

Ontario Federal Election Forecast

Justin Lee

2020-10-07

Executive Summary

The Canadian Polling Company Petit poll has been tasked by The Liberal Party of Canada to survey the province of Ontario to understand whether people are likely to vote for the Liberal Party in the upcoming 2020 election. This is a part of monthly polling updates to be submitted to the Liberal Party. In order to acquire this information, it had been decided that a political survey would be sent out to the population of interest. Thus a Google Forms Survey was produced to answer relevant questions. These surveys were sent out to a list of email addresses acquired from previous Canadian Federal Elections.

It was found that a majority of individuals responses to the survey questions indicated that a 40.5% percent majority would vote for the Liberal Party of Canada if an election were to be held today. The second majority was the Conservative Party of Canada, in which 29.5% of response reported they would vote for them. The third majority, 20.6% said that they would vote for the New Democratic Party. In addition, it was found in the stimulated survey responses that a majority of individuals in Ontario Strongly Approve and Somewhat Approve of the way the Liberal Party is currently handling their position in the federal government.

This information matters because it details the political views at a provincial level. Specifically in Ontario, we can approximately gauge the political views of citizens through these survey responses. Even so, there is some weaknesses in the fact that it is not feasible to survey every single eligible voting citizen in Ontario simply because there is no guarantee a response will be received from everyone. Because of this case, it is important that future work in any political party consists of yearly or even monthly polling updates in order to better understand the majority political views of citizens in Canada.

Introduction

The following report aims to provide polling information from citizens in Ontario to the Liberal Party of Canada. Google Forms was utilized in created distributable surveys to various citizens in Ontario. A list of email address from previous Canadian federal elections were acquired in order to reach currently eligible Canadian voters in Ontario. Within this report contains various data and information on the stimulated survey responses received in Ontario. These response were analysed and visual graphed in order make sense of what they can indicate. In addition, all relevant survey questions, data and R code is embedded towards end of this report.

Survey Methodology

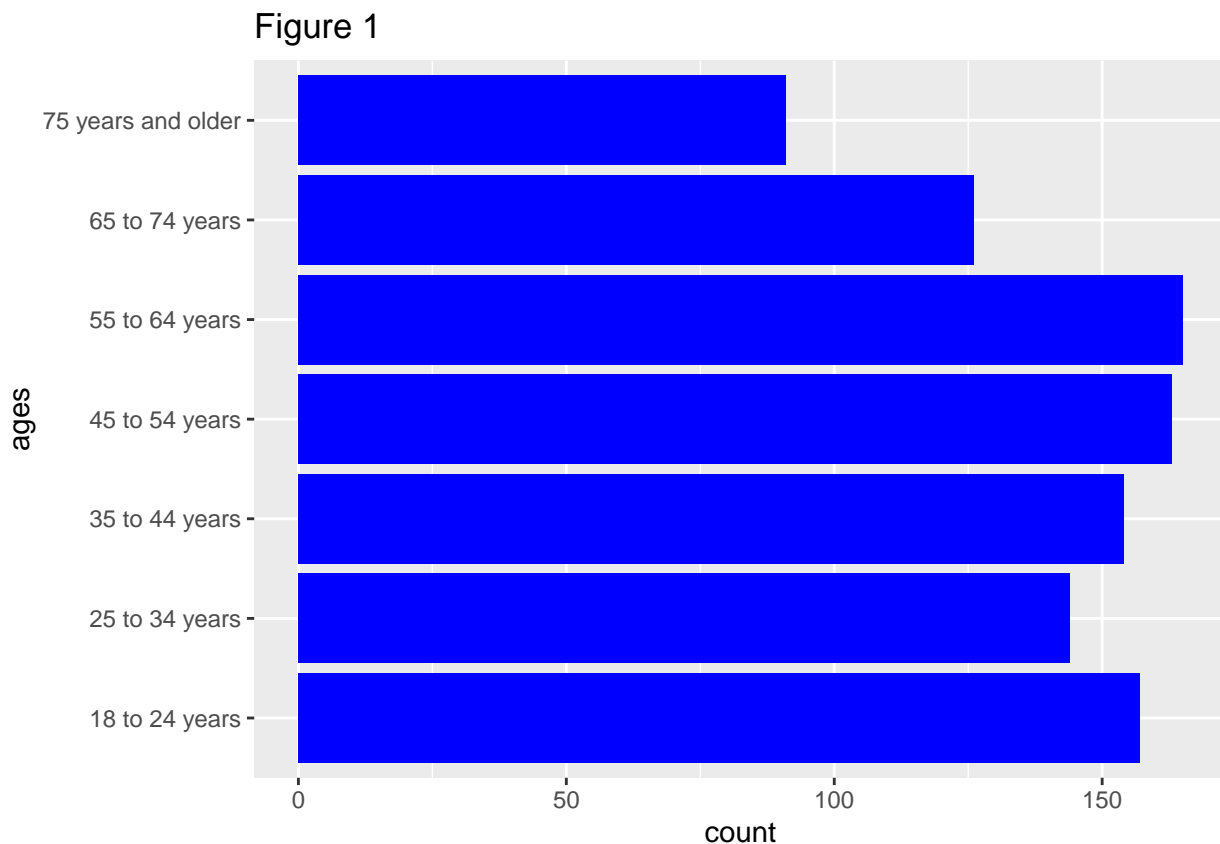
In order to acquire the relevant information, it was decided that stratified sampling was chosen as the sampling method. Stratified sampling involves splitting the population of interest into homogeneous groups and then simple random sampling is used with each of these split groups in order to pull results. Within this report the population are the citizens of Ontario and the sampling frame will be the list of email address

acquired in most recent federal elections. In this case, for stratified sampling, it was decided that the sample will be stratified based on age, since different age groups tend to influence political views. As such, samples were split into age groups through the responses of the google forms survey. It is estimated that this would cost roughly anywhere between \$5000-\$10000 to execute this survey sampling. Since Google forms is being utilized, the cost to create an actual survey is free. But labor cost in developing the survey and distributing through mass emailing and then consolidate that information in stratified sampling would incur labor costs for statistician. It is anticipated that \$5000-\$10000 would suffice. In regards to non-response, the surveys are designed to be very short in order to avoid possibility of non-response. Non-response can create bias within survey responses because it may be the case that those who didn't respond had drastically different political views than those that did respond. Additionally, all submissions for responses to these surveys are anonymous in order to protect respondent privacy.

Results

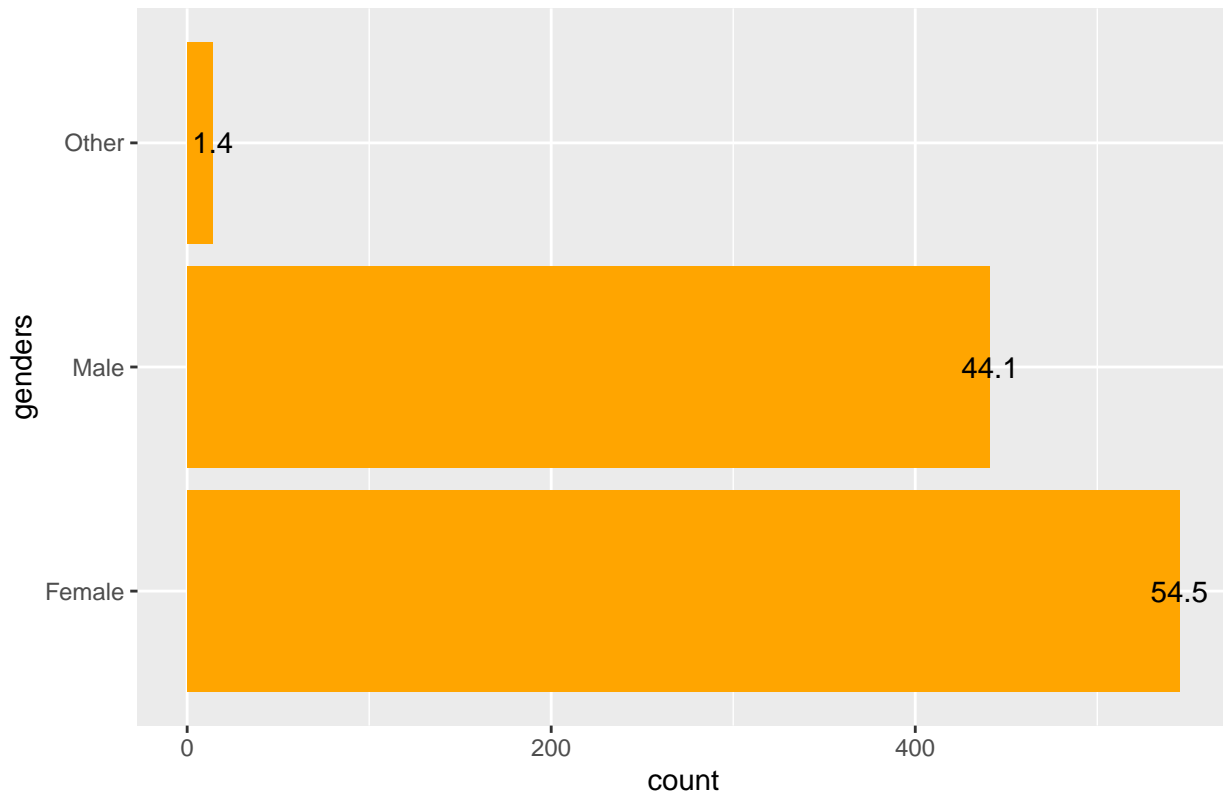
The created surveys were released into simulated fields using various R coded functions. In order to effectively simulate responses based on the selected stratified sampling method, proportions within Ontario's general population was derived from population estimates acquired from the following statistics Canada WEBSITE.

In order to accurately represent survey answers reflective of real responses within the simulated fields, proportions used in R coded functions were based on the most recent CBC polling tracker with information used at from updated ON OCT 7, 2020 AT 11:36 AM ET site. This link image was used as these were the most recent polling tracker percentages for the province of Ontario. From these proportions, the following responses were received through simulated fields in R.



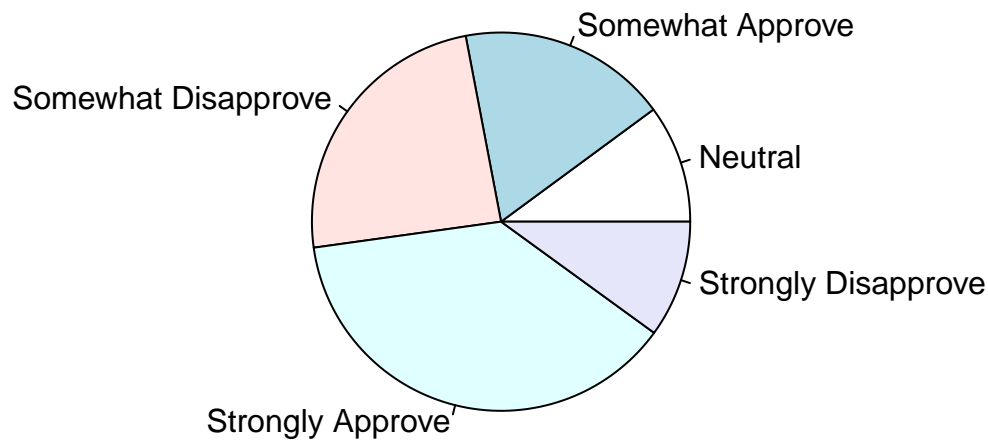
In figure 1 we have a count of the varying ages of all responses acquired from the survey.

Figure 2



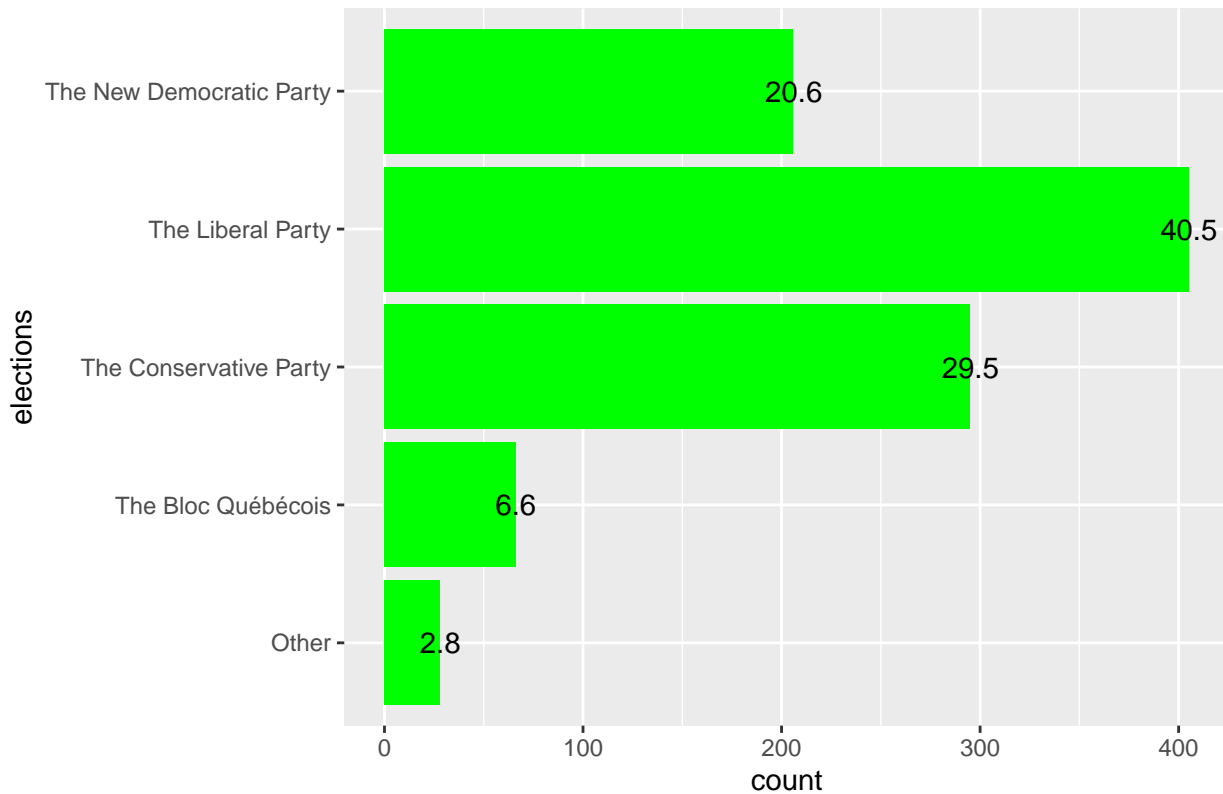
From Figure 2, we see that from the simulated survey responses we have 44.1% individuals are males, 54.5% individuals are female and 1.4% are other.

Figure 3



In figure 3 we see that a majority of sampled response to the survey question “Overall, do you approve or disapprove of the way the Liberal Party is handling their position in the federal government?” as being either Strongly Approve or Somewhat Approve. Overall, it seems the general majority of individuals in Ontario are content with how the Liberal Party is conducting their job in the federal government.

Figure 4



With Figure 4, results from the survey showed approximately 40.5% of individuals responding saying they would vote for the Liberal Party if an election were held today. The second majority was 29.5% of response indicating that individuals would vote for the Conservative Party if an election were held today. The third majority was 20.6% of responses saying that they would vote for the New Democratic Party. This indicates a good majority of citizens in Ontario would support the vote for the Liberal Party of Canada. Based on this data, it seems that the Conservative Party and the New Democratic Party are the leading competing parties for future federal elections.

Weakness and Areas for Future

Within this report a select few shortcomings were faced with regards to acquiring appropriate proportions for simulating response survey data in R. This can be tackled through further analyzing additional possible variables that can affect political views. Variables such as income level or ethnicity will be noted in future work in polling update surveys. For future work, it is noted that the importance of this political polling information is beneficial to any political party running in federal elections or even preparing for them. As such, using surveys is one of the most beneficial and effective ways to acquire information about various populations of interest. Even if survey responses cannot effectively be received, there is benefit in using simulating fields, so long as the proportions within the fields are accurately representing the population of interest.

Appendix

A digital copy of the created Survey can be found by clicking [HERE](#)

Screenshots of the Survey can be found [HERE](#)

All relevant R Code performed for this report can be found [HERE](#)

References

- “CBC News Canada Poll Tracker.” CBCnews, CBC/Radio Canada, newsinteractives.cbc.ca/elections/poll-tracker/canada/.
- Government of Canada, Statistics Canada. Population Estimates on July 1st, by Age and Sex, Government of Canada, Statistics Canada, 29 Sept. 2020, www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710000501.
- Hadley Wickham, Romain François, Lionel Henry and Kirill Müller (2020). dplyr: A Grammar of Data Manipulation. <https://dplyr.tidyverse.org>, <https://github.com/tidyverse/dplyr>.
- H. Wickham. ggplot2: Elegant Graphics for Data Analysis. Springer-Verlag New York, 2016.
- Kirill Müller and Hadley Wickham (2020). tibble: Simple Data Frames. <https://tibble.tidyverse.org/>, <https://github.com/tidyverse/tibble>.
- R Core Team (2020). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org/>.
- Wickham et al., (2019). Welcome to the tidyverse. Journal of Open Source Software, 4(43), 1686, <https://doi.org/10.21105/joss.01686>