Monthly Canadian Election Poll

Cesar Y. Villarreal Guzman

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Executive Summary

In this experiment we conduct a simulation based survey study to investigate the impact of the second wave of the COVID-19 pandemic on the political views of Canadian's. The study follows the premise of random selection of participants from a pool of candidates corresponding to the different Canadian provinces. The number of participants from each province was determined by following the *stratified simple random sampling* (SRSWOR) method (Wu and Thompson 2020). The survey was designed using the Typeform platform. The plan of administration is by email, coupled with a small monetary incentive ($5 coupon) upon completion.

Research has long suspected on the correlation between the length of a survey and response rate. An experiment evaluating redesigns of the U.S. Census found that shortening the questionnaire increased response rate (Dillman, Sinclair, and Clark 1993), a more recent experiment showed a sizable negative effect of length on completion in web surveys (Marcus et al. 2007). As a result, we decided to limit the survey to four questions:

1. For whom did you vote in the 2019 Canadian federal elections?
2. How do you feel about the general direction of our country at the moment?
3. How much did the COVID-19 pandemic influence your response to the last question?
4. If there was a general election tomorrow, which party would you vote for?

Responses where simulated based on data collected from a list news videos covering the address of Prime Minister Trudeau on the COVID-19 pandemic. The videos used where from September and first week of October. Overall we collected: *number of views*, *number of likes*, *number of dislikes* and *number of comments*. This was achieved by calling the official YouTube API provided by Google. Data was then processed and used to generate the following results, displayed in Figure 1.
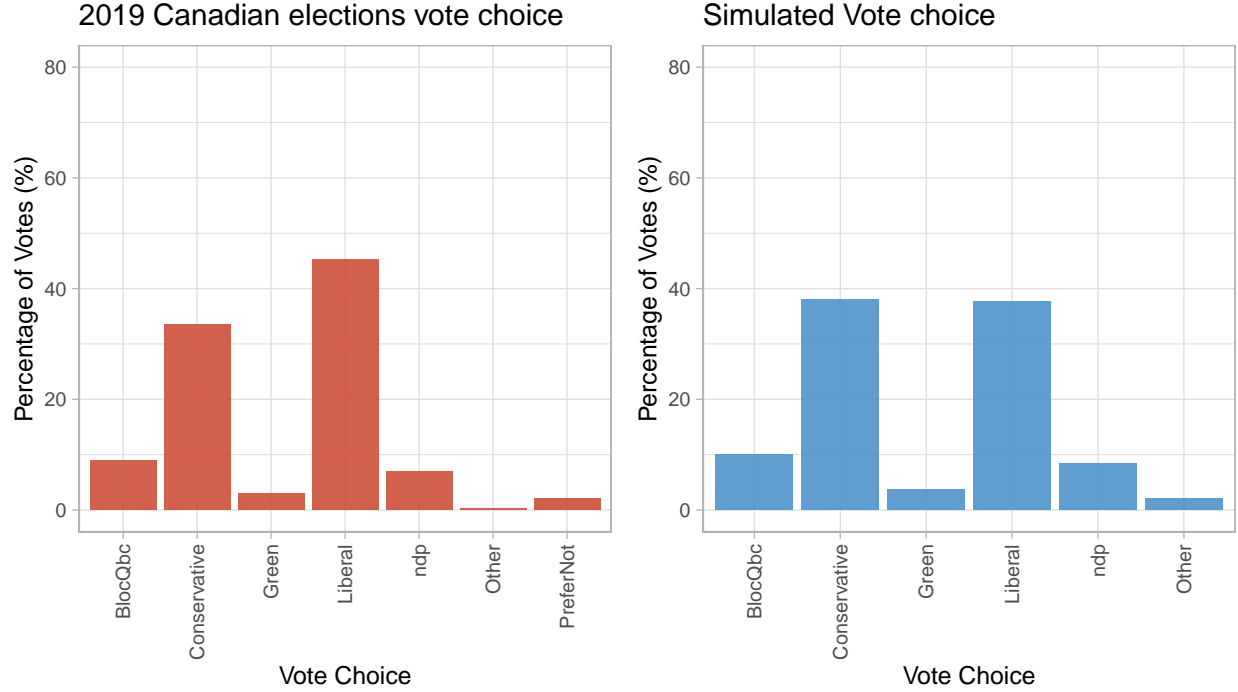
Figure 1: Results for question 'For whom did you vote in the 2019 Canadian federal elections?'

As can be seen there has been a small loss of approximately 3%.

Introduction

Survey Methodology

The objective of the survey is to analyze the impact of the incoming COVID-19 second wave on Canada's population political views.

The population to be sampled will be the Canadian population. Provided access to a list of addresses and corresponding emails which will be used as a frame for this experiment, we generate $\mathbf{S}_h$ by stratified simple random sampling (SRSWOR).

Table 1: Stratum Sizes and Weights

Province	Stratum Weight	Stratum Sample Size
Newfoundland and Labrador	0.014	138
Prince Edward Island	0.004	43
Nova Scotia	0.026	258
New Brunswick	0.021	206
Quebec	0.226	2255
Ontario	0.388	3874
Manitoba	0.036	363

Province	Stratum Weight	Stratum Sample Size
Saskatchewan	0.031	311
Alberta	0.116	1162
British Columbia	0.135	1355
Yukon	0.001	12
Northwest Territories	0.001	12
Nunavut	0.001	11

We seek a 95% confidence accuracy in this study.

Results and Discussion

Apendix

References

Dillman, Don A., Michael D. Sinclair, and Jon R. Clark. 1993. "Effects of Questionnaire Length, Respondent-Friendly Design, and a Difficult Question on Response Rates for Occupant-Addressed Census Mail Surveys." *Public Opinion Quarterly* 57 (3): 289. https://doi.org/10.1086/269376.

Marcus, Bernd, Michael Bosnjak, Steffen Lindner, Stanislav Pilischenko, and Astrid Schütz. 2007. "Compensating for Low Topic Interest and Long Surveys." *Social Science Computer Review* 25 (3): 372–83. https://doi.org/10.1177/0894439307297606.

Wu, Changbao, and Mary E. Thompson. 2020. *Sampling Theory and Practice.* Springer International Publishing.