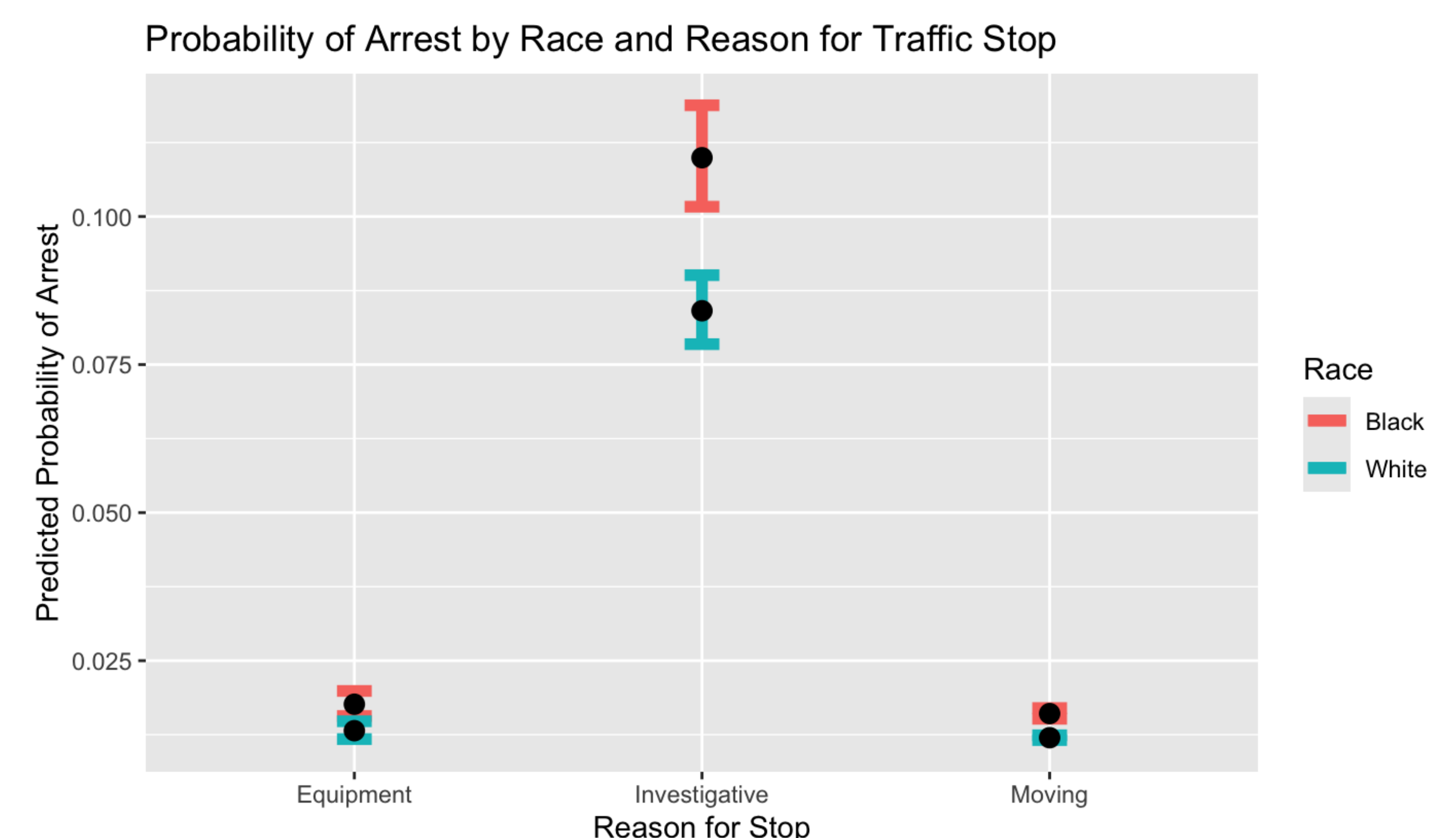
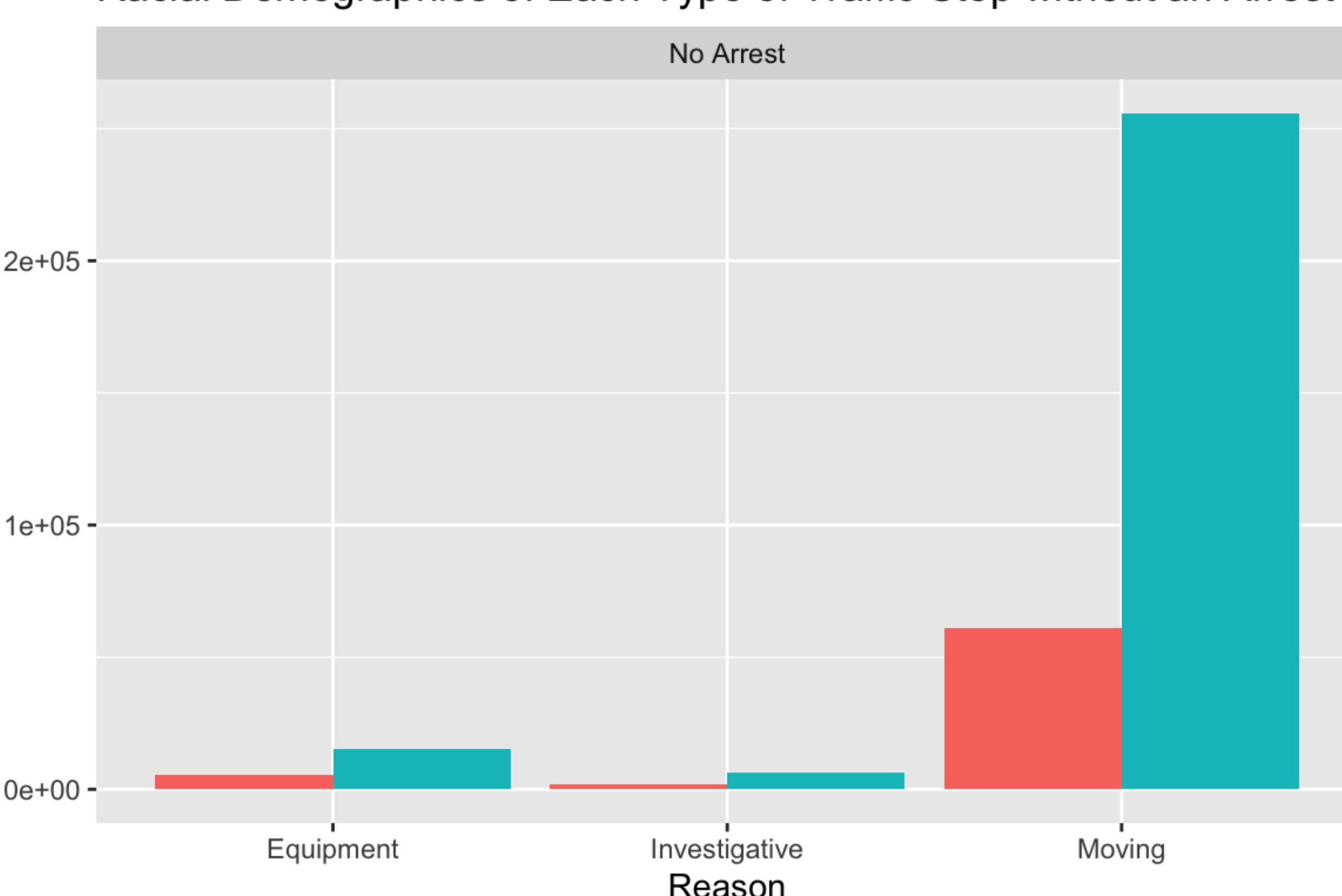
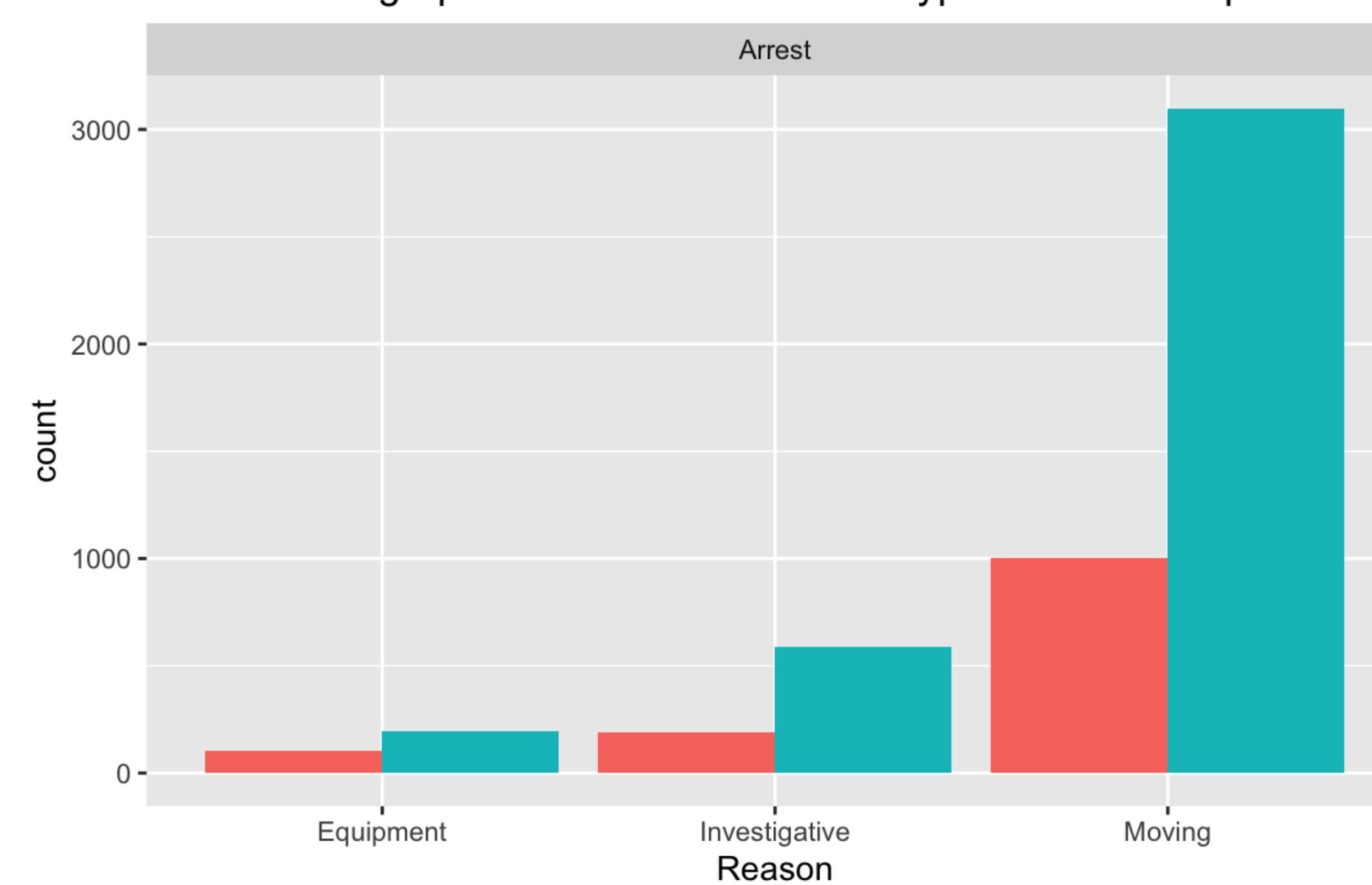


Figure 2: the graph demonstrates that for each of the reasons for a traffic stop black drivers have a higher probability of arrest than white drivers. Investigative stops have the greatest racial disparity and highest probability of arrest.

Racial Demographics of Each Type of Traffic Stop without an Arrest



Racial Demographics of Arrests for Each Type of Traffic Stop



Figures 1-2: the graphs reveal that the majority of traffic stops are for moving violations. Investigative stops have a greater probability of resulting in an arrest because the proportion of stops that are classified as investigative is greater in figure 2 than figure 1.

References

Laurencin, C. T., & Walker, J. M. (2020). Racial profiling is a public health and health disparities issue. *Journal of Racial and Ethnic Health Disparities*, 7(3), 393–397. <https://doi.org/10.1007/s40615-020-00738-2>

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Parker, K., MacDonald, J., Alpert, G., Smith, M., & Piquero, A. (2004). A contextual study of racial profiling - Assessing the theoretical rationale for the study of racial profiling at the local level. *American Behavioral Scientist*, 47(7), 943–962. <https://doi.org/10.1177/0002764203261073>

Discussion

- Black Connecticut residents are more likely to be arrested at traffic stops than white drivers, with black men having the highest probability of arrest.
- This adds nuance to previous findings that suggest several Connecticut police departments disproportionately stop Black drivers.
- Further analysis is needed at the department level to understand the local context that leads to the racial disparity in arrests and to determine if specific departments warrant targeted racial bias intervention.