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Insurance Voting in the Centre: An Experimental Approach

Annika Fredén¹, Bastiaan Bruinsma², Nora Theorin³, and Henrik Oscarsson³

¹Lund University, Lund

²Chalmers University of Technology, Göteborg

³University of Gothenburg, Göteborg

All correspondence concerning this article should be addressed to Annika Fredén, Lund University, Allhelgona kyrkogata 14, 223 62 Lund, Sweden.

E-mail: annika.freden@svet.lu.se

Abstract

Recent research suggests that to help their preferred coalition win an election, voters are willing to vote for a political party other than their preferred choice. In this field, voting for smaller parties under proportional representation is an under-studied feature. A crucial factor to estimate the chances for smaller parties is polls. In this study, we analyze the influence of opinion polls on switching vote choice to a smaller party when the party polls are at different levels. Building on an original survey experiment, we elaborate the potential differences in impact on insurance voting for a small party with looser or stronger association with a government alternative. The focus is the 2022 Swedish general election and the three smallest parties in parliament: the Green Party (center-left), the Christian Democrats (right), and the Liberals (center-right). The experiment had nine different conditions where each of these parties was placed at different levels of opinion: below, at, and above the parliamentary threshold, while holding all other factors constant. We find that poll-induced insurance voting is most prevalent for the party with the strongest preference for a government alternative (the Christian Democrats) and least prevalent for the party with a more issue-focused stance (the Greens).

Recently electoral research has placed greater emphasis on short-term factors that influence vote choice, such as leaders, polls, and coalition signals. A particular focus is strategic voting; the act of voting for a party other than one's own preference (Blais, Nadeau, Gidengil, & Nevitte, 2001). In theory, this type of voting has a forward-looking element; voters must consider the potential implications of their vote, that is, the government formation process (see, e.g., Downs, 1957). Empirical research has found that this kind of behavior is significant in both proportional representation (PR) systems and plurality systems (Abramson et al., 2010; Blais & Gschwend, 2010; Cox & Shugart, 1996; Fredén, 2014; McCuen & Morton, 2010). However, the way voters act strategically can vary according to electoral rules. In plurality systems, voters are incentivized to vote for a larger party than their preferred one as these are more likely to be elected and gain power. In PR systems, voters sometimes have an incentive to vote for a smaller party than their preferred one, as this could help a party reach an electoral threshold, allowing it to be part of the voters' preferred coalition. This type of strategic voting in PR systems is known as insurance voting (Cox, 1997; Fredén, 2017). It has received less attention than the classic version of defecting from a party that has no chance to win. As PR systems tend to result in a coalition government, a crucial factor is how parties collaborate in the run-up to an election. Some argue that voters are more likely to vote not for their favorite party, but for their preferred coalition. While previous studies have found evidence of this behavior (e.g., Fredén, 2021; Kedar, 2005; Meffert & Gschwend, 2010, 2011), the circumstances under which such voting occurs remain largely unexplored. In this article, we focus on the impact of opinion

polls before the election, which we suggest is more important to voting behavior in proportional systems with substantive thresholds than in majoritarian systems. In this manner, we cross-fertilize public opinion research with more classic voting studies, having the starting point that voters' intention to vote for a party might depend on the information environment.

Here, we build on Cox (2018), who suggests that voters' tendency to cast an insurance vote depends on election-specific factors in addition to voter characteristics and relate this to previous work that has elaborated the impact of polls on voting behavior under various systems (Ansolabehere & Iyengar, 1994; Daoust, Durand, & Blais, 2020; Fredén, 2017; Meffert & Gschwend, 2011). First, we expect that the party's support level in opinion polls relative to the electoral threshold plays a role in voters' tendency to choose it. This expectation builds on previous research showing that polls tend to impact voter behavior—at least in non-majoritarian systems (Fredén, 2017; Meffert & Gschwend, 2011). It should however be noted that there are few studies investigating the impact of polls in non-majoritarian systems, despite the fact that polls have become a very frequent factor during election campaigns. More studies are therefore warranted. Second, we expect that it matters if a party is part of a coalition during the period leading up to the election. Often, such a decision is based on how “close” a party feels to other parties. This “closeness” can be defined in many ways, but the most common is a closeness on an underlying left-right dimension. Centrist parties can be pivotal for coalition building as they can potentially choose between two possible coalitions. Until now though, the literature focuses on smaller parties that have

a clear position either on the left or on the right (e.g., [Kedar, 2005](#)). Third, it could matter if the party is an issue party or a government-oriented party. That is, a party that voters perceive as being issue-focused may receive fewer insurance votes as voters might doubt whether the party will be part of their favored coalition. On the other hand, parties that do state that they aim to be part of a coalition might profit, as voters feel their vote is more likely to be influential.

To address these gaps, we rely on a survey experiment ($N = 3,259$) conducted in the period leading up to the 2022 parliamentary elections in Sweden (the election was held on September 11, and the experiment was conducted from August 31 to September 9). In the experiment, respondents received a fictitious opinion poll and were asked to tell which party they would vote for and why. To study the influence of the poll on vote choice, we randomly assigned respondents to either of the nine groups, where the support for the three smallest parties—the Christian Democrats, the Liberals, and the Green Party—was either below, at, or above the electoral threshold of 4%. In addition, we followed up the experiment with a free-text question on the motivation of vote intention, to validate the reasons for vote choice in the subexperimental groups. We then compare the differences between the groups in numbers and words to address our identified gaps.

In line with our expectations, we found that polls influence voting behavior for smaller parties under PR, and more so for some parties than for others. Both the numeric and textual analyses show evidence of poll-induced insurance voting which was strongest for the party with the clearest position on the right, the Christian Democrats. For the Liberals, we observed a similar finding, though weaker. For the Green Party, we found no evidence of an increased likelihood to vote for the party when it polled below the threshold level, despite its previous status as a government coalition party. We suggest that the party's history as a primarily issue-oriented party can play a role here.

From here on, this article will proceed as follows. First, we introduce the concept of insurance voting and the opportunities and challenges that the Swedish system offers. After this, we introduce the variables that influence this behavior and derive our hypotheses. We then discuss our data and present our results. We conclude with a discussion of the implications of our findings and suggestions for future work.

Insurance Voting in a Contemporary PR Context

Strategic voting occurs when a citizen votes for a different party than one's preference, with the outcome of the election in mind. In a way, this makes the voter into an insurance voter as the vote choice is not a perfect expression of political preference ([Gschwend, 2007b](#)). Evidence for strategic voting is widespread and has been observed in Portugal ([Gschwend, 2007a](#)), Austria ([Meffert & Gschwend, 2010](#)), Canada ([Blais et al., 2001](#)), Germany ([Lachance, 2023](#)), and Sweden ([Fredén, 2014](#)) among others. Insurance voting distinguishes itself from other types of strategic voting by focusing on the aspect of the party “making it” over an electoral threshold. As it can make the difference between zero or a decent number of parliamentarians, whether a smaller party manages to get into parliament can be crucial to any forthcoming negotiations. That is one reason why, in certain contexts such as Norway, Germany, and Sweden, a

lot of media attention is usually placed on parties' chances to reach the electoral threshold, and voters are constantly exposed to polls through the media.

In previous research, the impact of electoral polls is debatable. On the one hand, a party that performs well in polls tends to attract more votes. This notion of the “bandwagon” phenomenon appears to be prevalent across different countries and systems (e.g., [Dahlgard, Hedegaard Hansen, Hansen, & Larsen, 2017](#); [Oleskog Tryggvason, 2021](#)). For instance, [Van der Meer, Hakhverdian, and Aaldering \(2016\)](#) showed that in the 2012 general elections in the Netherlands, the Liberal and Labour parties benefited from the perception that they were “rising” in the polls. In a similar vein, [Faas, Mackenrodt, and Schmitt-Beck \(2008\)](#) discovered that the SPD and Left Party gained advantage from their standing in the polls during the 2005 federal elections in Germany. On the other hand, research from the U.S. and Britain show that although polls have some impact on political preferences and voters' tendency of showing up at the voting booth, the impact on actual vote choice is very limited in these systems ([Ansolabehere & Iyengar, 1994](#); [McAllister & Studlar, 1991](#)). [Roy, Singh, Fournier, and Blake \(2015\)](#) and [Singh, Roy, and Fournier \(2018\)](#) discovered that polls have little impact on voters' hunt for electoral information. [Roy, Singh, Fournier, and Blake \(2021\)](#) enhance this conclusion, stating that although there may be some poll effects, they are generally minor. Also, both [Blais, Loewen, Rubenson, Stephenson, and Gidengil \(2018\)](#) and [Daoust et al. \(2020\)](#) demonstrate that in the case of Canada, polls do not appear to influence voting behavior.

However, most of the studies that find little impact of polls on voting behavior examine countries with majoritarian systems. When considering non-majoritarian systems, [Meffert and Gschwend \(2011\)](#) find that polls do impact some voters' behavior in Germany when the race is close, with [Fredén \(2017\)](#) coming to comparable conclusions for Sweden. One reason for this is that the marginal impact of polls is more effective in non-majority systems than in majority ones. That is, only a small difference can already be relevant for a party in a non-majority system, while in a majority system, the difference needs to be larger to be relevant. Moreover, in general, the polls become more reliable under PR, as they are usually nationwide and represent the population better than under majoritarian rules where the context in the constituency matters more. The polls under PR also usually place focus on parties, rather than candidates, which should emphasize the element of coordination around the threshold for party representation.

The parties, in turn, can consider the benefits from collaborating with other parties during the campaign. A concrete example illustrating this is that in the run-up to the 2010 Swedish General Election, Prime Minister Fredrik Reinfeldt, representing the largest party in the right-wing coalition called “the Alliance,” signaled that the smaller “Alliance-parties” needed voter support ([Fredén, 2014](#)). A related way of thinking is “compensatory” voting, explored by [Kedar \(2005\)](#). Here, it is the parties' position on the left-right scale that is the focus, and voters are expected to vote for a party with a more extreme position than their own to influence the composition of Parliament. In practice, extreme parties are often smaller parties that may also be at risk of not reaching representation. As a result, both insurance-oriented motives and motives related to a party's position on the left-right scale

can be important for voters in these systems (Fredén, 2021; Gschwend, 2007b; Lachance, 2023; Meffert & Gschwend, 2010). That voters are willing to consider these factors fits into some recent literature that shows that vote choice can depend on how likely voters think it is that a certain coalition will form (Bahnsen, Gschwend, & Stoetzer, 2020).

In this study, we focus on an election in which some of the parties were clearer about their intention to cooperate than others do. We focus on the Liberals (L), which had collaborated with center-left parties during the previous term, though belonged to a center-right coalition beforehand; the Green Party (MP), who had withdrawn their presence in government approaching the election; and the Christian Democrats (KD), who was part of a previous center-right coalition and also had a clear stance on aiming for such a coalition again. All three parties polled around the threshold level in the year leading up to the 2022 general elections. This makes the case an important test of how polls influence voters' tendency to vote for a small party under PR, and whether there is variation in behavior vis-a-vis different types of parties.

The Swedish 2022 Riksdag Elections

The elections for the unicameral Swedish Riksdag took place on September 11, 2022. The electoral system uses open lists, allows for preference votes, and has a strong focus on pre-electoral coalitions since the early 2000s (Allern & Aylott, 2009). Sweden has since the 1990s a tradition for a left Social Democratic-led block and a right Moderate Party (M)-led block. Media focuses on which of the blocs should win a majority of seats, and this time the polls suggested a neck-and-neck race which very much resembled the previous election in 2018. A major difference was that the Centre party outspokenly supported a Social Democratic government, which they did not do in 2018 when they supported a Prime Minister from the Moderates. The Liberals, on the other hand, had been in budget collaborations with the Social Democrats during the most recent term in office, but now supported the Prime Minister candidate from the Moderates. To gain seats, a party needs to receive 4% of the votes at the national level, which is our focus here. Eight parties were part of the previous Riksdag and were re-elected during the election. These are the socialist Left Party (V), the environmental and center-left Green Party (MP), the center-left Social Democrats (S), the liberal Centre Party (C), the center-right Liberals (L), the liberal-conservative Moderates (M), the right-wing conservative Christian Democrats (KD), and the right-wing nationalist Sweden Democrats (SD). See also [Online Appendix A](#) for a more detailed overview of these parties.

For the 2022 election campaign, the left block consisted of V, S, MP, and C, while the right block consisted of L, M, KD, and SD (although it should be noted that some of the parties had a substantially clearer block position than others). Compared to the previous elections, the blocks differ by the inclusion of the SD in the right-wing block and the switch of C from the right-wing block to the left-wing block. The switch of C is interesting as the party used to be part of the *Alliance* coalition of C, L, M, and KD, while the inclusion of the SD in the center-right shows the end of the complete “cordon sanitaire” that had formed around that party (Gadd et al., 2022). Compared to 2018, it was clear early on to which block each of the parties committed itself. The difference this time was then whether the parties in a certain block would

join a potential coalition or would only supply parliamentary support (Aylott & Bolin, 2023). During the campaign, the Liberals, the Green Party, and the Christian Democrats consistently polled around, or under, 4%. During the election campaign, citizens thought that these three parties were the ones that would be the least likely to reach the threshold level, estimating that the Greens would have the least chance to do so (Oscarsson, Bäckstedt, Cederholm Lager, Karlsson, & Solevid, 2024).

Also, the *Liberals* seemed for a long time unlikely to reach the electoral threshold, suffering from a divided party and having a new party leader just five months prior to the election (Aylott & Bolin, 2023). They have traditionally had difficulties keeping their voters, even though some issues such as school and nuclear power have been strong on their agenda (e.g., Oscarsson & Holmberg, 2016). Complicating its position in this election was the party's recent close collaboration with both right-wing and left-wing parties. For example, the party was part of the 2019 budget-oriented “January agreement” (Januariavtalet) together with the Social Democrats, the Centre Party, and the Green Party that allowed for the S-led government Löfven II. Yet, in June 2021, the party abstained in a confidence vote on Löfven and later voted against the continuation of his government. This position was consolidated in the late election campaign, where the party advertised heavily on Facebook with the slogan: “No government turnover without us” [Utan oss blir det inget maktskifte] (Oscarsson et al., 2024).

In turn, we classify the *Green Party* as a party with a clear bloc position, while also seeing it as an issue party. The Green Party was part of the Löfven II government and supported the Andersson government after Löfven resigned in November 2021. Yet, after the defeat of the coalition budget, and Andersson's willingness to implement an opposition budget, the Green Party left their position in government. Later, the party also abstained from a second installation vote for Andersson. At the local level, the Greens have a somewhat looser orientation to a bloc, as they collaborate with the center-right in many municipalities. Therefore, the Greens might have been seen as a less trustful government partner among core Social Democratic supporters, and more like a representative for green values.

Finally, the *Christian Democrats* are a party with both a clear left-right position and coalition status. The party almost exclusively collaborates with right-wing parties. This move has strengthened since the current leader Ebba Busch took over as party leader in 2015. As a result, the party was one of the first to propose a right-wing coalition including the SD.

Influences on Insurance Voting

We focus on three aspects that can influence the insurance vote for a party: electoral polls, pre-electoral coalition membership, and electoral focus. We will discuss each of these in turn and derive their related hypotheses.

Polls

The impact of polls has been debatable in the majoritarian electoral system, some earlier research from proportional systems suggests that polls do influence vote intentions. In effect, when polling near the electoral threshold, polls supply an important piece of information for voters to determine whether a party will get elected. Consequently, if a smaller

coalition party polls below the electoral threshold, voters may decide to cast an insurance vote to aid them. Fredén (2017) showed how Christian Democrats benefited from polling under or at the 4% electoral threshold during the 2014 general elections. In line with these results, we hypothesize that the incentives for poll-induced insurance voting are strongest when the party polls just under or at the threshold level.

H1: *Voters are more likely to cast an insurance vote for a party that in opinion polls has a support level at the electoral threshold level than when it has it either (a) well over it or (b) well under it.*

Pre-Electoral Coalition Membership

Earlier work indicates that a party's membership in a pre-electoral coalition can play a role for voters' tendency of switching to another alternative (Fredén, 2014; Fredén & Sohlberg, 2019; Gschwend, 2007b). Voters might vote with a government—and not only a party—in mind (e.g., Bargsted & Kedar, 2009; Irwin & Van Holsteyn, 2012). This can be to the benefit of especially those parties that might on their own not be able to cross an electoral threshold. Voters may consider parties with a clear position on the left or on the right. First, a clearer position makes the party's inclusion in a government alternative more reliable—the voter will know in which direction the vote goes. Second, during post-electoral coalition talks, coalitions tend to move toward the median (Kedar, 2009, p. 27; Lachance, 2023). Therefore, voters potentially vote more “extreme” to compensate for this and to bring the resulting coalition closer to their preference (Lachance, 2023, p. 2).

In the case of Sweden, this would mean that the Christian Democrats on the right, and the Greens on the left, would profit most from insurance voting, while for Liberals this would be less so. Liberals moved between both blocs during the most recent term in office, supporting the left-wing bloc between 2019 and 2021.

H2 *Voters are more likely to cast an insurance vote for a party with a clear membership of a pre-electoral coalition than for a party for which this membership is less clear.*

Electoral Focus

A third factor that may impact insurance voting is the party's electoral emphasis. This refers to what the parties believe the election is primarily about. A party might stress the election's importance as pertaining to issues or, alternatively, as being about winning and being in government. If the latter is the case, voters are more likely to follow a so-called portfolio-maximizing voting strategy (Cox, 2018). For instance, in Sweden, the Green Party can be considered an issue party (Westman, Gadd, Holmberg, & Oscarsson, 2023). Although part of the left-wing coalition, the party withdrew from the coalition without difficulty after the 2021 budget debate, retaking more of an “underdog” status. In contrast, during the election campaign, the Liberals and the Christian Democrats prioritized gaining government robustly. The Liberal's party leader Sabuni expressed at an early stage that the party supported a right-wing government (Gadd et al., 2022). Pehrson who took over leadership in 2022 emphasized this position. This sentiment was similarly expressed in the Christian Democrats' electoral program, where there was an emphasis on their desire to take part in the government. If voters cast a vote for a party, which during coalition talks opts to join the

coalition, they may consider their vote being on safer grounds compared with voting for a more issue-oriented party.

H3 *The more a party focuses on being part of a governmental coalition, the larger the chance that voters will cast an insurance vote for them.*

As a final step in our analysis, we will attempt to *validate* our findings by considering whether insurance voting was indeed on a voter's mind while deciding their party of choice. We expect that respondents in the conditions where we hypothesized the highest level of insurance voting mention strategic reasons for their choice to a greater extent. Given that voting preferences during strategic switches are a complicated phenomenon, the most direct way to figure out whether insurance voting took place is by asking the respondents why they chose a certain party. Here, we will do this in the guise of a free-form open question. Given that we use this information to validate our findings, we will not posit a hypothesis about it here.

Experimental Setup and Data

For our dataset, we draw on a survey experiment conducted during the 2022 elections for the Swedish Riksdag. We collected our data by using the Swedish Citizen Panel (*Medborgarpanelen*), which consists of both self-recruited and invited participants. In our case, the sample selected from the panel is a nonprobability sample, stratified by gender, age, and educational level. The fieldwork for our survey took place over 10 days, starting on August 31, and ending on September 9. As such, all our data were collected at least 2 days before the election on September 11. After the first invitation to the survey, respondents were sent a reminder 4 days later. Their choice of device (computer, mobile, or tablet) was free. In the end, 32% used a computer, 60% a mobile device, and 8% used a tablet. In total, 3,259 respondents filled out all responses.

In the survey, respondents are asked four questions. In the first, they are asked to position themselves on an 11-point left-right scale running from 0 (Left) to 10 (Right), with 5 being a neither/nor option. In the second, they were asked to position the eight political parties on how much they liked or disliked them, ranging from –5 (strongly dislike) to 5 (strongly like), with 0 being a neither/nor option. We later used this question, following Blais and Gschwend (2010) to find the most preferred party by taking the party that here received the highest rating. In the case of ties, as there is no other information to assess which party the respondent prefers, we treat both preferences as separate cases and include them as an additional row in our analysis. Our main reason not to remove those respondents with multiple preferences is that given the fact that coalition governments are expected, it is therefore also reasonable to expect that respondents might like some of the coalition parties to an equal degree.

After this, the participants were randomized into nine distinct groups.¹ Each group received a separate edition of a (fictional) opinion poll. For each of the nine editions, the percentage shown for each party was similar, except for L, KD, or MP, whose support ranged from 2.5%, 4%, and 5.5%. The

¹ The randomization check revealed no significant differences between respondents in the different groups in terms of age ($p = .231$, $f = 1.32$), sex ($p = .317$, $f = 1.16$), educational level ($p = .625$, $f = .77$), or political ideology ($p = .842$, $f = .52$).

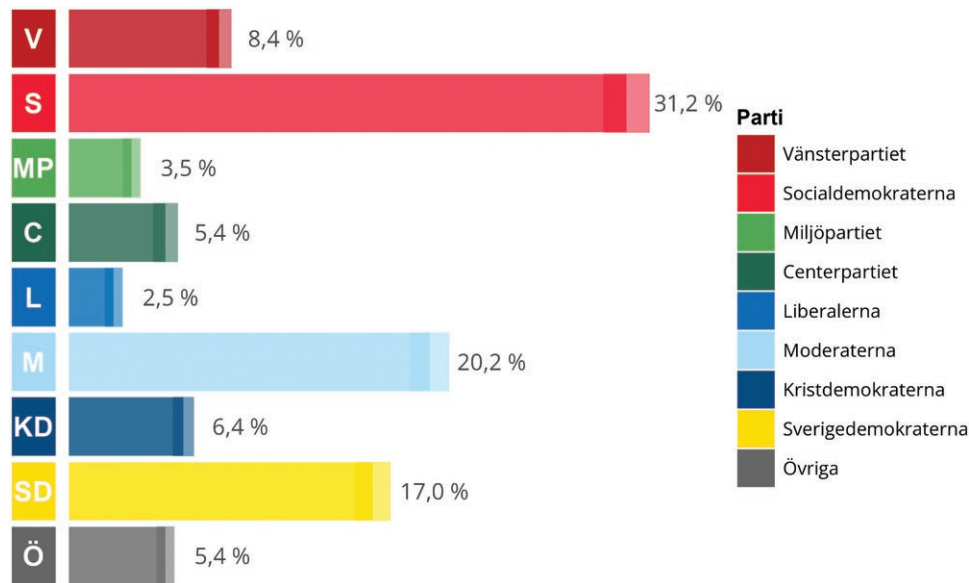


Figure 1. Example of opinion poll as used in the experiment. In this example, the Liberal party is kept at 2.5%.

hypothetical support levels in the polls replicated a previous study in the same context conducted in the 2014 Swedish general election (Fredén, 2017), adding two more center-oriented parties to the present study (the Liberal party and the Greens). The only other element that was changed was the “Other” bar to derive an overall percentage of 100%. An example of the opinion polls is shown in Figure 1, with L held at 2.5% for this case. It is worth noting that the party colors and abbreviations in the poll are traditionally associated with each party. It is common in Sweden to refer to parties simply by their abbreviation (e.g., “S” for the Social Democrats). However, to ensure clarity for those who may be unfamiliar with these, a legend has been included on the right-hand side of Figure 1. Finally, the parties are listed from top to bottom based on their placement on the left-right spectrum, with the left-leaning parties at the top and the right-leaning parties at the bottom. The “Övrigt” (Ö) category (referring to “Other”) stands for the combined percentage of all parties not projected to meet the electoral threshold and any remaining percentages left after adjusting the poll results for the other parties.

After being exposed to the opinion poll, respondents were asked which party they would vote for in the elections *given this opinion poll*. Here, they could choose for each of the eight parties, as well as “Other party,” “Would vote blank,” “Would not vote,” “Don’t know,” and “Don’t want to specify.” A final question asked respondents to describe in their own words *why* they chose to vote for that party. If voters responded, “Would vote blank,” “Would not vote,” or “Don’t know” in the previous question, they would instead receive a question why they chose that option. Finally, respondents read the following debriefing text: “In the study you participated in, you were exposed to a fictional opinion poll. The purpose of the study was to investigate people’s propensity to vote for a political party close to the parliamentary threshold.”²

Results

In total, 3,759 respondents took part in the survey, of which 471 only took part in the first wave, and 3,288 in both waves.

² Translation from Swedish.

From those, 3,259 respondents completed the questionnaire. For the remainder of our article, we draw upon this group. Online Appendix B shows how the respondents were distributed over the nine different experimental conditions.

In terms of composition, there were slightly more Male ($n = 1,747$) than Female ($n = 1,512$) respondents. As for age distribution, there were 228 respondents under 30, 506 between 30 and 39, 565 between 40 and 49, 609 between 50 and 59, 648 between 60 and 69, and 703 respondents were older than 70. As for education, 6 respondents had not completed primary education, 124 had only Primary education, 350 completed Upper secondary (<3 years), 544 completed Upper secondary education (>3 years), 466 completed Post-secondary education (<3 years), 155 completed Post-secondary education (>3 years), 744 completed University (<3 years), 797 completed University (>3 years), and 73 completed Postgraduate education. As a result, our sample is overrepresented by an older, higher-educated, male group than we would have found in the voting-eligible population (Oscarsson & Holmberg, 2016; Westman et al., 2023). Still, since we use an experimental design, the sample contains sufficient variation in socioeconomic backgrounds to make inferences.

Regarding the left-right position of the respondents, we find a slight overrepresentation of left-wing voters (see Online Appendix C). When asking the respondents what they thought of a certain party, users could choose a position between -5 (dislike) and 5 (like). In most cases, respondents used these questions (one was asked for each party), to display their liking of the single party they do like and their dislikes of most of the others. As a result, the average like for each party is negative, except for S (at 0.19). The most disliked parties are SD (-1.93), followed by KD (-1.56), MP (-1.52), and C (-1.28). The other parties, V (at -0.76), L (at -0.95), and M (at -1.01) perform slightly better but still have a negative score.

Influences

We start by looking at the influence of the various polls on the vote choice respondents would make (Hypothesis 1). In Table 1, we use row-wise percentages for each of

Table 1. Response to the Question “Given This State of Opinion, Which Party Would You Vote for in the Parliamentary Elections on September 11, 2022?” for Each of the Nine Different States

Group		MP	L	KD
KD	2.5%	15.16	2.93	8.24
	4.0%	14.62	5.74	7.31
	5.5%	11.96	4.62	4.08
L	2.5%	12.98	6.78	5.01
	4.0%	14.40	4.80	6.13
	5.5%	11.78	4.93	6.03
MP	2.5%	11.46	4.30	5.16
	4.0%	11.17	6.98	6.42
	5.5%	12.17	5.80	4.64

Note. As only the results for three of the parties are shown, the rows do not add up to 100%.

the parties the respondents chose, given by their experimental group. Starting with the Christian Democrats (KD), the percentage of voters is higher as soon as their given percentage in the experiment goes down. More specifically, when KD is shown at the 2.5% support level, 8.2% of the respondents would vote for that party, dropping to 7.3% when held at 4.0% and 4.1% at 5.5%. In effect, this would mean that KD loses about half of its support between the 2.5% and 5.5% groups. Also, while the decrease is not significant between 2.5% and 4.0% ($t(1,759) = 0.12, p = .37$), it was significant between 4.0% and 5.5% ($t(1,751) = 3.06, p < .05$) and between 2.5% and 5.5% ($t(1,744) = 4.88, p < .05$). This lends support to the overarching expectation that poll levels at the threshold increase insurance voting. Turning to the Liberals (L), a similar pattern can be observed: The party received their highest support in the 2.5% group. In contrast to the KD conditions, however, the difference between 2.5% and 4.0% is relatively large (6.8% vs. 4.8%), while little happens when the party is shown at 5.5% (4.9% of the vote). Yet, none of the differences is significant, given the overall low number of voters for that party. That is, the decrease is not significant between 2.5% and 4.0% ($t(1,714) = 0.95, p = .16$), between 4.0% and 5.5% ($t(1,740) = 0.00, p = .50$), nor between 2.5% and 5.5% ($t(1,704) = 0.79, p = .19$).

For the Green Party (MP), finally, we find yet another pattern. Here, the party obtains 11.4% of the vote at 2.5%, but less (11.2%) when their vote share is at 4.0% and again more (12.2%) when they are at 5.5%. However, we find no significant differences between either of the three groups: not between 2.5% and 4.0% ($t(1,707) = 0.00, p = 1.00$), between 4.0% and 5.5% ($t(1,703) = 0.09, p = .77$), nor between 2.5% and 5.5% ($t(1,694) = 0.03, p = .86$).

Considering these findings, our first hypothesis—stating that voters are more likely to cast an insurance vote for a party that in opinion polls has a support level at the electoral threshold level than when it has it either (a) well over it or (b) well under it—is only partly supported. For the Christian Democrats, we find a significant difference between the 2.5/4.0 and 5.5 levels. This supports the general hypothesis that insurance voting for a smaller party can increase if the party has somewhat “alarming” polling figures, rather than a position safely over the threshold.

It is worth noting that the levels of voting for the Liberals tended to be higher when polling at the 2.5 level compared with the 4% threshold level. One potential reason is that poll levels need to be exaggerated in an experimental setup to make an impact on voters’ behavior (compare the discussion by Morton and Williams (2010, p. 321) on artificiality in experiments). Another interpretation is that the relationship between the threshold party and its neighbor parties is crucial for the voter’s interpretation of other voters’ (and parties’) coordination likelihood. Voters should be more likely to defect to a party at very low poll levels if they think others want to “save” the party too. This behavior relates to our second and third hypotheses.

Turning to Hypothesis 2, we expected that the clearer affiliation the party has to a coalition alternative, the greater the tendency to cast an insurance vote. The significant difference in voting for the Christian Democrats at the different polling levels, compared with the pattern for the Liberals, supports this expectation. The Christian Democrats had a more long-term and stable relationship with the right-wing bloc and the Moderate party than the Liberals. However, even though the Greens had a clear left-wing position in this election, we find no evidence of poll-induced insurance voting for them. In Hypothesis 3, we expected that the more the party focuses on being in government, the higher the tendency for voters to cast an insurance vote for that party. To test the influence of the party’s association to a coalition further, we divide the sample into right-wing supporters and left-wing supporters, to investigate the tendency of large party supporters to defect to their smaller potential coalition partners (Tables 2 and 3). Again, we find the most consistent pattern of insurance voting on the right, and in particular for the Christian Democrats.

Table 2 shows the number of times a party was chosen for supporters of both Sweden Democrats (SD) and Moderates (M) at each of the voting levels. In the case of Moderate party supporters, more were willing to vote for the Christian Democrats (KD) when the party was under or at the threshold compared to when it was above. A similar pattern can be found vis-a-vis the Liberals. In turn, SD supporters mostly voted for their preference. What becomes clear is that while Moderate supporters are willing to support a vote for the smaller parties in the right-wing bloc, SD supporters are not so willing to do this. One explanation for this might be that traditional Moderate voters are more concerned with the potential of their party to form a government (in line with hypothesis 3), while SD voters might mostly focus on simply making their party influential in parliament.

For the left-wing parties, we find little difference among the Social Democrat supporters on whether to vote for the Greens over the various poll levels (Table 3). Thus, this indicates to a certain degree that supporters of the Social Democrats did not follow a clear insurance voting strategy vis-a-vis the Green Party. This supports the findings from the aggregate analyses: polling figures have a different impact on vote choice for the Greens, compared with the smaller parties on the center-right.

Our findings also indicate that none of the smaller threshold parties were abandoned because of low poll levels—we saw no tendencies of avoiding to “waste one’s vote,” as is often visible in a plurality electoral system. Instead, poll levels under or at the threshold incentivized supporters of the clearest government coalition alternative to defect to a smaller neighbor party.

Table 2. Count of Response to the Question “Given This State of Opinion, Which Party Would You Vote for in the Parliamentary Elections on September 11, 2022?” for Self-declared Party Supporters (Columns) Among Sweden Democrats (SD) and Moderates (M)

Group		Support Sweden Democrats (SD)						Support Moderate Party (M)					
		C	L	M	KD	SD	Other	C	L	M	KD	SD	Other
KD	2.5%	1	0	7	7	54	10	1	2	36	14	9	7
	4.0%	0	1	3	6	67	13	1	8	32	13	8	10
	5.5%	0	1	2	3	74	9	1	5	35	3	13	6
L	2.5%	0	2	3	3	51	3	0	7	34	7	10	7
	4.0%	0	1	7	4	51	7	2	4	38	7	9	1
	5.5%	0	0	13	4	54	11	2	3	41	6	12	2

Note. Only Christian Democrats and Liberal conditions are shown.

Table 3. Count of Response to the Question “Given This State of Opinion, Which Party Would You Vote for in the Parliamentary Elections on September 11, 2022?” for Self-declared Party Supporters (Columns) Among Social Democrats (S) and the Left party (V)

Group		Support Social Democrats (S)					Support Left Party (V)				
		V	MP	S	C	Other	V	MP	S	C	Other
MP	2.5%	8	12	72	2	7	54	15	14	1	6
	4%	11	11	69	4	5	39	16	13	3	7
	5.5%	4	11	75	4	7	40	12	12	1	4

Note. Only the Green Party condition is shown.

Validation of Overall Findings Through Structural Topic Modeling

To validate the findings from the numerical analyses, we also looked at the free-text responses that voters gave to an additional question to describe why they would vote for the party they selected. This allows us to better understand if mentioning strategic reasons is associated with poll treatments. Here, we draw upon the Structural Topic Model (STM). This type of topic model, developed by Roberts, Stewart, and Tingley (2019) to deal with open questions specifically, allows us to add certain “prevalence” parameters to the model. These parameters not only serve to structure the model, but we can also use them to test their effects on the derived topics. Their inclusion into the model is based on whether we expect them to influence the likelihood of a certain topic occurring in the text provided by the respondents. Here, we choose to include the personal characteristic variables of gender, age, and education, the self-reported left-right position of the user (on a 1–11 scale), and their eventual vote choice. In addition, we clean our textual data by lowercasing, removing stop words, and removing any other symbols. We leave in numbers, as we consider respondents may refer to these for a reason (such as references to the 4% electoral threshold).

As STM is an unsupervised method (Grimmer & Stewart, 2013), one decision we must make is the number of topics we wish the model to extract. For this, there is no single “correct” answer, rather, this depends on what we believe to be useful for our analysis. To help us find this number, we follow Roberts et al. (2014) and run multiple models, ranging from 2 to 25 topics. We then expect both the semantic coherence of the derived topics, as well as whether the topic has a clear interpretation. Based on this, we derive a model of six topics.

Table 4. Terms With the Highest Association for the Support Topic, Based on Their FREX Value

Topic	Highest associated words (based on FREX value)	
	Swedish	English
Support	<i>riksdagen, regering, behövs, kvar, spärren, majoritet, förändring, 4_procent</i>	parliament, government, needed, remaining, barrier, majority, change, 4_percent

To interpret these topics, we rely on two types of information. First, we look at those words that have the highest association with a certain topic. This association is based on the FREX value of a word for that topic. This FREX value is based on both the frequency of a word (how often the word occurs in the responses) and how exclusive that word is to a certain topic (the degree of association of a word with a topic). Second, we look at the first fifty responses that the model classifies as having the highest degree of a certain topic in them. This combination allows us to combine the quantitative information given by the model, with the qualitative information given by the reading of the responses, thus giving a coherent idea of what the topics are about (Grimmer, Roberts, & Stewart, 2022). One of the topics we derive as most significant is “Support,” which is relevant to the present study.

Table 4 shows the highest associated terms. We find terms related to support voting, majorities, and the 4% electoral threshold. Inspecting the responses more closely, we find direct mentioning of casting a support vote, often to allow their chosen party to clear the 4% electoral threshold, or to support a certain coalition. As an example, a respondent who valued the Liberal party, the Moderates, and Christian

Democrats evenly, opted to vote for Liberals when shown that party at 2.5% providing as a reason that “I will vote in favor of the Liberals, though it will be a bit of a draw.” For a further overview of the other topics, see [Online Appendix D](#).

As we included information on the respondent’s age, gender, education, self-reported left-right position, eventual vote choice, and, most important for the present study, experimental condition into the model, STM allows us to estimate what the effect of any of these variables is on the prevalence of a topic in a certain response. Thus, we can look at the influence of the experimental condition on the preference for the topics. Looking at [Figure 2](#), we find that *support reasons for voting become less prominent as soon as the mentioned party’s support increases*. This corresponds with our suppositions, as this would indicate that respondents might opt to use an “insurance vote” if their party is shown to not perform well in the poll. While controlling for background factors, the support reasons occur most often for those voters who consider voting for the Christian Democrats at the 2.5% support level, which supports the numerical analyses. To summarize, the textual analysis suggests that the poll treatment has an impact on vote choice in the expected direction, and that this impact is strongest on voting for the Christian Democrats.

Discussion

We started our study with a hypothesis that polls matter in different ways for different parties. Replicating an original survey experiment in a new election context, we expected that voters might alter their vote intention depending on whether it was below, at, or above the threshold, and that the tendency to do so would vary by party. We found that the influence of polls was greatest in voting for a small party with a clear belonging to a government alternative (Christian Democrats) and least for an issue-oriented party which emphasizes

government less (the Green Party). We saw that as soon as the Christian Democrats were shown as having 5.5% support, the number of respondents opting to vote for this party dropped significantly. This indicates that some voters of this party solely chose it to allow it to reach the 4% electoral threshold, indicating insurance voting. We argue that one reason that this pattern occurred for the Christian Democrats and less for the Liberals and the Green Party is that the Christian Democrats from a very early point indicated it would be part of a coalition with the Moderate Party, and that this pattern was familiar to voters. Supporting this is the indication that it was especially Moderate Party voters who, in our experimental setup, switched to the Christian Democrats to allow the party to reach the threshold.

Noteworthy are the findings for the Green Party. Observational studies from the 2022 Swedish National Election study suggest that almost one-half of the party’s votes come from voters who thought that another party was better ([Oscarsson et al., 2024](#)). Moreover, the same national election study finds that Liberal party voters and Green party voters were the ones that most frequently claimed strategic reasons as important for their vote choice. At the same time, Green party voters claimed agenda-setting and ideology-oriented reasons more frequently than the average voter ([Bäckstedt, 2023](#)). From our analysis, we can conclude that the poll element was not as important in voters’ tendency of choosing the Green party as it was for the two other target parties in the study.

An important difference between the observational data studies from the election and the present experiment is that we evaluate the mechanisms of a certain type of strategic voting—insurance voting induced by *poll figures*—more deeply. The experimental setup emphasizes the polling dimension of vote choice, all else equal. One interpretation is that the Green Party benefited from their relatively stable polling figures

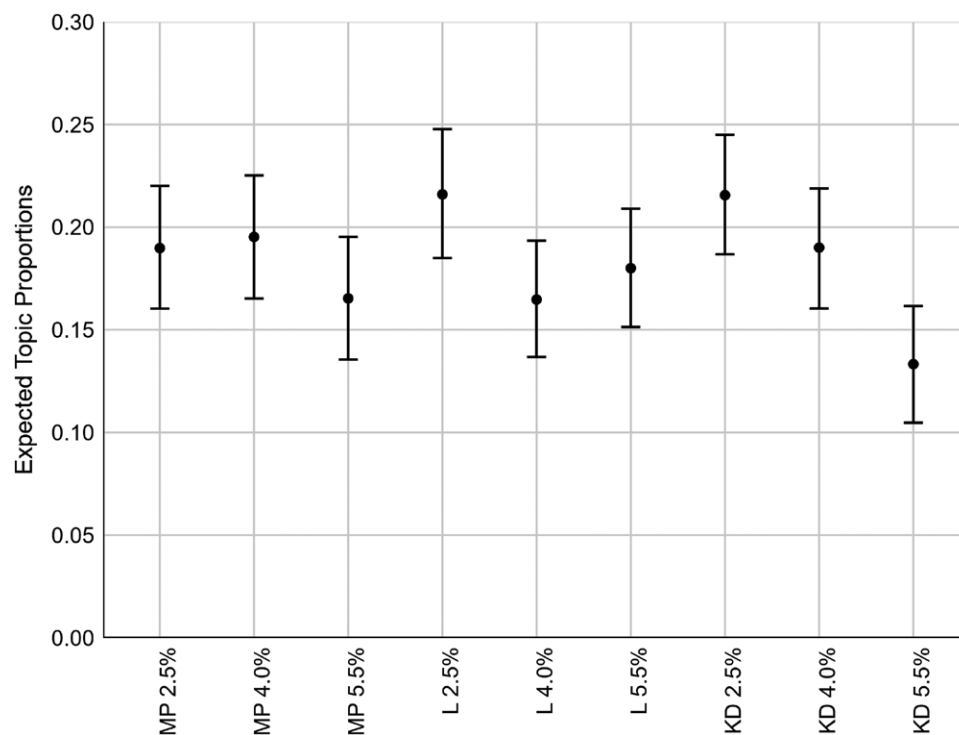


Figure 2. Effect of the experimental condition (X-axis) on the topic prevalence for the “support” topic (Y-axis).

above the threshold in the late election campaign, given that their chances to survive in parliament seemed precarious beforehand (Oscarsson et al., 2024). A related mechanism is the one found in an earlier experiment, which showed that voters' tendency of choosing a party with an underdog status increases if they get information that a decent number of voters support the party (Fredén, Rheault, & Indridason, 2022). In the case of the Green party, it is their profile toward issues rather than taking on ministerial portfolios in conjunction with their small size, that still contains an underdog element.

Still, our findings suggest that in the Swedish context, voters are not very sensitive to low poll levels if the party is already in parliament. Instead, small parliamentary parties with a clear affiliation with a government alternative can gain extra votes if they poll around or below the threshold. An interesting contra-factual would have been if the Liberal party leader had chosen a less positive attitude toward collaboration with the right-wing parties. Would the party's chances to reach the threshold have decreased then? Our study indicates that the mechanisms for the Liberals resembled those for the Christian Democrats: voters tended to support the party to a greater extent if the polls showed support levels at or below the threshold, given their position as affiliated with the right-wing bloc. For a party that polls below the threshold level over an extended period, affiliation with a coalition can increase the chances to survive in parliament.

In the Swedish case, the threshold is 4% whereas in other PR contexts, the threshold is considerably higher (such as 10% in Turkey) or lower (such as in the Netherlands with an effective threshold below 1% of the national vote share). Sweden has a large focus on the parties' national rather than local support level, and the electoral system is very proportional in terms of distribution of seats. This proportionality in combination with a 4% threshold for party representation makes a big difference for government formation if the smaller threshold party with an affiliation to a government alternative reaches it or not. The results from our study are likely to travel to other PR contexts where the distribution of seats is conducted in a similar manner and there is a threshold of considerable size. On the other hand, if the threshold were to be increased toward the 10% level as in Turkey, the tendency of deserting non-viable options would probably increase. Previous experimental studies indicate that voters in PR systems with substantive thresholds tend to coordinate with the bigger parties, just as in plurality systems (Blais, Erisen, & Rheault, 2014).

The impact of trends in polls is another interesting aspect of the story. A limitation of our study is that it assumes polls to be fixed at a certain level, while they in fact vary over time. Previous work shows that given disappointing polls, politicians and parties often tend to change both their programs and emphasize their positions (Pereira, 2019) and the way they communicate about it—something that Schumacher and Öhberg (2020) show is the case for Sweden. How the party leader's coalition signaling influences voters' tendency to cast a strategic vote is an interesting avenue for forthcoming studies.

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Supplementary Data

Supplementary data are available at *International Journal of Public Opinion Research* online.

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Biographical Notes

Annika Fredén is currently an Associate Professor at the Department of Political Science at Lund University.

Bastiaan Bruinsma is currently a Post Doc at the Department for Computer Science and Engineering at Chalmers University of Technology.

Nora Theorin is currently a Post Doc at the Department for Journalism Media and Communication at the University of Gothenburg.

Henrik Oscarsson is currently a Professor at the Department of Political Science at the University of Gothenburg.