Quantifying Strategic Voting in Canadian Elections With Difference-in-Difference

POL304H1 Assignment 3

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1 Research Question

Does a close margin between the Liberals and Conservatives increase strategic voting in subsequent elections? Word count: 15

2 Previous Literature

I selected Dylan Anderson's 2022 article, titled: The 'Tipping Point of a Strategic Vote: When Does an Individual Vote Strategically?" This article tests the theory that there is a quantitative "tipping point" for when predictors of strategic voting (preference and viability rating for preferred party, and distance from contention) will cause a third-party supporter to shift their vote from their preferred party to their favorite competitive party. In Canada, right-leaning voters generally support the Conservatives, and left-leaning voters are more likely to switch between the Liberals, NDP, and to a lesser extent, the Green party (Anderson 2022). Anderson (2022) found comparable quantitative "tipping points" for when the probability of third-party supporters in Canada and the UK crosses 50 percent. Word count: 97

3 Theory

Strategic considerations influence vote choice, but to a lesser extent than party affiliation (Blais 2002). Strategic voting has increased in recent years, and while most third-party supporters vote sincerely, they are more likely to vote strategically if the race between the top two candidates is close, their preferred candidate is uncompetitive, and their second-choice candidate is ideologically similar (Merolla and Stephenson 2007). Ideological distance between the two

competitive parties increases the likelihood that third-party supporters will vote strategically because it increases how much they like their second choice and dislike their last choice (Daoust and Bol 2018). In Canada, the Conservative party attracts right-leaning voters; left-leaning voters are split between the Liberal party, NDP, and to a lesser extent, the Green party (Anderson 2022). This means that we can expect a decrease in NDP vote share in historically Liberal-Conservative battleground ridings where third-party candidates are expected to perform poorly. Word count: 141

4 Improvement on the Previous Literature

This study aims to build on the widely accepted predictors of strategic voting and the tipping point theory by quantifying strategic voting in Canadian elections. I will evaluate the causal effect over time of a close race between the Liberals and Conservatives on NDP support at the riding level. Word count: 49

5 Hypothesis

A close race between the Liberals and Conservatives causes a decrease in NDP vote share. Word count: 15

6 Data

My data set is Elections Canada official results from the 42nd, 43rd, and 44th general elections. My unit of analysis is election results at the riding level. The independent variable is the margin between the Liberal and Conservative candidates in 2019, while the dependent variable is the difference between NDP vote share in 2015 and 2021. Using difference-in-difference, I compare ridings where the margin was <5 percentage points (treatment) with others (control), where the top two candidates were Liberal and Conservative in 2019. If my hypothesis is correct, we will see that a close race between the Liberals and Conservatives causes NDP support to decrease. Word count: 100

7 Data Cleaning and Analysis

Data cleaning and analysis were done using R programming language and the `dplyr` and `janitor` packages (R Core Team 2023). My code and data are available at: https://github.com/taliafabs/POL304Project.git

8 Results

NDP vote share increased for the treatment and control ridings between 2015 and 2021, but to a lesser extent in treatment ridings. The sample average treatment effect (SATT), which is the difference for the treatment ridings minus the difference for the control ridings, is -2.16, as shown in Table 3. The counter-factual outcome, shown in Figure 1 shows the average NDP vote share that we would have observed in treatment ridings if there were no close races. The average estimated causal effect for ridings with a close margin is shown by the gap between the treatment and counter-factual outcomes in Figure 1. Word count: 99

Table 1: Mean NDP Vote Share for Treatment and Control Ridings, 2015

Treatment	Control
14.775	12.70132

Table 2: Mean NDP Vote Share for Treatment and Control Ridings, 2021

Treatment	Control
15.74167	15.82649

Table 3: Difference in mean NDP vote share for treatment and control groups and estimating sample average treatment effect for the treated (SATT)

TreatmentDifference	ControlDifference	SATT
0.97	3.13	-2.16

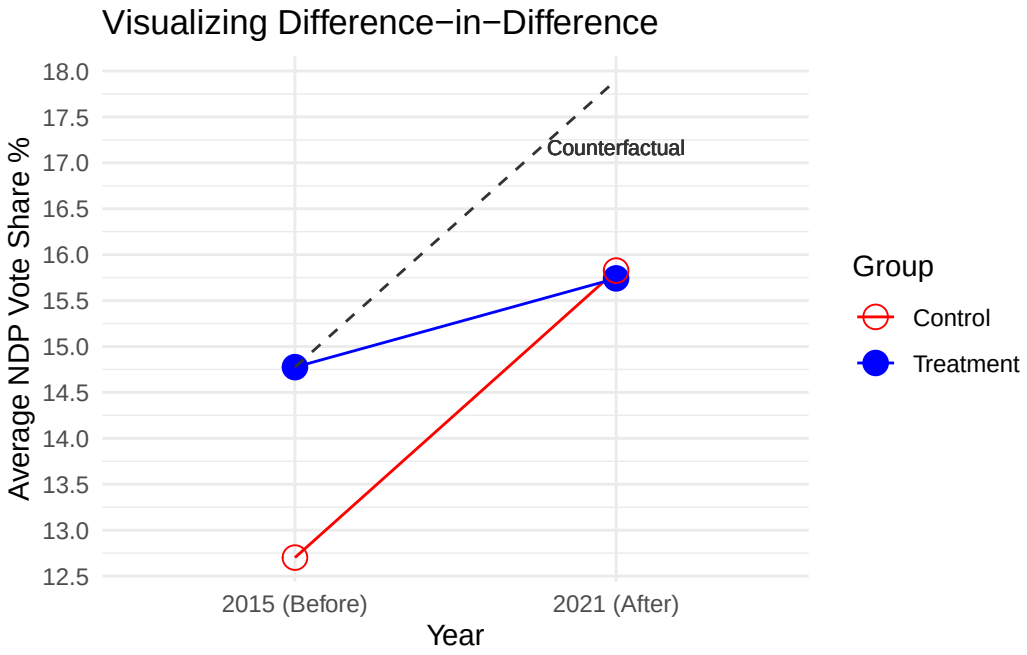

Figure 1: Change in Average NDP Vote Share % for Treatment (Liberal vs Conservative margin <5 percentage points) and Control (Liberal vs Conservative margin >= 5) ridings before and after 2019 general election

9 Discussion

I obtained results that I was expecting. The SATT is -2.16, and the counter-factual in Figure 1 shows the average outcome that we would have observed if there were no close races. This is consistent with my hypothesis, which suggests that a close margin between the Liberals and Conservatives has a negative effect on NDP vote share. I believe that I obtained an expected result because difference-in-difference accounts for time-varying confounders and my assumption that treatment ridings would have experienced the same voting trends as control ridings in the absence of close margins in 2019 appears to hold. Word count: 97

10 Endogeneity

My research includes only ridings where the top two candidates in 2019 were Liberal and Conservative. This ensures that only battleground and strong Liberal or Conservative ridings were studied and rules out local NDP support as a confounder. I divided ridings into treatment and control groups based on whether the margin between the Liberal and Conservative candidates was <5 percentage points in 2019. I used difference-in-difference to account for riding-specific and time varying confounders. I am confident that the parallel time trends assumption holds because I tested a small period and NDP vote share trends are consistent federally. I performed OLS regression in R to test the assumption that the treatment is exogeneous. As shown in Table 4, the estimated slope coefficient for NDP vote share in 2015 is 0.0368, which is close to 0. The p-value is 0.3; there is insufficient evidence to reject the null hypothesis, which states that this coefficient is 0. This means NDP vote share in 2015 does not predict the margin between the Liberals and Conservatives in 2019. This helps rule out reverse causality; the independent variable is not a predictor for the dependent variable. Word count: 190

Table 4: Coefficient summary for linear model for Liberal vs Conservative margin in 2019 using NDP vote share in 2015 as a predictor

term	estimate	std.error	statistic	p.value
(Intercept)	2.1565374	0.5910437	3.648694	0.0014151
ndp2015	0.0367826	0.0353479	1.040588	0.3093682

References

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