Selective Abstention in Simultaneous Elections: Understanding the Turnout Gap

Sirus H. Dehdari[*] Jaakko Meriläinen[†] Sven Oskarsson[‡]

July 28, 2020

Abstract

If two elections are held at the same day, why do some people choose to vote in one but to abstain in another? We argue that selective abstention is driven by same factors that determine voter turnout. Our empirical analysis focuses on Sweden where the turnout gap between local and national elections has been about $2-3\%$. Rich administrative registry data reveal that people from higher socio-economic backgrounds, immigrants, women, older individuals, and people who have been less geographically mobile are less likely to selectively abstain.

Keywords: elections, roll-off, selective abstention, voting behavior, voter turnout

Word count: 2517

---

[*]Department of Government, Uppsala University, and Swedish Institute for Social Research, Stockholm University. Email: sirus.dehdari@statsvet.uu.se.

[†]Center for Economic Research and Department of Economics, Instituto Tecnológico Autónomo de México. Email: jaakko.merilainen@itam.mx.

[‡]Department of Government, Uppsala University. Email: sven.oskarsson@statsvet.uu.se.

Voter turnout varies greatly across time and space (Blais 2000). This holds true even when focusing on simultaneously held elections within countries. The notion of selective abstention is commonplace. For example, Burnham (1965) makes a remark on "[...] the tendency of the electorate to vote for 'prestige' offices but not for the lower offices on the same ballot" in the United States. This raises a puzzle. Why do some people choose to vote in one but to abstain in another if they have already born the cost of showing up at the polling station? Who are the selectively-abstaining voters?

Answering these questions is not straightforward. Voter turnout scholars have explored the connection between various individual-level characteristics and selective abstention building on both aggregate and/or survey data (Bullock and Dunn 1996; McGregor 2018; Wattenberg, McAllister, and Salvanto 2000). However, inferences from aggregate data are subject to the well-understood ecological inference problem. Survey data on voter turnout, on the other hand, tend to suffer from misreporting that may be correlated with potentially unobserved voter characteristics (Holbrook and Krosnick 2009; Silver, Anderson, and Abramson 1986).

We tackle these issues with exceptional administrative registry data from Sweden where voters vote in elections at three different levels—national, regional, and municipal—at the same time. Our data combine voter turnout registries with a plethora of individual-level characteristics. With this data set at hand, we demonstrate that individual characteristics that typically predict voter turnout (or abstention) are also associated with selective abstention.

Our empirical analysis reveals that people from higher socio-economic backgrounds, immigrants, women, older individuals, and people who have been less geographically mobile are less likely to selectively abstain. These correlations are robust to a number of modeling choices, and they are in line with various arguments that link individuals' demographic and socio-economic characteristics with the costs and benefits of voting (Almond and Verba 1963; Verba and Nie 1972; Wolfinger and Rosenstone 1980).

Sweden as a Test Bed

We study selective electoral participation in the context of Sweden. Elections to the Swedish Parliament, municipal councils, and county councils have been held simultaneously since 1970.[1] At present, the elections are held every four years on the second Sunday of September. For the past ten years, voter turnout has exceeded 80% in all types of elections (see Figure 1), but there has been a relatively stable turnout gap between municipal and regional, and national elections. For example, in 2018, about 87% of the voters voted in the national election but the turnout rate was roughly three percentage points lower in the local elections.

The political environment is fairly homogeneous across different types of elections. They all use the same electoral system: proportional representation with semi-open lists. Each voter may cast one vote per election that they are allowed to participate in. The candidate lists for each party are printed on separate ballot papers, and there is one party list per election. The ballots for the three elections have similar layouts but a different colors.[2] A key difference between the elections at different levels are eligibility rules. To vote in a Swedish parliamentary election, one must be a Swedish citizen and at least 18 years old. Voting in elections for the county and municipal councils is less restricted. An individual is allowed to vote in these elections if he or she is at least 18 years old and a citizen in Sweden, Iceland, Norway, or any EU country. Furthermore, permanent residents who are citizens in other countries are eligible to vote if they have lived in Sweden for three consecutive years (see also Aggeborn et al. 2020).

Differential eligibility rules call for individual-level data if we want to understand what is behind selective abstention. Using Swedish administrative registries, we build an individual-level

[1]Municipal councils are responsible for policies such as urban planning and primary and secondary education, and county councils organize health care.

[2]In the United States, many elections are typically included on the same ballot. Selective voter abstention is often referred to as "roll-off", as voters are more likely to abstain in races for less salient offices that are usually listed lower on the ballot (Bowler and Donovan 2000).

dataset including information on voter turnout and various characteristics. Our turnout data come from the 2010 elections in which about 84.4% of the voters voted in both the national and municipal elections. A small fraction of voters eligible to vote in both elections abstained selectively: 1.61% voted in the national but not the municipal elections, and 0.11% voted in the municipal but not the parliamentary elections. We observe the turnout outcomes and various characteristics of more than six and a half million voters in total. Appendix A provides further information on the data.

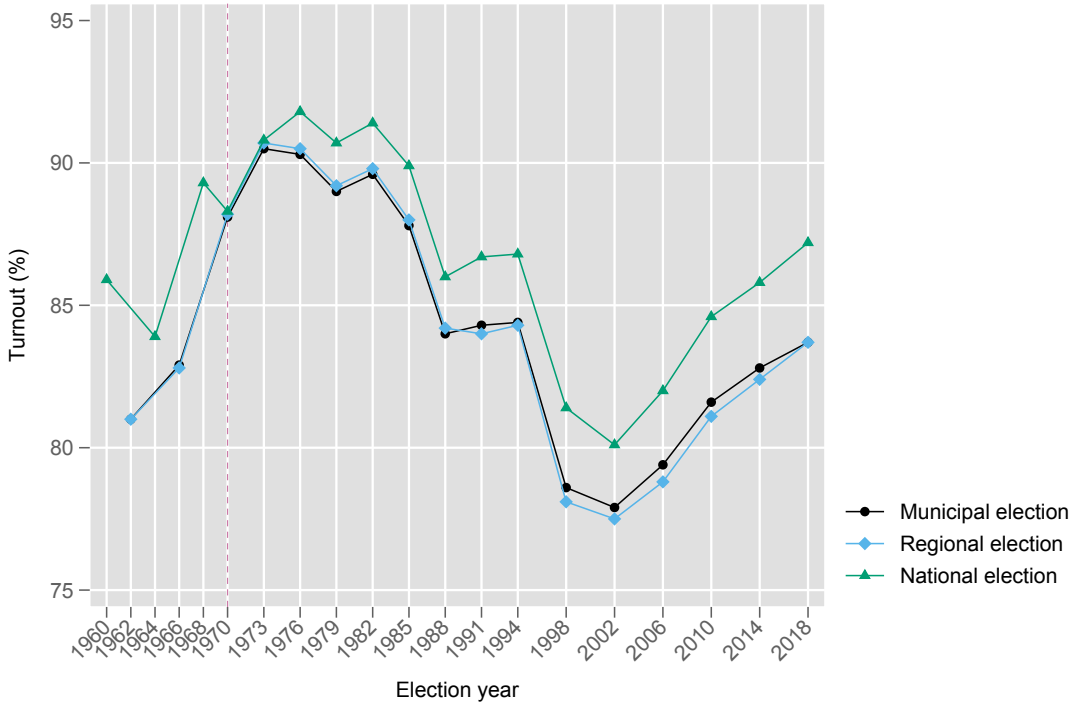

Figure 1. Turnout in Swedish elections, 1960-2018. Elections have been organized on the same day since 1970 (dashed vertical line). *Source:* SCB.

Theoretical Considerations

What could explain the selective abstention that we see in our data? Students of voter turnout have attributed it to a multitude of determinants. For instance, selective abstention may be a result of some voters being peripherally engaged in politics. It may require more to motivate them to vote

in lower-level elections (Bhatti et al. 2019; Burnham 1965). On the other hand, some voters may abstain in some of the elections because of lack of information (Dubin and Kalsow 1996). Such determinants of voting behavior may interact with macro-level factors common to all voters in a constituency such as differential mobilization efforts across elections (Cox and Munger 1989), or complex ballot structures (Reilly and Richey 2011).

These explanations are closely connected with the calculus of voting framework (Downs 1957; Riker and Ordeshook 1968). A voter chooses to vote if the utility he or she derives from voting exceeds the cost of doing so—formally, if $pB + D > C$. Here, p is the probability of an individual's vote influencing the electoral outcome, bringing the voter a benefit B if realized. D is an additional payoff that a voter obtains from the act of voting, such as utility from fulfilling a citizen duty, and C is the cost of voting. We argue that factors that explain voter turnout are also likely to influence selective abstention. Our focus is on C and D which vary across voters.[3]

Theoretical work suggests that the costs explaining selective abstention are not *fixed costs* such as the time spent traveling to a polling station. Instead, there are psychological *informational costs* that a voter faces if he or she has limited information on candidates and parties, and might "mistakenly" vote for the wrong candidate or party (Ghirardato and Katz 2006). These arguments are in line with Feddersen and Pesendorfer (1996) who show that less informed indifferent voters strictly prefer abstaining over voting, even when voting is costless. On the other hand, there may be other types of costs that matter for selective abstention. Voters who are part of a tight social network may be monitored by their peers, which could increase the cost of not voting (Feddersen 2004). Related to this argument, one might expect that voters who are more engaged with the local community may also have a greater sense of a civic duty, increasing the propensity to vote in elections at all levels of government (Leighly 1996).

Our data set contains information on a number of socio-economic and demographic characteristics which have been argued to have a strong link with and C and D (Almond and

[3]Arguably, p and B could vary by election. For example, a single vote might be decisive in a small local government election, making p greater in local elections.

Verba 1963; Verba and Nie 1972; Wolfinger and Rosenstone 1980). One of the most prominent arguments in this literature is that citizens with a higher socio-economic status are better informed than less-educated and lower-income citizens. This should make them less likely to selectively abstain in simultaneous elections. We also have reason to believe that older people are less likely to selectively abstain, because they tend to have become more involved with public affairs and more connected with their communities. For similar reasons, geographical mobility may matter: people who have lived longer in a particular municipality are expected to be less likely to selectively abstain in local elections. Mobility could also be associated with the costs of voting. People who have recently moved to a new municipality may be less familiar with the local political environment and will therefore have to exert more effort into finding a suitable candidate or party.[4]

The relationship between gender and immigrant background, and selective participation is more ambiguous from a theoretical perspective. Kostelka, Blais, and Gidengil (2019), for example, argue that women are less psychologically engaged in politics and thus less likely to vote in second-order elections. In contrast, authors such as Carreras (2018) have suggested that women exhibit a higher sense of civic duty than men. This should instead make them less likely to selectively abstain. Similarly, it is unclear how people with an immigrant background turn out to vote in elections at different levels. On the one hand, immigrants may come from lower socio-economic backgrounds, and they might experience language barriers to acquiring political information especially at lower-level elections. Then again, naturalization might play some role and increase voter participation, for instance, by boosting the feeling of social inclusion (Bevelander and Pendakur 2011).

[4]Those eligible to vote are automatically registered as voters in all elections. Thus, geographical mobility cannot affect (selective) turnout through registration costs in our case (c.f. Highton 2000).

Empirical Analysis

We estimate a linear probability model (using OLS) to quantify the connection between voter characteristics and selective abstention in Swedish elections. We regress an indicator variable for selective abstention—multiplied by 100 so that the coefficients can be interpreted in terms of percentage points—on a set of covariates. We measure selective abstention using two indicator variables: (*i*) turning out to vote in at least one of the three elections but abstaining in at least one, or (*ii*) voting only in either the local or the national election which are more salient elections than the regional election. The regression results are reported in Table 1.[5]

Let us start by focusing on the estimation results in columns (1) and (3). First, socio-economic status matters. Earning $10,000$ SEK (about $1,000$ USD) more is associated with a 0.02 percentage point decrease in selective abstention, and having one more year of education is associated with a decrease of $0.21-0.29$ percentage points. These regression coefficients are statistically significant with $p<0.01$. Unemployed individuals are $0.33-0.56$ percentage points more likely to selectively abstain. Overall, these results are in line with the argument that people from higher socio-economic backgrounds have more political information which decreases the costs of voting. This further makes participation in all elections more likely.

Second, demographic characteristics are important. A one-year increase in age decreases the propensity of selective abstention by $0.07-0.09$ percentage points. Having lived one more year in a municipality prior to the election is associated with a decrease of 0.23 percentage points in selective abstention. These results are consistent with a lower C or a higher D for older voters or voters who have not moved recently. Selective abstention in any election is, on average, $0.49-0.81$ percentage points lower among women than men, which is in line with the idea of female voters

[5]We assess the robustness of our results in Appendix B. Our conclusions hold if we regress selective abstention on socio-economic and demographic characteristics separately (Appendix Tables B1 and B2), use a probit or a logit specification (Appendix Tables B3 and B4), or control for municipality fixed effects to hold the electoral environment constant (Appendix Table B5).

having a higher sense of civic duty to vote. Interestingly, a final remark is that immigrants (who are naturalized citizens) are $0.36 - 0.65$ percentage points more likely to vote in all elections than native Swedes.

To understand whether selective participation is a persistent phenomenon, we also estimate a specification in which we include the lagged dependent variable. For the purpose of this test, we use data from the 2014 elections in which we observe a random and representative sample of the voters. We link these voters to their turnout behavior in the 2010 election. If selective electoral participation is persistent, we ought to see a positive correlation between past selective abstention and selective abstention today. This is, indeed, the case (columns 2 and 4 in Table 1). In fact, past selective turnout turns out to be by far the strongest predictor of selective turnout in the current election: voters who selectively abstained in the 2010 elections are $12.7 - 16.6$ percentage points more likely to abstain again four years later.

Note also that not all of our descriptive results persist when we control for the lagged dependent variable. In particular, the regression coefficients for *Years in municipality* and *Immigrant* are no longer statistically significant. The latter even changes its sign when the additional covariate is included. The regression coefficient for *Unemployed* is marginally significant in column (2) but insignificant in column (4). Many of the estimates also tend towards zero when we control for lagged (selective) abstention. The discrepancies may be partially due to differences in the 2014 sample and the overall population. In Appendix Table B6, we rerun the analyses in the odd columns using the same sample of voters in 2010. These results are very similar to the correlations that we find in the 2014 sample.

In most cases, the same characteristics that predict selective abstention also predict overall abstention. Columns (5) and (6) report the correlation between voter abstention (in all elections) and voter characteristics. There are, however, two notable exceptions. First, voters with an immigrant background are less likely to selectively abstain, conditional on having turned out to vote, but more likely to abstain overall. Second, unemployed voters are more likely to selectively abstain while they instead are less likely to abstain overall.

We report regression results using data that are aggregated to the municipality level in Appendix Table B7. The patterns that we find here do not emerge when we study the correlates of selective abstention using these aggregate-level data. This highlights the importance of individual-level data, if we want to properly understand what kind of factors explain the phenomenon.

Table 1. Determinants of selective and complete voter abstention.

	Selective abstention (any election)		Selective abstention (local or national)		Complete abstention	
	(1)	(2)	(3)	(4)	(5)	(6)
Income (10,000 SEK)	-0.024***	-0.012***	-0.022***	-0.010***	-0.132***	-0.075***
	(0.002)	(0.003)	(0.002)	(0.003)	(0.009)	(0.011)
Years of education	-0.288***	-0.167***	-0.208***	-0.095***	-2.108***	-1.051***
	(0.013)	(0.028)	(0.011)	(0.023)	(0.023)	(0.053)
Unemployed	0.562***	0.823*	0.328***	0.410	-0.476***	-1.345*
	(0.059)	(0.486)	(0.050)	(0.345)	(0.145)	(0.694)
Age	-0.085***	-0.039***	-0.066***	-0.033***	-0.097***	-0.018*
	(0.005)	(0.005)	(0.004)	(0.004)	(0.011)	(0.010)
Years in municipality	-0.021***	-0.011	-0.021***	-0.005	-0.087***	-0.032***
	(0.005)	(0.009)	(0.002)	(0.003)	(0.008)	(0.010)
Female	-0.805***	-0.532***	-0.487***	-0.251***	-1.688***	-1.322***
	(0.045)	(0.118)	(0.034)	(0.089)	(0.053)	(0.263)
Immigrant	-0.649***	0.129	-0.356***	-0.019	13.787***	8.365***
	(0.076)	(0.291)	(0.064)	(0.178)	(0.488)	(0.477)
Lagged dependent variable		16.564***		12.714***		42.186***
		(1.196)		(1.241)		(0.829)
Year	2010	2014	2010	2014	2010	2014
Observations	5703614	43197	5738934	43612	6643367	52929

Notes: The dependent variable is an indicator variable (multiplied by 100) for selective abstention in any election in columns (1) and (2), selective abstention in either the local or national election in columns (3) and (4), and not voting in any election in columns (5) and (6). The estimations in columns (1) and (2) are conditional on voting in any election, and the estimations in columns (3) and (4) are conditional on voting in either the local or the national election. Robust standard errors are reported in parentheses. ***, ** and * denote statistical significance at 1%, 5% and 10% levels, respectively.

Closing Remarks

We document new empirical facts on what kind of people selectively abstain in simultaneous elections. Knowing what type of citizens are more likely to abstain selectively can help designing policies intended to boost turnout. For example, voters who have already born the cost of voting

might be the easiest to persuade in get-out-the-vote experiments. They should also be more likely to react to information on political platforms of candidates and other important topics which should help reduce the information costs associated with voting. Finally, while we observe merely a relatively small turnout gap between national and local elections, it is worth noting that the difference in turnout rates could be pivotal for the outcomes of local elections. This may be crucial for both political representation and, consequently, policy outcomes.

References

Aggeborn, Linuz, Henrik Andersson, Sirus Håfström Dehdari, and Karl-Oskar Lindgren. 2020. "Does Election Salience Affect Immigrant Voter Turnout?" *APSA Preprints*.

Almond, Gabriel, and Sidney Verba. 1963. *The Civic Culture: Political Attitudes and Democracy in Five Nations*. New Jersey: Princeton University Press.

Bevelander, Peter, and Ravi Pendakur. 2011. "Voting and Social Inclusion in Sweden." *International Migration* 49 (4): 67-92.

Bhatti, Yosef, Jens Olav Dahlgaard, Jonas Hedegaard Hansen, and Kasper Møller Hansen. 2019. "Core and Peripheral Voters: Predictors of Turnout Across Three Types of Elections." *Political Studies* 67 (2): 348-366.

Blais, André. 2000. *To Vote or Not to Vote: The Merits and Limits of Rational Choice Theory*. University of Pittsburgh Press.

Bowler, Shaun, and Todd Donovan. 2000. *Demanding Choices: Opinion, Voting, and Direct Democracy*. University of Michigan Press.

Bullock, Charles S., and Richard E. Dunn. 1996. "Election Roll-Off: A Test of Three Explanations." *Urban Affairs Review* 32 (1): 71-86.

Burnham, Walter Dean. 1965. "The Changing Shape of the American Political Universe." *American Political Science Review* 59 (1): 7-28.

Carreras, Miguel. 2018. "Why no gender gap in electoral participation? A civic duty explanation." *Electoral Studies* 52: 36-45.

Cox, Gary W., and Michael C. Munger. 1989. "Closeness, Expenditures, and Turnout in the 1982 U.S. House Elections." *American Political Science Review* 83 (1): 217-231.

Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York: Harper and Row.

Dubin, Jeffrey A., and Gretchen A. Kalsow. 1996. "Comparing Absentee and Precinct Voters: Voting on Direct Legislation." *Political Behavior* 18 (4): 393-411.

Feddersen, Timothy J. 2004. "Rational Choice Theory and the Paradox of Not Voting." *Journal of Economic Perspectives* 18 (1): 99-112.

Feddersen, Timothy J., and Wolfgang Pesendorfer. 1996. "The Swing Voter's Curse." *American Economic Review* 86 (3): 408-424.

Ghirardato, Paolo, and Jonathan N. Katz. 2006. "Indecision Theory: Explaining Selective Abstention in Multiple Elections." *Journal of Public Economic Theory* 8: 379-400.

Highton, Benjamin. 2000. "Residential Mobility, Community Mobility, and Electoral Participation." *Political Behavior* 2 (1): 109-120.

Holbrook, Allyson L., and Jon A. Krosnick. 2009. "Social desirability bias in voter turnout reports: Tests using the item count technique." *Public Opinion Quarterly* 74 (1): 37-67.

Kostelka, Filip, André Blais, and Elisabeth Gidengil. 2019. "Has the gender gap in voter turnout really disappeared?" *West European Politics* 3 (42): 437-463.

Leighly, Jan. 1996. "Group Membership and the Mobilization of Political Participation." *Journal of Politics* 2 (58): 447-463.

McGregor, R. Michael. 2018. "Voters Who Abstain: Explaining Abstention and Ballot Roll-Off in the 2014 Toronto Municipal Election." *Urban Affairs Review* 54 (6): 1081-1106.

Reilly, Shauna, and Sean Richey. 2011. "Ballot Question Readability and Roll-Off: The Impact of Language Complexity." *Political Research Quarterly* 64 (1): 59-67.

Riker, William, and Peter Ordeshook. 1968. "A Theory of the Calculus of Voting." *American Political Science Review* 62 (1): 25-42.

Silver, Brian D., Barbara A. Anderson, and Paul R. Abramson. 1986. "Who Overreports Voting?" *American Political Science Review* 80 (2): 613-624.

Verba, Sidney, and Norman H. Nie. 1972. *Participation in America: Political Democracy and Social Equality*. New York, NY: Harper & Row.

Wattenberg, Martin P., Ian McAllister, and Anthony Salvanto. 2000. "How Voting is Like Taking an SAT Test: An Analysis of American Voter Rolloff." *American Politics Quarterly* 28 (2): 234-250.

Wolfinger, Raymond, and Steven J. Rosenstone. 1980. *Who Votes?* New Haven, CT: Yale University Press.

Selective Abstention in Simultaneous Elections: Understanding the Turnout Gap

Online Appendix

July 28, 2020

A Data

This Appendix provides further details on our data and how to acquire them for replication purposes.

Sample and descriptive statistics. Our data cover information on voter turnout and voter characteristics of more than six and a half million voters in total. The data were collected from Swedish municipalities that maintain voter registries and information on voter turnout. Eight out of 290 municipalities did not provide these data, and voters in these municipalities are thus excluded from our sample. Summary statistics on our data can be found in Table A1. The number of observations that we use in our analyses varies slightly depending on the specification we use. The exact numbers are reported in our regression tables. The data contain almost the whole universe of Swedish voters in the year 2010.

The main turnout data come from the 2010 elections. In our analyses, we measure selective abstention in two ways: (*i*) turning out to vote in at least one of the three elections but abstaining in at least one vote, or (*ii*) voting only in either local or national election. in both cases the reference group contains individuals voting in all elections. This means that we omit individuals who reside in the region of Gotland in some of the analyses, as they do not have a regional government. According to our data, about 3% of the voters selectively abstained in at least one election in 2010. Selective abstention in either municipal or national election was slightly lower, around 2%. About 14% of the voters did not vote in any of the elections.

Besides the turnout outcomes, our data set contain information on a number of individual characteristics, in particular voters socio-economic and demographic background. The average (monthly) income in our sample was roughly 17,500 SEK in the 2010 election. An average individual eligible to vote had completed almost 12 years of education, and 5% of the individuals in our sample were unemployed. The average age of the people included in our data set was almost 50, and they had lived roughly 22 years in the same municipality, on average. Not

surprisingly, the data are balanced in terms of gender. As we restrict our sample to only include individuals eligible to vote in both local and national elections, the immigrants in our data are all naturalized citizens. They comprise about 9% of the observations.

In some analyses, we also use data from the 2014 election. We have information on a randomly drawn sample of individuals who are eligible to vote in Swedish elections. When selecting this sample, higher sampling weights were placed on individuals from marginalized groups (e.g., immigrants and individuals of a lower socio-economic status). Table A1 also reports the summary statistics for the 2014 sample.

Obtaining the data. The individual-level information that we use in this paper come from various Swedish administrative registers. The data are stored on an encrypted server at Uppsala University and all our analyses have been conducted through a remote desktop application. We are under a contractual obligation not to disseminate these data to other individuals.

However, interested readers can acquire the data directly from Statistics Sweden. Currently, Statistics Sweden requires that researchers obtain a permission from a Swedish Ethical Review Board before the data can be ordered. A description of how to order data from Statistics Sweden is available at: https://www.scb.se/en/services/guidance-for-researchers-and-universities/. A complete list of the variables that were used in this project is available from the authors.

Table A1. Descriptive statistics.

	2010		2014	
	Mean	SD	Mean	SD
Selective abstention (any election)	0.030	0.171	0.033	0.180
Selective abstention (local or national)	0.020	0.140	0.014	0.118
Complete abstention	0.138	0.345	0.112	0.316
Income (10,000 SEK)	17.528	21.578	24.132	24.454
Years of education	11.685	2.650	12.216	2.485
Unemployed	0.048	0.215	0.042	0.200
Age	49.505	19.085	47.743	15.959
Years in municipality	21.886	15.669	21.447	15.913
Female	0.508	0.500	0.496	0.500
Immigrant	0.088	0.283	0.091	0.287

B Robustness Checks

In this Appendix, we show that our findings are robust to a number of alternative modeling choices. We also show that the results are not robust to using aggregate-level data, which further motivates our use of the individual-level dataset.

Different sets of covariates. We start by showing that our estimation results are robust to regressing selective abstention on the socio-economic and demographic covariates separately. These regression results are reported in Tables B1 and B2, respectively. The magnitude of the point estimates is slightly affected by this modeling choice, but importantly, all qualitative conclusions remain the same as in our main analyses.

Income and years of education are negatively associated with selective and complete voter abstention, and unemployed individuals tend to be more likely to selectively abstain than employed individuals (Table B1). Age, years lived in a municipality, being a female, and being a naturalized citizen are all negatively associated with selective abstention (Table B2).

Probit and logit specification. In our main analysis, we estimate the relationship between different voter characteristics and selective abstention using a linear probability model (OLS). Given the dichotomous nature of our dependent variable, we rerun our analyses using a probit specification. We report the probit results in Table B3 that shows the marginal effects evaluated at the means. Results from this analysis are very similar to the results from the linear probability model.

For example, focusing on the specifications that do not control for the lagged dependent variable (columns 1 and 3), we can make the following observations regarding socio-economic background and voting behavior. Earning 10,000 SEK is associated with a reduction of about 0.3 percentage points in selective abstention. Similarly, individuals who have one more year of education are about 0.23-0.31 percentage points less likely to selectively abstain. Selective abstention is about 0.36-0.58 percentage points more likely among the unemployed.

Also demographic characteristics matter in the same way as in our main analyses. A one-year increase in age and having lived in a municipality for one more year are associated with a 0.06-0.08 percentage point and 0.02-0.03 percentage point reduction in selective abstention, respectively. Women are 0.48-0.78 percentage points less likely to vote selectively than men and individuals with an immigrant background are 0.28-0.54 percentage points less likely to participate only in some of the elections.

Once we use the 2014 sample and control for the lagged dependent variable, most of our results persist. However, as in the main analyses, the regression coefficients for unemployment and immigrant background are no longer statistically significant. While the magnitude of the coefficient of *Unemployed* does not change much, the coefficient of *Immigrant* changes sign. Having said that, it should also be noted that the standard errors are considerably larger in the specification that controls for the lagged dependent variable. In columns (2) and (4) selective abstention is clearly an important predictor of selective abstention today.

We have also estimated a logit model. Table B4 shows that the logit estimates are in line with the probit and OLS estimates.

Including municipality FEs. Besides characteristics that influence voting behavior at the individual level, there are number of institutional and other macro-level factors that may play a role. To keep the electoral environment fixed, we also estimate a specification that includes municipality fixed effects. These regression results are reported in Table B5. The regression results are essentially not affected at all by this modeling choice.

Municipality-level results. An impoartant remark is that correlations that we find when using the individual-level do not show up when we aggregate the data to the municipality level by taking averages. We illustrate this point in Table B7.

Income, age, and immigration status are still correlated with selective (columns 1 and 2) and complete (column 3) abstention similarly to what our individual-level analysis suggests. However, we no longer see that average duration of education, unemployment status, years lived

in the municipality, or gender composition would matter for selective abstention. Also the magnitude of the point estimates is affected by the aggregation. This makes it more difficult to make any inferences regarding the association between selective abstention and individual voter characteristics. These remarks further highlight the importance of individual-level data if we want to study the determinants of (selective) abstention.

Note that there is one observation missing in column (1). This is due to the fact that the region of Gotland only has one municipality and it does not have a regional government. Thus, we omit this municipality from the analysis.

Estimation results using the 2014 sample. In Table B6, we assess whether the discrepancy between the results in odd and even columns in Table 1 in the main text could be driven by differences in the estimation sample that we use. The odd columns include all individuals who are eligible to vote in the elections that we focus on, whereas the even columns only include a sample of voters in the year 2014. Table B6 reports the determinants of voter turnout in this sample but using outcome data from the year 2010. The regression results using the 2010 and the 2014 data are virtually identical. This further suggests that there may be some (potentially unobservable) differences between the populations covered by the 2014 sample and our complete data for 2010.

Table B1. Explaining voting behavior with socio-economic characteristics.

	Selective abstention (any election)		Selective abstention (local or national)		Complete abstention	
	(1)	(2)	(3)	(4)	(5)	(6)
Income (10,000 SEK)	-0.010***	-0.007***	-0.012***	-0.006***	-0.122***	-0.073***
	(0.001)	(0.002)	(0.001)	(0.002)	(0.008)	(0.009)
Years of education	-0.125***	-0.097***	-0.071***	-0.039*	-1.802***	-1.000***
	(0.026)	(0.031)	(0.018)	(0.020)	(0.041)	(0.056)
Unemployed	1.351***	1.109**	0.968***	0.632*	1.734***	-0.640
	(0.112)	(0.481)	(0.084)	(0.338)	(0.164)	(0.692)
Lagged dependent variable		16.997***		13.101***		43.458***
		(1.196)		(1.233)		(0.825)
Year	2010	2010	2010	2014	2010	2014
Observations	5703614	43197	5738934	43612	6643367	52929

Notes: The dependent variable is an indicator variable (multiplied by 100) for selective abstention in any election in columns (1) and (2), selective abstention in either the local or national election in columns (3) and (4), and not voting in any election in columns (5) and (6). The estimations in columns (1) and (2) are conditional on voting in any election, and the estimations in columns (3) and (4) are conditional on voting in either the local or the national election. Robust standard errors are reported in parentheses. ***, ** and * denote statistical significance at 1%, 5% and 10% levels, respectively.

Table B2. Explaining voting behavior with demographic characteristics.

	Selective abstention (any election)		Selective abstention (local or national)		Complete abstention	
	(1)	(2)	(3)	(4)	(5)	(6)
Age	-0.070***	-0.030***	-0.054***	-0.027***	0.002	0.039***
	(0.005)	(0.005)	(0.003)	(0.004)	(0.006)	(0.009)
Years in municipality	-0.012**	-0.006	-0.015***	-0.001	-0.030***	-0.002
	(0.005)	(0.009)	(0.002)	(0.003)	(0.011)	(0.011)
Female	-0.716***	-0.511***	-0.393***	-0.220***	-1.352***	-1.218***
	(0.040)	(0.116)	(0.028)	(0.084)	(0.057)	(0.238)
Immigrant	-0.425***	0.278	-0.175***	0.076	15.209***	9.007***
	(0.074)	(0.289)	(0.058)	(0.178)	(0.590)	(0.494)
Lagged dependent variable		16.746***		12.850***		44.285***
		(1.191)		(1.237)		(0.834)
Year	2010	2010	2010	2014	2010	2014
Observations	5703614	43197	5738934	43612	6643367	52929

Notes: The dependent variable is an indicator variable (multiplied by 100) for selective abstention in any election in columns (1) and (2), selective abstention in either the local or national election in columns (3) and (4), and not voting in any election in columns (5) and (6). The estimations in columns (1) and (2) are conditional on voting in any election, and the estimations in columns (3) and (4) are conditional on voting in either the local or the national election. Robust standard errors are reported in parentheses. ***, ** and * denote statistical significance at 1%, 5% and 10% levels, respectively.

Table B3. Results from probit estimation.

	Selective abstention (any election)		Selective abstention (local or national)		Complete abstention	
	(1)	(2)	(3)	(4)	(5)	(6)
Income (10,000 SEK)	-0.026***	-0.018***	-0.026***	-0.014***	-0.218***	-0.127***
	(0.001)	(0.004)	(0.001)	(0.003)	(0.004)	(0.014)
Years of education	-0.312***	-0.194***	-0.225***	-0.118***	-2.104***	-1.091***
	(0.011)	(0.032)	(0.010)	(0.026)	(0.030)	(0.056)
Unemployed	0.575***	0.592	0.361***	0.341	-0.235	-0.908*
	(0.056)	(0.384)	(0.047)	(0.268)	(0.155)	(0.547)
Age	-0.080***	-0.043***	-0.060***	-0.035***	-0.119***	-0.057***
	(0.004)	(0.005)	(0.003)	(0.005)	(0.008)	(0.009)
Years in municipality	-0.023***	-0.014	-0.025***	-0.007*	-0.075***	-0.024**
	(0.006)	(0.010)	(0.002)	(0.004)	(0.008)	(0.010)
Female	-0.784***	-0.526***	-0.475***	-0.260***	-1.912***	-1.602***
	(0.038)	(0.109)	(0.030)	(0.081)	(0.073)	(0.246)
Immigrant	-0.537***	0.141	-0.278***	0.008	12.713***	7.065***
	(0.057)	(0.272)	(0.047)	(0.157)	(0.498)	(0.449)
Lagged dependent variable		14.281***		10.326***		36.880***
		(1.162)		(1.161)		(0.838)
Year	2010	2014	2010	2014	2010	2014
Observations	5703614	43197	5738934	43612	6643367	52929

Notes: The table shows marginal effects evaluated at means. The dependent variable is an indicator variable for selective abstention in any election in columns (1) and (2), selective abstention in either the local or national election in columns (3) and (4), and not voting in any election in columns (5) and (6). The estimations in columns (1) and (2) are conditional on voting in any election, and the estimations in columns (3) and (4) are conditional on voting in either the local or the national election. Robust standard errors are reported in parentheses. ***, ** and * denote statistical significance at 1%, 5% and 10% levels, respectively.

Table B4. Results from logit estimation.

	Selective abstention (any election)		Selective abstention (local or national)		Complete abstention	
	(1)	(2)	(3)	(4)	(5)	(6)
Income (10,000 SEK)	-0.024***	-0.017***	-0.024***	-0.014***	-0.228***	-0.139***
	(0.002)	(0.004)	(0.001)	(0.003)	(0.006)	(0.009)
Years of education	-0.310***	-0.188***	-0.222***	-0.110***	-2.077***	-1.085***
	(0.026)	(0.035)	(0.012)	(0.027)	(0.040)	(0.065)
Unemployed	0.637***	0.607	0.417***	0.305	-0.212	-1.208**
	(0.058)	(0.376)	(0.049)	(0.265)	(0.163)	(0.540)
Age	-0.080***	-0.041***	-0.061***	-0.035***	-0.120***	-0.049***
	(0.007)	(0.008)	(0.004)	(0.005)	(0.008)	(0.008)
Years in municipality	-0.025***	-0.013	-0.027***	-0.006	-0.077***	-0.019*
	(0.008)	(0.009)	(0.003)	(0.004)	(0.008)	(0.010)
Female	-0.779***	-0.562***	-0.475***	-0.271***	-1.865***	-1.616***
	(0.037)	(0.114)	(0.029)	(0.087)	(0.079)	(0.240)
Immigrant	-0.579***	0.136	-0.315***	0.013	12.159***	6.494***
	(0.056)	(0.264)	(0.046)	(0.160)	(0.506)	(0.422)
Lagged dependent variable		13.408***		9.326***		35.870***
		(1.138)		(1.097)		(0.825)
Year	2010	2014	2010	2014	2010	2014
Observations	5703614	43197	5738934	43612	6643367	52929

Notes: The table shows logit coefficients. The dependent variable is an indicator variable for selective abstention in any election in columns (1) and (2), selective abstention in either the local or national election in columns (3) and (4), and not voting in any election in columns (5) and (6). The estimations in columns (1) and (2) are conditional on voting in any election, and the estimations in columns (3) and (4) are conditional on voting in either the local or the national election. Robust standard errors are reported in parentheses. ***, ** and * denote statistical significance at 1%, 5% and 10% levels, respectively.

Table B5. Regression results with municipality fixed effects.

	Selective abstention (any election)		Selective abstention (local or national)		Complete abstention	
	(1)	(2)	(3)	(4)	(5)	(6)
Income (10,000 SEK)	-0.022***	-0.011***	-0.021***	-0.009***	-0.129***	-0.076***
	(0.002)	(0.003)	(0.002)	(0.003)	(0.009)	(0.011)
Years of education	-0.292***	-0.167***	-0.220***	-0.101***	-2.113***	-1.073***
	(0.019)	(0.031)	(0.013)	(0.024)	(0.024)	(0.055)
Unemployed	0.490***	0.748	0.285***	0.457	-0.653***	-1.275*
	(0.056)	(0.465)	(0.046)	(0.344)	(0.124)	(0.692)
Age	-0.083***	-0.038***	-0.063***	-0.032***	-0.088***	-0.016
	(0.005)	(0.005)	(0.004)	(0.005)	(0.010)	(0.010)
Years in municipality	-0.025***	-0.007	-0.028***	-0.007*	-0.112***	-0.032***
	(0.005)	(0.005)	(0.002)	(0.004)	(0.011)	(0.010)
Female	-0.795***	-0.573***	-0.483***	-0.258***	-1.672***	-1.299***
	(0.047)	(0.118)	(0.034)	(0.089)	(0.054)	(0.263)
Immigrant	-0.600***	0.272	-0.341***	-0.032	13.505***	7.882***
	(0.144)	(0.269)	(0.075)	(0.189)	(0.418)	(0.478)
Lagged dependent variable		16.455***		12.622***		42.186***
		(1.192)		(1.236)		(0.823)
Year	2010	2014	2010	2014	2010	2014
Observations	5703614	43197	5738934	43612	6643367	52929

Notes: The dependent variable is an indicator variable (multiplied by 100) for selective abstention in any election in columns (1) and (2), selective abstention in either the local or national election in columns (3) and (4), and not voting in any election in columns (5) and (6). The estimations in columns (1) and (2) are conditional on voting in any election, and the estimations in columns (3) and (4) are conditional on voting in either the local or the national election. All specifications control for municipality fixed effects. Robust standard errors are reported in parentheses. ***, ** and * denote statistical significance at 1%, 5% and 10% levels, respectively.

Table B6. Determinants of selective and complete voter abstention (survey sample).

	Selective abstention (any election)		Selective abstention (local or national)		Complete abstention	
	(1)	(2)	(3)	(4)	(5)	(6)
Income (10,000 SEK)	-0.014***	-0.012***	-0.011***	-0.010***	-0.121***	-0.075***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.011)	(0.011)
Years of education	-0.220***	-0.167***	-0.125***	-0.095***	-2.047***	-1.051***
	(0.028)	(0.028)	(0.023)	(0.023)	(0.053)	(0.053)
Unemployed	0.862*	0.823*	0.394	0.410	-0.509	-1.345*
	(0.486)	(0.486)	(0.345)	(0.345)	(0.694)	(0.694)
Age	-0.056***	-0.039***	-0.043***	-0.033***	-0.134***	-0.018*
	(0.005)	(0.005)	(0.004)	(0.004)	(0.010)	(0.010)
Years in municipality	-0.015*	-0.011	-0.007**	-0.005	-0.064***	-0.032***
	(0.009)	(0.009)	(0.003)	(0.003)	(0.010)	(0.010)
Female	-0.673***	-0.532***	-0.303***	-0.251***	-2.478***	-1.322***
	(0.118)	(0.118)	(0.089)	(0.089)	(0.263)	(0.263)
Immigrant	0.091	0.129	-0.026	-0.019	13.987***	8.365***
	(0.291)	(0.291)	(0.178)	(0.178)	(0.477)	(0.477)
Lagged dependent variable		16.564***		12.714***		42.186***
		(1.196)		(1.241)		(0.829)
Year	2010	2014	2010	2014	2010	2014
Observations	43197	43197	43612	43612	52929	52929

Notes: The dependent variable is an indicator variable (multiplied by 100) for selective abstention in any election in columns (1) and (2), selective abstention in either the local or national election in columns (3) and (4), and not voting in any election in columns (5) and (6). The estimations in columns (1) and (2) are conditional on voting in any election, and the estimations in columns (3) and (4) are conditional on voting in either the local or the national election. All regressions control for municipality fixed effects. Robust standard errors are reported in parentheses. ***, ** and * denote statistical significance at 1%, 5% and 10% levels, respectively.

Table B7. Regression results obtained with aggregate data.

	Selective abstention (any election)	Selective abstention (local or national)	Complete abstention
	(1)	(2)	(3)
Income (10,000 SEK)	-0.111***	-0.099***	-0.480***
	(0.032)	(0.022)	(0.086)
Years of education	0.036	0.097	-0.797**
	(0.182)	(0.114)	(0.390)
Unemployed	3.511	2.567	19.929
	(4.802)	(2.731)	(13.303)
Age	-0.099**	-0.145***	-0.014
	(0.040)	(0.026)	(0.085)
Years in municipality	-0.009	0.002	0.027
	(0.007)	(0.004)	(0.018)
Female	4.736	6.024	-43.880***
	(6.725)	(4.063)	(16.636)
Immigrant	-5.829***	-4.554***	21.728***
	(1.328)	(0.838)	(2.548)
Year	2010	2010	2010
Observations	281	282	282

Notes: The dependent variable is the share of voters who selectively abstain in any election in column (1), who abstain in either the local or national election in column (2), and who do not vote in any election in column (3) Robust standard errors are reported in parentheses. ***, ** and * denote statistical significance at 1%, 5% and 10% levels, respectively.