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The more the better? Cumulative issue ownership and intra-campaign party switching

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ABSTRACT

We contribute to the literature on short term changes in voters' party preferences (or intra-campaign party switching), by advancing a factor that has been neglected so far: Voters' perceptions about parties' issue competence. We develop a model of party switching that includes both classic predictors and issue ownership considerations. Moreover, in contrast to the usual *single* issue ownership conception focusing on the party deemed most competent to solve the most important problem, we argue that voters base their party choice on their perceptions of parties' competence on a variety of issues, i.e. on *cumulative* issue ownership. We test our model on panel data from the 2015 Swiss election study. The change in competence perceptions appears as a strong predictor of party switching: The higher the increase in the number of issues on which voters see a party as most competent during the campaign, the higher their likelihood to switch to that party.

1. Introduction

Faced with the weakening of long-term determinants of electoral behavior and increasing instability of individual attitudes, scholars have shifted their analytical focus to short-term changes in voters' choice. They have advanced a number of individual characteristics that may account for party switching during election campaigns such as political sophistication, party identification, ideology, trust, issue positions or campaign exposure (e.g., Dassonneville, 2012; Johann et al., 2018; Kriesi and Sciarini, 2004; Zelle, 1995). In this paper, we draw attention to a factor that has been surprisingly neglected so far: voters' evaluations of parties' capacity to handle issues, i.e. issue ownership perceptions. The lack of consideration for issue ownership considerations stands in stark contrast with the alleged importance of voters' evaluations about parties' issue competence as a determinant of party choice (e.g. Bellucci, 2006). Yet, while the issue ownership literature has boomed over the last two decades, studies analyzing how issue ownership perceptions influences short-term changes in party choice are still scarce.

In this paper, we develop a model of change in voters' party choice (i.e., of voters' party switching) that integrates both classic predictors and voters' evaluations of parties' issue competence in a dynamic framework. Moreover, we innovate by relying on a finer-grained conception of issue ownership than the standard *single* issue ownership approach. While most existing studies have focused on the party voters

deem most competent to solve the problem most important to them, we consider the *cumulative* issue ownership conception that voters pick up the party they deem most competent on a variety of issues (Karlsen and Aardal, 2016). Cumulative issue ownership informs the hypothesis that short-term changes in voters' evaluations of parties' issue competence prompt instability in party choice. More specifically, we assume that the higher the increase in the number of issues on which voters deem a party most competent during the election campaign, the higher their likelihood to switch to that party.

Assessing whether issue ownership considerations contribute to party switching bears important implications for our understanding of how citizens form their opinion. Finding that citizens update their vote intention in accordance with underlying changes in political preferences or perceptions about parties' issue competence will lead us to be optimistic about their capacity to make consistent decisions (see Geers et al., 2017). By contrast, finding that short-term changes in voters' party preferences occur at random will support the view of the 'floating voter' and result in pessimistic conclusions about citizens' ability to make reasonable choices (see Berelson et al., 1954).

We test our hypotheses on panel survey data carried out in the context of the 2015 Swiss general election (Selects, 2016a). In this article, the spotlight is on explaining changes between vote intention and vote choice during an election campaign, i.e. on *intra-campaign party switching*. Accordingly, this paper does not account for other types of volatility such as activation (change from no vote intention to party choice) or demobilization (shift from vote intention to abstention).

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2. Theoretical framework

Whether citizens display stable or unstable vote intentions during an election campaign depends on a variety of factors. We first briefly review the literature on the 'classic' predictors of party switching. Next, we develop our theoretical argument about the related role of cumulative issue ownership perceptions.

2.1. The classic determinants of party switching

According to a widespread view, short-term instability in voters' party choice varies as a function of their degree of political sophistication. However, scholars disagree with respect to the form of the relationship. Some bet on a linear relationship and argue that politically sophisticated voters have more stable attitudes than political novices (Sciarini and Kriesi, 2003). Others claim that the relationship is curvilinear. In this alternative conception, both the weakly and highly sophisticated voters show stability in party preference, although for completely different reasons (Converse, 1962; Zaller, 1992): Political novices are little attentive to the campaign and not prone to receive cues for changes, whereas political experts are likely to process new information, but are resistant to opinion change. Therefore, the frequency of party switch is supposed to peaks among moderately sophisticated voters, who are more able to receive information than political novices and less resistant to change than political experts. Empirical evidence from the (few) studies dealing with intra-campaign volatility speaks for the linear effect of sophistication (Dassonneville, 2012; Geers and Strömbäck, 2018).

Political disaffection, as measured by distrust in institutions or parties, dissatisfaction with democracy, or lack of external efficacy is another driver of party switch (Zelle, 1995). Dissatisfied voters "lack incentives to form stable party preferences" (Voogd and Dassonneville, 2018: 3) and tend to use party switch to punish incumbent parties. While dissatisfaction with democracy and political alienation primarily translate into vote switching between elections (Dassonneville, 2012;; Dassonneville and Dejaeghere, 2014), within campaign switchers also display lower levels of efficacy (Dassonneville, 2012).

A third set of factors relates to ideology and party attachment. Voters with a more extreme ideology hold strong attitudes (Krosnick and Petty, 1995) and are "least dealigned" (Dassonneville, 2012: 29), which increase their resistance to change in comparison to ideologically moderate voters. Similarly, party identification also leads to higher stability in party choice. Party identification is a strong determinant of electoral choice (Campbell et al., 1960) and tends to operate as a 'shelter' against party switch (Dejaeghere and Dassonneville, 2017; Dassonneville and Dejaeghere, 2014 Lachat and Sciarini, 2002; Nicolet and Sciarini, 2006). Independents do not have any attachment to a party and cannot use it as a cue in their decision-making process (Dassonneville and Stiers, 2018; Lachat, 2007). They are, therefore, more susceptible to short-term changes.

In addition to individual characteristics, contextual factors, such as those relating to the party system, also matter.[1] On the one hand, party switching is more likely in a highly fragmented party system, where voters face many alternatives and where competition is fiercer, than in a system where only two or three parties compete. On the other hand, high polarization may hinder switching because voter-party distances are higher than in a system where parties are ideologically close to each other (Dejaeghere and Dassonneville, 2017).

2.2. Dynamics in cumulative issue ownership as a predictor of party switch

We add issue ownership considerations to the list of determinants of party switch during an election campaign. Issue ownership refers to the special link existing between voters, issues and parties (Walgrave et al., 2015). The issue ownership theory posits that parties 'own' specific issues, meaning that they are seen as more competent than their adversaries at handling them. The early issue ownership literature mainly attempted to explain parties' behavior (Budge and Farlie, 1983; Petrocik, 1996). It argued that parties emphasize those issues on which they have a comparative advantage and tend to downplay those on which their competitors are perceived as more competent. Scholars then shifted their analytical focus to the impact of citizens' perceptions about parties' issue competence on electoral choice, i.e. to issue ownership voting. They show that citizens' evaluations of parties' issue competence is a strong predictor of electoral choice: Voters tend to vote for the party they deem most competent at handling political issues (Bellucci, 2006; Lachat, 2014; Lanz, 2020Lutz and Sciarini, 2016), and this especially if those issues are important to them (Bélanger and Meguid, 2008).

Furthermore, while the early literature emphasized the stability of issue ownership (Petrocik, 1996), the recent literature has highlighted the possibility of short-term changes in voters' assessments of parties' issue competence. Looking at the sources of changes, some scholars find that party communication and media coverage lead to short-term shifts in voters' competence perceptions (Aalberg and Jenssen, 2007; Dahlberg and Martinsson, 2015; Tresch and Feddersen, 2018; Walgrave et al., 2009). Others delve into the consequences of these changes for electoral choice formation. Lanz and Sciarini (2016) find that short-term changes in issue ownership perceptions prompts instability in party choice: Voters who change their evaluation of the most competent party on the most important issue during the election campaign are more likely to convert to another party, than voters who hold stable perceptions with respect to the party they deem most competent. Refining the analysis with measures of citizens' perceptions about parties' competence on a range of issues, Petitpas and Sciarini, 2018 find that voters update their vote choice *in-line* with their change in issue competence evaluations. That is, voters who change their competence attribution on a given issue during the electoral campaign are more likely to activate or convert their vote to the party benefitting from that change.

The *single* issue ownership literature rests on the conception that citizens cast their vote for the party they deem most competent on *the* most important issue. In this paper, we point to another form of issue ownership voting, namely to *cumulative* issue ownership. We argue that the single issue ownership conception is too narrow and does not accurately capture the role of competence perceptions. On the party level, the argument of the issue ownership literature that parties focus their campaign on the issue they own has been challenged by the issue competition literature, which maintains that parties cannot select one issue and ignore all others (e.g. Green-Pedersen, 2007). To the contrary, vote-seeking considerations force parties to pay attention to issues owned by other parties. In that view, parties offer policy-packages to voters and attempt to increase their reputation of competence on several issues (Dahlberg and Martinsson, 2015), even if this implies 'issue trespassing' (Damore, 2004; Holian, 2004). Competition over issue competence is especially intense in multiparty systems, where it is unlikely that a given issue is owned by a single party (Kleinnijenhuis and Walter, 2014). In such a context, many issues are "shared" (Geys, 2012: 409) or "contested" (Bos et al., 2017: 761).

On the voters' side, one may also question the restrictive conception of the single issue ownership approach that voters base their choice on the party most competent on the most important problem. Instead, vot-

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[1] Further to the party system, campaign characteristics and media coverage may also play a role (e.g. see Geers and Bos, 2017; Johann et al., 2018), but they are beyond the scope of this paper.

ers are likely to consider a broader range of issues when evaluating parties (Karlsen and Aardal, 2016). Accordingly, scholars find that voters use their evaluations of parties' competence on a variety of issues when making their electoral choice (e.g. Bélanger and Meguid, 2008; Lachat, 2014; Lutz and Sciarini, 2016; Petitpas and Sciarini, 2018).

The finding that citizens' perceptions about parties' competence on multiple issues *taken separately* influences party choice raises the question of the effects of competence perceptions about several issues *taken together*. The concept of *cumulative issue ownership* was first coined by Karlsen and Aardal (2016), but the idea of looking at ownership on multiple issues dates back to Kuechler (1991), who introduced the distinction between "homogeneous" and "heterogeneous" competence evaluations. Perceptions are homogeneous if a voter names one and the same party as most competent on all issues under consideration, and are heterogeneous if a voter perceives different parties as most competent on those issues. Yet this binary conception is too crude. One should better conceive of cumulative issue ownership as a continuum, depending on the number of issues on which a voter perceives a party as most competent (Karlsen and Aardal, 2016: 262). This definition comes close to the notion of "generalized competence", according to which competence attribution operates through "issue transfer" (Green and Jennings, 2017: 81–82): Competence attribution on a given issue to a given party acts as a cue for other issues, so that citizens "transfer [their] competence ratings from an issue to another".

Cumulative issue ownership, in turn, is likely to affect party choice (Karlsen and Aardal, 2016; Kuechler, 1991). The higher the number of issues on which a party is deemed most competent, the more likely the vote for that party. Applying this causal argument to a dynamic framework, we expect that changes in citizens' cumulative issue competence attribution affect party switching. Suppose a voter rates a party as most competent on one issue at the outset of the election campaign, but ends up seeing that party most competent on four different issues. Suppose further that the increase in cumulative issue competence attribution occurs in favor of a different party than the one for which she initially intended to vote. The contrast between vote intention and competence attribution may act as a triggering signal. Realizing that her vote intention is no longer in line with her competence evaluations, the voter will tend to update her vote and convert to the party she now deems most competent on the four issues.

From that we derive our hypothesis that *the higher the increase in cumulative issue competence attribution in favor a party during the campaign, the higher the likelihood to switch to that party*.

3. Methodology

3.1. Data

To analyze the determinants of short-term stability and change in electoral choice and to assess how cumulative issue ownership fare in comparison to more classic predictors, we exploit data from an online panel survey carried out in the 2015 Swiss election study (Selects, 2016a). The initial sample was randomly drawn from the official register of the Swiss population (full coverage). Among the 29,500 sampled citizens 11,073 participated in the first wave, between June and August 2015. The second wave took the form of a Rolling Cross-Section, with about 120 interviews each day during the 62 days prior to the Election Day (October 18, 2015). After the election, participants to the first two waves were re-contacted to fill the third-wave questionnaire.

Among the 7581 respondents who participated in all three waves, we exclude those who had already voted when they filled the question-

naire of wave 2 (n = 972),[2] who did not vote (n = 1615), or who voted for a small party (n = 351). We also exclude missing values on the question about vote intention (n = 15).[3] In addition, we exclude observations from the small cantons of Nidwalden and Obwalden (n = 29), where only two parties competed and one of them was a small, local party. We also drop cases with missing values on the questions about parties' issue competence in the first (n = 225) or second wave (n = 764),[4] and on control variables (n = 335). As we focus on vote conversion, we further exclude voters who 'activated' during the campaign, i.e. who did not have a vote intention in the first wave but ended up voting for a party (n = 178). This leaves us with a sample of 3097 respondents.

3.2. Measures

The dependent variable is *party switching*. We capture the dynamics in party preferences by comparing the vote intention measured in the first wave to vote choice reported in the third wave. The party switch variable takes the value 1 if a citizen ended up voting for a different party than the one she mentioned in the first wave, and 0 if she holds a stable party choice. We focus on the seven main Swiss political parties receiving more than 90% of total votes.[5] Among the respondents in our study, 24% converted during the campaign (744 out of 3097).[6]

To measure *cumulative issue ownership*, we take advantage of a more detailed questions than the 'most important problem' (MIP) and 'most competent party' (MCP) questions. The questionnaire of the first two waves included questions about the party considered most competent on five salient issues[7]: Immigration, Europe, economy, social policy, and environment. We use these questions to compute an additive scale of citizens' perceptions of parties' competence ranging from zero to five, where a value of zero means that the voter sees the party as most competent on none issue, whereas a value of five means that a voter sees the party as most competent on all five issues. We then capture the dynamics in cumulative issue ownership perceptions by calculating the differences in the competence score between the first and the second wave. This helps to assess whether a voter attributes competence on a higher or lower number of issues to a given party during the campaign. More specifically, we rely on two distinct variables, one measuring a positive difference and one measuring a negative difference. Both vari-

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ables range from 0 to 5, with 0 standing for stability in cumulative issue ownership perceptions toward a given party and 5 standing for a maximal change, in favor or against a given party.

Fig. 1 gives a sense of the dynamics in issue ownership perceptions, by showing for each party the distribution of cumulative issue competence attribution in the first and in the second wave. We first see that in both waves only a tiny share of voters attribute competence on the five issues to the same party. Most voters have more differentiated views and attribute competence on the five issues to different parties. Not surprisingly, the four governmental parties are seen as most competent on a higher number of issues than the three small parties. Second, for all parties the dynamic of issue competence evaluations displays a mix of stability and instability during the election campaign.

On the one hand, the high density of dots in the diagonal cells are indicative of fairly strong stability in cumulative issue competence attribution – but this mainly holds for one or two issues. On the other hand, the high number of dots in cells in the upper-left and lower-right quadrants of Fig. 1 is indicative of a fairly strong instability: Many voters have changed the number of issue competence attributions to a given party between the two waves. Most of these changes relate to one or two issues. Only few respondents have changed their competence attribution to a given party on three, four, or five issues. In that sense, our data provides mixed evidence for the existence of 'issue transfer': Voters who make up their mind about the party most competent on a given issue do not necessarily do the same for all other issues under consideration.

Our model includes some additional controls relating to the five issues under study. First, we control for voter-party distances on those issues, as voters are more likely to switch their competence perceptions and their party preferences to a closer party. The question asked in the first wave presents issue-specific policy statements to respondents, with answers ranging from strongly in favor (1) to strongly against (5). For each respondent and each issue, a higher value indicates a higher distance with a party's position.[8] Second, to separate the 'competence' component from the 'salience' component of issue ownership, our model controls for the salience that respondents granted to each of the five issues. The saliency scale included in the first wave has four categories: 'rather not important', 'rather important', 'very important' and 'extremely important'. We group these five measures of issue salience in an additive scale to assess the overall level of issues' salience in the eyes of voters.

Further, we include a number of classic predictors of electoral volatility as controls in our model. First, we measure *political sophistication* with five factual knowledge questions asked in the second wave. More specifically, we rely on item response theory and use the factor scores resulting from a two-parameter logistic model (see appendix A for more details). Thus, our indicator for political sophistication is a latent trait taking into account the difficulty and the discrimination of the five knowledge items. Second, we measure political disaffection with a question asked in wave 3 about voters' *trust in political parties* at the national level on a 0 to 10 scale (where 10 means full trust). Third, our indicator for *ideology* is self-location on the left-right scale (0–10) measured in wave 1, whereby we assume that respondents located at both poles of the scale have a more extreme ideology than respondents who opt for the center of the scale. Fourth, *party identification* is measured in wave 1 and, following previous studies (e.g. Lachat, 2015; Green and Jennings, 2017), we distinguish between the 'identifiers' (respondents who feel close to the party in question), the 'rivals' (who

feel close to another party) and the 'independents' (who do not feel close to any party). As mentioned in the theory section, party identification acts as a barrier against volatility. In addition, party identification is a major driver of issue ownership perceptions (Stubager and Slothuus, 2013). Controlling for party identification thus helps to reduce the risk that voters' assessments of parties' issue competence are mere artifacts of party identification. Fifth, to control for potential time and campaign effects we include the number of days elapsed between the interview date in the second wave and the Election Day, and a measure of self-reported attention to the campaign included in the second wave. Finally, we also control for the usual sociodemographic suspects: age, sex, education, religious affiliation, and linguistic region.

Turning to context-level variables, we include measures of party system polarization and fragmentation on the cantonal level, thus taking advantage of the strong variations existing in electoral competitiveness between Swiss cantons (Goldberg and Sciarini, 2014; Lachat, 2011 – see appendix B).

3.3. Model

To analyze intra-campaign changes in voters' party preferences ('party switching'), we estimate a cross-classified multilevel logistic regression on a stacked dataset in which a voter appears as many times as there are parties. Accordingly, the unit of analysis is the respondent-party combination. This enables us to test if conversion to a party is in-line with the dynamics in citizens' issue competence perceptions regarding that party. As the observations are not independent within each respondent, party, and canton, we introduce varying intercepts at each level. This results in the following model specification, where the parentheses account for the cross-classification:

$$\eta_{i(jkl)} = \alpha + \beta_1 \Delta cumul\_pos_{i(jkl)} + \beta_2 \Delta cumul\_neg_{i(jkl)} + \beta_3 cumul\_w1_{i(jkl)} + \beta^T X_{i(jkl)} + \mu_{1j} + \mu_{2k} + \mu_{3l} + \varepsilon_i$$

where $\eta_{i(jkl)}$ is the probability for respondent j living in a canton k, to switch her vote to a party l at the observation level i. The main parameters capture the positive and negative dynamics in cumulative issue ownership ($\Delta cumul\_pos$ and $\Delta cumul\_neg$), and the competence perceptions (cumulative issue ownership) in wave 1 ($\Delta cumul\_w1$) to control for the 'starting point' of these dynamics. The other variables and controls are in a matrix X with a vector of β^T coefficients. In line with the discussion above, we introduce a squared term for ideology. The terms $\mu_{(n)}$ and ε denote the varying intercepts for the respondents, the cantons, the parties, and the respondent-party error term, respectively. We estimate this model in a Bayesian framework (see appendix C for details about the data structure and the estimation).

4. Results

Fig. 2 shows the results of the regression model with different Highest Density Intervals (HDIs, the full table appears in appendix D). In table D, the point-estimate is the median of the posterior distribution and represents the most probable value of the parameter. It is comparable to the coefficient in a frequentist framework. The HDIs describe the uncertainty around the parameters (see Makowski and Lüdecke, 2019). To better grasp the magnitude of the effects, we calculate the predicted probabilities to switch to a given party, while setting the other covariates at their means or reference value (see Fig. 3 for the main variable of interest and appendix E for other variables).

Fig. 2 highlights the strong influence of changes in cumulative issue ownership perceptions on party switching. In line with our hypothesis, the likelihood to convert to a party rises with the increase of the number of issues on which that party is considered most competent (median = 0.54, 89% HDI [0.45,0.63]): The effect of a positive increase in cumulative issue ownership has 89% chance of falling be-

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[8] Following Singh (2014), we compute linear distances instead of quadratic ones with the following formula:

$$distance_{ijk} = | v_{ik} - p_{jk} |$$

, where v is the position of a voter i on an issue k and p is the position of a party j on an issue k, calculated by the average position of its electorate (as defined by the vote intention in the first wave).
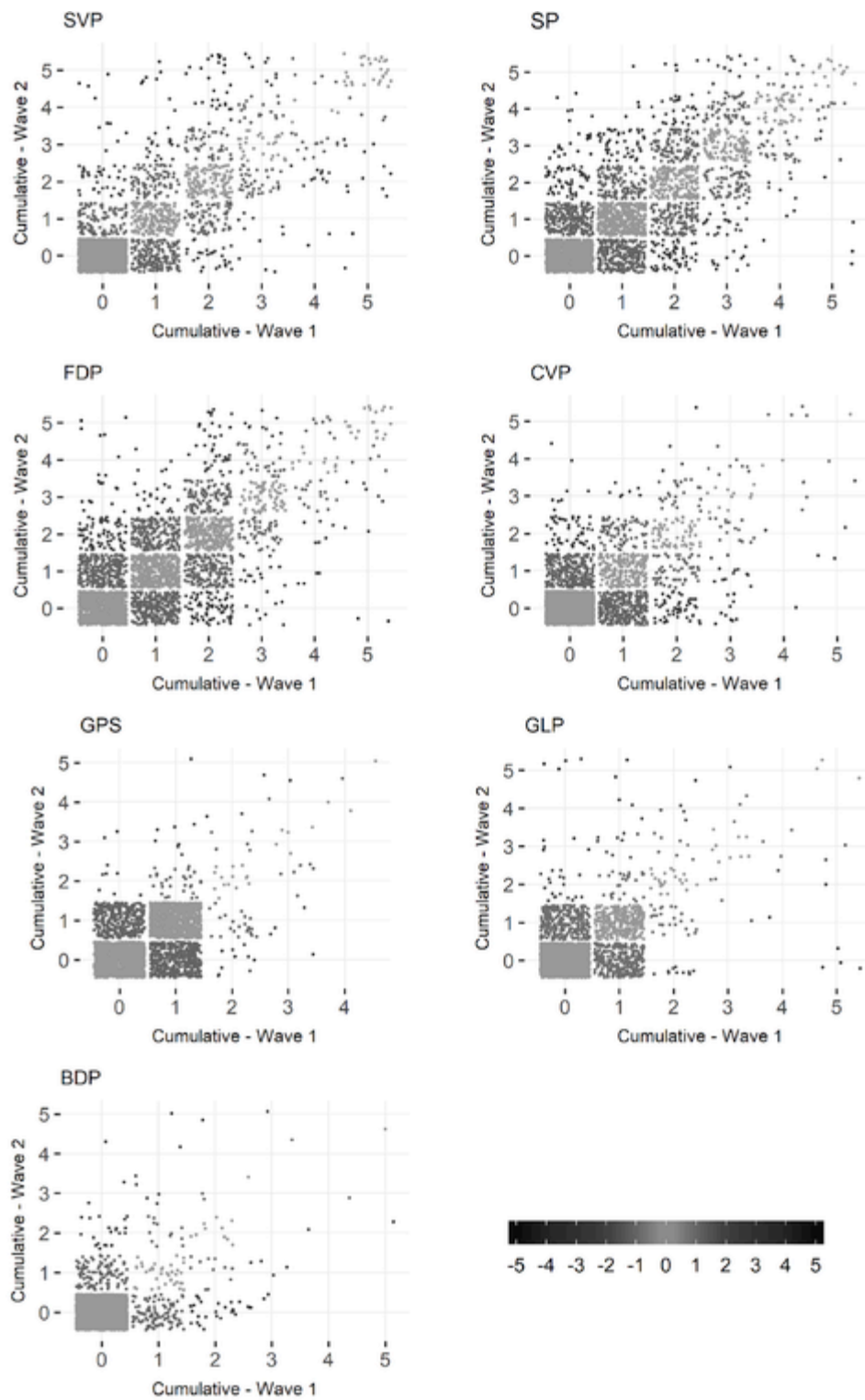
Note: Each dot is a respondent (n=3,097). Reading example: Dots at $x = 1$ and $y = 3$ in the SVP chart represent voters who perceived this party as the most competent on only one issue in the first wave, but on three issues in the second wave.

Fig. 1. *The dynamics of cumulative issue ownership.* Note: Each dot is a respondent (n = 3097). Reading example: Dots at $x = 1$ and $y = 3$ in the SVP chart represent voters who perceived this party as the most competent on only one issue in the first wave, but on three issues in the second wave.
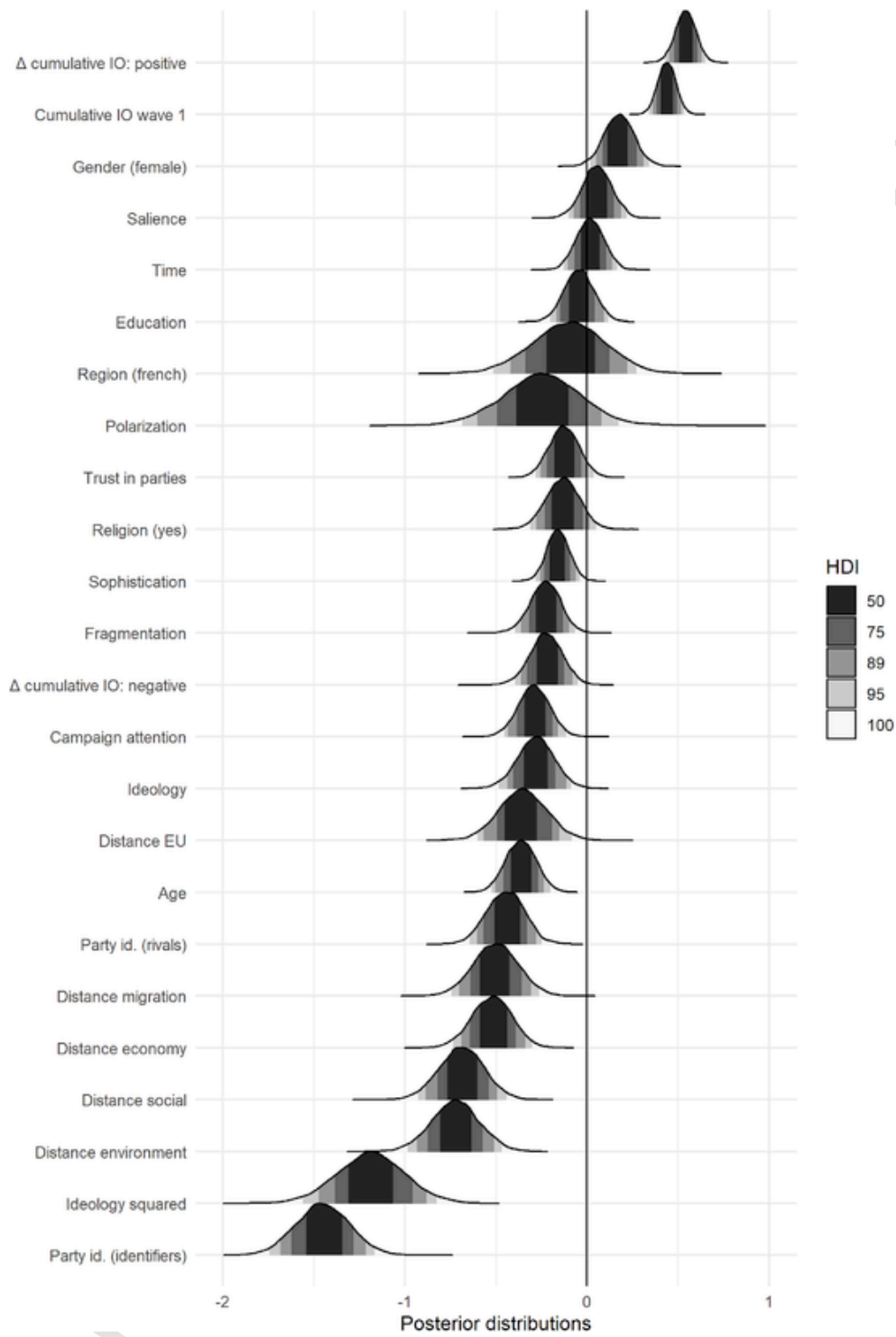
Fig. 2. *The determinants of party switching (multilevel logit models).*

tween 0.45 and 0.63.[9] Fig. 3 shows that the probability to switch to a party increases by 0.36 for people who see that party as most competent on five more issues. Of course, people who change their competence attribution in favor of a party on all five issues are rather the exception in our data (see Fig. 1). Yet even more moderate – and empiri-

cally more frequent – changes in cumulative issue ownership have a strong effect. Thus, people who see a party as most competent on two (three) more issues during the campaign have a 0.07 (0.15) higher probability to convert to that party. Interestingly, a decrease in cumulative issue competence perceptions has a negative impact on the likelihood of party switching, but the size of the effect is smaller than that of an increase (see also appendix E, figure E1).

Commenting on the classic predictors of intra-campaign party switching (see appendix E, figure E2), the likelihood to convert to a

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[9] Note that this effect comes in addition to that of cumulative issue ownership in wave 1, which also has a sizeable effect on the likelihood of party switch.
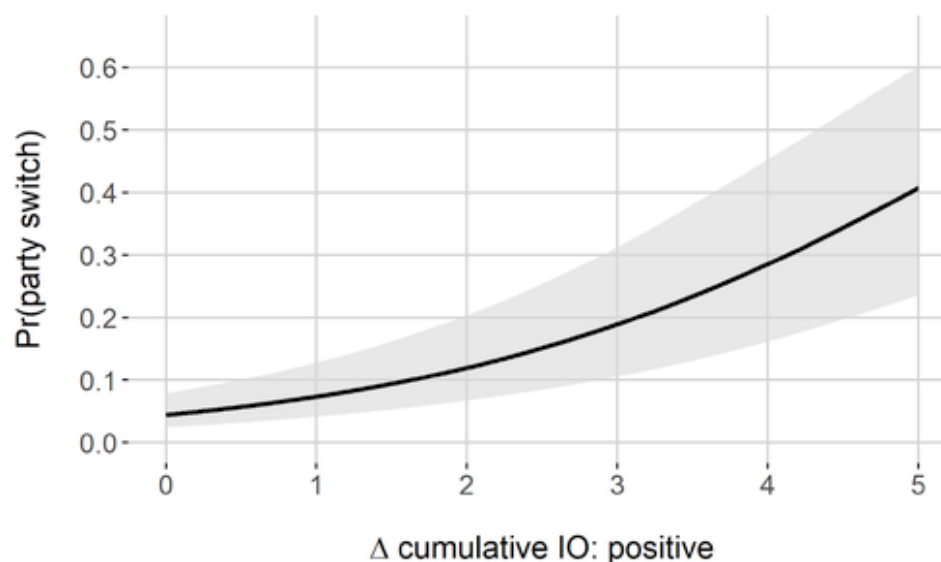
Note: Predicted probabilities and related 95% credible intervals.

Fig. 3. *Dynamic of cumulative issue ownership and party switching.* Note: Predicted probabilities and related 95% credible intervals.

given party decreases as sophistication increases,[10] and increases as trust towards political parties decreases. This tends to confirm that sophisticated voters are more resistant to change, whereas dissatisfied voters are more volatile. However, the effect of these two predictors is quite small (a decrease of 0.02 in the probability) and uncertain. Voters who identify with a party are less likely than independent voters to convert their vote, but the size of the effect is again low (identifiers have a 0.04 lower probability to switch than independents). Ideology shows the expected curvilinear pattern and a similar magnitude than party identification: The odds of party switch are smaller for voters with a more extreme ideological profile. Further, the likelihood to switch to a party decreases as the party-voter distances on a given issue increase. For example, voters that are close to a party on the environmental issue have a 0.06 higher probability to switch their vote to that party than voters holding a distant position. Finally, the stability of party choice increases with age and campaign attention. In sum, the impact of the classic predictors on party switching is small. The size of the effect does not exceed 0.07, which is comparable to a small change in cumulative issue ownership (i.e. a one unit change), but far weaker than the effect of a major change in cumulative issue ownership (i.e. more than a two unit change).

On the contextual level, the polarization of the party system does not influence short-term volatility, while a more fragmented party system decreases the likelihood to switch. As an explanation for the latter, counter-intuitive result, one may point to the complexity of a system with many parties, which may discourage voters to seek information and update their party choice.

5. Robustness tests

We submit our results to a number of robustness tests (all models appear in appendix F, table F1). First, we check whether the impact of cumulative issue ownership also holds if we simultaneously include the standard, *single issue-ownership* measure and related changes during the

election campaign (model 1).[11] To that end, we rely on the usual MIP and MCP questions asked in the first and second wave of the panel. We include a dummy variable capturing whether a voter changes her perception of the MIP and two dummies measuring whether she changes her mind with respect to the most competent party to solve the MIP in favor of a given party ('positive' change) or at the expense of that party ('negative' change). In addition, we include an interaction term between the change in MIP and the positive change in MCP. The results show that the inclusion of the dynamics in MIP/MCP weakens the influence of the dynamics in cumulative issue ownership, which nevertheless remains sizeable (figure F1). Further, a change in single issue ownership evaluations also has an impact on party switching (figure F1): Regardless of whether they change their evaluation of the most important problem, voters who change their perceptions about the party they see most competent to solve the most important problem have a 0.08 higher probability to shift their vote accordingly.

Second, we address the issue of endogeneity between party preferences and competence perceptions (Vliegenthart and Lefevere, 2017, see also Walgrave and Soontjens, 2019). As mentioned above, our design makes sure that the measure of voters' party switching (between the first and the third wave) is posterior to the measure of change in issue competence attribution (between the first and the second wave). However, this does completely rule out the risk of reverse causality. That is, there is still a risk that respondents changed their vote intention between the first and the second wave, and rationalized this change in the third wave, by naming as most competent the party for which they intended to vote in the second wave.

To get a finer-grained view on this, we interact the positive cumulative issue ownership dynamics with the vote intention in the second wave (where '1' means that a voter intends to vote for the party in

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[10] We also tested a model with a quadratic term for sophistication, but found no effects.

[11] There is a relationship between single and cumulative issue ownership, but it is in no way deterministic: Among respondents mentioning a party as the most competent to solve the most important problem, the average score of cumulative issue ownership for that party hardly exceeds 2. Thus, for a standard voter seen as most competent to solve the most important problem is not the one seen most competent on the three other issues under study. Taking into account that the five issues on which the cumulative measure is based are also the five MIPs on the aggregate level, the relationship between single and cumulative issue ownership is in fact weak.

question and '0' otherwise). This enables us to distinguish respondents who changed both their competence attribution and their vote intention in favor of a given party between the first and the second wave, from those who changed their competence attribution between the first and the second wave and changed their party choice between the second and the third wave. In the former scenario, we cannot exclude that respondents rationalized their change in party choice *a posteriori*. In the latter scenario, we can be confident that party switching is the consequence of a change in cumulative issue ownership. The results appear in appendix F, model 2, figure F2. A change in cumulative issue ownership has a positive and strong effect on party switching for both groups of voters, i.e. regardless of whether party switch took place between wave 1 and wave 2 or between wave 2 and wave 3.

Third, we test a model (in appendix F, table F1, model 3) with interaction terms between cumulative issue ownership and political sophistication, as knowledgeable citizens tend to use a greater variety of decision-making criterion (see Stubager et al., 2018). Yet the results do not show any moderation effect. In the same model, we also introduce an interaction term between cumulative issue ownership and overall issue salience. While some studies found that issue ownership voting is higher for issues that are more important to voters (e.g., Bélanger and Meguid, 2008), salience does not condition the effect of cumulative issue ownership in our data.

Finally, our measure of cumulative issue ownership dynamic does not differentiate a voter who attributes competence to a party on two issues in wave 1 (e.g. migration and Europe) and on two other issues in wave 2 (e.g. economy and social), from a voter who attributes competence to a party on two same issues in both waves. To distinguish these two configurations, we add a dummy variable taking the value 1 in the former case and 0 in the latter case (appendix F, model 4). This does not affect the results.

6. Conclusion

This paper contributes to the literature on intra-campaign party switching by investigating the role of the dynamic in issue ownership perceptions, and it adds to the standard single issue ownership approach by drawing attention to cumulative issue ownership. We claim that party switching depends on voters' changes in perceptions regarding parties' competence on a combination of issues. That is, we claim that voters take into account the policy-packages offered by parties and use their evaluations of parties' competence on multiple issues as decision-making criteria.

To test our hypotheses, we have estimated multilevel models on panel data from the 2015 Swiss election study. Our findings show that the short-term dynamic in voters' perceptions about parties' competence is highly consequential. The higher the increase in the number of issues on which a voter attribute competence to a party during the electoral campaign, the higher her likelihood to convert to that party. A decrease in cumulative issue competence attribution has the opposite – albeit smaller – effect, meaning that it reduces the odds of switching to the corresponding party. The strength of the effects of changes in cumulative issue ownership perceptions is all the more remarkable since it holds in models controlling for the classic predictors of party switching – and it is in fact comparatively higher than that of the classic predictors. Moreover, by shedding light on the effects of the dynamics in cumulative issue ownership perceptions, our results show that many citizens cumulate their evaluations about parties' competence on a number of issues when forming their electoral choice, and thus adopt a broader approach than assumed by the single issue ownership conception.

Our results bear normative and practical implications. On the normative side, they tend to demonstrate that short-term changes in voting preferences do not occur at random. Quite to the contrary, citizens tend to update their vote intention in accordance with their underlying po-

litical attitudes, and more especially with their evaluations of parties' issue competence. This is reassuring in terms of voters' capacity to make consistent decisions. On the more practical side, our results speak to political parties and electoral campaign practitioners alike. They suggest that political parties can make important short-term electoral gains if, by communicating on their policy proposals, they are able to convince voters about their competence at handling issues. By the same token, our findings do not back the view that parties should focus their electoral campaign on *the* issue they own. Instead, they indicate that parties can win votes if they campaign on a variety of (important) issues (see also Greene, 2018; Gerber et al., 2015).

While our study focuses on a single country, it has broader implications beyond the Swiss case. On the one hand, the question whether issue ownership voting is sensitive to the context, i.e. whether it is stronger or weaker in more fragmented or more polarized party systems, is debated (contrast e.g. Green and Hobolt, 2008 to Pardos-Prado, 2012). According to a recent comparative study, issue ownership voting matters in most countries, regardless of the degree of polarization or fragmentation of the party system (Lanz, 2020(. If this holds, we can be confident that the results from our Swiss study will travel well to other countries.

On the other hand, assuming that issue ownership voting is conditional on the context, Switzerland may be seen as a 'hard case' in that respect, i.e. a case where issue ownership voting is arguably weaker than elsewhere. First, in the Swiss 'consensus democracy' with a very stable partisan composition of government and strong power sharing mechanisms (Lijphart 2012; Vatter, 2008), the clarity of responsibility is low. This, in turn, complicates voters' evaluation about the performance of specific governing parties. Second, by enabling citizens to decide on policy issues in popular votes, direct democracy is said to reduce the influence of issue voting on electoral choice (e.g. Holzer and Linder, 2003). Therefore, the influence of the dynamics of cumulative issue ownership on party switching uncovered in this article is presumably also at work – and perhaps more forcefully so – in other contexts. Moreover, while we focused on a specific type of volatility (i.e. on change in party preference between vote intention and vote choice), our argument about the role of cumulative issue ownership could also help to highlight other campaign effects, such as activation. We hence wish to encourage scholars to include the battery of items measuring voters' perceptions about parties' competence on a range of issues in other election studies with a longitudinal (pre-post) design. The battery is easily replicable and it offers a more comprehensive view of issue ownership perceptions.

Declaration of competing interest

None.

Author statement

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Color

None.

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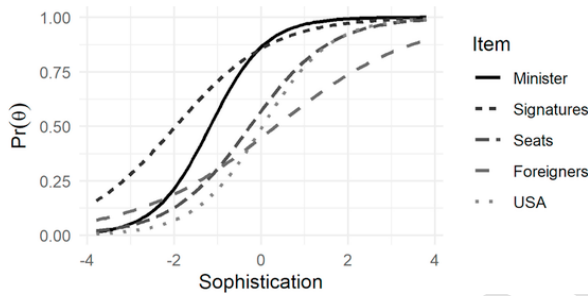## Appendix A. Political sophistication measure

The knowledge items in the second wave of the panel are about:

- The name of the Swiss Minister of Foreign Affairs
- The required number of signatures for a federal initiative
- The party which had second most seats in the National Council
- The percentage of foreigners in Switzerland in 2014
- The name of Vice President of the USA

For each binary item, 0 indicates a wrong answer and 1 a right answer.

For model selection, we ran a 1 PL, 2 PL, and 3 PL models. According to the likelihood ratio tests, the PL2 model perform better than the PL1 and the PL3 models. A unidimensionality test using modified parallel analysis (Drasgow and Lissak, 1983; Rizopoulos, 2006) shows that there is only one dimension, allowing us to construct our measure in extracting the factor scores. The item-fit statistics indicate that we can reject the hypothesis that the items do not fit the model. All these results are available upon request.

The Item Characteristic Curves show the probability of a right answer (y) against the estimated political sophistication latent dimension (x). It allows observing the difficulty and the discriminability of each item.

The Item Information Curves show that some items provide more information about political sophistication for different levels of political sophistication.
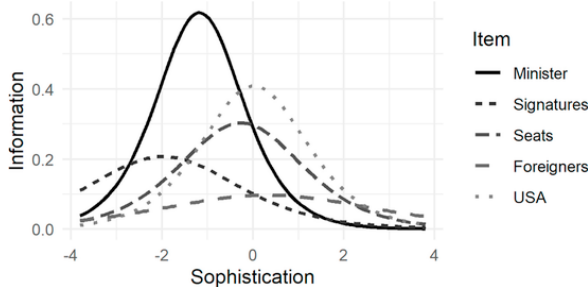
Appendix B. Party system measures

- Polarization (Taylor and Herman, 1971; Lachat, 2011):
$$\Sigma_{j=1}^{7} v_j (p_j - \bar{p})^2$$

Where v_j is the vote share of party j in 2015, p_j is the position of party j on the left-right scale according to the post-election survey respondents (Selects, 2016b), and $\bar{p}$ is the weighted average position on this dimension, that is: $\bar{p} = \Sigma_{j=1}^{J} v_j p_j$

The following cartogram display the Swiss cantons and their levels of polarization:
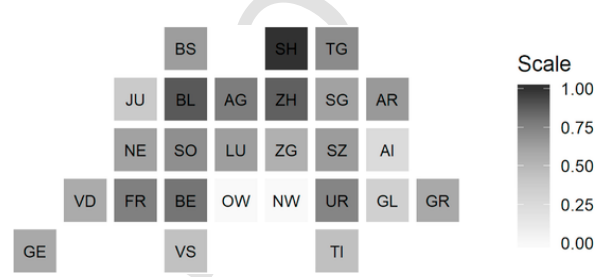
- Fragmentation

To measure party fragmentation, we rely on the effective number of parties (Laakso and Taagepera, 1979), which measures the number of available options for the voters in a given canton, taking into account parties' size. The effective number of parties is calculated as follows:

$$Eff. Nr. Parties = \frac{1}{\Sigma_{j=1}^{J} v_j^2}$$

where the denominator is the sum of the v_j squared vote shares for each party in each canton.

The following cartogram display the Swiss cantons and their levels of fragmentation:
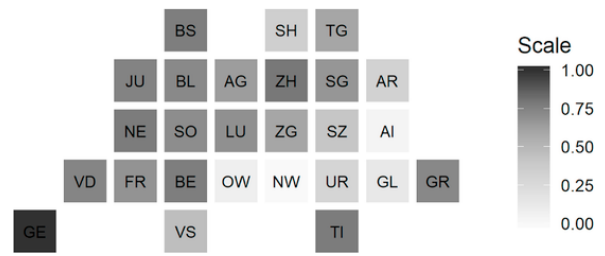
Note: code source for the cartograms from Invalid Input (2017). In the polarization cartogram, the cantons of Obwalden (OW) and Nidwladen (NW) are missing.

Appendix C. Data structure and estimation

The following unit diagram represent the data structure.
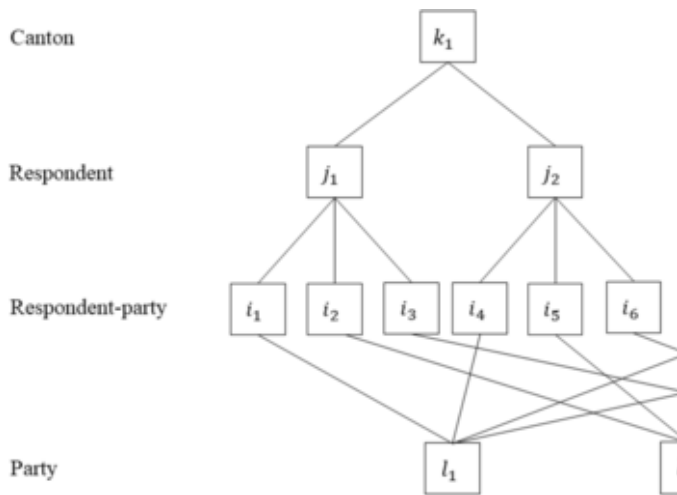
We estimated the regression models with the `brms` package for R (Bürkner, 2017) based on Stan language (Carpenter et al., 2017). For each model, we ran 4 chains with 1000 warmup iterations, 3500 post-warmup iterations, and a thin of 1, resulting in a total of 10,000 post-warmup samples. This 'low' number of posterior samples is sufficient as we use the No-U-Turn Sampler based on Hamiltonian Monte Carlo chain algorithm (see Hoffman and Gelman, 2014) that is more efficient than other samplers such as Gibbs (Bürkner, 2017). In addition, it allows estimating complex models (Bürkner, 2018; Gelman et al., 2013; McElreath, 2016).

To evaluate convergence, we checked the trace plots, the autocorrelation plots, the effective sample size, and the $\hat{R}$ value (Gelman and Rubin, 1992) for each model and each parameter. For all of them, the traces show stationarity across chains with a constant mean and variance, the autocorrelation tends to zero as the number of iterations increases, the effective sample size are not lower than 2000, the Monte Carlo standard errors are equal or lower than 0.01, and the $\hat{R}$ are lower than 1.01. In addition, there are no divergent transitions. To sum-up, all the models show convergence.

We defined normal non-informative priors for the parameters and half Student-t non-informative priors for the varying intercepts. We specified the following hyperparameters: $N(0, 10)$ and $Student - t(3, 0, 10)$, respectively.

To compare the models, we computed LOO information criterion (leave-one-out cross-validation, see Vehtari et al., 2017) where lower values indicate a better fit.

Appendix D. The determinants of party switching *(multilevel logit model)*

|	Median	s.e	89% HDI	
			Lower	Upper
Intercept	−1.70	0.31	−2.24	−1.21
Sophistication	−0.16	0.06	−0.26	−0.06
Party id. (=identifiers)	−1.45	0.15	−1.69	−1.22
Party id. (=rivals)	−0.45	0.11	−0.60	−0.28
Ideology	−0.28	0.10	−0.44	−0.12
Ideology squared	−1.19	0.18	−1.47	−0.88
Trust political parties	−0.13	0.08	−0.26	0.00
Salience	0.05	0.08	−0.07	0.19
Distance EU	−0.35	0.13	−0.57	−0.15
Distance migration	−0.50	0.12	−0.70	−0.31
Distance social	−0.69	0.12	−0.89	−0.49
Distance environment	−0.72	0.13	−0.94	−0.51
Distance economy	−0.52	0.11	−0.69	−0.34
Campaign attention	−0.29	0.09	−0.44	−0.16
Time before election day	0.02	0.08	−0.11	0.14
Gender (=female)	0.18	0.08	0.05	0.31
Age	−0.36	0.08	−0.50	−0.24
Religion (=yes)	−0.13	0.09	−0.28	0.01
Region (=french)	−0.10	0.20	−0.42	0.22
Education	−0.04	0.08	−0.17	0.09
Polarization	−0.25	0.21	−0.61	0.08
Fragmentation	−0.23	0.08	−0.36	−0.10
Cumulative IO wave 1	0.44	0.05	0.36	0.52
Δ cumulative IO: positive	0.54	0.06	0.45	0.63
Δ cumulative IO: negative	−0.23	0.09	−0.36	−0.08
Group variables (sd and s.e)				
Canton	0.45	0.12		
Respondent	0.07	0.05		
Party	0.67	0.27		
N canton	24			
N respondent	3097			
N party	7			
N observations	20970			
LOO (looic and s.e)	5780.2	161.8		

Appendix E. Dynamic of negative cumulative issue ownership and the classic predictors of party switching

Fig. E1
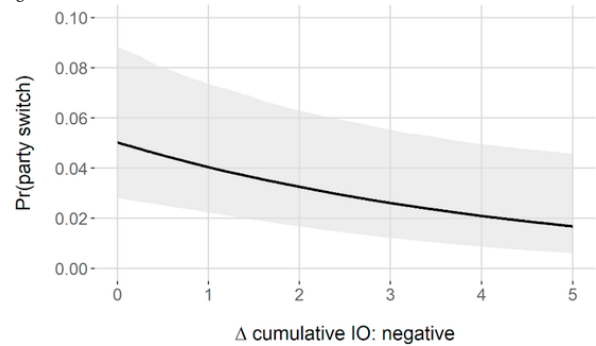
Dynamic of negative cumulative issue ownership and party switching. Note: Predicted probabilities and related 95% credible intervals.

Fig. E2
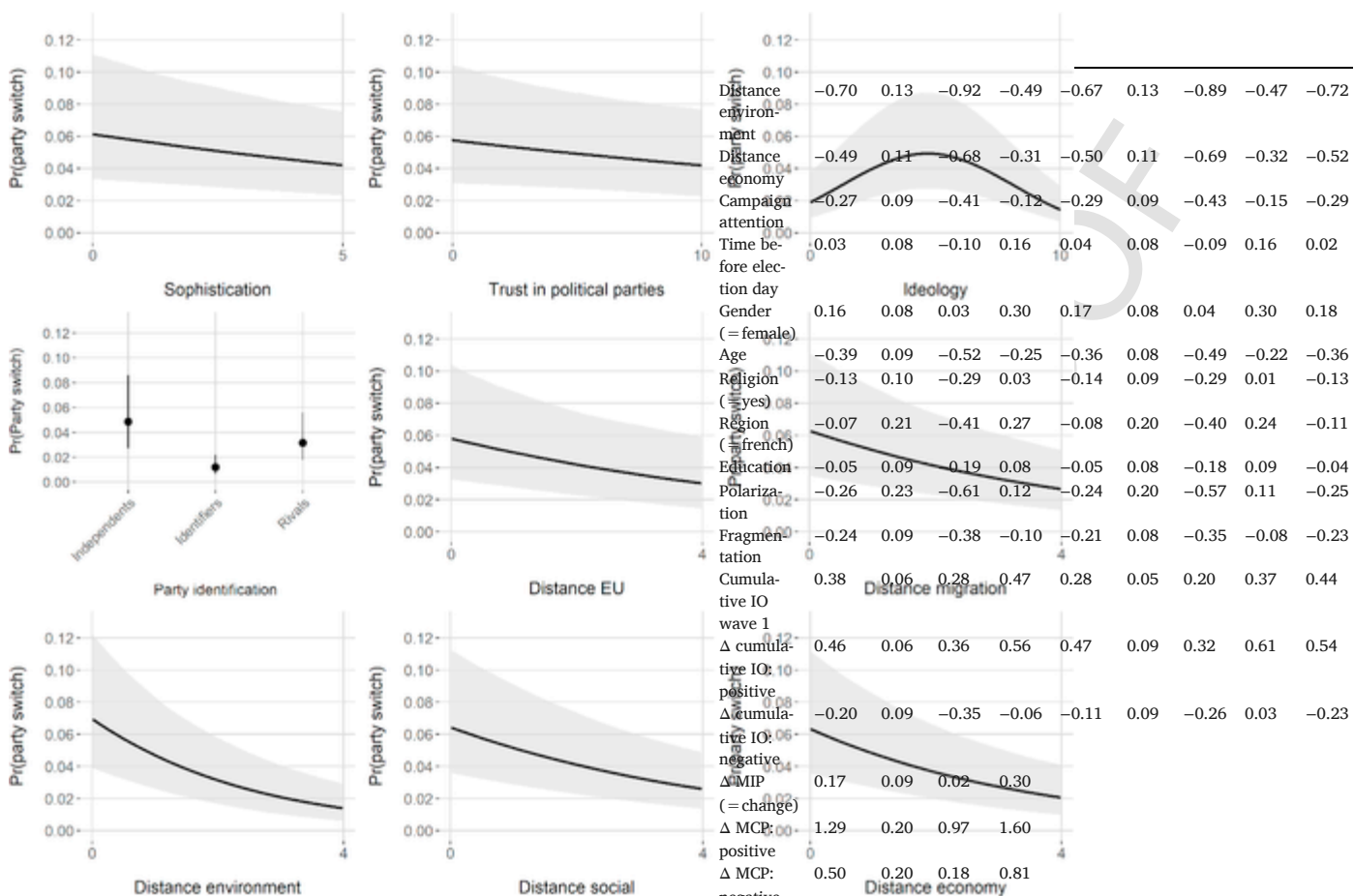
The classic predictors of party switching. Note: Predicted probabilities and related 95% credible intervals.

(Figures: Sophistication; Trust in political parties; Party identification; Distance EU; Distance environment; Distance social)

Appendix F. Robustness checks

Table F1

The determinants of party switching (multilevel logit models).

	(1)				(2)				(3)			
	Med.	s.e.	Low	Upp	Med.	s.e.	Low	Upp	Med.	s.e.	Low	Upp
Intercept	−1.96	0.31	−2.48	−1.45	−2.01	0.31	−2.55	−1.50	−1			
Sophistication	−0.18	0.06	−0.28	−0.08	−0.15	0.06	−0.24	−0.05	−0			
Party id. (=identifiers)	−1.62	0.16	−1.86	−1.35	−1.99	0.16	−2.24	−1.73	−1			
Party id. (=rivals)	−0.48	0.11	−0.66	−0.31	−0.26	0.11	−0.42	−0.09	−0			
Ideology	−0.26	0.10	−0.42	−0.09	−0.27	0.10	−0.43	−0.10	−0			
Ideology squared	−1.19	0.19	−1.51	−0.89	−1.21	0.19	−1.49	−0.89	−1			
Trust political parties	−0.13	0.09	−0.26	0.00	−0.12	0.08	−0.25	0.01	−0			
Salience	0.07	0.08	−0.07	0.20	0.05	0.08	−0.08	0.18	0.1			
Distance EU	−0.30	0.13	−0.51	−0.09	−0.32	0.13	−0.53	−0.12	−0			
Distance migration	−0.43	0.13	−0.64	−0.24	−0.44	0.12	−0.64	−0.24	−0			
Distance social	−0.66	0.13	−0.85	−0.45	−0.65	0.12	−0.84	−0.45	−0			
Distance environment	−0.70	0.13	−0.92	−0.49	−0.67	0.13	−0.89	−0.47	−0.72			
Distance economy	−0.49	0.11	−0.68	−0.31	−0.50	0.11	−0.69	−0.32	−0.52			
Campaign attention	−0.27	0.09	−0.41	−0.12	−0.29	0.09	−0.43	−0.15	−0.29			
Time before election day	0.03	0.08	−0.10	0.16	0.04	0.08	−0.09	0.16	0.02			
Gender (=female)	0.16	0.08	0.03	0.30	0.17	0.08	0.04	0.30	0.18			
Age	−0.39	0.09	−0.52	−0.25	−0.36	0.08	−0.49	−0.22	−0.36			
Religion (=yes)	−0.13	0.10	−0.29	0.03	−0.14	0.09	−0.29	0.01	−0.13			
Region (=french)	−0.07	0.21	−0.41	0.27	−0.08	0.20	−0.40	0.24	−0.11			
Education	−0.05	0.09	−0.19	0.08	−0.05	0.08	−0.18	0.09	−0.04			
Polarization	−0.26	0.23	−0.61	0.12	−0.24	0.20	−0.57	0.11	−0.25			
Fragmentation	−0.24	0.09	−0.38	−0.10	−0.21	0.08	−0.35	−0.08	−0.23			
Cumulative IO wave 1	0.38	0.06	0.28	0.47	0.28	0.05	0.20	0.37	0.44			
Δ cumulative IO: positive	0.46	0.06	0.36	0.56	0.47	0.09	0.32	0.61	0.54			
Δ cumulative IO: negative	−0.20	0.09	−0.35	−0.06	−0.11	0.09	−0.26	0.03	−0.23			
Δ MIP (=change)	0.17	0.09	0.02	0.30								
Δ MCP: positive	1.29	0.20	0.97	1.60								
Δ MCP: negative	0.50	0.20	0.18	0.81								
MCP wave 1	0.25	0.17	−0.03	0.53								
Δ MIP × Δ MCP positive	−0.25	0.23	−0.6	0.14								
Vote intention wave 2					1.33	0.13	1.12	1.53				
Δ cumul IO: pos. × vote int. W2					−0.10	0.11	−0.29	0.08				
Soph. × Δ cumul IO: pos.									0.04			
Salience × Δ cumul IO: pos.									−0.11			
Issue divergence												
Group variables (sd and s.e)												
Canton	0.48	0.13			0.44	0.13			0.46			
Respondent	0.07	0.05			0.07	0.05			0.07			
Party	0.61	0.26			0.64	0.28			0.67			
N canton	24				24				24			
N respondent	2966				3097				3097			
N party	7				7				7			
N observations	20082				20970				20970			

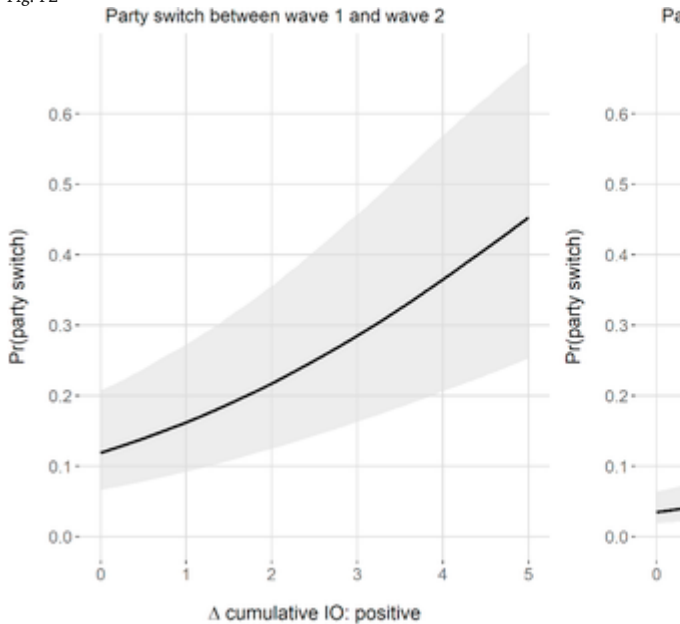|					
LOO (looic and s.e)	5382.8	156.4	5682.1	161.6	5782.6

Med. = median; s.e. = standard errors; Low = lower bound of the 89% HDI; Upp = upper bound of the 89% HDI.

Fig. F1
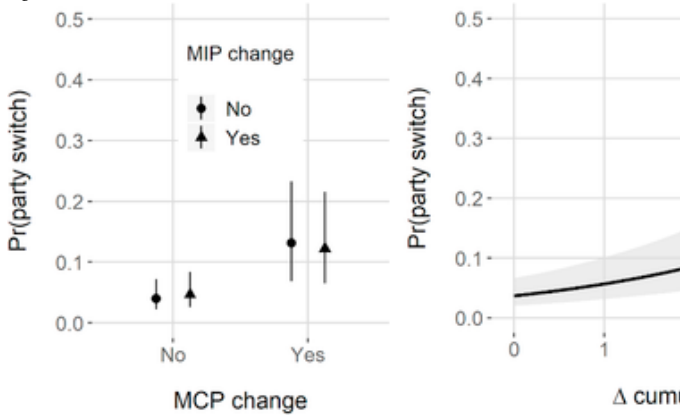
Dynamics of MIP/MCP, cumulative issue ownership, and party switching (model 1). Note: Predicted probabilities and related 95% credible intervals.

Fig. F2

Dynamics of cumulative issue ownership and party switching, depending on the timing of party switching (model 2). Note: Predicted probabilities and related 95% credible intervals.

Appendix D. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.electstud.2020.102118.

Uncited references

Dassonneville and Dejaeghere, 2014; ; .

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