ORIGINAL ARTICLE



Do voters prefer more parties on the ballot?

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Abstract

Citizens' evaluation of how well the system works is central to the legitimacy of a democratic system. Elections and voting are crucial parts of the democratic system, and therefore, it is very important to evaluate voter satisfaction with the electoral process. In this study, we evaluate one aspect of the electoral process: the supply of parties on the ballot paper, and we use a direct measure of satisfaction with the party choices available on the ballot. We performed a survey experiment with a representative sample of citizens in four Western European democracies: Austria, England, Ireland and Sweden. The results point to a clear answer: voters are more satisfied if there are more parties to choose from. The findings also show that the positive effect is stronger among the higher educated. We also examined if it is the presence of an ideologically close option that really matters. The results show that respondents in every ideological position prefer more parties. This strongly suggests that it is the number of parties, as such that matters.

Keywords Elections \cdot Number of parties \cdot Survey experiment \cdot Voter satisfaction \cdot Voting scenarios

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Introduction

Citizens' evaluation of how well the system works is central to the legitimacy of a democratic system (see e.g. Lipphart 1999; Diamond and Morlino 2005). In this study, we contribute to this research field by examining citizen satisfaction with the number of parties, and we use a direct measure of satisfaction with the party offer on the ballot. There are arguments for both a negative and a positive effect of a higher number of parties on citizens' satisfaction. From a representation perspective, voters are more likely to find a political party that represents their individual point of view when many options are available, and therefore, more parties on the ballot should foster voter's satisfaction positively. From an accountability perspective, however, we can expect that a higher number of parties affects satisfaction negatively. In a democratic system, it should be clear who to be held accountable and in a system with few parties often one party forming the government, and it is, therefore, clear who voters can hold accountable and that should affect satisfaction positively. Furthermore, we know that voters prefer simplicity, and the greater complexity that may be associated with the presence of many parties and many choices may confuse voters. Some people may, therefore, favour having fewer parties and fewer choices on the ballot. In this regard, we examine the possibility that only voters with a higher level of cognitive resources want more parties on the ballot, those with a lower level of cognitive resources being satisfied with a more limited choice. Finally, we examine whether it is the simple presence of more options on the ballot paper or having an ideologically proximate choice that matters for voters' satisfaction. Accordingly, the main questions for this study are: Do voters prefer more or fewer choices on the ballot? If so, which voters?

To address these questions, we have designed an original survey experiment. The experiment was conducted in four Western European democracies namely Austria, England, Ireland and Sweden. We find that having more parties on the ballot has a positive effect on voter satisfaction, and that the positive effect of having more parties on the ballot is stronger among higher educated voters. Additional tests indicate that the number of parties matters per se, beyond ideological congruence.

Theoretical framework

In the evaluations of political systems, it is important to make a distinction between the inputs, outputs and outcomes (Högström 2013; Almond et al. 2004, p. 43). The input deals with access to the political power (demand and support). The output side has to do with how the political power is exercised (decisions and actions), while outcomes are the results and consequences of the outputs (Högström 2013). Elections and voting are crucial parts of the democratic system, and therefore, it is very important to evaluate voter satisfaction with the electoral



process. In this study, we evaluate one aspect of the electoral process: the supply of parties on the ballot paper.

Whether voters prefer fewer or more parties is contested in the literature. From a representation perspective, we should expect voters to be pleased with having more parties on the ballot. Miller and Listhaug (1990) argue that a higher number of parties (or candidates) mean more choice for voters, which should lead to higher levels of satisfaction. Theoretically, the more parties there are, the more likely it is that every voter or group of voters will be represented by one of the parties that are on the ballot (Blais and Carty 1990). Accordingly, voters are more likely to find a political party that adequately represents their individual point of view and voter satisfaction with the party supply should increase when there are many options available on the ballot (Miller and Listhaug 1990; Blais 2006; Lijphart 1999). The need for many parties may be especially crucial in countries that have many political cleavages (Neto and Cox 1997). Several cleavages might make it more advantageous to have more parties representing the different combinations of preferences, but an increased number may also increase complexity. The presence of many parties may allow a greater representation of minority groups and women, and this could also affect satisfaction positively (Anderson and Guillory 1997; Lijphart 1999).

From an accountability perspective, however, we can expect that more parties on the ballot paper will have a negative effect on satisfaction. In a democracy, those in power are accountable to the people. If the voters are not satisfied with the government, they can vote for an opposing party at the next election with the purpose of removing the sitting government from office (Manin et al. 1999; Lundell 2011). Therefore, it should be clear who are to be held accountable. In theory, if there are few choices on the ballot, voters should more easily identify the political alternatives. For example, in a two-party system, the two main parties should offer voters a clear choice between two main political alternatives, and the party that wins the election can form a stable single-party cabinet (Aarts and Thomassen 2008). Accordingly, when a single party with a majority of the seats governs alone, there is clear accountability, while when a coalition governs accountability is messier. Therefore, a system with few parties should provide a clear link between votes cast and the party forming the government and that should affect satisfaction positively (Henderson 2008). Differently, multiparty systems produce coalition governments, and it is not clear which party should be held responsible for the decisions made by a coalition government (Lundell 2011). This can create confusion and depress voter satisfaction with the election process (Christmann and Torcal 2018).

In addition, governing coalitions with many different parties tend to be unstable (Weil 1989; Lane and Ersson 1996; Somer-Topcu and Williams 2008) and can hinder the formulation of efficient policies (Aarts and Thomassen 2008; Norris 1999; Criado and Herreros 2007).

From a complexity perspective, we can also expect a negative effect of a higher number of parties. Making decisions requires energy, and consciously thinking about every choice can even lead to cognitive exhaustion (Schwartz et al. 2002; Schwartz 2004). Accordingly, when the number of options increases, the complexity of voting increases. Voters may prefer simple over complex choices, and therefore, satisfaction with party supply can decrease if the number of options increases. In this regard, the impact of the number of parties on satisfaction is possibly conditional on the degree of cognitive resources citizens have, with more cognitively demanding choices being appreciated the most by those who are better able to 'deal' with complex choices (e.g. Jusko and Shively 2005). Citizens with a higher level of cognitive resources may be more satisfied with more parties on the ballot while the reverse may hold among citizens with lower levels of cognitive resources.

Previous research has produced contradictory results. Anderson (1998) finds that party system fragmentation (the effective number of parliamentary parties) is positively correlated with satisfaction with democracy. Christmann and Torcal (2018) demonstrate that party system fractionalization (the effective number of electoral parties) and government system fractionalization are associated with a lower level of satisfaction with democracy. Quaranta and Martini (2017) demonstrate that a higher number of parties decreases people's satisfaction with democracy. Dassonneville and McAllister (2020) examine the effects of party system characteristics on citizens' satisfaction with democracy. They demonstrate that an increase of the (effective) number of parties has a negative effect on citizen's satisfaction with democracy. However, they conclude that the negative effect is only modest. There are finally studies that have demonstrated that there is no relationship between the number of parties and levels of satisfaction. Ezrow and Xezonakis (2011) report that the effective number of parliamentary parties does not have any effect on satisfaction.

Furthermore, several previous studies have found that ideological congruence between voters and parties matters for citizen's satisfaction with democracy. Mayne and Hakhverdian (2017) show that egocentric congruence affects citizen's satisfaction positively.¹ Reher (2016) finds that higher levels of congruence in policy priorities and/or the presence of a party stressing citizens' concerns have a positive effect on satisfaction with democracy. In the same vein, Kim (2009), and Dahlberg and Holmberg (2014) report that ideological congruence boosts citizen satisfaction with democracy, while Ezrow and Xezonakis (2011) demonstrate that increases in party policy extremism depress satisfaction with democracy.

The studies discussed above all use satisfaction with democracy as their dependent variable. We argue that democratic satisfaction is too broad of a measure when investigating voters' satisfaction with the party supply. The use of broad measures can be one reason why previous research has found contradictory results. Satisfaction with democracy is likely to be affected by many other institutional settings of the democratic system that are beyond the electoral realm, such as civil liberties including free and independent media, freedom of expression, assembly, association, education and religion.

Another problem in previous research is the dependence on cross-sectional, observational data. The use of observational data makes it difficult to isolate the effect that the number of choices has on satisfaction with democracy compared to other variables such as the distribution of seats, party identification and the

¹ They defined egocentric congruence as the ideological match between one or more elected representatives and an individual citizen.

performance of the supported party (see e.g. Anderson and Guillory 1997; Stiers, Daoust, and Blais 2018; Curini, Jou, and Memoli 2012; Birch 2008).

Our study is designed to overcome the shortcomings of prior research, which has been purely observational and has relied on a very broad measure of satisfaction. We conduct a randomized survey experiment, and we use a more specific measure of satisfaction, namely satisfaction with the ballot supply. Our approach, we believe, is likely to provide a more compelling result about how the number of parties on the ballot affects citizens' satisfaction with the range of options that they can choose from.

Research design

We performed our survey experiment in four Western European democracies, Austria, England, Ireland and Sweden that differ in terms of both electoral rules and party systems. In terms of the effective number of parties at the parliamentary level (ENPP) (see Laakso and Taagepera 1979), the four countries differ substantially: Austria (2017) 3.60 ENPP, Ireland (2016) 4.93 ENPP, Sweden (2018) 5.63 ENPP and United Kingdom (2017) 2.48 ENPP (Gallagher 2019).

In our survey experiments, voters participate in several elections (two in Sweden and three in the other countries)², and we manipulate the party supply namely the count of the options on the ballot paper (either three or five parties). Where there are five parties rather than three, voters also have more policy positions to choose from and, thus, a higher likelihood of finding a congruent party. After each election, respondents are asked 'On a scale of 0–10, where 0 means "not at all satisfied" and 10 means "very satisfied", "how satisfied are you with the party offer on the ballot that you have just used?"³ This constitutes the dependent variable of our study.⁴

In order to investigate the party offer, specifically, the experiment 'isolates' voters from all party specific features by using fictitious parties. Voters can only distinguish between parties through the use of their ideological position (left–right) on the government services-spending scale, which is commonly used in national election studies.⁵ As pointed out by Neto and Cox (1997), countries that have many political cleavages are likely to have more parties than countries with few cleavages. In this study, we hold the number of political cleavages constant and only take one cleavage

 $^{^2}$ In Sweden, this was a choice forced upon us due to the need to keep the overall length of the survey manageable.

 $^{^3}$ Expect for Sweden where a 1–10 scale has been used instead. In Sweden, the choice of the scale was forced upon us due to consistency with the rest of the survey questions. We recoded the satisfaction variable in Sweden to account for this difference.

⁴ The original question to measure our dependent variable in Swedish and in German are as follows. German: Auf einer Skala von 0 bis 10, wobei 0 bedeutet "gar nicht zufrieden" und 10 bedeutet "sehr zufrieden", wir zufrieden sind Sie mit dem Parteiangebot auf dem Stimmzettel, den Sie gerade benutzt haben? Swedish: På en skala 1–10 där 1 är inte alls nöjd och 10 är mycket nöjd, hur nöjd är du med det antal partier som erbjuds i valet?

⁵ Lijphart (2012, 76–77) argues that in several countries with two-party systems the major parties are mainly divided with respect to one issue dimension of partisan conflict, namely the left–right dimension, while in other countries, other issue dimensions also matter. In this study, we concentrate on the classic left–right issue dimension.

(left–right) into account. More specifically, voters are asked to choose between either three parties (with the options left, centre and right) or five parties (with the options left, centre-left, centre, centre-right and right) with the two ends of the scale labelled 'higher taxes and hence more social spending' and 'lower taxes and hence less social spending', respectively. Accordingly, the option with five parties includes two more ideological options on the ballot. Appendix A shows an example for a voting scenario with three parties and one with five parties. In our experiment, the voting scenarios differed in terms of party supply as well as the type of vote choice (vote for one party only or possibility of ranking all parties). After the respondents had voted, they were asked two follow-up questions one about their satisfaction with the party supply on the ballot paper (our dependent variable) and one about satisfaction with the voting system. In all countries but Sweden, all respondents were asked these two questions. In Sweden, each respondent was asked only one follow-up question. This means that in Sweden, we can include only about half of the respondents of our survey.

For the experiments conducted in Austria and Sweden, the survey questions were translated from English to German and Swedish, respectively, by native speakers. Concerning the data collection in the four countries, in Austria, the survey experiment was conducted by Statistik Austria within the Plattform für Umfragen, Methoden und empirische Analysen (PUMA 2018) project as part of an online survey with 693 respondents (AAPOR response rate of 38.5%). The fieldwork was completed during February and March 2018. Since the unit of analysis is the single election, there are approximately 2000 observations (693 unique participants \times 3 elections).

In England, the experiment was conducted by YouGov as part of the Political Omnibus Study survey with 1512 respondents (the response rate for YouGov is normally between 25 and 30%). The study only includes respondents whose main residence is in England. The fieldwork was carried out on the 1st and 2nd of November 2018. Since the unit of analysis is the single election, there are just over 4500 observations and 1512 unique participants.

The survey experiment in Ireland was conducted by Irelandthinks, i.e. with 1000 respondents. The fieldwork lasted from the 17th to 23rd December 2018. The sample was recruited from Irelandthinks i.e. online panel. We have 3000 observations and 1000 unique participants. The experiment in Sweden was conducted by the Laboratory of Opinion Research (LORE) at the University of Gothenburg as part of the online Swedish National Election Study survey (Martinsson et al. 2018) with 1891 respondents (AAPOR response rate of 57%). The fieldwork was undertaken from June to August 2018. Survey data came from the LORE's the Citizen Panel project including 55,000 active participants with self-recruited selection. There are just over 1800 observations and 937 respondents in the segment of the experiment that are used for this study. The samples included in this study are in line with the overall population in each country.

Since our respondents participated in several voting experiments, the experiments are not independent from each other for each respondent and therefore we cluster the standard errors by the respondents. We use ordinary least squares regression (OLS)

| Table 1Distribution ofsatisfaction with party supply infour countries | Country | Mean | Std.Err | Min | Max |
|---|---------|------|---------|-----|-----|
| | Austria | 5.24 | 0.061 | 0 | 10 |
| | England | 5.90 | 0.037 | 0 | 10 |
| | Ireland | 5.79 | 0.046 | 0 | 10 |
| | Sweden | 5.65 | 0.067 | 0 | 10 |

when we run the estimations. In all multivariate models, we add standard controls that have been commonly used in the field: gender, age, education and left–right ideological positioning (see e.g. Anderson and Guillory 1997; Donovan and Karp 2017). Since the voting scenarios differed also in terms of the type of vote choice (vote for one party only or possibility of ranking all parties), we also include a dummy variable for the type of vote choice as a control.⁶ (A full descriptive overview of the control variables is presented in Appendix B.) Concerning the controls age and education, they were coded in years in Austria and England and were grouped in Ireland and Sweden. We recode these variables to account for this difference so that they range from 0 to 1 in all countries. The ideological position variable was coded 0 to 10 in all countries except for Sweden where a 1–10 scale was used instead. We recode the variable in Sweden to account for this difference, so the scale also ranges from 0 to 10 for the Swedish data. The ranking variable is coded as 0 (vote for one party only) and 1 (possibility of ranking the parties). Finally, we include dummy variables for each country; Austria is used as the baseline.

Some previous studies, for example, Mutz and Pemantle (2015), (see also Mutz, Pemantle, and Pham (2019)) recommend not including control variables in statistical models based of experimental data, due to potentially spurious relationships between the independent variable and dependent variables being eliminated by randomization in experimental designs. Therefore, we start the analysis with a bivariate model.

Analysis and findings

Table 1 shows the distribution of satisfaction with the ballot supply in the four countries.

As shown in Table 1 mean satisfaction with party supply varies between 5.24 and 5.90 (on a 0- to 10-point scale); England has the highest mean while Austria has the lowest. However, these differences are modest. Four of the pairwise comparisons of the differences of the means are statistically significant while two comparisons

⁶ The voting choice variable compares closed list voting systems (e.g. South Africa and Spain), offering voters a categorical vote choice, (there the order of candidates is fixed by the party itself), versus ranking list systems (similar to the one adopted in Ireland), where voters are asked to order parties in declining order (though not forced to choose all parties).

| | Model 1 | Model 2 | Model 3 | Model 4 |
|-------------------------------|---------|----------|----------|-----------|
| Number of parties | 0.45*** | 0.46*** | 0.46*** | 0.28*** |
| - | (0.03) | (0.03) | (0.03) | (0.06) |
| Ranking | | - 0.15** | - 0.15** | - 0.15** |
| | | (0.05) | (0.05) | (0.05) |
| Female | | - 0.09 | - 0.08 | - 0.08 |
| | | (0.07) | (0.07) | (0.07) |
| Education | | - 0.01 | - 0.25* | - 1.32*** |
| | | (0.11) | (0.12) | (0.37) |
| Age | | 0.63*** | 0.48*** | 0.48*** |
| | | (0.10) | (0.11) | (0.11) |
| Ideology | | 0.07*** | 0.07*** | 0.07*** |
| | | (0.01) | (0.01) | (0.01) |
| Number of parties x education | | | | 0.27** |
| | | | | (0.09) |
| Ref: Austria | | | | |
| England | | | 0.66*** | 0.67*** |
| | | | (0.10) | (0.10) |
| Sweden | | | 0.25* | 0.26* |
| | | | (0.11) | (0.11) |
| Ireland | | | 0.54*** | 0.54*** |
| | | | (0.11) | (0.11) |
| Constant | 3.90*** | 3.29*** | 3.09*** | 3.79*** |
| | (0.11) | (0.17) | (0.17) | (0.29) |
| N | 11,087 | 10,637 | 10,637 | 10,637 |
| R2 | 0.030 | 0.043 | 0.052 | 0.053 |
| | | | | |

Table 2 Multivariate regressions satisfaction with party supply

Robust standard errors in parentheses

p < 0.05; **p < 0.01; ***p < 0.001

(between Ireland and England, and between Sweden and Ireland) are statistically insignificant.

We start the regressions with a bivariate model. Model 1 in Table 2 shows that having five rather than three parties on the ballot has a positive and statistically significant effect on satisfaction. Concerning the effect size, a respondent encountering five instead of three parties has on average a satisfaction that is 0.45 points higher (on a 0- to 10-point scale) than someone who votes under a choice of three parties. Model 2 consists of the main independent variable party supply (three or five parties) and the controls, vote choice (ranking), gender, education, age and ideology. Model 2 shows that having five rather than three parties on the ballot still has a positive and statistically significant effect on satisfaction, even when relevant controls are included. In model 3, country dummy variables are included. The impact of



Fig. 1 Interaction effect between the number of parties and education

party supply is still positive, statistically significant and the size of the effect is the same.

In model 4, we examine if the increase in satisfaction from three to five parties is dependent on the amount of cognitive resources derived from respondent's level of education. We use education as a proxy for voters' cognitive resources as it can be argued that respondents with higher education have learnt to understand more complex information. Level of education is the only variable that is available in all countries to check for respondents' cognitive resources. Therefore, in model 4, we include an interaction between the number of parties and the level of education. A graph that illustrates the interaction effect is shown in Fig. 1.⁷ The findings indicate that those with the highest level of education are substantially less satisfied with a lower party supply. Figure 1 also shows that, in line with our hypothesis, the impact of having more parties is bigger among the highly educated. It must be pointed out, however, that even the less educated prefer to have more parties to choose from. All in all, therefore, our hypothesis about cognitive resources is only partially confirmed.

To investigate if there is cross-country variation, we perform separate analyses for each of the four countries. The results are presented in Appendix C (models 5-12). The findings show that having five rather than three parties on the ballot has a positive and statistically significant effect on satisfaction in all four countries. In the models for each country, the results show that the effects are strongest for Austria, and therefore, as a robustness test, we also run models with Austria excluded. In these models, we found a positive effect for the number of parties on satisfaction with the party offer on the ballot (see Appendix E models 19–22). As a further

⁷ Education is coded with four categories where 0 is lowest level of education and 1 is the highest level of education. Figure 1 is based on model 4 presented in Table 2.

| Ideological position | Three parties | Five parties | Diff (p value) | Observations |
|----------------------|---------------|--------------|----------------|--------------|
| 0.00 (left) | 5.83 | 6.13 | - 0.30 (0.291) | 496 |
| 1.00 | 5.43 | 6.59 | - 1.16 (0.002) | 238 |
| 2.00 | 5.13 | 6.34 | - 1.21 (0.000) | 646 |
| 3.00 | 4.79 | 6.11 | - 1.32 (0.000) | 1075 |
| 4.00 | 4.90 | 5.84 | - 0.94 (0.000) | 1184 |
| 5.00 (centre) | 5.05 | 5.78 | - 0.72 (0.000) | 2545 |
| 6.00 | 5.24 | 6.19 | - 0.95 (0.000) | 1013 |
| 7.00 | 5.24 | 6.28 | - 1.04 (0.000) | 1195 |
| 8.00 | 5.62 | 6.56 | - 0.95 (0.000) | 986 |
| 9.00 | 5.96 | 6.91 | - 0.95 (0.001) | 370 |
| 10.00 (right) | 5.90 | 6.58 | - 0.69 (0.001) | 1111 |

 Table 3
 Mean satisfaction with the party supply: left-right ideological positioning

robustness test, we run the four models presented in Table 2 with an alternative measure of satisfaction as the dependent variable, namely satisfaction with the election. The findings are presented in Appendix F; they show that having five rather than three parties on the ballot also has a positive and statistically significant effect on this alternative measure of satisfaction.

Furthermore, that impact is also stronger among the higher educated in each country (though the interaction does not quite reach statistical significance in Ireland). To further check the robustness of the findings and control if there is an 'experimenter demand effect' (Zizzo 2010), we also run alternative models including only the first election in all four countries, and the two first elections. These models are presented in Appendix D (models 13–18). The results are very similar to those presented in Table 2.

These findings clearly show that the number of parties on the ballot matters for voter satisfaction, and voters prefer more parties on the ballot. However, one might question whether it is the number of parties as such or simply the presence of an ideologically close option that really matters. In that case the impact of the number of parties should depend on one's relative distance from the parties in the two scenarios. Clearly voters at positions 0, 1, 9 and 10 are much better off with five than with three parties. But voters at position 5 are equally well represented in both situations.⁸ If it is ideological congruence that matters, the positive impact of having five parties should be limited to voters at positions 0/1/9/10. To investigate this issue, we performed additional analyses. Table 3 shows satisfaction with the party offer for voters with different ideological positions.

The results in Table 3 show that respondents in every position prefer five parties. This strongly suggests that it is the number of parties, as such that matters and

⁸ The positions of the parties in the 3-party scenario are 2.5/5/7.5 and 1.7/3.3/5/6.7/8.5 in the 5-party scenario. The distance from the closest party is 0.8 smaller with 5 parties for those in positions 0/1/9/10, 0.2 or 0.3 for those in positions 2/3/4/6/7/8, and the distance is the same (nil) for those in position 5.

not ideological congruence. Those in the centre, for instance, are equally well represented under three and five parties since in both cases, they have a party that is exactly at their position, yet they express greater satisfaction with five parties, even if this has no consequence on their egocentric representation.⁹

Conclusion

In this study, we investigate if voters are more satisfied if there are more parties to choose from on the ballot. The relationship between the number of parties and satisfaction is far from clear in the literature; some studies demonstrate that a higher number of parties has a positive effect on satisfaction while others show the opposite effect. There are also studies that have not found any effect. To contribute to the research field, we performed a survey experiment with a representative sample of citizens in four Western European democracies: Austria, England, Ireland and Sweden. Compared with previous research, we used a more specific measure of satisfaction, namely satisfaction with the party supply. The findings show that there is a clear answer; yes, voters are more satisfied if there are more parties to choose from. The results also show that the positive effect is stronger among the higher educated.

Importantly, our analyses indicate that is the number of parties, as such that matters, and not the presence of ideological congruence. We should, however, point out a limitation of our study. We show that voters are more satisfied when the number of parties increases from three to five parties. We are not able, however, to tell what happens when people are offered more than five parties. We cannot rule out the possibility of a decreasing marginal return when there are many more parties. Taagepera et al. (2014) have shown that the relationship between voter turnout and the (effective) number of parties are curvilinear (turnout rises to a peak as the (effective) number of parties increases and then falls slowly). The same pattern could hold with respect to voter satisfaction. We encourage future studies to examine if there is an upper bound of party options where satisfaction starts to decrease. We also encourage researchers to employ further experiments to investigate the relationship between the number of parties, ideological congruence, and voter satisfaction. In future studies, it would be relevant to include other party conflict dimensions beyond the left-right dimension, for example, urban-rural and religious dimensions (see Liphart 2012, pp. 76–77). If more party conflict dimensions are included, complexity will increase and it should be important to investigate if cognitive resources have a stronger effect on citizens' satisfaction with the number of parties when complexity increases. Finally, we suggest that future studies should look into the effect of satisfaction with the party supply on satisfaction with democracy more broadly.

 $^{^{9}}$ We also examine whether the impact of extremism depends on the number of parties. We perform an estimation with extremism, a variable that goes from 0 to 5. 0 corresponding to the centrist location (5 on the 0 to 10 scale) and 5 corresponding to extremist positions (0 or 10 on the 0 to 10 scale) and an interaction term between extremism and number of parties. The results in Appendix G show that the interaction is statistically insignificant.

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Declarations

Conflict of interest The corresponding author states that there is no conflict of interest.

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