

Affect Versus Cognition: Wishful Thinking on Election Day.

An Analysis Using Exit Poll Data from Belgium

International Journal of Forecasting, accepted
© International Journal of Forecasting

Abstract

Citizens tend to overestimate the electoral success of their preferred party. We investigate the extent to which Belgian voters overestimate the result of the party they vote for and what factors explain which voters do so more than others. Our focus is on the impact of educational attainment and partisan attachment on overestimating one's party's result. Previous research in this field relied on data gathered in the months before the elections, introducing a substantial amount of over-time variation and uncertainty in the measurements of citizens' vote share estimations. As an alternative, we investigate voters' estimations of their party's electoral success by means of data gathered in an exit poll survey. Our results show a strong impact of partisan attachments on overestimations, suggesting that a mechanism of wishful thinking is at play. Furthermore, we find that the extent to which partisan attachments increase citizens' overestimations depends on voters' level of education.

Keywords: vote share estimations, wishful thinking, elections, exit poll, Belgium

1. Introduction

People tend to overestimate the probability their preferred outcome occurs when asked to predict the outcomes of an event (Tversky and Kahneman, 1974), and it has been suggested that this is a consequence of wishful thinking. This phenomenon has been observed in various contexts, including elections. Essentially, ‘wishful thinking’ in elections implies that voters overestimate the result of their preferred party (Babad and Yacobos, 1993; Babad, 1997; Gimpel and Harvey, 1997; Jottier, Ashworth and Heyndels, 2012).

This paper investigates whether, and the extent to which, Flemish voters overestimate the electoral result of the party they voted for. In addition, we investigate what factors explain why voters overestimate electoral results, and why some do so more than others. More specifically, we investigate the impact of educational levels and partisan attachments on citizens’ predictions of the electoral success of the party they vote for. First, we expect higher educated voters to overestimate the vote share of their party less than the lower educated. Second, citizens who feel more attached to their party can be expected to feel more strongly about their party winning the election. As a result, they are thought to overestimate the performance of their party more. If we find that stronger preferences are associated with a larger tendency to overestimate, this would suggest that a mechanism of wishful thinking explains the overestimation of a party’s result. Third, we expect the overall rationalising influence of educational attainment to weaken the extent to which partisan attachments cause citizens to overestimate the result of their party. More cognitive skills might counterbalance the impact of biased perceptions of the electoral race, reducing the extent to which perceptions are guided by partisan attachments (Anduiza, Gallego and Muñoz, 2013).

Citizens’ electoral predictions and wishful thinking in elections have mostly been investigated in two-party contexts such as the United States (Granberg and Brent, 1983;

Uhlener and Grofman, 1986; Gimpel and Harvey, 1997). Research in multi-party systems is more scarce, though not absent (See, for example: Faas, MacKenrodt and Schmitt-Beck, 2008; Levine, 2007; Meffert, Huber, Gschwend and Pappi, 2011). This paper contributes to this literature by investigating the extent to which citizens overestimate the electoral result of their party and the determinants influencing this phenomenon in the Belgian multi-party context. Our analyses differ from previous work in multi-party contexts with regard to two important elements. First, previous research in countries such as Austria or Germany has relied on categorical predictions of election outcomes that can only be coded as right or wrong (e.g., whether a party would pass the electoral threshold, or what parties would form the governing coalition) (Faas, MacKenrodt and Schmitt-Beck, 2008; Meffert *et al.*, 2011). In our study, however, we opt for a more fine-grained measure of the accuracy of voters' prediction and use respondents' point estimates of their party's vote share. Doing so allows us not only to investigate what determines whether a voter overestimates her party's result, but also what explains the *extent to which* respondents overestimate in their predictions. Second, our data come from an exit poll survey, which we argue is a more appropriate research design compared to the election campaign surveys that previous work has relied on. The exit poll format allows for an exact and straightforward way of calculating the error in citizens' perceptions, as all information was gathered on a single day. Our data were collected in the context of the Belgian 2014 general elections and it should be noted that the Belgian electoral rules render an exit poll format a particularly useful and valid tool for studying citizens' political attitudes and behaviour. More specifically, given that voting is compulsory in Belgium (for the election under study, turnout was at 92.5%) and since there is no advance voting, nearly the full voting age population can be reached when sampling at the polling station.

We investigate voters' perceptions about the electoral success of the party they vote for and the extent to which these are accurate. Such perceptions are of importance in electoral democracies, as voters' perceptions have an impact on their attitudes and voting behaviour (Meffert *et al.*, 2011; Hollander, 2014). In addition, we investigate the factors that lead voters to overestimate their party's result. More specifically, we examine whether educational attainment allows voters to cognitively evaluate politics instead of relying on feelings of closeness to a party. In doing so, we seek to find evidence for "Jefferson's notion that a better-educated citizenry makes for a better democracy" (Lewis-Beck and Skalaban, 1989, p. 150).

2. Citizens' Predictions of Electoral Results

Citizens have expectations about parties' electoral results and about who is likely to win the election. A number of studies have argued that these citizen forecasts serve as a good indicator of who will eventually win the election (Lewis-Beck and Skalaban, 1989; Babad and Yacobos, 1993; Sjöberg, 2009). Citizens' estimates of who will win the election are also important substantively, as citizens tend to rely on these expectations when deciding whom to vote for (Murr, 2016). Previous research has shown, however, that even though citizens' predictions – in the aggregate – are surprisingly accurate (Murr, 2011), when people are asked to predict the electoral result of their own party, these predictions are systematically biased upward – which suggests these predictions are driven by 'wishful thinking' (Babad, 1997; Jottier *et al.*, 2012).

The earliest students of electoral behaviour already drew attention to the occurrence of wishful thinking in elections (Lazarsfeld, Berelson and Gaudet, 1944). The most widely investigated context for wishful thinking in elections is that of the US presidential elections. Since 1952, the American National Election Studies include a question asking who respondents think will become the next president. As Lewis-Beck and Skalaban (1989) show, taken

together, survey respondents are able to correctly predict who will be the next president.¹ Voters' individual predictions, however, are not perfect, and are biased in the direction of their own preference. In fact, Granberg and Brent (1983, p. 477) find that respondents expect their preferred candidate to win by a ratio of 4 against 1.

While the literature on voters' electoral predictions and the mechanism of wishful thinking is mostly focused on the context of the United States, wishful thinking has been investigated in multi-party systems as well (Lachat, 2015). In Israel, Babad and Yacobos (1993) and Babad (1995) found that strongly supporting a party considerably biased citizens' predictions of future results as well as their interpretation of current events. Furthermore, Babad (1997, p. 122) found wishful thinking to decrease when respondents were promised a reward if their predictions were accurate. Even though predictions improved when respondents received such an incentive, the effect of preferring a particular outcome remained substantial. Levine (2007) investigated wishful thinking in the Netherlands, where he found a twofold effect of partisan preferences on wishful thinking; on the one hand preferences directly affect voters' predictions, and on the other hand they bias respondents' recall of the latest poll results – indirectly biasing further the prediction of the future electoral result. Finally, research in the German and Austrian context as well has shown that voters engage in wishful thinking, overestimating the electoral chances of their preferred parties as well as the chance of their preferred coalition taking office (Faas, MacKenrodt and Schmitt-Beck, 2008; Meffert *et al.*, 2011; Ganser and Riordan, 2015).

In summary, in various contexts outside the political sphere, as well as in various electoral contexts, people have been found to overestimate their preferred outcome. These overestimations have argued to be a consequence of wishful thinking: “Voters (like sports fans) seem to engage in strong and consistent wishful thinking in favor of the home team” (Meffert

et al., 2011, p. 805). In line with the rich evidence from previous work, we expect wishful thinking to occur in the case under investigation, the Belgian multi-party system, as well.

2.1. Causes of Overestimations

Previous work has found that voters tend to overestimate their parties' future results. In addition, scholars have looked into this phenomenon more closely and have aimed at explaining why voters overestimate so strongly, and which voters are doing so most. In their work on citizen forecasting, Lewis-Beck and Skalaban (1989) shed light on the factors affecting individuals' probability of correctly predicting electoral outcomes. Somewhat surprisingly, their study offers almost no evidence of politically involved citizens (measured by political participation, interest, media attention and whether or not the respondent believes politics is too complex to understand) being better in predicting the winner compared to less involved citizens. What their work does show, however, is that citizens' level of education influences the accuracy of their prediction. A large number of studies have similarly found evidence of a link between levels of education and the accuracy of electoral predictions (Granberg and Brent, 1983; Gimpel and Harvey, 1997; Yaniv *et al.*, 2002; Meffert *et al.*, 2011). It should be noted, however, that there is no full consensus on the importance of education. Ganser and Riordan (2015), for example, find educational attainment to only weakly affect the accuracy of predictions in Germany.

How does education affect the accuracy of predictions, if political involvement and knowledge do not? Lewis-Beck and Skalaban (1989, p. 150) argue that the effect of educational level is indirect: "Greater education tends to bring a more extensive social network and thus more extensive social knowledge. When queried about the course of major national events like elections, those with more schooling can bring tools to bear, and yield up somewhat more

accurate judgements. Furthermore, the more educated, because of their greater training, are perhaps more efficient seekers and gatherers of the relevant information”. The argument that the more extensive social networks that higher educated dispose of increases the accuracy of forecasts can also be found in the work of Lewis-Beck and Tien (1999), Uhlaner and Grofman (1986), as well as in a recent paper by Leiter, Murr, Rascon and Stegmaier (2016, p. 2), who conclude that “Citizens’ social networks may provide more information on the election and the vote choices of others, enhancing the ability to forecast correctly”.

Other interpretations as well have been given for explaining why the lower educated would be less able to predict election results. Dolan and Holbrook (2001) argue that the lower educated do not dispose of the cognitive resources to handle complex information, and instead make use of ‘shortcuts’ or ‘heuristics’ (Lau and Redlawsk, 2006). A number of shortcuts that the lower educated in particular rely on, are thought to strengthen wishful thinking. First, scholars have identified a pattern of ‘hedonic consistency’, implying that one expects others to be very similar to oneself. The lower educated are thought to be more sensitive to hedonistic consistency, while the higher educated dispose of more clues and are hence more aware of the fact that this might not be the case (Granberg and Brent, 1983; Dolan and Holbrook, 2001). Second, the lower educated are thought to be more sensitive to the impact of an ‘availability heuristic’. In short, relying on this heuristic leads people with particular preferences to overestimate their group’s chances because they are mainly being exposed to favourable information. According to this line of thought, social networks are important as well, though it is assumed here that social networks reduce the accuracy of citizens’ predictions of electoral results. More specifically, when voters’ social networks most likely consist of people who hold similar opinions, this implies a biased exposure, which leads voters to overestimate the likelihood that their preferred outcome is realised (Tversky and Kahneman, 1974; Babad, 1997).

In line with previous work, we expect the higher educated to be less likely to overestimate their party's vote share compared to those who have lower levels of education:

H1: Higher educated voters will be less likely to overestimate their party's vote share than lower educated voters.

Furthermore, party attachments are likely to be related with the probability of overestimating results. Previous research has shown that partisanship influences and even biases the perception of political events (Bartels, 2002; Anduiza, Gallego and Muñoz, 2013; Tworzecki and Markowski, 2014; Achen and Bartels, 2016). In line with this work, partisanship is expected to be related with the likelihood of overestimating as well.

Partisans can be expected to have strong preferences about the party they would like to see winning the elections – that is, the party they identify with – and therefore be more likely to overestimate the vote share this party will obtain. Previous studies quite consistently find overestimation in line with one's preferences, and this is argued to be a consequence of a mechanism of wishful thinking: “Strong wishful thinking effects were found, predictions varying in a linear trend as a function of the direction and intensity of preference” (Babad, 1997, p. 105).

As will be explained below, our data do not allow to investigate whether voter's predictions of their own party are more biased than their predictions of other parties' results, as we only have information on how voters predicted their own party to perform. However, to the extent that it can be observed that strong party preferences lead voters to overestimate a party's result more, we can safely conclude that wishful thinking is indeed driving overestimations. Indeed, while all voters are expected to engage in wishful thinking to some extent (Granberg and Brent, 1983), it can be expected that those who feel stronger attached to

a party overestimate this party's vote share to a larger extent than voters who feel less attached to the party they voted for. In the end, the partisans are really a part of the 'team' they desire to win (Price, 2000).

In line with previous work on this topic, we thus expect that citizens who are more attached to a party are more likely to overestimate the performance of their party than those who are less attached to the party they voted for.

H2: Those who are more attached to the party they vote for will be more likely to overestimate their party's performance than those who are less attached to the party they vote for.

We thus expect two main effects to work in opposite directions: while educational level is expected to be related with a lower probability of overestimating the party's vote share, partisan attachments are expected to increase this probability. It is important to think about the interaction between those two effects, because the higher educated are consistently found to have stronger party attachments (Barton and Döring, 1986; Heath and Topf, 1986). Marthaler (2008, p. 951), for instance, finds the higher educated to have a stronger attachment to a party than what holds for the lower educated. Addressing this paradox, Meffert et al. (2011, p. 811) state that education might reduce partisan bias in predictions: "(...) educated and knowledgeable respondents seem to have more and better information that allows them to constrain the distorting effect of partisan preferences. Less knowledgeable respondents, on the other hand, seem to rely much more on their partisan preferences, resulting in quite distorted expectations". Since partisans' overestimation are a result of "the affect influencing the cognition" (Granberg and Holmberg, 2002, p. 1079), it can be expected that it will be especially the less educated partisans who will make a prediction based on affect, while the more educated

partisans might be making a more cognitive prediction and therefore be less likely to overestimate. This interaction between affect and cognition has also been hypothesised in other research. Anduiza et al. (2013), for instance, find that while feeling attached to a party softens one's judgement about the severity of indications of corruption of that party, it only does so for the least knowledgeable identifiers. In summary, we expect higher educated partisans, who dispose of more information about what a realistic prediction is, to be less likely to overestimate their party's vote share than what holds for lower educated partisans:

H3: Education will weaken the influence of partisan attachment on the probability of overestimating the party's result.

The first three hypotheses are in line with previous research, as they focus on the probability that someone will overestimate the performance of her/his party. This is in line with the categorical dependent variables previous studies used – i.e. whether or not the respondent forecasts correctly who will be the next president of the U.S.A. (Uhlener and Grofman, 1986; Gimpel and Harvey, 1997), or – in multi-party systems – whether the respondent predicts whether or not a party will reach the electoral threshold or future coalitions correctly (Faas, MacKenrodt and Schmitt-Beck, 2008; Meffert *et al.*, 2011). However, as will be explained below, this study uses a measure of electoral predictions that allows to investigate which voters overestimate their party's vote share *to a larger extent*. Other than previous studies investigating who is right and who is wrong, we are able to examine the determinants of the extent to which people overestimate. Thus, this study takes a step further than previous studies that investigate who is more likely to overestimate their party's vote shares, and examines who overestimates to a larger extent than others. Since the determinants of the extent to which someone overestimates are expected to be the same as the mechanisms determining who is

more likely to overestimate, the three hypotheses are expected to work in the same way described above within the group of voters who overestimate.

H4: Higher educated voters will overestimate their party's vote share to a lesser extent than lower educated voters.

H5: Those who are more attached to the party they vote for will overestimate their party's vote share to a larger extent than those who are less attached to the party they vote for.

H6: Education will weaken the impact of partisan attachment on the extent to which citizens overestimate their party's vote share.

3. Case Selection: (Over)estimations of Electoral Results in Belgium

Previous work on citizens' electoral predictions and wishful thinking has mostly focused on the American two-party context (Granberg and Brent, 1983; Lewis-Beck and Skalaban, 1989; Dolan and Holbrook, 2001), in which there is a clear 'winner' (the candidate winning presidency) and clear 'losers' (all other running candidates) of the election. In such a context, as Dolan and Holbrook (2001, p. 31) indicate, "people will either be correct or incorrect in naming the winner". In our study, in contrast, we investigate this topic by means of data gathered in Flanders, the largest region of Belgium. In a multi-party system like Belgium, it is much less clear who wins the elections and who loses; multiple parties may gain votes and consequently seats, while multiple others lose votes. Furthermore, since governments are always coalitions of different parties, and are formed in a process of deliberation and lengthy

negotiations, gaining votes and seats does not guarantee a governing position (Timmermans, 2003). As a result, the largest party is not always part of the governing coalition, and neither does winning votes automatically translate into entering government. For this reason, unlike previous work on predictions and wishful thinking in multi-party contexts (Faas, MacKenrodt and Schmitt-Beck, 2008; Meffert *et al.*, 2011), we do not examine predictions about what parties will enter government. Neither do we ask respondents to predict whether they think a particular party will pass the electoral threshold (Meffert *et al.*, 2011). Instead, we focus on predictions of the vote shares that different parties will obtain. While this is a cognitively challenging task, we would argue that it offers a more precise estimate of the accuracy of citizens' predictions. For example, while both a voter who predicts a party will get 6% of the votes as well as a voter who thinks the party will receive 20% of the vote would predict the party to pass the threshold, the former is a better prediction of a party obtaining 7% of the votes. Instead of treating both respondents equally, our approach allows for a fine-grained measure of the accuracy of citizens' electoral predictions, and allows us to investigate differences in prediction within the group of respondents who overestimate their party's vote share.

The difficulty of the task asked from our respondents implies that party preferences are likely to have a major influence on the predictions that are made. As Granberg and Brent (1983, p. 478) have argued: "When the external stimulus situation is unstructured (ambiguous), internal factors such as needs or preferences increase in importance in the determination of behaviour (...). It follows that preferences influence expectations to the extent that the actual outcome is in doubt".

This is all the more the case in the context of the highly fragmented Flemish party space (Deschouwer, 2012). More specifically, Belgian voters cast their votes while being highly uncertain regarding the results. This uncertainty might lead to substantial errors in the voters' expectations of the performance of their own parties. Such prediction errors might have

important normative implications. First, if voters' predictions of the electoral result are inaccurate, this limits possibilities of strategic voting – casting a vote for another party than the preferred party in order to elect this party in Parliament or to render the formation of certain governing coalitions possible, or just to prevent an undesirable outcome to occur (Meffert *et al.*, 2011). Flawed predictions, and overestimations in particular, might be less problematic among partisans, as they would mostly vote for their preferred party anyways. However, if prediction errors are present among non-partisans as well, these are likely to have important behavioural consequences. Second, when voters overestimate the electoral success of the party they vote for, this might have consequences for their levels of political trust and satisfaction with democracy. A rich literature has found indications of a winner/loser-gap in levels of satisfaction with democracy and political trust (Blais & Gélinau, 2007; Singh, 2014; Singh *et al.*, 2012). While these studies find that elections generally have a positive effect on support for democracy and levels of political trust, they also identify a gap in levels of support between those who voted for a winner of the election on the one hand and citizens who voted for a party that lost the election on the other. What constitutes winning and losing is somewhat debated. Some authors have focused on those who vote for a party that enters government and those who voted for a party that is in opposition after the election, while others focus on winning and losing in terms of parties' vote or seat shares (Hooghe & Stiers, 2016; Singh, 2014). For explaining variations in the extent to which winning and losing effectively affect levels of political trust or support for democracy, Hollander (2014) has argued that it is important to take into account the role of wishful thinking. More precisely, he argues that the negative effects of losing an election on attitudes of support or political trust will be particularly pronounced among those who are surprised their party has lost the election. Relying on data that were collected in the context of the 2012 U.S. presidential election, Hollander (2014) finds some evidence that is in line with this expectation. As a result, overestimating the results of one's

preferred party is likely to have important attitudinal effects. The more a voter overestimates the vote share that her party will obtain, the more she will be surprised when her party does not obtain that result. These surprised losers, then, will likely have lower levels of trust or be less supportive of democracy or the electoral process.

4. Data and Methods

Previous research on predictions of electoral results and wishful thinking mainly relies on data gathered in surveys in the weeks or months before Election Day. Such data, however, include a huge amount of contextual variation. During the election campaign, political information as well as election polls are regularly published and covered in the media, changing the information context. When interviewing respondents over such an extended period of time, the information that respondents dispose of during the interview – when asked to make a prediction of the outcome of the elections – hence differs depending on the time of the interview. If, for instance, some interviews are conducted on day t and a new poll is being published on day $t+1$, respondents who were interviewed on day $t+1$ can rely on more information when making their prediction than what holds for those who were interviewed on day t . Especially in the middle of an electoral campaign, the publication of polls, parties' campaign efforts and the occurrence of political events constantly change the information context. As a result, analyses that rely on data that were gathered over several weeks risk being affected by the timing of the interview (Blais and Bodet, 2006). Furthermore, it has been shown that time also plays a direct role; the closer to Election Day, the more accurate predictions become (Dolan and Holbrook, 2001). As a result, depending on the time of the interview, information might be more or less available for respondents, affecting the accuracy of their predictions.

Second, studies that span a full election campaign (Levine, 2007; Meffert *et al.*, 2011) have to compare voters' forecasts with poll results that are being released during the fieldwork, and have to make the assumption that these polls are an accurate reflection of vote intentions at a particular point in time. Polls that are released in the run-up towards elections, however, can be wrong (Jérôme, Jérôme and Lewis-Beck, 1999) implying that surveys conducted during the electoral campaign lack a reliable benchmark to assess the accuracy of respondents' predictions. Our study, in contrast, in which we use data gathered on Election Day itself, allows comparing voters' predictions with the actual electoral results – and there can be no doubt these are accurate. All in all, studies in the run-up towards Election Day have to make fairly strong assumptions, which is not necessary when using data of an exit poll.

Third, studies using data gathered in the weeks before Election Day have to assume that respondents are aware of the upcoming elections, and are – at least to some extent – exposed to information about who is likely to win (Dolan and Holbrook, 2001). Surveying voters right after they left the voting booth, on the other hand, ensures that voters are at least aware of the elections.

To eliminate the impact of the contextual differences described above, we make use of the data gathered in an exit poll. All respondents were thus interviewed on a single day – Election Day. On 25 May 2014, elections for the federal, regional and European level were held in Belgium. The data that will be used in this study come from the 'Leuven Exit Poll', a study in which voters were surveyed immediately after casting a vote (Dassonneville *et al.*, 2014). To limit non-response, self-administered questionnaires were opted for, which were handed out to voters when leaving the voting booth. This method resulted in a response rate of 47.28% and a sample size of 4,165 respondents. High levels of non-response risk biasing the representativeness of the data (Panagopoulos, 2013), but it is reassuring to note that the reported vote choice in this exit poll survey is similar to the official results. Furthermore, to

ensure the representativeness of the data, the analyses are weighted to sex, age and province. The comparison between the reported and the official vote choice, and more information on how the weights are calculated, is included in Appendix A.

The study was only executed in Flanders, which implies that the results can only be generalised to the Flemish population. However, the Belgian party space basically consists of two separate party systems (Deschouwer, 2012). The data thus provide a comprehensive view on voting behaviour in one of the two Belgian party systems. Stratified sampling was used, selecting a random sample of municipalities in the Flemish region first, and polling offices within those municipalities next. Subsequently, trained interviewers were present at the voting location the whole day and asked every 3th (in places where paper ballots were used) or 4th (in places where electronic ballot were used) voter leaving the booth to fill in the questionnaire and put it in a box. As the sample was not drawn randomly but based on selected municipalities, in the analyses respondents are clustered by municipality.

By using data gathered on a single day we aim to overcome the impact of contextual differences in respondents' predictions of the electoral outcome. It needs to be stressed that preliminary results of the elections are only published after the closing of the voting booths, and the results of exit polls are not made public on Election Day either. These possible sources of bias throughout Election Day are thus not present in the Belgian context. Recall that turnout is compulsory in Belgium. As a result, we should not be too worried about the fact that by means of an exit poll survey we sample voters only. In addition, there is no advance voting in Belgium, implying all voters could be reached by means of an exit poll survey at the polling office.

4.1. Dependent Variables

This study first seeks to confirm findings of earlier studies, and then goes a step further as we do not only investigate the determinants of overestimating electoral results, but also who overestimates *to a larger extent* than others. In line with these two steps, two dependent variables are used. In the exit poll survey, respondents were asked to report their vote for each electoral level, and for the regional level more specifically respondents were asked what result they thought the party they voted for would obtain. Since the survey was only conducted in Flanders, we use data of the vote choice for the regional level. This level can be expected to raise sufficient interest and attention since in Belgium regional elections can be considered elections of first order (Deschouwer, 2012; Schakel and Jeffery, 2013). Furthermore, the media generally focus on electoral results as regional percentages as well.² In a multi-party setting, the question who ‘wins’ an election is less straightforward. As Levine (2007, p. 219) states: “the precise share of the vote matters in a PR system much more than in plurality systems where it matters little whether one candidate has won 55%, 65% or 75% of the vote”. In the exit poll, the respondents were asked to predict what percentage of the vote the party they voted for would obtain. The first dependent variable, then, is an indication of whether or not a respondent overestimated the vote share her/his party would obtain. Therefore, in line with earlier studies using a categorical dependent variable, we create a dichotomous measure indicating whether the respondent overestimated the party’s vote share (code 1) or not (code 0).³

In the second step, we investigate who overestimates her/his party’s vote share to a larger extent than others. We take a step further than the categorical dependent variable most previous research used, and use a continuous measure of the performance of a party – in line with Jottier et al. (2012). Since we are interested in the level of bias among those who

overestimate, we analyse the determinants of the bias in the prediction of respondents who overestimated the result of their party. Therefore, in the second step, the analyses are only conducted using the data of those respondents who overestimated the vote share their party would obtain, and voters who underestimated the result of their party are excluded.⁴ The second dependent variable is the relative error of respondents' prediction. A voter voting for a party that obtained 12%, but who predicted her party to obtain 10% of the votes, has the same absolute error of 2 percentage points as a voter predicting that a party who obtained 32% would obtain 30% of the votes. The relative error, in contrast, provides a more accurate image of the prediction error – in this example it amounts 16,67% and 6,67% respectively. Therefore, we calculate the relative error (Jottier et al. 2012, p. 348), which we calculate in the following way:

$$Relative\ error = \left(\frac{(predicted\ vote\ share - actual\ vote\ share)}{actual\ vote\ share} \right) * 100$$

In an additional robustness test, we also replicated the analyses with a focus on absolute prediction errors. As evident from the results in Appendix B, however, our conclusions are substantially the same when changing the coding of our dependent variable.

4.2. Independent Variables

The first independent variable of interest is educational level. We include educational level as a dummy-coded categorical variable and distinguish between three groups of respondents: (1) low educated: respondents having obtained no degree, only a primary degree, or a lower secondary degree, (2) middle educated: respondents who have finished higher secondary education, and (3) high educated: respondents with a college or university degree.

The second independent variable of interest is partisan attachment. Even though scholars have questioned the existence of attachments in multi-party systems (Thomassen and Rosema, 2009), research has indicated that in multi-party settings voters take cues from parties as well (Brader and Tucker, 2012; Brader, Tucker and Duell, 2012). The way in which party attachments should be measured in such contexts, however, is debated somewhat more (Schickler and Green, 1997). The Belgian society and political system were traditionally 'pillarised' (Lijphart, 1968). Most citizens were a member of one of the major societal and ideological pillars, such as the catholic or the socialist pillars. People were member of the trade union or professional organization of 'their' pillar, took health insurance from 'their' pillar, sent their children to a summer camp organized by 'their' pillar, etc. (Deschouwer, 2012). Importantly, the party system as well was pillarised and citizens casted votes for the party representing the pillar they belonged to (Deschouwer, 2012; Swenden, Brans and De Winter, 2006). In such a context, party attachments lead voters to always choose the same party out of habit. Over time, Belgian society as well as the political system have gradually 'depillarised'. That is, the pillar organisations have gradually lost their grip on citizens and the vote for the traditional pillar-parties has weakened over time (Deschouwer, 2012). While the phenomenon of habitually voting for the party of one's own ideological pillar has thus weakened, is it safe to assume that consistently casting a vote for the same party can still be considered to be a sign of connectedness with this party. This argument can also be found in the literature on electoral volatility. Studies investigating vote-switching consistently find that feeling attached to a party decreases the probability that a voter will switch parties between two elections or during the electoral campaign (Granberg and Holmberg, 1991; Dassonneville, 2014, 2016). Also in the Belgian context, partisanship has been shown to be a more important determinant of the vote for stable voters than what holds for volatile voters (Dassonneville and Stiers, forthcoming).

Therefore, we assume that casting a vote for the same party time and again can be considered a good proxy measurement of party attachment.

Respondents in the exit poll survey were asked to indicate the extent (a scale from 1 = not important at all, to 5 = very important) to which a number of different vote choice determinants were important for them. One of the determinants included was the extent to which the voter chose to vote for a given party “out of habit, I always vote for this party”. The responses on this question are included in our analyses as an indicator of the extent to which the respondent feels attached to a certain party. We expect that those who feel attached to a party will indicate it is important to vote for this party time and again. This variable is crucial for our analyses, as a connection between strong attachments and more overestimation would suggest that wishful thinking drives voters’ overestimations.

Furthermore, a series of control variables is included in the analyses. The abovementioned long-term process of depillarisation influencing habitual voting raises the need to control for the age of the respondent. We also add a control for sex (0=female, 1=male) in our analyses. In their study on vote share estimation and wishful thinking among politicians, Jottier et al. (2012) include a control for sex as well. They argue that women generally perceive more risk, which might lead them to process uncertainty about election outcomes differently though it should also be noted that previous research on gender differences in voters’ predictions is rather mixed (Babad et al., 1992; Meffert et al., 2011). Since we expect the effect of educational level to be independent of interest in politics, in a second model we will control for political interest. Lewis-Beck and Skalaban (1989) control for the vote intention. Since the data used in this study are collected on Election Day itself, we control for the reported vote choice, which allows taking into account systematic differences in the accuracy of predictions for different parties.

5. Results

First, we investigate the systematic bias in the voter's predictions of the results of the party they voted for. Figure 1 presents the Kernel Density distributions of the predictions of the voters of each of the parties. In each party-plot, the full line represents the mean prediction and the dotted line represents the actual result that a party obtained.

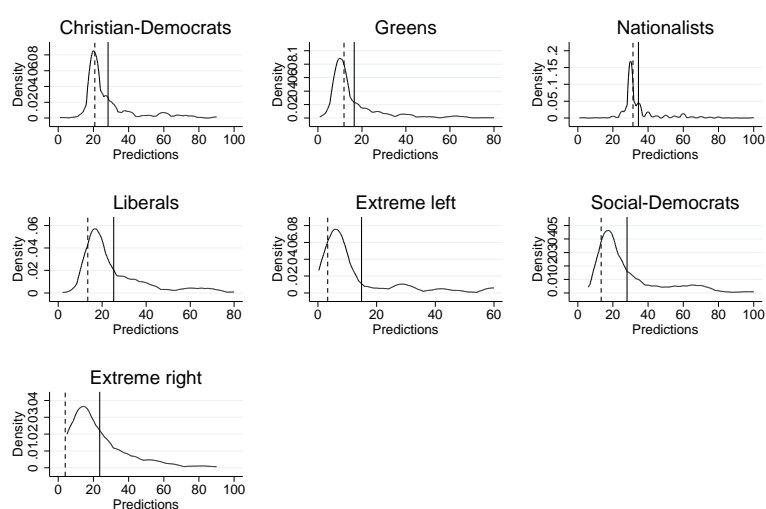


Figure 1. Prediction electoral results

The weighted mean relative error of all respondents' predictions (including both under- and overestimations) amounts 69.67%. This result already suggests that there was a considerable amount of wishful thinking among the Flemish electorate. “[I]n a world without wishful thinking we expect the relative error to cancel out on average” (Jottier, Ashworth and Heyndels, 2012, p. 349). The relative error amounting more than 0 thus indicates that voters considerably overestimate in their predictions of the party they voted for. This is also confirmed when looking at Figure 1, which shows that for most parties, the largest proportion of the voters overestimated the result the party they voted for would obtain. Figure 1 also indicates that the

voters for the smallest parties (e.g., extreme right and extreme left) overestimated their party's performance to the largest extent. Obviously, the larger the vote share of a party, the smaller the margin available to overestimate, while parties obtaining only a small share of the votes have a large margin in which voters can predict and consequently overestimate. Taking into account these ceiling effects, some voters still seem to be better in predicting the vote share than others. In sum, the first results indicate that Flemish voters indeed tended to overestimate the result the party they voted for would obtain, and there appear to be large differences in the prediction error of the voters for the different parties. As there seems to be party-level variation in levels of overestimation, and to account for the ceiling effects, we will control for vote choice in the regression analyses. Our multivariate models hence include party-specific intercepts.

The results show that there is substantial variation in the extent to which voters overestimate their party's results. To investigate the factors related with this overestimation, logistic regression models are estimated, with as dependent variable a measure of whether or not the respondent overestimated the vote share the party she voted for would obtain. The results are summarised in Table 1.

Table 1. Logistic regression model explaining wishful thinking among Flemish voters

	Model 1	Model 2	Model 3
	B	B	B
	(Std. Err.)	(Std. Err.)	(Std. Err.)
Sex (ref. = woman)	-0.490*** (0.093)	-0.438*** (0.101)	-0.442*** (0.101)
Age	-0.010*** (0.003)	-0.008** (0.003)	-0.008** (0.003)
Education (ref. = non/primary/ lower secondary)			
Higher secondary	-0.524** (0.183)	-0.477* (0.190)	-0.711* (0.321)
Tertiary	-0.871*** (0.173)	-0.788*** (0.181)	-0.971** (0.309)
Habitual voting	0.086* (0.035)	0.091** (0.034)	0.037 (0.079)
Vote (ref. = Nationalists)			
Christian-Democrats	0.593*** (0.137)	0.574*** (0.137)	0.576*** (0.135)
Greens	2.274*** (0.158)	2.264*** (0.160)	2.265*** (0.161)
Liberals	2.581*** (0.193)	2.575*** (0.191)	2.575*** (0.191)
Extreme left	3.584*** (0.519)	3.596*** (0.530)	3.599*** (0.527)
Social-Democrats	2.678*** (0.257)	2.680*** (0.259)	2.681*** (0.258)
Extreme right	4.516*** (1.019)	4.462*** (1.025)	4.468*** (1.021)
Political interest		-0.073** (0.022)	-0.072** (0.023)
Middle educated*Habit			0.081 (0.097)
High educated*Habit			0.091 (0.100)
Constant	0.697** (0.231)	1.010*** (0.237)	1.175*** (0.305)
N	2765	2765	2765
R ²	0.226	0.229	0.229

Data: Leuven Exit Poll

Note: Entries are logit coefficients, standard errors clustered by municipality reported between parentheses. The data are weighted to sex, age and province. Significance levels: *: p<0.05; **: p<0.01; ***: p<0.001.

The results in Model 1 in Table 1 provide support for the first hypothesis. Educational level is included in the analyses as a categorical variable, comparing the error of prediction of the lowest educated with the middle and highest educated respectively. In line with previous

studies, it is negatively correlated with overestimation: the middle and higher educated are less likely to overestimate the vote share of their preferred party than lower educated. Furthermore, an additional test showed the difference between middle and higher educated to be significant as well.

Also the second hypothesis is supported by the results: voters who are more attached to their party will be more likely to overestimate this party's results. This observation offers suggestive evidence that a mechanism of wishful thinking leads voters to overestimate their party's result. The fact that the result is in line with theoretical expectations also validates our use of this indicator as a proxy measure for the strength of party attachments in a Belgian context. Furthermore, these results remain robust also when including political interest in Model 2. However, interest itself is negatively related with overestimating. This finding contrasts the study of Lewis-Beck and Skalaban (1989), who did not find convincing evidence of interest to have an influence on the accuracy of forecasts, but it is in line with the study of Meffert *et al.* (2011). Finally, to test the third hypothesis stating that educational level will weaken the influence of partisan attachment on the predictions, an interaction between educational level and partisan attachment is included in Model 3. The coefficients of the interaction are not significant, indicating that there does not seem to be a difference in impact of partisan attachment between the different groups of educational level. However, interaction effects cannot be interpreted straightforwardly, and we estimated average marginal effects for different levels of educational level as these provide the best view on the impact of habitual voting (Mood, 2010). The figure is not included for space considerations, but shows that, while there seems to be an impact of habitual voting on the probability of overestimating the party's vote share for the middle educated voters, there does not seem to be such a relationship among the lower- and higher-educated voters.

In line with previous studies, educational level and partisan attachment are related with the probability of voters to overestimate their party's result – although there is no convincing evidence of educational level to weaken the impact of partisan attachment. However, in the second step, we go beyond this distinction between whether or not a respondent overestimated her/his party's vote share, and investigate the determinants of the *extent to which* respondents overestimate. Therefore, we now focus on only those respondents who overestimated the vote share of their preferred party, and the relative prediction error is taken as the dependent variable in a linear regression analysis, the results of which are summarised in Table 2.

Table 2. Linear regression model explaining overestimation among Flemish voters

	Model 1	Model 2	Model 3
	B	B	B
	(Std. Err.)	(Std. Err.)	(Std. Err.)
Sex (ref. = woman)	-77.881*** (10.159)	-71.562*** (9.200)	-71.349*** (9.200)
Age	-1.362** (0.392)	-1.119* (0.435)	-1.151* (0.435)
Education (ref. = non/primary/ lower secondary)			
Higher secondary	-48.652** (15.812)	-42.339* (17.414)	-20.747 (27.748)
Tertiary	-88.345*** (11.564)	-77.678*** (13.849)	-44.608 (23.619)
Habitual voting	15.376* (6.170)	16.005* (6.309)	22.641* (8.520)
Vote (ref. = Nationalists)			
Christian-Democrats	16.577 (9.239)	19.856 (10.128)	18.500 (9.935)
Greens	60.096*** (10.885)	63.072*** (10.962)	62.140*** (11.087)
Liberals	50.796*** (8.553)	54.055*** (9.094)	53.301*** (90.80)
Extreme left	482.195*** (71.696)	489.196*** (71.541)	488.529*** (71.609)
Social-Democrats	56.739*** (8.259)	60.639*** (8.885)	59.971*** (8.954)
Extreme right	252.893*** (28.844)	238.803*** (28.659)	236.156*** (29.031)
Political interest		-8.297* (3.324)	-8.448* (3.355)
Middle educated*Habit			-6.709 (7.443)
High educated*Habit			-11.391 (6.934)
Constant	158.064 (19.055)	185.120*** (19.109)	166.810*** (21.888)
N	1625	1625	1625
R ²	0.304	0.312	0.312

Data: Leuven Exit Poll

Note: Entries are unstandardised coefficients, standard errors clustered by municipality reported between parentheses. The data are weighted to sex, age and province. Significance levels: *: $p < 0.05$; **: $p < 0.01$; ***: $p < 0.001$.

In our fourth hypothesis, we stipulated that the higher educated should overestimate their party's vote share to a lesser extent than the lower educated. We test this hypothesis in Model 1 of Table 2. The results provide support for our expectation: respondents with a higher

secondary degree made a relative error in their prediction that was on average 48.65% lower than the error of the lowest educated. Those having a tertiary degree engage even less in wishful thinking, having a relative error that is on average 88.35% lower than that of the lowest educated group. Also in this analysis, the difference between the middle and higher educated is significant as well. It can thus safely be concluded that higher levels of educational attainment are significantly related with smaller overestimations. Model 1 also includes an indicator of the importance of habit as a determinant of the vote choice. Following the fifth hypothesis, the significant positive coefficient provides support for the expectation that voters who habitually vote for the same party, overestimate the result of their party to a larger extent. When focusing on the extent to which voters overestimate as well, our results thus are in line with a mechanism of wishful thinking; the stronger a voter's allegiances to a party the more optimistic become her predictions of how well her party will perform. Furthermore, as the results of Model 2 show, these relationships are independent of the level of interest in politics, since including political interest in the analyses does not strongly reduce the impact of educational level. However, just as in the analysis explaining whether or not someone overestimates, interest also negatively relates with the extent to which voters overestimate when predicting their party's vote share.

Finally, our sixth expectation that educational level moderates the impact of party attachment on the extent to which voters overestimate their party's result is tested by including an interaction between educational level and habitual voting in Model 3 of Table 2. The coefficients of the interaction terms do not reach statistical significance. To get a better sense of the moderating impact of education on partisanship, we plot the average marginal effect of party attachment for each educational level separately (Brambor, Clark and Golder, 2006; Kastle and Leoni, 2007), as these allow for a better comparison of the effect of party attachment between these groups. The results are displayed in Figure 2.

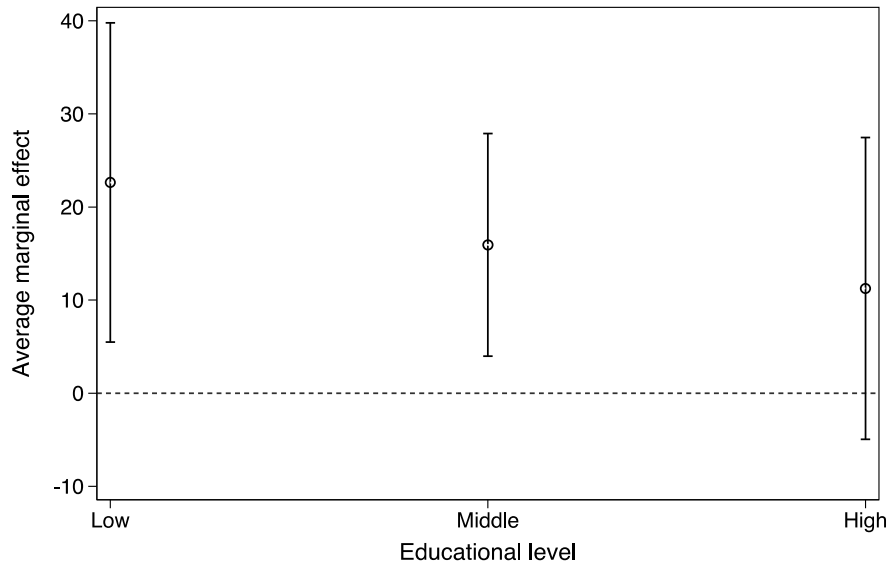


Figure 2. Average Marginal Effects of Educational Level

As evident from Figure 2, the average marginal effect of party attachment is positive and significant for the lowest educated and the middle educated. For the highest educated, in contrast, the confidence intervals include zero. For higher educated voters, we can thus not state that the impact of party attachment on the extent to which they overestimate is significantly different from zero. This result offers suggestive evidence for our sixth hypothesis, as it indicates that party attachment is not related with a higher level of overestimation thinking for high educated voters, while it is so for low and middle educated voters.⁵

In sum, our results offer support for each of the three hypotheses we introduced with regards to the extent to which people overestimate their party's vote share. The results in Model 1 of Table 2 indicate that the higher educated overestimate their party's vote share to a lesser extent than the less educated voters, while voters who are more connected to their party overestimate the performance of their party to a larger extent. Finally, and importantly, the average marginal effects based on the results in Model 3 provide support for the attenuating

effect of educational level on the overestimation by habitual voting. Interestingly, when controlling for important background characteristics of the electorates of the parties, the differences between the parties remain significant.

Despite all the advantages of using exit poll data, there are also some disadvantages – one of which is the fact that the questionnaires are shorter than common electoral surveys. Therefore, we dispose of only a limited set of variables we can include in our models and the differences of accuracy of prediction between the parties might be due to a variable we cannot include in the analyses.⁶ More research is needed to investigate why the electorate of certain parties is better at predicting their party's performance than others. In this specific case, it should be noted that the polls that were published before the elections did not overestimate the performance of those parties for which we find voters to make the largest errors.

6. Conclusion

This study set out to investigate what explains whether or not a voter will overestimate the electoral result of the party she votes for as well as the determinants of the extent to which voters overestimate their preferred party's vote share. The aim was to investigate whether higher education decreases overestimations and whether party attachment strengthens overestimations – which would suggest the presence of a mechanism of wishful thinking. Most importantly, we sought to investigate whether educational attainment counterbalances the impact of party attachment and whether cognition is thus more important than affect.

We tested six expectations using data gathered in an exit poll. Previous research used data gathered in the weeks or months before the elections and these data risk to be influenced by confounding factors as poll results being published during the campaign, and time until the elections. Therefore, the best way to investigate the accuracy of predictions and the factors

influencing bias in these predictions, is by comparing the predictions with the actual electoral results. Furthermore, previous studies had to make the assumption that voters already received at least a minimum of information about the upcoming elections. In the current study, we neutralised the possible influence of these factors and used data gathered on Election Day itself. This allows making stronger conclusions than previous research about the factors influencing wishful thinking in predicting electoral results.

The results show that Flemish voters engaged in wishful thinking when they predicted the vote share their preferred party would obtain in the regional elections of 25 May 2014, with an average relative overestimation of 69.67%. In line with the hypotheses, the higher educated were found to engage less in wishful thinking than what holds for the lower educated, and also among respondents who overestimated their party's vote share, the higher educated did so to a lesser extent than the lower educated. It thus seems that the more extensive social knowledge the higher educated dispose of enables them to make up more realistic predictions. In line with previous research we also find that party attachment increases the overestimation of the results. However, while we find no evidence of a moderating effect when investigating the determinants of overestimation, when we look at the *extent* to which respondents overestimated, we find that party attachment increases wishful thinking among the low and middle educated, but not among the high educated.

Our results shed light on mixed findings in earlier studies on citizens' electoral predictions. Ganser and Riordan (2015) only found small effects of education on accuracy of predictions in Germany. In contrast to these weak effects, Meffert *et al.* (2011), found educational level to be an important predictor of wishful thinking in Germany and Austria. Our reliance on exit poll data implies that we have more accurate information on whether voters are engaging in wishful thinking. Our analyses – that are based on these high quality data – show educational level to decrease and party attachment to increase the probability of voters

to overestimate the vote share their party will obtain. Furthermore, our more fine-grained measure of the extent of wishful thinking allows going a step further and investigating the extent to which predictions are biased. Based on our results, we can conclude that the lower educated are not only more likely to overestimate their party's result, if they do so their prediction also seems to be more flawed (i.e., they overestimate more). Also those voters who are more strongly attached to their party overestimate their party's vote share to a larger extent. However, with regards to the hypothesis of educational level to weaken the impact of party attachment on wishful thinking, the results are mixed. While we do not find support for this expectation when investigating whether or not a voter overestimates, when examining the extent to which voters overestimate, the results show that partisan attachments only increase overestimation in the group of low and middle educated voters.

Self-evidently, we need to take into account some limitations of our study. First, the Leuven Exit Poll was only conducted in Flanders, and our results are thus generalisable to the Flemish region of Belgium only. However, there is no reason to assume this setting to be very different from other multi-party settings – the only exception being that Belgium has compulsory voting. However, rather than a limitation, we consider compulsory voting to be an advantage of this setting, because high turnout levels enable us to investigate the prediction of the whole electorate by means of an exit poll. Second, as stated earlier, the exit poll was kept brief to increase the response rate, which resulted in a rather limited set of available variables. Although we were able to include the standard set of controls next to our variables of interest, there might be other variables at play that we were not able to control for. Habitual voting might, for instance, be an imperfect measure of attachment to a party. However, the nature of party-attachment in multi-party settings is a point of discussion and based on the literature on electoral volatility, we believe that voting for the same party time and again indicates one's attachment to a party.

As Dolan and Holbrook (2001, p. 43) state, these results have implications beyond the prediction of election outcomes: “The concept of wishful thinking can be useful in a number of different contexts, including the general tendency of people to “filter” information about candidates and political events”. Thus, while the results do not show any difference in impact of party attachment between the different levels of education with regard to whether or not voters engage in wishful thinking, when investigating the extent to which voters overestimate, the findings provide another indication of the possible biasing effects of a sense of attachment to a party that can be countered with higher education.

Notes

¹. In this paper, it is not our ambition to pursue forecasting of elections in the Belgian multi-party context. It is also important that our data do not allow doing so. Citizen forecasting models are among the most accurate approaches to forecasting elections (Graefe, 2014; Murr, 2011) but such models require richer data than the data at hand. More precisely, given that we only have information on how voters predicted their own party to perform, the systematic partisan bias in voters' predictions cannot balance out by aggregating. In addition, the timing of the data collection (i.e., on Election Day) would imply that any effort to use these data to forecast election has essentially no lead time – a crucial criterion for forecasting models (Lewis-Beck, 2005).

². That is, voters would for example be aware of the fact that the Flemish nationalists obtained about 28% of the votes in the Flemish region in the 2010 elections, not that this corresponds to 17.40% of the votes in the whole country.

³. As most respondents answered this question with a natural number, the actual vote shares the party obtained were rounded to the closest natural number. Subsequently, every voter predicting a vote share larger than this number receives code 1, every respondent predicting a vote share lower than this number receives code 0. If the actual vote share was been rounded upwards, the natural number itself was coded as an overestimation; if the actual vote share was rounded downwards, the natural number itself was coded as an underestimation.

⁴. In total, 32.22% of the respondents underestimated the vote share the party they voted for would obtain. The analyses were also conducted coding the dependent variable as 0 for those voters who underestimated the vote share of their party. The findings of these analyses lead to the same conclusions as those reported in the text.

⁵. As a lower educational level is expected to have an indirect impact on the overestimation of electoral results as well. That is, the lower educated are thought to be influenced more by the party preferences within homogeneous social networks. We tested for the possibility of the close environment of the voter to influence the bias in the prediction of the electoral results. To do so, we include a variable in the models that indicates the vote share of the party the voter voted for in her electoral canton (the lowest level on which election results are publicly available). As the results – reported in Appendix D show – this variable does not seem to be significantly related with the probability of overestimating the party’s result, nor with the extent to which the voter engages in wishful thinking.

⁶. We included the full list of available variables in appendix.

References

- Blais, A., & Gélinau, F. (2007). Winning, Losing and Satisfaction with Democracy. *Political Studies*, 55(2), 425-441.
- Achen, C. H. and Bartels, L. M. (2016) *Democracy for Realists: Why Elections Do Not Produce Responsive Government*. Princeton: Princeton University Press.
- Anduiza, E., Gallego, A. and Muñoz, J. (2013) 'Turning a Blind Eye: Experimental Evidence of Partisan Bias in Attitudes Toward Corruption', *Comparative Political Studies*, 46(12), pp. 1664–1692.
- Babad, E. (1987) 'Wishful Thinking and Objectivity among Sports Fans', *Social Behaviour*, 2(4), pp. 231–240.
- Babad, E. (1995) 'Can Accurate Knowledge Reduce Wishful Thinking in Voters' Predictions of Elections Outcomes?', *Journal of Psychology*, 129(3), pp. 285–300.
- Babad, E. (1997) 'Wishful Thinking Among Voters: Motivational and Cognitive Influences', *International Journal of Public Opinion Research*, 9(2), pp. 105–125.
- Babad, E. and Yacobos, E. (1993) 'Wish and Reality in Voters' Predictions of Election Outcomes', *Political Psychology*, 14(1), pp. 37–54.
- Bartels, L. M. (2002) 'Beyond the Running Tally: Partisan Bias in Political Perceptions', *Political Behavior*, 24(2), pp. 117–150.
- Barton, T. and Döring, H. (1986) 'Weakening Partisanship and the Higher Educated in Britain', *European Journal of Political Research*, 14(5–6), pp. 521–542.
- Blais, A. and Bodet, M. A. (2006) 'How do Voters form Expectations about the Parties' Chances of Winning the Election?', *Social Science Quarterly*, 87(3), pp. 477–493.
- Brader, T. and Tucker, J. A. (2012) 'Following the Party's Lead: Party Cues, Policy Opinion, and the Power of Partisanship in Three Multiparty Systems', *Comparative Politics*, 44(4), pp. 403–420.

- Brader, T., Tucker, J. A. and Duell, D. (2012) 'Which Parties Can Lead Opinion? Experimental Evidence on Partisan Cue Taking in Multiparty Democracies', *Comparative Political Studies*, 46(11), pp. 1485–1517.
- Brambor, T., Clark, W. R. and Golder, M. (2006) 'Understanding Interaction Models: Improving Empirical Analyses', *Political Analysis*, 14(1), pp. 63–82.
- Dassonneville, R. (2014) 'Political Sophistication and Vote Intention Switching: The Timing of Electoral Volatility in the 2009 German Election Campaign', *German Politics*, 23(3), pp. 174–195.
- Dassonneville, R. (2016) 'Volatile Voters, Short-Term Choices? An Analysis of the Vote Choice Determinants of Stable and Volatile Voters in Great Britain', *Journal of Elections, Public Opinion & Parties*, pp. 273–292.
- Dassonneville, R., Falk Pedersen, E., Grieb, A. and Hooghe, M. (2014) *Belgian Elections of May 25, 2014: Leuven Exit Poll. Technical Report*. Leuven: University of Leuven.
- Dassonneville, R. and Stiers, D. (forthcoming) 'Electoral Volatility in Belgium (2009-2014). Is There a Difference Between Stable and Volatile Voters?', *Acta Politica*, accepted.
- Deschouwer, K. (2012) *The Politics of Belgium: Governing a Divided Society*. Basingstoke: Palgrave Macmillan.
- Dolan, K. A. and Holbrook, T. M. (2001) 'Knowing Versus Caring: The Role of Affect and Cognition in Political Perceptions', *Political Psychology*, 22(1), pp. 27–44.
- Faas, T., MacKenrodt, C. and Schmitt-Beck, R. (2008) 'Polls that Mattered: Effects of Media Polls on Voters' Coalition Expectations and Party Preferences in the 2005 German Parliamentary Election', *International Journal of Public Opinion Research*, 20(3), pp. 299–325.
- Ganser, C. and Riordan, P. (2015) 'Vote Expectations at the Next Level. Trying to Predict Vote Shares in the 2013 German Federal Election by Polling Expectations', *Electoral*

- Studies*, 40, pp. 115–126.
- Gimpel, J. G. and Harvey, D. H. (1997) 'Forecasts and Preferences in the 1992 General Election', *Political Behavior*, 19(2), pp. 157–175.
- Greafe, A. (2014). Accuracy of Vote Expectation Surveys in Forecasting Elections. *Public Opinion Quarterly*, 78(1) 204-232.
- Granberg, D. and Brent, E. (1983) 'When Prophecy Bends: The Preference-Expectation Link in U.S. Presidential Elections, 1952-1980.', *Journal of Personality and Social Psychology*, 45(3), pp. 477–491.
- Granberg, D. and Holmberg, S. (1991) 'Election campaign volatility in Sweden and the United States', *Electoral Studies*, 10(3), pp. 208–230.
- Granberg, D. and Holmberg, S. (2002) 'A Mass-Elite Comparison of Wishful Thinking', *Social Science Quarterly*, 83(4), pp. 1079–1085.
- Heath, A. F. and Topf, R. G. (1986) 'Educational Expansion and Political Change in Britain: 1964-1983', *European Journal of Political Research*, 14(5–6), pp. 543–567.
- Hollander, B. A. (2014). The Surprised Loser: The Role of Electoral Expectations and News Media Exposure in Satisfaction with Democracy. *Journalism & Mass Communication Quarterly* 91(4), 651-668.
- Hooghe, M., & Stiers, D. (2016). Elections as a democratic linkage mechanism: How elections boost political trust in a proportional system. *Electoral Studies* 44, 46-55.
- Jérôme, B., Jérôme, V. and Lewis-Beck, M. S. (1999) 'Polls Fail in France: Forecasts of the 1997 Legislative Election', *International Journal of Forecasting*, 15(2), pp. 163–174.
- Jottier, D., Ashworth, J. and Heyndels, B. (2012) 'Understanding Voters' Preferences: How the Electorate's Complexity Affects Prediction Accuracy and Wishful Thinking among Politicians with Respect to Election Outcomes', *Kyklos*, 65(3), pp. 340–370.
- Kastellec, J. P. and Leoni, E. L. (2007) 'Using Graphs Instead of Tables in Political Science',

Perspectives on Politics, 5(4), pp. 755–771.

- Lachat, R. (2015) ‘Is What you Want What you See? Partisan and Ideological Bias in Perceptions of Parties’ Electoral Chances. Paper presented at the 2015 ECPR General Conference, Montréal, 26-29 August’.
- Lau, R. R. and Redlawsk, D. P. (2006) *How Voters Decide. Information Processing during Election Campaigns*. Cambridge: Cambridge University Press.
- Lazarsfeld, P. F., Berelson, B. and Gaudet, H. (1944) *The People’s Choice. How the Voter Makes up his Mind in a Presidential Campaign*. New York: Columbia University Press.
- Leiter, D., Murr, A. E., Rascon, E. and Stegmaier, M. (2016) ‘The Impact of Social Networks on Citizen Forecasts’. Paper presented at the 6th General Conference of the European Political Science Association. Brussels, 2-3 June 2016.
- Levine, R. (2007) ‘Sources of Bias in Voter Expectations under Proportional Representation’, *Journal of Elections, Public Opinion and Parties*, 17(3), pp. 215–234.
- Lewis- Beck, M. S. (2005). Election forecasting: Principles and practice. *The British Journal of Politics & International Relations*, 7(2) 145-164.
- Lewis-Beck, M. S. and Skalaban, A. (1989) ‘Citizen Forecasting: Can Voters See into the Future?’, *British Journal of Political Science*, 19(1), pp. 146–153.
- Lewis-Beck, M. S. and Tien, C. (1999) ‘Voters as Forecasters: A Micromodel of Election Prediction’, *International Journal of Forecasting*, 15(2), pp. 175–184.
- Lijphart, A. (1968) ‘Typologies of Democratic Systems’, *Comparative Political Studies*, 1(1), pp. 3–44.
- Marthaler, S. (2008) ‘The Paradox of the Politically-Sophisticated Partisan: The French Case’, *West European Politics*, 31(5), pp. 937–959.
- Meffert, M. F., Huber, S., Gschwend, T. and Pappi, F. U. (2011) ‘More than Wishful Thinking: Causes and Consequences of Voters’ Electoral Expectations about Parties and

- Coalitions’, *Electoral Studies*, 30(4), pp. 804–815.
- Mood, C. (2010) ‘Logistic regression: Why we cannot do what We think we can do, and what we can do about it’, *European Sociological Review*, 26(1), pp. 67–82.
- Murr, A. E. (2011). “Wisdom of the Crowds?” A Decentralised Election Forecasting Model that uses Citizens’ Local Expectations. *Electoral Studies*, 30(4), 771-783.
- Murr, A. E. (2016) ‘The Wisdom of Crowds: What do Citizens Forecast for the 2015 British General Election?’, *Electoral Studies*, 41, pp. 283–288.
- Panagopoulos, C. (2013) ‘Who Participates in Exit Polls?’, *Journal of Elections, Public Opinion & Parties*, 23(4), pp. 444–455.
- Price, P. C. (2000) ‘Wishful Thinking in the Prediction of Competitive Outcomes’, *Thinking & Reasoning*, 6(2), pp. 161–172.
- Quintelier, E., Hooghe, M. and Marien, S. (2011) ‘The Effect of Compulsory Voting on Turnout Stratification Patters: A Cross-National Analysis’, *International Political Science Review*, 32(4), pp. 396–416.
- Schakel, A. H. and Jeffery, C. (2013) ‘Are Regional Elections Really “Second-Order” Elections?’, *Regional Studies*, 47(3), pp. 323–341.
- Schickler, E. and Green, D. P. (1997) ‘The Stability of Party Identification in Western Democracies. Results From Eight Panel Surveys’, *Comparative Political Studies*, 30(4), pp. 450–483.
- Singh, S. P. (2014). Not all election winners are equal: Satisfaction with democracy and the nature of the vote. *European Journal of Political Research* 53(2), 308-327.
- Singh, S., Karakoç, E., & Blais, A. (2012). Differentiating winners: How elections affect satisfaction with democracy. *Electoral Studies* 31(1), 201-211.
- Sjöberg, L. (2009) ‘Are All Crowds Equally Wise? A Comparison of Political Election Forecasts by Experts and the Public’, *Journal of Forecasting*, 28(1), pp. 1–18.

- Swenden, W., Brans, M. and De Winter, L. (2006) 'The Politics of Belgium: Institutions and Policy under Bipolar and Centrifugal Federalism', *West European Politics*, 29(5), pp. 863–873.
- Thomassen, J. and Rosema, M. (2009) 'Party Identification Revisited', in Bartle, J. and Bellucci, P. (eds) *Political Parties and Partisanship: Social Identity and Individual Attitudes*. London: Routledge, pp. 42–59.
- Timmermans, A. L. (2003) *High Politics in the Low Countries: An Empirical Study of Coalition Agreements in Belgium and the Netherlands*. Aldershot: Ashgate.
- Tversky, A. and Kahneman, D. (1974) 'Judgment under Uncertainty: Heuristics and Biases', *Science*, 185(4157), pp. 1124–1131.
- Tworzecki, H. and Markowski, R. (2014) 'Knowledge and Partisan Bias: An Uneasy Relationship', *East European Politics & Societies and Cultures*, 28(4), pp. 836–862.
- Uhlener, C. J. and Grofman, B. (1986) 'The Race May be Close but my Horse is Going to Win: Wish Fulfillment in the 1980 Presidential Election', *Political Behavior*, 8(2), pp. 101–129.
- Yaniv, I., Schul, Y., Raphaelli-Hirsch, R. and Maoz, I. (2002) 'Inclusive and Exclusive Modes of Thinking: Studies of Prediction, Preference, and Social Perception during Parliamentary Elections', *Journal of Experimental Social Psychology*, 38(4), pp. 352–367.

Appendices

Appendix A: Representativeness of the Sample

In this study, we make use of data gathered in an exit poll in the elections of 25 May 2014 in Belgium. Relying on survey data it is important to verify whether respondents are representative for the whole population. Comparing the votes as reported by the respondents with the official electoral results provides insight in the extent to which our sample is representative for the population under investigation (Panagopoulos, 2013). Therefore, in Table A in this appendix, we present the results of the question for which party the respondent voted and the official electoral results. In line with how we proceed for the main analyses presented in this paper, we focus on the regional level for examining the reported vote choice as well as official results.

Table A.1. Comparison electoral results exit poll with official results

Party	Vote-share respondents in sample	Vote-share in official results
Social-Democrats	20.80%	19.46%
Greens	11.86%	8.27%
Nationalists	31.41%	30.30%
Liberals	13.43%	13.44%
Extreme left	3.30%	2.40%
Social-Democrats	13.26%	13.29%
Extreme right	4.02%	5.63%
Other	0.75%	2.24%
Blank/Invalid	1.17%	4.97%

Note: the official vote shares do not correspond with those reported in Table 1. To calculate the error in the predictions of the respondents (and as reported in Table 1), we used the official results reported as vote shares of the casted valid votes. Since in Table A we also include the share of blanc and invalid votes, we get a better comparison between the reported and the official results by calculating not the share of the valid votes the parties received, but the share of the casted votes.

As can be seen in Table A, the results as reported by the respondents of the exit poll closely resemble the eventual official electoral result. The only substantial difference seems to be the lower number of respondents indicating to have casted a blank or invalid vote compared to what the official statistics show. Apart from this, the results are comparable and we thus can assume the sample to be representative regarding the party choices.

Next to party choice, however, the sample might be skewed to other, socio-demographic characteristics. To ensure representativeness of the sample, we use in our analyses a weight that corrects for age, sex and province of the respondents. This weight was calculated by comparing the distribution of wo-/men, different age groups, and populations of different provinces, and assigning a weight that ensures a representation in the sample that corresponds with the distribution in the (Flemish) population. Table A2 (retrieved from Dassonneville et al., 2014, p. 9) displays the distributions and corresponding weights.

Table A.2. Distribution of age, sex and province in the population and the sample, and corresponding weights

	N in population	% in population	N in sample	% in sample	Weight
Antwerp women 18-64	548, 779	10,68%	329	8,56%	1,248
Antwerp women 65+	181, 761	3,54%	42	1,09%	3,248
Antwerp men 18-64	559, 873	10,89%	281	7,31%	1,490
Antwerp men 65+	144, 528	2,81%	62	1,61%	1,745
Limburg women 18-64	267, 895	5,21%	288	7,50%	0,695
Limburg women 65+	82, 019	1,59%	46	1,20%	1,325
Limburg men 18-64	275, 061	5,35%	316	8,22%	0,651
Limburg men 65+	67, 843	1,32%	58	1,51%	0,874
East-Flanders women 18-64	447, 208	8,70%	262	6,82%	1,276
East-Flanders women 65+	154, 061	2,99%	34	0,88%	3,398
East-Flanders men 18-64	456, 233	8,87%	305	7,94%	1,117
East-Flanders men 65+	117, 718	2,29%	54	1,41%	1,624
West-Flanders women 18-64	347, 339	6,76%	333	8,67%	0,780
West-Flanders women 65+	141, 829	2,76%	34	0,88%	3,136
West-Flanders men 18-64	359, 244	6,99%	321	8,36%	0,836
West-Flanders men 65+	110, 564	2,15%	46	1,20%	1,792
Flemish Brabant women 18-64	339, 099	6,59%	459	11,95%	0,551
Flemish Brabant women 65+	112, 923	2,19%	69	1,80%	1,217
Flemish Brabant men 18-64	337, 373	6,56%	433	11,27%	0,582
Flemish Brabant men 65+	87, 719	1,71%	70	1,82%	0,940
Total	5,139,069	100%	3.842	100%	

Appendix B: Replication Analyses with Absolute Error as Dependent Variable

Table B.1. Linear regression model explaining overestimation among Flemish voters

	Model 1	Model 2	Model 3
	B	B	B
	(Std. Err.)	(Std. Err.)	(Std. Err.)
Sex (ref. = woman)	-6.656*** (0.757)	-6.223*** (0.712)	-6.206*** (0.724)
Age	-0.131*** (0.032)	-0.115** (0.033)	-0.119** (0.032)
Education (ref. = non/primary/ secondary inferior)			
Secondary superior	-5.084*** (1.265)	-4.652** (1.330)	-2.430 (2.398)
Tertiary	-9.631*** (1.115)	-8.901*** (1.130)	-4.520* (2.130)
Habitual voting	1.164** (0.412)	1.207** (0.427)	2.007* (0.770)
Vote (ref. = Nationalists)			
Christian-Democrats	0.375 (2.028)	0.599 (2.086)	0.419 (2.082)
Greens	-4.073* (1.748)	-3.870* (1.798)	-3.984* (1.793)
Liberals	0.118 (1.732)	0.341 (1.780)	0.241 (1.782)
Extreme left	0.016 (1.983)	0.494 (2.075)	0.417 (2.081)
Social-Democrats	1.386 (1.584)	1.653 (1.630)	1.572 (1.636)
Extreme right	2.604 (2.441)	2.324 (2.461)	1.958 (2.482)
Political interest		-0.567* (0.215)	-0.589** (0.213)
Middle educated*Habit			-0.669 (0.802)
High educated*Habit			-1.536* (0.753)
Constant	25.298	27.149*** (2.359)	24.999*** (2.960)
N	1625	1625	1625
R ²	0.145	0.152	0.155

Data: Leuven Exit Poll

Note: Entries are unstandardised OLS coefficients, standard errors clustered by municipality are reported between parentheses. *: p<0.05; **: p<0.01; ***: p<0.001

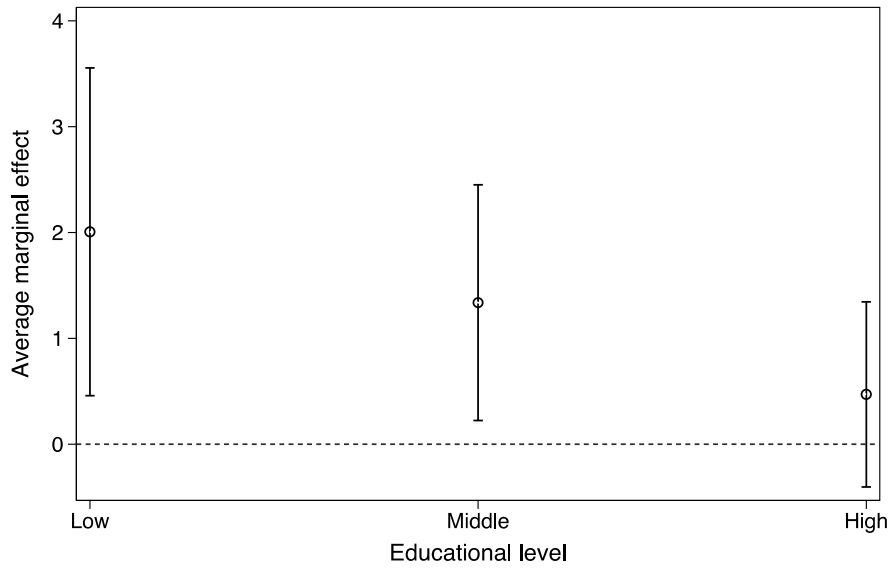


Figure B.1. Replication Figure 2 using the absolute prediction error as dependent variable

Appendix C: List of Variables Included in the Leuven Exit Poll

Socio-Demographic variables

Sex

Year of birth

Occupation

Highest obtained educational degree

Voting behaviour Flemish elections

Party voted for

Prediction of the vote share the preferred party will obtain

Importance of vote choice determinants: ideology; habit; candidates/leaders; wishes party to be part of government; wishes party to obtain Parliamentary seats; policy positions; unsatisfied with all other parties; people in environment vote for the same party; this party is capable of ruling Flanders.

Voting behaviour national and European elections

Same set of questions as voting behaviour Flemish elections, with the exception of prediction of the vote share the preferred party will obtain.

General

Did you vote three times for the same party?

If no: which party do you prefer most?

Interest in politics in general

Self-positioning on ideological axis

To what extent are the decisions of the following institutions important for your personal life:

Flemish Parliament; national Parliament; European Parliament.

Retrospective evaluation economic situation family.

Retrospective evaluation economic situation Belgium.

Appendix D: Results including variable indicating vote share of the party the voter voted for in the voter's constituency

Table D.1. Replication Table 1, including size of party in electoral canton

	Model 1 B (Std. Err.)	Model 2 B (Std. Err.)	Model 3 B (Std. Err.)
Sex (ref. = woman)	-0.489*** (0.093)	-0.438*** (0.101)	-0.441*** (0.101)
Age	-0.009*** (0.003)	-0.008** (0.003)	-0.008** (0.003)
Education (ref. = non/primary/ lower secondary)			
Higher secondary	-0.524** (0.183)	-0.477* (0.189)	-0.715* (0.322)
Tertiary	-0.872*** (0.172)	-0.788*** (0.181)	-0.974*** (0.308)
Habitual voting	0.085* (0.035)	0.090** (0.035)	0.035 (0.079)
Vote (ref. = Nationalists)			
Christian-Democrats	0.603*** (0.134)	0.584*** (0.134)	0.586*** (0.133)
Greens	2.300*** (0.165)	2.289*** (0.167)	2.291*** (0.167)
Liberals	2.598*** (0.192)	2.592*** (0.190)	2.593*** (0.190)
Extreme left	3.616*** (0.520)	3.628*** (0.529)	3.632*** (0.526)
Social-Democrats	2.697*** (0.259)	2.699*** (0.261)	2.701*** (0.260)
Extreme right	4.545*** (1.021)	4.491*** (1.027)	4.498*** (1.023)
Political interest		-0.073** (0.022)	-0.072** (0.023)
Middle educated*Habit			0.0825 (0.087)
High educated*Habit			0.062 (0.100)
Size of party in constituency	0.002 (0.003)	0.002 (0.003)	0.002 (0.003)
Constant	0.659** (0.232)	0.974*** (0.238)	1.139*** (0.304)
N	2765	2765	2765
R ²	0.226	0.229	0.229

Data: Leuven Exit Poll

Note: Entries are logit coefficients, standard errors clustered by municipality reported between parentheses. The data are weighted to sex, age and province. Significance levels: *: p<0.05; **: p<0.01; ***: p<0.001.

Table D.2. Replication Table 2, including size of party in electoral canton

	Model 1 B (Std. Err.)	Model 2 B (Std. Err.)	Model 3 B (Std. Err.)
Sex (ref. = woman)	-77.877*** (10.131)	-71.550*** (9.170)	-71.343*** (9.163)
Age	-1.362** (0.392)	-1.119* (0.436)	-1.152* (0.435)
Education (ref. = non/primary/ lower secondary)			
Higher secondary	-48.670** (15.765)	-42.381* (17.353)	-20.759 (27.682)
Tertiary	-88.348*** (11.572)	-77.684*** (13.954)	-44.640 (23.558)
Habitual voting	15.381* (6.195)	16.017* (6.333)	22.645* (8.544)
Vote (ref. = Nationalists)			
Christian-Democrats	16.480 (9.793)	19.625 (10.595)	18.382 (10.477)
Greens	59.878*** (12.334)	62.548*** (12.517)	61.869*** (12.573)
Liberals	50.645*** (9.269)	53.694*** (9.712)	53.114*** (9.716)
Extreme left	481.929*** (70.852)	488.558*** (70.825)	488.198*** (70.821)
Social-Democrats	56.566*** (9.435)	60.226*** (9.876)	59.757*** (9.957)
Extreme right	242.653*** (28.766)	238.225*** (28.599)	235.860*** (28.837)
Political interest		-8.299* (3.328)	-8.448* (3.358)
Middle educated*Habit			-6.713 (7.464)
High educated*Habit			-11.381 (6.917)
Size of party in constituency	-0.016 (0.247)	-0.037 (0.250)	-0.019 (0.256)
Constant	158.352*** (20.217)	185.818*** (20.757)	167.175*** (22.361)
N	1625	1625	1625
R ²	0.304	0.312	0.312

Data: Leuven Exit Poll

Note: Entries are unstandardised coefficients, standard errors clustered by municipality reported between parentheses. The data are weighted to sex, age and province. Significance levels: *: p<0.05; **: p<0.01; ***: p<0.001.

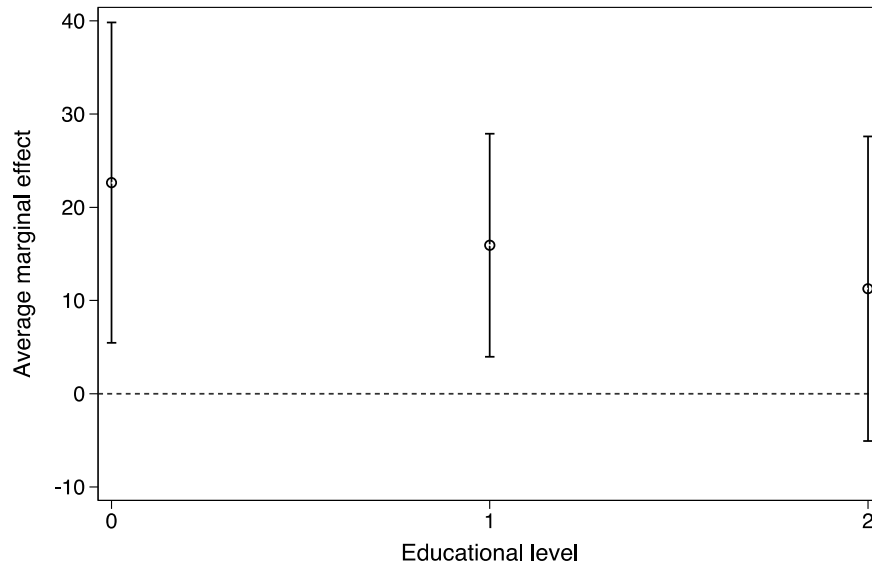


Figure D.1. Replication Figure 2 using the model including size or party in electoral canton