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## Chilean Electoral System: A moderate D'Hondt PR

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## Introduction

Between 1990 and 2013, there were more than 25 attempts in the Chilean legislature to put an end to the electoral system regulating the election of parliamentarians that had been established by Pinochet's authoritarian regime. Known as the binomial system, it had been criticized on various grounds (Chasquetti 2017). On the one hand, its legitimacy was questioned: because it was established by Pinochet, it was considered to be an "authoritarian legacy" (Garretón 2006). On the other hand, critics argued that the distribution of electoral districts led to pronounced inequalities in the vote (malapportionment), that it generated a marked disproportionality in representation, that it excluded important groups from the assembly, and that it did not encourage interparty competition (Auth 2006). Public opinion polls showed that a large part of the population supported electoral reform (Segovia and Laroze 2009). Nevertheless, no reform attempt prospered.

Following the 2013 elections, the political and parliamentary scenario changed significantly. This encouraged the government of Michelle Bachelet (2014-2018) to make a further attempt at reform of the electoral system. Thus, at the beginning of her administration, she presented a reform bill whose main objectives were to reduce the levels of malapportionment, promote greater interparty competition, increase the representativeness of the system by establishing greater opportunities for other groups to reach Congress (Gamboa and Morales 2016), and change "the current unequal gender representation in the National Congress" (Bachelet 2014). After a year of debate and negotiation, in 2015 a large enough parliamentary majority was finally assembled to replace the binomial system with a (so-called) moderate proportional system. The new rules were applied for the first time in the 2017 elections.

This contribution describes and examines the main components of the new Chilean electoral system and analyzes the results of the first elections held under these new rules. The first section describes the main features of the electoral system for parliamentary elections in Chile and explains, with an illustrative example, how the seat distribution system works. The second section analyzes the effects of the electoral system using data from the 2017 election. We refer to the system's results in terms of proportionality, fragmentation, and the effect of the quota law. We conclude with some final observations.

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## The Electoral Rules for Parliamentary Elections

Conceptualized in its simplest form, an electoral system is the mechanism by which votes are converted into seats (Herron et al. 2018: 2). A fuller definition adds three other elements: rules on the distribution of districts, the form of candidacies, and voting rules (Nohlen 1995). Considering these four elements, the new Chilean electoral system is characterized by (a) division of the territory into plurinominal districts of variable magnitude (M), (b) open lists, (c) a secret ballot and a single ballot paper, and (d) use of the D'Hondt rule as a mechanism for seat allocation.

The Chilean parliament consists of two chambers, the Senate and the Chamber of Deputies (CD). Under the binomial system, the Senate was composed of 38 senators and the CD of 120 deputies. This system established that two parliamentarians $(\mathrm{M}=2)$ were to be elected for each electoral district both for the Senate and the CD , so there were 19 senatorial constituencies for the Senate and 60 electoral districts for the CD. The parties could compete alone or as part of apparentments formed with other parties. Each party or apparentment could present up to two candidates for each electoral territory. Voters had to vote for a single candidate only, never for a list. Seats were distributed according to the D'Hondt rule. Thus, to determine which candidates were elected, the first point considered was the sum of the votes obtained by the candidates on a list. If a list obtained more than twice as many votes as the runner-up list, both its candidates won seats. Failing this, seats went to the two candidates who had the most votes of the two lists with the most votes (Gamboa and Morales 2016).

The new system is different. First, the number of seats to be elected increased for both chambers: from 120 to 155 for the CD and from 38 to 50 for the Senate. At the same time, in the case of the CD , the number of districts was reduced from 60 to 28 , while their magnitude varied between 3 and 8 ( 5.5 , on average). The new districts were created mainly from mergers of pre-existing districts. Moreover, a new rule was introduced for the CD: every 10 years the electoral authority
(SERVEL) must recalculate the number of seats corresponding to each district according to variations of its population, but the number must never be less than three or greater than eight in any district. Deputies' term in office is 4 years, so that in each election, the CD is renewed in its entirety (Gamboa and Morales 2016).

Meanwhile, the number of senatorial districts was reduced from 19 to 15. Again, these were based on the pre-existing districts. The M is also variable but only between 2 and 5. Consequently, the binomial system was essentially left unchanged for five senatorial districts (Gamboa and Morales 2016). Senators' term in office lasts for 8 years, so that the Senate is partially renewed every 4 years (depending on whether the senatorial districts are even or odd).

As a result of these changes, malapportionment was reduced. Indeed, at CD level malapportionment fell considerably, from a ratio of $17.8 \%$ to $10.6 \%$ (using the Loosemore and Hanby index). However, at Senate level, the result was negative: malapportionment increased from $30.7 \%$ under the previous system to $32.6 \%$ in the new one (Gamboa and Morales 2016).

Second, parties can compete by themselves and form a list on their own or join an apparentment. These are permitted at the national level, but sub-apparentments are not. In this way, parties can join forces by combining their votes to gain more seats. As a consequence, as explained below, the seat distribution system is carried out in two steps. In the first, according to the D'Hondt rule, the seats corresponding to each list are calculated. In a second step, following the same rule, the seats won by an apparentment are distributed to each of its component parties (Gamboa and Morales 2018a).

Also, the law established that, whether of a party or an apparentment, each list may propose one extra candidate in addition to the number of seats up for election in each district (the " $M+1$ " rule). It imposes no obligation on parties or apparentments in their choice of candidates. The only substantive limitation, in the case of candidates being chosen in state-regulated primaries, is that only up to $40 \%$ of a party's candidates
may be chosen by this method, given the quota system (see below).

Third, for the first time in Chile, party lists are subject to gender quotas: no party may present candidates of either sex in excess of $60 \%$ of its total number of candidates. In addition, to boost women's participation, state reimbursements to women for votes obtained were increased, surpassing by $20 \%$ those received by men. Finally, a benefit for parties was established: for each woman elected, their party would receive a bonus of about US $\$ 20,000$. Since these rules apply only to four elections (2017, 2021, 2025, and 2029), they are transitional. In short, this is a system of candidacy quotas and does not establish any priority for female candidates in the distribution of seats. In this way, the Chilean formula is one of "aspirant quotas" and not of "reserved seats" that guarantees a certain number of seats for women (Dahlerup 2007).

Lastly, as before, the lists are open, with voters having to mark a preference for one of the candidates. There is no list vote. The vote is voluntary.

The rules for seat distribution work as follows: first, the total number of votes obtained by each list (the sum of the votes obtained by each of its candidates) is calculated. Then, how many seats each list gets is determined according to the D'Hondt rule. The following example explains the procedure: consider the case of a district that elects five seats $(M=5)$, and four competing lists each obtain the following number of votes: List A, 45,000; List B, 8000; List C, 27,000; and List D, 20,000. Applying the D'Hondt rule to this distribution, List A gets three seats, Lists C and D get one each, and List B gets nothing.

Second, once the number of seats corresponding to each list has been decided, which candidates get the seats can be determined. There are two possibilities. The first applies to a list composed of a single party, in which case seats are distributed according to the number of votes obtained by each candidate. In our example, if List C is composed of a single party, the candidate with the most votes is elected. The second possibility involves a list composed of several parties and includes candidates from different parties. Returning to the above example, let us suppose
that List A (which obtained three seats) was composed of candidates from three parties. In this case, to distribute the seats between the parties, a calculation similar to the one described above is made, but this time considering that the number of positions to be distributed is three, and that there are three lists (corresponding to each of the three parties). Thus, the first step is to add the votes of the candidates of each of the parties. Supposing the result is Party A, 22,500; Party B, 10,800 ; and Party C, 11,700. Applying the D'Hondt rule again, Party A ends up with two seats and Party C with one. Party B gets nothing. So defined, the seats go to the candidates in each list with the most votes. Thus, in the example given, the two candidates of Party A with the most votes and the candidate of Party C with the most votes are elected. Thus, as in many PR systems, the candidates of each list with the most votes are not necessarily elected.

## The New Rules in Operation: Proportionality, Fragmentation, and Quotas

Electoral systems have effects on different characteristics of the party system, such as parties' level of fragmentation, the proportionality of representation, or indirectly on the polarization of the political system (Cox 1990; Lijphart 1994). In this section we analyze the results of the first elections in which this new open list proportional system was used, comparing its results with those of the previous electoral system. We focus, in particular, on three main issues: (dis)proportionality of representation, fragmentation of the party system, and the result of the gender quota rules. We concentrate on the results of the election of deputies, since it is the only one at the national level in which all the seats were up for election, as the Senate was only partially renewed, and therefore data for that election are limited. We also acknowledge that no definitive conclusions can be drawn about the effects of the new rules from the results of a single election. Yet they do allow trends to be identified, such as those we highlight below.

For the 2017 election of deputies, the 25 competing parties formed a total of nine lists. Of these, individual parties made up two, and apparentments made up the remainder. There were also 11 independent candidates. Each apparentment included between two and five parties. Of a maximum of 183 candidates that each list could include, more than 160 candidates were presented by three apparentments alone: the Frente Amplio, Fuerza de Mayoría, and Chile Vamos (Gamboa and Morales 2018a).

## Disproportionality

The first aspect to consider is the effect of the new rules on the proportionality of representation, understood as the difference between each coalition or party's percentage of seats and its percentage of votes. A positive difference indicates that the party in question has a "favorable disproportion," while a negative one indicates that a party has an "unfavorable disproportion" (Gamboa and Morales 2018a). As we pointed out above, a main criticism of the binomial system was that it generated very disproportionate results, favoring some parties while prejudicing others (Gamboa and Morales 2016). Therefore, according to the reform bill's backers, one of its objectives was to address and solve this problem.

Here we show the data on disproportionality from two perspectives. On the one hand, we present the data at a general level, comparing them with data from the binomial system period. According to Gamboa and Morales (2018a), whether the Loosmore and Hanby index or the Gallagher index is used, disproportionality was variable between 1989 and 2013. According to the former index, and considering the results by coalition, disproportionality reached its lowest point in the 2001 elections, in which it scored 7 points, while its highest point was in 2013 with 12.2 points. If we use the Gallagher index, the lowest and highest points are found in these same years, with disproportionality figures of 5.2 and 7.8 points, respectively (in both indices, higher figures indicate less correspondence between votes and seats). Second, if we compare the figures for 2013 and 2017, the new electoral system can be seen to have not reduced
disproportionality significantly. According to Loosmore and Hanby's index, it dropped only to 12.1 in 2017, while if we use Gallagher's, it fell only to 7.3. Third, if we apply the same exercise to individual parties, we see a similar phenomenon occurring: according to the Gallagher index, disproportionality reached 6.2 points in 2013 and 6 in 2017. In principle, then, the reform did not produce a substantial reduction of disproportionality in party representation.

On the other hand, it is interesting to observe what happens within apparentments, i.e., to examine who wins and who loses within the electoral alliances. Considering the three largest apparentments (which together obtained $87 \%$ of the seats in 2017), the evidence points to two main facts. First, within each of them, the largest parties were the most favored, each obtaining a favorable disproportion. For example, within the Chile Vamos apparentment, the party with the most votes (Renovación Nacional) notched up 5 points of favorable disproportion. In the Fuerza de Mayoría coalition, the result was similar: the party with the most votes, the Socialist Party, had a favorable disproportion of 2.5 points (Gamboa and Morales 2018a). Yet the other parties' distribution of seats was not proportional to their electoral weight either. Thus, for example, in the Fuerza de Mayoría pact, parties of different electoral weight obtained the same number of seats (Gamboa and Morales 2018a). This is a relevant point, insofar as it warns of how a particular feature of the system can affect the distribution of seats in a PR system.

## Fragmentation

A second important aspect is how many parties the political system is divided into. Given that the system changed from one of $\mathrm{M}=2$ for all districts to a higher and variable magnitude, barriers to entry to parliament were reduced, especially to the Chamber of Deputies (where the average M is higher). Thus, by lowering that barrier, an increase in the number of parties represented in parliament is to be expected. In the case of the 2013 elections, eight parties won parliamentary representation, while in 201715 did so. Between one election and another, in other words,
the number of parties in parliament practically doubled. Undoubtedly, at first sight, the effect of the reform was to facilitate the entry of new parties. However, in political science there is consensus that measuring the fragmentation of the party system based only on how many parties are represented in parliament can lead to wrong conclusions, since not all parties have the same weight. In this way, to better understand the point, we need to consider other types of measurement, such as one that measures the number of effective parties (NEP) (Laakso and Taagepera 1979). In simple terms, this index of party fragmentation quantifies the significant parties that comprise a system. In the case of Chile, on average, the number of effective parties between 1989 and 2013 was 7.17 . The highest figure for the period was in 2013, when the number of effective parties was 8.7. In 2017, under the new system, the NEP rose to 10.7 , the top score since the return to democracy. Yet it should be noted that this metric had shown an upward trend before the electoral reform, particularly in the elections of 2009 (7.3) and 2013 (8.7). Thus, the increase in the NEP in the new elections is not necessarily dramatic. However, it is relevant that in 2017, there was a significant decrease in the combined electoral weight of the two traditional coalitions, the Alianza por Chile (which groups together the right-wing parties) and the Nueva Mayoría (center-left, the successor of the Concertación). While in 2013 they accumulated $84 \%$ of the votes, in 2017 their combined votes dropped to $73.5 \%$. In large part, this is explained by the emergence of a new left-wing coalition, the Frente Amplio, and the success of other small parties in gaining access to parliament.

## Gender Quotas

As explained above, for the first time in its history, Chile incorporated a gender quota system in its electoral rules. This is an "aspirants' quota" that does not ensure the election of women. Additionally, financial incentives were introduced to encourage women's participation in party lists.

What do the data tell us about the effects of the reform in this first election? First, that the number of female candidates obviously increased
considerably. In the case of the elections for the CD, there was an increase from $19.4 \%$ in 2013 to $41.4 \%$ in 2017. Second, that the percentage of women elected to the Chamber of Deputies also increased: while in the 2013 elections $15.8 \%$ of the seats were occupied by women, in 2017 the percentage increased to $22.6 \%$. Third, despite the above, it was also the case that there was no rise in women's rate of electability. Indeed, while in $201321.5 \%$ of the candidates won a seat, in 2017 this figure fell to $8.9 \%$. Men's electability rate, on the other hand, remained intact. Finally, and unlike what happened before when the average votes of male and female candidates were much alike, in 2017 the average votes for female candidates fell to $1.9 \%$, while that for men was $3.5 \%$. What is the reason for this? The available evidence does not allow a definite answer. However, preliminary data show that female candidates (especially challengers) face greater difficulties than men in collecting campaign resources and therefore tend to be disadvantaged in elections (Gamboa and Morales 2018b).

## Final Remarks

Electoral systems play a fundamental role in the functioning of democratic systems by establishing the playing field for party competition. In this context, study of the Chilean case is particularly interesting since it analyzes the characteristics and (preliminary) effects of a recent electoral reform. On the first point, institutional design, we showed how the 2015 reform substantially changed the conditions of political competition in relation to those under the previous binomial system. As noted, the reform sought to achieve certain central objectives: to reduce malapportionment (by redrawing electoral district boundaries), to lower the entry barriers to the legislature (by increasing the average magnitude), to favor greater proportionality in the representation of parties, and to reduce inequity in women' access to the legislature. On the issue of proportionality, the literature suggests that greater proportionality would be achieved with a moderate increase in district magnitude (between three and eight for the

CD and between two and five for the Senate). In turn, this increase would not have a very profound effect on fragmentation (Carey and Hix 2011). Finally, the D'Hondt rule was maintained as a mechanism for distributing seats, and the formation of electoral apparentments between parties is permitted (but sub-apparentments are not).

The results of a single election are insufficient to draw conclusions about whether or not the new electoral system achieved its proposed objectives. Given that the operation of the binomial electoral system that preceded the new formula for more than two decades served as the "driving force in party system change" (Scully 2017, 23), it is unrealistic to assume that the parties will adjust their expectations and strategies mechanically and automatically to the new rules. However, some trends can be observed. First, malapportionment was indeed significantly reduced in the districts to elect deputies, but not in the Senate. Second, the proportionality of representation was not substantially increased when the results disaggregated by party are considered. Third, in terms of fragmentation, there is an increase, although not a dramatic one, in the actual number of parties with parliamentary representation. However, it is difficult to attribute this effect exclusively to the electoral change, since trends suggesting increasing fragmentation of the party system were already observed before the reform. Finally, with regard to equity in women's access to the legislature, the results of the 2017 elections are double-edged: on the one hand, an increase in the percentage of women candidates and women elected, but on the other, a substantial reduction in their electability.

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