# The Effectiveness of Government Intervention on Mobility

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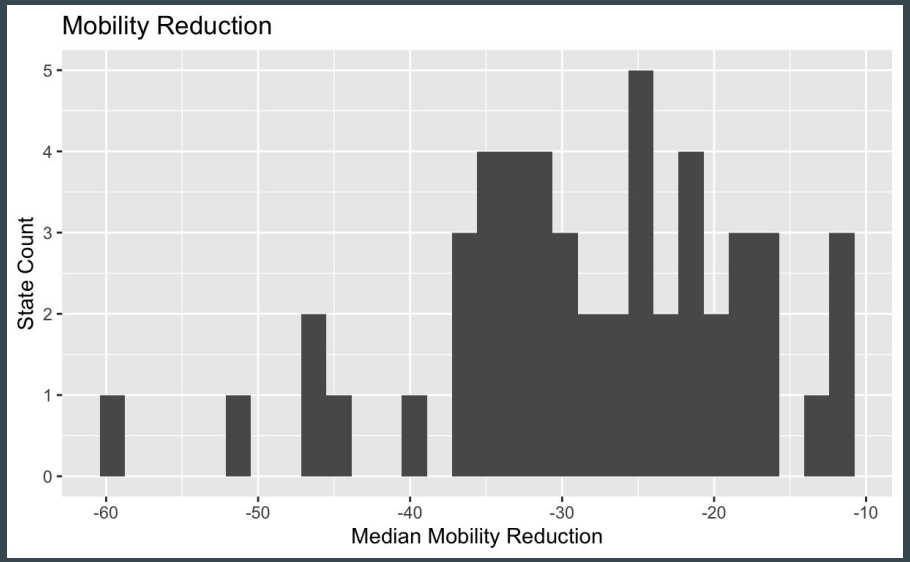
# Research Question

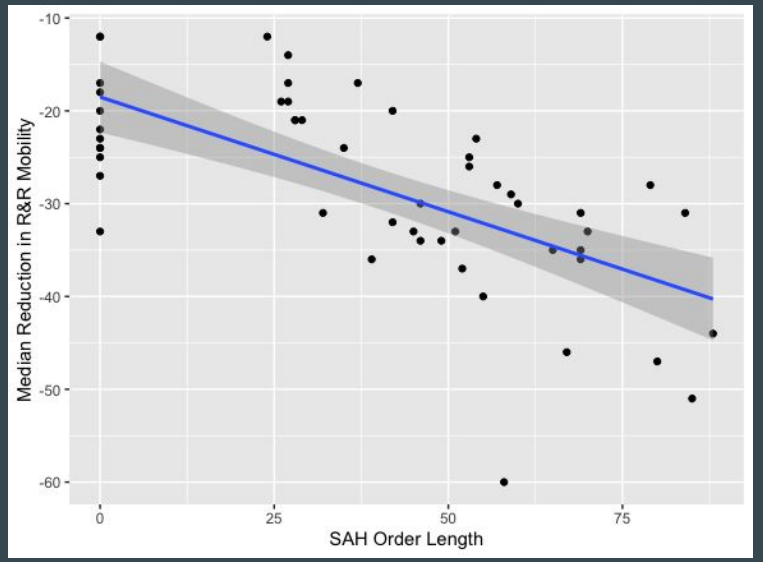
Early estimates the COVID impact were highly variable and many states took different actions to control the spread and reduce public uncertainty. Therefore, we ask:

**Did the length of stay at home (SAH) orders initiated by states, decrease the mobility of the states residents in an effort to curb the spread of the virus during the first wave of COVID-19?**

# Defining Mobility & Stay at Home Length

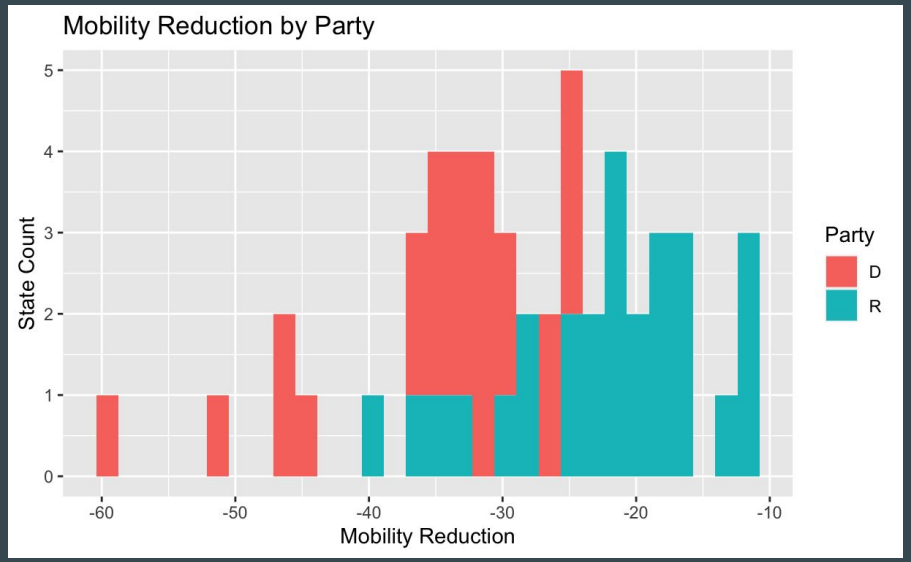
- Mobility Reduction - Median state-level reduction in retail and recreation relative to an early 2020 baseline from Google's mobility data
- SAH length - Days of public SAH orders during the first COVID wave

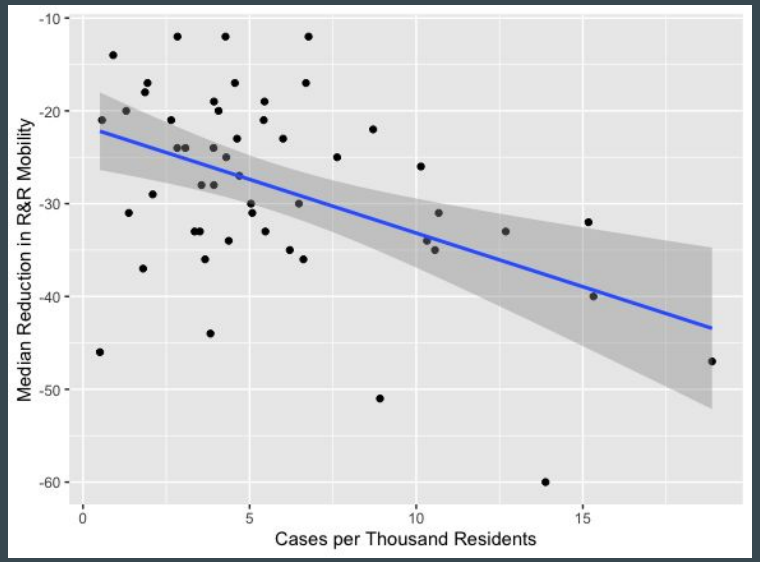


# Additional Covariates

- Governor Party - The political party of the state governor
- COVID Cases in Period - COVID cases per thousand residents during first wave



# Model Results - Significant Factors

- Length of SAH is a statistically significant predictor of mobility reduction, with each additional day reducing median mobility by 0.17 points
- States with Republican governors resulted in 6 points higher median mobility than a state with a Democratic governor
- There was a statistically significant impact of COVID cases in the period, with each unit increase in cases per thousand reducing median mobility by 0.74 points

# Model Results - Additional Findings

- No significant relationship between mobility and median age of the state
  - We hypothesized this would be strong indicator of mobility impact given the vastly different impact the virus has on older individuals
- While significant, a model with the percent of individuals in a state at risk of COVID was counter to initial hypothesis
  - This model indicated that the more at-risk the individuals of state, the more mobile the individuals of the state were, a finding we believe to be happenstance rather than the true relationship or the result of omitted variable bias such the general health of the population