Monthly Poll for Progressive Conservative Association of Nova Scotia

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Abstract

Following the recent Nova Scotia attacks in April 2020, people's votes are more important than ever in deciding their future. In this report we will investigate the approval ratings of the Progressive Conservative Association of Nova Scotia, following such an incident. We will attempt to categorize these findings by their age groups or knowledge of the incident to maybe find a correlation. This information could unlock potential in having the public's interest of the party increase with efficient use of the data.

We use R Core Team (2020), Ushey et al. (2020), Wickham et al. (2019), Allaire et al. (2020), Stephen Moore (2019),Leyland Cecco (2020), Jillian Kestler-D'Amours (2020), Wikipedia contributors (2020b), Wikipedia contributors (2020a), Canada Statistics (2016a), Canada Statistics (2016b)

Non-technical executive summary

With the April 2020 attacks and the ban of 'assault style' firearms in May 2020, the discussion of firearms has heightened. With this comes conversations of policies and laws that should be in place, and which parties will carry out such demands. This report is written to inform the Conservative party of Nova Scotia: Progressive Conservative Association of Nova Scotia (PC Party of Nova Scotia); about the current approval rating.

Through cluster sampling via mail, then random selection of responses, we asked the public of Nova Scotia their thoughts about the PC Party of Nova Scotia's policies and how willing they are to vote for the party. This information along with general questions aided us in in finding correlation in approval ratings and their age. This report provides critical data for the Progressive Conservative Association of Nova Scotia, as it could inform them of possible future policies to introduce to the public or maybe laws to be lobbied to the main government.

Through several graphs and table, we hope to enlighten the party of the current political climate of the province and help suggests solutions for possible problems.

Introduction

On the night of April 18th, 2020, a mass shooting lasted 12 hours, killing at least 22 peoples; some being public workers such as a nurse and firefighter. Following this heart-wrenching event, Canada introduced a ban of 'assault style' firearms nationwide to avoid such an event happening again. With how recent these incidents are, it brings up the conversation about gun control/violence. Bringing up these conversations make the public think more critically about their political stance and even for some, form one. The data here has been collected via online voluntary surveys and is filled with only closed questions, for easier categorization. Due to this and the nature of our survey being voluntary, we thought that we may receive more responses asking now rather than later when these conversations have died down. When examining the data, we tried to divide it through their age group and political affiliation to analyse people's opinion and their support of a party more easily. This will help the PC of Nova Scotia look at their current popularity to help gauge how the public feels about their policies and how they should adapt with these findings.

The survey itself was constructed with several goals in mind: to get a general opinion from the public while still being able to categorize these 'opinions' into charts and graphs. This challenge led to the creation of open-ended questions, but the answers themselves being closed, on a scale. The scale was made very distinctive to help those convey their specific opinion through a few words. Others were binary Yes/No questions, not necessarily for public opinion but for information on how educated our sample population were on our topic of interest. This data was collected through a two-stage process. First, is through cluster sampling then, narrowed down with simple random sample without replacement (SRSWOR), described in more detail below. This then leaves us with 100 responses to the survey. We created our data structures from then on.

Overall, this report will aid the PC Party of Nova Scotia when coming to the public with their policies and how to present their point. After looking at the data, we may want to approach the public in a gentler way as many of them may disagree with the party's opinions. Conversely, the party may find that this survey strongly supports their stance and provide greater confidence to move forward with their ideas. With the data below, we will explore the views of different people and how their political perspective directs their thinking.

```
# The code for this report can be found at
# https://github.com/karhian/PC-Nova-Scotia/blob/main/survey-pc-ns.Rmd
```

Survey methodology

Firstly, the objective of this survey was to gather information about the public's opinion on the Progressive Conservative Party of Nova Scotia. The sample population was Nova Scotian citizens. Through this survey we asked closed questions, but ones that contain a limited but varying scale of choices. This was deliberately done to capture a broad, but organized group of data to later be generalised. It was created on surveymonkey.com and was chosen specifically for its ingenious layout. It displays all questions on one page while still moving the respondent along by automatically scrolling down to the next question after confirmation of their answer. There is still the possibility of changing answers before submitting and backtracking. This allows the public to not feel like they are being conveyed a narrative by omission of further questions. We also place the question about knowledge of the Nova Scotia attacks at the end, to avoid pushing a narrative or prejudice, making people feel that they should answer a certain way.

As stated before, this survey was conducted through a two-stage process. Stage 1 is by cluster sampling. We chose cluster sampling for its convenience and low budget cost. Sending letters to a few districts instead of random people throughout Nova Scotia cuts down delivery costs and would speed up gathering of information overall. This was done by choosing two districts within Nova Scotia; and to avoid bias, each represented by opposing parties. First district was Lunenberg, which is represented by the Liberals. The second district chosen was Argyle, which is represented by the Progressive Conservatives. After choosing the electoral districts, each citizen within, were mailed letters which included a link to the website of the survey. This letter; intended for the head of the household; also encouraged them to go to a public place with Wi-Fi if not available in their homes. The data collected from this was completely voluntary, as there is no incentive for them to answer. From then on, we accepted the first 250 responses from each district (500 in all) and list them according to time of submission. This method of accepting the first responses eliminates the possibility of non-responses. We also only took in responses that were fully answered to avoid errors down the line.

Afterward, Stage 2 was simple random sample without replacement (SRSWOR). We chose this extra step to limit bias. We do this by picking 100 random numbers between 1-500 and choosing those responses from the numbered list. This list of 100 SRSWOR data was the conclusive piece of information that we then continued out exploration into. Basing all our graphs and tables upon this data. As for the privacy aspect, the only private information we ask of, is their age range. Other than that, no other information is needed from the respondent making the survey easy to fill out.

Breaking down the cost of this survey, for each letter we mailed to a household, it cost 90c, and there are 3,360 households in Arglye(Canada Statistics (2016a)) and 21,440 households in Lunenberg(Canada Statistics (2016b)). Multiplying the cost of each letter by number of households we get approximately $22,320. As for

the survey maintenance itself, it is hosted for free on surveymonkey.com. So, our total cost for this survey report is \$22,320.

Results

Below shows a rough table of how we organised our information, with one response taking up one row.

Further details on the questions will be in the appendix

```
## # A tibble: 6 x 9
##     row Question_1 Question_2 Question_3 Question_4 Question_5 Question_6
##   <int> <chr>      <chr>      <chr>      <chr>      <chr>      <chr>
## 1   187 Liberal    More Than~ 31-49      Yes        No         Yes, I wi~
## 2    53 Other      6-10 Peop~ 31-49      Yes        No         Yes, I wi~
## 3   262 Conservat~ More Than~ 50-64      No         Yes        Yes, I wi~
## 4   315 Other      1-5 People Under 18   No         No         Undecided
## 5   408 Conservat~ 6-10 Peop~ 18-30      No         Yes        Undecided
## 6    83 Conservat~ 1-5 People 18-30      No         No         Yes, I wi~
## # ... with 2 more variables: Question_7 <chr>, Question_8 <chr>
```


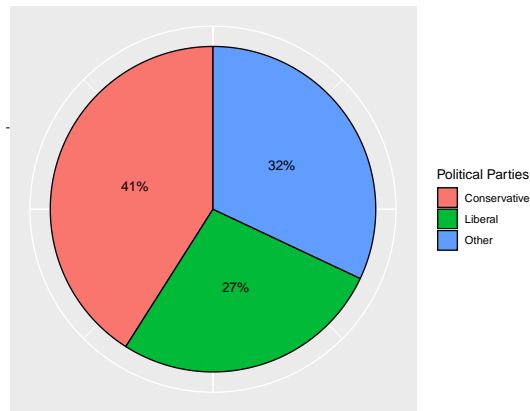Figure 1: Political affiliations in nova scotia
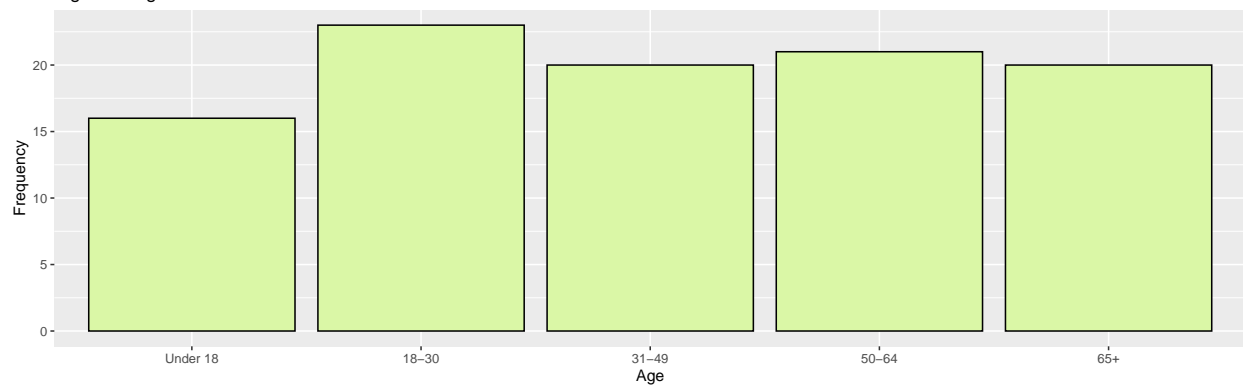

Figure 2: Age distribution

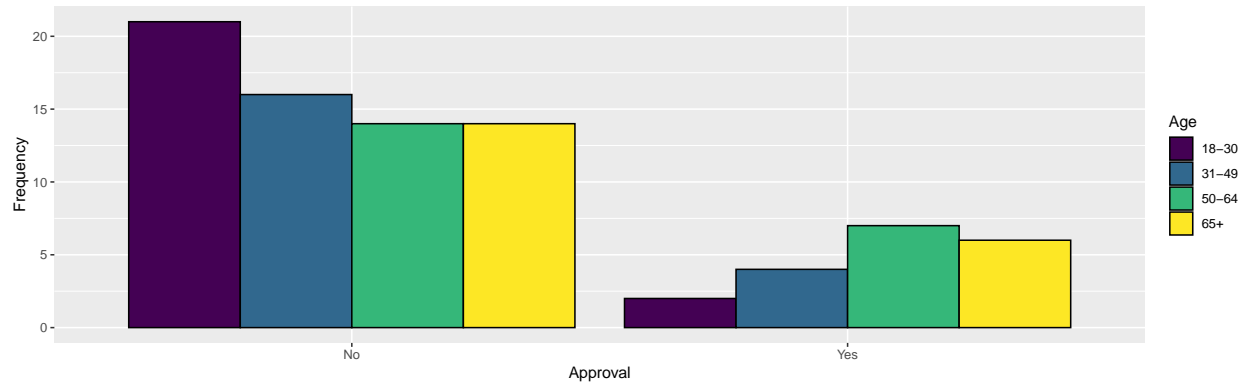Figure 3: Approval ratings for age 18 and above

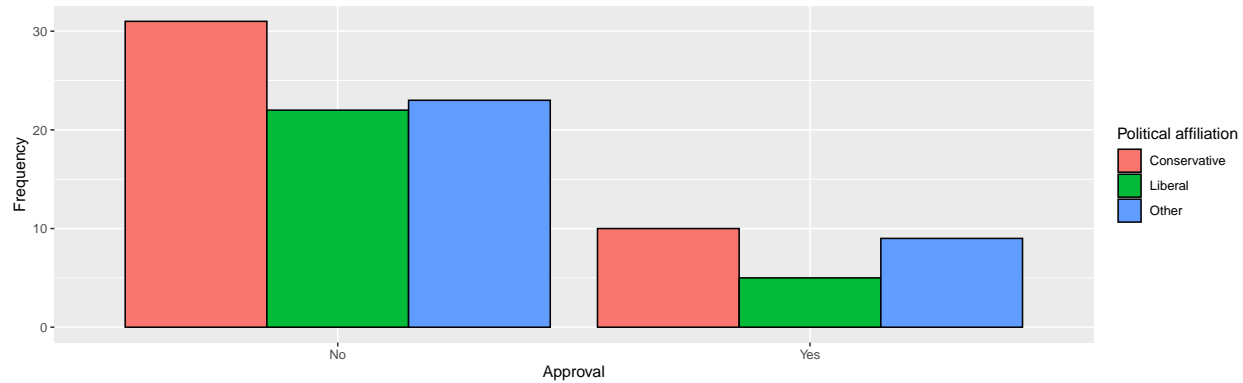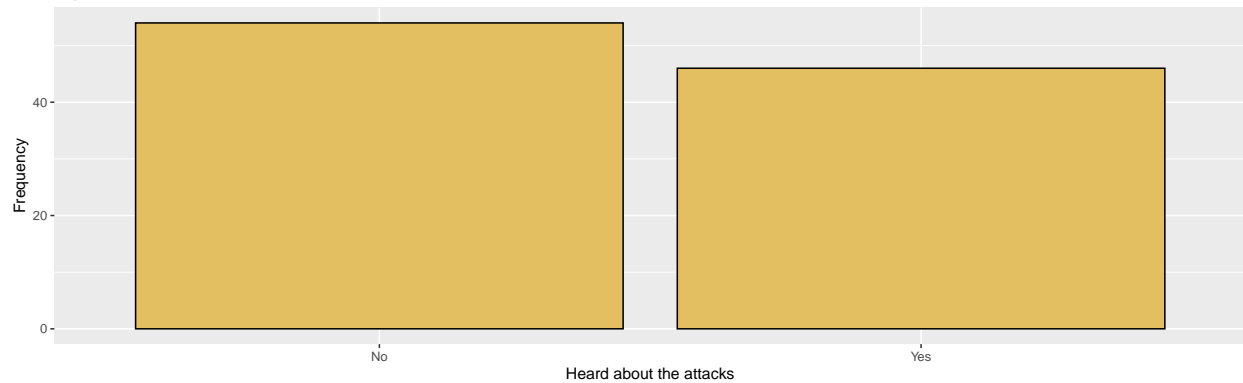Figure 4: Approval ratings based on political affiliation

Figure 5: 'Have you heard about the April 2020 Nova Scotia Attacks?'

Discussions

From the graphs above we can see that the majority of people that made up our sample population come from a Conservative stance (41%), while the next highest is Others (32%) and the lowest being Liberal (27%). This tells us that many of the population are not liberal and have much more conservative views on gun control. We received responses from all age groups with those below the age of 18 being the lowest as shown in figure 2. This may be due to those under the age of 18 who could not vote in the election.

The approval ratings for the Progressive Conservative Party of Nova Scotia is very low. From figure 3 we get to see that those between the age of 18-30 do not approve their policies. This could be due to the younger generation leaning towards a more liberal and modern life, disagreeing with many conservative views. One way to improve their approval rating is by drafting new policies that appeal to those of the age group 18-30.

By filtering those below the age of 18, we can see a decreasing trend on those who do not approve the Progressive Conservative Party of Nova Scotia's policies. When we looked at the approval rating based on political affiliations in figure 4, surprisingly, the majority of those who said they supported the Progressive Conservative Party of Nova Scotia does not approve their policies.

We wanted to see if the Nova Scotia attacks affect the Progressive Conservative Party of Nova Scotia's rating. This question was asked based on the Progressive Conservative Party of Nova Scotia's stance on gun ownership but based on figure 5 where we asked if they heard about the nova scotia attacks, there is a close 50-50 split with those saying no being higher than yes. Further work needs to be done on this as we cannot conclude if the drop in ratings was due to gun ownership stance.

Weaknesses and opportunities for futute work

Although we try our best to avoid bias, it is inevitable that we face obstacles too large to face within our scope of abilities. The main bias that may be apparent in the data is caused by the data collection system. There are several problems that mailing physical letters can create. Firstly, we would only be able to reach those with a mailing address, or else we have no way to legally send them mail. Another weakness is due to the survey being collected via voluntary responses. This could mean that only those passionate about the topic would answer the survey and skew the results. Those who do not have a strong opinion may feel like their thoughts do not matter and not fill in the survey altogether.

This survey also requires and internet connection which not all citizens have the privilege using. It could lead the bias for those with fractionally higher income levels as they have access to internet. Another way the data could be biased is the fact that it is only done by one person per household. Everyone in the house could have differing political opinions and this survey may not have captured this accurately.

Other potential future work is to survey young votes on what policy they would want to see. This could broaden our group of support as well as create innovative ideas to apply to the current system. We could also survey how or if their lives have changed since the attacks, so see how safe they feel within Nova Scotia.

Appendices that detail the survey

Link to Survey: https://www.surveymonkey.com/r/G59282K

Screenshots of the survey:

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1. What is your political affiliation?

◯ Liberal

◯ Conservative

◯ Other

2. How many people are in your household?

○ 1-5 people

○ 6-10 people

○ More than 10 people

3. What is your age?

○ Under 18   ○ 50-64

○ 18-30   ○ 65+

○ 31-49

4. Have you heard of the Progressive Conservative Association of Nova Scotia?

○ Yes

○ No

5. Do you approve of the Progressive Conservative Party of Nova Scotia's policies?

○ Yes

○ No

6. How likely are you to vote for the Progressive Conservative Association of Nova Scotia?

◯ Yes I will vote for them

◯ Undecided

◯ No, I will not vote for them

7. Are you planning to vote in the next election?

◯ Yes

◯ No

8. Have you heard about the April 2020 Nova Scotia Attacks?

◯ Yes

◯ No

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