

How do Progressive Conservative Party in Manitoba attract more voters in the upcoming election?

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Executive summary

Our company, Petit Poll, considers to “work for” the Progressive Conservative Party by signing a contract. We mainly focus on one of the Canadian provinces — Manitoba, which is located near Ontario and known as the fifth-most populous province in Canada. In order to collect data of citizens’ political opinions and preferences, our company decided to take a survey and conduct it via email to attract Manitoba citizens participating. We encouraged more citizens in Manitoba to join our survey investigation through awarding the participants who complete the survey with a C\$15 gift card. We surprisingly find out that the majority of our supporters are mid-aged groups with a relatively high education and income levels.

In addition, we consider summarizing their demands on increasing educational investment, improving employment opportunities and medical insurance coverage. Unfortunately, the investment in medical and education areas of our Party— Progressive Conservative Party still remains to be improved. There was an inadequate input of revenue into the medication and education from Progressive Conservative Party. Nonetheless, our Party has done an excellent job on decreasing the unemployment rate and creating more working positions which successfully get attention from voters.

The survey reflects the citizens’ satisfaction level on each Party and thus this would be extremely crucial for the next election. However, some citizens still keep silent and not engage in the survey which leads to inaccurate data during the analysis process. Since we make references to previous elections data, it is possible to gain more valuable dataset from recent information. We admit that gift cards are not attractive to every citizen since people with higher income are less likely to answer surveys than low-income groups. Therefore, our outcome will be less representative for high-income people.

In the future, Progressive Conservative Party in Manitoba could increase their spending on medical insurance and introduce a universal health-care plan to gain voters’ attention. By slightly reducing the investment on dealing with the problem of unemployment, paying more attention to the two other social issues: education and health care.

Introduction

The Progressive Conservative Party is known as the “Tories” which sits almost at the center-right of the political spectrum and dominates the federal power for over a century in Canadian history. The Progressive Conservative Party became active due to the creation of the province Manitoba in the 19th century under the leadership of Brian Pallister, and it still remains the majority of seats in the Assembly of Manitoba.

Our company is interested in ways to attract and encourage more citizens to vote for the Progressive Conservative Party in Manitoba. Thus, our team members conduct the survey from a wide range of population in Manitoba to gather the citizens’ personal information and their political views. By summarizing the data and plotting into graphs, we could analyze the characteristics of our supporters. We count the number of voters for each party through the statistical data of our survey and divide those participants into different genders, ages, religions and income levels they have respectively by drawing Figure 1-5. By

conducting the survey investigation, we collect the data from three main areas: employment rate, medical care and education. We compare the data of respondents' comments on how the Progressive Conservative Party did in the past in addressing these three social issues. We draw Figure 6-9 to illustrate the voters' views on each party and analyze the graphs by concluding the specific feedback for our Progressive Conservative Party and planning the future expectations for our Party's developments.

It is obvious that the Progressive Conservative Party plays an effective role in increasing employment rate while it is not particularly concerned about health care and education. Conversely, as competitors, the Green Party and New Democratic Party invest heavily in medical insurance. Our party can put more effect on health care and education to attract more supporters since many people will vote for parties, which largely invest in the medical and educational area. At last, we indicate the weaknesses and improved methods for the non-response of the survey.

Survey methodology

In this survey investigation, the population we are focusing on is all Canadian citizens in Manitoba who are aged at 18 years old or above and the sample is 1000 Canadian citizens in Manitoba who are randomly selected to answer our emails. The frame is a list of emails that registered in the government.

We aim to use simple random sampling to demonstrate the gender, age, religion, income distribution of respondents, and the voters' social views on employment, medical care and education in a particular province Manitoba. By using the simulation method, we can make sure that every sample has equal probability to be chosen and thus the data will be more accurate to analyze.

In order to reach our desired respondents, we could gather the citizens' email addresses from the government because they had already registered their emails in the government. By sending out the survey via email, we wish to collect the citizens' personal information and their valuable opinions on different Parties in province Manitoba. Since conducting the survey via email is the most efficient way, we randomly send the email survey to the citizens in Manitoba by using the simple random sampling without replacement (SRSWOR). This ensures that a large variety of population in Manitoba such as citizens in different ages, cultures or education levels could participate in this survey.

In purpose of reducing the non-responsive surveys, we offer the awards for citizens who actively respond to the survey. For instance, we will provide a C\$15 gift card for those people who completely answer the survey to encourage them to share their political views. The non-response will affect the sample size of the entire survey since it may change the outcomes of each survey question. Thus, this is necessary to reduce non-response in order to lessen its influence and obtain precise and reasonable data for our survey.

Since we need to provide gifts for those people who respond to the survey, we need at least C\$15 for each participant. Suppose we receive 1000 available surveys from the citizens, then we will pay at least C\$15000 for this survey investigation. Additionally, we have to pay for the labour fee as we may hire employees to send out those emails to each person via network. This will cost C\$20 in one hour for a single employee. In total, this would probably cost us about C\$15040 (C\$15000 for gift card and C\$40 for labor fee).

To protect respondents' privacy, every team member will sign a privacy contract. The team members will make a copy of the privacy contact and email it along with the survey.

Discussion

Graphs and Results

In Figure 1-8, "L" stands for Liberal Party, "C" stands for Progressive Conservative Party, "G" stands for Green Party, "N" stands for New Democratic Party, "O" stands for Other, "Undecided" stands for uncertainty about voting.

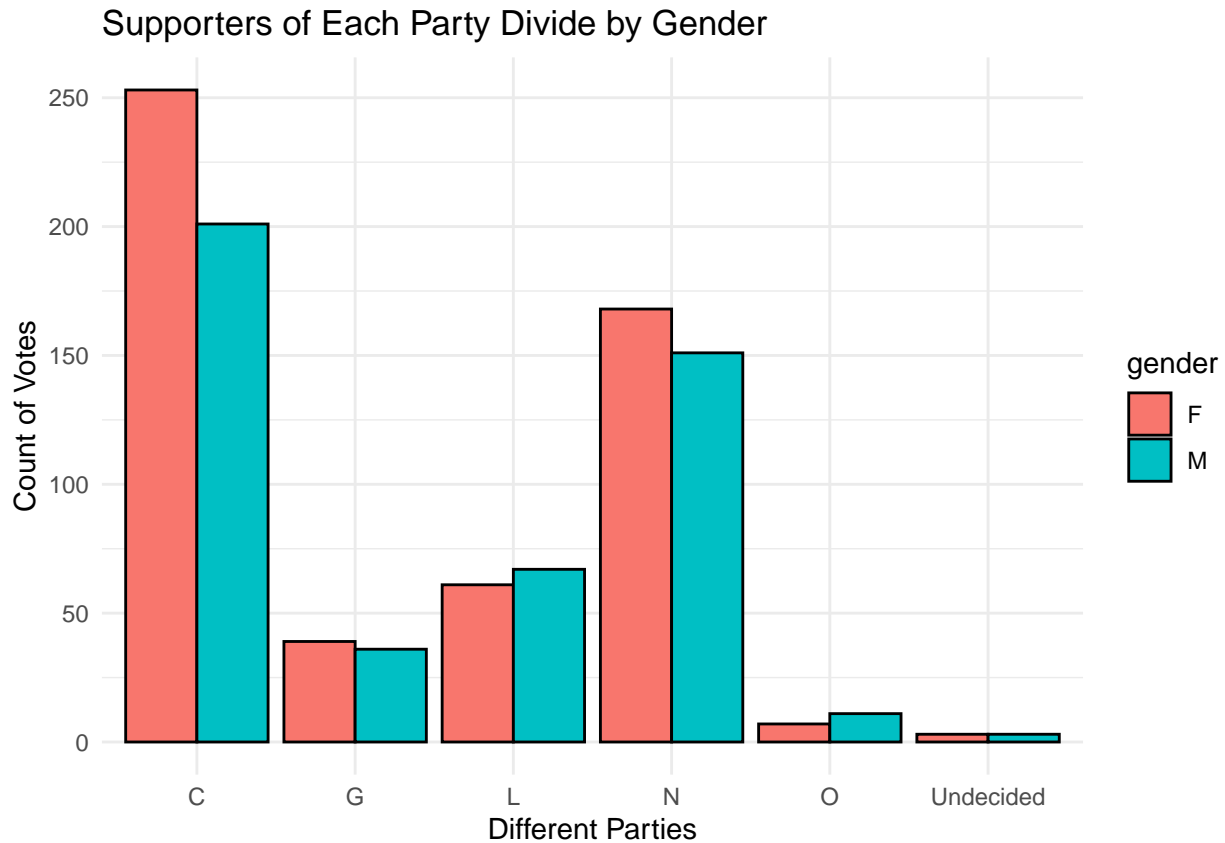


Figure 1: Graph 1.1

In Figure 1, the bar plot clearly shows the gender of voters in each party. Male and female make different choices when answering the question 'Which party would you like to vote?'. Out of all citizens surveyed, Progressive Conservative Party has become the most popular party, with about 250 female voters and 200 male voters. Followed closely by the New Democratic Party. It becomes the second most popular party, with about 170 female voters and 150 male voters. Interestingly, both parties win more support from female voters. Differently, more male voters are willing to support Liberal party than female voters. Meanwhile, the Green Party has about the equal number of supporters from both genders.

Age distribution of Participants

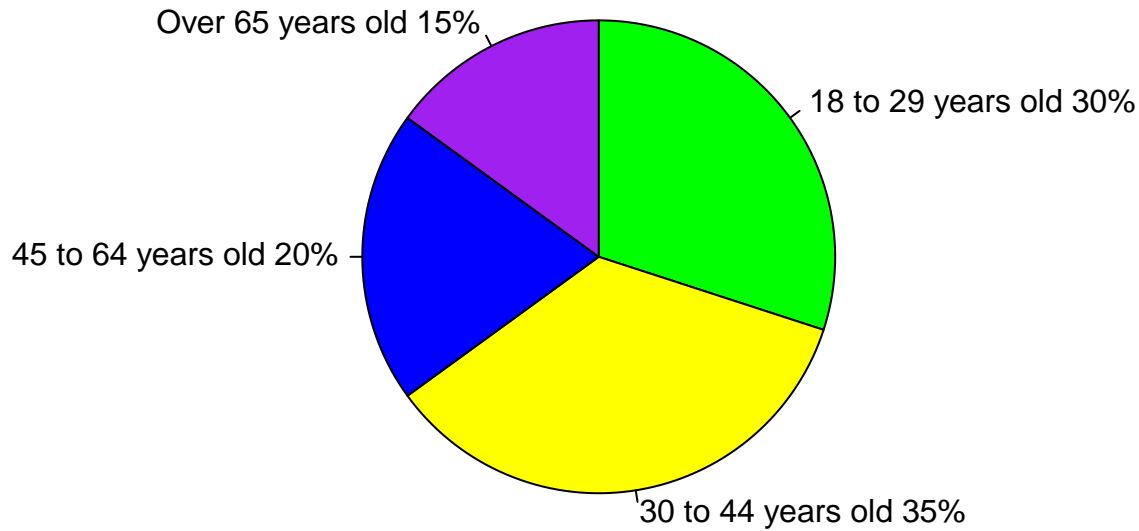


Figure 2: Graph 1.2

The Number of Respondents in Different Ages that Vote for Each Party

##	vote						
##	age	C	G	L	N	O	Undecided
##	18-29	133	22	51	103	4	3
##	30-44	158	30	32	100	4	1
##	45-64	83	14	27	63	6	2
##	Over 65	80	9	18	53	4	0

Figure 3: Table 1.1

Figure 2 and 3 indicate the relationship between the age period of respondents and the party they vote for. In Figure 2, we describe the age distribution of respondents in percentage. From this graph, we indicate 35 percent of our participants are about 30 to 44 years old and 30 percent of voters are young people who are 18 to 29 years old. These two age periods almost dominate the two-thirds of the pie chart, and only about one-third of people who take part in our survey are above 45 years old. Figure 3 numerically describes the number of participants who vote for each party in different age periods. From this table, the Progressive Conservative Party wins dominant support among every age period. Moreover, among all age periods, most people who are 30 to 44 years old choose to vote for the Progressive Conservative Party. The New Democratic Party holds the second dominant support from all age periods. However, the Green Party has the least support from people in different age periods.

The Number of Respondents with Different Religious Beliefs that Vote for Each Party

##	vote						
##	religion	C	G	L	N	O	Undecided
##	Buddhist	5	2	0	3	0	0
##	Christian	291	45	79	217	11	6
##	Hindu	1	2	1	3	0	0
##	Jewish	13	0	3	6	0	0
##	Muslim	11	1	6	3	0	0
##	None	129	25	39	87	7	0
##	Other	4	0	0	0	0	0

Figure 4: Table 1.2

Figure 4 shows the number of supporters from each party and the religion they believe. In this table, we can see that most of our respondents are Christians or atheists and only a few participants are Buddhists, Hindus, Jewishes, Mulisms and from other religions. The Progressive Conservative Party wins 291 Christian supporters, which has a higher number of Christian supporters compared to the number of Christian supporters who vote for the New Democratic Party. The Progressive Conservative Party also wins dominant votes among atheists.

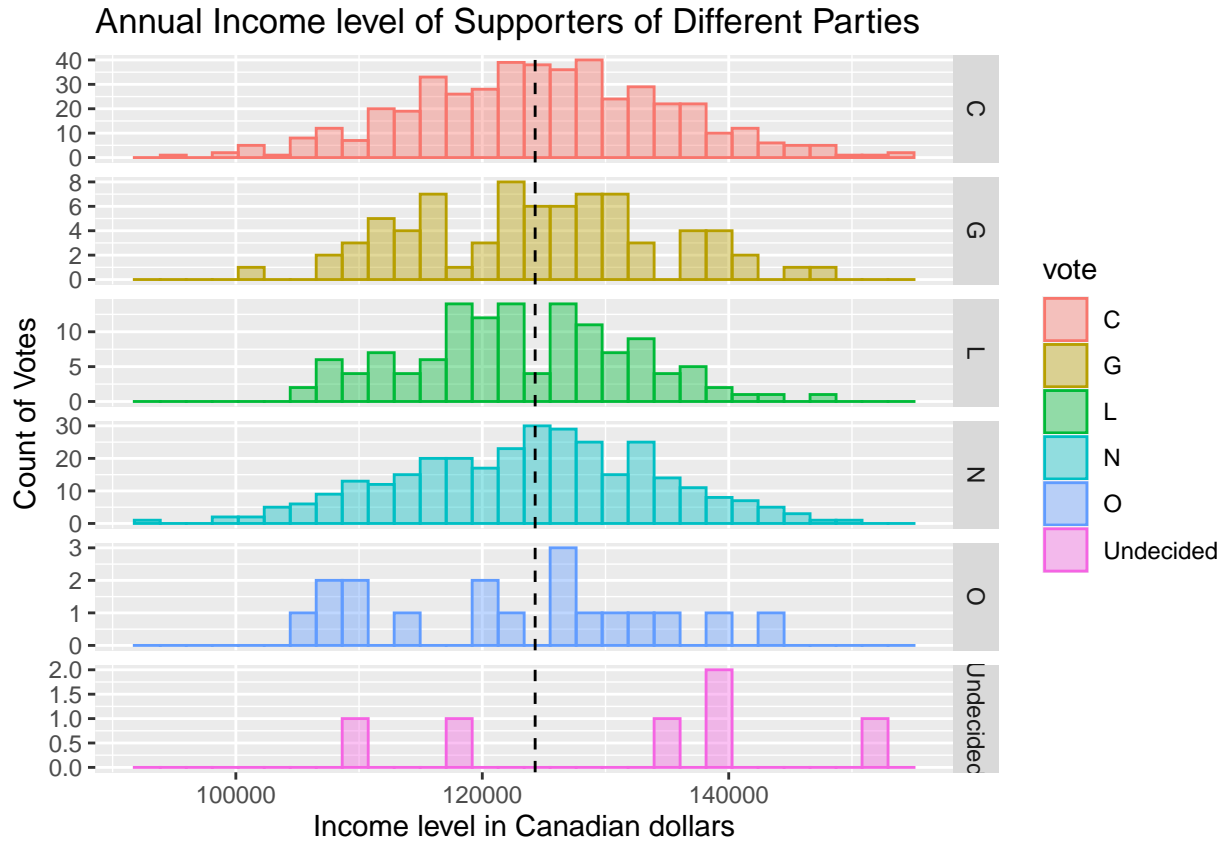


Figure 5: Graph 1.3

Figure 5 illustrates the Party that the respondents would like to choose and their overall annual income levels in the range from 31,300 Canadian dollars to 551,000 Canadian dollars. Based on the histograms, we can clearly view that the majority of the supporters vote for the Progressive Conservative Party. The supporters' income levels are distributed normally with the mean 124,000 Canadian dollars in the Progressive Conservative Party and New Democratic Party. The distribution of supporters' income in the Liberal Party is bimodal and relatively less spread out.

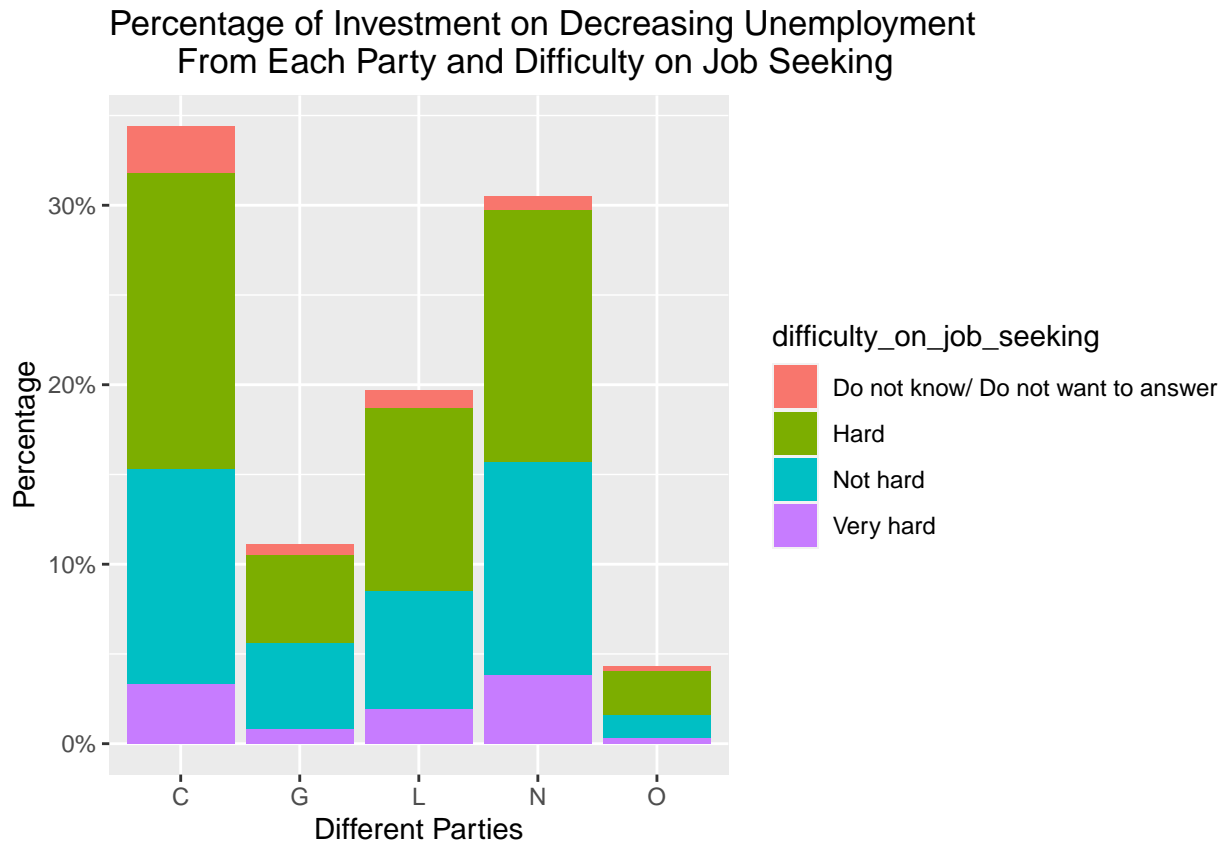


Figure 6 : Graph 2.1

In Figure 6, it reflects the percentage of investment from each party on decreasing the unemployment rate and the difficulty of seeking a job from participants' point of views. The Progressive Conservative Party and New Democratic Party take useful actions in decreasing the unemployment rate as both of them invest large percent of money on reducing unemployment. It is obvious that unemployment becomes a common question in all Parties that approximately 70% of citizens believe it is difficult for them to apply for a job. Nevertheless, the Green Party did almost nothing to solve the problem of unemployment since they only invest around 10% on lowering down the unemployment rate.

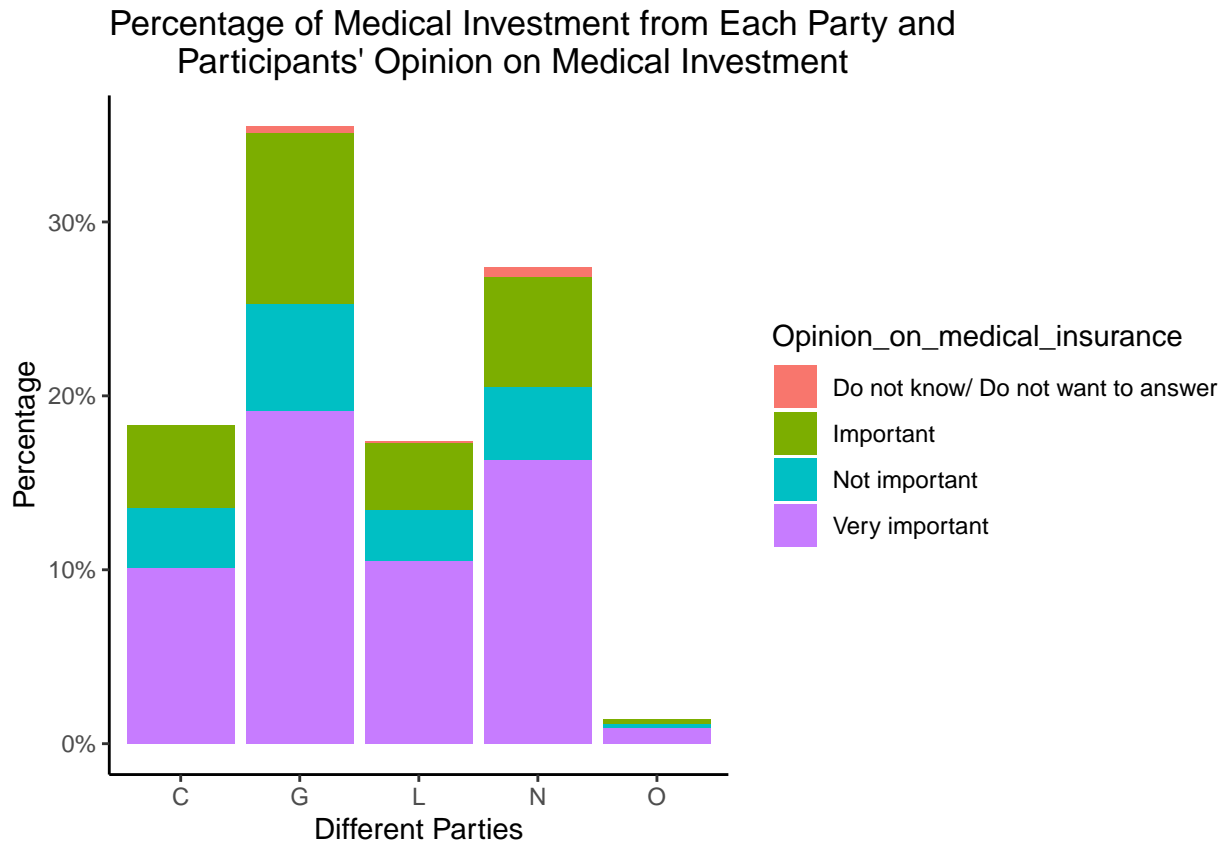


Figure 7: Graph 3.1

In Figure 7, the bar chart summarizes the percentage of medical investment from each party and citizens' opinion on the importance of medical investment. From the bar chart, it is obvious that the Green Party invests most money into medical care and they dominate over 30% of the total medical investment. Similarly, the New Democratic Party also devotes the second-largest investment to medical care including medical insurance among all the parties. Conversely, Liberal Party and Progressive Conservative Party remain low investment in the medical area since neither of them reach 20% in medical investment respectively. However, most of the citizens in Manitoba believe medical investment is very important to them and this could be viewed from the graph that over 50% of citizens are strongly supporting more investment into healthcare.

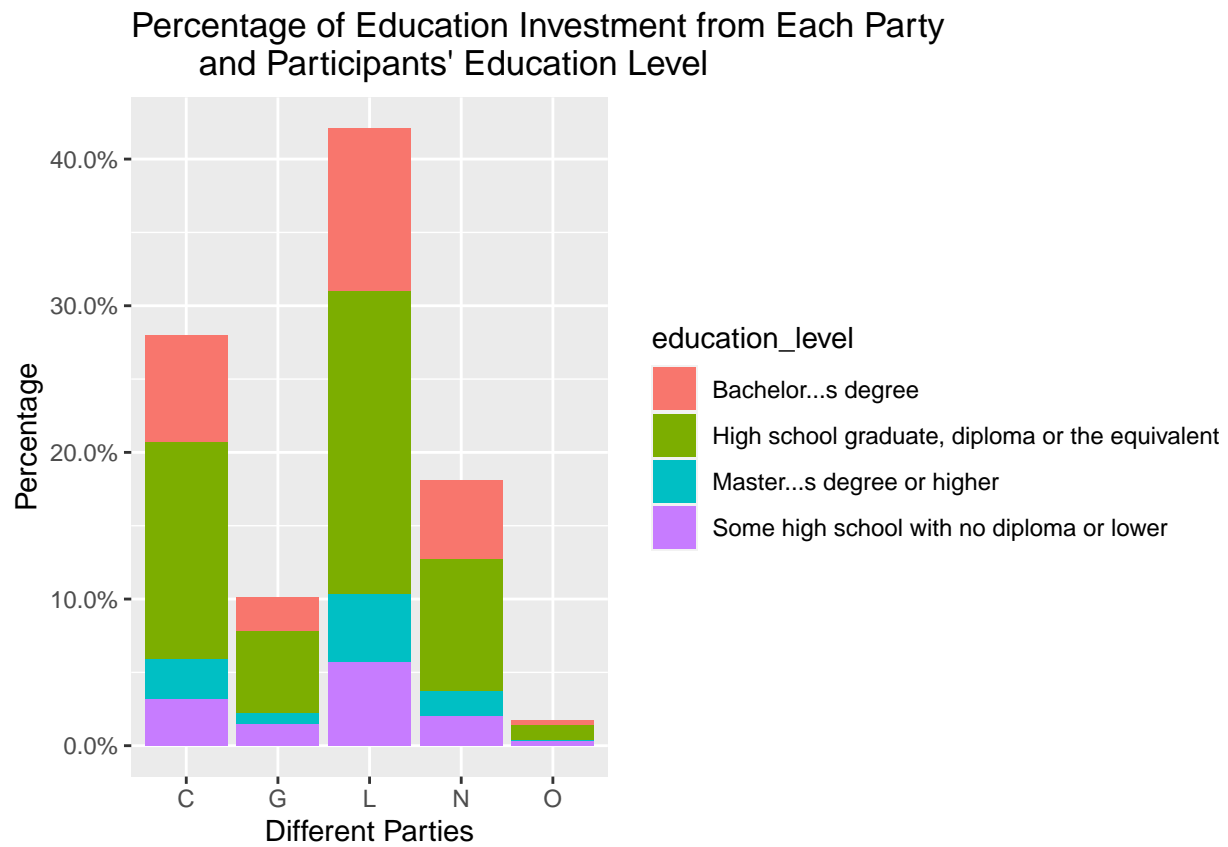


Figure 8 : Graph 4.1

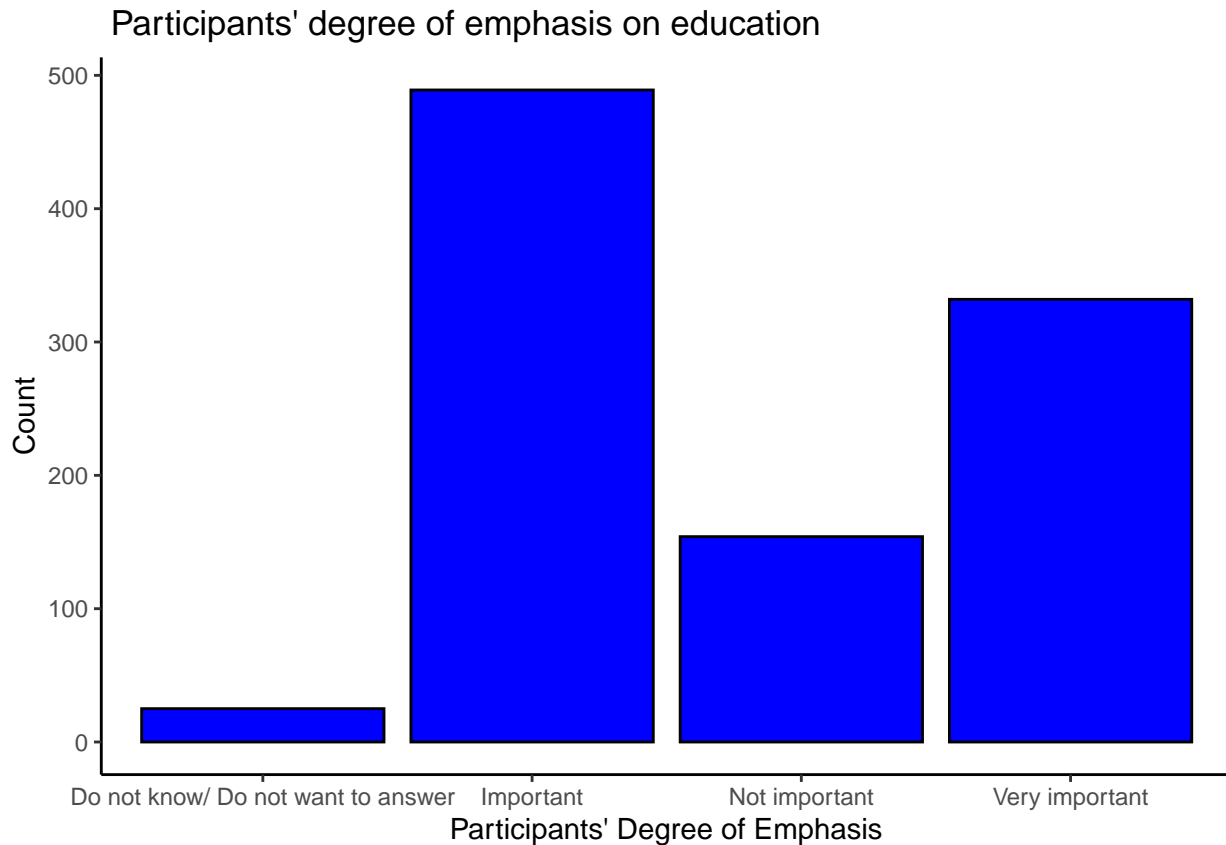


Figure 9 : Graph 4.2

Figure 8 and 9 indicate the education sections in the aspects of education levels of respondents, the different percentage of parties' investments on education, and the importance of education in voters' views.

In Figure 8, it illustrates the percentage of education investment from each party and the distribution of participants' education levels in a bar chart. Most of the citizens have a high school diploma or higher degrees and only approximately 10% of the participants have education levels less than high school. The Liberal Party spends the most money on education, more than a percentage of 40%, which means almost half of the education investment comes from Liberal Party. In addition, the Progressive Conservative Party invests the second-most money into education and most of the supporters from Progressive Conservative Party are highly educated. There are relatively low investments from the Green Party and New Democratic Party, though the majority of their supporters achieved a high degree in education. From Figure 9, it demonstrates the degree of emphasis on education from the supporters' perspectives. Apparently, education is crucially important to over 300 participants and less than 200 people do not pay much attention to education. On the whole, the majority of them agree with the importance of education and this may explain whether most of the participants are highly educated.

Explain where the dataset come from

To get a dataset, we make the survey and we also consult the previous dataset online. Our survey includes questions about responders' personal information and political point views. We collect samples through the survey and we use samples to estimate views of all Canadian citizens in Manitoba. According to the survey, we can obtain the data of citizens' income levels, age distribution, education degrees, ect. We can also consider the previous dataset as a reference.

Bias

According to our data, the majority of Manitoba people vote for the Progressive Conservative Party. Thus, there exists a bias for the survey questions about how the Party does in the aspects of employment rate, health care and medical insurance. Since most people support the Party and they may not be sure what the Party does in dealing with these three social issues, people may blindly believe that the Progressive Conservative Party did well in the past without any updated information. The only way to adjust or relieve this bias is increasing sample size. As the sample size increases, the influence of bias will be significantly reduced and the survey results will be more reliable. Nevertheless, the larger sample size we have, the more money we use for giving gift cards.

Conclusion

By conducting the survey investigation, we mainly collect the data from three main areas: employment, medical care and education. The unemployment issue still seriously affects most of the citizens and the majority of them realized the importance of seeking a job under the help of Parties. With practical actions taken by the Progressive Conservative Party, this would certainly alleviate unemployment since they invest large amounts of money to lower the unemployment rate. This plays an effective role in attracting supporters and boosting up the possibilities to win the next election.

By comparing the Progressive Conservative Party with other Parties, the investment in medical and education areas still remains to be improved. Based on participants' opinions on their current medical insurance plans, health care still plays a vital role in citizens' daily life. Over 70% of the participants believe that medical insurance is extremely important, thus the Party with higher investment in medical care could possibly win more votes. From the data in previous years, there was an inadequate input of revenue into the medical care plans from Progressive Conservative Party. Conversely, two of the biggest competitors, the Green Party and New Democratic Party had invested heavily in medical insurance and increased their spendings on health care. This damages the profits of the Progressive Conservative Party and may cause them to lose supporters.

In addition, the educational investment of the Progressive Conservative Party is on an average level without any extraordinary performance. Although the supporters from Progressive Conservative Party are highly educated, the Party is not particularly concerned about education. However, most of the participants are aged between 30 and 44 years old, which is extremely possible for them to have children at that age. Thus, they may put emphasis on their children's education and are more likely to support the Party with higher investment in the education area. If the Progressive Conservative Party focuses more on education, this would possibly attract the majority of the population.

Weaknesses and Limitations

To reduce the non-responsive surveys, we offer gift cards for participants who completely answer the survey. However, we admit that gift cards are not attractive to everyone though it does encourage more people to finish the survey. That is, people with higher income are less likely to answer surveys than those who have lower income, which means our outcome will be less representative for groups with higher income. Aside from that, we can't ignore the fact that respondents will not always provide accurate, honest answers when doing the survey. While, our data strongly relies on respondents' answers, so we can only suppose that they provide honest answers. Participants are easy to lie to when coming to some personal questions like 'What is your income?' or 'What is your highest degree you have completed?'. They may not feel comfortable providing answers which show they have lower income and lower education level. All these will affect our result of the study.

Simple Random Sampling Without Replacement (SRSWOR) is used in our survey. Although it has advantages like simplicity, its weakness is also obvious. For SRSWOR to work, a large sample size is mandatory, which makes the research become more time consuming. Unlike Stratified Random Sampling, we do not divide people into groups according to their characteristics. That is, one sample can't be representative for a group, so a large sample size is required to prevent bias. Therefore, we will spend more time and money on collecting data than groups which use other sampling methods.

Future expectation

From our conclusion, people in Manitoba have a high degree of emphasis on three social issues including employment, health care and education. After the analysis of the results, the Progressive Conservative Party paid more attention to increasing the employment rate and creating more working positions. Moreover, it invested money to help education to a certain degree. However, the plan for medical insurance of the Progressive Conservative Party was still in progress and lasted a long time to introduce. Among these three aspects, the Progressive Conservative Party should focus more on people's medical insurance. For example, leaders of the Party can highly encourage the introduction of new medical plans and denote more money on drug discoveries to help more patients. In the education aspect, the Party can denote part of investments on building new schools and develop more labor force of professors and school teachers. Although respondents think the Party was helpful on increasing the employment rate, we cannot ignore the future job seeking problems as well. The main goal of the Progressive Conservative Party is to a certain extent, slightly decreasing the energy on addressing the unemployment problems, and paying more attention to the other two social issues: education and health care.

Appendix

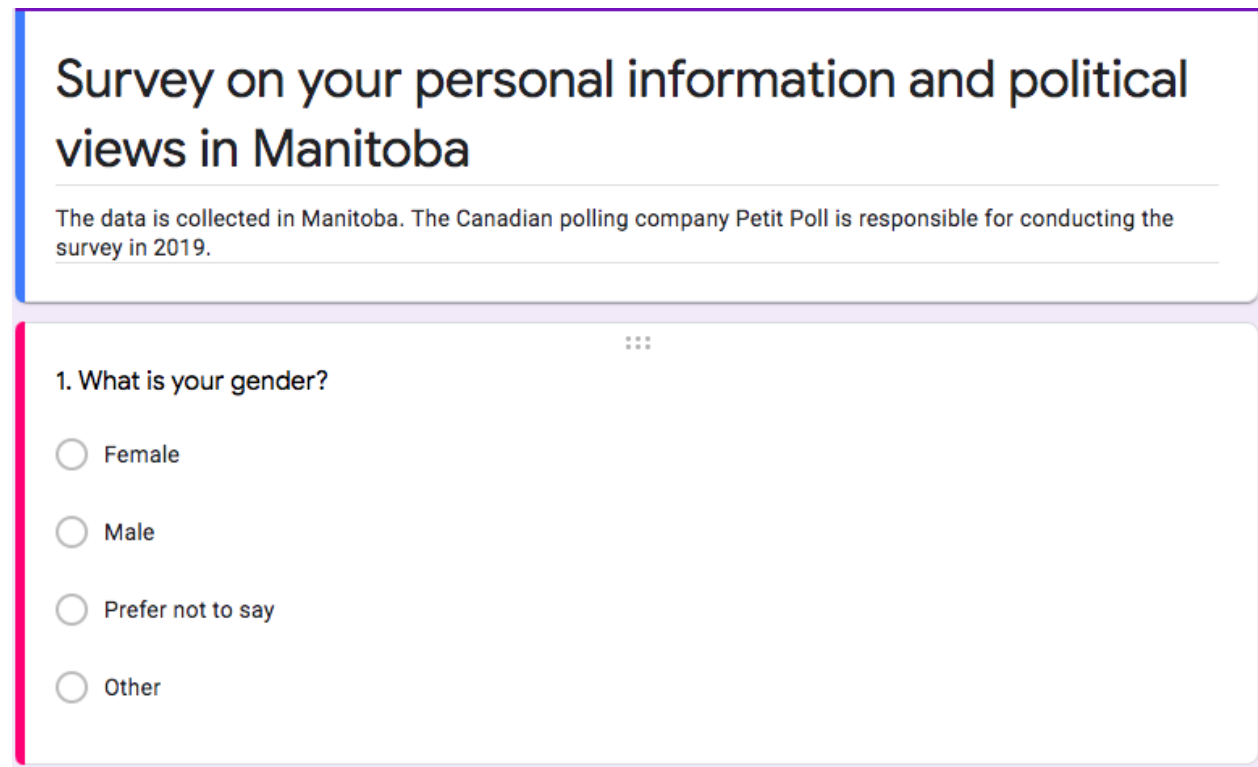
Github repo:

Codes are used from <https://github.com/Jinwen-Tao/How-Progressive-Conservative-Party-attracts-voters/blob/main/How%20do%20Progressive%20Conservative%20Party%20in%20Manitoba%20attract%20more%20voters%20in%20upcoming%20election.Rmd>

Survey link:

<https://docs.google.com/forms/d/1s3IeOE6F5ic51g0lbC6or2mO3qbnFy2xvZ1-xPVFwds/edit>

Survey screenshots:



Survey on your personal information and political views in Manitoba

The data is collected in Manitoba. The Canadian polling company Petit Poll is responsible for conducting the survey in 2019.

1. What is your gender?

☐ Female

☐ Male

☐ Prefer not to say

☐ Other

Figure 10: Graph 5.1

2. What is your age? (in years old)

- ☐ 18-29
- ☐ 30-44
- ☐ 45-64
- ☐ Over 65

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3. Which religion do you believe?

- ☐ None/ Atheist
- ☐ Buddhist/ Buddhism
- ☐ Jewish
- ☐ Muslim
- ☐ Christian
- ☐ Hindu
- ☐ Other

Figure 11: Graph 5.2

4. What is your personal income last year in Canadian dollars ?

- ☐ 0
- ☐ 1- 9 999
- ☐ 10 000 - 24 999
- ☐ 25 000 - 49 999
- ☐ 50 000 - 74 999
- ☐ 75 000 - 99 999
- ☐ 100 000 - 149 999
- ☐ 150 000 and greater
- ☐ Prefer not to answer

Figure 12: Graph 5.3

5. What is your highest degree or level of school you have completed?

- ☐ Some high school with no diploma or lower
- ☐ High school graduate, diploma or the equivalent
- ☐ Bachelor's degree
- ☐ Master's degree or higher
- ☐ Other

Figure 13: Graph 5.4

6. Which party do you prefer to vote for?

- ☐ Liberal Party
- ☐ Green Party
- ☐ Progressive Conservative Party
- ☐ New Democratic Party
- ☐ Other
- ☐ Undecided
- ☐ Prefer not to say

Figure 14: Graph 5.5

7. Which party do you think invest most in health care and medical area in 2019?

- ☐ Liberal Party
- ☐ Green Party
- ☐ Progressive Conservative Party
- ☐ New Democratic Party
- ☐ Other
- ☐ Do not want to answer/ Do not know

Figure 15: Graph 5.6

8. Do you think medical insurance and medical care are important to your life?

- ☐ Very important
- ☐ important
- ☐ Not important
- ☐ Do not know/ Do not want to answer

9. Which party do you think takes useful actions on addressing unemployment issues in 2019?

- ☐ Liberal Party
- ☐ Green Party
- ☐ Progressive Conservative Party
- ☐ New Democratic Party
- ☐ Other
- ☐ Do not want to answer/ Do not know

Figure 16: Graph 5.7

10. Do you think it is hard for you to seek a job?

- ☐ Very hard
- ☐ Hard
- ☐ Not hard
- ☐ Do not want to answer/ Do not know

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11. Which party do you think invests more money on education?

- ☐ Liberal Party
- ☐ Green Party
- ☐ Progressive Conservative Party
- ☐ New Democratic Party
- ☐ Other
- ☐ Do not want to answer/ Do not know

Figure 17: Graph 5.8

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12. Do you think it is very important for you to have a high education degree?

- ☐ Very Important
- ☐ Important
- ☐ Not Important
- ☐ Do not want to answer/ Do not know

Figure 18: Graph 5.9

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