

A Quantitative and Qualitative Analysis of Maine's Political Landscape **Sumer Singh Vaidya, Class of 2022**

Over this summer, I worked under the guidance of Professor Michael Franz to analyze Maine's political landscape through a combination of qualitative and quantitative methods. My aim was to understand how different cultural, economic, and social factors influence public opinion on various political issues within the state. I chose to focus on the state's 2nd Congressional District as it has historically been a swing precinct, and thus provides a more complex mix of political beliefs compared to its consistently Democratic, more urban counterpart. As a Mathematics and Government major, this project was a perfect opportunity to advance my interest in both fields.

Part of my research involved conducting an original poll of registered voters in the district. Due to COVID-19, I had to move my survey to an online platform so that I could effectively continue my research remotely from India. Applying my understanding of polling from my course, "A Quantitative Analysis of Political Science", I created a survey that assessed individuals' opinions on several political issues. You can find my complete survey [here](#). I gathered responses through snowball sampling, where I initially shared the poll through email lists of different organizations in Maine. Due to low response rates, I moved to circulate my survey across social media platforms such as Facebook, where I found tremendous success. I targeted groups and communities on these platforms whose members could best replicate a random probability sample and gained over 750 responses.

The quantitative section of my research focused on analyzing the results of this poll using R Studio. I was able to hone my coding skills, learning how to program different statistical methods in a language, of which, I had limited initial understanding of. Using the Kruskal-Wallis Test followed by a post hoc Dunn Test, I first investigated differences in political opinions based on demographic factors. To try and minimize the effect of the non-random probability sample from my online poll, I conducted a subsequent Ordinal Logistic Regression and controlled for other variables in an effort to isolate the effect of demographic factors on a question response. This section revealed a number of statistically significant differences in opinions, across issues ranging from Healthcare to LGBT+ rights, based on demographic factors such as party affiliation, gender and education status.

The second section of this analysis aimed to quantify the correlation between individuals' opinions on different questions and political issues. Depending on the type of variable a response was stored as, I ran Multivariable Linear or Ordinal Logistic Regressions while controlling for demographic factors to examine the correlation between responses on different questions. This yielded a number of fascinating results, for instance, I discovered that individuals who support universal background checks on the sale of firearms are more likely to support state government spending on combatting climate change. It was interesting to compare the findings from my survey with other polling and election results in Maine.

To supplement this aspect of my research, I conducted a series of interviews with academics, consultants, and politicians, like Congressman David F. Emery and Mayor Nick Isgro, who provided valuable insight on their experiences in navigating Maine politics. I also explored various other perspectives through literature on public opinion in Maine, such as Professor Christian Pothom's 'Maine: An Annotated Bibliography' as well as the state's local journalism to gain a holistic understanding of its political dynamics.

Faculty Mentor: Professor Michael Franz

Funded by the Breckinridge Summer Research Fellowship