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Winning & losing in coalition systems. A quasi-experimental study of the effect of coalition formation on satisfaction with democracy[☆]

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ABSTRACT

Does government formation affect satisfaction with democracy? Research so far has focused on how winning or losing elections affects satisfaction with democracy, yet, in many coalition systems, who wins and who loses is not determined directly by the elections, but by the coalition formation process. Until now, the effect of government formation on satisfaction with democracy has not been examined. In this paper, we examine this using a quasi-experimental matching design examining eleven elections. We find some evidence that the formation of the coalition slightly but significantly lowers the satisfaction with democracy among those who supported a party that was removed from the governing coalition. This suggests that in coalition systems, looking at electoral winners and losers may be insufficient.

1. Introduction

The effect of ‘winning’ elections on satisfaction with democracy has been subject of ample study since [Anderson and Guillory's \(1997\)](#) seminal work. As [Anderson and Guillory \(1997, p. 66\)](#) wrote, “democracy is about winning and losing at election time”: winning is voting for a party that ends up in government and losing as voting for a party that ends up in opposition ([Anderson and Guillory, 1997](#)). Winners of the elections are more satisfied with democracy than the losers of the elections. This difference is amplified by characteristics of the democratic system, such as whether this is a majoritarian or consensus democracy. A key feature of a majoritarian democracy is that the government formation follows almost immediately after an election, because nearly always a single party wins a majority. In many consensus democracies, however, who ends up in power is not decided in the elections but in the ensuing coalition formation process ([Mair, 2011](#); [Powell, 2000](#)). The central question of this paper is *how government coalition formation affects satisfaction with democracy*.

The fact that in consensus systems who ends up in government is determined weeks, months ([Ecker and Meyer, 2020](#)) and sometimes more than year after the election ([Van Aelst and Louwerse, 2014](#)), poses two challenges to the existing literature: firstly, in many studies a

winning party is defined as one that ends up in government after the election ([Bernauer and Vatter, 2012](#); [Williams et al., 2021](#)), yet the survey data upon which these studies rely were often collected before this was known to voters. These studies assume that the respondents are ‘fortune tellers’ who are reliably able to predict which party will end up in government ([Blais and Gélinau, 2007, fn. 8](#); [Singh et al., 2012, fn. 2](#)). Secondly, these studies have not disentangled the effect on satisfaction with democracy of ending up in the governing coalition from the election result itself, that is the satisfaction that someone gets from the electoral fortunes of the parties who contested the election.

Using a quasi-experimental design where we examine the difference between respondents who were interviewed before and after the formation of a government, we aim to isolate the effect of a party entering government from the effect of electoral results. To this end, we need to have election surveys that occurred during a coalition formation process, where there are enough respondents before and after the installation of a new government to allow for matching, and where the composition of the government changed power changed hands. We identify eleven election surveys from seven countries in the CSES that meet our criteria. We employ a quasi-experimental matching design to ensure that the difference that we find is not the result of different kinds of respondents being interviewed before and after the installation of the

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government.

2. Theory

The notion of consent of the governed is at the core of democracy. The idea the governed can choose their governors is key to the appeal and the justification of this type of regime. This means that satisfaction with democracy, the extent to which people accept this form of government, is an important indicator. It has become a key variable in the field of political science. It is often understood as an expression of a respondents' support for the political system that is located between diffuse support for democratic principles and specific attitudes towards political actors (Van der Meer and Kern, 2019). It is not necessarily a measure of the embrace of democratic principles but rather support for how the system works in practice (Linde and Ekman, 2003). It is seen as crucial for our understanding of electoral politics as it is strongly linked to the legitimacy of political systems (Hobolt et al., 2021; Howell and Justwan, 2013), but also to personal well-being (Orviska et al., 2014).

The majoritarian or consensual nature of a political system is seen as key to explaining satisfaction with democracy, with both types of systems being argued to lead to higher levels of satisfaction with democracy (Van der Meer and Kern, 2019). The most prominent voice arguing that consensual systems see higher levels of satisfaction with democracy is Lijphart (2012). There is some debate about what drives this relationship as this a complex concept, which encompasses, among other things, a proportional electoral system and coalition government. There are those who point to the importance of electoral systems: Listhaug et al. (2009) argue that a proportional electoral system makes more voters feel represented in parliament, while Blais et al. (2017) show that voting for a party which does not win representation in parliament lowers satisfaction with democracy. There also those who point to the importance of coalition government. Bernauer and Vatter (2012) argue that it is in particular the absence of single party majority government that is associated with greater satisfaction with democracy, as more parties have access to policymaking here. Even parties outside of the government may have some bargaining power over policy (Farrer and Zingher, 2019), in particular in the case of minority governments (Strøm, 1990).

There also those studies that find that majoritarianism is associated with higher levels of satisfaction with democracy. Prominently, Aarts and Thomassen (2008) show that a more majoritarian electoral system is associated with greater satisfaction with democracy. They argue that majoritarian systems offer accountability: the ability to 'throw the rascals out.' Accountability is likely to stimulate satisfaction with democracy (Van der Meer and Kern, 2019). Powell (2000) proposes that proportional electoral systems have an important and related weakness: elections are not the decisive arena for government formation. Voters lack a meaningful choice with real consequences. The important question of who ends up in government is determined in smoke-filled rooms, which may lower voters' satisfaction with democracy (Dekker and Den Ridder, 2018; Irwin and Van Holsteyn, 2011). This is perhaps shown most clearly in New Zealand where, after the introduction of mixed-member proportional representation, the country had to deal with protracted coalition formation talks and ended up with a coalition that was unexpected and which few voters favoured (Karp and Bowler, 2001).

Anderson and Guillory (1997) propose that it is the difference in the experience of winners and losers that drives differences in satisfaction with democracy between consensus and majoritarian regimes: Winning is sweeter in majoritarian systems and losing is more bitter there because the winners of elections govern unchallenged. In consensual political systems, there is more power-sharing and 'electoral losers' are not automatically excluded from the policy-making process, and can end up with great influence over policy (Blais et al., 2017).

The idea that winning should be understood as ending up in government is well-established in the literature (Blais et al., 2017; Curini et al., 2012; Hollander, 2014; Singh et al., 2012). The electoral

performance of a party is less relevant than whether it ends up in government (Delgado, 2016; Singh et al., 2012). There are both policy and psychological mechanisms underpinning winners being more satisfied with democracy. The policy mechanism is that respondents are happier with democracy if a government is put in office that is closer to their policy preferences (Anderson and Guillory, 1997). That is why people who are ideologically close to a winning party or who vote for their preferred party see a greater increase in their satisfaction with democracy (Campbell, 2015; Curini et al., 2012; Singh, 2014). Yet, there also is a psychological argument (Singh et al., 2011, 2012): winning produces a number of positive emotions, such as joy, in individuals while losing increases negative emotions such as anger. This is as true in sports as it is in politics (Singh et al., 2012).

The studies of the relationship between satisfaction with democracy and 'winning' fall into two sets: those who rely on post-election surveys and those who rely on other surveys, such as the European Social Survey.¹ Both define a 'winner' as someone who voted for a party that is in government after an election. When using post-election surveys in majoritarian systems (Beaudonnet et al., 2014; Blais and Gélinau, 2007; Dahlberg and Linde, 2017; Delgado, 2016; Henderson, 2008; Hollander, 2014; Howell and Justwan, 2013; Singh et al., 2011), this is usually unproblematic: an election may be close, but at the end of the night there nearly always is a clearly identified winner (Howell and Justwan, 2013). But as Campbell (2015, p. 169) observes "although elections are supposed to generate winners and losers, this is not guaranteed." The relationship between election results and coalition formation is less clear in proportional systems. In parliamentary regimes, coalition government accounts for around 70% of governments (Gallagher et al., 2011). A number of studies explicitly state that they look at which parties *end up* in a government after the end of the survey period. They argue that the coalition which formed was "the most likely outcome" (Singh et al., 2012, fn. 2) or "could be easily predicted" (Blais et al., 2017, fn. 8). Others appear to use a one-size-fits all solution which include coalitions formed during or after the survey period (Bernauer and Vatter, 2012; Williams et al., 2021).² This introduces a strong assumption: That survey respondents can reliably predict which parties end up in government before the fact. It also ignores the possibility that electoral success and government participation are distinct potential drivers of satisfaction with democracy.

In this paper, we seek to determine the effect of government formation itself on satisfaction with democracy. Electoral outcomes are opinion forming cues that shape political attitudes (Campbell, 2015). We argue that the 'winner's bounce' (or loser's slump) can be decomposed into two parts: first, the utility that voters derive from the electoral results of the parties that contested an election, whether this is in the form of happiness at a favoured party doing well, or sadness at a disliked party being successful (or vice versa); and second the utility they obtain from their favoured party entering government or disutility that they obtain from said party exiting the government. That is, cabinet formation itself is a separate yet salient signal that prompts re-evaluations from citizens. In majoritarian systems, where the composition of the government is nearly always determined simultaneously to the arrival of the election results, the two signals cannot be disentangled from each other. However, in systems with coalition

¹ Examples include: Anderson and Tverdova (2001), Anderson and Guillory (1997), Curini et al. (2012), Farrer and Zingher (2019), Kölln and Aarts (2021), Leemann and Stadelmann-Steffen (2022), Leiter et al. (2019), Loveless (2021), Morgan-Jones & Loveless 2023 (Forthcoming), and Martini and Quaranta (2019).

² Bernauer and Vatter (2012, p. 436) measure "government voters ... by a dummy variable taking the value 1 if the respondent voted for a party that obtained cabinet portfolios (coded in the CSES) and 0 otherwise." Williams et al. (2021, p. 4) "count individuals who voted for the victorious executive (party of the president; party of the prime minister) as electoral winners."

government, this is not the case. In such systems, we can divide the electorate into four categories: those who voted for a former government party that becomes an opposition party (former coalition); those who voted for a former opposition party that becomes a government party (new coalition); those who voted for a government party that stayed in government (continuing coalition); those who voted for an opposition party that stayed in opposition (continuing opposition).

The first two groups are likely to update their satisfaction with democracy after a new government is formed: those who voted for a party leaving the government are likely to do so negatively; and those who voted for party entering the government are likely to do so positively. The latter two groups are unlikely to update their satisfaction with democracy based solely on the formation of the new government. This gives us:

1. **Former coalition hypothesis:** After a government is formed, the satisfaction with democracy decreases among voters who voted for a party that leaves the government to join the opposition.
2. **New coalition hypothesis:** After a government is formed, the satisfaction with democracy increases among voters who voted for a party that leaves the opposition to join the government.
3. **Continuing opposition hypothesis:** After a government is formed, the satisfaction with democracy is unchanged among voters who voted for a party that continues in the opposition.
4. **Continuing coalition hypothesis:** After a government is formed, the satisfaction with democracy is unchanged among voters who voted for a party that continues in the governing coalition.

This division of the electorate into four groups is also possible if perfect prediction of which government forms on the part of voters is assumed. Such an assumption, however, can be problematic in two ways: Firstly, a voter may simply be wrong about which government eventually forms. Secondly, the act of government formation itself may influence a voter's satisfaction with democracy. Below, we explore the extent to which the act of government formation itself leads to differences in satisfaction with democracy among voters who otherwise were identical and had identical access to public information about both electoral outcomes and the likelihood of the formation of various coalitions.

3. Methods

Our goal is to assess whether after the installation of a new government a person's satisfaction with democracy changes. In an ideal world, one would have a panel survey with a wave just after the elections and a wave just after the installation of a new government. That would allow us to see how individual respondents change their opinion in reaction to this political event, and so disentangle the effect of the electoral result from the effect of the government formation itself. This is, however, to our knowledge not available.

Instead, we use a quasi-experimental design to approximate such an approach. Our paper uses what is known as Unexpected Event during Survey Design (UESD) approach (Muñoz et al., 2020): that is, we look at post-election surveys and note which respondents were interviewed before and which after the installation of the new government. The difference in aggregate levels of satisfaction with democracy between the two groups should then be the effect of government formation alone (as the election results are identical across the groups).

The UESD approach comes with two important assumptions (Muñoz et al., 2020). The first is ignorability: the assignment of interviewees to different values of time is independent of the potential outcomes. The second is excludability: any difference between respondents interviewed before and after the event can only be attributed to the event. We address these assumptions by different interventions. We address the first assumption (ignorability) by using a matching design to ensure that the two samples are as similar as possible (McCready, 2006; Ho et al.,

2007). This requires sufficient respondents in both the pre- and the post-installation period. We address the second assumption (excludability) by controlling for the time trend and by jack-knifing our data.

3.1. Cases

We use the Comparative Study of Electoral Systems (CSES) dataset, a collection of national post-election surveys (Quinlan et al., 2020). We focus on countries where the government coalition formation occurred during the research period of the survey. There are 37 such cases (see Table A1 in the appendix). Out of these we exclude countries in which a single party won a majority of seats (as we are interested in the effect of coalition formation and no coalition government forms in these cases). We also exclude continuing governments, since in this case, there are no new government/opposition parties, which is necessary to test our central hypotheses. Moreover, there is no treatment of any of the respondents, since the continuing nature of the government means there is no updating of beliefs by voters. Finally, we can only include cases with a sufficient N. We look at the smaller of the groups that was surveyed before or after the elections and answered all the relevant questions that we use in the analysis. This determines the total size of the sample (which is twice this size). We select cases with at least 100 respondents in the smallest category.

Our final sample thus consists of eleven elections (see Table 1). Our cases represent a very conservative test of the effect of coalition formation as the only cases where there are sufficient respondents are those cases where the governing coalition was formed quickly and in one try, in other words, those most negotiations which are also the most predictable. A greater effect of coalition formation is likely to occur in systems where government formation lasts longer, is less predictable and is more prone to breaking down.³

3.2. Sample construction

To satisfy the ignorability assumption in a UESD, we use a matching technique. This kind of technique to improve covariate balance between treatment and control groups is generally considered preferable over alternative approaches (such as including controls) (Muñoz et al., 2020). For each of the surveys, we look at whether respondents were interviewed before or after the installation of the new government (the pre and post group). We split respondents into two groups: those who were interviewed after the date of government installation as given by Parl-Gov (Döring et al., 2022) (the 'post' group), and those who were interviewed before or on the day of installation (the 'pre' group). We match the smallest group of respondents (whether the pre or post group) with respondents from the larger group. So, for instance in the case of Germany in 2009, when excluding respondents with missing variables on the employed variables, there are 700 respondents in the pre-group, and 773 in the post-group. For each of the 700 respondents in the pre-group, we select another respondent that is as similar as possible to that respondent from the larger sample of the same election study, that is, the 773 respondents in the post-group.

We employ MatchIt, an R package specifically meant to recreate a quasi-experiment from observational data (Stuart et al., 2011). The algorithm identifies the "nearest neighbour" for every treated participant who is as similar as possible on the selected variables. We use age (in years), binary gender self-identification (see Williams et al., 2021), education level (in four steps), and party choice in the election. Continuing with the example above of Germany in 2009, this creates an overall

³ A contrasting example would be Germany in 2017, where the last respondent was interviewed 68 days after the election, but the government only formed 171 days after the election, after the first negotiations between the CDU/CSU, the FDP, and the Greens, which most commentators predicted would form the next government, failed.

Table 1
Sample construction.

Election	Parties		Dates		Survey dates		Sample			
	Outgoing	Incoming	Election	Installation	Start	End	Pre	Post	Matched	N
Finland 2007	KESK, SDP, SFP	KESK, KOK, VIHR, SFP	18/3/07	19/4/07	20/3/07	20/5/07	162	808	Pre	324
Finland 2015	KOK, SDP, SFP, KD	KESK, KOK, PS	19/4/15	29/5/15	24/4/15	28/6/15	194	979	Pre	388
Germany 2009	CDU/CSU, SPD	CDU/CSU, FDP	27/9/09	28/10/09	28/9/09	23/11/09	700	773	Pre	1400
Iceland 2013	SDA, LGM	IP, PP	27/4/13	23/5/13	4/5/13	10/9/13	672	445	Post	890
Norway 1997	DNA	KfP, S, V	16/9/97	17/10/97	16/9/97	30/11/97	279	1415	Pre	558
Norway 2005	H, KfP, V	DNA, SV, S	12/9/05	17/10/05	13/9/05	2/1/06	533	1117	Pre	1066
Norway 2013	DNA, SV, S	H, F	9/9/13	16/10/13	13/9/13	7/1/14	751	693	Post	1386
New Zealand 2008	LP	NP	8/11/08	19/11/08	14/11/08	27/2/09	733	231	Post	462
Poland 2007	PiS, S, LPR	PO, PSL	19/10/07	16/11/07	6/11/07	29/11/07	545	587	Pre	1090
Sweden 2006	SAP	M, C, F, KD	17/9/06	5/10/06	20/9/06	28/11/06	534	431	Post	862
Sweden 2014	M, C, F, KD	SAP, MP	14/9/14	2/10/14	15/9/14	17/11/14	351	421	Pre	702

sample with 1400 respondents. For all the election surveys which fulfil our requirements, this results in a sample with 9128 respondents. [Tables 2 and 3](#) show the descriptive variables of the sample, including the distribution on the variables on which we matched these respondents, while [Table A2](#) in the Appendix shows the vote choices of the respondents, both overall and split into the pre- and post-groups. As can be seen, the two groups are very evenly matched on all the matching variables.

3.3. Dependent and independent variables

Our dependent variable is satisfaction with democracy. The question employed is “On the whole, are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the way democracy works in [country]?” The question had four answer options: “very satisfied”, “fairly satisfied”, “not very satisfied”, and “not at all satisfied”. To ease interpretation, we have flipped the scale from how the item was coded in the survey: in our analysis, higher values indicate more satisfaction.

Our key independent variables are the treatment variable and whether voters voted for parties that started and/or ended up in the governing coalition. The treatment variable is whether respondents came from the pre or post group (as described above). To test our hypotheses, we look at the interaction between these three variables: whether the survey was held pre/post coalition formation, whether the party voted for was in government before government formation and whether the party voted for was in government after government formation.

3.4. Modelling strategy

As the dependent variable is ordinal, we employ proportional odds logistic regression. We include election dummies to control for unobserved differences between the elections and cluster our standard errors at election level.

[Table 4](#) shows the results of three models: a model with only the treatment variable (model 1); a model adding dummy variables for having voted for incoming and outgoing government parties, and an interaction between these two variables (model 2)⁴; and model 3, our primary model, which adds interactions between the treatment variable and each of the three variables added in model 2.

To test the robustness of the results, we add several control variables to our primary model, as shown in [Table A3](#) in the Appendix: first, the number of days after the election a respondent was interviewed, to test for the possibility that the effect we are observing is due to a general

⁴ As some parties continue in government after an election, it is possible for a respondent to score 1 for both these dummy variables; the interaction allows us to distinguish between such respondents and those who voted for parties which either joined or left government.

decline in satisfaction with democracy as the effect of the election dissipates ([Van der Meer and Steenvoorden, 2018](#)). This is an important control to assess whether we meet the excludability assumption: in this way we control for other time trends that may occur parallel to the survey period. Second, we use alternative approaches to assess who won the elections (though note that [Singh et al. \(2012\)](#) and [Delgado \(2016\)](#) show the importance of government participation over electoral performance): whether a respondent voted for the largest party and the change in seat share of the party that the respondent voted for.

We run a Brant test to assess whether the proportional odds assumption (in [Table A4](#)). As this is significant (indicating a violation of the proportional odds assumption), we see whether we can replicate the results with other models: linear regression, generalized ordinal regression (specifically a partial proportional odds model with the possibility of non-parallel lines) and multinomial regression ([Tables A6–A8](#) in the Appendix). We also examine a multilevel ordered logistic regression (Model A10 in [Table A6](#)).

In addition to the time trend, we test the excludability assumption by pooling multiple electoral studies. This diminishes the chance that another event that occurred in the survey period in one country affects the results. We further test this by ‘jackknifing’ the data by excluding one election at the time to show that the results are not driven of the particularities of one particular election survey ([Table A9](#) in the Appendix).

4. Results

[Table 4](#) shows the proportional odds logistic regressions and [Fig. 1](#) visualises the key result. [Tables A5–A9](#) in the Appendix show the robustness tests.⁵ The first model in [Table 4](#) shows the effect of the treatment alone on satisfaction with democracy. As can be seen, government formation in itself has no significant effect. The second model shows the treatment in addition to the effect of voting for the different types of government parties. Recall that we consider four types of voters: those who voted for a party in government prior to the election, those who voted for a party in government after the election, those who voted for a party that was in government both before and after the election, and lastly those who voted for a party that was neither in government before nor after the election. Model 2 in [Table 4](#) shows that people who voted for a party that was in either the outgoing or incoming government are more satisfied with democracy. The interaction between outgoing and incoming government is clearly not significant, indicating that respondents who voted for a party which was in government both before and after an election do not differ in their satisfaction with

⁵ [Table A3](#) shows the full model (i.e., with election dummies) and [Table A4](#) shows the Brant test. This indicates that as a whole the test is significant (that is the assumption of parallel lines is violated). Notably however the assumption is not violated for the treatment variable and all the different interactions.

Table 2
Descriptives of binary and rational-interval variables.

Variable	Mean			Median	S.D.	Min.	Max.	Low	High
	Entire	Pre	Post						
Gender	0.50	0.50	0.50	–	–	0.00	1.00	Male	Female
Age	48.97	49.27	48.67	49.00	16.77	18	100	Young	Old
Treatment	0.50	0.00	1.00	–	–	0.00	1.00	Before	After
Voted for largest party	0.35	0.34	0.35	–	–	0.00	1.00	Voted for other party	Voted for largest party
Voted for incoming coalition	0.47	0.46	0.49	–	–	0.00	1.00	Voted for opposition party	Voted for new coalition party
Voted for outgoing coalition	0.39	0.39	0.38	–	–	0.00	1.00	Voted for opposition party	Voted for old coalition party
Days since election	30.60	16.89	44.31	27	19.61	1.00	136.00	Shortly after elections	Long after elections
N = 9128									

Table 3
Descriptives of categorical variables.

Variable	Answers	No	Entire	Pre	Post
Satisfaction with Democracy	Very satisfied	4	15.6%	15.7%	15.6%
	Fairly satisfied	3	62.5%	62.9%	62.1%
	Not very satisfied	2	18.1%	17.6%	18.7%
	Not all satisfied	1	3.7%	3.8%	3.6%
Education	None	–	33.1%	33.8%	32.5%
	Primary/Lower secondary	–	28.7%	28.4%	29.0%
	Higher secondary	–	8.7%	8.6%	8.8%
	University	–	29.5%	29.3%	29.7%

Table 4
Ordered logistic regression analysis.

Model	Model 1	Model 2	Model 3
Treatment	–0.03 (0.06)	–0.04 (0.06)	0.08 (0.12)
Party voted for in the outgoing government		0.61*** (0.15)	0.76*** (0.16)
Party voted for in the incoming government		0.68*** (0.21)	0.70*** (0.19)
Party voted for in the incoming government *		0.07 (0.20)	–0.02 (0.20)
Party voted for in the outgoing government			–0.30*** (0.09)
Treatment * Party voted for in the incoming government			–0.06 (0.13)
Treatment * Party voted for in the incoming government * Party voted for in the outgoing government			0.20* (0.11)
Cut 1 2		–1.99*** (0.16)	–1.92*** (0.16)
Cut 2 3		0.12 (0.12)	0.18* (0.11)
Cut 3 4		3.49*** (0.11)	3.56*** (0.12)
N		9128	9128
AIC		17172	17170

*p < 0.1, **p < 0.05, ***p < 0.01; All models include election dummies. Full model in Table A3 in the Appendix.

democracy from respondents who voted for either an incoming or outgoing government party.

Model 3 in Table 4 adds the interaction between each voter type with the treatment. Fig. 1 visualises the results: Each of the four answer categories of the dependent variable is shown for each of the four categories of voters. Between 2% and 6% of respondents are not at all satisfied with democracy, and there is no difference within groups between those interviewed before and after government formation. About one in six of the respondents are not very satisfied with democracy. For one group we find an effect of government formation. This does not differ significantly among those who were interviewed before and after government formation. Three out of five respondents are fairly satisfied

with democracy. Here, we do not find substantial differences before or after government formation. About one in seven respondents are very satisfied with democracy: amongst those who voted for a party that left government after the election, the share of respondents who indicate that they are ‘very satisfied with democracy’ decreases by 15%. This decrease is significant, but only at the 0.1-level.

In the Appendix, we show three sets of additional models. As significant coefficients do not entirely tell the entire story we show the predicted values in Table A10 and A11. In all models the predicted values are in the expected direction (a decrease in satisfaction with democracy among those who voted for the parties leaving the government) but only in half of them are these differences significant. Model A6 includes the effect of days since the election. In that case the interaction between the treatment and voting for the outgoing government is significant, but there are no significant differences in the predicted values between those interviewed before and after government formation; the Model A7 includes the effect of voting for the largest party. In this case the interaction effect is significant and there are significant differences in the predicted values between those interviewed before and after government formation. Model A8 includes the effect of the change in seat share of the party voted for, which shows the same combination of a significant interaction but no significant differences in the predicted values as Model A6. Table A6 employs the same variables as our main model (model 3 in Table 4) but using instead, respectively, a linear regression model (model A9) and a multilevel ordered logistic regression (model A10). In the first, the significant interaction in our main model is replicated, but in the second it is not. In neither there are significant differences between the predicted values of those interviewed before and after government formation (predicted values for the former are shown in Table A11). Table A7 shows a Generalized Logistic Regression model. Here, we find both cases where the relevant interaction term is significant and significant differences between those interviewed before and after government formation. In Table A8 (multinomial regression), we do not find that the relevant interactions are significant and there are significant differences between those interviewed before and after government formation. Lastly, Table A9 finally shows jackknifed models where we remove each case in turn to check the robustness of the results. We find the relevant interactions to be significant in seven out of eleven cases and significant differences between those interviewed before and after government formation in five out of eleven cases.

To summarise: as expected, levels of satisfaction with democracy are stable for those who voted for a party that stayed in government (H4 – continuously high) or opposition (H3 – continuously low). We find evidence for a small but significant drop in satisfaction with democracy when the new government is formed among those who voted for a party that leaves the government (H1). Such a pattern is absent for parties that enter the government (H2), indicating that their supporters do not update their levels of satisfaction with democracy. Yet, it is important to note that this evidence is not strongly robust: while we find that in all our robustness tests the dissatisfaction of those who voted for parties leaving the government increases post-treatment, we find that this difference is only significant in eight out of eighteen robustness tests we

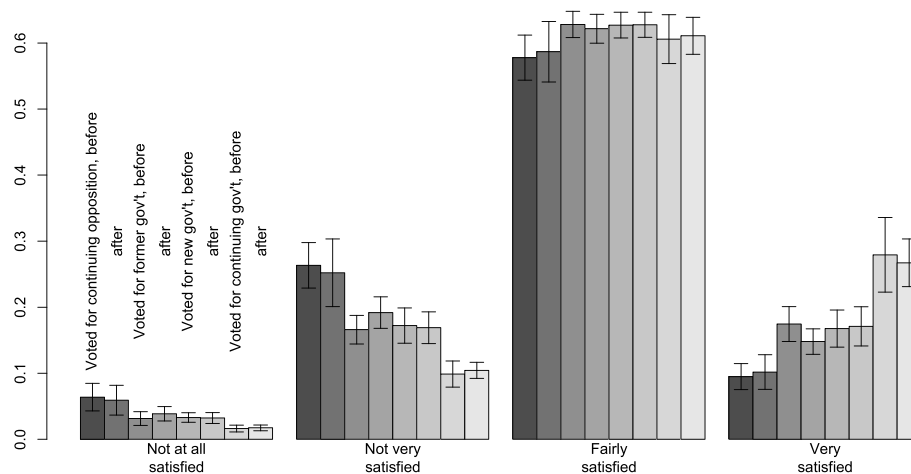


Fig. 1. Predicted proportions.

examine. The lack of robustness is likely the results of the heterogeneity in the untreated group, which makes the effect small and uncertain. Sometimes the estimates meet the criterion for significance and sometimes they (barely) do not meet this criterion. The group of voters in our sample that have been treated are likely to be heterogeneous in terms of how correct their expectations regarding government formation were. In some cases, a 'naïve' guess on election night will have turned out correctly, meaning no updating of information at the moment of government formation itself; in others, a coalition considered unlikely will have formed, leading to more widespread updating at the moment of government formation.

5. Conclusion

In many countries, elections create clear winners and losers, with a clear majority for either the government or the opposition at the end of election night. People's satisfaction with how democracy works is changed at those moments. Winners walk with an extra spring in their step, losers with their heads hung low. This is how majoritarian, Westminster systems work. In proportional, consensus democracies, the game is decided in the third half. The election results create the setup for the real game about the distribution of power: government formation negotiations. Here, electoral losers can become government parties, while other parties can see their seat gains turn into sand (Van der Meer and Kern, 2019). The central question in this paper was: how does government formation itself shape satisfaction with democracy?

We used a quasi-experimental design to compare respondents interviewed before and after the installation of a new government, thus allowing us to isolate the effect of government formation from the effect of the election results themselves. The satisfaction with democracy of three of the four groups of voters remained stable: those who voted for parties that stayed in government, for parties that stayed in opposition, and for parties that entered government. These voters were unperturbed by government formation. However, we find some evidence that when a new government was installed, satisfaction with democracy declines among those voters who supported a party that was part of the previous government, but which was not part of the new government. This decline is small, marginally significant and not fully robust to changes in model choice. The evidence is suggestive that a difference exists between winners and losers of government formation but in no way conclusive. What could explain this pattern?

As prior government participation is a strong predictor of future participation (Martin and Stevenson, 2010), the drop in satisfaction with democracy for voters who observe a favoured party exit government is unsurprising, as the naïve probability of continued government service is high, making disappointment to voters who may not pay much

attention to the government formation process all the greater. One may propose, drawing on the literature on motivated reasoning (Hollander, 2014), that people tend to predict their preferred party will be victorious even in the face of information in the opposite direction. That is, partisanship biases respondents' perceptions of political facts. Partisan identifiers are more likely to believe that their party has won an election independent of the result (Stiers et al., 2018). The voters of the parties negotiating to form a new government may confidently believe that these parties will work out an agreement, while the supporters of parties in government prior to the election, but which are not part of the negotiations may foster some hope that these will fail and their party will be flown in to save the day: People expect that their 'team' will win even when that is unlikely. Like a football team scoring in injury time, their team will squeeze out a victory against the odds. This means that in systems where the elections do not directly decide who ends up in government, respondents who voted for a party that ends up in opposition may not have updated their satisfaction with democracy with the likely outcome of coalition formation. It is only when the referee blows the final whistle that voters update their satisfaction with democracy, in particular for those voters who are now certain that their party will be in opposition in the coming years. A segment of voters eventually changes their opinion when they are presented with overwhelming evidence that their party will be in opposition in the coming years, that is, when a government is installed that consists of other parties. Such a pattern is absent for those who voted for an opposition party that entered government, who may have updated their feelings about democracy in the wake of the elections. We see the role of this kind of motivated reasoning elsewhere in the literature on winners and losers in the electoral process as well (Hollander, 2014).

Our study has some limitations: the effect sizes we find are relatively small, our results are marginally significant and modelling choices affect the significance of the results. A lot of voters are unaffected by government formation. They may have changed their satisfaction with democracy before the election or immediately after it, but before government formation. Secondly, a quasi-experimental research design using matching design relies on reconstructing randomization instead of true randomization. It may be that there is an unknown third factor that affected the satisfaction with democracy that we did not incorporate in the matching process.

What does our story say to the broader literature? Firstly, it suggests that even when for those who follow political events closely the outcomes may be predictable, this does not mean that all citizens have updated their political attitudes to these new circumstances. The evidence suggests that citizens aren't soothsayers. Moreover, our study indicates that government coalition formation has its own effect on satisfaction with democracy which we can see after the dust of an

election has settled: people who voted for a party that leaves government following an election appear to update their satisfaction with democracy when this information becomes clear. This makes it more difficult to distinguish the winner-loser difference in satisfaction with democracy in coalition systems, in particular in post-election surveys. Perhaps this can be one part of explaining the growing empirical lack of clarity surrounding the relationship between these variables (Aarts and Thomassen, 2008; Lijsthaug et al., 2009; Van der Meer and Kern, 2019). Assuming a Westminster style “it is clear who governs” model has limitations here. Future research should incorporate this difference between Westminster and coalition democracies more explicitly.

Finally, we propose that election studies, in particular in countries where coalition government is the norm, should look into the possibility of conducting three-wave instead of two-wave surveys. We often see a pre-election wave and a post-election wave. We believe that it is useful to add a post-formation wave to election studies conducted in consensus democracies with protracted coalition formation processes, in particular given how we have shown that who ends up in government significantly shapes citizens’ political attitudes. That said, as our findings indicate that government formation only influences part of the electorate, existing one or two-wave surveys will remain a valuable resource for scholarship, as long as researchers are aware that the possibility that winning is more subtle than it appears at first sight.

Declaration of competing interest

The authors declare none.

Data availability

Data will be made available on request.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.electstud.2023.102646>.

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