

Early Voting: Comparing Canada, Finland, Germany and Switzerland

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Abstract: As voter turnout has been declining in many parts of the world, election administrators have considered a variety of methods to encourage voters to go to the polls by making voting easier. One convenience voting measure allows voters to cast their ballot early, through in-person advance voting or mail-in balloting. However, there are some concerns that early voters have the same characteristics as those who are most likely to vote anyway, which suggests that rather than increasing turnout, early voting may simply make voting more convenient for those who are likely to vote anyway. There are also concerns that early voters may be less likely to consider the election to be fair, since they may have concerns about the security of their ballot. This paper therefore asks: first, what are the socio-demographic and attitudinal correlates of early voting, compared with election day voting and, second, does early voting affect citizens' perceptions of the fairness of the election? This paper considers four types of early voting in four post-industrial democracies: on-demand postal voting in Germany, automatic postal voting in Switzerland, days-long advance voting in Canada, and week-long advance voting in Finland. It looks at multiple elections across time, at both the national and regional level, using data from a variety of national and comparative election studies, contributing to our understanding of the potential impacts of early voting on turnout and perceptions of election fairness across four different contexts.

1. Introduction

As voter turnout has been declining in many parts of the world, election administrators have considered a variety of methods to encourage voters to go to the polls by making voting easier. One convenience voting option allows voters to cast their ballot before election day, whether by mail or in person. While the initial early voting programmes focused on providing opportunities to vote for those who were out of town on election day or disabled, recent advances in early voting have expanded these opportunities to the general population, no longer requiring that citizens provide an excuse to be eligible to vote early.

However, there are some concerns that arise from the recent proliferation of early voting. One concern is that early voters may have the same characteristics as those who are most likely to vote anyway. This suggests that rather than increasing turnout, early voting may simply increase the convenience of voting for those who already vote. Evidence on this hypothesis is mixed, and mainly focuses on the American context. This paper therefore asks: What are the socio-demographic and attitudinal correlates of early voting, compared with election day voting?

Secondly, some research suggests that voters who do not cast their ballot at a polling location on election day will be less likely to trust the election results. For postal voters, this may be because they have no direct contact with election officials, or are concerned whether their ballot will arrive by mail. Both postal and in-person advance voters may question whether their ballot will be safely stored to be counted on election day. This paper therefore also asks: does early voting affect citizens' perceptions of the fairness of the election?

Scholars lack systematic comparative evidence on the patterns of early voting in different contexts. Accordingly, this paper considers four types of early voting in four post-industrial democracies: on-demand postal voting in Germany, automatic postal voting in Switzerland, days-long advance voting in Canada and weeks-long advance voting in Finland. Additionally, rather than considering early voting at only one time point, this paper looks at multiple elections, at both the national and regional level, using survey data from a variety of national and comparative election studies. It first employs logistic regression analysis to uncover the socio-demographic and attitudinal predictors of early voting. Next, it considers the relationship between early voting and perceptions of fairness of the election.

This research provides scholars and policymakers a fresh examination of the socio-demographic and attitudinal correlates of early voting across time, countries, regions and types of early voting. It also allows for some broad conclusions about the potential implications of early voting on voter turnout, especially for underrepresented populations, and on voter perceptions of election fairness.

2. Early Voting

This paper first considers the socio-demographic and attitudinal correlates of early voting. In doing so, it asks: do early voters have the same characteristics as election day voters, or does early voting actually enhance the turnout of population groups that may be underrepresented at the ballot box? To answer these questions, it is necessary to begin with the factors that influence whether a voter will choose to go to the polls or not. Authors such as Downs, and later Riker and Ordeshook, suggest that, among other variables such as civic duty, electoral institutions play a role in the rational 'calculus of voting' (Downs, 1957; Riker and Ordeshook, 1968) In these models, the time and cognitive costs of voting are among the critical factors that are taken into consideration when a voter decides whether it is worth casting a ballot in an election. Consequently, convenience voting measures, such as early voting, may influence this decision by reducing some of the costs of voting. In the case of postal voting, a voter may not even have to leave home to cast a ballot, decreasing or eliminating travel time. For both postal and in-person advance voting, voters can choose from a greater range of times to cast their ballot, making it easier to find time to vote amidst their other obligations.

Does this theory of early voting as a convenience measure that reduces voting costs and thereby increases turnout play out in the empirical research on early voting? Scholars continue to debate whether the provision of early voting has a significant effect on turnout and whether this effect is positive or negative. In one of the few cross-national studies of the impact of early voting on turnout, Blais et al. compare 151 elections in 61 countries between 1990 and 2001 (Blais et al., 2003). They find that turnout is higher among registered voters when the “ease of voting” (measured by whether it is possible to vote by mail, in advance or by proxy) is greater.

Most other studies consider the impact of one type of early voting in one jurisdiction. In Switzerland, the rolling introduction of postal voting allowed some researchers to examine the effect this change had on turnout rates in the country. Luechinger et al. find that the introduction of postal voting did have a positive effect, averaging 4.1 percentage points, on turnout in Switzerland (Luechinger et al., 2007). In the American context, studies of Oregon’s move to exclusive postal voting in 2000 have also found the change to have a positive impact on turnout (Berinsky et al., 2001; Karp and Banducci, 2000; Richey, 2008). However, in a study of in-person advance voting in Canadian elections, Blais et al. find only a small positive effect (0.7 percentage points) on turnout (Blais et al., 2007). Stein and Garcia-Monet also find a modest effect of in-person early voting in Texas when comparing the advance polling rates and overall turnout rates between two elections (Stein and Garcia-Monet., 1997). They find that for each percentage point increase in votes cast early, total turnout increases by about 0.07 points.

Other research challenges these broad findings that early voting increases turnout (Fitzgerald, 2005; Giammo and Brox, 2010). For example, Burden et al. suggest that early voting actually decreases overall turnout (Burden et al., 2014). They conduct individual-level and county-level analyses of the usage of various forms of early voting in the 2004 and 2008 U.S. presidential elections and find that early voting laws are not associated with higher turnout. In fact, early voting may actually decrease turnout because it diminishes the civic significance of election day for individuals and changes the incentives for political campaigns to pursue mobilization efforts. Funk suggests a similar phenomenon occurs in Switzerland, where postal voting may decrease the social incentives of voting, particularly in rural areas (Funk, 2010).

While scholars continue to debate the absolute impact of early voting on turnout, another body of literature, primarily from the United States, has considered whether early voting has differential impacts on different population groups. For example, Herron and Smith examine the impact of early voting on the turnout rates of traditionally underrepresented groups (Herron and Smith, 2012, 2014). In one article, they compare voting patterns in the 2008 and 2012 elections in Florida and find that the reduced number of advance polling days in 2012 had the greatest negative effect on racial/ethnic minorities, registered Democrats, and those without a party affiliation (Herron and Smith, 2014). In another study, they find that African American, Hispanic, younger, and first-time voters are significantly more likely to vote early than other voters, and are therefore disadvantaged by a reduction in the number of early voting days available (Herron and Smith, 2012). Similarly, Stein and Garcia-Monet suggest that the early voting drives of the Clinton-Gore campaign, targeted toward Hispanic voters and new registrants, did appear to have some success in encouraging early voting among their supporters (Stein and Garcia-Monet., 1997). But on the whole, they caution against the conclusion that early voting helps to reduce unequal participation among traditionally underrepresented populations, as they also find that early voting is positively correlated with higher median home values, suggesting that wealthier voters were most likely to use early voting.

Stein and Garcia-Monet’s article is only one of many to consider the socio-demographic and attitudinal characteristics of early voters in the United States. Most researchers find that early voters tend to be older (Barreto et al., 2006; Blais et al., 2007; Gronke and Toffey, 2008); but evidence about the impact of other socio-demographic characteristics is more mixed. Some suggest that early voters tend to be better educated (Gronke and Toffey, 2008; Karp and Banducci, 2000, 2001), while others find

education not to be a significant determinant of early voting (Blais et al., 2007; Neeley and Richardson, 2001; Stein, 1998). There is also debate over whether early voters are, in fact, wealthier than election-day voters (Blais et al., 2007; Karp and Banducci, 2000; Neeley and Richardson, 2001; Stein and Garcia-Monet., 1997). Regarding attitudinal variables, there is some consensus that early voters are more informed, engaged, and interested in the election and in politics more generally (Blais et al., 2007; Gronke and Toffey, 2008; Karp and Banducci, 2001; Stein, 1998), but these findings are not uniform across all studies. In sum, there remains much debate within the literature on the socio-demographic and attitudinal correlates of early voting.

Unlike the topic of who is voting early, there has been much less study of whether those who take advantage of early voting opportunities differ from election day voters in terms of their trust in the fairness of the election. A difference in levels of trust between election day voters and early voters is expected for those who use postal voting since they do not actually see their ballot go into the ballot box and do not have any face-to-face contact with election workers. In-person advance voters, as well as postal voters, may have concerns that their ballots will be safely stored for counting on election day. While there is less research on this question, Alvarez et al. present the findings of a national survey following the 2004 American Presidential election regarding voters' trust that their vote would count as intended. They found that there is a negative relationship between voting by absentee ballot and trust in the election results (Alvarez et al., 2008). Atkeson and Saunders find similar results in a smaller-scale survey of voters in one district in Colorado and New Mexico (Atkeson and Saunders, 2007). The authors suggest that voters who had voted in-person on election day were more confident that their vote would be counted than absentee voters, and to a lesser extent, than early in-person voters. This question requires additional research, particularly outside the American context.

3. Hypotheses

The first goal of this paper is to consider the socio-demographic and attitudinal correlates of early voting, in an attempt to better understand how early voting may influence the dynamics of turnout in four countries with different early voting opportunities. Despite some research from the United States showing that some traditionally less participatory populations do take greater advantage of early voting than initially thought, the bulk of evidence on early voting concludes that early voters do not differ significantly from their election day counterparts. Accordingly, I hypothesize that the traditional socio-demographic and attitudinal correlates of turnout will in general hold true for early voting as well.

Three of the most important socio-demographic correlates of voter turnout are age, income and education level. Literature on voter turnout has demonstrated that the young are the least likely to vote and middle-aged voters the most likely. For example, in her cross-national analysis, Norris finds that turnout increases with age, but flattens out in middle age and slightly declines among seniors (Norris, 2002). Lower turnout on the part of younger adults is likely due to a combination of factors that may include differences in political interest, civic duty, social pressure and perceptions of the importance of voting. The slight decline in turnout among seniors may be due to health concerns or difficulties getting to the polls. In these cases, early voting may actually assist seniors in turning out to vote (Kembhavi, 2013). Nonetheless, echoing Norris' findings regarding age and voter turnout, *I hypothesize that early voting will be highest among the middle age group, and lower for the oldest and especially youngest age groups.*

According to the socioeconomic model of voter turnout, as theorised by Verba and Nie (Verba and Nie, 1972), and later expanded upon by Brady et al. (Brady et al., 1982), an individual's social status, including type of job, level of education and income, is an important predictor of whether the individual will vote or not. Social status influences people's civic attitudes, including whether they feel politically efficacious, as well as the availability of time and money to engage in politics. Education, in particular, will influence an individual's civic skills, according to this model. Differences in voter turnout among

individuals of different socio-economic statuses can therefore be explained by the differential distribution of these civic resources. This has been demonstrated both in the American context and cross-nationally, though it is important to note that some scholars have found that the predictive power of education is lower, or even non-significant, in some Western European countries (Gallego, 2010; Norris, 2002)). However, in a recent study by Nevitte et al., three of the countries studied in this paper, namely Switzerland, Germany and Canada, did exhibit a significant relationship between education and turnout (Finland is not included in the study) (Nevitte et al., 2009).

Since income is not measured in some of the datasets I will use, I will only test education as a potential social correlate of early voting. It is important to note that the scholarly community is increasingly skeptical of the argument that higher education actually causes higher voter turnout, but they do note that these two variables tend to correlate (Persson, 2013). As such, education level is likely a proxy for other factors relating to social status, family background and other early life influences. So regardless of whether education actually causes turnout or whether self-selection makes those with higher education more likely to turn out to vote, education remains a good indicator of those who are more likely to vote in the first place. Education will also be a particularly useful variable to study, since the cognitive costs of voting are likely to be more pronounced for more complicated early voting procedures. *I therefore hypothesize that those with at least some postsecondary education will be more likely to vote early than those with lower levels of education.*

Additionally, gender should be related to early voting. There is a sizable literature on the relationship between gender and the propensity to vote. While some recent research has demonstrated a decline or even a reversal in the gender gap in voting (Inglehart and Norris, 2003), other studies probing this relationship more closely have suggested that a gender gap in voting exists due to gaps in political knowledge and interest (Carpini and Keeter, 1996; Lizotte and Sidman, 2009). In the case of early voting, this means that women may be less likely to know about early voting opportunities and to take advantage of them. *I therefore hypothesize that being female will be negatively related to early voting.*

This paper also tests the potential impact of two attitudinal variables: political interest and political knowledge. The most politically interested citizens may be more aware of early voting opportunities and keener to participate. They are also more likely to vote in general (Norris, 2002). *I therefore hypothesize that those who are more interested in politics will be more likely to vote early than those with less interest.* Knowledge has also been found to be positively related to turnout in general, and should be especially pertinent for early voting, since it requires an increased amount of knowledge about voting procedures to know where and when to cast an early ballot (Carpini and Keeter, 1996; Popkin and Dimock, 1998; Zaller, 1990)). Accordingly, *I hypothesize that the more political knowledge voters have, the more likely they will be to vote early.*

Finally, I will test the relationship between early voting and voters' perceptions of the fairness of the election. It is suggested that those who do not vote at polling places, but instead cast their ballot by mail, will be less confident their vote will be counted since they lack the face-to-face contact with election officials that breeds trust in the system (Alvarez et al., 2008; Atkeson and Saunders, 2007)). In-person advance voters, like postal voters, may also have concerns about whether their ballot will be securely stored before election day. For these reasons, *I hypothesize there to be a negative relationship between early voting and perceptions of the fairness of the election.*

4. Comparing Across Country, Time and Region

This paper is unique in that it tests these hypotheses in four countries with different early voting procedures. There are two major families of early voting: postal voting and in-person advance voting. Each of these types of early voting can vary according to their ease of use. Postal voting can be available only to voters who request a postal ballot in advance, as is the case in Germany and the United

Kingdom, or it can be the default option, as is the case in Switzerland, where all voters receive a postal ballot that they can return by mail or hand-deliver to a local office. In-person advance voting can also vary in the number of days of early voting available. In some countries, like Finland and Sweden, or more recently, New Zealand, voters have a period of one or two weeks leading up to the election during which they can vote at a variety of advance polling locations, some of which are centrally located in places like post offices. In Canada, by contrast, the official early voting period lasts a short number of days, often over a weekend the week before the campaign closes. To facilitate a comparative study of early voting, this paper selects one country that uses each of these type of early voting: Switzerland for automatic postal voting, Germany for on-demand postal voting, and Canada for shorter in-person advance voting, and Finland for longer in-person advance voting.

Figure 1. Models of No-Excuse Early Voting

Postal Voting	Easier	Automatic	Ex. Switzerland
	More Difficult	On-Demand	Ex. Germany , United Kingdom
In-Person Advance Voting	Easier	Long period (week(s))	Ex. Finland , Sweden, New Zealand
	More Difficult	Short period (days)	Ex. Canada

Postal voting is the easiest in **Switzerland**, where all voters receive ballot papers in the mail and can mail them in or drop them off at the polling station. This procedure was first introduced in a selection of cantons in 1978, and had been expanded to all cantons by 2005. Early voting is the norm in Switzerland: approximately 85% of the population used postal ballots in the 2011 general election.¹ This paper uses national data on early voting since 1999 (by which time postal voting was available in most regions²), which is available through the Swiss Election Studies.³ Regional data are available through the Making Electoral Democracy Work project for regional and national elections in Zurich and Lucerne in 2011.

While postal voting has also existed in **Germany** for a number of years, the 2009 federal election was the first time it was available nation-wide without an excuse. To take advantage of postal voting in Germany, voters must apply for a mail-in ballot, and then mail the ballot or hand-deliver it to a municipal office. While this process is perhaps the most difficult of the four types of early voting presented in this study, it does not seem to deter voters, since in the last federal election, about 23.4% of voters voted early. Survey data on early voting are available from 2013 from the German Longitudinal Election Studies.⁴ Regional survey data for Bavaria and Lower Saxony are available for the 2013 state and national elections from the Making Electoral Democracy Work project.⁵

¹ Office for Democratic Institutions and Human Rights, 2011. Swiss Confederation Federal Assembly Elections 23 October 2011 OSCE/ODIHR Election Assessment Mission Report Office for Democratic Institutions and Human Rights, Warsaw. This report provides an approximately percentage of Swiss voters who use postal voting.

² Because of the rolling introduction of early voting, this paper only considers those cantons for which early postal voting was available at the given time point.

³ For more details about the Swiss Election Studies, see <http://forscenter.ch/en/our-surveys/selects/>

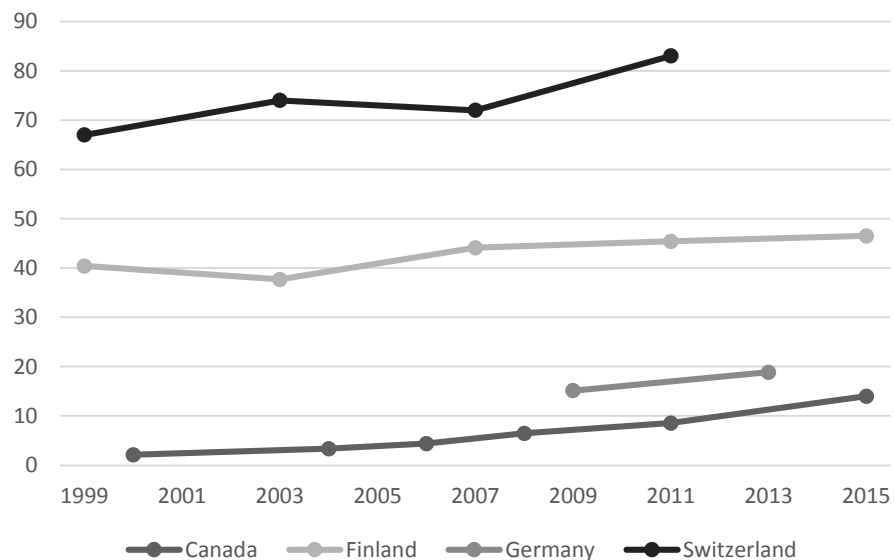
⁴ For more details about the German Longitudinal Election Studies, see <http://gles.eu/wordpress/english/>

⁵ For more details about the Making Electoral Democracy Work datasets, see <http://electoraldemocracy.com/voter-behaviour> Note that a panel was used for Bavaria's state and national elections. Since the same respondents were re-surveyed and the two elections were close together, only data from the state election (the first election to be studied) are used.

While postal balloting is available in **Canada** in special circumstances (such as for overseas voters), most Canadians who vote early take advantage of in-person advance polls set up at a number of polling stations, usually the weekend before the election. Voters are encouraged to visit the advance polling station listed on their voter information card. No-excuse advance voting was first introduced in the 2000 federal election, when only 3.5% of voters cast their ballot in advance. However, the rate of early voting has since increased to a record 20.7% of voters in the 2015 federal election, when the number of advance voting days increased from three to four. Questions about early voting have not been consistently asked in Canadian Election Studies.⁶ Consequently, survey data are only available for the 2000 and 2008 federal elections.⁷ The Making Electoral Democracy Work dataset has survey data for the 2015 federal election for the provinces of Ontario, Quebec and British Columbia.⁸ Data on early voting in regional elections are available for the 2011 Ontario election and the 2012 Quebec election.

In-person advance voting is even more common in **Finland**, where the period of advance voting is much longer, usually about a week, and often takes place at post offices throughout the country. This method of advance voting, codified as a right of all voters in the Finnish Election Act in 1998, is quite popular, with at least 40% of the population using advance voting in any given national election.⁹ The Finnish National Election Study¹⁰ contains data on early voting for the three most recent elections. Regional data on early voting are unfortunately not available for Finland.

Figure 2: Percentage of Voters who voted Early in National Elections, 1999-2015



Data for Canada, German and Finland come from each country's official election returns. Postal voting turnout data were not available for Switzerland, so data from the national election study were used instead. Data for the 2015 Swiss election is not yet available.

⁶ For more details on the Canadian Election Study, see <http://www.queensu.ca/cora/ces.html>

⁷ While a question about advance polling was asked during the 2006 pre-election survey, this data is incomplete as voters could still cast their ballot in an advance poll before the election. Advance voting was not asked in the post-election survey.

⁸ In this case all regions were weighted equally.

⁹ For more details on early voting statistics in Finland, see http://www.stat.fi/til/pvaa/kas_en.html

¹⁰ For more details on the Finnish Election Study, see <http://valforskning.pol.gu.se/english>

This selection of four cases with different forms of early voting allows us to address another important question: do the socio-demographic and attitudinal correlates of early voting vary by type of early voting used? Given the relationship between the costs of voting and the propensity to vote, *I hypothesize that there will be greater differences in the socio-demographic and attitudinal correlates of early voting for election day versus early voters, for the countries where early voting is more difficult, namely Germany for postal voting and Canada for in-person advance voting.*

Additionally, this paper considers both regional and national elections in three of the countries studied (Canada, Germany and Switzerland). This allows for more cases to be considered and also permits the testing of the socio-demographic and attitudinal correlates of early voting in second-order elections, where turnout and salience tends to be lower.¹¹ This will make the results more generalizable to elections, both national and regional, in the country as whole.

5. Method

For each dataset, respondents are grouped into two categories: early voters and election day voters. Socio-demographic characteristics and attitudes are recoded to be as similar as possible across election studies. Age is split into three categories (ages 18-35, ages 36-65 and ages 66 and over) in order to best account for the lower turnout among the youngest and oldest voters, while also being sensitive to the low number of respondents in some datasets. Education is dichotomized into two categories: some or completed postsecondary education, and high school education or less. I do so in part to ensure that the education variable is comparable across countries. Additionally, most recent research regarding education levels and turnout in Western democracies uses postsecondary education as the main division between levels of educational attainment (Kam and Palmer, 2008). Because the attitudinal variables of political interest and political knowledge were measured on different scales in each dataset, they are recoded to run from 0 to 1. See Appendix A for more details about the variables used.

Data are pooled by country, and weighted according to the actual proportion of early voters and to weight each election studied equally.¹² Because I am most interested in the differences between election day and early voters, I use logistic regression, with the dependent variable as method of voting (election vs. early). I first estimate a logistic regression with election fixed effects, with the aforementioned socio-demographic variables as the independent variables. I then add attitudinal variables to the models. For elections where there are data on the respondent's perception of the fairness of the election, I use ordinary least-squares regression to estimate the relationship between early voting and the perceived fairness of the election, while controlling for socio-demographic and attitudinal factors.¹³ For this model, whether the citizen voted for the winner or loser in the contest is also taken into account, since this has been demonstrated to have an effect on perceptions of fairness (Anderson et al., 2007; Anderson and Tverdova, 2001; Birch, 2010; Sances and Stewart, 2014).¹⁴

6. Results

¹¹ The concept of 'second-order' elections were popularized by Reif, K., Schmitt, H., 1980. Nine Second-Order National Elections - A Conceptual Framework for the Analysis of European Election Results. *European Journal of Political Research* 8(1), 3-44. It is important to note that there remains debate as to whether some 'second-order' elections, as actually less salient. See the example of Quebec: Hough, D., Jeffery, C., 2006. *Devolution and electoral politics*. Manchester University Press ; Distributed in the USA by Palgrave, Manchester; New York; New York.

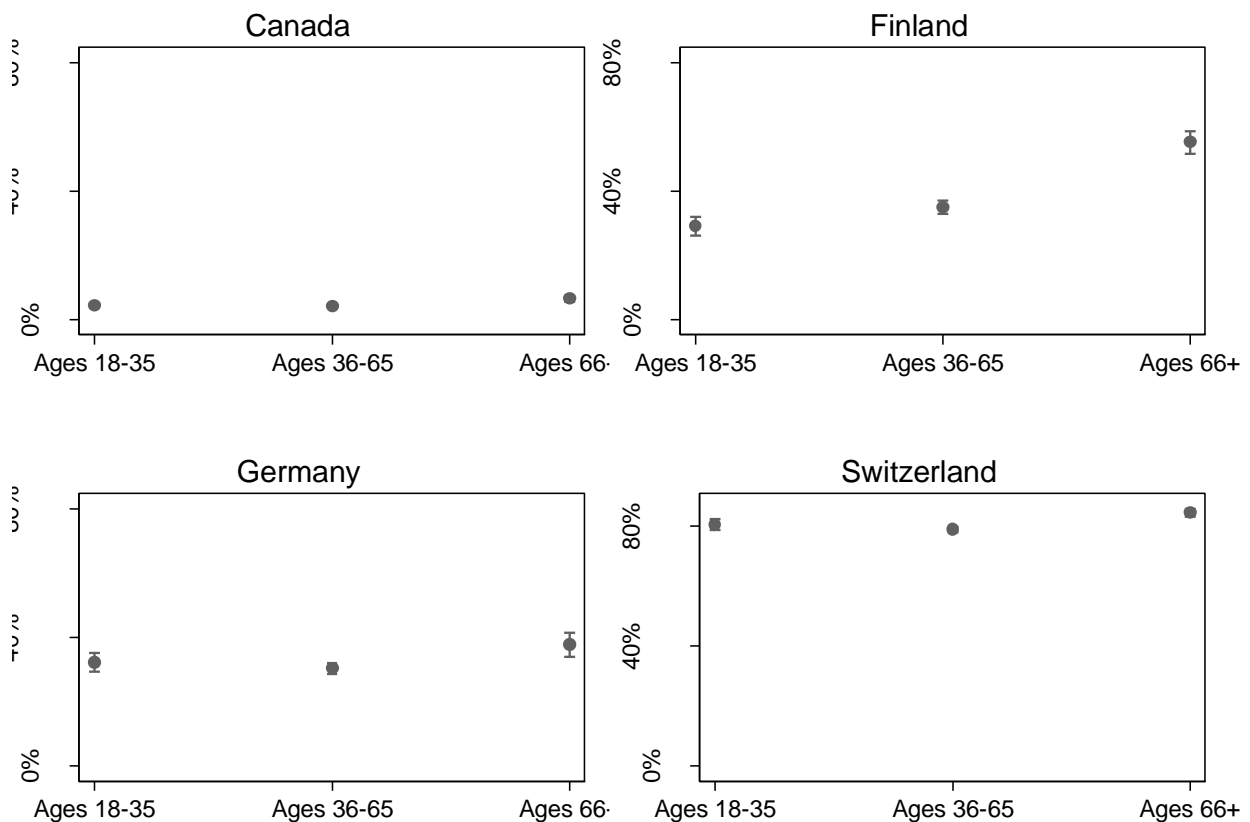
¹² Accurate data on early voting rates were not available for Switzerland and for regional elections in Bavaria and Lower-Saxony, so these data were only weighted for region.

¹³ Ordered logistic regression was also run for a robustness check. There were no substantial differences.

¹⁴ Note that whether the respondent voted for the winner is not available for Switzerland.

The most striking finding is that across all four countries, being in the oldest age group is positively associated with early voting. However, the magnitude of this relationship varies across countries (see Figure 3). On the lower end, there is only about a 2 percentage point difference in the estimated probability of early voting (compared with election day voting) between the middle and oldest age groups in Canada.¹⁵ In Finland, by contrast, the effect is quite pronounced, with the probability of early voting estimated to be about 23 percentage points higher for the oldest age group. Although this paper hypothesized that early voting would mirror election day voting and taper off among the oldest voters, it is possible that early voting may be popular among the elderly who have trouble getting to the polls on election day. Postal voting may allow them to vote without even leaving their home, while in-person advance voting may allow them more flexibility in seeking assistance to get to the polls. Election management bodies may also place targeted in-person early voting locations in hospitals and senior's residences to make it easier for these populations to vote. This is a promising finding for those who see early voting as essential to improving voting access among the elderly, sick and disabled (Prince, 2012).

Figure 3: The Estimated Probability of Early Voting by Age Group



Estimated probability of early voting by age group, from models in Table 1. 95% confidence intervals shown.

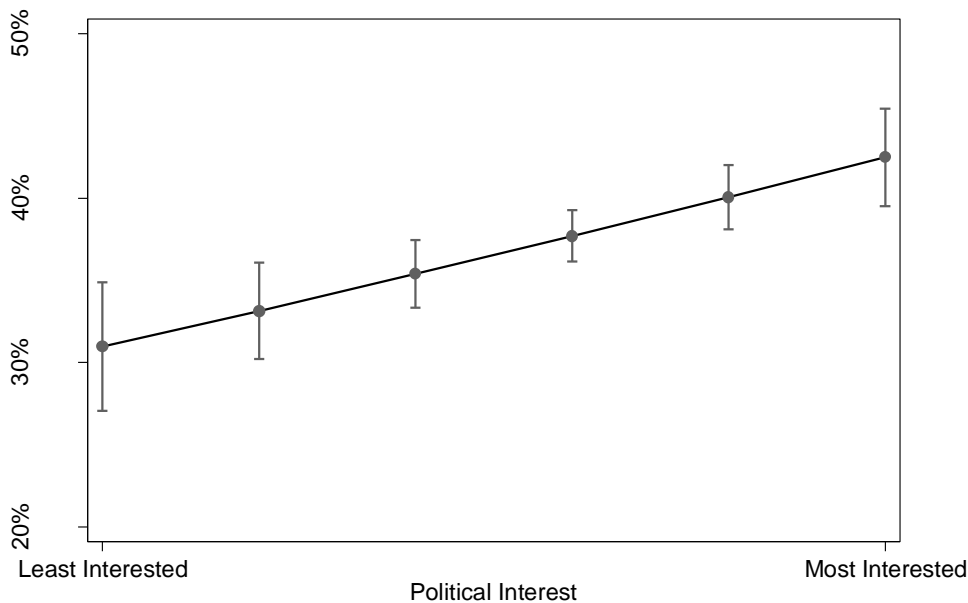
¹⁵ All marginal effects are estimated with other variables as observed. For an overview of this method, see Hanmer, M.J., Ozan Kalkan, K., 2013. Behind the Curve: Clarifying the Best Approach to Calculating Predicted Probabilities and Marginal Effects from Limited Dependent Variable Models. *AJPS American Journal of Political Science* 57(1), 263-277.

There is also a positive relationship between post-secondary education and early voting in the two countries in which postal voting is used. In Germany and Switzerland, post-secondary education can significantly predict early voting. There is a 3 percentage point difference in predicted probability of voting early between those with and without post-secondary education in Switzerland, and a 7 percentage point difference between these groups in Germany. The education effect may be strongest in Germany because the early voting process in this country requires the most skills, given that voters must apply in advance for a mail-in ballot.

The influence of gender on early voting is mixed. In Canada, the impact of being female on early voting is negative, as predicted, but in all other countries, being female is actually a positive predictor of early voting. However, the magnitude of the difference between women and men is quite small (less than 3 percentage points) for all cases. It is also important to note that the negative effect of being female on early voting in Canada shrinks to less than one percentage point difference when attitudinal variables are added to the models, which suggests that, as hypothesized, the gender gap in early voting may be at least in part attributed to differences in knowledge and interest between men and women.

There are also mixed findings regarding the attitudinal correlates of early voting. Political Interest is a positive predictor of early voting in all cases, however this relationship is not statistically significant in Germany. The magnitude of the difference in the predicted probability of early voting between those the most and least interested in politics ranged from 3 percentage points in Canada, to 12 percentage points in Finland (see Figure 4).

Figure 4: The Estimated Probability of Early Voting by Political interest in Finland



Estimated probability of early voting by political interest, from models in Table 1. 95% confidence intervals shown.

Political knowledge is not a statistically significant predictor of early voting. Because of this curious finding, political interest was removed from the regression to determine whether the lack of a statistically significant finding is due to a potential mediating effect of political interest on the relationship between political knowledge and early voting. However, political knowledge becomes statistically significant only in Canada when political interest is removed. This suggests that in the Canadian context, the political interest variable may be impacting out the effect of political knowledge.

In the other cases, however, it appears that political interest, rather than any knowledge barrier, influences whether an individual chooses to vote early.

The results in Table 1 also show that voters are more likely to vote early in regional elections. However, this finding is likely because the regional elections studied in this research were all more recent, and early voting has increased in all jurisdictions over time.¹⁶ Nevertheless, including regional and national elections in this study allows for the findings to be more broadly applicable to elections at both levels in the countries studied.

The final question that this paper addresses is whether early voting is related to lower perceptions of fairness of the election. Table 2 show that there is a statistically significant negative relationship between early voting and perceptions of fairness in Germany and Switzerland, where postal voting is used. However, this effect is quite small: there is less than a one point difference in predicted perception of fairness of the election (on a 10 point scale) between early voters and election day voters. This suggests that while there may be a possibility of lower perceptions of fairness among early voters, the impact is minimal. Other variables, particularly interest in politics, have a more pronounced impact. It is important to note, however, that the lack of relationship between early voting and perceptions of election fairness may also stem from the general question wording used. Voters may each consider different factors when they evaluate the 'fairness' of an election. Future research should consider this question with a more direct survey question that considers, for example, trust that their ballot will be counted, or confidence in election administration procedures.

7. Conclusions

To summarize the major findings, I return to the two major questions this paper seeks to address. Firstly, do early voters differ significantly from election day voters in terms of socio-demographic and attitudinal variables? Looking at the results of the logistic regression analysis and the predicted probabilities of early voting, the answer to this question is not straightforward.

Across all four countries, being in the oldest age category is positively related to early voting. It is possible that in some cases, elderly voters rely on early voting as a way to get to the polls or to vote within the comfort of their home. For these voters, early voting may not a matter of convenience but necessary to facilitate their participation.

There appears to be a minimal influence of gender on early voting; where this variable is statistically significant, the magnitude of its impact is quite small. Where the impact is largest, in Germany, being female is actually positively related to early voting, contrary to the hypothesis that the gender gap in political knowledge might extend to early voting. This finding suggests that early voting will likely not exacerbate this gender gap.

Education has a statistically significant positive impact on early voting in the two countries studied that employ postal voting. The impact of education on early voting is most pronounced in Germany, where early voting likely takes the most cognitive resources, since voters must apply for a postal ballot in advance.

Turning to attitudinal variables, these results show that interest in politics, but not political knowledge, is positively related to early voting in three of the four countries studied. This suggests that early voting is most often used by those who are already interested and engaged in politics, but that there is not a knowledge barrier to early voting in the four countries studied.

¹⁶ To address this concern, a separate logistic regression similar to Table 1 was run only with data from the Making Electoral Democracy Works dataset, which contains data from regional and national elections between 2011 and 2015. In these models, the impact of region is statistically significant and negative for Canada, statistically significant and positive for Switzerland and not statistically significant and negative for Germany. These findings are likewise simply due to the small number of elections that were covered.

These findings can help illuminate the potential implications of early voting measures for turnout. For elderly voters, early voting opportunities may facilitate turnout. This is an encouraging finding for election administrators committed to finding ways to reduce voting obstacles for elderly voting. Likewise, this paper finds that any knowledge gaps that may exist between men and women will not dissuade women from using early voting opportunities. However, this paper also finds that early voting may take additional educational or cognitive resources in the cases of Germany and Switzerland, and will be taken advantage of by those already more interested in politics. This suggests that, in some cases, early does simply seem to offer added convenience to those population groups with traditionally higher turnout.

The second major question in this paper concerned early voters' perceptions of the fairness of the election: do they perceive elections to be less fair because they lack personal contact with election officials, or because they are concerned about their votes being safely stored and counted? While there is a negative relationship between perceptions of the fairness of the election and early voting in Switzerland and Canada, the magnitude of this relationship is actually quite small: less than one point on a ten-point scale of fairness. Other variables, particularly political interest, had a greater effect on perceptions of fairness. This suggests that, while decreased perceptions of election fairness are possible for early voters, they need not be a central concern in all contexts. Future research should consider this question with more direct survey questions about voters' election experiences and trust that their ballot will be counted.

Finally, it is important to consider the differences between the four contexts that are explored in this paper: on-demand postal voting in Germany, automatic postal voting in Switzerland, days-long advance voting in Canada and weeks-long advance voting in Finland. While a larger sample of jurisdictions would be needed to confidently assess the impact of different types of early voting on participation, it is telling that these four very difficult contexts to present similarly mixed results. There are no overarching trends between the two major families of early voting, nor between the easier and more difficult models of early voting.

In conclusion, the findings in this paper should at once both please and alarm election administrators. It should please election administrators that early voting is likely helping the oldest voters who may find it more difficult to get to the polls on election day. Furthermore, it is promising that early voting is only weakly related to lower perceptions of fairness of elections. However, at the same time, many of the socio-demographic and attitudinal variables that predict election day voting are also related to, and perhaps even exacerbated by, early voting. Those taking advantage of early voting are likely those who would vote anyway, and thus the provision of early voting may not always lead to higher voter turnout, especially among populations traditionally under-represented at the polls.

Table 1: Socio-Demographic and Attitudinal Correlates of Early Voting by Country

VARIABLES	Canada		Finland		Germany		Switzerland	
	(1) Early Voting	(2) Early Voting	(3) Early Voting	(4) Early Voting	(5) Early Voting	(6) Early Voting	(7) Early Voting	(8) Early Voting
Female	-0.26*** (0.08)	-0.18** (0.08)	0.08 (0.07)	0.12 (0.07)	0.16** (0.07)	0.17** (0.07)	0.12** (0.05)	0.16*** (0.05)
Ages 18-35	0.03 (0.10)	0.11 (0.10)	-0.28*** (0.09)	-0.26*** (0.09)	0.10 (0.09)	0.11 (0.09)	0.11 (0.07)	0.13* (0.07)
Ages 66+	0.50*** (0.10)	0.44*** (0.10)	0.85*** (0.09)	0.84*** (0.09)	0.37*** (0.10)	0.37*** (0.10)	0.40*** (0.06)	0.39*** (0.06)
Post-Secondary Education	0.00 (0.09)	-0.07 (0.10)	0.01 (0.07)	-0.05 (0.08)	0.33*** (0.08)	0.33*** (0.08)	0.14** (0.06)	0.11* (0.06)
Interest in Politics		0.84*** (0.17)		0.53*** (0.15)		0.12 (0.17)		0.45*** (0.11)
Political Knowledge		0.19 (0.18)		0.10 (0.17)		-0.02 (0.13)		0.03 (0.10)
Regional Election	4.30*** (0.11)	4.27*** (0.11)			0.61*** (0.11)	0.56*** (0.13)	1.29*** (0.12)	1.27*** (0.12)
Constant	-6.29*** (0.11)	-6.95*** (0.19)	-1.14*** (0.09)	-1.53*** (0.17)	-1.81*** (0.10)	-1.86*** (0.14)	0.52*** (0.07)	0.18* (0.11)
F statistic	472.09***	372.27***	36.95***	29.12***	81.81***	61.40***	48.13***	40.85***
Observations	10,214	10,133	3,333	3,332	6,992	6,985	12,939	12,925

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

Logistic regression models with election fixed effects.

Dependent variable is whether the voter cast their ballot early or on election day (election day voting is reference category).

Data are weighted so each election is weighted equally, and also by early vs. election day turnout. Data on official early voting rates are not available for Switzerland and for regional elections in Bavaria and Lower-Saxony, so these data are not weighted by turnout type.

Regional election data are not available for Finland.

Data are clustered by election.

Table 2: Early Voting and Perceptions of Fairness of the Election

VARIABLES	Canada	Germany	Switzerland
	(1) Fairness of Election	(2) Fairness of Election	(3) Fairness of Election
Early Voting	-0.10 (0.10)	-0.17** (0.08)	-0.26** (0.13)
Female	-0.21* (0.11)	-0.06 (0.08)	-0.52*** (0.07)
Ages 18-35	-0.53*** (0.14)	-0.51*** (0.10)	-0.00 (0.08)
Ages 66+	-0.24 (0.15)	0.19* (0.12)	-0.10 (0.10)
Post-Secondary Education	-0.17 (0.13)	0.14* (0.08)	0.34*** (0.08)
Interest in Politics	0.87*** (0.25)	0.91*** (0.18)	1.45*** (0.20)
Voted for the Winner	0.42*** (0.11)	0.51*** (0.08)	
Regional Election	0.16 (0.11)	0.17 (0.11)	0.04 (0.08)
Constant	7.14*** (0.21)	7.51*** (0.17)	7.02*** (0.19)
Observations	4,633	5,032	2,751
R-squared	0.052	0.064	0.063

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

Regression models, with election fixed effects.

Dependent variable is the respondent's perception of fairness of the election.

Data are weighted so each election is weighted equally, and also by early vs. election day turnout. Data on official early voting rates are not available for Switzerland and for regional elections in Bavaria and Lower-Saxony, so these data are not weighted by turnout type.

Data on whether the respondent voter for the winner are not available for Switzerland.

Data on perceptions of fairness are not available for Finland.

Appendix A: Variables

Variable	Coding
Early Voting*	0 = Voted on election day [reference category] 1 = Voted early
Gender	0 = Male [reference category] 1 = Female
Age groups	1 = Age 18-35 0 = Age 36-65 [reference category] 2 = Age 66+
Education	0 = high school or less [reference category] 1 = some or completed post-secondary
Interest in Politics	Scales were different for each country. To standardize, it was recoded to a 0-1 scale.
Political Knowledge	The type and number of political knowledge questions were different for each country (ranging from identifying political leaders' pictures to questions about political processes). To standardize, it was recoded to a 0-1 scale.
Fairness of election	"Rate how fairly the election was conducted?" Scale of 0 (not at all fair) – 10 (very fairly)
Voted for winter	"Would you say the party you voted for won or lost the election?" 0 = no 1 = yes
Regional Election	0 = National election [reference category] 1 = Regional election

***Notes on the construction of the early voting variable:** For the Making Electoral Democracy Work datasets, voters were surveyed once leading up to election day and again after the election. In the post-election survey, the respondents were asked specifically whether they had used a method of early voting, where appropriate specifically listing the options available (for example, advance polling, absentee balloting). In addition, the pre-election questionnaire, conducted shortly before the election, asked respondents if they had already voted (which presumes that those who had already voted did so using early voting measures). These data, however, are necessarily incomplete as voters still had time to cast an early ballot between the survey and election day. To include the greatest possible number of respondents who voted early, I include in the early voting category all voters who responded they had voted early in either the post-election or pre-election survey. For national election studies, post-election questions on whether the voter early or on election day were used.

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