

Article



Preference vote and intraparty competition in open list PR systems

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Abstract

Open list proportional representation (PR) systems require that candidates seek personal votes in order to be successful. This feature of the system is considered to lead to intense competition among co-partisans and, ultimately, to weak electoral and legislative parties, narrow public policies, localism, clientelism, and corruption. We examine the distribution of personal votes among candidates from the same party for seven elections to the Brazilian national chamber of deputies (1990–2014). These elections are widely seen as hyper-competitive, particularly among candidates from the same list. Yet, the patterns in the data are not compatible with such a view. We find that the level of overall competition is considerably lower than the absolute number of parties and candidates competing would suggest. More significantly, we find that the number of viable candidates within party lists is limited and that their votes are distributed in such a way that indicates a contained competition among co-partisans during the election. These findings add to recent work that builds a more nuanced view of ballot structure, competition, and personalism.

Keywords

Proportional representation; personal vote; open list PR; intra-party competition; electoral systems: elections in Brazil

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I. Introduction

Proportional representation (PR) electoral systems are based on the principle that seats are first allocated to a collective entity: the party. In all cases, the party gains seats in proportion to the share of votes it receives. However, PR systems differ in the way parties allocate seats to individual candidates. In closed-list systems (CLPR), parties rank candidates and voters cast a ballot for the party. The seats are allocated to individual candidates according to their rank in the list the party builds prior to the election. If the party receives *n* seats, the top *n* candidates, as ranked by the party, are those who win seats in the legislature. By contrast, in open-list systems (OLPR), parties present a set of candidates running under their label, but do not rank them prior to the election. Voters cast a ballot for an individual candidate (a preference vote), and parties receive seats in proportion to the sum of votes received by all the candidates running under their label. Seats are distributed to individual candidates according to the number of personal votes they received. If the party receives *n* seats, the top *n* candidates, as determined by the number of votes they personally received, are those who win the legislative seats. ¹

Scholars have claimed that because in CLPR systems voters cannot alter the order of candidates the party presents, competition occurs among parties; candidates' attributes play little or no role in voters' decisions. In contrast, it is argued, in open-list systems competition is mostly among co-partisans and it is based on candidates' personal attributes. Although parties receive seats in proportion to their votes, candidates within each party win seats because they obtain the highest number of personal votes. For this reason, candidates emphasize their individual attributes to make sure that one of the seats the party wins goes to them and not to one of their co-partisans. Thus, scholars posit that competition in OLPR elections occurs not only among parties, but also among candidates.² In these systems, elections are characterized by both inter- and intra-party competition.

We argue, in contrast, that lists in OLPR systems are composed in such a way as to minimize the need for candidates from the same party to fight with one another *during* the election. We suggest that intra-party competition in an OLPR system is much more constrained than initially thought. We find this to be true especially for small districts and for larger parties, where coordination is easier to achieve. For larger districts, we find that coordination is more difficult to attain, although it is not impossible.

Using data from elections for the Brazilian national Chamber of Deputies (CD), which are universally seen as highly competitive and personalistic, we provide evidence in support of the view that intra-party competition is significantly controlled. Our analysis reveals that even in these most unlikely settings, intra-party competition is limited; many lists are carefully built so that competition among co-partisans is significantly reduced as candidates seek votes.

This article is organized into five additional sections. In Section 2, we review new literature on electoral systems to which this article is related. In Section 3, we explain the basics of elections for the Brazilian CD. In Section 4, we analyze the absolute number of candidates in party lists. We distinguish irrelevant candidates,

which comprise more than half of all candidates participating in the elections, and identify strong or viable candidates. These are the candidates who have a chance of winning seats for the CD. Section 5 presents the evidence of limited competition in party lists. It is divided into three sub-sections, each focusing on a different way of demonstrating 'list containment.' Section 6 concludes with a discussion of the implications of our findings and possibilities for future work.

2. OLPR electoral systems and intra-party competition

PR systems with preference vote are increasingly popular. The reason may reflect voters' desire to cast a ballot for persons and not organizations: when voters are directly responsible for the election of specific candidates, they can hold them individually accountable in a way they cannot if their only choice were the entire list political parties build (see Colomer, 2011; Manin, 1997; Mitchell, 2000). However, because it requires that candidates win over their co-partisans in order to be elected, it is widely accepted that candidates under preferential list PR will cultivate their own, personal, reputation at the expense of their party's reputation, thus weakening the ties between voters, candidates, and parties (Carey and Shugart, 1995). The consequences of the personalism spawned by intra-party competition are said to be numerous and noteworthy: electoral campaigns become focused on individuals and not policies, party programs are diluted, and public policies respond to local rather than national concerns. Owing to intra-party competition, parties become diminished in their capacity to enforce a "brand name" and become a simple list of candidates who compete among themselves to get the most votes. The final result are weak political parties and widespread competition consisting of a war of all candidates against all. For a review of this literature, see Mershon (2020) in this issue.

We find this conclusion to be incorrect. It depends on three assumptions that are not warranted. First, it assumes that if preference vote is present, then intra-party competition exists at the time of election. However, it ignores that parties can compose their lists strategically such that candidates from the same list seek votes from non-overlapping constituencies. Second, it assumes that personalism always entails narrow and parochial support from constituents. However, it ignores that candidates may choose to emphasize traits that connect them to valence or ideological issues. Third, it assumes that the only instrument parties have to influence candidates is their placement in the party list. However, parties do have resources that can be deployed strategically to generate (personal) votes for candidates they prefer to see elected.

We argue that even in OLPR systems political parties retain a significant role in shaping electoral competition. Office-seeking parties have a strong incentive to limit competition inside the list to prevent the eruption of a war of all against all within their lists. Parties can do so because they control access to their label and are able to deploy financial, logistical, and operational resources that are highly desirable by individual candidates. Candidates, in turn, also have an interest in limiting competition within their list. Only a small number of candidates are able to get personal votes that are sufficient to guarantee their election; all other candidates need the

support of their parties in order to get elected. Given that party resources are limited, those who see themselves as viable want to limit competition stemming from similar candidates. Thus, in OLPR, intra-list competition happens, like in any other electoral system, prior to the election.

Brazil probably represents the least likely case for finding evidence of limited intra-party competition. The received wisdom about CD elections since the return of democracy in 1985 emphasizes that political parties are weak, that contests are hyper-competitive, and that candidates must fight for votes with co-partisans at least as much as they do with candidates from other parties.³ Indeed, such conclusions come from the analyses of the raw numbers involved in these elections. For example, in the 2014 election, 32 parties competed for votes in 27 multimember districts with magnitudes ranging from 8 to 70 (with a median magnitude of 10). Parties presented 768 lists across the 27 districts, which together contained 5,882 candidates seeking one of the 513 seats in the Chamber of Deputies, thus implying an overall rate of 11 candidates per seat. The average list contained eight candidates, with a standard deviation of 12. The effective number of parties in 2014 was over 14, both in the electorate and in the CD. Yet, we show that intra-party competition was substantially constrained, even under these circumstances.

Careful examination of the aggregate results reveals a different world, more ordained and constrained than the one that is usually depicted. The data show that the major parties and viable candidates often succeed in reducing partisan self-destruction. The fact that intra-party competition is not rampant during the election implies that much of it occurs, like in majoritarian and CLPR systems, prior to the election.

The sharp contrast in the level of intra-party competition between OLPR and CLPR systems has been invoked as an explanation for a large number of important outcomes. 4 This article adds to the growing list of work that sees a less-sharp distinction between these two systems and challenges the connection between the ballot structure, intra-party competition, personalism, and these outcomes. Studies such as those of Espírito-Santo and Sanches (2018), Sanches and Espírito-Santo (2016), Nemoto and Shugart (2013), Latner and McGann (2005), and Shugart et al. (2005) show that candidate attributes matter even where parties are in charge of ranking candidates before elections and voters can only cast a ballot for a party. Others, in turn, show that even in the presence of preferential voting, party organizations have other instruments they can deploy to act strategically. Folke et al. (2016), for example, point to a 'primary effect' in Sweden as parties use the information provided by preferential votes to compose lists for future elections and identify candidates for higher offices. Furthermore, the view that parties in preference list PR systems will be ideologically weak and composed of maverick candidates who cultivate their own unique base of support among voters is powerfully undermined by two of the articles included in this issue. Folke and Rickne (2020) showed that in Sweden's local elections, politicians who communicate with voters in terms of ideology and policy preferences, receive relatively higher numbers of personal votes. Moreover, not only do they fail to find a correlation between ideological deviation and preference votes, they show that, when there is a voting

conflict between parties and politicians, candidates who think the party's position should be prioritized are favored with preference votes. Carroll and Nalepa (2020), in turn, show how the very aspect that is considered to lead to weak parties in OLPR, the fact that party leaders cannot rank candidates prior to elections, induces parties to recruit individuals with a preference profile similar to that of party leaders. The consequence, as they show, are more, rather than less, ideologically cohesive parties in OLPR than in CLPR. Finally, closer to our own work here, Crisp et al. (2013) and Swindle (2002) showed how parties in preferential PR systems strategically compose their lists and how, in so doing, they significantly mitigate, if not altogether prevent, intra-party competition. We add to these contributions by presenting evidence that intra-party competition is limited even in a setting where unbridled competition is seen as the norm.

3. Elections for the CD

Brazil is divided into 27 electoral districts, which correspond to each of the 26 states and the federal district of Brasilia (for this reason, we use 'districts' and 'states' interchangeably). Each of these districts elects three senators and one governor in majoritarian elections. Senators are elected for 8 years but the Senate is renewed by 1/3 and 2/3 every 4 years. Governors and the President are elected for 4 years in majority run-off contests and, since 1998, have been allowed one immediate reelection.

Elections for the national CD and the 27 unicameral state legislatures are held under identical rules. The CD has 513 members (503 in 1990) and membership in state-level assemblies ranges from 24 to 94. In both cases, the entire state is one district. Voters have one vote, which can be cast for the party label or for a candidate running under the party label (there are no independents). Voters do not see a preprinted list of candidates when they enter the booth. Whether voting on paper or electronically, voters must enter the number or the name of their party and/or candidate. For this reason, the 'list' of candidates has to be conceived loosely: candidates run under the same party label, but are not in any way presented collectively to voters.

Votes for the party label and votes for individual candidates from that party are pooled to compute the party total vote, PV. Seat allocation is first made to the parties on the basis of district quotas Qd = VV/M, where VV is the number of valid votes in the district, and M is the magnitude of the district. Parties get as many seats as their 'party quota' QP = PV/Qd. The n seats a party wins are allocated to the top-n candidates ranked in terms of their personal votes. In other words, the n candidates elected from the party slate are those with the highest number of votes. Remainder seats are allocated through the highest-average method. Since 1990, the election of 889 representatives (out of 3,334 deputies elected, or 27%), happened thanks to the remainder distribution.

There are two important features of the OLPR system in Brazil that matter for our analysis. First, there is a district-level threshold, even though there is no national threshold. Lists that do not receive at least one *Qd* are excluded from the

distribution of seats. Since the Chamber of Deputies is highly malapportioned in favor of states with relatively small populations, the effective threshold varies considerably among states.⁵ In São Paulo, for instance, the threshold has been 100%/70 seats since 1994, which is equal to 1.43% of the valid votes; in Roraima (and all the other 10 states with district magnitude equal to 8), it is 100%/8 seats, which equals 12.5% of the valid votes. In absolute terms, this means that in 2014, a party in São Paulo needed to obtain at least 303,802 votes in order to avoid exclusion from the process of seat allocation; in Roraima, the party needed 27,837 votes. The coalition rule, which we discuss next, allows parties that would not reach the district threshold by themselves to receive at least one seat.

Second, parties are able to and do frequently enter into electoral coalitions when running for seats in the CD (as well as for state assemblies); and for the purpose of seat allocation, coalitions are treated as a single party. Yet, in what follows, we ignore the coalition and focus the analysis entirely on the list of candidates composed by the party, whether the party is running alone or in a coalition. We have three reasons for doing so.

First, the electoral legislation treats a coalition as a single list only for purposes of seat allocation. The distribution of seats to coalitions is identical to the distribution of seats to parties running alone: votes given to candidates and parties composing the coalition are pooled to compute CV, the total votes given to the coalition as a whole. To determine the number of seats the coalition can 'buy,' CV (rather than PV, defined above) is divided by the district quota Qd. Note that voters who do not choose a candidate can vote for the parties that compose the coalition, but they cannot vote for the coalition. This is so because the coalition does not exist as an entity for the purposes of electoral campaigning. The allocation of seats to candidates is also identical to what happens in individual parties: the number of preference votes coalition candidates receive determines their rank, and the top-n candidates in the list, regardless of their party affiliation, receive the n seats the coalition wins. Thus, and this is very important, coalitions for proportional elections only matter after the election, strictly for the aggregation of the votes and distribution of seats. In the proportional elections, parties and candidates do not compete as members of a coalition and voters are rarely aware that a candidate for federal deputy belongs to a party that is in coalition with another party. In fact, the legislation explicitly indicates that, when competing for the CD, parties should only use their own name and/or acronym during the campaign (TSE, 2012: art.6, paragraph 2).

Second, parties in the same coalition do not negotiate anything about the conduct of the campaign for federal deputies. The list of candidates is not the result of a process of bargaining among parties that seek to optimize their own lists with the coalition in mind. Rather, they are simply the addition of lists independently generated by the parties that compose the coalition.⁶ The rules are such that coalitions do not constrain the number of candidates a party can include in its list. In the period studied here, 1990–2014, only 9 coalition lists, out of 796, reached the maximum number of candidates they could have presented.⁷

Third, gubernatorial elections drive the formation of coalitions. According to the legislation, coalitions need to be consistent at the district level across majoritarian and proportional contests. In other words, two parties that coalesce to elect a governor must either remain together or run separately in the CD elections; but they are not allowed to coalesce with a third party that participates in a different gubernatorial coalition (Mesquita, 2016). Thus, consistency is defined with respect to the coalition that forms to elect the governor. One of the implications of this is that coalitions are agreed at the district and not at the national level. Not only do they vary across elections, they also vary across states in the same election.

In sum, coalitions for CD elections have little or no effect on how party lists are composed. They do not constrain the list of candidates a party presents and, plausibly, they do not affect how voters cast their ballot. For this reason, when it comes to the formation of candidate lists, the party, whether running alone or running in coalition, is the relevant unit of analysis.

4. Party lists and the number of candidates

In absolute terms, parties present relatively large lists of candidates for the CD. Between 1990 and 2014, 28,618 candidates, distributed over 3,816 party lists, competed for one of the 3,334 seats under dispute. This suggests an environment of intense intra-party competition. Yet, the absolute number of candidates running is quite misleading as a measure of competitiveness. In contrast to the arguments advanced by the literature, we find that the majority of candidates who run are irrelevant: they could be dropped from the race and the final allocation of seats would not change at all. Furthermore, we also find that the number of strong and competitive candidates in each list is actually small. In this section, we define and identify irrelevant and strong candidates in two different ways. In both cases, we find that about 60% of candidates are irrelevant.

4.1. Irrelevant candidates

Scholars and pundits alike commonly argue that in OLPR systems parties have an incentive to make their lists as large as possible. This belief comes from the fact that the total number of seats a list receives depends on the sum of the votes obtained by all candidates in that list. Thus, they argue, the more votes, the better chances to win an additional seat, implying that lists should be composed of as many candidates as there are individuals willing to compete. These individuals would, then, 'fight it off' during the electoral campaign for the preferences of a given pool of voters.⁹ Any additional vote to a candidate in the list adds to the list's total and, thus, increases the probability that the list would get one extra seat. Indeed, given the number of candidates running in each election, as can be seen in Table 1, one would think that this is exactly what parties do: they open their lists to anyone who wants to run and let candidates fend for themselves during the campaing period.¹⁰

Year	Number of candidates	Number of seats	Candidate/seat
1990	3,824	503	7.60
1994	1,530	266	5.75
1998	3,356	513	6.54
2002	4,198	513	8.18
2006	4,943	513	9.64
2010	4,885	513	9.52
2014	5,882	513	11.47
All years	28,618	3,334	8.58

Table 1. Number of candidates and seats in elections for the Chamber of Deputies, Brazil, 1990–2014

Source: Compiled by the authors from TSE, Brazil (http://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais-I/repositorio-de-dados-eleitorais/).

A closer examination of the lists, however, strongly suggests that the environment for candidates during the election is not as competitive as it first appears. To begin with, the distribution of personal votes is very skewed. The reality of competition in CD elections is that very few candidates can be reasonably assured about their own election: about 95% of the successful candidates were elected because of vote pooling within the list since they did not receive enough personal votes to reach one district quota. Many candidates, however, can be certain that they will not be elected, and they do not represent a threat to anyone's chances of being elected.

Table 2 clusters the candidates who ran between 1990 and 2014 by the number of personal votes they received, expressed as a proportion of their districts' quota. The numbers show that not all candidates are the same and that the vast majority of candidates are, to put it mildly, irrelevant: 13,440 candidates, or 47%, received less than 1% of a district quota in personal votes; 77%, over 22,000 individuals out of 28,618, received less than 10% of a district quota. This means that, in a district such as São Paulo in 2014, where over 25 million voters cast a ballot, and where a seat cost about 300,000 votes, close to half of the candidates received less than 3,000 personal votes; and in a district such as Amapá, where about half a million people voted and a seat cost about 48,000 votes, a little less than half of the candidates received fewer than 480 votes. The small number of votes obtained by such a large number of candidates is clear in Figure 1.

Figure 1 shows the proportion of candidates that competed in the seven elections between 1990 and 2014, clustered by the number of personal votes they received, expressed as a proportion of the district quota. This figure also adds the proportion of the total personal votes cast in all elections that each candidate cluster received. Thus, the first column shows that 47% of all candidates received less than 1% of a district quota in personal votes and that, together, their vote represented 1.71% of the votes cast during the period. The figure also shows that 5.3% of the candidates received 41% of the personal votes cast in the seven elections.

Personal votes	Number of candidates	Percentage of candidates
PV < 0.01Dq	13,440	46.96
0.01Dq < PV < 0.10Dq	8,663	30.27
$0.10Dq \leq PV < 0.20Dq$	1,976	6.90
$0.20Dq \leq PV < 0.30Dq$	1,252	4.37
$0.30Dq \leq PV < 0.40Dq$	1,004	3.51
$0.40Dq \leq PV < 050Dq$	752	2.63
$0.50Dq \leq PV < 0.60Dq$	579	2.02
$0.60Dq \le PV < 0.70Dq$	362	1.26
$0.70Dq \leq PV < 0.80Dq$	196	0.68
$0.80Dq \le PV < 0.90Dq$	129	0.45
$0.90Dq \le PV < 1.00Dq$	88	0.31
$1.00Dq \leq PV < 1.50Dq$	128	0.45
$1.50Dq \leq PV < 2.00Dq$	30	0.10
PV>2.00Dq	19	0.07
Total	28,618	100.00

Table 2. Number of candidates in CD elections by personal votes, Brazil, 1990-2014

Source: Compiled by the authors from TSE, Brazil (http://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais-I/repositorio-de-dados-eleitorais/). PV = Personal votes; $Dq = District\ quota$.

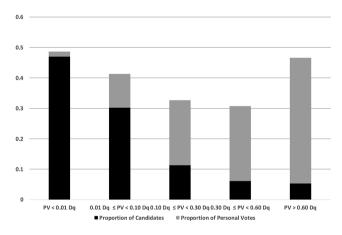


Figure 1. Proportion of candidates and proportion of personal votes, CD Elections, Brazil, 1990–2014. Compiled by the authors from TSE, Brazil (http://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais-1/repositorio-de-dados-eleitorais/)

Another way to look at the weight of the candidates with the least votes is to analyze whether such votes were helpful in pushing the total vote for their lists over a district quota. Although small individually, collectively they might have had an impact. This, however, is not the case. We simulated the allocation of seats in each district for the seven elections by removing, one at a time, the votes obtained by the candidate with the fewest personal votes. ¹¹ If candidates with a low absolute

number of votes contributed to the totals of their lists in any way, removing them would change the allocation of seats to that list. We discovered that, over the seven elections, the votes obtained by 59% of the candidates made no difference whatsoever in the final allocation of seats: removing their votes and reallocating the seats produced a distribution of seats identical to the one that occurred in reality. For example, in 2014, 1,239 candidates competed for the 70 CD seats from the state of São Paulo; the votes of 789 of them could simply be ignored and the allocation of seats, which resulted in 18 parties receiving at least one seat, would not have changed. Ignoring the votes obtained by 789/1,239 = 64% of all candidates in that district in that election would make no difference in the way the seats were allocated to parties and candidates in that district.

Thus, the vast majority of candidates makes no difference in the allocation of seats as they do not help their parties gain an extra one. When we remove irrelevant candidates, the number of candidates that potentially matter in the race drops to 10,592 individuals.¹²

4.2. Competitive or viable candidates

Elections for the CD in Brazil are obviously competitive, but the high number of candidates per seat, the measure normally used by scholars and pundits, is not a good indicator of the real competition candidates face. In the previous section, we showed that the vast majority of candidates did not receive 10% of their district quotas in personal votes. We also identified as irrelevant those candidates who could have been removed from the race without altering in any way the distribution of seats in their districts. While compelling, these figures are endogenous to the elections in which the candidates competed. In this section, we identify the candidates who could be considered competitive, strong, or viable on the basis of information generated *prior* to the election in which they competed. We want to single out the candidates that enter the race with a reasonable expectation that they can win. Once we identify these candidates, we can evaluate the degree of intra-party competition such candidates face.

We identify viable candidates in any given election by combining information about their participation and performance in previous elections. Based on these criteria, there are three groups of candidates. (1) *Previous incumbents*: those who at election t had been successfully elected as governor, senator, mayor, a member of the CD or of one of the state legislatures in a previous election. (2) *Unsuccessful past candidates*: individuals who had ran for one of those offices in the past but who were never elected. (3) *Inexperienced candidates*: those who had not participated in an electoral contest before t.¹³

We consider all previous incumbents to be strong, competitive, viable, or 'high-quality' candidates. In this sense, we follow the US literature on campaigns and elections, which considers candidates who have previously held public offices to be 'quality candidates.' In general they did well, in terms of personal votes: 90% of them received more than 36% of their district quota, and no one received less than

Type of Candidate	Running	Elected	Strong/Viable
Previous Incumbent	2,468	1,508	2,468
Past Unsuccessful Candidate	4,993	212	773
No Previous Electoral History	12,378	323	997
Missing History	69	9	
Total	19,908	2,052	4,238

Table 3. Candidates in CD elections according to their electoral histories, Brazil, 2002-2014

Source: Compiled by the authors from TSE, Brazil (http://www.tse.jus.br/eleicoes/estatisticas/repositorio-dedados-eleitorais-l/repositorio-de-dados-eleitorais/).

10%; as can be seen in Table 3, 61% of them were elected when they ran in one or more of the four elections between 2002 and 2014.

Regarding the second category, past unsuccessful candidates, one could argue that they should all be considered weak because they never won an elected position. Yet, some of them did quite well in the past. It is reasonable, therefore, to think that they came into the election at t expecting to be successful, but, for various reasons, were not elected. Thus, instead of discarding all these candidates (which would favor our argument of low intra-party competition), we decided to include and consider strong those candidates who, although never elected before, received in the elections he or she had participated in at least 10% of a district quota in personal votes. This classifies as viable or strong 211 of the 212 candidates who had tried before but were first elected at t, and 562 of the 4,781 who were not elected at t, for a total of 773. 14 Thus, 15% of the candidates who came into the election with a prior but unsuccessful run commanded sufficient personal votes to be considered viable candidates. Finally, 12,378 out of 19,908 candidates, 62%, had no prior electoral experience when they ran between 2002 and 2014. Some of these did well in terms of personal votes in the election they ran, although only 323 were elected. Some of these are candidates who believed they could attract personal votes on the basis of activities they had engaged in outside of the electoral arena, whether or not these activities were political. Of these candidates, we consider viable those who were elected (with four exceptions) and, to be consistent with the criterion adopted above, those who obtained at least 10% of a district quota in personal votes, but were not elected. This adds 997 individuals to the set of viable candidates: 319 of the 323 novices elected when they first ran, and 678 novices who ended up not getting elected. 15

In the end, of the 19,908 candidates who participated in elections between 2002 and 2014, 16%, (212 + 1508 + 319 + 562 + 960 + 678) or 4,238, can be considered quality, viable or strong candidates. It was among these candidates that real competition for votes took place. This means that the ratio of candidate per seat under dispute in the four elections was 2.1. This is a far lower rate than that obtained by simply comparing the number of candidates with the total number of seats under dispute, which was 8.58 (see Table 1). This suggests that intra-party competition is much more limited than a first general analysis of candidates would indicate.

5. Contained intra-party competition

The previous section showed that in spite of the large number of lists and candidates competing for a seat in the Brazilian CD, intra-party competition seems to be limited. Among strong candidates, the ratio of candidates per seat is 2.1, far from the ratio of 10 the literature usually reports.

In this section, we explore the dynamics within parties to understand the level of intra-party competition. We do this by examining the distribution of personal votes across candidates in the same party and across parties. First, we look into whether different parties use distinct strategies to compose their lists. We find that competitive parties present candidate lists that are more efficient that those presented by less-competitive parties. Second, we assess the degree of intra-party competition by comparing the number of strong candidates in a list (as identified in Section 4.2) with the number of candidates elected from that list. We find that parties tend to build lists with as many strong candidates as seats they receive; lists that contain multiple strong candidates win multiple seats. We interpret this as evidence that strong candidates in the same party list are not necessarily competing for the same seat. We also analyze the context in which these parties act, and find that district magnitude adds uncertainty into parties' strategies. Third, we examine the pattern of distribution of personal votes within party and coalition lists. We show that the distribution of votes across candidates from the same party list tends to be sharply discontinuous when we move from the last elected to the first non-elected candidate. This indicates, we believe, that rather than a random group of individuals seeking votes in competition with one another, party lists are deliberately built in a way to reduce clashes among co-partisans.

5.1. Candidate efficiency of party lists

We define list efficiency as the ratio between the number of candidates presented and the number of candidates elected in a list, with low ratios indicating higher efficiency. The received view about CD elections in Brazil, as we have seen, is that party lists are large and candidates face intense competition from co-partisans, that is, that party lists are inefficient. Efficiency would be of no concern to either parties or candidates. Given that seats are allocated to the lists by pooling votes across all candidates, parties should have an incentive to present lists as large as possible. The incentive should be stronger for consolidated, more competitive and wealthier parties because they are those more likely to attract candidates. Thus, party lists of more competitive parties should be highly inefficient. In a perverse way, the literature argues, the system rewards parties that are able to attract as many candidates as possible and incite intense competition among them.

However, as we can see in Figure 2, the opposite is true. This figure presents the ratio between the number of candidates in a party list and the number of candidates elected in that list for the seven elections between 1990 and 2010, averaged over party type and district magnitude. We can see that candidate lists presented by more consolidated and competitive parties are considerably more efficient than

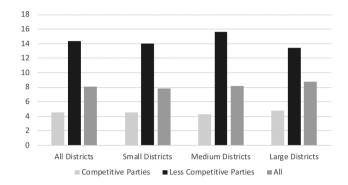


Figure 2. Party list efficiency by party type and district magnitude, CD Elections, Brazil, 1990–2014. Compiled by the authors from TSE, Brazil (http://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais-l/repositorio-de-dados-eleitorais/)

those presented by weak, less-competitive ones. The former have lists that are significantly more contained numerically.

We define as consolidated and more competitive the eight parties which, according to Mesquita (2016), have 'executive proclivities,' that is, parties that have presented competitive candidates for governor in multiple elections and in multiple districts. For her, these parties 'have the most to gain from coordinating electoral entry. They guarantee reduced competition and increased support for their candidates in the districts they consider to be the most important in any given election' (Mesquita, 2016: 70–71). Mesquita identifies eight such parties: the PT and the PSDB, the two parties that have held the presidency for relatively long periods of time since 1990 (12 years for the PT and 8 years for the PSDB) and are in opposite sides of the ideological and electoral spectrum (Limongi and Cortez, 2010; Melo, 2014; Mesquita, 2016); four parties normally considered to be Brazil's catch-all parties, the PMDB, PFL/DEM, PTB, and the PP; and two parties that were stronger earlier (PDT) or that have expanded later (PSB) in the period. 16 The 'executive proclivities' of these parties, alongside with their desire to reduce competition, translates into relatively higher levels of list efficiency in elections for the CD. Together, these parties presented 14,237 candidates across all seven elections and elected 2,617; they presented 5.4 candidates for every candidate elected. The remaining parties, considered to be much less competitive, presented 14,381 candidates and elected 717, meaning that they presented 20 candidates for every candidate they elected. The candidate efficiency of competitive and non-competitive parties is more or less the same in small (DM between 8 and 12 seats), medium (DM between 16 and 31 seats), and large (DM between 39 and 70 seats) districts. Thus, intra-party competition in the more competitive parties is substantially more restrained than in the other parties, at least when it comes to the number of potential competitors. 17

5.2. The number of strong candidates in party lists

We now move to an examination of the number of strong candidates that appear in different party lists. What can the number of such candidates tell us about intraparty competition? Their absolute numbers tell us almost nothing: viable candidates do not necessarily face more competition from their co-partisans simply because they are in lists with other similar candidates. For example, intra-party competition might be less intense in a list that contains 10 viable candidates than in a list with only 3 such candidates if the former list is from a more competitive party that has enough electoral strength to elect all 10 of them while the latter is a list from a weaker party that expects to elect only one. To evaluate the degree of competition candidates face within their lists, thus, we need to have some idea of how those who put the list together expect to do in the election. In other words, we need to have a measure of the number of seats each list expects to receive. The degree of intra-party competition will increase with the difference between the number of viable candidates presented in a list, and the number of candidates the list expects to elect.

Finding such an estimate, however, is not straightforward. In line with other researchers, we could use past success (e.g., the average number of seats received in the past *n* elections) as an indicator of how a party expects to do in the current election (Crisp et al., 2007). In a context such as that in Brazil, however, where district-level volatility is high, an average of past performance would not be very reliable as an indicator of future performance. The high volatility caused both by shifts in voters' preferences and the entry and exit of parties in different districts, leads to an artificially large number of lists that over-perform, that is, lists that elect more candidates than the number of candidates they present. Although this is possible (e.g., see the example in note 12), it is not reasonable to expect it to be frequent.

Our solution is to simply compare the number of strong candidates in a list, our measure of viable candidates, with the number of seats a list received in the current election. This is possible because we classify candidates as strong in the current election on the basis of their performance in past elections; the classification, in this sense, is exogenous to the election for which it is used. We argue that intra-party competition is more intense, the larger the difference between the number of strong candidates in a list and the number of candidates elected from that list. When there are strong candidates who were not elected, it suggests that some candidates received votes that could have gone to someone else in the list.

Table 4 contains the relevant information for the four elections for which we can identify strong candidates. Table entries represent the absolute number of party lists by the difference between strong candidates presented and elected, and by the magnitude of electoral districts: small (8–12), medium (16–31), and large (39–70). As can be seen, close to half of all party lists presented no strong candidates and elected no one. Intra-party competition in these cases is either non-existent or irrelevant.

In turn, 1,367 lists presented at least one strong candidate. Of these lists, 24% presented exactly the number of strong candidates they elected, and 41% presented

	District Magnitude			
Type of List	All	$8 \leq DM \leq 12$	16 ≤ DM ≤ 31	39 ≤ DM ≤ 70
No strong candidates, no candidates elected	1,275	748	388	139
As many strong candidates as candidates elected	325	189	93	43
One more strong candidate than the number of candidates elected	562	306	162	94
Two more strong candidates than the number of candidates elected	210	98	65	47
Three or more strong candidates than the number of candidates elected	266	45	97	124
Fewer strong candidates than elected	4	0	2	2
All	2,642	1,386	807	449

Table 4. Number of party lists by type of list and district magnitude, Brazil, 2002–2014

Source: Compiled by the authors from TSE, Brazil (http://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais-1/repositorio-de-dados-eleitorais/).

one strong candidate who was not elected. As we consider the number of viable candidates in the list to be an indicator of the party's expected number of seats it will obtain, we see that 65% of the lists with at least one strong candidate are well coordinated in the sense that they follow Cox's (1997) rule and present at most M+1 viable candidates (where, following Crisp et al. (2007), M denotes the 'party's magnitude'). In only 10% of all lists, or 35% of the lists with at least one competitive candidate, do we see three or more strong candidates in excess of the number of candidates elected. These lists are clearly uncoordinated. Had the party devoted some of the resources and efforts that went towards the multiple non-elected candidates to only one of them, they might have been able to obtain an additional seat. Eight per cent of the lists had two strong candidates in excess. Whether one adds them to the set of 'well-coordinated' lists or not, the overall picture is not one of internecine intra-party competition. ¹⁸

Note that the difference between presented and elected viable candidates varies considerably with district magnitude. Candidates in smaller districts are less likely to have to fight against their co-partisans than candidates in largest districts. In districts with magnitudes between 8 and 12, 78% of all lists presented at most M+1 candidates with M as defined above; this proportion falls to 61% in medium size districts, and to 44% in the mega districts, those with magnitudes between 39 and 70. In turn, while only 7% of the lists in the small districts presented three or more excess strong candidates, 40% in the mega districts did so. It may well be the case that the widespread perception of chaotic electoral competition for the CD in Brazil, prevalent among analysts of virtually every kind, comes from the habit of

projecting the electoral dynamics observed in the five mega districts to the rest of the country. These are the most developed districts; they concentrate about 60% of both population and economic activity and are the focus of national media attention. Their sheer magnitude makes it hard for parties to form a reliable estimate of their strength and virtually impossible for candidates to have a good sense of where they stand in terms of votes when compared with their co-partisans. Relatedly, voters are concentrated in large urban centers, which makes it harder for candidates to carve, geographically or in any other way, non-overlapping constituencies. It is possible, therefore, that the sense of extremely intense intra-party competition that pervades analysis of CD elections in Brazil emerges from the observation of what happens in the largest districts, which is then projected to the smaller ones.

In conclusion, a comparison of the number of strong candidates presented by and elected from each list shows a very different picture than the one that predominates in studies of Brazilian legislative elections and of OLPR electoral systems in general. Intra-party competition in smaller districts, at least as measured by the frequency with which lists present excess strong candidates, is much more constrained than previously realized.

5.3. Discontinuous distribution of personal votes across candidates in the same list

The lack of intense competition inside party lists can be also demonstrated through an examination of how personal votes are distributed across candidates in a party list. Consider the 2014 election in the state of Santa Catarina, in southern Brazil, where 16 seats were under dispute. The election was dominated by two broad coalitions and one party, the Worker's Party (*PT*), which ran alone and won two seats. One of the coalitions, *C*1, was composed of eight parties, and elected five candidates across three of these parties: *PSDB*, *PP*, and *PPS*; the other coalition, *C*2, contained 12 parties and received 9 seats, also distributed across three parties: *PMDB*, *PR*, and *PSD*.

The distribution of votes for the candidates in the three sets of lists that received seats in this election is presented in panels A, B, and C of Figure 3. The hollow circle in each panel represents the last candidate elected from that party. In panel A, we see the three parties from C1 that received seats. Keeping in mind that personal votes are expressed as a proportion of the district quota, we see that the first two candidates in the PP received, respectively, 1.09 and 0.59Dq in personal votes, and they were elected; the third candidate, who was not elected, received 0.02Dq in personal votes. Thus, the difference in personal votes between the last elected and the first non-elected PP candidates was 0.57Dq. A similar situation can be observed for the other two parties in C1: the last elected candidate for the PSDB received 0.24Dq in personal votes, and the first non-elected received 0.06Dq; the last elected for the PPS received 0.37Dq and the first non-elected 0.01. Thus, a sharp discontinuity can be observed in Figure 3 in the personal votes received by the last elected and the first non-elected candidates in the same party.

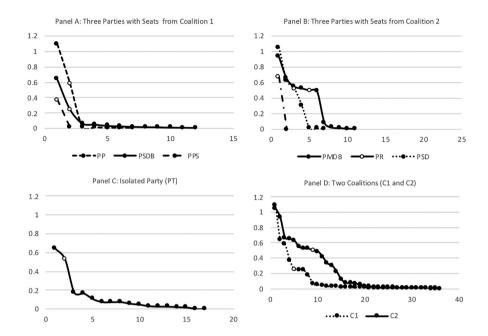


Figure 3. Distribution of personal votes for candidates in party and coalition lists, CD elections, Santa Catarina, 2014. Compiled by the authors from TSE, Brazil (http://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais-l/repositorio-de-dados-eleitorais/)

A similar discontinuity exists in the second coalition, C2, composed of three parties (PMDB, PR, and PSD, Figure 3 panel B). In both the PMDB and the PSD, the discontinuity is between the personal votes of the first and second non-elected candidates. The PR, in turn, presented only one candidate, who was elected, thus implicitly implying a difference as large as that candidate's personal vote. In Figure 3 panel C, we can observe the electoral results for the PT, which did not participate in any coalition. The first and second candidates, both elected, had personal votes equivalent to 0.64Dq and 0.53Dq, respectively. The third candidate, not elected, had personal votes amounting to 0.18Dq. The difference in personal votes between the last elected and the first non-elected candidates was, therefore, equal to 0.36Dq. Thus, we see in panels A–C of Figure 3 that the distribution of personal votes of candidates from the same party tend to take a sharp turn south at or around the first non-elected candidate.

Now examine panel D of Figure 3, which depicts the distribution of personal votes received by candidates from all 8 parties that participated in C1, and those from the 12 parties that participated in C2. We can see that the difference between the last elected candidate and the first and/or second non-elected candidate is considerably smaller: the share of personal votes across the candidates occupying these three relative positions is quite similar. It is not difficult to imagine that small disturbances prior to the election could have led to the success of the sixth or

Table 5. Difference in personal votes between last elected and first non-elected candidates in coalition and party lists, Brazil, 1990–2014

Panel A		Panel B				
Average across elections for each state			Average across states for each election			
State	Party	Coalition	Year	Party	Coalition	
AC	0.313	0.052	1990	0.160	0.046	
AL	0.396	0.121	1994	0.214	0.054	
AM	0.402	0.151	1998	0.285	0.096	
AP	0.201	0.062	2002	0.278	0.100	
BA	0.252	0.045	2006	0.307	0.098	
CE	0.365	0.126	2010	0.326	0.095	
DF	0.427	0.088	2014	0.384	0.090	
ES	0.221	0.057				
GO	0.307	0.078				
MA	0.276	0.057				
MG	0.206	0.037				
MS	0.223	0.071				
MT	0.269	0.134				
PA	0.280	0.102				
PB	0.341	0.119				
PE	0.380	0.039				
PI	0.361	0.115				
PR	0.221	0.099				
RJ	0.198	0.068				
ŔŇ	0.499	0.171				
RO	0.235	0.066				
RR	0.271	0.095				
RS	0.160	0.083				
SC	0.246	0.043				
SE	0.316	0.138				
SP	0.101	0.041				
TO	0.244	0.043				

Source: Compiled by the authors from TSE, Brazil (http://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais-I/repositorio-de-dados-eleitorais/).

seventh candidates instead of the fifth in C1, or of the tenth and not the ninth candidate in C2.

This pattern exemplifies the different environment candidates face in party versus coalition lists. Candidates must act parametrically within the coalition: as discussed in Section 3, the coalition list is the product of the mere addition of lists composed independently and, for political and legal reasons, are not identified as an actor in the campaign for federal representatives, let alone one capable of strategic behavior. But candidates can and do affect the lists in the parties under whose label they run, most importantly the number of claimants on the finite party resources. The fact that there is such a sharp discontinuity in the number of personal votes received by successful and unsuccessful candidates suggests, we believe,

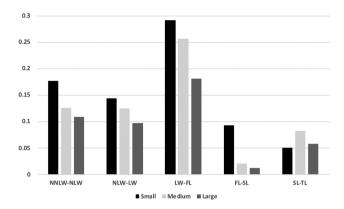


Figure 4. Average difference in personal votes for pairs of candidates in the same party list by district magnitude. Compiled by the authors from TSE, Brazil (http://www.tse.jus.br/eleicoes/estatisticas/repositorio-de-dados-eleitorais-I/repositorio-de-dados-eleitorais/). Candidate positions: NNLW = Next to Next to Last Winner; NLW = Next to Last Winner; LW = Last Winner; FL = First Loser; SL = Second Loser; TL = Third Loser.

that strong candidates go into the election knowing that they are fighting not their co-partisans but members of different parties. Table 5 demonstrates that the inflection is general and larger in party lists than in coalition lists: the average differences for party lists for each state in all elections (panel A), and for each election across the states (Panel B), is always considerably higher than for coalition lists. To the extent that the break in the distribution of votes from the last elected to the first non-elected candidate denotes capacity to limit intra-list competition, we can say with assurance that members of the same party face much more limited competition from co-partisans than members of parties in the same coalition.

We interpret the existence of a sharp discontinuity between the last elected and the first non-elected candidate in party lists as evidence that these lists are numerically contained and that they tend to be contained at or around that point. We would be incorrect, however, if we were to find similar differences across the personal votes of candidates located in other relative positions. Our last piece of evidence, thus, is presented in Figure 4, which compares the personal votes between candidates located at different positions in the party list. If we locate the difference in votes between the last winner (LW) and the first loser (FL) at the center, to its left we have the difference in personal votes between the next-to-last winner (NLW) and the LW, and between the next to the next-to-last winner (NNLW) and NLW; to the right are the differences between the FL and the second loser (SL), and between the SL and the third loser (TL). If party lists are limited in the number of candidates they contain, we should observe a curvilinear pattern in the distribution of these differences: relatively small differences between two winning or two losing candidates; large differences between a winning and a losing candidate.¹⁹ Limiting the analysis to lists with all the positions displays a similar pattern, but significantly

reduces the number of lists. As displayed in Figure 4, the overall pattern conforms with this expectation. Differences in the personal votes of last winners and first losers in lists from the same party are considerably larger than the differences between pairs to their left and right. As we had found in Section 4.2, there is a district magnitude effect: although the pattern of discontinuity is as expected across all districts, it is sharper in smaller districts than in larger.

6. Conclusion

In this article, we have provided evidence to the effect that, even in its most extreme form, OLPR elections do not necessarily imply high levels of intra-party competition. Electoral campaigns will certainly be personalized since candidates need to attract votes for themselves. However, there is nothing in this fact that requires candidates from the same list to compete with one another for votes and that, as a consequence, competition will degenerate into a war of all against all, with the ultimate obliteration of political parties. As we have seen, the absolute number of candidates competing misleads the observer because over 40% of them, in a strong and specific sense, are irrelevant: they generate so few votes that they could be dropped out of the race without changing at all the allocation of seats. Moreover, the number of candidates who enter an election with a reasonable expectation of victory is small, implying a moderate level of overall competition. Finally, when we consider the distribution of candidates inside the party lists we discover that, in general, they contain a limited number of viable candidates and that the number of excess candidates is small. To be sure, this pattern is less accentuated in very large districts, but it is nonetheless significantly present, suggesting that the difficulty emerges not so much from the ballot structure but from the extremely large magnitude and sheer number of voters in the district.

It is important to mention that candidates can be different not only because they have different number of personal votes, but also because they seek votes in different constituencies and, thus, do not really compete for the same pool of voters. Candidates in the same list can seek votes in different areas of the district; they can also seek the vote of constituencies that, even if not geographically concentrated, are qualitatively different (e.g., issue-oriented voters). Thus, apart from the finding that party lists are populated by a relatively small number of strong candidates, it might be possible that even that small number of candidates draw votes from different constituencies spread across the district. We develop this idea in another paper.

Electoral systems that cultivate incentives for candidates to emphasize the personal vote do not necessarily imply autophagic competition among co-partisans and the obliteration of political parties. Yes, OLPR (and other forms of preferential PR) does make elections more focused on individual candidates. However, the competition within parties happens prior to the election, with both parties and candidates making sure that two candidates from the same party join forces to attract votes that otherwise would have gone to a different party, rather than fighting for the votes that one or the other would have received. Our findings have implications

for the kinds of linkages politicians and voters establish in preferential PR systems, for the behavior of politicians once they are elected, and for the role of electoral institutions on the nature of public policies. They question the causal chain that connects incentives for personal votes to intra-party competition, weak political parties, and adverse policy outcomes.

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Notes

- 1. In addition to closed and open, PR lists can be flexible. In these systems, parties rank candidates prior to elections but voters can cast a preference vote for specific candidates in the list. Candidates receiving a certain number of preference votes are elected, regardless of their rank in the list produced by the party. The number of votes necessary to upset the party ranking varies considerably across systems, but is usually a proportion of the total number of votes received by the party or of the quota necessary to elect a candidate in the district. In most existing systems, voters rarely upset the ranking of candidates produced by the party, although there is evidence that personal votes are becoming more important (Reinwick and Pilet, 2016).
- 2. See, among others, Bergman et al. (2013), Norris (2006), Willis et al. (1999: 21), Carey and Shugart (1995), and Geddes and Ribeiro Neto (1992).

3. Ames and Power (2007: 191) state that the Brazilian OLPR system 'encourages fierce struggles not only among different parties, but also between candidates from the same party.' For Mainwaring (1995: 395), 'to get elected, candidates often compete with their own party members more than they compete with candidates of other parties;' Nicolau (2006: 700) believes that 'candidates see as their main rivals colleagues from the same list rather than from other parties' [our translation]; Geddes and Ribeiro Neto (1992: 649) make reference to a remark by Francisco Weffort, a political scientist and eventual politician, to the effect that 'the open-list system pits candidates of the same party against each other;' Power (2000: 28) believes that Brazilian 'open-list PR is fratricidal.'

- 4. A non-exhaustive list includes: relatively low levels of public goods provision (Shugart, 1999); narrowly targeted public policy (Lizzeri and Persico, 2001; Milesi-Ferretti et al., 2002); relatively high levels of corruption (Chang, 2005; Geddes and Ribeiro Neto, 1992; Golden, 2003); relatively low levels of corruption (Kunicová and Rose-Ackerman, 2005; Persson et al., 2003), or different types of corruption (Gingerich, 2013); gender imbalance (Jones and Navia, 1999); distributive politics (Franchino and Mainenti, 2013); higher budget deficits (Hallergerg and Marier, 2004); inefficient public spending (Hicken and Simmons, 2008); bilateral investment treaties and foreign direct investment (Crisp et al., 2010; Garland and Biglaiser, 2008); vote buying (Hicken, 2007); agricultural subsidies (Park and Jensen, 2007); and economic reform (Bagashka, 2012).
- 5. Malapportionment in the CD comes primarily from a constitutional rule imposing a floor and a ceiling on the formula for determining the magnitude of the district: regardless of population, no district may have fewer than 8 or more than 70 seats. There are no adjustments of seats due to population shifts. The last time a change occurred was in 1993, when the size of the CD increased from 503 to 513, with the additional 10 seats going to São Paulo. In 2013 the court in charge of elections (the *Tribunal Superior Eleitoral* or TSE) attempted to adjust the number of seats on the basis of the 2010 census. States challenged the TSE decision in the federal high court (*Supremo Tribunal Federal*), which reversed the changes, arguing that they could only be made on the basis of constitutional (*complementar*) legislation (Zampier, 2013).
- See Carneiro (2009) for examples of how parties form candidate lists in the state of Rio de Janeiro.
- 7. These were in Amapá (1990), Brasília (two in 1990, one in 1998, two in 2014), Paraíba (1990), Rondonia (2014), and Roraima (2014). For reasons we could not discover, four coalitions in 1990 (Roraima, São Paulo, and two in Rio de Janeiro) presented more candidates than they should have been allowed.
- 8. For a review of the literature on the incentives of large and small parties to coalesce in elections for the CD see Calvo, Guarnieri, and Limongi (2015), Schmitt (2005) and Mesquita (2016).
- Consider, for example, Bergman et al. (2013: 322): 'A seat-maximizing party under OLPR is indifferent to the distribution of votes across its candidates, meaning we can expect laissez faire competition: nominate the maximum allowable number of candidates, and let them compete freely.'
- 10. All the data in this article come from *Tribunal Superior Eleitoral, Brasil.* Data for 1994 are incomplete. The TSE has withdrawn the data that used to be available and has rereleased information for only 15 of the 27 districts.
- 11. In this exercise, we started by allocating the seats in the district as they actually happened. We did that according to the rules that governed each election, which means that we used the coalition lists, when relevant, as the recipient of seats; we then allocated the

- seats to individual members of the list. For 12 of the 177 districts, we were not able to exactly replicate the final allocation of seats, although the outcome was very close. We did not include these districts here.
- 12. Recall that 28,618 candidates competed between 1990 and 2014. Excluding the candidates in the 12 districts we could not replicate, leaves 25,588 candidates, of which 14,996 were found to be irrelevant. Therefore, the personal votes received by 10,592 candidates mattered for the final allocation of seats.
- 13. Owing to data limitations, our 'history' only goes back as far as 1998. Thus, candidates who ran in 2002 had histories defined by their participation and performance in the 1998 and 2000 elections; candidates who ran in 2006 had histories defined by their participation and performance in the 1998, 2000, 2002, and 2004 elections; etc. In creating these histories, in addition to the national elections that happened up to 2014, we also considered the local elections of 2000, 2004, 2008, 2012, and 2016. There were 69 candidates in these elections for whom we were not able to find information about their participation and performance in previous elections. In total, therefore, Table 3 and the analysis in Section 5.2 refer to the 19,908 who participated in the four elections between 2002 and 2014.
- 14. The one case not classified as strong among the 212 who were first elected at *t* comes from the list presented by the *PRONA* in São Paulo in 2002. This candidate received 0.15% of a district quota in personal votes and was elected in the tail of Enéas Carneiro, who obtained 5.6 district quotas in personal votes, thus automatically electing himself and four of his co-partisans. The other three received similarly low levels of personal votes, but had never participated in any election before. A fifth candidate, also an electoral novice who received 0.01% of a district quota in personal votes, was elected in the remainder distribution.
- 15. The four exceptions are explained in the previous note. The majority of novices who were not elected when they ran performed poorly in the elections they had participated in: 50% of them received less than 0.6% of a district quota in personal votes; 90% of them received less than 8% of a district quota.
- 16. Mesquita's list is only marginally different from other classifications of large parties, e.g., Guarnieri (2011) and Braga (2006).
- 17. Parties in Brazil, as in other places, differ in the way they are organized, some more centralized than others. This is clearly something that might affect their ability to control the list and prevent entry of excess candidates. Unfortunately, addressing this possibility is impossible given the state of our knowledge about how parties in Brazil are organized. The best and most complete study of party organization in Brazil is by Guarnieri (2011), which is limited to only seven parties. Since there may be variation in the way parties operate at the district level when it comes to list composition, it is not possible to extend Guarnieri's classification of parties to the whole country.
- 18. There are at least two possible reasons for lists in Brazil to overshoot the number of strong candidates. One is that there is a non-trivial number of seats (close to 15% in the average district) that are allocated through the (largest average) remainder distribution. Second, many candidates are not initially elected but end up serving some significant amount of time as an elected representative. Many of those who were initially elected leave when they join the government as a minister or as a member of an executive or judicial agency, or run in mayoral elections that take place in the second year of their mandate. When this happens, the next candidate in the list takes the seat. We know of no systematic studies about these candidates, except that the number is considered to be high.
- The number of cases in each pair differs because not all lists have candidates in all positions.

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