Women's Electoral Success in Open List PR:
The Crucial Impact of Ballot Placement

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Abstract

The order in which candidates' names appear on the ballot acts as a cue to provide voters with additional information, exerting a strong influence on candidates' success at the polls. Voters reward candidates listed at the top of the ballot either because they associate the order with a hierarchy within the party or as a satisficing response to time consuming tasks. This is particularly relevant under open list systems, where party identification does not provide sufficient information for voters to choose between copartisans. We argue that candidate information provided by the ballot, such as incumbency and gender, enhance or moderate the primacy effect. Using data from 2,500 candidates on 640 electoral lists in the 2000 Chilean municipal elections, we provide an empirical test of how information cues—such as incumbency and candidate sex—enhance or moderate the primacy effects in open list systems. We find that primacy effects exert a strong influence on candidates vote share, but its effect varies considerably depending on the presence of other cues. In particular, incumbents enjoy a larger vote bonus for being placed at the top of the pact list than political novices and men enjoy a larger primacy bonus than women. Further, we show that female voters exhibit fewer gender biases than male candidates. The ability to determine candidates' names order on the ballot shows that party elites disproportionate influence over election outcomes is not exclusive of closed list systems.

Introduction

Under open list systems, candidates not only compete against candidates of different political parties, but also against copartisans. Voters who are ill informed to make a vote choice among candidates or have no strong preferences over candidates, can use shortcut or information cues to inform their choice. Most commonly, voters use candidates' party identification as a means of reducing cost of voting by signaling ideological or issue positions. In open list PR systems, however, party identification does not provide sufficient information for voters to choose between copartisans. As such, voters may draw on other information cues such as candidate placement on the party list, name recognition, and candidate's sex to make their decision at the polls.

In particular, voters frequently draw information cues from the order in which candidates' names appear on the ballot. Voters reward candidates listed at the top of the ballot either because they associate the order with a hierarchy within the party or because time consuming tasks like voting lead them to deploy a satisficing response—settling for the first acceptable option on the ballot. Name recognition, and under some conditions candidate sex, has also been shown to influence voter's decisions at the polls. Incumbency is associated to experience and higher quality candidates, while gender stereotypes associate women with lower qualification for leadership position.

Given that all these informational cues are made available to the voter on Election Day through the ballot, it is critical to understand how the cues work together to inform election outcomes. Thus, we contribute to the literature on information cues and election outcomes in two ways. First, we provide an empirical test of primacy effects in open list PR multimember systems, contributing to a nascent body of literature that has begun to consider the effects of ballot order in political and institutional contexts that extend beyond the United States. Second, we consider how

candidate information provided by the ballot on Election Day, such as incumbency and gender, enhance or moderate the primacy effect.

To do so, we exploit candidate-level data from more than 2,500 candidates on 640 electoral lists in the 2000 Chilean municipal elections. The Chilean municipal elections provide an ideal setting to test whether order affects candidates' vote shares and how information gleaned from incumbency and gender exacerbate or nuance the expected ballot order effect. Using a compositional modeling approach, we show that candidates at the top of the coalition list, incumbents, and men enjoy a larger electoral bonus over their copartisans. Moreover, although each of these characteristics increases candidates' vote shares, incumbents and men enjoy larger primacy effects than do political novices or women. Further, male candidates enjoy a larger incumbency advantage than do their female counterparts. Finally, we show that male voters largely drive gender differences in candidate's vote shares. Although female voters do exhibit some biases in favor of male candidates, gender differences in vote shares are larger and more consistent among male voters.

These findings have important implications for candidates competing in open list systems. First, the sizable electoral bonus enjoyed by candidates at the top of the party list indicate that despite the open list structure of elections in Chile, the ability to determine the order in which candidates' names appear on the ballot renders party elites disproportionate influence over election outcomes. Further, as women are not rewarded with the same primacy bonus as men, our results imply that women have to be better than their male counter parts to compete for the same share of votes. Indeed, we demonstrate that unless women have both the incumbency advantage and the primacy bonus, they cannot expect their vote share to be on par with male novices at the top of the list. Finally, on a more positive note, the finding that female voters exhibit fewer gender biases than

male voters indicates that traditional gender stereotypes that have historically held women back in politics may be slowly eroding.

Electoral Success and the Crucial Impact of Ballot Placement

The order in which candidates' names appear on the ballot has been found to be used by voters as an informational cue, having relevant implications on candidates' probability of being elected (Koppell and Steen 2004; Ho and Imai 2006; 2008). Candidates at the top of the ballot earn a vote bonus, which is known as a primacy effect. According to this line of research, a primacy effect is expected to emerge because people tend to use voting options at the top of the ballot as a baseline to compare the options that appear below. Voters give more careful consideration to the alternatives at the top, associating ballot order with a hierarchy within the party/coalition or simply as a result of deploying a satisficing response to voter fatigue phenomena (Bowler et al. 1992; Krosnick 1991; Krosnick and Miller 1998; Augenblick and Nicholson 2012; Pasek et al. 2014).

Although research has developed a clear understanding of how primacy effects inform voter's decisions at the polls and how they map on to candidates vote shares, research on primacy effects has largely been limited to the U.S. context, where candidates compete in single member district electoral system (Ho and Imai 2006; 2008; Koppell and Steen 2004). A large number of democracies employ open list proportional representation systems, wherein candidates compete against other political parties but also against copartisans. Yet, only recently have scholars recognized the importance of the primacy effect in open list PR multimember systems (Marcinkiewicz and Stegmaier 2014; Marcinkiewicz 2013; Ortega Villodres 2008) where party is not enough information to make a vote choice. As such, it is unclear how generalizable primacy effects are beyond the U.S. context.

Moreover, despite the recent increase in attention to the implication of ballot design for election outcomes, scholars rarely consider how the order of the candidates in the ballot work together with other information cues such as gender and incumbency to inform voters' behavior at the polls. Given that electoral systems do not operate in isolation of other contextual factors, it is important to consider the extent to which primacy effects exert an influence on electoral outcomes when voters have other important information cues at their disposal.

We thus, contribute to this research on primacy effects in two important ways. First, we provide an empirical test of primacy effects in open list PR multimember systems. This contributes to a nascent body of literature that has begun to consider the effects of ballot order in political and institutional contexts that extend beyond the United States. Second, and equally important, we consider how candidate information provided by the ballot on Election Day, such as incumbency and gender, enhance or moderate the primacy effect. In the section that follows we explain how each of these three factors, ballot order, incumbency, and candidate sex, in isolation may influence voters' decisions at the polls. Then we develop expectations for how these three factors work together to influence candidate's electoral fortunes.

The Combined Effect of Ballot Order, Incumbency, and Gender as Information Cues in Open List Systems

Previous work on the U.S. shows that primacy effects have important implications for electoral success. Candidates listed first in the ballot on average garner more votes than candidates listed later in the ballot. As the cost of casting a vote increases, either because of low saliency elections or because of ill-informed voters, voters rely more on information cues to cast their vote. Candidates at the top of the ballot may be perceived as more important and thus, associated with a certain hierarchy within the party structures. Primacy effect is also the consequence of satisficing strategies by voters who are not willing to spend time and effort in casting the vote. In their attempt

to randomly choose an option, voters unintendedly lean towards the first listed option (Pasek et al. 2014). The explanations for why candidates listed first receive bonus votes lead us to believe that primacy effect matters even more when candidates compete against copartisans and in more complex voting systems such as in open list systems since party cues are held constant.

Under open list systems, candidates not only compete against opponents from different political parties, but also against copartisans. In this context, information provided by the party is not enough for the voter to make a choice. If voters are ill informed to make a vote choice among candidates or have no strong political preference, they can rely on shortcuts such as choosing the first candidate in the list.

The primacy effect could play against one of the virtues that open lists have in proportional representations systems in terms of leveling the field, creating equal opportunities for every candidate on the list to access office (Marcinkiewicz 2013), breaking through the barriers that party structures and list placement pose. As such, ballot features that favor an association between ballot order and candidates' importance or hierarchy within the party structure could work against those at the bottom of the ballot.

Given that voters have more choices in open list PR systems, but party is held constant, primacy effects may be even more important in open list PR than in single member districts where candidates do not compete against copartisans. To evaluate whether primacy effects influence electoral outcomes in open list PR systems and to assess the magnitude of this relationship we test the following hypothesis:

H1. In PR open list systems, candidates at the top of the list will garner on average more votes than candidates further down the ballot.

The order in which candidates appear, however, is but one of the many informational cues available to voters. Although we anticipate that ballot placement will exert a strong impact on election outcomes, other contextual and individual factors may enhance or moderate the primacy effect. Nonetheless, with few exceptions (Marcinkiewicz and Stegmaier 2014; Marcinkiewicz 2013), research has not considered how candidates' order and other informational cues—such as name recognition and gender—work together to shape election outcomes. In this research we focus specifically on how incumbency and gender in combination with candidate list order influence candidate's ability to win votes at the ballot box—exacerbating or nuancing the expected primacy effect of the ballot.

Candidate Incumbency

To begin with, incumbent candidates win at a higher rate than political novices (Mayhew 1974). There are a number of reasons why incumbents may fare better at the polls then their novice political opponents. In particular, incumbent candidates have higher name recognition among voters at the polls (Shair-Rosenfield and Hinojosa 2014). This may be a product of pork-barrel spending or constituency services in the previous election period (Fiorina 1977; 1989); strong incumbent candidates deterring potential quality challengers from entering the race, as there is a high opportunity costs these face for entering races (Cox and Katz 1996; Ashworth and Bueno de Mesquita 2008); and finally, incumbents may have more access to campaign resources (Abramowitz 1991). Thus, on average, incumbent candidates should garner more votes at the polls than political novices.

We expect that incumbency advantage and ballot order work together to increase the vote shares of incumbent candidates at the top of the list. Among voters who recognize the incumbent's name, incumbent candidates obtain more votes as a direct result of name recognition. But, even when voters do not recognize the incumbent's name, incumbents at the top of the list still obtain

additional votes due to the primacy effect. As a result, we can think of incumbency advantage and ballot order as having an additive effect wherein incumbents at the top of the list benefit from name recognition among voters with some information, and they benefit from primacy effects among those voters who do not recognize their name. To evaluate these expectations we test the following two hypotheses.

> *H2. Incumbent candidates will garner more votes than political novices.*
>
> *H3: Candidates at the top of the list enjoy a larger incumbency advantage than candidates further down the list.*

Candidate Gender

Research on woman representation has found that women are less likely to be elected in open list proportional representation systems. Even in countries with gender quotas—where political parties are required to include in the ballot a certain number of female candidates—women are not elected to office at the same rate as men (Jones and Navia 1999; Górecki and Kukołowicz 2014).

One explanation posits that when voters are not particularly attached to any political party or candidate competing for the post, they use cues derived from the candidates' names, such as gender, to make their voting decisions, employing stereotypes about leadership (Matson and Fine 2006). Research on attribution and sex role stereotypes suggests that women candidates may be evaluated differently than their male counterparts, attributing particular leadership qualities to men but not to women (Smith and Fox 2001, Alexander and Andersen 1993). Given that typical gender stereotypes are incongruent with stereotypes about effective political leaders, voters may perceive women as less qualified to hold office. As a result, we could anticipate that all else equal, in low information elections, women may garner less support than men. To evaluate if men fare better at the polls than women we test the following hypothesis:

H4. In PR open list systems, women will garner on average fewer votes than men.

Although there is some evidence that suggests that women do not fare as well as men in elections, others argue that women's underrepresentation in elected bodies is largely a product of institutional differences, and not voters' choices. That is, women tend to be institutionally disadvantage because they are not placed in electable positions in open list PR systems, they are less likely to have incumbency advantage, and they are more likely to compete against quality challengers in elections. If women's poor electoral performance is mostly a product of institutional disadvantages, then we can assume that when women do compete on a level playing ground with men (i.e., when women are placed at the top of the ballot and when they compete as incumbents), they will garner equitable votes shares. By contrast, if women's electoral performance is also a product of voters' unwillingness to support a female candidates, then we should anticipate that even when women and men compete on a level playing field, men will outperform women at the polls. To evaluate whether women and men obtain equitable vote shares when they are afforded the same institutional advantages, or whether gender biases persist at the polls, we test the following two hypotheses.

H5. Women at the top of the list will garner fewer votes than men at the top of the list.

H6. Female incumbents will garner fewer votes than male incumbents.

Voter Sex

Finally, we consider the extent to which our expectations apply equally to male and female voters. Although some gender stereotypes might be shared across different groups, it is also the case that particular groups of citizens are likely to react differently to different information cues. According to Barnes and Beaulieu (2014), there has been a recent gender shift in the relevance of gender stereotypes when evaluating leadership positions. While both men and women used to associate leadership characteristics to the male gender (Powell and Butterfield 1989; Schein 1973;

1975), women have recently began to associate it with female qualities as much as with male qualities. This change has not occurred among men, who still rely on traditional gender stereotypes (Deal and Stevenson 1998; Norris and Wylie 1995).

Our expectation is that information cues, especially candidates' order in the ballot affect electoral performance. We also expect the effect of order to vary depending on the interaction with the other two informational shortcuts addressed in this study: incumbency and gender. If that is indeed the case, incumbent female candidates at the top of the ballot will be outperformed by male incumbents in the same position. In the same vein, we would expect female candidates to have lower chances of being elected than men when placed towards the end of the ballot.

> *H7. Female candidates at the top of the ballot will win fewer votes than male candidates at the top of the ballot among male voters, but not among female voters.*

> *H8. Female incumbents will garner fewer votes than male incumbents among male voters but not among female voters*

Municipal Elections in Chile

Chilean municipal elections provide an ideal setting to test if order, incumbency and sex are associated to candidates' electoral success. Specifically, the open list, proportional representation electoral system, in combination with the strong incumbency advantage, and the absence of national affirmative action laws that requires political parties to include women on their list of candidates, enable us to systematically investigate how primacy effects, incumbency advantage and candidate sex work together to explain candidate's vote share. Further, until the 2008 election, men and women in Chile voted at separate ballot boxes. The separate recording of men's and women's votes allows us to test our expectations about how information cues have a differential impact on men's and women's voting behavior.

The Chilean territory is divided into 15 regions comprising 345 *comunas* (342 in the year 2000), with one exception (Antartica), comunas are administered by a mayor and a city council.

Councilmembers are elected by open list, proportional representation, multimember system. Both mayor and councilmembers can be reelected. The most voted candidate of the list that received at least 30% of the votes in the district is elected mayor. The city council races vary in district magnitude, which can be of 6, 8 or 10 based on population.

Although districts are multimember districts, in the Chilean municipal level open-list system voters can only vote for a single candidate. If a person votes for more than one candidate, the ballot is considered spoiled. The rules of allocation establish that first votes are assigned to the coalition or pact, then to the sub-pact and finally among candidates, who are then ranked based on the number of votes received (Jones and Navia 1999).

Chilean municipal ballots are paper-based Australian ballots. Each race is presented in a separate paper, and each one contains all the candidates in that race. All pacts are ordered using an alphabetical identification code that is randomly assigned. Each pact offers lists candidates grouped by sub-pacts and parties. A sub-pact includes partisan candidates and independent candidates clearly differentiated. Pacts, sub-pacts and parties are identified with their logo and name (independents have no logo). The order the sub-pacts and parties appear on the pact's list is a product of elite negotiations at the municipal level. As such, there is substantial variation across municipalities in the order in which parties are listed on the pact's candidate lists. Finally, all candidates in the ballot are numbered from one to the total number of candidates in that district using a single sequence of integers. This all creates an ideal scenario to analyze whether the order in which candidates are presented in a list affects their probabilities to be elected.

Women's political participation and representation in Chile has been characterized by three main aspects. First, women are underrepresented in legislative bodies (Jones and Navia 1999).

Second, historically, women and men exhibit different voting behavior at the polls in Chile (Altman 2004). Third, the absence of national gender quotas (Shair-Rosenfield and Hinojosa 2014).

Literature on American Politics agrees that women vote is on average more liberal than men (Norris 2004). The opposite tendency characterized Chile, in particular before the democratic period before the last democratic breakdown (Altman 2004). The gap between me and women in terms of vote preference have been decreasing, to less than one percent in 1996 elections (Jones and Navia 1999). The Chilean municipal election offers the opportunity to test whether female voters' are positively or negatively impacted by institutional characteristics such as ballot placement or incumbency or they just respond to some ideological bias. Until the year 2008 elections, women and men voted in separate voting booths, and the vote tally was reported separately.

Women in legislative bodies, on the other hand, still remain underrepresented. Although women representation is better at the municipal level compared to the national level, for the period analyzed, it still lags behind men's. One factor contributing to women underrepresentation in Chile is the absence of national gender quota similar to other countries in the region, establishing a minimum number of women candidates in each list and that women have to be places in electable positions on each list (Shair-Rosenfield and Hinojosa 2014). The absence of gender quotas, however, allow scholars to isolate the effect of other institutional factors such as order, incumbency or list placement in order to examine the factors that increase the likelihood that voters support women at the polls.

Finally, the binomial electoral system introduced by Pinochet in order to reduce the number of parties and enhance the right wing parties' possibilities to access elective offices lead to parties to form coalitions that exceed the electoral stage (Jones and Navia 1999). The coalitional logic structures competition both at the national and municipal level. Of particular importance for our

study, Chilean voters are loyal both to their party and the pact that party belongs, to the extent that in district elections they may vote for candidates within the coalition, even if not from their preferred party (Altman 2008). For that reason, scholars typically examine the pact as the unit of observations—rather than individual parties—when studying Chilean district elections.

Research Design

To examine our hypotheses we evaluate candidates' vote share of the electoral coalition's overall votes in the 2000 municipal elections for all 341 Chilean municipalities. For the 2000 election, a total of 16 lists (including independents) in five different coalitions (including independents-out-of-pact) competed at the municipal level for the city council and mayoral offices.

Given the importance of coalitions for organizing electoral competition in Chile, the unit of analysis is each coalition in a district. We analyze the vote share of the top three wining candidates relative to the smaller, less competitive candidates. We measure *vote share* using the total number of votes cast for a given candidate divided by the total number of votes the candidate's coalition won. The data was collected from the Chilean Electoral Service (Servicio Electoral, 2016).

Table 1 illustrates how *Vote Share* varies significantly across candidates depending on the candidate's sex. Although the average candidate in the top three positions on the coalition's list are likely to win approximately 20% of the electoral coalitions' votes, women win a smaller vote share than do men. In particular, women win between four and eight percent fewer votes than men depending on their position on the ballot. Moreover, the difference in women's average vote share and men's average vote share are statistically different regardless of the candidate's placement on the ballot.

Table 1. Top Three Candidates' Vote Share.

Candidate Order	All Candidates (N)	Female Candidates (N)	Male Candidates (N)	Difference (p-value)*
First	19.94% (1292)	14.50% (246)	21.22% (1046)	6.71% (0.000)
Second	18.63% (1292)	15.31% (242)	19.40% (1050)	4.09% (0.008)
Third	20.74% (1292)	14.09% (248)	22.31% (1044)	8.22% (0.000)

* T-test of difference in proportion

The model includes several independent variables. First, the order of the candidate in each coalition. Based on the literature on primacy effect, it is expected that candidates listed first in the coalition enjoy an electoral advantage compared to the candidates listed later in the ballot. Second, a dummy variable for candidates' gender, being 1 female and 0 male. The compositional data analysis (see Analysis Section) allow us to assess whether woman are elected in equivalent rate as men when occupy same order in the ballot. Third, the incumbency status of the candidate, being 1 if the candidate hold a position at the municipal level in the precious period, for this case, 1996-2000 period. An interaction term between sex of the candidates and the incumbency status of the candidate's to test whether incumbent woman win at the same rate as incumbent men.

The model also includes, a variable that accounts for the proportion of incumbent candidates in each coalition list measured using the total number of incumbent candidates in the list (candidates that won a position in the 1996 election) divided by the total number of candidates presented by the coalition. It is expected that a higher proportion of incumbent copartisans decrease the probability of woman within the list to be elected. The proportion of female candidates in the list, measured as the total number of female candidates in each list divided the total number of candidates and the total number of candidates presented by each coalition, as the vote share for each candidate tend to decrease as the number of candidates increase. And the total number of candidates presented by the list.

Other control variables include, coalitions' ideological position, as the likelihood of voting for women, may be related to certain political parties. According to the literature, left wing parties are more inclined to nominate women in electable position and their voters are more likely to vote for women candidates than right wing parties. For this reason, we include dummy variables to control the ideological placement for left wing political coalitions. The right-wing coalition serves as the reference category.

Finally, socio-demographic variables at the district level are included as a proxy for the level of sophistication of the voters. To capture the level of education in the district we control for the percentage of the district population that has at least twelve years of education. Additionally, we control for the percentage of the district that lives in an urban versus rural area.

Analysis

The statistical model used in this paper deals with two main characteristics of our dataset. First, the dependent variable, the proportion of votes obtained by each candidate in each district and coalition, is a continuous but bounded variable, that ranges between 0 and 1. Second, the votes obtained by each candidate are not independent from the votes obtained by other candidates. For this particular case, as the unit of observations is the coalition within each district, the vote shares for all candidates within the same coalition sum up to 1. This means that any votes obtained by each candidate within the coalition reduce the votes obtained by other candidates in the same coalition by the same amount (Jackson 2002). These two features make more adequate a nonlinear function that contemplates non-independence among observations such as a compositional data analysis (Katz and King 1999; Tomz et al., 2002).

In this vein, each row represents a coalition in each district, and each column represents the candidates within the coalition. The number of candidates presented by each coalition in the 2000

municipal election ranges from 1 to 9. For the purposes of this study, the datasets only includes coalitions with at least four candidates and grouped in a residual category any candidate listed forth and up within each list. Theis last category is used as baseline for the analysis.

Because our dependent variable is theoretically bounded between zero and one, we first convert our dependent variables to an unbounded scale using a multivariate logistic transformation (Tomz et al. 2002; also see King and Katz, 1999; Jackson, 2002). In particular, we calculate the natural log of the vote share for each of the top three vote winners within each coalition relevant to the vote share of the remaining candidates (i.e., the baseline category). We then model the log ratios for all four categories as a linear function of our independent variables using a seemingly unrelated regression (SUR). The SUR technique allows us to account for the correlation in the errors between the different dependent variables. Recall that because the candidate's vote share sum to one and because increasing one category necessarily results in a decrease in another category these outcomes are not independent of one another.

Findings

The results from our SUR analysis are reported in Table 2. The first three columns show the results from the men's ballot boxes. The first column shows the results for candidates placed at the top of the coalition candidate list, the second column displays the results for candidates placed second on the coalition list, and the third column lists the results for the third candidate on the coalition list. The last three columns in Table 2 display the results from the women's ballot boxes. Here, column 4 represents the first candidate on the coalition list, whereas column 5 and 6 represent the second and third candidates on the list respectively.

Table 2 shows some interesting findings. First, it is clear from the first three columns that female candidates do not garner the same vote share as their male counterparts at men's ballot

boxes. The coefficient for female candidates is negative and statistically significant for all female candidates, regardless of their placement on the ballot. The same finding does not hold for women's ballot boxes. The coefficient for female candidate is not statistically significant for women in any position on the ballot. Second, as expected Table 2 indicates that incumbent candidates win higher vote shares than do political novices, as the coefficient for incumbent candidates is positive and significant regardless of the candidate's placement on the ballot. The interaction term between female candidates and incumbency is not significant for any of the candidates except for women who are listed second on the ballot at women's ballot boxes. The positive and significant coefficient on the interaction term indicates that among female voters, women may receive a larger bump in vote shares than male incumbents. We will investigate the interaction terms in more detail and return to this issue when we discuss Figures 1 and 2 below.

With respect to the control variables in the model, it is clear that an increase in the total number of candidates on the coalition list and an increase in the proportion of incumbents candidates on the list are associated with a lower vote share won by each of the top three candidates on the coalition's list regardless of whether the sex of the ballot box. This is expected because when there are more candidates on the list, we can expect that the vote share will be distributed across a larger number of candidates rather than being concentrated among the top three candidates. Moreover, when candidates at the top of the list compete against a larger share of incumbents on their same coalition list, they have to share name recognition and credit for policies implemented by the previous city council. As a result, they also garner fewer votes relative to candidates who do not share the coalition ballot with a large percentage of incumbent candidates. Finally, it is evident from the table of coefficients that candidates from the left-lining coalition fared better in the 2000 municipal election than did candidates from the right.

17

Table 2: Candidates Vote Share: Results from Compositional Analysis

Candidate Position	Men's Ballot Boxes			Women's Ballot Boxes		
	(1) First	(2) Second	(3) Third	(4) First	(5) Second	(6) Third
Female Candidate	-0.453**	-0.297**	-0.354**	-0.293	-0.145	-0.248
	(0.204)	(0.151)	(0.161)	(0.211)	(0.154)	(0.168)
Incumbent Candidate	1.314***	0.848***	1.063***	1.317***	0.806***	1.106***
	(0.144)	(0.128)	(0.134)	(0.148)	(0.132)	(0.139)
Female X Incumbent	-0.043	0.360	0.207	-0.041	0.507*	0.201
	(0.308)	(0.271)	(0.269)	(0.317)	(0.277)	(0.280)
Share Female Candidates	0.219	0.246	0.310	-0.033	0.016	0.151
	(0.379)	(0.332)	(0.367)	(0.395)	(0.343)	(0.380)
Share Incumbents	-0.892***	-1.377***	-1.228***	-0.690**	-1.262***	-1.169***
	(0.292)	(0.266)	(0.276)	(0.303)	(0.274)	(0.286)
Total Candidates	-0.671***	-0.724***	-0.656***	-0.668***	-0.712***	-0.632***
	(0.061)	(0.053)	(0.058)	(0.064)	(0.055)	(0.060)
Urban Population	-0.048	-0.067	0.151	-0.052	-0.062	0.234
	(0.225)	(0.196)	(0.214)	(0.236)	(0.203)	(0.223)
Education	-2.091*	-0.255	-0.277	-2.086*	-0.124	-0.210
	(1.078)	(0.955)	(1.031)	(1.121)	(0.984)	(1.068)
Left Leaning Coalition	0.817***	0.514***	0.119	0.745***	0.511***	0.135
	(0.217)	(0.189)	(0.206)	(0.226)	(0.195)	(0.214)
Constant	4.838***	3.157***	2.870***	4.772***	2.994***	2.603***
	(1.016)	(0.895)	(0.971)	(1.056)	(0.921)	(1.006)
Number of Candidate Lists		*640*			*637*	
R²		*0.279*			*0.259*	

Standard errors in parentheses
* p<.05, ** p<.01, *** p<.001

Recall that the dependent variable in Table 2 represents the log ratio of each candidate's vote share relative to the baseline category (i.e., the vote share won by candidates further down the ballot). Thus, although the direction and significance of the coefficients can provide some indication of the factors that influence candidate's vote share, the effect of each of the variables cannot be interpreted directly from the table of coefficients. Moreover, it is particularly difficult to ascertain from the table of coefficients how large the primacy effects are for each candidate and how this varies by candidate's sex. To facilitate interpretation of our results we simulate coefficients and calculate expected values of the dependent variable for different candidate conditions (i.e., ballot

placement, sex, and incumbency). Then we inverse the logistic function of our dependent variable to transform the log ratios into vote shares so that the expected values can be intuitively interpreted (King, Tomz, and Wittenberg 2000). We graph the results for Men's Ballot Boxes in Figure 1 and Women's Ballot Boxes in Figure 2. Unlike the table of coefficients, the figures facilitate a direct comparison of the expected vote share for candidates listed at the top of the ballot, compared to those listed further down the ballot. Finally, to determine if the mean expected values are statistically different at the 95% confidence level, we graph 84% confidence intervals for each of the mean expected values. When 84% confidence intervals do not overlap, we can conclude that the difference between two means is statistically significant at the 95% confidence level (Julious 2004).

Figure 1 plots the expected vote share for candidates at men's ballot boxes on the x-axis, when all other values are held at their mean or mode. The y-axis indicates the ballot placement, sex, and incumbency of each type of candidate in our analysis. To begin with, we hypothesized the candidates at the top of the ballot would garner more votes than candidates further down the ballot. Figure 1 indicates that, on average, candidates at the top of the ballot do win a larger vote share than candidates further down the ballot of the same sex and with the same political experience. For example, male political novices at the top of the ballot garner on average 12% more votes than male novices listed second on the ballot and 8% more votes than male novices listed third on the ballot. Similarly, female political novices at the top of the ballot win 9% and 6% more votes than female novices listed second and third on the pact list respectively. The primacy effect enjoyed by incumbents is even larger, with male incumbents at the top of the list earning 24% and 16% more votes than male incumbents listed second and third on the pact ballot respectively, and female incumbents at the top of the list acquire 15% and 10% more votes than female incumbents ranked in the second and third positions on the list. Thus, our findings lend strong support to our first hypothesis, that candidates listed at the top of the list will benefit electorally.

Next, turning to incumbency advantage, both male and female candidates enjoy a substantial incumbency advantage—showing strong support for the second hypothesis. As expected according to hypothesis three, on average, male incumbent candidates who are placed at the top of the pact list garner 13% more votes than male political novices at the top of the pact list and 19% more votes than female political novices at the top of the pact list. Candidates placed second on the list, do not enjoy the same incumbency bonus, however those placed third on the list do have a clear advantage over political novices.

Female incumbents also fare better than political novices, but their incumbency advantage is not as large as men's. Specifically, female incumbents enjoy a 10% bump in their votes share as compared to female **political novices, but only a 4% bump in vote share as compared to male novices—and the difference between female incumbent's vote share and male novice's vote share is not statistically different.** Taken together, our findings at men's ballot boxes indicate that, whereas male incumbents at the top of the ballot experience a huge boost in vote share, female incumbents at the top of the ballot only experience a boost in vote share large enough to compete on par with male political novices. As a result, we find support for hypothesis six; female candidates do not benefit from incumbency as much as their male counterparts at men's ballot boxes.

Despite this strong relationship between order and vote share, our findings indicate that female and male candidates do not benefit equally from ballot placement, and actually in accordance to hypothesis four, in PR open list systems, women garner on average fewer votes than men. Indeed whereas male political novices at the top of the candidate list are expected to win 27% of the pact's vote share, female political novices only win an average of 21% of the pact's vote share. This 6% difference is statistically significant at the 95% confidence level. Similarly male incumbents obtain about 9% more votes than female incumbents—also significant at the 95% level. Although women

at the top of the ballot do have a clear advantage over men and women further down the ballot, they do not fare as well as their male colleagues at the top of the ballot. Consistent with hypothesis seven, the results indicate that among male voters, women do not enjoy the same primacy advantage as men.

Figure 1. Men's Ballot Boxes
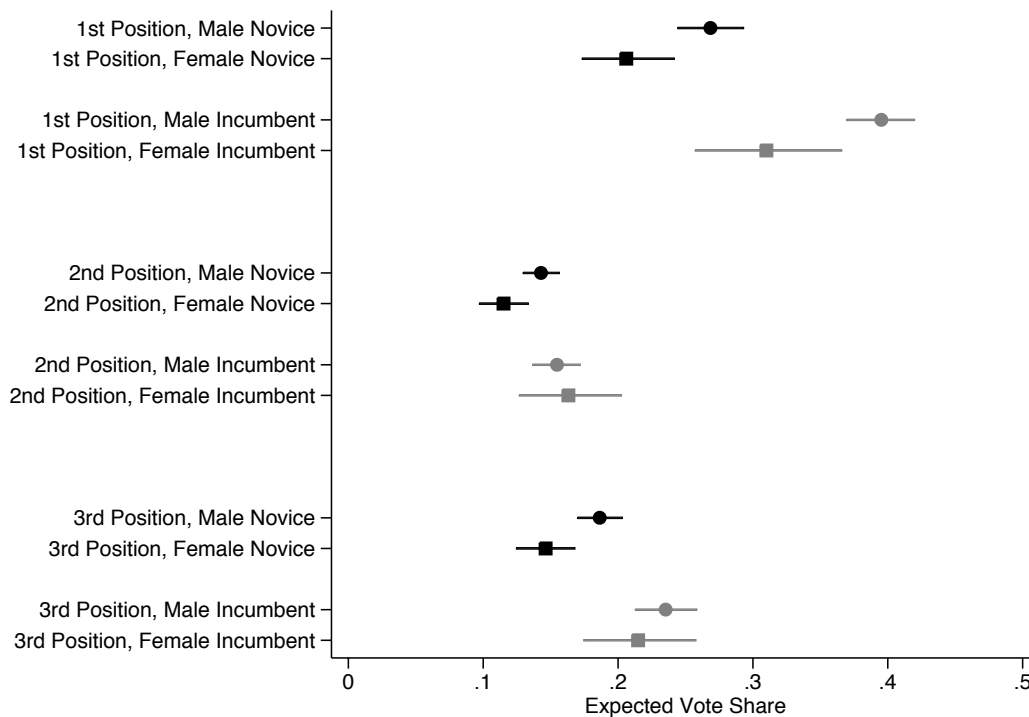
Next, turning to Figure 2, which plots the expected vote share for candidates at women's ballot boxes we see that with a few important exceptions, the overall trends reported in Figure 1 are quite robust to the sex of the voters. In support for hypothesis 1, Figure 2 shows that as male voters, female voters also reward candidates at the top of the list with substantially more votes than candidates further down the pact list. Among political novices, male candidates at the top of the ballot have a 14% advantage over candidates listed second on the pact list and an 8% advantage over those listed third. Similarly, female political novices obtain 11% and 7% more votes that female political novices in the second and third positions on the pact list. The observed differences between

incumbent and novice vote shares lend strong support for hypothesis 2. Moreover, in support for hypothesis 3, Figure 2 shows that incumbents at the top of the pact list receive an even larger primacy boost. Specifically male incumbents at the top of the pact list win 26% more votes than incumbents ranking second on the pact list and 16% more votes than incumbents listed third on the pact list. All-in-all the results obtained from women's ballot boxes also demonstrate strong support for our expectations that ballot order matters and incumbency both work together to advantage candidates.

In sharp contrast to Figure 1 (Men's Ballot Boxes), Figure 2 (Women's Ballot Boxes) demonstrates that both men and women benefit equally from being placed at the top of the ballot. The difference in the expected vote share between male and female political novices is not statistically significant. This stands in contrast to the statistically significant difference of 6-points observed at men's ballot boxes. Thus, we do not find support for hypothesis 5—the expectation that women at the top of the list will garner fewer votes than their male counterparts—among female voters. Instead, this finding offers support for hypothesis 7 which posits that women top of the pact list will win fewer votes than men at the top of the ballot among male voters, but not among female voters.

In support for hypothesis two, Figure 2 demonstrates that both male and female incumbents obtain substantially larger vote shares than political novices. At women's ballot boxes, male incumbent candidates at the top of the pact list obtain 13% more votes than male political novices at the top of the pact list and 16% more votes than female political novices at the top of the pact list. Consistent with the results from Figure 1, Figure 2 shows that incumbents placed second on the pact list do not reap the same benefits as those at the top of the list, or as those ranking third on the pact list.

Similar to male incumbents, female incumbents are also more competitive than political novices, wining 14% more votes than female novices but only 7% more votes than male novices. As with men's ballot boxes, there is no significant difference between female incumbent's vote share and male novice's vote share, indicating that although female incumbents enjoy more support than female novices at the top of the ballot, women's incumbency advantage is only sizable enough to put them on a level playing field with male novices. As presented in the hypothesis six, female candidates do not benefit from incumbency as much as their male counterparts at women's ballot boxes. Still, the gender differences in incumbency advantage are not as stark as the ones observed at men's ballot boxes. Whereas male incumbents are expected to win 9% more votes than female incumbents at men's ballot boxes, the expected vote share won by female and male incumbents is not significantly different at women's ballot boxes. Overall, the comparison of male and female incumbents at men's and women's ballot boxes provides mixed hypothesis 8.

Figure 2. Women's Ballot Boxes
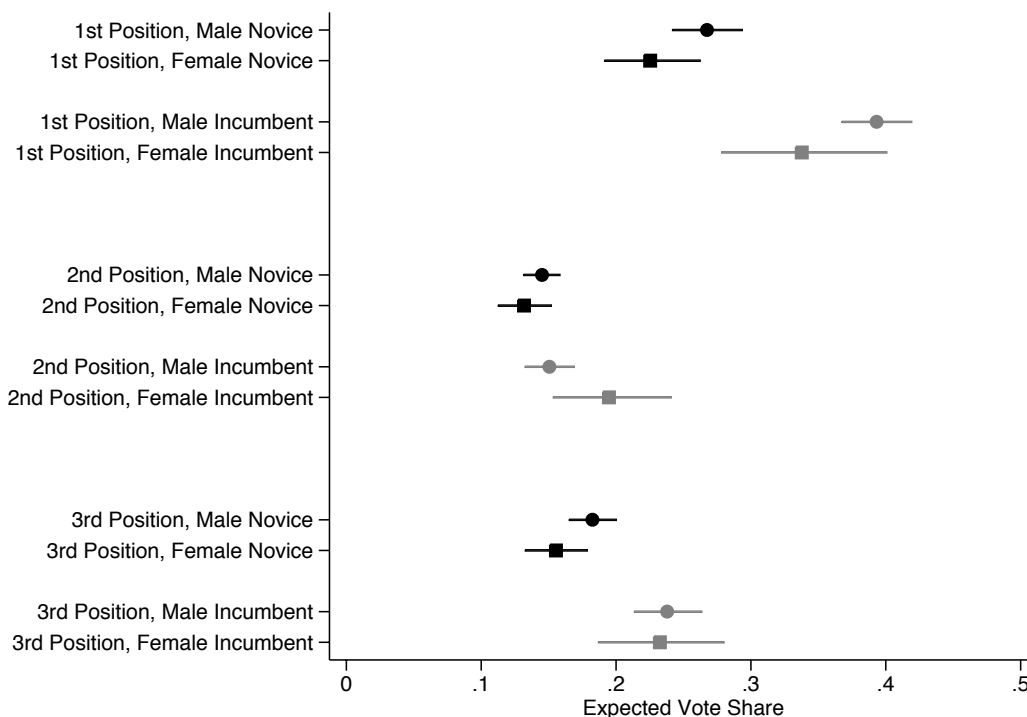
Conclusion

Our results show that primacy effects exert a strong influence on candidates vote share at the polls, but demonstrate that primacy effects vary considerably depending on other information cues. In particular, we demonstrate that incumbents enjoy a larger vote bonus for being placed at the top of the pact list than do political novices and that men enjoy a larger primacy bonus than do women. Further, we show that gender differences observed in candidates overall vote share vary considerable depending on the sex of the voters.

This research makes three important contributions to our understanding of ballot design. First, this study is one of the few studies that evaluates the prevalence of primacy effects beyond the U.S. context (Marcinkiewicz and Stegmaier 2014; Marcinkiewicz 2013, Ortega Villodres 2008). We show that primacy effects exert an important influence over electoral outcomes in low-information open-list PR systems. Indeed, the estimated size of the primacy effects observed in Chile is much larger than those observed in single member districts in the United States. This finding has important implications for candidates competing in open list PR systems because it demonstrates that party leaders' authority over the order in which candidate names appear on the pact list affords them disproportionate influence over election outcomes. Indeed, we show that in low information elections, even incumbency advantage is not substantial enough to offset primacy effects if a candidate's name does not appear at the top of the ballot.

A second contribution of this study is that we explicitly consider how other information cues—such as incumbency and candidate sex—strengthen or weaken the influence of primacy effects. We show that primacy effects are strongest among male incumbents and weakest among female political novices. Our findings thus show that it is important to take into account the larger electoral context when evaluating how ballot design influences electoral outcomes. Moreover, this has important implications for the electoral fates of women and other historically marginalized

groups. In theory, open list PR systems are believed to provide all candidates equal opportunities to access office—as they give voters the opportunity to choose between candidates within the same party or coalition. But, if voters associate ballot order with candidates' importance or hierarchy within the party structure, this could undermine women and minority candidates' opportunity to access office, making it harder to break through the party structures. Where party leaders are less likely to place women or other minorities at the top of the ballot, the primacy effect could offset the benefits that open lists PR systems offer in terms of leveling the field and creating equal opportunities for every candidate on the list to access office. This disadvantage may be further compounded by the fact that women do not enjoy the same primacy effects as men.

A final major contribution of our research is that it is one of the few studies that evaluate if male and female voters are more or less likely to support female candidates at the polls. We show that female voters are equally likely to support male and female candidates, but male voters show a preference for male candidates. Even when women are placed at the top of the ballot and have an incumbency advantage, they do not enjoy the same advantages as male candidates at the polls. In particular, at men's ballot boxes, we show that even with incumbency advantage, women at the top of the pact list only fare as well as male political novices at the top of the pact list.

This finding has a number of implications for female candidates competing in open-list proportional representations systems. The gender biases observed here indicate that female candidates may need to demonstrate better qualifications than their male counterparts to overcome information deficits at the polls. When voters have more information about candidates, they are less likely to employ information shortcuts and more likely to cast an informed ballot. As such, female candidates who have higher levels of visibility prior to election may be able to compete on par with male candidates.

Nonetheless, our results hold some promise for the future of female candidates in Chile. In particular, comparison of men's and women's ballot boxes lends further support to the argument that the prevalent belief that women are not as well suited to hold office may be dissipating—particularly among female voters (Barnes and Beaulieu 2014). Although we still observe substantial gender differences at men's ballot boxes, the lack of gender differences at women's ballot boxes is encouraging, suggesting that traditional gender norms that hold women back in politics are slowly eroding.

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