How Household Income Impacts Political Views, Focusing on Mr. Donald Trump, Yielded Inconclusive Results*

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This study explores the relationship between household income, ethnicity, and political preferences using data from 'The Welfare Effects of Social Media.' Despite inconclusive findings challenging the presumed impact of income on political views, our innovative metric, measuring respondents' propensity to follow Donald Trump, did not provide conclusive results. This introduces new avenues in political science and statistics, encouraging further exploration into understanding the dynamics of these relationships. The study contributes to the ongoing discourse on the complex relationships between income, ethnicity, and political inclinations.

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1 Introduction

Household income is defined as the gross income earned by all members in a household above 15 years of age (SCOTT 2024). Over the years, it has been debated whether household incomes at all affect one's affiliation towards a political school of thought. It is a reasonable hypothesis to assume a sort of relationship between income and voting either Democrat or Republican, as both parties have different economic outlooks thereby affecting incomes differently. Maybe higher income inequality polarizes political leaning further. Therefore, it is in our best interests to study whether the poor vote to improve their quality of life.

*Code and data are available at: LINK.https://github.com/Crooksyyy/The-Effects-of-Social-Media

In 'Income Inequality and Partisan Voting in the United States', Andrew Gelman, Lane Kenworthy and Yu-Sung Su (Gelman, Kenworthy, and Su 2010) make a case for higher earning Americans voting Republican, whereas Jeff Madrick (Madrick 2020) argues how working-class Americans voted against their interests in voting Republican. Conflicting theories have emerged, and we intend on tackling this issue at hand of whether different income brackets tend to vote differently. By measuring the difference in propensity to follow Mr. Donald Trump in relation to household income.

The remainder of this paper is structured as follows. Section **??** will introduce the data set and the variables it contains. Section **??** will display the findings of our data in relation to our paper. The **?@sec-disc** will discuss why the findings matter and the weaknesses of our analysis.

Our data has been obtained from 'The Welfare Effects of Social Media' (Allcott et al. 2020) . Our code is supported by the following packages (R Core Team 2022) (Wickham et al. 2019) (Müller 2020) (Xie 2023)

2 Data

2.1 Data Introduction

The data for this paper was collected from the replication package of the paper 'The Welfare Effects of Social Media'(Allcott et al. 2020) The authors from that data had collected this data themselves using an online survey platform called Qulatrics, inquiring about personal information such as personal names, IP addresses, extent of by which the subjects follow politics, etc. Notably the dataset would contain a lot of confidential information, that if released in the replication package would cause ethical problems. As a result, the authors included the de-identified versions of their data collected, which was used in our analysis too.

2.2 Income Data

Our key variables of interest include household income. The survey participants were offered options in bins starting at 0 to 9,999 US dollar range, with every succeeding bin also being 9,999 USD wide. The bins went up to a ceiling of 50,000 USD per annum, then every next bin was 25,000 USD wide until a ceiling of 150,000 USD. In our analysis we combine the bins above 9,999 into – 20,000 to 49,999, 50,000 to 99,999 and the rest being 100,000 and up. The option of 'Prefer not to answer' was also available, and the entries with that response were dropped. The distribution of the data can be seen in Figure **??**. Figure **??** closely resembles the expected distribution of USA household income. As expected in any income distribution the majority of responses fall within the average income ranges of the USA, between 20,000USD

and 100,000USD (2022). These factors indicate that the data set has an accurate representation of household income.

2.3 Politics Data

Another variable of use is the extent to which the subjects follow Mr. Donald Trump, leader of the Republican Party. The possible responses were 'Not at all closely', 'Somewhat closely,' 'Rather closely' and 'Very Closely,' and the respondents could select one of these options which will become our measure of measuring subscription to Republican ideas. This data is represented using a pie chart in Figure **??**. This variable faces many problems as this categorical scale is not consistent across respondents. To be specific we mean someone who identifies as someone who does follows Not at all closely can be following Mr. Donald Trump more than someone who identifies as Somewhat closely. This is a measurement issue within to the questions asked in the survey and all self-identifying variables in general. (**figure2?**) shows the quantity of respondents in each group. The most common response is that they follow somewhat closely, and the other responses are relatively even.

2.4 Ethnicity Data

The second question of the data that we have included in our analysis is the ethnicity of the respondents. This again is a categorical variable, that the individual self identifies their own ethnicity. The response options included Asian or Pacific Islander, White / Caucasian, Hispanic, Black or African American and other. Table **??** shows the percentage of respondents in each with the overwhelming majority of responses being Caucasian at nearly 70%. This is actually less than the most recent estimates by the United States government which estimate over 75% of the population is Caucasian (2022). The data also has an over representation of Asian and Native Americans. This results in an under representation of Hispanic and African American populations.

Table 1: Percentage of each Ethnicity from Responses in the facebook ad

Ethnicity	Percentage of Responses
American Indian or Alaskan Native	0.7554138
Asian or Pacific Islander	13.5806614
Black or African American	6.0936713
Hispanic	8.0577472
Other (please specify)	2.5851939
White / Caucasian	68.9273124

3 Results

This paper's goal was to identify if lower-income households voted against their interest. To understand this relationship, we used the variable for how closely a respondent follows Mr. Donald Trump as our measurement of subscription to Republican ideas. Using this measurement, we organized the proportion of individuals by income class to how closely they follow Mr. Donald Trump in Figure **??**. This graph shows that a proportional amount of each income class follows Mr. Donald Trump at similar levels across all income levels. Specifically, we mean the percentage of individuals following Mr. Donald Trump at different levels is the same no matter the income class. This means we cannot conclude that income class impacts how closely individuals follow Mr. Donald Trump, and therefore, cannot conclude that different income levels subscribe to republican ideas more than others.

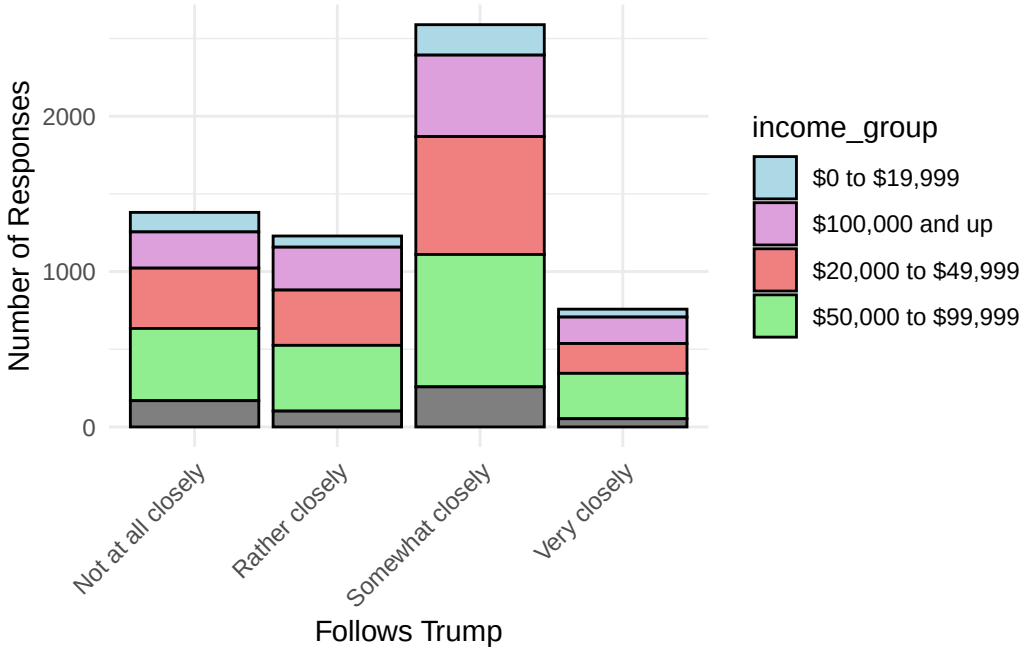

Figure 1: Number of Respondents who follow Donald Trump at different levels by Household Income

To further our analysis, we computed the same graph however organized by race, not income Figure **??**. This resulted in a similar result as race is proportional between all levels of following Mr. Donald Trump. Therefore, consistent across races to follow republican rhetoric. Again, this means the percentage of people who follow Mr. Donald Trump at different levels is the same for each race. This is more difficult to conclude for minorities as their representation within the data set is so small as stated in Section **??**.

Overall, the results of this analysis were inconclusive to measure how income impacts individu-

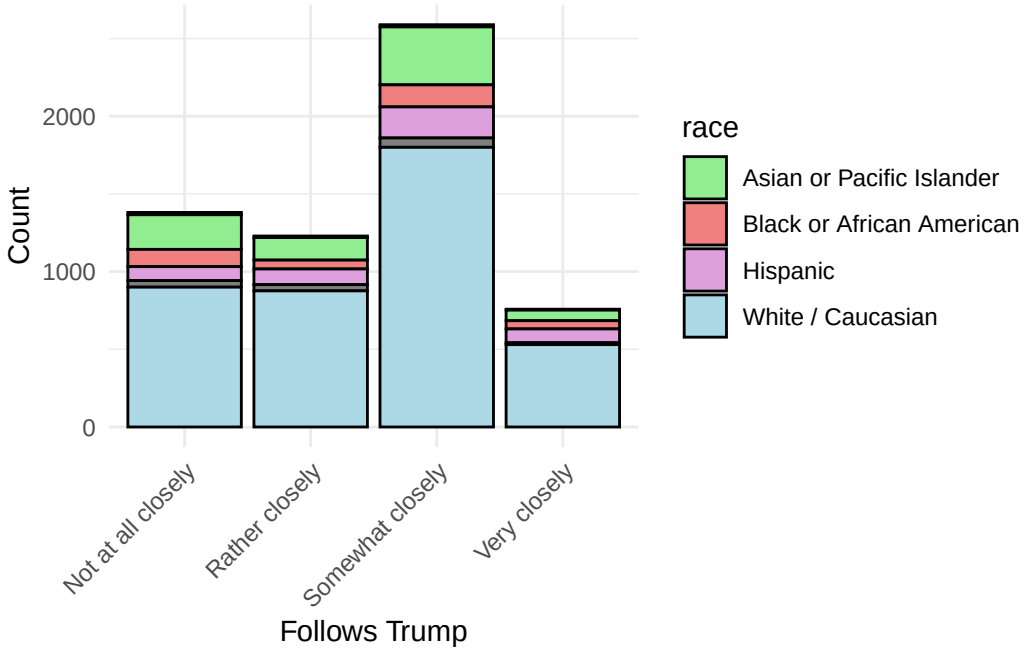

Figure 2: Number of Respondents who follow Donald Trump at different levels by Race

als' propensity to follow republican rhetoric. There are many reasons this could be true and as stated in the (**intro?**) there are multiple schools of thought previously studied on the topic.

4 Discussion {sec-disc}

4.1 Inconclusive – not a futile exercise

Our results show no evident relationship between income and Republic following. This result is important in of itself – the insignificant relationship suggests income does not influence an individual's choice of presidential candidate. There can be many possible reasons. The first reason is that other factors apart from income influence this choice to a much greater extent. For example, a family of 5 kids may be more influenced by a candidate promising better institutional infrastructure like more schools and subsidized education. As mentioned in 'Factors Influencing Voting Decision: A Comprehensive Literature Review' (Kulachai, Lerdtomornsakul, and Homyamyen 2023), the main headings influencing decisions include 'demographic factors, psychological factors, sociocultural factors and economic factors.' Income is only one of the many economic factors, and so may have a very small influence on voting preference.

4.2 Weaknesses

The analysis in the paper is not perfect, with some changes that can make it much more robust. One of the limitations is the race question – the limitation of only the choice in the survey means individuals who part of any of those races are not included are unable to provide a data point. If some of these groups significantly change their voting pattern based on income, their contribution is lost. This is a classic case of sampling bias. Secondly, any values that were missing from the dataset were dropped for this paper. Just as stated previously, the contribution of those data points is lost, making our conclusions less precise. Lastly, the survey collected data via an online platform, thereby leaving out opinions of individuals either not in possession of technology or not very adept at operating it such as the elderly. This is another sampling bias result, as it leaves out another key societal group for the analysis. Thirdly, the income variable only being measured as a categorical variable limited our analysis. Income is usually measured as a continous variable which would have allowed analysis such as regression to be used.

Appendix

4.1 Figures

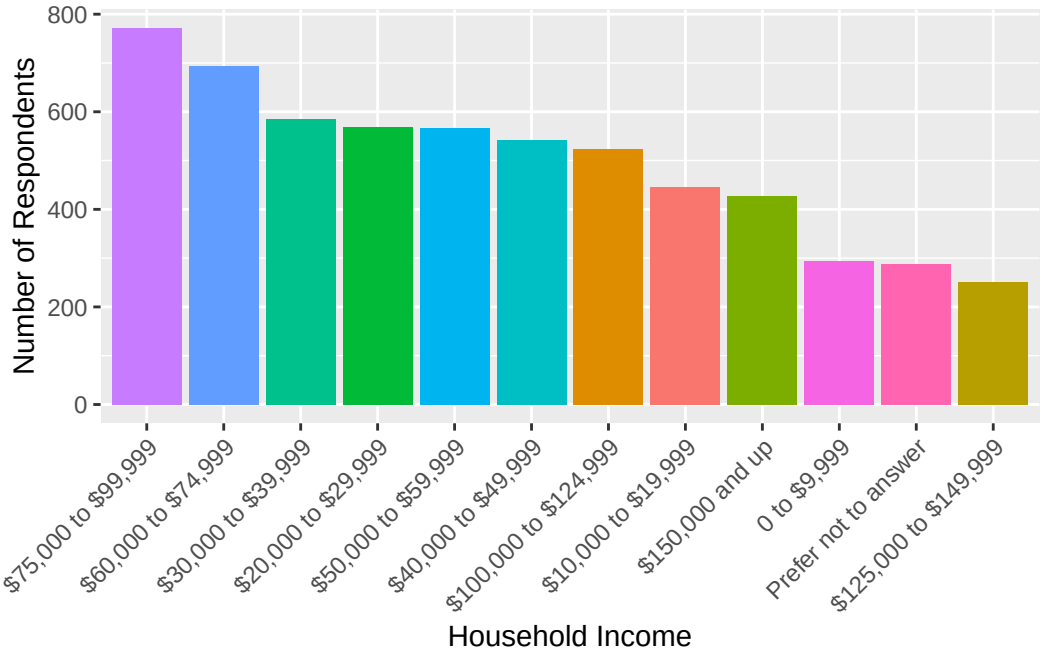

Figure 3: Distribution of Income from Responses in the facebook ad

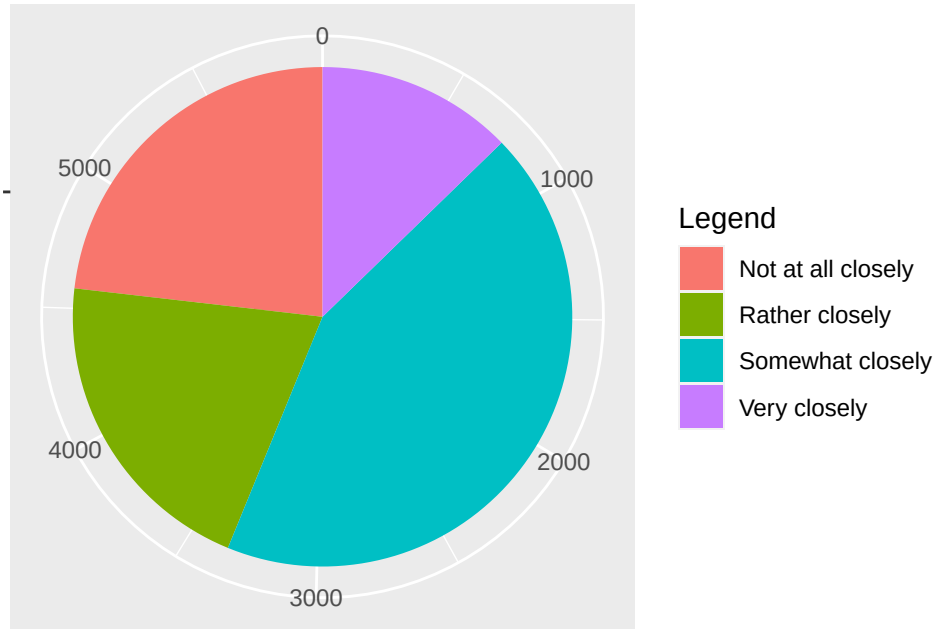

Figure 4: How Closely People Follow Mr.Donald Trump from Responses in the facebook ad

4.2 Data Cleaning

The data cleaning for this analysis was very straightforward. Once the data was obtained using the links mentioned in the paper or the github repo, the variables reqired for the analysis we compiled and any response with missing data was removed.

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