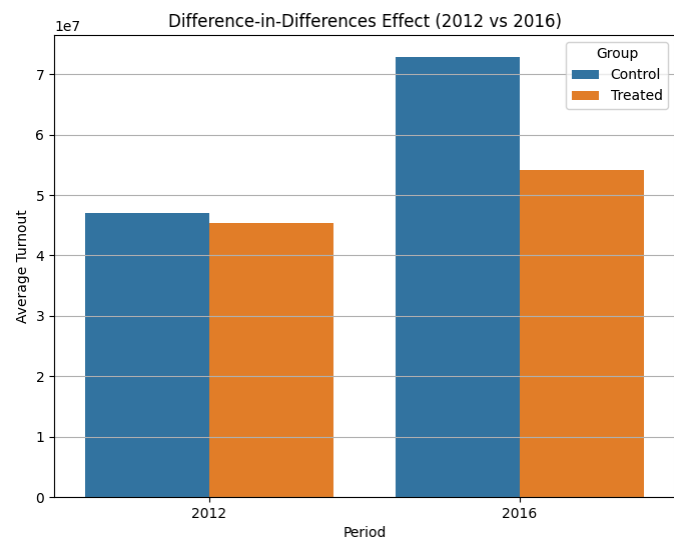


## Analyzing Voter Turnout Trends

This analysis tries to find how voter turnout trends in U.S. elections compare across different states. It does this by exploring the relation between turnout and factors such as restrictive voting laws and battleground state status. The hypothesis being tested is that states with more restrictive voting laws will show lower voter turnout, while battleground states will experience higher turnout due to increased campaign efforts and voter engagement initiatives.

The dataset used for this analysis includes election results at the national, state, and precinct levels, with data on state, precinct, year, office, party, and number of votes. The data was used to determine trends in voter turnout across different states and election cycles. For my analysis program, I mainly used the data from the presidential elections in 2012 and 2016. I used a Difference-in-Difference (DiD) approach to compare voter turnout changes in states with restrictive voting policies versus states without such restrictions. Additionally, voter turnout rates were analyzed for battleground and non-battleground states using population estimates gathered from the U.S. census.

The DiD analysis compared three “treated” states with restrictive voting policies (Alabama, Georgia, and Kentucky) against three “control” states with less restrictive policies (Washington, Minnesota, and Connecticut) between 2012 and 2016. Some examples of those restrictive voting policies is a law requiring voters to present a photo ID at the polls and requiring voter registration information to exactly match state databases



which lengthens or complicates the process that people might not trouble with. The results showed that states with restrictive policies experienced a decline in voter turnout from 2012 to 2016 with a negative DiD-effect, compared to the other states tested. A visualization of the DiD effect above confirms this trend, with treated states showing a greater turnout decline than control states.

Another analysis of battleground and non-battleground states for 2012 and 2016 was made. Turnout rates were calculated using total votes cast divided by the estimated population in each state. The analysis focused on presidential election years, 2012 and 2016, and compared the average turnout rates between battleground and non-battleground states to determine whether increased campaign activity and voter outreach correlated with higher participation. The table below showed the results of the average turnout rate for battleground states and non-battleground states with the battleground states having a higher average voter turnout rate for both years.

Battleground vs Non-Battleground State Mean Turnout Rate		
Year	Battleground States	Non-Battleground States
2012	0.4763	0.3718
2016	0.4819	0.4793

This analysis provides some evidence supporting the hypothesis that restrictive voting policies correlate with lower voter turnout. Additionally, battleground states exhibit higher turnout compared to non-battleground states most likely due to increased campaign activities and voter mobilization efforts. Some improvements that could be made to this analysis in order to make this more credible is to use longer term turnout trends by finding a dataset with consistent data for all states plus years, use the amount of people eligible for participation in voting to provide more accurate numbers instead of using total population, and doing more research into factors influencing voter turnout.