The Effect of Personal Financial Situation on Support for Populism

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Abstract

This project investigates if there is a causal effect of personal financial situation on the degree of support for populist political opinions, using data from the Canada Election Study (CES) survey for the 2021 Canadian federal elections. The treatment and control groups are determined based on responses to a question about how one's financial situation has changed over the past year. The measure for support for populism is formed by aggregating responses from several questions. I use several estimators for the average causal effect, including the regression outcome, Horvitz-Thompson, Hajek and doubly robust estimators. These estimators show a small positive effect. This outcome holds when using different sets of covariates and different pre-processing methods.

Introduction

Populism is a broad political ideology based on anti-elite and anti-establishment sentiments. Populists frame themselves as being for the "common people", standing against an elite class consisting of politicians, corporations, established media and others. The actual policies espoused can vary greatly, and populists can come from both the left and right wings of the political spectrum (LeDuc, Pammett, and Clarke 2023). The past decade has seen an increase in support for populist politicians and parties in the West. Populist parties in Europe, largely from the right wing, have enjoyed increasing vote shares in elections, such as the National Rally in France, the Alternative for Germany, the Sweden Democrats and the ruling Fidesz Party in Hungary. Recently, in the Dutch general election held on November 22, 2023 resulted in the victory of the far-right Freedom Party (Kirby and Holligan 2023). The results of the Brexit referendum in the UK are also driven by populist sentiments, as well as the victory of Donald Trump in the 2016 US presidential elections. In Canada, populists have not seen as much success electorally. A new populist right-wing party, the People's Party of Canada was formed in 2018 but failed to win any votes in the 2019 or 2021 general elections (LeDuc, Pammett, and Clarke 2023). However, there have been other displays of populist sentiment in Canada, such as the recent Freedom Convoy protests in 2022. These protests originated from opposition to COVID vaccine mandates by truckers, and grew to encompass a variety of dissatisfactions towards the Liberal-led federal government (Gillies, Raynauld, and Wisniewski). Given the impacts populist movements have had in other countries, it would be worthwhile to take a look at populism in Canada and try to understand the characteristics and causes of populist sentiment in the country.

The rise of populism has been theorized to have roots in economic inequality and security. People who feel that their financial situation has worsened become disillusioned with what they consider to be establishment policies, and turn towards populist alternatives. Previous studies have looked at different aspects of the relationship between economic conditions and support for populism. Guiso et al. (2021) argue that the 2008 recession resulted in an increase in populism on both the demand side (voter behavior) and the supply side (political party behavior). They conducted a pseudo-panel analysis across European countries, using dependence on external finance/borrowing as an instrument, to show that economic insecurity causes an increase in populist voting. They also find an increase in populist positions amongst political parties using regression. Hays, Lim, and Spoon (2019) use causal mediation analysis to show that individuals impacted by

regional import shocks develop anti-immigration sentiments, which lead to support for right-wing populist parties. Algan et al. (2017) find that regional increases in unemployment are followed by rising voting shares for populist parties, using two-stage least squares regression with share of construction as an instrumental variable.

I intended to assess the effect of an individual's financial situation on their support for populist beliefs, using responses from the Canada Election Study (CES) survey for the 2021 Canadian federal elections (Stephenson et al. 2022). Based on previous papers, I expected to see that a decline in one's financial situation causes greater support for populist opinions. The results of my analysis suggest that a worsening financial situation does have a small, positive effect on support for populism.

Data

The CES survey consists of a campaign period and post election component. To form treatment and control groups for financial situations, I looked at the responses to a post-election question where the respondent is asked how their financial situation has changed over the past year. Respondents who replied that their situation got worse were placed in the treatment group, and others were put in the control group. A rating of the degree of support for populist opinions is constructed from the responses to five questions. These questions ask the respondent to indicate the degree to which they agree or disagree with a given statement. I convert the responses to an integer from 1 to 5, where 5 represents strongly agreeing with the populist opinion, and take the average of the responses to the six questions. Respondents who did not answer these questions, or had responded "don't know/prefer not to answer" were removed from the dataset.

The five statements are:

1. What people call compromise in politics is really just selling out on one's principles.
2. Most politicians do not care about the people.
3. Most politicians are trustworthy.
4. The people, and not politicians, should make our most important policy decisions.
5. Most politicians care only about the interests of the rich and powerful.

Each of these statements represents a populist opinion, except for Q3 which is anti-populist, and has its response values reversed.

The dataset contains responses to many other questions, which can be used as covariates in the analysis. These include demographic variables, such as region, gender, age, education level, religion, marital status, employment status, union membership, and area classification (urban, rural, etc.). I also include whether the respondent is a native anglophone or francophone, as such linguistic identities have had political relevance historically. Whether the respondent and their parents are born in Canada or not is also included, as populism has linked to nativist attitudes in other countries. There are also questions asking about whether the respondent follows politics, whether they have paid attention to the election campaigns, and if they consider religion important to their lives. Lastly, I included the respondent's party vote in the 2021 election. In the pre-processing stage, some of the responses were grouped together to form larger categories. For example, respondents whose highest education level was less than secondary education were put in the same category . Respondents with missing values for any of the variables were dropped from the dataset. Furthermore, respondents who selected a response for which very few others selected were removed from the dataset due to causing issues with the bootstrapping procedure.

After cleaning the data and removing rows as described previously, there were 13194 points left in the dataset. Out of these, 3232 were in the treatment group and 9962 were in the control group.

Methods and Analysis

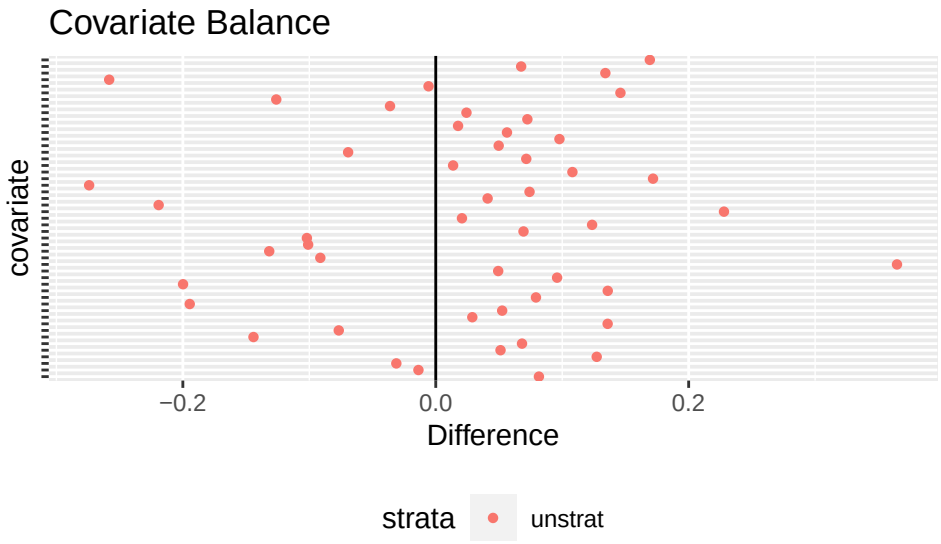
To discern the causal effect of change in financial situation on support for populism, I used several estimators for the average treatment effect. I used multiple estimators in order to check for robustness. Here Y is the

outcome, Z is the treatment, and X is the covariates. For each estimator, standard errors and confidence intervals were obtained using bootstrapping.

The first is the outcome regression method (Ding 2023), where the estimator is given by

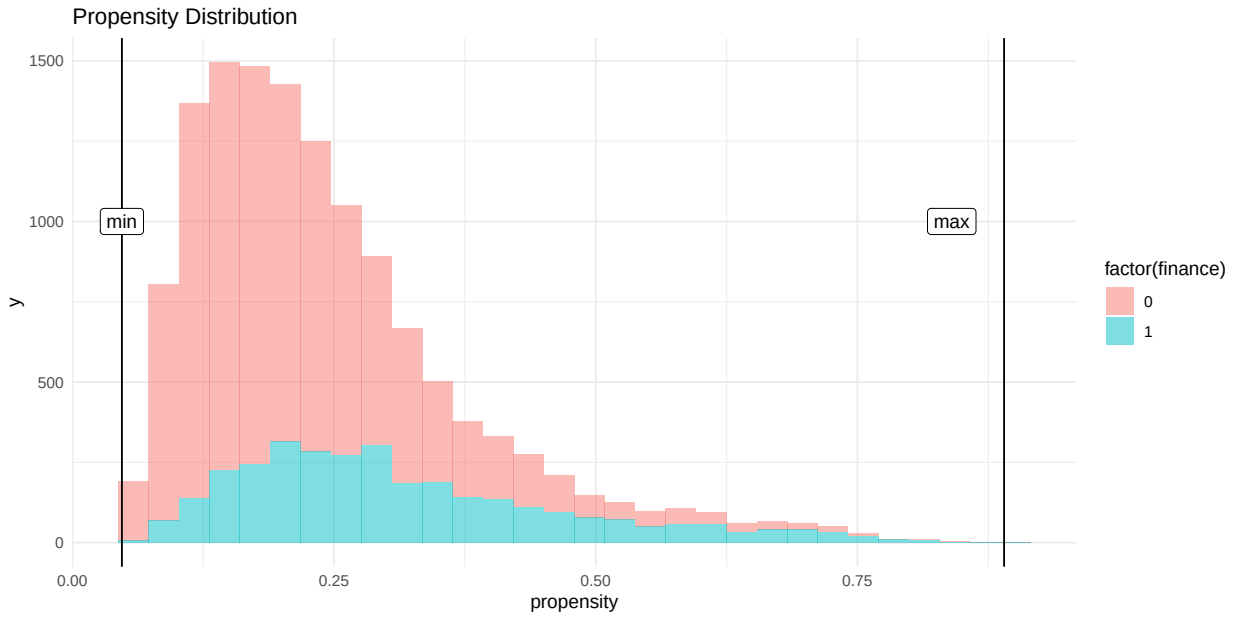
$$\hat{\tau} = \frac{1}{n} \sum_{i=1}^{n} \hat{\mu}_1(X_i) - \hat{\mu}_0(X_i) \tag{1}$$

Here $\hat{\mu}_1(X_i)$ and $\hat{\mu}_0(X_i)$ are given by the OLS regression estimates for E(Y | Z = 1, X = x) and E(Y | Z = 0, X = x).



As shown in the plot, there are several covariates that are imbalanced between the treatment and control groups. To account for the imbalance, we can use inverse propensity weighting (IPW) estimation methods.

First we estimate the propensity scores using a logistic regression model. From the resulting propensity scores, the minimum value is ~0.047 and the maximum value is ~0.89, so we satisfy the condition that 0 < e(X) < 1, where e(X) are the propensity scores. The histograms show the difference in propensity score distribution between the treatment and control groups.



The inverse propensity weighting, or Horvitz-Thompson estimator ("A Generalization of Sampling Without Replacement from a Finite Universe," n.d.) is

$$\hat{\tau}^{ht} = \frac{1}{n}\sum_{i=1}^{n}\frac{Z_i Y_i}{e(\hat{X}_i)} - \frac{1}{n}\sum_{i=1}^{n}\frac{(1-Z_i)Y_i}{1-e(\hat{X}_i)} \tag{2}$$

However, there are issues with this estimator, as it is not invariant to location transformations of the outcome. The Hajek estimator addresses this problem by normalizing the weights:

$$\hat{\tau}^{hajek} = \frac{\sum_{i=1}^{n}\frac{Z_i Y_i}{e(\hat{X}_i)}}{\sum_{i=1}^{n}\frac{Z_i}{e(\hat{X}_i)}} - \frac{\sum_{i=1}^{n}\frac{(1-Z_i)Y_i}{1-e(\hat{X}_i)}}{\sum_{i=1}^{n}\frac{1-Z_i}{1-e(\hat{X}_i)}} \tag{3}$$

Lastly, the doubly robust or augmented inverse propensity score weighting (AIPW) estimator is

$$\hat{\tau}^{dr} = \frac{1}{n}\sum_{i=1}^{n}[\frac{Z_i(Y_i-\hat{\mu}_1(X_i))}{e(\hat{X}_i)} + \hat{\mu}_1(X_i)] - \frac{1}{n}\sum_{i=1}^{n}[\frac{(1-Z_i)(Y_i-\hat{\mu}_0(X_i))}{1-e(\hat{X}_i)} + \hat{\mu}_0(X_i)] \tag{4}$$

Here we estimate $\hat{\mu}_1(X_i)$ and $\hat{\mu}_0(X_i)$ with OLS regression as before. The doubly robust estimator is consistent even if one of the regression or propensity models is misspecified (but not both).

Table 1: Results

	reg	HT	Hajek	DR
est	0.2831542	0.2545440	0.2875416	0.2841806
se	0.0162929	0.0723281	0.0181121	0.0167298
CI_lb	0.0329730	-0.2725762	0.0237627	0.0306672
CI_ub	0.5333354	0.7816642	0.5513205	0.5376940

All four of the estimators show a small, positive ATE in the 0.25 to 0.29 range. Furthermore, the effects are significant at the 0.05 level, except for the HT estimator (which has wider confidence intervals, as the

estimator often has higher variance). This suggests that a decline in one's financial situation slightly raises support for populism.

Robustness Analysis

In order to further check the robustness of the results, I redid the analysis with different preprocessing and covariates.

First, I did the analysis with only demographic and socioeconomic characteristics. In other words, I left out the variables for following politics, following the campaign, party vote, and importance of religion. I then did the analysis with only regional and cultural covariates, including region, rural/urban classification, native language, religion, importance of religion, and whether the respondent and their parents were born in Canada. For both alternate sets of covariates, the IPW estimators do not change much in value, while the outcome regression estimator increases a little bit. The results for the confidence intervals show little change as well.

Table 2: Demographic and socioeconomic covariates

	reg	HT	Hajek	DR
est	0.3472801	0.2545440	0.2875416	0.2864526
se	0.0168494	0.0713440	0.0182022	0.0176672
CI_lb	0.0928622	-0.2689779	0.0231072	0.0259329
CI_ub	0.6016980	0.7780659	0.5519760	0.5469723

Table 3: Regional and cultural covariates

	reg	HT	Hajek	DR
est	0.3877628	0.2545440	0.2875416	0.2882172
se	0.0166042	0.0755095	0.0186075	0.0182488
CI_lb	0.1352026	-0.2840442	0.0201794	0.0234442
CI_ub	0.6403230	0.7931321	0.5549038	0.5529901

Next, I tried using a different method to create the treatment and control groups. Instead of defining those with worsening financial situations are the treatment group, I used those whose financial situations improved. This treatment group should have a negative effect on support for populism. Under this new definition, we have 2229 units in the treatment group and 10965 in the control group. Recomputing the propensity scores, we have a minimum of ~0.01 and a maximum of ~0.53. The estimators show negative effects with values from -0.16 to -0.18. This aligns with the proposed causal effect of financial situation on support for populism. However, the results are not significant at the 0.05 level.

Table 4: Alternate treatment

	reg	HT	Hajek	DR
est	-0.1775846	-0.1622116	-0.1782537	-0.1787675
se	0.0207008	0.0833607	0.0228471	0.0210735
CI_lb	-0.4595846	-0.7281077	-0.4745127	-0.4632953
CI_ub	0.1044154	0.4036846	0.1180052	0.1057603

Lastly, I looked at alternative ways of measuring support for populism. Originally, I averaged the responses

to six questions about populist opinions. I redid the analysis using each separate question as the outcome variable, and the original treatment definition. There should be positive effects for each aside from Q3 which should have a negative effect (as it is an anti-populist statement). For each outcome, we observe a positive effect in the 0.2 to 0.4 range, aside from Q3 which has values in the -0.29 to -0.33 range. These effects generally have wider confidence intervals compared to the original analysis. The full results can be seen in the appendix.

Conclusion

Previous studies have found evidence for economic conditions causing an increase in support for populism. The reasoning is that people who feel they are suffering economic/financial hardship may lay the blame on the ruling establishment and their supporters, and look for alternatives in populism. This project investigated if a decline in one's personal financial situation causes increased support for populist beliefs amongst Canadians, using data from the 2021 CES election survey. To identify a causal effect, I looked at four estimators: the outcome regression estimator, the Horvitz-Thompson estimator, the Hajek estimator and the doubly robust estimator. The estimators show that the effect is small and positive, and significant at the 0.05 level for 3 out of the 4 estimators.

I did further analysis to check the robustness of the results. The results are robust to rerunning the analysis with different sets of covariates. When redefining the treatment to be an improvement rather than a decline in financial situation, the effect is negative as expected, though smaller and not significant at the 0.05 level. When defining the outcome as the responses to individual questions rather than the average, the effect largely holds. Overall, the original result is fairly robust to different ways of running the analysis.

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