

ARTICLE

Primaries Through the Looking Glass: The Electoral Effects of Opening the Selection of Top Candidates

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Abstract

This article revisits the foundations of prior research on the effects of plebiscitarian selection mechanisms on candidates' electoral strength. While previous studies do not nest political parties' decision making, the authors argue that party primary effects entail the interdependence of party procedures for candidate selection. The article assesses the validity of the two approaches. Using original data from seven parties and 296 regional elections in Canada, Germany and Spain, and from sixty-two pre-election polls in Germany and Spain, it shows that, other things equal, primary-selected candidates are not stronger than those selected by other procedures. However, there is evidence of a penalty for parties that do not select candidates by primary when their main rival does, in particular when the primary election is not divisive and is held closer to the general election.

Keywords: political party; leader; election; primaries

Plebiscitarian mechanisms to select candidates and leaders are increasingly popular in electoral democracies (Cross and Pilet 2015). In a sample of seventy-one parties in twenty-three democracies circa 2012, Kenig et al. (2015) found that half of the party leaders were elected by inclusive selectorates (members, supporters, both or voters).

A thriving body of research has in recent years examined the causes and/or consequences of party primaries in both presidential and parliamentary regimes (see Sandri, Antonella and Venturino (2015) or Cross et al. (2016) for a presentation of the state of the art). In this article we focus on the electoral effects of party primaries. We follow Sandri, Antonella and Venturino (2015, 11) and define party primaries as 'the internal elections for selecting political leaders or candidates for office (either for parliamentary elections or for chief executive mandates, at all levels) that entail full membership votes (closed primaries), or votes by members, sympathisers and registered voters (open primaries)'.

According to the *primary penalty hypothesis*, primaries generate weaker candidates than do other selection mechanisms because they produce ideologically extremist candidates and/or open up internal divisions within parties. According to the *primary bonus hypothesis*, primary-selected candidates are stronger than those chosen by other procedures because primaries bring democratic legitimacy, generate candidates with broad popular appeal, and/or encourage consensus within coalitions of parties that seek to endorse a joint candidate. Finally, it has been suggested that the electoral effect of primaries is contingent on their degree of inclusiveness, their divisiveness and/or the timing of primaries. However, the empirical evidence is mixed at best, and therefore the debate remains open.

We use a different approach to explore the electoral effects of primaries. While previous studies do not nest parties' and citizens' decision making, our main argument is that party primary

effects entail the interdependence of party procedures for candidate selection. In empirical terms, the conventional use of a dummy variable, *Primary (Yes/No)* is replaced with a dummy variable that captures four different scenarios: (1) all of the main candidates are nominated by primaries; (2) only the main rivals' candidates are nominated by primaries; (3) only the party's own candidate is nominated by primaries and (4) none of the main candidates are nominated by them.

By analyzing the electoral consequences of primaries, we contribute to an old debate within the literature about the consequences of the internal organization of political parties – the trade-off between intraparty decision making and parties' electoral results. According to the classical 'iron law of oligarchy', to be effective fighting machines, parties have to be organized along oligarchic rather than 'democratic' lines. In Michels' words (1949, 42), 'for a party to be able to react with sufficient speed to events and moves by other parties "a certain degree of caesarism" is required'. However, in a recent article, Lehrer et al. (2017) show that 'democratic' parties (measured as rank-and-file members' ability to select the party leader) respond more strongly to rival political parties than undemocratic parties due to the information that influences core supporters, who are the same constituency that ultimately influences the policy platforms of democratic parties. By examining the interdependence of parties' procedures for candidate selection, our research will help determine whether the trade-off holds.

We assess the validity of both approaches using two different data sets on the branches or wings of seven national parties in 296 regional elections in Canada, Germany and Spain from 1990 to 2017 and sixty-two pre-election polls in Germany and Spain. We show that, other things equal, primary-selected candidates are neither stronger nor weaker than those selected by other procedures. This does not mean, however, that primaries are ineffectual. We find evidence of a *penalty* for parties that not do select candidates by primary when their main rival does, particularly when the primary election is not divisive and is held closer to the general election. Finally, to reinforce this finding, we show that candidates who are not selected by primaries are more poorly rated than those who are.

Arguments

Three competing arguments, which primarily rely on evidence from US primaries, have been posited about the effects of primaries on legislative and executive candidates' strength. First, since the seminal work of Key (1947), the predominant view has been the primary penalty hypothesis: primary-selected candidates are weaker in general election competition than those selected using other methods due to two mechanisms. First, primaries produce candidates who are unappealing to the general electorate because they are selected by the most committed party members, who tend to be ideologically distant from the median voter. Brady et al. (2007) provide evidence supporting this mechanism, while the evidence from Norrander (1989) or Kaufmann, Gimpel and Hoffman (2003) goes against. The second mechanism is that the primaries process itself may damage candidates by subjecting their participants to public criticism and opening up internal divisions within parties. This mechanism is supported by Kenney and Rice (1987) or Lengle et al. (1995), but challenged by Atkeson (1998), for instance.

The second competing argument is that candidates selected via primaries may reap a bonus due to again two possible mechanisms. First, primary campaigns allow parties to identify high-quality candidates who will prove to be effective campaigners in the general election (Adams and Merrill 2008). Secondly, primaries may be considered demonstrations of intraparty democracy and transparency. As voters usually value this selection mechanism (Young and Cross 2002), they may reward it at the ballot box vis-à-vis nominations emerging from opaque, backroom negotiations (Carey and Polga-Hecimovich 2006).

Finally, we term the third argument the 'contingency approach'. The link between primaries and election outcomes is contingent on institutional and political moderating factors, in particular the degree of inclusiveness, their divisiveness and/or the timing of primaries. The primary

penalty might be reduced by opening up primary elections to non-members (who are closer to the median voter, according to Kaufmann, Gimpel and Hoffman 2003), when there are few candidates or a single candidate (Lengle et al. 1995), or when primaries are not held close to the general election (Ramiro 2016).

The empirical evidence regarding the electoral effect of primaries from the few studies using data outside the United States is also mixed. Carey and Polga-Hecimovich (2006) and Ramiro (2016) found evidence of a primaries bonus in presidential primaries in Latin America and local primaries in Spain, respectively. However, using data from 111 parties in national elections in fifteen countries with parliamentary regimes from 1965 to 2012, Pedersen and Schumacher (2015) found no effect of primaries.

In this article we use a different approach to examine the electoral effects of primaries. We argue that their effect on candidate strength entails the interdependence of parties' procedures for candidate selection. The crucial point when estimating primary effects is whether candidates selected by primaries compete against candidates who are also selected by primaries, or against those who are chosen using other methods.

Several methodological implications are derived from the interdependence assumption. Our first methodological point proposes that, primary effects have to be examined by comparing the parties' electoral results. Table 1 illustrates the simplest situation, when only two parties compete. In a two-party system there are four possible scenarios when assuming the interdependence of party strategies: (1) none of the parties have primary-nominated candidates, (2) both of the parties have primary-nominated candidates, (3) only party A's candidate is selected by primaries and (4) only Party B's candidate is selected by primaries. In a multiparty system, the number of possible scenarios is the square of the number of parties entering the election.

In the two scenarios in the principal diagonal, the two parties follow the same candidate selection method. All else being equal, when both parties rely on primaries, the potential positive or negative effect of primaries should cancel each other out. When relaxing the all-else-being-equal assumption, and therefore moderating factors come into play, we may observe a different primary bonus (or penalty) for the two parties, even though both rely on primaries to select their candidates. For instance, the primary bonus (or penalty) should be greater for the party that holds its primaries closer to the election. In the scenario in which no candidates are selected by primaries, the moderating factors are irrelevant and therefore the candidate selection method does not play a role. In the off-diagonal scenarios, in which only one of the parties holds primaries, the expectation about whether primaries have a positive or negative electoral effect is less clear. The party holding primaries should attain a bonus (or penalty), and the one using a different selection mechanism should get a penalty (or a bonus).

However, most prior empirical studies do not consider this interdependence of candidate selection methods. They test the primary effect using a dummy variable that distinguishes between candidates selected by primaries versus other methods across elections or countries, irrespective of what their rivals do (Pedersen and Schumacher 2015). This operationalization based on a decision-theoretic approach (that is, parties' decision making is not nested) leads to a biased estimate of the effects of primaries on candidate strength. Two parties competing against each other and not using primaries, and parties not using primaries when their rival does, are put together in the '0 category'. This approach is flawed, because the candidate selection method used by the rival party can affect a party's electoral support. This problem appears again when combining primary-selected candidates competing against other primary-selected candidates and primary-selected candidates competing against candidates selected by other procedures in the '1 category'.

Estimation bias is not the only problem. In addition, the use of this dummy variable does not allow us to determine which party is attaining a primary bonus (or penalty). If Party A's candidate is selected by primaries, while Party B's is not, a positive coefficient for the dummy variable means that party A receives more votes than party B. However, it is not possible to know whether

Table 1. Interdependence of candidate selection

		Party B	
		Primary	No primary
Party A	Primary	No effect/moderating factors	Bonus or penalty
	No primary	Bonus or penalty	No effect

the primary-selected candidate attains a bonus, or the candidate not selected by primaries receives a penalty for not using them, or if both effects take place at the same time. Our point is that if voters value more inclusive selection mechanisms (Young and Cross 2002), they might punish parties that do not select candidates by primaries.

Several scholars have attempted to avoid some of these problems by studying situations in which only one party holds primaries (Ramiro 2016). Thus if Party A is the one holding primaries, they implicitly study what happens in just the upper- and bottom-right cells of Table 1. But we still do not know whether voters are rewarding (punishing) the party that is holding primaries, or punishing (rewarding) the one that does not.

Finally, in cases in which more than one party holds primaries, other scholars, such as Carey and Polga-Hecimovich (2006), study whether only one candidate, several or all candidates in an election are selected by primaries. They study all the cells apart from the bottom left. However, this procedure is only correct when just two parties compete.

Our second methodological point relates to the number of degrees of freedom in the analysis. In a pure two-party system, elections are a zero-sum game in which parties compete for a finite number or percentage of votes: Party A's primary affects Party B's support in an inverse way. As all parties (that is, 100 per cent of the votes in the election) are grouped together in the 0 or 1 category of the primary dummy, there is a single degree of freedom when estimating the coefficient of the primaries variable. Therefore, when observing the election results, it is not possible to determine whether voters reward parties for primaries or punish them for not using inclusive selectorates.

In sum, we contend that, in order to make a non-biased estimate of the effects of primaries on candidates' strength and to identify whether there is a primary bonus or a penalty for using or not using primaries, two methodological decisions are crucial:

- The binary variable (*Primary* (Yes/No)) has to be replaced with a series of dummies capturing the four scenarios in Table 1: (1) none of the candidates of the main parties is nominated by primaries; (2) only the main rival's candidate is nominated by primaries; (3) only the party's own candidate is nominated by primaries and (4) both main candidates are nominated by primaries. This series of dummies should be created after matching parties that compete against each other in specific elections. In our empirical analysis we focus on the two main national parties and control for whether any other parties have used primaries. It is not possible to run the models if we include all parties in every election and consider all the possible scenarios combining the use or not of primaries across parties due to the lack of observations: given the still-low proportion of candidates selected by primaries, we would have numerous empty cells if studying all possible combinations in situations where more than two parties compete.
- The number of degrees of freedom when estimating the primary effect has to be greater than 1. This means that more than two parties in the corresponding elections have to be studied (that is, when there are more than two parties competing, it is a zero-sum game for all of them together, but not for every pair of parties considered) or, if only two are studied, they must not have 100 per cent of the votes together.

In the empirical analysis our interdependence approach will be compared to the decision-theoretic approach, using parties' vote shares in regional elections as the dependent variable. The discussion of how primaries affect candidate strength leads us to formulate two main competing hypotheses. First, *according to the decision-theoretic approach, primaries will affect election results irrespective of how the candidates of rival parties are selected.* However, according to our interdependent decision-making approach, *primaries will affect election results when they are only held by one party.*

Data and Methods

We collected information from all regional elections in three parliamentary and multilevel countries – Canada, Germany and Spain – from 1990 (when membership ballots started to be used to select either the 'candidate' for the chief executive office and/or the party leader) until 2017. Parties in these three countries employ closed and party-regulated primaries. In contrast to state-regulated primaries, when primaries are party regulated, the four scenarios in our interdependence approach emerge given that parties choose which decision-making process to use to select their leaders. In addition, these three countries have multiparty systems, which is crucial because more than one degree of freedom is needed to estimate the coefficient of the primaries variable. We focus on regional elections in only three countries instead of national elections in many countries in order to increase the number of observations while maximizing the control of institutional, cultural and idiosyncratic factors (Cross et al. 2016). The three countries represent established parliamentary democracies with a very high degree of economic and political decentralization. According to the Regional Authority Index elaborated by Hooghe et al. (2016), in 2010 Germany was the most decentralized country in a sample of eighty countries, Spain was second and Canada eighth. In sum, the value of the regional office is largely similar across all three countries.

Finally, given that in Germany and Spain primaries are still not used to select legislative candidates, we focus on 'executive candidates'. Strictly speaking, in parliamentary regimes no 'candidate' runs in a popular election to become the head of government in the same way as presidential or gubernatorial candidates in presidential and semi-presidential regimes do. Prime ministers are elected by parliaments, not directly by citizens. In practice, however, the trend towards the 'presidentialization' of authority in many parliamentary democracies (Poguntke and Webb 2005) implies that parties inform voters prior to the election of their 'top candidate' (also referred to as 'electoral leader') and the future prime minister if they obtain a majority in Parliament. Parties differ in how they select their top candidate, however. In Canada, as is typical of Anglo-Saxon democracies (Cross et al. 2016), the party leader is by default the top candidate for the upcoming election. In contrast, in Germany and Spain, as is common in continental Europe, the selection of the 'party leader' and the 'top candidate' are formally separated in two different processes (Astudillo 2015). Therefore, in Germany and Spain we focus on the latter selection.¹

In order to make comparable analyses, we collected data in every region in the three countries. In Germany and Spain we selected the two most-voted national party branches in the whole period of 1990–2017. In the former we focused on the right-wing Christlich Demokratische Union (CDU)² and the left-wing Sozialdemokratische Partei Deutschlands (SPD), while in the latter we focus on the right-wing Partido Popular (PP) and the left-wing Partido Socialista Obrero Español (PSOE). In Canada, the rule is slightly different. The federal New Democratic Party (NDP) has wings in almost all provinces, the Liberals (LP) in just four, whereas the rest of the provincial Liberal parties operate as separate entities, and the Conservative Party of Canada (CPC) has

¹In both countries, however, we have also included as 'primary' elected those top candidates who were party leaders previously selected by primaries.

²Christlich-Soziale Union (CSU) in Bavaria.

no formal provincial wings. Still, these separate provincial Liberal and Conservative parties are distinct from ethno-regional parties, such as the *Parti Québécois*, and are ideologically linked to the federal parties. As a result, we have included the provincial Liberal and Conservative parties regardless of their formal affiliation with the federal parties. Finally, in three provinces (British Columbia, Manitoba and Saskatchewan) the branches of the NDP replace either the provincial Liberal or Conservative party as one of the two most-voted parties during the whole studied period. In congruence with existing research on the electoral effect of primaries, we focus only on national parties (and not on the main ethno-regional subnational parties when these parties compete) to generate a single dimension of competition.

The branches and wings of these seven national parties have opened up the process of selecting their aspirants to the chief executive office through the one-member-one-vote method in Canada, the ‘members’ survey’ (*Mitgliederbefragung*) in Germany and the primaries (*Primarias*) in Spain. To explore the robustness of our results, our models will also be estimated excluding, first, the observations from Canada due to its particularities and, second excluding regional elections in all three countries in which the two main national parties (CDU, SPD, PP, PSOE, CPC and LP) were not the two largest.

The data therefore include branches or wings of seven national parties in 296 elections in forty-two regions (nine provinces in Canada,³ sixteen *Länder* in Germany and seventeen *comunidades autónomas* in Spain) in the descriptive analyses and 282 elections in the regressions due to the availability of information included in the data. We find four interesting patterns (see Table 2). First, movement towards primaries greatly differs across countries. They are used much more often in Canada than in Spain and especially Germany. Secondly, not all parties are equally prone to selecting their candidates through primaries. Thirdly, the use of primaries across regions within countries is surprisingly diverse. For instance, the twenty-two primaries held by the SPD in Germany have taken place in only seven *Länder*. Finally, primaries are not invariably a one-way street. Some parties have experimented with primaries and then dropped the practice in subsequent elections. For instance, the PSOE in Spain did not use primaries between 2003 and 2011.

Each observation in our data is a party branch or wing in a given election. Our dependent variable is the percentage of the vote won by the party in the regional election, $Vote \%_t$. Following Carey and Polga-Hecimovich (2006, 535–6), and in order to account for the party’s baseline strength, we control for the percentage of the vote won by the party in the previous election, $Vote \%_{t-1}$. We also include the following controls to capture current regional electoral tides:

- *Incumbent Party*: A dummy coded 1 if the party controlled the head of the regional government, and 0 otherwise.
- *Unemployment Rate Change*: To capture how the region is doing, we select the difference in the number of unemployed people as a percentage of the labour force in the two election years in every region.⁴ The two unemployment rates are measured in the quarters in which the elections were held.
- *Unemployment Rate Change* × *Incumbent Party*: An interactive variable to identify the marginal effect of economic performance on the candidate of the incumbent party. Since a decrease in the unemployment rate should help the party in power, we expect a negative coefficient of the interactive term.
- Country dummies capturing idiosyncratic, unobservable factors.⁵

³Quebec is excluded because neither the Conservative Party nor the NDP ran candidates. The three Canadian territories of Yukon, Northwest Territories and Nunavut are also excluded from the analysis, either because of their non-partisan politics or a lack of data about how party leaders were selected.

⁴The data have been obtained from the respective national institutes of statistics (the *Statistics Canada-Statistique* in Canada, the *Bundesagentur für Arbeit* in Germany and the *Instituto Nacional de Estadística* in Spain).

⁵The results do not change appreciably if region dummies are used instead of country dummies.

Table 2. Use of ‘primaries’ by the main national parties in regional elections in Canada, Germany and Spain^a

Country	# Elections	Party	# Primaries	Year of elections with primaries	# Regions with primaries
Canada	64	Conservatives	15	1990, 1993(2), 1995, 1998, 2003, 2007(2), 2008, 2010, 2011, 2012, 2015(2), 2017	8
		Liberals	20	1993, 1995(2), 1996(2), 1997, 1998, 1999(2), 2001, 2003(2), 2004, 2006, 2012, 2013, 2014(2), 2015, 2016	8
		NDP ^b	5	2003, 2011, 2013, 2016, 2017	2
Germany	107	CDU	5	1995, 2006 (2), 2012, 2016	3
		SPD	12	1995, 1998, 1999 (3), 2001, 2007, 2009, 2011, 2012, 2013, 2016	7
Spain	125	PP	2	2011, 2015	1
		PSOE	22	1998, 1999 (7), 2003, 2011 (3), 2015 (7), 2016 (2), 2017	12

^aIn parentheses, the number of primaries when there is more than one in a given year.

^bThe data for the NDP only come from the three provinces included in the analysis (British Columbia, Manitoba and Saskatchewan).

- *Third-Party Primary*: Given that more than two parties compete in elections in all three countries, we also control for a dummy variable that is coded 1 if in a given election any party apart from the two main national parties used primaries, and 0 otherwise.

Finally, we measure the key independent variable, whether the candidate was selected by primaries, in two different ways. First, we follow the decision-theoretic approach and use a dummy variable, *Primary (Yes/No)*, which coded 1 when the candidate is selected by primaries, and 0 otherwise. Secondly, following our interdependent decision approach, we include a series of dummies to distinguish three scenarios: neither of the two main candidates is nominated by primaries (0), only the main rival’s candidate is nominated by primary (1), only the own candidate is nominated by primary (2). Due to the very low number of cases in which both main candidates are nominated by primaries (eight), this category is excluded from the estimates, which explains why the number of observations in Table 5 drops from the first to the second model. The reference category is none of the candidates is nominated by primaries. The information on primaries comes from different sources: parties’ websites, newspapers, party documents and press, politicians’ biographies, and published studies on parties and regional elections (Astudillo and Detterbeck 2018; Cross 1996; Young and Cross 2002).

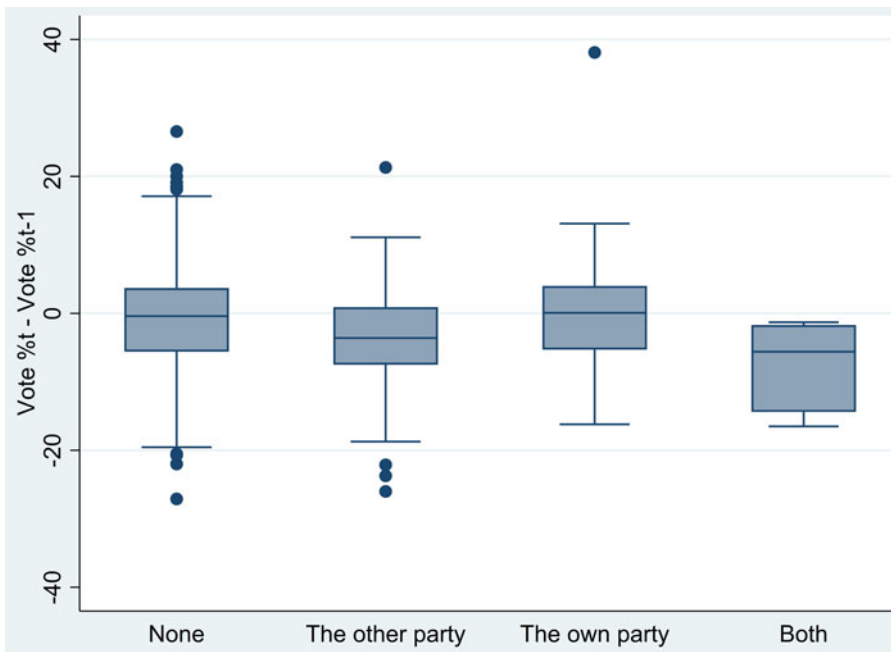
We also explore the divisive-primary hypothesis and the timing effect of primaries (that is, whether the temporal proximity of primaries to the legislative election makes a difference). The degree of openness is not examined, as only party members are in the selectorates. The divisive-primary hypothesis is tested using *the number of primary candidates* and the *primary winner’s vote share*. The timing effect of primaries is captured with the temporal proximity of primaries and regional elections using *Days* (the primary election and general election dates) as the unit. The variable ranges from 65 (primaries were held two months before the regional election) to 1,456 (almost four years between the primary and the general election). We include *the number of days and its square* to account for a possible non-linear effect. The descriptive statistics of the variables are displayed in Table 3.

Results

In Figure 1, the relationship between electoral performance (the difference between the vote share of parties in two consecutive elections in t and $t - 1$) and the use of primaries in t to select the top candidate in our sample is displayed. The conclusion is that what matters is what a party’s main rival does, not what the party does itself. At first glance, there are no differences between selecting the top candidate through primaries or not if a party’s main competitor does not. When neither

Table 3. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Vote % _t	553	34.88	11.82	0.6	69.6
Vote % _{t-1}	553	35.92	11.65	0.6	69.6
Incumbent party	553	0.43	0.50	0	1
Unemployment rate change	553	-0.41	1.81	-5.66	11.42
Other party primary	530	0.12	0.33	0	1
Number of primary candidates	61	2.97	1.70	1	9
Primary winner's vote share	61	61.85	11.62	38.5	99
Days	64	518.80	319.05	65	1456
Primary (Yes/No)					
Canada	123	0.28	0.45	0	1
Germany	186	0.09	0.297	0	1
Spain	244	0.09	0.30	0	1
Primary dummies					
Canada	116	0.83	0.95	0	3
Germany	186	0.27	0.62	0	2
Spain	244	0.29	0.66	0	3

**Figure 1.** Effects of primary election on share of vote

party holds primaries ($n = 425$), the median electoral performance is -0.3 and the mean -0.7 ; when a party uses primaries but its main competitor does not (the 'the own party' category, $n = 65$) the median is -0.1 and the mean 0.2 . However, a party that does not select its top candidate using primaries when its main competitor does (the 'other party' category, $n = 64$) can expect to receive 3.5 percentage points fewer votes (median = 3.5, mean = 3.3).

In Table 4 we use a mean comparison test to examine whether selecting top candidates via primaries affects parties' electoral performance. On the left side of the table we test the effect of primaries following the conventional approach, and find no statistically significant differences in parties' election results depending on whether they use primaries. The averages are -1.1 and

Table 4. Mean comparison tests

	Decision-theoretic approach		Interdependence approach			
	No primaries	Primaries	No primaries	Primaries only in the rival party	Primaries only in the own party	Primaries in both parties
Average	-1.03	-1.05	-0.71	-3.31	0.15	-8.83
Std. dev.	(7.73)	(8.20)	(7.56)	(8.48)	(7.82)	(6.98)
N	494	75	425	64	65	8
		t = 0.01 p = 0.99		t = 2.52 p = 0.01	t = -0.85 p = 0.39	t = 3.01 p = 0.00

-1.0, respectively. In other words, when the analysis of primaries is rendered blind to the behaviour of competitors, primaries are inconsequential. On the right side of the table we test the electoral effect of primaries when considering the behaviour of the main competitors. In each cell the comparison is with the 'no primaries' scenario. There is a statistically significant punishment at the 0.01 per cent level for a party when it does not use primaries but its main rival does (the 'rival party' category) compared to the scenario in which none does. However, if the rival's top candidate is not selected using primaries, a party's election results do not change depending on whether it uses primaries or not (the 'own party' category, $n = 0.39$).

In Table 5 the effect of primaries on election results is examined using an ordinary least squares regression that includes controls. Although the structure of the data is clearly hierarchical (by country, region and election), we have decided against running a multilevel model. According to Bryan and Jenkins (2016, 19–20) based on Monte Carlo simulations, multilevel models require twenty-five countries for linear models at the very minimum, and most likely more for models with a complex specification. As there are only three countries, with nine provinces in Canada, sixteen Länder in Germany and seventeen comunidades autónomas in Spain in the sample, the standard errors have been clustered by election to account for non-independence in the data structure and to match parties competing against each other in each election.

The first model tests the conventional wisdom that assumes the decision-theoretic approach, while the remaining models test our approach allowing the interdependence of party decisions. When following the conventional approach, $Vote \%_{t-1}$ is naturally a strong predictor of partisan support in t . The coefficients on the subsequent three variables should be interpreted in conjunction. The negative coefficient on *Incumbent Party* is by itself an estimate of the effect of being the candidate from an incumbent party that has ruled over no change in the unemployment rate. The variable is not statistically significant. Similarly, the coefficients on *Unemployment Rate Change* and *Unemployment Rate Change* \times *Incumbent Party* are not significant, indicating that candidates from incumbent parties are not rewarded (punished) for good (bad) economic performance. The most interesting result is that the candidate selection by primaries does not significantly affect the vote share of parties. In other words, nomination by primaries is not an electoral asset.

The second model is identical to the first, except that the binary dummy, which captures whether the candidate is selected by primaries or not, is replaced with a categorical variable that distinguishes among three scenarios: none of the main parties has primary-nominated candidates (the reference category); a given party, but not the rival, has nominated its candidate by primaries (*Only the own party*); and the rival, but not the given party, has nominated its candidate via a primary (*Only the rival party*). The model shows little change in the coefficients of the control variables. Our most important result is the strong negative effect of not selecting the candidate by primaries when the rival does so based on vote share. Other things being equal, primaries only in the other party generate a penalty of 3.2 points and the estimate is significant at the 0.01 per cent level. However, nomination by primaries does not generate a bonus: candidates selected by primaries do not run more strongly than those selected via other methods when

Table 5. Effects of primary election on share of vote

	Decision-theoretic approach	Interdependence approach				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Vote % _{t-1}	0.78*** (0.04)	0.76*** (0.04)	0.76*** (0.04)	0.76*** (0.04)	0.78*** (0.04)	0.58*** (0.06)
Incumbent party	-0.22 (0.98)	0.50 (1.00)	1.02 (0.96)	0.99 (0.96)	1.49 (1.03)	2.19** (1.07)
Unemployment rate change	0.08 (0.21)	-0.04 (0.21)	-0.08 (0.21)	-0.08 (0.20)	-0.15 (0.21)	0.20 (0.28)
Unemployment × Incumbent party	-0.28 (0.37)	-0.32 (0.37)	-0.35 (0.36)	-0.34 (0.35)	0.05 (0.34)	-0.42 (0.48)
Spain	0.99 (0.57)	1.10** (0.57)	1.95*** (0.53)	1.97** (0.53)	1.21** (0.56)	2.33*** (0.63)
Canada	2.33*** (0.84)	3.16*** (0.86)	3.98*** (0.88)	3.92*** (0.88)		4.38*** (1.04)
Primary (Yes/No)	-1.41 (1.06)					
Primaries (ref. None of them)						
Only the own party		-0.86 (1.00)	-0.39 (1.01)	-1.18 (0.95)	-1.59 (1.03)	-0.89 (1.19)
Only the rival party		-3.19*** (1.12)	-2.80*** (1.03)	-1.63 (1.08)	-2.47** (1.24)	-2.85** (1.41)
Third party primary			-5.23*** (0.92)	-4.87*** (1.12)		
Only the own party × Third party primary				3.85 (3.55)		
Only the other party × Third party primary				-5.75** (2.33)		
Constant	6.34*** (1.32)	6.61*** (1.30)	6.65*** (1.19)	6.49*** (1.15)	5.56*** (1.24)	12.93*** (2.12)
R ²	0.61	0.62	0.65	0.66	0.66	0.49
N	553	538	530	530	428	384
# Clusters	282	272	268	268	217	194

Note: standard errors in parentheses. ***p < 0.01, **p < 0.05

the rival party does not use primaries. In sum, the effect of primaries is driven by what the rival does. We find no evidence of a primary bonus, but of a primary penalty when only the rival's candidate is selected by primaries.

In Models 3, 4, 5 and 6 we explore the robustness of our findings. In the third model we control for whether third parties (not one of the two main national branches) use primaries. We have included a variable that captures whether any other party uses primaries (*Third-party primary*). The models produce a smaller coefficient on *Only the own party* and *Only the rival party*, but their statistical significance does not change. Interestingly, when a third party holds primaries, support for the main national branches drops. This is clearly in line with our previous models, which show that the effect of primaries is driven by what the other parties do. The fourth model, which adds to the third an interaction term between our primary categorical variable and whether other parties use primaries, shows that national parties are punished by primaries in other parties when the former do not select candidates by this method: this interaction term is negative and statistically significant at the 0.05 per cent level. However, if national parties use primaries, they are not affected by their use in other parties: the interaction is far from being statistically significant. The fifth model replicates the first, but excluding observations from Canada, as explained. The results remain qualitatively the same: primaries only in the other national party generates a statistically significant penalty (at the 0.05 per cent level), while nomination by primaries does not generate a bonus. In the last model, when excluding elections in which the national parties we have selected are not the two largest, the results remain qualitatively

Table 6. Effect of types of primary election on share of vote

	Model 1	Model 2	Model 3
Vote % _{t-1}	0.76*** (0.13)	0.79*** (0.13)	0.72*** (0.14)
Incumbent party	1.90 (3.98)	1.94 (4.09)	4.23 (4.31)
Unemployment rate change	0.54 (1.03)	0.31 (0.95)	0.39 (1.05)
Unemployment × Incumbent party	-1.17 (1.47)	-1.27 (1.29)	-1.22 (1.46)
Spain	-0.87 (2.85)	-0.81 (2.79)	-0.23 (2.82)
Canada	-3.38 (2.79)	-1.15 (2.22)	-3.69 (2.53)
# of Candidates	1.57** (0.70)		1.87*** (0.61)
Primary winner's vote share	-0.005 (0.091)		0.03 (0.08)
Days to election		-0.026* (0.014)	-0.034** (0.013)
Days to election ²		0.00002*** (0.00000)	0.00002*** (0.00000)
Constant	2.28 (7.78)	8.95 (6.05)	5.74 (8.83)
R ²	0.70	0.75	0.75
N	60	64	60

Note: robust standard errors in parentheses. ***p < 0.01, **p < 0.05, *p < 0.1

the same. The coefficient on *Only the other party* is again negative and statistically significant at the 0.05 per cent level, while the coefficient on *Only the own party* is not statistically significant.

Finally, in Table 6 we have selected the sixty-four elections in which only the rival's candidate is selected by primaries to explore the divisive-primary hypothesis and the timing effect of primaries.⁶ We expect that the penalty for the party not using primaries should decrease with a greater number of primary candidates and/or lower electoral support for the primary winner. Similarly, we expect that primaries held near elections increase the penalty. In the first model, the number of primary candidates has the expected positive sign (the more primary candidates, the lower the penalty) and is statistically significant at the 0.05 per cent level, while the primary winner's vote share does not significantly affect the penalty. In the second model we find evidence that the timing of primaries makes a difference. The more (less) temporally proximate are primaries and the election, the greater (lower) the penalty.⁷ *Days to Election* and *Days to Election²* are statistically significant at the 0.1 and 0.05 per cent levels, respectively. The third model, which combines the regressors from the first two, does not substantially change the results: the number of primary candidates is now statistically significant at the 0.01 per cent level, while the statistical significance of the primary winner's vote share and the timing of primaries does not change. The only statistically significant control in the three models is *Vote %_{t-1}*.

Endogeneity and Simultaneity

A major concern when examining the electoral effects of primaries is that their presence is endogenous to anticipated voter support. For three reasons, we do not think that expectations about election results drive parties' decisions about whether to hold primaries. First, previous

⁶The number of observations changes across the models due to the availability of information.

⁷We have not found that primaries held close to elections increase the penalty when there is a single candidate or if the primary is not competitive.

empirical research (Carey and Polga-Hecimovich 2006; Ramiro 2016) on the issue has found no evidence of endogeneity. Secondly, primaries are exceptional in some parties included in the sample. The PP in Spain has only held two and the CDU in Germany only five. However, the variability of the electoral support of these two parties (the standard deviations are 14.44 and 9.38, respectively) is similar to that of their rivals, the PSOE and the SPD (10.65 and 10.26, respectively). Thirdly, our main finding is that the effect of primaries is driven by what the rival does, and this clearly goes against endogeneity. In other words, the negative electoral externalities created by primaries are not compatible with an endogeneity problem.

Similarly, we think there is no reason to suspect that there is a simultaneous relationship between the methods of selecting candidates used by parties in every country. Again, in both Germany and Spain the huge difference between the number of primaries held by the CDU and the SPD (five versus twelve) and the PP and the PSOE (two versus twenty-two) clearly indicates that party strategies are not simultaneously determined.

Testing the Causal Mechanism with Survey Data

Using our second dataset, we examine whether primary-selected candidates are more favourably evaluated than candidates selected by other procedures. This is the causal mechanism accounting for the punishment when a given party does not use primaries but its main rival does. Owing to the availability of data, we focus on twenty-one primary-selected candidates in regional elections in Spain (twenty from the PSOE and one from the PP) and ten in Germany (seven from the SPD and three from the CDU). We compare their ratings using an eleven-point scale ranging from 0 (dislike) to 10 (like) in Spain and a $-5/+5$ scale in Germany. In both countries the data come from the corresponding pre-election surveys. In Germany we rely on telephone interviews conducted by the Mannheimer Forschungsgruppe Wahlen, while in Spain, the Centro de Investigaciones Sociológicas conducted face-to-face surveys.

In Figure 2, we compare how the ratings of primary-selected candidates in the election held in t but by other procedures in the election held in $t - 1$ differ from the ratings of candidates selected via other methods in both elections. According to the results of the previous analysis, we expect the ratings of the former to increase, and those of the latter to diminish. As expected, the median for the primary-selected candidates is positive, 0.15, while the median for the latter is negative, -0.2 . The median difference is greater for candidates not selected by primaries.

In Table 7 we test whether the difference in the ratings between the two consecutive elections is statistically different between the two groups of candidates. According to the paired mean comparison test, the difference (0.36) is statistically significant at the 0.05 per cent level ($p = 0.017$). In sum, primaries make a difference both for primary-selected candidates and for those selected by other procedures.

Conclusion

The implicit assumption underlying most previous empirical research on the electoral consequences of primaries is that no other parties are selecting candidates at the same time. A binary dummy capturing whether candidates are selected by primaries or through other methods is therefore sufficient to estimate the electoral effect of this selection method. When moving from a decision-theoretic to an interdependent decision-making process approach, four different scenarios emerge: none of the candidates is nominated by primaries, only the rival's candidate is nominated by primaries, only the own candidate is nominated by primaries, and both candidates are nominated by primaries. These have not been systematically examined in prior research. A second shortcoming of the literature we have highlighted is the problem of degrees of freedom when estimating the effect of primaries. As the binary variable renders election results a zero-sum game, it is not possible to know whether the primary-selected candidate receives a bonus, or if the

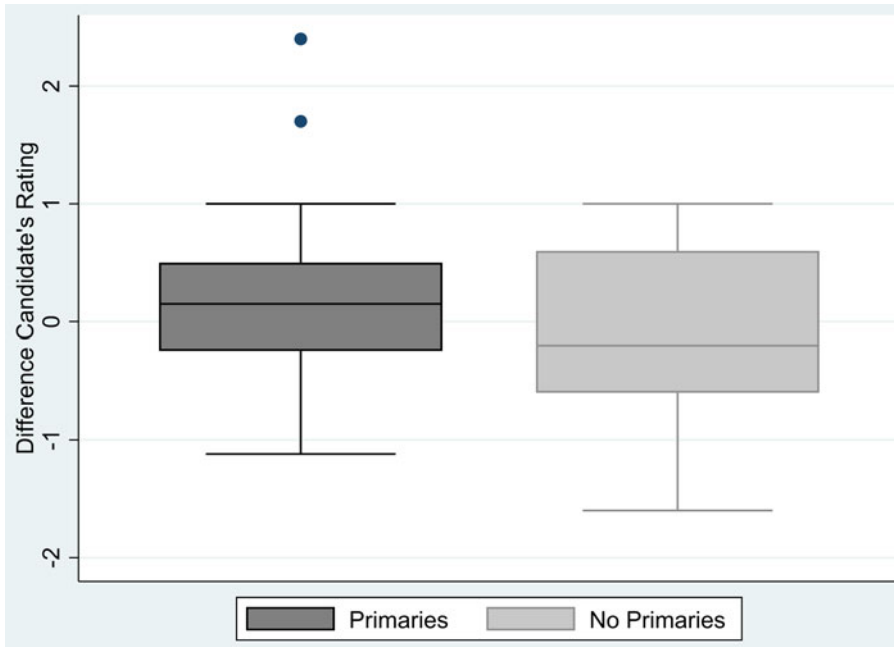


Figure 2. Effects of primary election on candidates' ratings

Table 7. Mean comparison test

	Candidates' rating	
	Primaries	No primaries
Average	0.183	-0.180
Std. dev.	0.125	0.135
N	31	31
Difference	0.363	
p	0.017	

candidate not selected by primaries receives a penalty for not using them, or if both effects are at play at the same time.

We examined original data from the branches and wings of seven national parties and 296 regional elections in three parliamentary regimes, Canada, Germany and Spain, and found no evidence that, other things being equal, primary-selected candidates are stronger than those selected by other procedures, as some other empirical studies have found (Pedersen and Schumacher 2015). This does not mean, however, that primaries are ineffectual. There is evidence of a penalty for parties that do not select candidates via primaries when the main rival does, particularly if there are fewer primary candidates and where primaries are held close to the general election. In addition, data from sixty-two pre-election polls in Germany and Spain show that satisfaction with candidates not chosen by primaries drops when the main rival party in the election uses this selection method.

Our finding has several implications for the century-old debate about intra-party decision making and parties' electoral results. For instance, contrary to the 'Michellian' vision, opening up a party's internal decision making does not entail an electoral penalty. Our evidence therefore does not support the Michellian argument used by parties to justify not using primaries (Ramiro 2016).

However, primaries are not necessarily an electoral asset, as Carey and Polga-Hecimovich (2006) argue in presidential regimes. When assessing the electoral effects of internal reforms, such as the introduction of primary elections to select leaders, parties should be studied as actors making interdependent decisions.

We acknowledge several limitations of our empirical analysis. First, since our sample includes only three countries, all of them parliamentary regimes; future studies are needed in more countries and other types of governments before our results can be generalized with confidence to other contexts (Samuels and Shugart 2010). The next step would be to compare primaries in presidential and parliamentary systems. The second limitation results from our methodology. Although the structure of the data is hierarchical (that is, we are examining the intraparty decision-making processes of *national parties* in *regional elections* in specific *years*), regional elections are considered as independent observations. The logic behind this assumption is that regional offices are very valuable in these three countries due to the very high degree of decentralization. However, party strategies in two regions within the same country are more highly correlated than party strategies in two regions from different countries, and this may affect our estimates. In our estimates we have simply clustered the standard errors by election to account for non-independence in the data structure and to match parties competing against each other in the specific election. Our interdependent approach to primaries cries out for data analysis methods that properly model interdependence. Spatial econometric models (Williams 2015), for instance, are interesting ways to model the patterns of parties' spatial interdependence. A substantial number of countries and elections should thus be included in the sample in order to employ methods modelling interdependence.

Supplementary material. Data replication sets are available in Harvard Dataverse at: <https://doi.org/10.7910/DVN/0UX9AN> and online appendices are available at <https://doi.org/10.1017/S0007123419000632>

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