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## Does Age Affect Attitude Towards Online Voting?

*Authored by Oriya Baraness*

*Political Science*

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Elections need to remain innovative and robust in the fast-changing world of the digital age. While previous literature focuses on the technicality, legality, security and practicality of e-voting in Canada, the purpose of this study is to find if younger voters would adopt a different attitude towards online voting than older voters. The question at hand here is; how does age affect attitudes towards online voting in Canada? For populations that are under-represented in Canada, online voting can be a conduit that leads to better civic engagement, increased political participation and a better perception of elections. Online voting makes it easier for younger voters to engage in civic duties rather than going into polling stations and filling out a ballot in the electoral process. Often, a cost and benefit analysis are the mechanisms behind rational choice voting. Therefore, there is reason to believe online voting may lead to a better sense of engagement for younger voters who are currently disengaged from our political system. Online voting could also lead to better representation for the interests of younger cohorts.

**Keywords:** age, *Canadian elections, electronic voting, participation, rational choice voting, voting*

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### Literature Review

The “Calculus of Voting” model proposed by Riker and Ordes-Hook (1968) suggests that time and cognitive factors are considered before voting. Building on this framework, Blais, Young and Lapp (2000) suggest that one’s moral obligation to vote is the most powerful motivator to go to the polls. People are often motivated more by their civic duty to vote than they are by their individual choice. For those who view voting as a choice and not a duty, online voting could become a mobilizing mechanism that eases their choice to vote. Many young people adopt a cost-benefit analysis approach to determine whether the outcome of voting is worth their time or effort. Younger voters often choose not to vote simply because the benefits of voting do not outweigh the cost of the time required to vote in person, or they do not feel as if their voices matter enough in a broader context (Condon and Holleque 2013). As people age, they gain more self-efficacy, and in return, empirical evidence demonstrates older individuals have internalized their benefits of voting (178). While the “Calculus of Voting” theory is a widely shared idea in the landscape of rational choice voting, I will borrow this framework from Riker and Ordes-Hook (1968) to suggest younger voters may exhibit a slightly more positive attitude towards online voting because they value the ‘low cost’ but similar reward of voting remotely.

Younger voters have been shown to have lower levels of turnout rates than older voters (James and Garnett 2020). While some scholars attribute low turnout rates among younger voters to onerous identification processes (such as requiring multiple documents at polling stations), another factor points to alarming rates of political apathy among younger voters (Milner 2005, 8). Literature continues to distinguish between the voting attitudes of younger voters versus older (established) voters, and scholarship on this topic comes to an agreement that young voters have a widely shared disconnect from politics (James and Garnett 2020). Disconnection from politics disincentivizes younger voters in elections (Elections Canada). Newly registered voters are also faced with unseen challenges of mobilization, which is why there is often a greater number of registered younger voters (via online registration tools) compared to those who show up at polling stations.

In Canada, non-voters who responded to election surveys indicated higher interest in online voting than present (Elections Canada). In Switzerland, however, e-voting only affected the short-term behaviour of young voters and did not display significant impacts on long-term voting patterns (Gerlach and Urs Gasser 2019). Furthermore, researchers who studied Estonia's online electoral process concluded that there is evidence e-voting would not "de-socialize" (affect group turnout rates) when compared to traditional voting methods (Unt, Solvak and Vassil 2017). In Estonia, which contains similarly immobile groups such as those living in isolated areas, online voting was preferred by some people as a solution to the obvious lack of access to polling stations. Although this is premature data, there was some controversy suggesting rural areas tend to collectively possess mentalities that are reluctant to utilizing technology (Unt, Solvak and Vassil 2017, 9)

Online voting in a simulation model was said to be more user-friendly for tech-savvy individuals who are perhaps more accustomed to computer systems for e-government usage. Following the research outcome suggesting younger generations utilize online voting in Switzerland and Estonia, the question of whether online voting would increase voter turnout rates for younger Canadians should be of immediate interest to political scientists. Other scholars elaborated to say younger people are more responsive to changes in *political substance* rather than procedural mechanisms of voting (Oostveen and Van Den Besselaar 2004), meaning the actual candidates, political culture and parties' responses to key issues have a bigger effect mechanism on young voters than the *way* they choose to vote.

We live in a digitized world that is constantly becoming more communicative via online

networks. For generations that grew up reliant on technology, civic engagement can potentially be seeing a significant decline if not catered to new voters. The common trend for young voter turnout is to be increasingly low, approximately 44 percent in North America (Blais and Jean-François 2020). In the 2019 election, 62 percent of online voter registrations were made by 18-24-year-olds in Canada. This displays the utilization of online programs that are effectively improving voting processes. However, only 53.9 percent of voters 18-24 years of age casted a vote in-person (Pammett and LeDuc, 2003, 68). This 8 percent margin reveals a discrepancy between those with an intention to vote and their accessibility to polling stations or perceived benefits in general.

Understanding attitudes towards changes in voting methods can also be captured by a current sample of data that suggests 46 percent of Canadians would rather see online voting than any other electoral reform (Goodman 2016). However, policymakers are rightfully hesitant to employ such ventures because not enough research has gone into practical online voting methods. In the 2018 Ontario Municipal elections, the Dominion online forum failed due to the high volume of voters, resulting in an emergency delay, a case in which Essex considers “a precursor to a nation-state deploying cyber operations against a democratic election” (Essex and Goodman 2020).

According to the policy recommendations, there are different methods to online voting. Some involve providing computers to residents, some are done through text, and some are simply based in web-page access. Nonetheless, these methods cannot be explored unless Canadian policymakers continue to lay the groundwork for the possible future development of better “mandatory technical standards, voluntary procurement and operational guidelines in a renewed legal framework” for e-voting (Essex and Goodman 2020, 170). Ontario launched event trial projects for online voting, but these efforts have not been regulated by a non-partisan agency to ensure online elections do not jeopardize democracy by becoming susceptible to foreign interference. While these studies investigated attitudes on online voting for other political instruments such as referendums or byelections, my study proposes to look for attitudes of e-voting on a federal elections level for younger voters.

### **Methodology**

This study uses the Canadian Elections Survey and STATA software to model the results of the relationship between age and attitudes towards online voting in Canada. To further explore whether the option to vote online is viewed positively by younger voters or if age does not play a definitive role in a voter’s attitudes towards voting online, I have operationalized age into

categories corresponding to Canadian Elections Voter Turnout by Age (see appendix). I hypothesize that because younger voters generally adopt a “low benefit, high cost” attitude towards voting, online voting would lower the cost of voting and be a better conduit for political participation for individuals between the age of 18-35. A statistically significant relationship ( $p < 0.05$ ) between age and attitudes towards online voting will allow me to reject the null hypothesis.

Controlling for other groups is important for the outcome of this study because it can show whether age is still statistically significant when other factors are included in my calculation. Education plays a role in attitudes towards voting - it is said that those who possess a completed university degree tend to have higher voter turnout rates than those who do not, which will result in a significant positive outcome between attitudes towards online voting and education (Garnet 2019, 119). The proportion of Indigenous youth who disagreed that voting was easy and convenient was 19 percent compared to 11 percent of youth overall (aged 18–34) (Elections Canada), which may display a significant positive relationship between being of an Indigenous background and attitudes towards online voting. Rural voters may also be inclined to adopt alternative voting methods if not properly mobilized, and finally, those that feel underrepresented by the current First-Past-the-Post system could also be an indicator of positive attitudes towards online voting (Kenneth, Blais and Fourtnier, 2008).

### **Independent variable**

Age, although coded as a continuous variable in the Canadian Elections Survey, will be de-strung for the purpose of this study and split across 7 cohorts 18-24, 25-34, 35-44, 45-54, 55-64, 65-74 and 75 and over.

### **Dependent variable**

The following Likert-scale type question was used to measure my dependent variable:

*“Canadians should have the option to vote over the Internet in federal elections”*

The Canadian Elections Survey provides this survey to accurately account for attitudes towards online voting. Although another variable measures perspective on online voting, I chose the one that was general to “Canadian”, versus one that might reflect a self-serving bias (*if you could*

*vote over the internet, how likely would you be to do so?*). “Don't know/ Prefer not to answer” was removed from the calculations of this study.

Since moral obligation to vote is the main reason for voter turnout, asking voters if it is a duty or choice to vote will indicate if the choice to vote online is a simple convenience. We can assume e-voting will not change their willingness to vote if these individuals perceive voting as a choice. However, if voting is perceived as a choice, it might be of simple convenience for them to vote online. To explore whether these respondents are individuals that are expressing interest in alternative voting methods but would still vote regardless of this method, I will use the following questions as one of my controls:

*“For you personally, is voting first and foremost a Duty or a Choice?”*

For the purposes of this study, I have binarized these variables to either “duty” or “choice” and removed the option of “do not know.”

## **Results**

This data uses a regression analysis to determine if age influences attitudes towards online voting in Canada. The first component establishes a statistical significance between age and attitude towards online voting. The second component uses the data to dig deeper into the causal mechanism behind this relationship. Together, the model demonstrates if online voting enhances attitudes towards voting in general.

The sample size ( $n$ ) for age categories in this set of data is 37,822 and the sample mean, and median is 49 years of age ( $\bar{x}=48.7$ ). The oldest voter was 99 years old and the youngest was 18. For the purposes of this study, the sample size ( $n$ ) for our dependent variable, “*Canadians should have the option to vote over the Internet in a federal election*” is 5,069 and the sample mean ( $\bar{x}$ ) is 3.04. The median is 3, which suggests the most frequent response was “neither agree nor disagree” in this data set. The skewness was slightly negative (-0.84) reflecting the average responses tends to slightly disagree with this statement ( $\sigma X=1.49$ ).

The results for a bivariate regression displayed a statistically significant relationship between age categories and online voting. This negative relationship showed 99% confidence that for every

1 unit decrease in age, there is a 0.087 decrease in positive attitude towards online voting, the dependent variable. Younger voters do hold increasingly positive attitudes towards online voting.

In considering results for when control variables are taken into consideration (Table 1), a multivariate regression analysis displays the independent relationship between age and attitudes towards online voting. For every 1 unit increase in age category, there is a 0.095 decrease in positive attitude towards online voting. Therefore, younger voters in this data set tend to favour online voting in comparison with older voters. This relationship is statistically significant at the 99% confidence interval level ( $p=0.00$ ), which means I can reject the null hypothesis suggesting there is no relationship between age and attitudes towards online voting.

TABLE 1: Variables	Online Voting
<b>Age categories</b>	<b>-0.0950***</b> (0.0266)
University	<b>0.264***</b> (0.0816)
Rural	-0.0670 (0.0853)
Indigenous	0.353 (0.245)
First-Past-Post	<b>0.154***</b> (0.0318)
Duty or Choice	<b>0.267***</b> (0.0955)
Constant	<b>2.429***</b> (0.234)
Observations	<b>1,385</b>
R-squared	<b>0.048</b>

Standard errors in parentheses \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

When controlled for other independent variables, to lower the probability of a spurious relationship between age and attitudes towards online voting, statistical significance is observed between dependent variables and some of our controls. Attitude towards online voting is statistically significant when correlated with those that are in favour of electoral reform, those with a university education and those who view voting as a choice. With 95% confidence, respondents who have obtained education at some university level such as a bachelor's degree, a master's degree, or a PhD. For every one-unit increase in attitude towards online voting, there is a 0.264 increase in education at the higher level. At the 95th percent confidence interval, for every single unit increase in attitude towards online voting, there is an increase of 0.154 to be in favour of electoral reform. Finally, for those who hold the opinion on voting as a choice, it is statistically significant at the 0.95th confidence interval that for every unit increase in online voting, there is a 0.267 unit increase towards those who view voting as a choice.

Finally, after running a variance inflation factor test, my results suggest multi-collinearity, and the relationship between independent variables and my dependent variable is unsystematic on the idiosyncratic level. Furthermore, testing for homogeneity of covariances (homoscedasticity Breusch-Pagan test) reveals independent variables have the same variance impact on the dependent variable. My model yields an R-squared of 0.048 which suggests that 4.5% of my model explains the variance in the dependent variable (attitudes towards online voting).

The implications for these findings suggest younger voters will adopt an increasingly positive attitude towards online voting regardless of their level of education, view on first-past-the-post voting, and their take on voting as a choice. The next generations of voters should feel that democratic processes can easily become up to date. We live in an increasingly technological society where we connect, debate, and network via the internet. It is time we channel Canada's resources towards federal online voting initiatives. Future findings should explore the two avenues of research garnered in this study: How does representation and attitudes towards voting in general affect turnout rates if voting was to be online for federal elections?

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**Appendix**  
**Voter turnout by age**  
**group, 2011, 2015 and 2019 federal**  
**elections, %**

	2019	2015	2011
Total, all age groups	77	77	70
18 to 24 years	68	67	55
25 to 34 years	71	70	59
35 to 44 years	75	75	65
45 to 54 years	78	79	73
55 to 64 years	81	83	80
65 to 74 years	85	86	84
75 years and older	79	80	79

Source: <https://www150.statcan.gc.ca/n1/daily-quotidien/200226/cg-b001-eng.htm>