

## Voting and satisfaction with democracy in flexible-list PR

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### ABSTRACT

A vast literature shows that voting for the winning party in elections boosts satisfaction with democracy. But in many list PR systems, voters do not only vote for a party, they can also vote for candidates within parties. Yet, we know very little about how such votes affect voters' satisfaction with democracy. In this paper, we analyse pre- and post-election panel survey data from Belgium, in which we asked respondents to report their vote choice for parties and for candidates. The main finding is that casting a preference vote for a winning candidate makes little difference, as party-list voters are those with the largest increase in satisfaction with democracy. Such a finding is very important as reforms that increase voters' opportunities to vote for candidates within list have multiplied recently, and many of these reforms have been justified as being in line with voters' demand for more candidate-centred electoral systems.

### 1. Introduction

There is a vast literature that studies the effects of electoral systems, particularly their merits and demerits for democratic representation (Lijphart, 1994; Norris, 2004; Taagepera and Shugart, 1989). Much of that literature is focused on the opposition between proportional representation (PR) and plurality systems. However, there is a growing interest in evaluating variants of PR systems. PR systems are sometimes classified depending on the size of electoral districts (Rae, 1967) or the type of methods used to translate votes into seats (Gallagher, 1991). More recently, scholarly attention has turned to ballot structure (André et al., 2014; Farrell, 2011; Renwick and Pilet, 2016).

There are different types of ballot structure in PR systems. Under closed-list PR, voters cast a vote for a party-list. They cannot express preferences for candidates within lists. The seats are allocated proportionally to the number of votes obtained by each party, and then given to the candidates in the order of their appearance on the list. Under flexible- or open-list PR, voters can also give preference votes to individual candidates within a party-list. In open-list PR systems, the seats are given to candidates depending on the number of votes they receive. In flexible-list PR systems, i.e. the most common system in established democracies, there is a balance between votes received by candidates and the order in which the candidates appear on the list to

decide which candidates are elected.

Many consider that flexible-list and open-list PR are preferable to closed-list PR. Intuitively, the former appear more democratic, as voters have a greater impact on which candidates are elected (Dalton, 2004). They also have a greater impact on the composition of the government, as key executive positions tend to be filled by the candidates with the largest number of preference votes (Folke et al., 2016; Merilainen and Tukiainen, 2018). Indeed, many PR democracies have adopted a flexible ballot structure or increased the flexible character of the ballot these last 20 years (Renwick and Pilet, 2016). However, cross-sectional studies find mixed evidence regarding the effect of ballot structure on people's satisfaction with democracy. Levels are often similar in closed-list and flexible-list PR systems (Bosch and Orriols, 2014). However, prior research has only examined aggregate levels of satisfaction with democracy.

It is crucial, we believe, to turn to individual-level data and within-country studies. We cannot assume that the type of list system (closed, flexible or open) affects all citizens equally. There can be important differences depending on individual voters' behaviour. First, in most flexible list systems, voters have the opportunity to vote for candidates but are not obliged to do so.<sup>1</sup> They can opt for a so-called party-list vote, marking only a preference for a party-list and letting the order of candidates on the ballot as set by political parties decides who is elected

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<sup>1</sup> In Europe, optional preference voting is used in Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Greece, Iceland, Italy, Latvia, Lithuania, Luxembourg, Norway, Slovakia, Sweden, and Switzerland. Compulsory preference voting is only found in Estonia, Finland, Poland and the Netherlands.

within the list (like in closed-list PR). Some studies show that the electorate is split between preference and party-list voters, as they are different on several covariates (André et al., 2012; Karvonen, 2010; Renwick and Pilet, 2016).

Second, the literature on the impact of party choice on satisfaction with democracy repeatedly shows that there is a crucial difference between winners and losers (Anderson et al., 2005). Voters of the winning parties are those getting the largest boost in satisfaction with democracy after the election. It is therefore crucial to verify whether this distinction also applies to voters supporting winning candidates versus supporters of losing candidates in flexible-list PR systems.

In order to provide the first account of how satisfaction with democracy is affected by voting (or not) for candidates in PR list systems, we propose a paper based upon the 2014 federal elections in Belgium. Belgium is a typical case of PR with flexible lists and optional preference voting for candidates within the list the voter has decided to support. In 2014, we conducted an original panel survey before and after the federal election. We compare levels of satisfaction with democracy of party-list voters on the one hand, and preference voters on the other (while distinguishing those who vote for winners and losers). We analyse pre- and post-election panel data. Our dependent variable is the difference in levels of satisfaction with democracy before and after the election. In our survey, we also asked respondents to report how exactly they voted using mock ballots. Given the complexity of flexible-list PR systems, the use of mock ballots in post-election surveys increases the accuracy of reported voting behaviour (see e.g. Bowler and Farrell, 1991). We can thus be confident about the vote choice variables we are using (see below for a description of the data).

## 2. The Belgian electoral system: a typical case of flexible-list PR

As mentioned above, Belgium uses a typical flexible PR system with optional preference voting for candidates.<sup>2</sup> Voters first decide for which party they want to vote, and then choose to either vote for individual candidates (we then say that they cast a ‘preference vote’) or validate the entire party-list without voting for any candidate (we then say that they cast a ‘party-list vote’). As in most flexible-list PR systems, the seats are allocated between candidates depending on both the number of preference votes received and their rank order on the party-list. Each party-list is pre-ordered, and the number of candidates varies from 4 to 24 depending on the magnitude of the district.<sup>3</sup>

This system clearly gives an advantage to candidates that have a top

<sup>2</sup> This paper focuses on the 2014 Belgian federal election. Three elections were held on the very same day in 2014: the federal, regional, and European elections, but the federal election is usually considered as the most important one. In reality, most Belgian voters cast a vote on a computer screen (electronic voting). In our survey just like in reality, they were first presented a screen with all parties running. It is only once they have selected a party that they are presented with the list of candidates running for this party. In our survey just like in reality, the operation was repeated three times, one for each election, but the federal ballot came first.

<sup>3</sup> The way the seats are allocated to candidates within parties is the following. For each party in each district, an ‘eligibility quota’ is calculated. Candidates who receive a number of preference votes that is equal or higher than the eligibility quota are directly elected. If seats remain to be allocated (in practice very few candidates get enough preference votes to reach the eligibility quota), a second round of seat allocation within lists starts, for which the rank ordering of candidates comes into play. The total number of party-list votes is divided by two, then transferred to the candidate ranked first on the list for her to reach the eligibility quota. The remaining party-list votes are subsequently transferred to the second candidate until she reaches the quota, then to the third candidate, and so forth until all party-list votes have been transferred. At the bottom of the party-lists, there are also ‘supplier candidates’ who will seat in parliament if one of the candidates becomes a minister. We do not consider votes for these candidates in this paper as the election of supplier candidates depends on post-election bargaining over government formation.

rank in the party-list. Many voters cast a party-list vote (in the 2014 federal election, they were 43%). As a consequence, most seats are allocated to candidates positioned high on the ballot by their party. These well-positioned candidates reach the eligibility quota with their preference votes tossed up by party-list votes. Few candidates manage to overcome the list order and to be elected instead of another candidate that was ranked higher (De Winter, 2005). In the 2014 federal election, only 6 of the 150 elected candidates fall in this category.

Flexible-list PR systems like the one used in Belgium also have another specificity. The number of preference votes received by candidates is an important popularity test with direct implications. Media tend to pay more attention after the elections to those candidates who have obtained the largest number of preference votes. More importantly, political parties use the scores in preference votes as a crucial element for the post-election career of candidates. The preference votes for individual candidate function as a ‘primary system’, which allows voters to choose future members of the government (Dumont et al., 2009; Folke et al., 2016; Merilainen and Tukiainen, 2018). For example, in 2014, Prime Minister Michel was the candidate with the largest preference score of his party, whereas Reynders, Minister Foreign Affairs, came second. A majority of the 17 ministers were ranked in top-50 of candidates with most preference votes in the country despite formal and informal linguistic and gender quota requirements. What is more, candidates who have obtained more preference votes are the most likely to be re-selected and to be positioned high on the list at next elections (André et al., 2017). It is important to note that in Belgium the preference scores of the head candidates are made public in the media on the day that follow Election Day, so most voters are aware of them.

## 3. Voting and satisfaction with democracy under PR

There is a large agreement among political observers to say that, from the perspective of voters, open and flexible-list PR are more democratic than closed-list PR systems. Dalton (2004) claims that introducing electoral systems that limit the influence of parties on the final electoral results and maximise the influence of voters on these results could fight the erosion of political trust that we observe in modern democracies (see also Rahat and Sheaffer, 2007).

Using cross-national survey data, Farrell and McAllister (2006) find that trust in institutions and satisfaction with democracy tend to be higher in countries using an open ballot structure. Using a regression discontinuity approach and official elections’ data from Spanish municipalities, Sanz (2017) shows that turnout is higher when voters can cast preference votes.<sup>4</sup> People themselves tend to prefer open and flexible-list PR systems. In their study of the effect of electoral rules in European elections, Laslier et al. (2015) asked a sample of thousands of European citizens to report their vote under various electoral rules, and to tell which system they prefer. In their sample, 66% of respondents strictly preferred the flexible-list PR system over the closed-list PR system.

However, evidence regarding how ballot structure affects satisfaction with democracy is mixed. The first study on the topic by Farrell and McAllister (2006) found that levels of satisfaction with democracy tended to be higher in list PR systems allowing voters to cast votes for candidates. Yet, Bosch and Orriols (2014), re-analysing the same dataset, show that satisfaction is only higher in the systems in which the rank ordering of candidates has no impact on which candidates are elected.

These findings might result from a perverse effect of open- or flexible-list PR systems on political competition. These systems create a structure of incentives in which candidates need to distinguish themselves from their party fellows if they want to be elected. Consequently,

<sup>4</sup> However, Soderlund (2017), who use a cross-country design finds the opposite: turnout is larger in closed-list PR systems.

they must invest a lot of resources in the cultivation of a personal vote (André et al., 2015; Shugart et al., 2005). More negative consequences have also been observed. Politicians will sometimes try to cultivate their personal reputation through political patronage, or even by engaging into corruption practices. Evidence shows that corruption tends to be higher in countries using an open- and flexible-list PR system (Chang and Golden, 2007; Ames, 1995). Also, Golden and Picci (2008) find that corruption decreased in Italy when the government replaced the flexible ballot structure of the PR electoral system by a closed one in the 1990s.<sup>5</sup> Along these lines, Bettarelli et al. (2017) show that Italians who experienced the old system tend to prefer the closed-list PR system.

To give new insights to the debate over ballot structure in PR systems, we propose a theory that starts from the literature on how one's vote affects satisfaction with democracy, that we apply to flexible-list PR systems. The literature often relies on survey data, and on answers given by respondents' satisfaction with democracy (Dalton, 2004; Blais and Gélinau, 2007). This question does not measure support for the principle of democracy. It taps into regime support, and reflects respondents' evaluation of how the democratic system works in practice. Because it is an evaluation of actual performance, it changes over time, for example, before and after elections (Anderson et al., 2005; Canache et al., 2001; Linde and Ekman, 2003). In this paper, we rely on a pre- and post-election panel survey (similar to Beaudonnet et al., 2014; Blais et al., 2017), in which we asked respondents to report their level of satisfaction with democracy before and after the election. Our dependent variable is the difference in levels of satisfaction with democracy before and after the election.

There is a vast literature showing that voters' level of satisfaction with democracy increases when they vote for winning parties and decreases when they vote for losing parties, both at the district and national (governmental) level. This is true under virtually all electoral rules (Anderson and Guillory, 1997; Anderson et al., 2005; Beaudonnet et al., 2014; Blais et al., 2017). This effect is usually imputed to a combination of both a feeling of being well represented (in the sense that they feel close to the winning party in ideological terms, Ezrow and Xezonakis, 2011), and a feeling of satisfaction of having voted for the winner (Singh et al., 2011).

In flexible-list PR systems, the voter first decides for which party she wants to vote and then cast a party-list vote or preference votes for individual candidates. Building on the literature, we can expect that one's satisfaction with democracy will increase when she votes for the winning party and decrease when she votes for a losing party (Blais et al., 2017). However, this effect is not central to our analysis, as it is bound to be similar in closed-list and flexible-list PR systems. In our models, we control for winning at the party-level in adding party fixed effects.

Satisfaction with democracy should also increase/decrease when a citizen votes for winning/losing candidates. We expect the mechanisms to be similar to the those linking satisfaction with democracy of voting for a winning/losing party. First, under closed-list PR, the voter has no impact on which specific candidates are elected. It depends on the candidates' order on the party-list, which is decided by the party. Although some parties organise internal elections prior the election to decide upon this order (usually among party representatives or party members), the 'selectorate' never fully reflects the actual electorate of the party (Hazan and Rahat, 2010). It is therefore unlikely that all voters are fully happy with the set of selected candidates. The same is true for flexible-list PR: the parties pre-ordered the candidates on the list, and there are probably some voters who are not fully happy with this order. However, in flexible-list PR, they can affect the candidates that are ultimately elected. The preference vote allows correcting for

<sup>5</sup> An alternative explanation for the decrease in corruption in Italy in 1990s is the exposition of various scandals in the medias, which put the issue of the fight against corruption on the political agenda.

potential deviance from voters' preferences in the party-list, and make the overall composition of parliament more aligned with their political preferences. All other things being equal, it should increase the congruence between parliamentarians and voters. Hence, we expect the satisfaction of voters that see the candidates for which they voted having a seat in parliament to increase more than others.

However, as mentioned above, in Belgium, very few candidates 'jump off' their list rank to be elected. Therefore, the preference votes hardly affect which candidates are elected. Yet, the second reason why voting for winning/losing candidates should increase satisfaction with democracy is that there should be some psychological satisfaction associated with voting for winners (see above). These mechanisms should differentiate party-list voters from winning and losing preference voters. This leads us to our two first hypotheses:

**H1.** Satisfaction with democracy increases more for preference voters who cast a vote for winning candidates than for party-list voters.

**H2.** Satisfaction with democracy decreases more for preference voters who cast a vote for losing candidates than for party-list voters.

Note that we separate winning and losing votes as we do not assume the two to have symmetrical effects on satisfaction with democracy. According to the literature on human's negative bias, people react more to negative than positive information (Soroka and McAdams, 2015). This is likely to also apply to elections in Belgium. When a voter cast a vote for a losing candidate, she realises that the electoral system does not quite work as a pure open-list system and that candidates at the bottom of the list have few chances of being elected. By contrast, she does not experience this frustration when she votes for a winning candidate. Hence, we expect that the negative effect of voting for losing candidates is stronger than the positive effect of voting for winning candidates.

Further, in flexible-list PR systems, the preference votes tend to function as a 'primary' to decide which candidates will get important portfolios in the government (Folke et al., 2016; Meriläinen and Tukiainen, 2018). In theory, this should only apply to candidates from political parties that are part of the ruling coalition. However, when we conducted the post-election survey, a few weeks after the elections, the actual composition of the ruling coalition was not known. Almost all parties were still involved in the initial talks and it was very hard to predict which parties would end up forming the new government. However, as explained above, ministers are most often selected among candidates who obtained a large number of preference votes. Voters could then anticipate whether the candidate(s) they voted for had a good chance of becoming minister depending on their preference score. Also, the satisfaction of supporters of candidates who received a high number of preference votes should also increase because of the psychological satisfaction associated with the fact of voting for winners, in this case a candidate with a high preference score (see above).

This leads us to a third hypothesis:

**H3.** Satisfaction with democracy of preference voters increases more when the candidates for whom they cast a vote have a high preference score than when these candidates have a low preference score.

#### 4. Data

Our data come from a pre- and post-election panel survey, conducted in the weeks preceding and following the 2014 federal election in Belgium. We used existing panels of adult citizens selected on a quota basis, thus ensuring the diversity of the sample. We sampled between 500 and 1000 respondents in each of the three regions of the country (Flanders, Wallonia, and Brussels). When we exclude respondents that did not participate in the post-election wave or that did not respond to one of the questions we are using in our analysis (see below).

In this paper, we focus on two specific items in the questionnaires.

First, in both the pre- and post-election questionnaire, we asked respondents to report, on a scale from 0 to 10, how satisfied they were with the way democracy works at the federal level in Belgium. Second, in the post-election questionnaire, we asked respondents for which party they voted. Then, we reproduced the ballot they faced in their district and asked them to report how they voted. We only showed the mock ballot to respondents who voted for one of the 13 parties that obtained at least one seat in the federal parliament.<sup>6</sup> For this reason, in our analysis, we exclude respondents who voted for other parties (around 7% of the total sample), and abstainers (because voting is compulsory in Belgium, only 6% of the total sample abstained).<sup>7</sup> We have a sample of 1324 respondents (594 in Flanders, 386 in Wallonia, and 344 in Brussels). We believe that mock ballots are particularly useful to obtain an accurate reproduction of vote choice in flexible-list PR systems that are more complex than closed-list PR and plurality systems (Bowler and Farrell, 1991).

With 20% of vote and seat shares, the N-VA (regionalist) was the first party in the 2014 federal election. This young party (officially founded in 2001) has been extremely successful for the last two elections. On the Flemish side, the CD&V (Christian-democratic) came second with 11%, followed by the Open-VLD (10%, centre-right) and the SP.A (9%, centre left). The two other parties, Groen (green) and VB (extreme-right), did not reach 5%. The situation was very different on the Walloon side: the PS (centre-left) came first with 12%, followed by the MR (10%, centre-right), and the CDH (6%, Christian-democratic). The other parties Ecolo (green), PTB (extreme-left), FDP (pro-Francophones) and PP (extreme-right), did not reach 5%.

In [appendix A1](#), we show the actual vote share of the 13 parliamentary parties at the 2014 federal election, and the vote share of these parties as reported in the survey. We put voters who voted for a party that did not obtain any seat in the category ‘other’. The table reveals that our sample is quite diverse as all major parties are represented. There are some discrepancies with the actual results but they are not major. The largest difference is to be found in the MR that is over-represented by 5 percentage-points, and the N-VA and CD&V that are under-represented by the same margin. All in all, the sample is fairly representative of the voting population in Belgium in 2014.

In this paper, we focus on preference voting. Therefore, we match the voting behaviour reported in the mock ballot with the actual electoral results, and construct three variables for each respondent: the number of preference votes cast, the number of preference votes cast for candidates ultimately elected (winning candidates), and the number of preference votes cast for candidates not elected (losing candidates). In [appendix A2-4](#), we show the distribution of these three variables. We see that 54% of respondents did not cast any preference vote (A2). This is a bit more than the reality of the 2014 federal election, where 43% of voters cast a party-vote, but not dramatically different.

Further, we see that 29% of voters cast a single preference vote, 8% two preference votes, and 3% three preference votes (A2). Few respondents voted for more than three candidates. These numbers are in line with the reality of elections in Belgium and previous studies of the topic that find that on average voters cast between one and two preference votes (André et al., 2012). [appendix A3](#) reports that 63% of voters did not cast any winning preference vote, whereas 27% of them voted for a single winning candidate. 74% did not cast any losing preference vote, and 16% cast a single losing preference vote (A4). Because of the skewed

<sup>6</sup> There was a problem for the mock ballots of the FDF. Hence, we cannot include this party in our analysis. That said, only 5% of the respondents voted for this party.

<sup>7</sup> It is interesting to note that abstaining respondents and those who vote for a party without parliamentary representation have low levels of satisfaction with democracy (between 4.0 and 4.6). However, when we compare their satisfaction before and after the election, their increase is similar to the rest of the population (between +0.10 and +0.35).

distribution of these variables, we recode the mock ballot variables in three categories: voting for zero winning candidate, one winning candidate, and two or more winning candidates. We do the same with votes for losing candidates: voting for zero losing candidate, one losing candidate, and two or more losing candidates. This allows us to limit the influence of outliers on the results.

In [appendix A5](#), we also report the average of the number of preference votes by party. Similar to other studies (André et al., 2012), we find that the socialist parties (PS and SP.A) receive fewer preference votes. This reflects the collectivist organisation of these parties. Also, we see that Flemish parties receive more preference votes because the district magnitude is on average larger in Flanders than in Wallonia.

In [Table 1](#), we describe the dependent variable of our analysis: satisfaction with democracy. We see that, on average, voters report a level of satisfaction around 6, on the scale from 0 to 10. We observe a slight increase between the pre- and post-election wave (+0.11). This is consistent with previous studies that find that satisfaction with democracies increase by the simple act of voting (Bowler and Donovan, 2002).

In [Table 1](#), we also show the summary statistics of the dependent variable when we split the sample into different categories based on the mock-ballot variables described above. We observe that there is variation in the level of satisfaction with democracy. Some voters are more satisfied after the election, for example those who did not cast any preference vote (+0.18) or did not cast any losing preference votes (+0.16); some are less satisfied, for example those who cast two or more preference votes (−0.19) or two or more losing preference votes (−0.11). We also see odd patterns emerging: the satisfaction of the group of voters who cast two or more winning preference votes increases on average less than that of the group of voters that did not cast any winning preference votes. Further analyses are thus needed to make sense out of these summary statistics. We also see the importance of analysing a pre- and post-election panel survey, as not all voters have similar levels of satisfaction before the election. Typically, party-list voters are less satisfied than preference voters. Therefore, it is important to consider the difference in satisfaction before and after the election in the analysis.

## 5. Analysis

### 5.1. Testing hypotheses 1 and 2

To test our two first hypotheses, we estimate OLS regression models predicting the difference in satisfaction with democracy before and after the election. It is important to note that the two waves were conducted within a few weeks before and after the election, minimizing the impact of unrelated events on the responses. In Model 0, the key independent variable is whether the respondent cast at least one preference vote, regardless of whether this vote was winning or losing. In Model 1, we distinguish between winning or losing preference votes. The variable is the same than the one presented above: not voting for any winning candidate, voting for one winning candidate, voting for two or more winning candidates, not voting for any losing candidate, voting one losing candidate, and voting for two or more losing candidates. In Model 2, we transform this key variable into two dummy variables: voting for at least one winning candidate or not, voting for a least one losing candidate or not. In both Models 1 and 2, party-list voters represent the reference category.

We add the following control variables. First, we include socio-demographic information: age, gender and education (in three categories, lower secondary, upper secondary, and tertiary education). Second, as to control for the effect of winning at the party-level, we add party fixed effects instead of seat shares. The reason is that, in Belgium, the participation of a party in the government is as much a function of its results than a function of bargaining between parties (Deschouwer, 2012). For example, in 2014, many voters perceived that the N-VA was unlikely to enter the governing coalition although it obtained the largest seat share (Verthé et al., 2017). However, we add the seat share of



**Table 1**  
Satisfaction with democracy and preference votes.

	Satisfaction before election	Satisfaction after the election	Difference in satisfaction	N
<b>Number of preference votes</b>				
0	5.89 (2.45)	6.06 (2.37)	+ .18 (2.04)	716
1	5.91 (2.36)	6.07 (2.38)	+ .15 (1.99)	384
2 or more	6.24 (2.23)	6.04 (2.29)	-.19 (2.23)	224
<b>Number of winning preference votes</b>				
0	5.83 (2.47)	6.00 (2.41)	+ .16 (2.10)	842
1	6.16 (2.19)	6.17 (2.28)	+ .01 (2.03)	357
2 or more	6.16 (2.36)	6.18 (2.54)	+ .02 (1.93)	125
<b>Number of losing preference votes</b>				
0	5.96 (2.39)	6.12 (2.32)	+ .16 (2.00)	974
1	5.87 (2.32)	5.88 (2.50)	+ .01 (2.10)	210
2 or more	6.04 (2.45)	5.94 (2.44)	-.11 (2.40)	140
Total	5.95 (2.39)	6.06 (2.36)	+0.11 (2.06)	1324

Note: entries are averages. Standard deviations are in parentheses.

the party for which the respondent vote at the district level given that some parties are popular in some districts than in others, and that this (weakly) affects satisfaction with democracy in some cases (Blais and Gélinau, 2007).

Third, we add the total number of preference votes cast by the respondent. As shown in Figure A2, a few respondents cast more than 20 preference votes, which automatically transfers into voting for both winning and losing candidates. It is not clear how winning/losing should affect satisfaction with democracy in this situation. We also include the respondent's level of satisfaction with democracy before the election as to control for potential floor and ceiling effects. Finally, we also include the magnitude of the respondent's district.<sup>8</sup>

Table 2 reports the estimations of Models 0–2. From Model 0, we see that casting a least one preference vote has a negative effect on changes in satisfaction (–0.27 units). This effect is statistically significant at a level of  $p < 0.05$ . From Model 1, we observe that casting a preference vote for one, two or more elected candidates also has a negative effect on the dependent variable. It decreases satisfaction with democracy by 0.18 and 0.15 units respectively compared to the difference in satisfaction of party-list voters. However, none of these effects are statistically significant. Further, Table 2 shows that satisfaction with democracy of voters who vote cast one, two, or more losing preference votes also decreases compared to party-list voters (by 0.24 and 0.43 units respectively). These effects are statistically significant at a level of  $p < 0.1$ .

The results of Model 2 confirm this pattern. Compared to party-list voters, the satisfaction of preference voters who vote for at least one candidate decreases by 0.18 units, and the one of those who vote for a least one losing candidate decrease by 0.28 units. This last effect is statistically significant at a level of  $p < 0.05$ .<sup>9</sup> It is important to note that few of the independent variables have a statistically significant

<sup>8</sup> It is important to note that we do not include any variable indicating whether the respondent is advantaged by the electoral system because they vote for a candidate that would not have been elected in a closed-list PR system. As mentioned above, there are few candidates who jump off their rank to be elected in Belgium. We thus have too few respondents in this situation ( $N = 21$ ) to evaluate whether being advantaged by the electoral system increases satisfaction with democracy.

<sup>9</sup> On the recommendation of a reviewer, we also estimate a model in which the main independent variable is a winning ratio, i.e. the number of winning preference votes/number of preference votes. We also add a dummy to capture party-list voters (see Model A1 in appendix A6). The ratio variable has a positive effect on satisfaction with democracy, which is in line with both H1 and H2. However, this effect is very small and non-statistically significant, which is another evidence that voting for winning and voting for losing candidates have asymmetrical effects.

**Table 2**  
Predicting changes in satisfaction with democracy.

	Model 0	Model 1	Model 2
At least one preference vote (winning or losing)	–0.27** (0.11)		
One winning preference vote		–0.18 (0.12)	
Two or more winning preference votes		–0.15 (0.22)	
One losing preference vote		–0.24* (0.14)	
Two or more losing preference votes		–0.43* (0.24)	
At least one winning preference vote			–0.18 (0.12)
At least one losing preference vote			–0.28** (0.13)
Age	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Female	–0.13 (0.10)	–0.14 (0.10)	–0.14 (0.10)
Education	0.00 (0.07)	0.00 (0.07)	0.00 (0.07)
Number of preference votes	0.01 (0.02)	0.03 (0.02)	0.02 (0.02)
Satisfaction pre-election	–0.43** (0.02)	–0.43** (0.02)	–0.43** (0.02)
Seat share (district level)	0.30 (0.59)	0.31 (0.60)	0.32 (0.60)
District magnitude	0.03* (0.01)	0.02* (0.01)	0.02* (0.01)
Party fixed effect	YES	YES	YES
Constant	2.77** (0.47)	2.76** (0.48)	2.75** (0.48)
R <sup>2</sup>	0.24	0.24	0.24
N	1324	1324	1324

Note: entries are coefficients estimated with OLS regression models. Standard errors are in parentheses. The predicted variable is the difference in satisfaction with democracy before and after the election. \* $p < 0.1$ , \*\* $p < 0.05$ .

effect on the dependent variable. We explain this by (1) the nature of the dependent variable that is the change in satisfaction with democracy before and after the election, and (2) the inclusion of party fixed effects that capture a great deal of the variation. Also, the effect of the level satisfaction with democracy before the election is negative and statistically significant, which suggests the existence of a ceiling effect. Finally, district magnitude has a small positive and statistically significant effect on satisfaction with democracy, indicating that voters like to have a choice between a larger set of individual candidates.

Is the negative effect of voting for losing candidates the same for all voters? To answer this question, we replicate Model 1 in adding a variable capturing the political knowledge of the respondents, and interacting it with the main independent variables. The rationale behind this choice is that voters who know more about politics are likely to be more informed about the electoral results, and in particular which individual candidate is elected in their district and with how many preference votes. The variable political knowledge is measured using questions from the pre-election questionnaire for which the respondents must match leaders to their party (N-VA, CD&V and Open VLD for Flemish respondents; MR and PS for Francophone respondents). The variable political knowledge differentiates between those who are able to match all leaders (around 55% of the sample), and those who do not. The results of Model A2 in appendix A7 indicate that knowledgeable voters are not more affected by their preference vote: none of the interaction terms are statistically significant.

As to give a more direct interpretation of the effects of Table 2, we calculate the predicted value of change in satisfaction with democracy for three groups of voters (based on Model 1): total winners (two or more winning preference votes, no losing preference votes), total losers

**Table 3**  
Group comparison of predicted differences in satisfaction.

Group 1	Group 2	Group 1 – Group 2	p-value
Total winners (+.11)	Total losers (–.17)	+0.28	0.40
Party-list voters (+.26)	Total winners (+.11)	+0.37	0.50
Party-list voters (+.26)	Total losers (–.17)	+0.43	0.07

Note: entries are differences in predicted levels of satisfaction with democracy based on Model 1, Table 2. Other variables are kept at their means.

(two or more losing preference votes, no winning preference votes), and party-list voters. We then compare the differences in prediction between them, and the related p-value. Each time, we keep the value of other variables of the model at their means.

From Table 3, we observe that the more positive change in satisfaction is among party-list voters (+0.26 units) followed by total winners (+0.11 units), and total losers (–0.26 units). If we compare the different groups, the difference of satisfaction between party-list voters and total losers is statistically significant at  $p < 0.1$ . In other words, we find support for H2, but not for H1, which confirms our original intuition that voters have a negative bias (see above).<sup>10</sup>

How big is the negative effect of voting for losing candidates? To answer this question, we compare it to the effect of party choice. As mentioned above, it is stylized fact that voting for a winning (losing) candidate increases (decrease) one's satisfaction with democracy. In the eyes of voters, winning first and foremost means having the largest national seat share. However, for other parties, voters consider that entering the governing coalition, as well as increasing their seat share compared to the previous election, is already a victory (Stiers et al., 2018). In Table A8 in the appendix, we report the predicted values of change in satisfaction with democracy based on the regression models of Table 2. At the notable exception of the N-VA,<sup>11</sup> party choice has the expected effect. Satisfaction increases the most for the electorate of the second and third largest parties (+0.5 for the PS, and +0.6 for the CD&V). Also, it diminishes by –1 for those who vote for the biggest loser, the VB, that went from 12 to 3 seats in 2014. The effect of voting for a winning (losing) party is thus larger than the effect of voting for winning (losing) candidates. Yet, the effect of preference votes remains substantial. As show in Table 3, voting for at least two losing candidates decreases satisfaction with democracy to a level corresponding to fifth of the effect of voting for the main losing party, i.e. the VB (–0.17 compared to –1). Finally, it is important to note that given that the

<sup>10</sup> There are a few studies that show that preference votes for head candidates are different from preference votes for other candidates. They suggest that the reason why voters vote for the head candidate is because she appears at the top of the list. Therefore, they do not have a genuine preference for this candidate (Nagtzaam, and van Erkel, 2017). This literature usually comes from the Netherlands where elections are held under a flexible-list PR system, but where voters must vote for individual candidates (they cannot vote for the party-list). In a robustness test, we replicate Model 1 (Table 2) in differentiating preference votes for head candidates and preference votes for other candidates. We observe that voting for one winning candidate, or two or more winning candidates at the exception of the head candidate, does not have a greater effect on satisfaction with democracy. The negative effect of voting for losing candidates persists though. See Model A3 in appendix A9.

<sup>11</sup> The satisfaction with democracy of the electorate of the N-VA, which is the largest party and the one with the largest increase in seat share, decreases by –0.4. Although the party is the big winner according to Stiers et al. (2018) criteria, the respondents did not know whether it would be part of the government when they answered the post-election survey. Because of its clear stance in favour of the independence of Flanders, the N-VA was considered by most other parties as a *persona non grata* (Verthé et al., 2017). During the campaign, the PS, the largest francophone party, clearly said that it would never form a government with the N-VA. If anything, it was unlikely that the party would be part of the governing coalition, which was likely to be a source of frustration for its supporters.

Belgian flexible-list electoral system does not give much weight to preference votes on who is elected compared to the rank on the party-list (see above). Hence, the effect of voting for winning and losing candidates on satisfaction with democracy is likely to be larger in countries in which it does.

## 5.2. Testing hypothesis 3

As mentioned above, in flexible-list PR systems, candidates with large preference scores are more likely to get an important position in the upcoming government, conditionally that their party is in the coalition and that they are elected in parliament. Hence, we can expect that satisfaction with democracy of preference voters are affected by the preference score of the candidates for whom they vote. As to test the third hypothesis, we replicate Model 1 of Table 1 in adding one key variable: the preference score of the candidate for whom the voter cast a vote. We wish to determine whether voters who cast a preference vote for a candidate with a high preference score are as satisfied than voters who cast a preference vote for a candidate with a low preference score. Hence, for this analysis, we reduce the sample to voters who cast at least one preference vote.<sup>12</sup>

There are different ways to calculate the preference score of candidates. In this paper, we use the percentage of preference votes she receives based on the total number of votes received by her party-list (like André et al., 2017). The advantage of this measure is that it is unaffected by the popularity of the candidate's party. Then, we take, for each preference voter, the highest score obtained by a candidate for whom she casts a vote. We make this choice to simplify the model, and because most preference voters cast only one preference vote (see above). The variable goes from 0 to 0.53 (mean = 0.19, standard deviation = 0.12) in our dataset.

We first estimate the new model on the sample of preference voters (Model 3, Table 4). In practice in Belgium, newspapers only publish the preference score of the top preference scorers. Hence, we also estimate two extra models in which we replace the variable 'preference score (max)' by dummy variable capturing whether the voter casts a vote for a candidate in the top-25 of preference scores (Model 4, Table 4) or in the top-50 (Model 5, Table 4).

From this analysis, we observe that an increase of one-unit in the highest preference score of the candidate for which the respondent votes increases her satisfaction before and after the election by 1.48 units ( $p < 0.05$ ). Similarly, voting for a candidate in the top-25 and top-50 in terms of preference score also increases change in satisfaction respectively by 0.53 ( $p < 0.05$ ) and 0.39 ( $p < 0.1$ ). In other words, we find strong supports for H3.

As to give a more direct interpretation of the effects of Table 4, we show the evolution of the predicted value of changes in satisfaction with democracy before and after the election for preference voters as the variable 'preference score (max)' varies from its empirical minimum (0%) to its empirical maximum (53%). Fig. 1 shows that the predicted value goes from –0.27 to 0.47 between these two extremes. The dashed horizontal lines in the figure gives a more realistic range, as it is the –1 to +1 standard deviation around the mean of the variable 'preference score (max)'. The predicted value between these two points goes from –0.18 to 0.20 (first-difference test  $p < 0.05$ ).<sup>13</sup> As a matter of comparison, we also calculate the predicted values based on Model 4

<sup>12</sup> We also exclude voters of the PTB (extreme-left), the PP (extreme-right), and the VB (extreme-right), as these parties have no chance to access government given the existence of a *cordon sanitaire* in Belgium. Hence, even their top preference scorer has no chance to be given an important government portfolio.

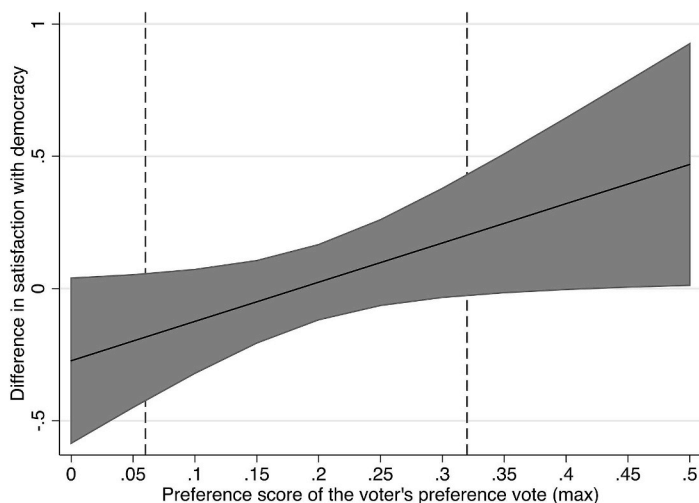
<sup>13</sup> It is interesting to note that the predicted satisfaction of preference voters who vote for a candidate with a high preference score (=mean + 1 standard deviation) is still lower than the predicted satisfaction of party-list voters (+0.26 see above).

**Table 4**  
The effect of the preference score of the head candidate.

	Model 3	Model 4	Model 5
Preference score (max)	1.48** (0.72)		
Candidate in the top-25 of preference score		0.53** (0.19)	
Candidate in the top-50 of the preference score			0.39** (0.18)
One winning preference vote	-0.29 (0.26)	-0.21 (0.24)	-0.23 (0.25)
Two or more winning preference votes	-0.29 (0.31)	-0.18 (0.29)	-0.20 (0.29)
One losing preference vote	-0.21 (0.21)	-0.20 (0.21)	-0.22 (0.21)
Two or more losing preference votes	-0.27 (0.27)	-0.25 (0.27)	-0.28 (0.27)
Age	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Female	-0.10 (0.15)	-0.11 (0.15)	-0.11 (0.15)
Education	-0.06 (0.11)	-0.04 (0.11)	-0.06 (0.11)
Number of preferences	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)
Satisfaction (pre-election)	-0.41** (0.03)	-0.41** (0.03)	-0.41** (0.03)
Seat share (district level)	-0.10 (0.83)	-0.45 (0.84)	0.00 (0.83)
District magnitude	0.05** (0.02)	0.04** (0.02)	0.05** (0.02)
Party fixed effects	YES	YES	YES
Constant	1.90** (0.73)	2.03** (0.72)	1.88** (0.73)
R <sup>2</sup>	0.23	0.23	0.23
N	597	597	597

Note: entries are coefficients estimated with OLS regression models. Standard errors are in parentheses. The predicted variable is the difference in satisfaction with democracy before and after the election. \* $p < 0.1$ , \*\* $p < 0.05$ .

and 5 (Table 4): voting for a top-25 candidate +0.37 (compared to -0.16 for others), or top-50 candidate +0.25 (compared to -0.15 for others). Preference voters are thus strongly affected by the preference score of the candidate for whom they cast a vote. In short, voting for a candidate that gets lots of votes does make one (a bit) happier.



Note: the line is the predicted difference of satisfaction with democracy before and after the election of preference voters (based on Model 3, Table 4). The shaded area is the 95%-confidence interval. The dashed lines are the +1 -1 standard deviation around the mean of the preference score of head candidate (mean=0.19). Other variables are kept at their means.

## 6. Conclusion

If there is a clear trend in electoral systems in recent years, it is towards open- or flexible-list PR (Renwick and Pilet, 2016). These last 20 years, many PR countries have introduced a flexible ballot structure or increased the flexible character of their ballot. The case for open and flexible-list PR is straightforward: as voters have a greater impact on which candidates are elected in parliament, and will form the government, it is considered as more democratic than closed-list PR. If we follow this line of reasoning, we should observe higher levels of satisfaction with democracy under open and flexible-list PR. However, studies using cross-national surveys find mixed results.

To provide new insights to this literature, we moved the analysis to the individual-level and country-studies. We analysed a pre- and post-election panel survey conducted in Belgium in 2014. Belgium is a typical case of flexible-list PR system: voters first vote for a party-list, and can then give a preference vote to individual candidates within this list or approve the entire party-list. In our questionnaire, we asked respondents to report their level of satisfaction with democracy both before and after the election, and to report how they exactly voted using mock ballots. We use these data to compare the effect of voting for a party-list or for winning/losing candidates on the difference in satisfaction before and after the election. The main expectation was that supporters of winning candidates would get the biggest boost in satisfaction with democracy after the elections. They are offered the opportunity to cast votes for candidates within lists, they make use of it, and they vote for winning candidates. It should enhance their evaluation of the political system.

However, our findings do not go in this direction. We actually find that party-list voters are slightly more satisfied than those who vote for elected candidates, and substantially more than those who vote for non-elected ones. This effect is similar for voters who have a high level of political knowledge and those who do not. Further, we rely on the tendency for candidates with high preference voting scores to be promoted to key government positions to conduct supplementary analyses. We find that, among preference voters, only those who vote for these successful candidates know a satisfaction boost like the one of party-list voters.

Our results bring an important contribution to the debate over variants of PR systems. Our findings clearly indicate that allowing voters to cast preference votes for candidates in addition to casting a vote for a party does not necessarily lead to happier voters. First we show

**Fig. 1.** The effect of preference score for preference voters. Note: the line is the predicted difference of satisfaction with democracy before and after the election of preference voters (based on Model 3, Table 4). The shaded area is the 95%-confidence interval. The dashed lines are the +1 -1 standard deviation around the mean of the preference score of head candidate (mean = 0.19). Other variables are kept at their means.

that in countries using a flexible-list PR system like Belgium in which voters can hardly change the order in which candidates are elected, a substantial portion of voters seems to be fully satisfied with the possibility of voting for a party-list. Party-list voters, who represent about half of the electorate are as satisfied with democracy as preference voters who vote for winning candidates, and clearly more satisfied than preference voters who vote for losing candidates. These results undermine the case for flexible-list PR systems, as a large portion of the electorate is perfectly happy with voting for an entire party-list.

Furthermore, we show that there is a winner/loser gap among voters who cast a preference vote. Voting for non-elected candidates negatively affects satisfaction with democracy. Voting for elected candidates can by contrast boost satisfaction, but only when this vote is for one of the most popular candidates. Yet, even for them the boost is similar to the one of party-list voters. In other words, giving voters the opportunity to cast a preference vote does not seem to help, as ‘preference vote winners’ are as not more satisfied in the end while

‘preference vote losers’ are less satisfied. Our findings thus cast doubt on the hypothesis per which open- or flexible-list PR systems can re-connect critical citizens with representative democracy and elections.

**Declarations of interest**

None.

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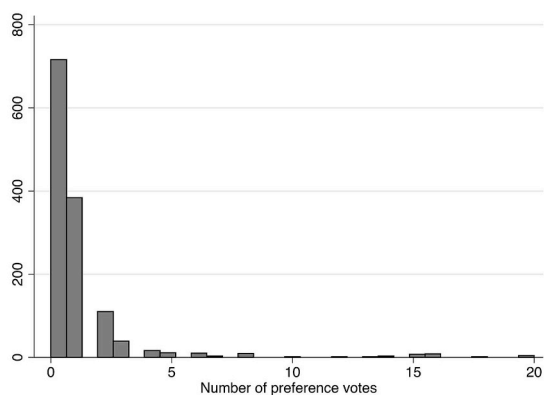
**Appendix**

*A1. Party vote shares: actual and in the survey*

	Actual vote share	Survey vote share
<b>Flemish parties</b>		
N-VA	20.26%	14.62%
CD&V	10.85%	6.39%
Open VLD	9.78%	6.52%
SP.A	8.83%	7.85%
Groen	5.32%	3.42%
VB	3.97%	2.15%
<b>Francophone parties</b>		
PS	11.67%	11.90%
MR	9.64%	15.44%
CDH	4.98%	6.96%
Ecolo	3.30%	4.75%
PTB	1.97%	4.87%
FDF	1.80%	5.06%
PP	1.52%	3.23%
Others	5.50%	6.84%

Note: N = 1580. The sample includes all respondents who gave an answer other than ‘refuse to answer’ or ‘don’t remember’ in the vote choice question in the post-election questionnaire.

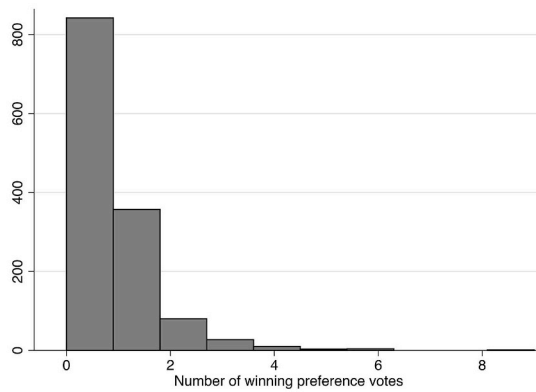
*A2. Distribution of preference votes*



Note: N=1,324.

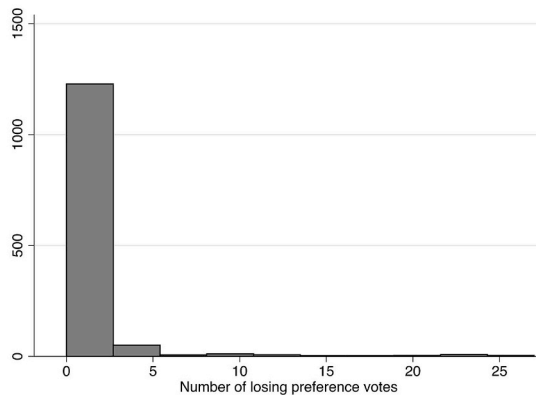


A3. Distribution of winning preference votes



Note: N=1,324.

A4. Distribution of losing preference votes



Note: N=1,324.

A5. Preference votes by party

	Mean	Standard Deviation
<b>Flemish parties</b>		
N-VA	1.34	3.92
CD&V	1.52	4.08
Open VLD	1.98	5.30
SP.A	1.29	3.04
Groen	1.86	3.99
VB	2.00	4.81
<b>Francophone parties</b>		
PS	1.16	2.96
MR	1.38	2.42
CDH	1.50	3.10
Ecolo	1.22	2.67
PTB	1.38	4.39
PP	0.10	0.31

## A6. Winning ratio

	Model A1
Winning/losing ratio	0.07 (0.18)
At least one preference vote	−0.27* (0.14)
Age	0.00 (0.00)
Female	−0.13 (0.10)
Education	0.00 (0.07)
Satisfaction pre-election	−0.43** (0.02)
Seat share (district level)	0.25 (0.60)
District magnitude	0.02* (0.01)
Party fixed effect	YES
Constant	2.79** (0.48)
R <sup>2</sup>	0.23
N	1324

Note: entries are coefficients estimated with OLS regression models. Standard errors are in parentheses. The predicted variable is the difference in satisfaction with democracy before and after the election. \* $p < 0.1$ , \*\* $p < 0.05$ .

## A7. Predicted values of change in satisfaction with democracy per party

	Model 0	Model 1	Model 2
<b>Flemish parties</b>			
N-VA	−0.38	−0.39	−0.39
CD&V	0.58	0.60	0.60
Open VLD	0.05	0.04	0.04
SP.A	0.44	0.44	0.44
Groen	0.48	0.51	0.51
VB	−0.97	−0.96	−0.97
<b>Francophone parties</b>			
PS	0.51	0.49	0.50
MR	0.00	0.01	0.01
CDH	0.36	0.38	0.37
Ecolo	0.21	0.23	0.23
PTB	−0.14	−0.14	−0.14
PP	−0.99	−0.98	−0.98

Note: entries are predicted values estimated with the OLS regression models of Table 2. The predicted variable is the difference in satisfaction with democracy before and after the election.

## A8. Interactions with political knowledge

	Model A2
One winning preference vote	−0.18 (0.19)
Two or more winning preference votes	0.26 (0.36)
One losing preference vote	−0.32 (0.21)
Two or more losing preference votes	−0.69*

	(0.35)
Political knowledge	0.31**
	(0.14)
Political knowledge * One winning preference vote	–0.04
	(0.24)
Political knowledge * Two or more winning preference votes	–0.66
	(0.42)
Political knowledge * One losing preference vote	0.16
	(0.28)
Political knowledge * Two or more losing preference votes	0.38
	(0.39)
Age	0.00
	(0.00)
Female	–0.09
	(0.10)
Education	–0.02
	(0.07)
Number of preference votes	0.03
	(0.02)
Satisfaction pre-election	–0.44**
	(0.02)
Seat share (district level)	0.32
	(0.60)
District magnitude	0.02*
	(0.01)
Party fixed effects	YES
Constant	2.73**
	(0.48)
R <sup>2</sup>	0.24
N	1324

Note: entries are coefficients estimated with OLS regression models. Standard errors are in parentheses. The predicted variable is the difference in satisfaction with democracy before and after the election. \* $p < 0.1$ , \*\* $p < 0.05$ .

#### A9. Differentiating preference votes for head and other candidates

	Model A3
Voting for head candidate and winning	–0.09
	(0.12)
Voting for head candidate and losing	–0.64
	(0.43)
One winning preference vote (at the exception of head candidate)	–0.21
	(0.17)
Two or more winning preference votes (at the exception of head candidate)	–0.03
	(0.30)
One losing preference vote (at the exception of head candidate)	–0.26*
	(0.15)
Two or more losing preference votes (at the exception of head candidate)	–0.43*
	(0.24)
Age	0.00
	(0.00)
Female	–0.14
	(0.10)
Education	0.01
	(0.07)
Number of preferences (at the exception of the head candidate)	0.04*
	(0.02)
Satisfaction (pre-election)	–0.43**
	(0.02)
Seat share (district level)	0.18
	(0.61)
District magnitude	0.02
	(0.01)

Party fixed effects	YES
Constant	2.83** (0.48)
R <sup>2</sup>	0.24
N	1324

Note: entries are coefficients estimated with OLS regression models. Standard errors are in parentheses. The predicted variable is the difference in satisfaction with democracy before and after the election. \* $p < 0.1$ , \*\* $p < 0.05$ .

## References

- Ames, B., 1995. Electoral strategy under open-list proportional representation. *Am. J. Polit. Sci.* 39, 406–433.
- Anderson, C., Blais, A., Bowler, S., Todd, D., Lishaug, O., 2005. *Losers' Consent: Elections and Democratic Legitimacy*. Oxford University Press, Oxford.
- Anderson, C., Guillory, C., 1997. Political institutions and satisfaction with democracy: a cross-national analysis of consensus and majoritarian systems. *Am. Polit. Sci. Rev.* 91, 66–81.
- André, A., Depauw, S., Martin, S., 2014. The classification of electoral systems: bringing legislators back in. *Elect. Stud.* 42, 42–53.
- André, A., Depauw, S., Martin, S., 2015. Electoral systems and legislators' constituency effort: the mediating effect of electoral vulnerability. *Comp. Polit. Stud.* 48, 464–496.
- André, A., Depauw, S., Shugart, M., Chytilik, R., 2017. Party nomination strategies in flexible-list systems: do preference votes matter? *Party Polit.* 23, 589–600.
- André, A., Wauters, B., Pilet, J.-B., 2012. It's not only about lists: explaining preference voting in Belgium. *J. Elections, Public Opin. Parties* 22, 293–313.
- Beaudonnet, L., Blais, A., Bol, D., Foucault, M., 2014. The impact of election outcomes on satisfaction with democracy under a two-round system. *Fr. Polit.* 12, 22–35.
- Bettarelli, L., Iannantuoni, G., Manzoni, E., Rossi, F., 2017. Voters' preferences and electoral systems: the EuroVotePlus experiment in Italy. *Econ. Politic.* 34, 159–177.
- Blais, A., Gélinau, F., 2007. Winning, losing and satisfaction with democracy. *Polit. Stud.* 55, 425–441.
- Blais, A., Morin-Chassé, A., Singh, S., 2017. Election outcomes, legislative representation, and satisfaction with democracy. *Party Polit.* 23, 85–95.
- Bosch, A., Orriols, L., 2014. Ballot structure and satisfaction with democracy. *J. Elections, Public Opin. Parties* 24, 493–511.
- Bowler, S., Donovan, T., 2002. Democracy, institutions and attitudes about citizen influence on government. *Br. J. Polit. Sci.* 32, 371–390.
- Bowler, S., Farrell, D., 1991. Voter behavior under STV-PR: solving the puzzle of the Irish party system. *Polit. Behav.* 13, 304–230.
- Canache, D., Mondak, J., Seligson, L., 2001. Meaning and measurement in cross-national research on satisfaction with democracy. *Publ. Opin. Q.* 65, 506–528.
- Chang, E., Golden, M., 2007. Electoral systems, district magnitude and corruption. *Br. J. Polit. Sci.* 37, 115–137.
- Dalton, R., 2004. *Democratic Challenges, Democratic Choices: the Erosion of Political Support in Advanced Industrial Democracies*. Oxford University Press, Oxford.
- Deschouwer, K., 2012. *The Politics of Belgium: Governing a Divided Society*. Palgrave, London.
- De Winter, L., 2005. Belgium: empowering voters or party elites. In: Gallagher, M., Mitchell, P. (Eds.), *The Politics of Electoral Systems*. Oxford University Press, Oxford, pp. 417–432.
- Dumont, P., Fiers, S., Dandoy, R., 2009. Belgium: ups and downs of ministerial careers in a partitocratic federal state. In: Dowding, K., Dumont, P. (Eds.), *Hiring and Firing. The Selection of Ministers in Europe*. Routledge, London, pp. 125–146.
- Ezrow, L., Xezonakis, G., 2011. Citizen satisfaction with democracy and parties' policy offerings. *Comp. Polit. Stud.* 44, 1152–1178.
- Farrell, D., 2011. *Electoral Systems: a Comparative Introduction, second ed.*. Palgrave, London.
- Farrell, D., McAllister, I., 2006. Voter satisfaction and electoral systems: does preferential voting in candidate-centred systems make a difference? *Eur. J. Polit. Res.* 45, 723–749.
- Folke, O., Persson, T., Rickne, J., 2016. The primary effect: preference votes and political promotions. *Am. Polit. Sci. Rev.* 110 (3), 559–578.
- Gallagher, M., 1991. Proportionality, disproportionality and electoral systems. *Elect. Stud.* 10, 33–51.
- Golden, M., Picci, L., 2008. Pork barrel politics in postwar Italy, 1953–1992. *Am. J. Polit. Sci.* 52, 268–289.
- Hazan, R., Rahat, G., 2010. *Democracy within Parties: Candidate Selection Methods and Their Political Consequences*. Oxford University Press, Oxford.
- Karvonen, K., 2000. *The Personalization of Politics: A Study of Parliamentary Democracies*. ECPR Press, Colchester.
- Laslier, J.-F., Blais, A., Bol, D., Golder, S., Harfst, P., Stephenson, L., Van der Straeten, K., 2015. The EuroVotePlus experiment. *Eur. Union Polit.* 16, 601–615.
- Lijphart, A., 1994. *Electoral Systems and Party Systems: a Study of Twenty-seven Democracies, 1945–1990*. Oxford University Press, Oxford.
- Linde, L., Ekman, J., 2003. Satisfaction with democracy: a note on a frequently used indicator in comparative politics. *Eur. J. Polit. Res.* 42, 391–408.
- Meriläinen, J., Tukiainen, J., 2018. Rank effects in open-list elections. *Publ. Choice* 177 (1–2), 87–109.
- Nagtzaam, M.A., van Erkel, P.F., 2017. Preference votes without preference? Institutional effects on preference voting: an experiment. In: *Journal of Elections, Parties, and Public Opinion* 7, pp. 172–191.
- Norris, P., 2004. *Electoral Engineering: Voting Rules and Political Behavior*. Cambridge University Press, Cambridge.
- Rae, D., 1967. *The Political Consequences of Electoral Laws*. Yale University Press, New Haven.
- Rahat, G., Sheaffer, T., 2007. The personalization(s) of politics: Israel, 1949–2003. *Polit. Commun.* 24, 65–80.
- Renwick, A., Pilet, J.-B., 2016. *Faces on the Ballot. The Personalization of Electoral Systems in Europe*. Oxford University Press, Oxford.
- Sanz, C., 2017. The effect of electoral systems on voter turnout: evidence from a natural experiment. In: *Political Science Research and Methods* 5, pp. 689–710.
- Singh, S., Lago, I., Blais, A., 2011. Winning and competitiveness as determinants of political support. *Soc. Sci. Q.* 92, 695–709.
- Shugart, M., Valdini, M., Suominen, K., 2005. Looking for locals: voter information demands and personal vote-earning attributes of legislators under proportional representation. *Am. J. Polit. Sci.* 49, 437–449.
- Soderlund, P., 2017. Candidate-centred electoral systems and voter turnout. *W. Eur. Polit.* 40, 516–533.
- Soroka, S., McAdams, S., 2015. News, politics and negativity. *Polit. Commun.* 32, 1–22.
- Stiers, Dieter, Daoust, Jean-François, Blais, André, 2018. What makes people believe that their party won the election? *Elect. Stud.* 55, 21–29.
- Taagepera, R., Shugart, M., 1989. *Seats and Votes: the Effects and Determinants of Electoral Systems*. Yale University Press, New Haven.
- Verthé, T., Bol, D., Beyens, S., Blais, A., 2017. Making votes count in parliament or government? *J. Elections, Public Opin. Parties* 17, 389–412.