



EXPLORATORY STUDY ON THE EFFECT OF COALITION EXTINCTION IN THE 2020 BRAZILIAN MUNICIPAL ELECTIONS

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Abstract: Several studies have discussed the consequences of coalitions on party fragmentation and candidates' representativeness in proportional elections in Brazil. This study aims to recover such discussions and analyze the dynamics between coalitions and electoral results in the context of the 2020 municipal elections. It is an exploratory study based on comparisons between data from 2016 and those from 2020, seeking to identify the possible effects that the elimination of coalitions in proportional elections may have had on the results of municipal elections and, from this perspective, to reflect on possible impacts on the 2022 elections. The analyses performed suggest the influence of the end of coalitions on the degree of fragmentation of municipal council groups, as well as on parties' electoral strategies. It is expected that the results achieved can help understand the dynamics that has emerged in the Brazilian political system with the end of coalitions, as well as suggest pathways for future research.

Keywords: Party Coalitions; Electoral Systems; Party Systems; Municipal Elections.

1 Introduction

Several studies have discussed the effects of coalitions on party fragmentation and on candidates' representative capacity in proportional elections. The effect of coalitions on the Brazilian political system has been studied by political science theorists since the 1960s (SOARES, 1964), but it was only in the last 30 years that the topic became more present in legislative debates on electoral reform, culminating, in 2017, with the enactment of Constitutional Amendment 97/2017 (BRASIL, 2017). Such amendment eliminated the possibility of coalitions for the election of members of the municipal, state, and federal legislatures. However, it was established that this rule would only be valid as of the 2020 municipal elections.

Hence, this is the great importance of studying the results of those elections, since they have become a kind of trial balloon in which the possible implications of the end of coalitions for electoral results and party strategies can be analyzed. Thus, this research conducts an exploratory study based on comparisons of data from the 2016 and 2020 municipal elections, in order to analyze the effects of the end of coalitions in proportional elections and their influence on the results. Based on that, we seek to explore how such outcomes may affect the 2022 elections.

This investigation was structured from a brief literature review, which included a historical overview of the study on coalitions in the Brazilian electoral system, and a research on the legislative proposals presented in the Chamber of Deputies that aimed to end coalitions,

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analyzing the justifications that the representatives presented on what consequences the intended change could cause in the Brazilian political system, particularly in the dynamics of proportional elections. Next, a discussion of the results obtained is presented, contextualizing the data from the 2020 elections with the discussions in the previously presented bibliography. The conclusion seeks to highlight the most relevant findings related to the new electoral dynamics that emerged in the Brazilian political system as a result of the end of coalitions, and some interesting topics are suggested for future research.

2 A brief history of coalitions in the Brazilian Electoral System

On October 4, 2017, Constitutional Amendment 97/2017 was enacted (BRASIL, 1997)², which extinguished the possibility of parties' making coalitions in proportional elections. Such an instrument appeared for the first time in Brazilian law 85 years earlier, under the denomination of "alliance of parties"³. This novelty brought by the 1932 Electoral Code, and subsequently renamed party coalition, has been used since then with the exception of elections occurring during the periods of the *Estado Novo* (New State) and the Military Regime (1964-1985).

According to Miranda (2013), the debates on the implications of coalitions in the election of legislature members gained momentum in the 1960s, when studies such as those by Gláucio Ary Dillon Soares emerged, trying to analyze their impacts on parties' electoral strategies and their effects on election results. Soares' (1964) studies aimed at analyzing the nature of coalitions, heretofore called alliances, made in proportional elections between 1950 and 1962. For that author, the coalitionist behavior was guided by two rationalities: minimal effort and ideological resistance.

The thesis of minimum effort, or effort economy, would arise from the alliances signed by parties in order to maximize electoral gains. In his studies, Soares (1964) introduced three hypotheses regarding the minimal effort thesis: a) small parties are more likely to form alliances so as to make it easier for them to reach the electoral quotient; b) the higher the electoral quotient, the higher the number of alliances; and c) alliances are more frequent in majority elections than in proportional elections.

On the other hand, according to the author, the thesis of ideological resistance would manifest itself when a party, aiming at reaching the electoral quotient, calculated the losses and gains resulting from alliances with parties of different ideological currents. Soares (1964) believed

² Constitutional Amendment 97/2017 arising from Constitutional Amendment Bill (PEC) 36/2016 presented in the Federal Senate by Senator Ricardo Ferraço (PSDB/ES). After approval with changes in the Chamber of Deputies, it returned to the Federal Senate and was renumbered as PEC 33/2017. It finally passed without changes and was enacted by the National Congress.

³ Decree No. 21.076, of February 24, 1932 (Electoral Code).

Article 58 - Proportional representation is processed in the following terms:

1. Any party, alliance of parties, or group of at least one hundred electors is allowed to register a list of their candidates, under a legend, with the Regional Court, up to five days before the election.

that, in small towns, parties tended to be less ideological than in larger cities, a factor that facilitated coalitions. In addition, parties with a more rooted ideology and a more determined social base would also be less likely to make alliances.

According to Carreirão (2006), in the following decades, besides the discussions on electoral strategies related to the establishment of coalitions, there was an intensification of studies addressing their possible impacts on the structure of the Brazilian political system, especially their consequences on representation in the Federal Chamber of Deputies. The studies by Souza (1976), Nicolau (1996) and Tavares (1998), among others, are particularly noteworthy.

However, in addition to the theoretical debate, the discussion on the application of coalitions in proportional elections also became a recurrent theme on the agenda of political reforms in the National Congress. Its possible relationship with the election of deputies from small parties, who would not reach the electoral quotient on their own, and the consequent party fragmentation occurring in the legislative houses during the 1990s led to a series of proposals to amend the Electoral Code, aiming at the prohibition of coalitions. This movement by congressmen intensified after 1999, with the presentation of Bill 668/1999 in the Chamber of Deputies by congressman Aloysio Nunes Ferreira (PSDB/SP). Parts of the arguments contained in the justification for the bill are noteworthy:

In summary, the expedient of coalitions has distorted the proportional system in its most characteristic aspect: the party is no longer the main reference of the electoral result, and voters may vote for one party and elect a candidate from another. Thus, political party representation in the Chamber of Deputies and other houses filled by proportional elections does not effectively correspond to the electoral strength of party affiliations.

The prohibition of coalitions in proportional elections has often been included in the political reform agenda as part of the discussion on the advantages and disadvantages of the participation of parties with a small number of votes in representative bodies. In other words, it is assumed that the end of coalitions is defended only by those who consider that a smaller number of political parties in the legislative houses would have beneficial consequences for the decision-making processes. This perception is mistaken.

Coalitions may indeed facilitate the subsistence of less voted parties, but this is not exactly why we should exclude them from the legal system. We should do it, in fact, because they distort representation, allowing parties without enough votes to elect representatives to occupy seats in legislative houses through coalition (BRASIL, 1999, p. 132).

Despite mentioning that the elimination of coalitions in proportional elections could reduce the number of parties elected to the Chamber of Deputies, the author of the bill still did not explicitly advocate the existence of a direct relationship of coalitions with party fragmentation, which, at the time, was increasing significantly in the legislative houses (PAIVA; ALVES; BENEDITO, 2013). Senator Sérgio Machado's main point was the distortion of the principle of proportionality in elections due to coalitions, which resulted in parties' failing to

obtain a number of seats that was proportional to their votes, and enabled the votes given to a party to result in the election of a candidate from another party, more often than not representing small parties.

Several bills that were later presented with the same idea as that of Bill 178/1999 can be listed. Some examples are: Bill 1336/1999 by congressman José Antônio Almeida (PSB/MA), Bill 3367/2000 by congressman Ricardo Ferraço (PSDB/ES), Bill 82/2003 by congressman Roberto Magalhães (PSDB/PE), Bill 7048/2002 by congressman Coriolano Sales (PMDB/BA), Bill 551/2003 by congressman José Roberto Arruda (PFL/DF), and Bill 1067/2003 by congressman Pompeo de Mattos (PDT/RS). It is noticeable that this list includes deputies from different parties, different ideological profiles and different states. Such convergence of thought among representatives allowed for the Special Committee of the Chamber of Deputies, intended to study the Political Reform, to present Bill 2679/2003 in the beginning of the 52nd Legislature, which proposed the end of coalitions for the election of representatives. In justifying that bill, the study committee of the Chamber of Deputies clearly and objectively highlighted the possible relationship between the application of coalitions in proportional elections and the increasing party fragmentation in legislative houses. The following excerpt from the proposal's justification is noteworthy:

The aforementioned mechanics is usually ignored by voters, who vote for a candidate, unaware that the vote they cast for him/her may actually elect a candidate from another party. Not infrequently, a candidate from the largest party in the coalition fails to be elected because he is passed over by the smaller party. The latter, without the coalition, would not have reached the quotient.

The practice dilutes the differences between the parties, seeming to serve only as an expedient to circumvent the legal barrier. Moreover, the non-permanence of the coalition after the election, in the legislative work, accentuates the opportunistic and episodic character of the alliance.

(...)

No less significant in our political life has been the problem concerning party fragmentation, already implicitly mentioned when we talked about the topic of coalitions in proportional elections. Diagnoses from a few years ago viewed the proliferation of parties, resulting from legal norms that were too permissive for party creation, as extremely negative (BRASIL, 2003, p. 15).

Even though it was not successful in the 2003 political reform, the discussion on eliminating coalitions in proportional elections did not subside and became recurrent in several of the subsequent attempts at political reform - including those occurring in 2007, 2012, and 2015 - until the idea prevailed 14 years later through Constitutional Amendment 97/2017. Despite its enactment in 2017, the constitutional amendment established that only as of the 2020 municipal elections would coalitions be extinct. Thus, although most studies on the effect of coalitions focus on their consequences for the Chamber of Deputies or Legislative Assemblies, the 2020 municipal elections gained enormous relevance by serving as a laboratory for real analysis on the impacts that the end of coalitions may actually cause on party representation in legislative houses. The

electoral results of the city councils in the major state capitals, in particular, are very similar to what is expected for the national elections.

3 Expected consequences of the end of coalitions in proportional elections

Before plunging into the analysis of the data from the 2020 elections, it is important to present some political scientists' discussions, as well as congressmen's opinions, about what the consequences for the legislative elections and their possible implications for the Brazilian political system would be if coalitions were extinguished.

For Nicolau (1996), the main function of coalitions in proportional elections was to allow small parties to avoid having to individually reach a high electoral quotient. According to the author, the Brazilian electoral system showed in its operation a certain degree of disproportionality that tended to benefit the large parties, generating what is known in the literature as "Duverger's mechanical effect". Thus, the creation of coalitions would be a way for small parties to minimize this phenomenon. However, its influence was determinant to increased fragmentation at the national level, especially in the composition of the Chamber of Deputies, according to Jairo Nicolau (1996).

However, according to Albuquerque (2017), there would be two consequences caused by coalitions in the Brazilian electoral system:

First, coalition parties do not need to exceed the electoral quotient in order to aspire to the disputed seats, but coalitions do. This allows small parties - which, if competing alone, would be eliminated from the race - to effectively run for one of the seats. This provision distorts the majoritarian bias of the electoral race. Parties that run alone and do not reach the electoral quotient do not win any seats; coalition parties that also do not reach the electoral quotient may eventually win seats.

The second consequence reflects on the parties' strategy for launching candidacies. They do not need to have a large proportion of votes in relation to the rest of the coalition in order to have a candidate elected, but only to place their candidates among the most voted for on the party list. For this, the party can concentrate its votes on one or two aspirants for a vacancy, counting on other parties to do the "dirty work" of increasing the number of votes for the coalition (ALBUQUERQUE, 2017, p. 80).

According to Braga (2006), the need to reach the electoral quotient in the Brazilian system worked as an exclusion clause in the elections, since most of the parties' electoral power is not evenly distributed in the national territory. Thus, coalitions would be an alternative for these parties to be competitive. For the author, with the elimination of coalitions in proportional elections and the maintenance of the formula for distribution of electoral surpluses only to parties that reached the party quotient, the damage to small parties would be enormous mainly because the possible "waste" of a considerable proportion of votes would still be an affront to the proportional principle enshrined in the Federal Constitution. Thus, Braga (2006) argues that an

alternative to reduce the inequalities brought about by the end of coalitions would be the elimination of the requirement for parties to reach the electoral quotient in order to participate in the distribution of electoral surpluses. Such a change would allow a distribution of seats that would more faithfully represent voters' will and avoid an increase in the systemic disproportionality produced by the new electoral formula (MELO; SOARES, 2016).

With similar conclusions to Braga's (2006), the study developed by Raphael Carvalho Silva, from the Legislative Consulting Office of the Chamber of Deputies, is noteworthy. In 2015, based on simulations with data from previous elections, the author predicted several effects that the extinction of coalitions could cause, in particular the possibly increased disproportionality in the composition of the Chamber of Deputies, favoring the largest parties to the detriment of medium-sized and small parties. According to the calculations reported by Silva (2015), the end of coalitions would provide an average growth of 39% for the large parties, affecting the medium-sized parties (mean reduction of 15%) and small parties (mean reduction of 41%), if the rule of distributing the surplus only to parties that reached the electoral quotient were maintained. According to Silva (2015), part of the representative distortions would be due to districts of small magnitude in which only one party exceeds the electoral quotient, thus obtaining all the disputed seats. For example, by the simulations, in the 2014 elections, such a situation would occur in seven states: Acre, Mato Grosso, Rio Grande do Norte, Roraima, Rondônia, Tocantins, and the Federal District. All of them electoral districts with low magnitude.

Comparatively, Silva (2015) shows that the proposal to end coalitions combined with the new rule of sharing the surplus among all parties could be considered more proportionally balanced, since the growth of large parties would be smaller (mean growth of 22.4%), and the reduction in the representation of medium-sized (mean reduction of 8.3%) and small parties (mean reduction of 15.9%) would be less severe. With the distribution of the surplus among the various parties, the risk of a single party's taking all the seats in a state would be eliminated. This is because, even in cases where only one party reaches the electoral quotient, all the other parties would participate in the process of allocating the surplus.

These ideas echoed in the deputies' discussions on Constitutional Amendment Bill (PEC) 282/2016, which dealt with the end of coalitions in proportional elections, and appear explicitly in the advisory opinion presented by Deputy Betinho Gomes to the Committee on Constitution and Justice and Citizenship (CCJC) of the Chamber of Deputies:

Only for the record, since the examination of infraconstitutional matters is not the object of this advisory opinion, we believe it is noteworthy that if the extinction of coalitions in proportional elections becomes effective, the logical consequence of this measure, for the preservation of the proportionality required by the Constitution, will be the revocation of the rule set forth in the Electoral Code that excludes parties from the allocation of seats if they do not achieve the electoral quotient (EC; art. 109, §2) (BRASIL, 2017a, p. 4).

Such a proposal to amend the Electoral Code, which altered the rules for distribution of electoral surpluses, was contemplated by Bill 8612/2017⁴, presented by the Special Committee for Analysis, Study and Formulation of Proposals Related to the Political Reform that had been working in the Chamber of Deputies in parallel to the Special Committee for PEC 282/2016. Thus, the same electoral reform that determined the end of coalitions also contemplated the possibility that all parties participating in the elections could run for the remaining seats after the calculation of the party quotient. This was the alternative found to try to minimize possible problems in the distribution of seats that could cause party monopolies in the districts.

Based on the bibliography and the legislators' analyses previously presented, the following expected consequences of the end of coalitions in proportional elections can be summarized:

- better electoral results for the large parties to the detriment of the medium-sized and small ones;
- reduction in party fragmentation in the legislative houses.

These predictions stem from analyses in studies that focus primarily on the consequences that would arise in the elections for the Chamber of Deputies. However, data from the 2020 elections showed that the reality of municipal elections is different from that of federal elections due to the behavior of both voters and parties. As Albuquerque (2017) rightly points out, part of the explanation for this is due to party federalism. While the large parties, with their capillarity, reach all states and most municipalities, many small parties are important only in specific places, usually the largest cities. This ultimately generates a lack of parallelism between some of the predictions presented by most studies, which focus on federal elections, and the results observed in municipal elections. There is a gap in the literature regarding the behavior of coalitions in the municipal spheres and their consequences, and this article seeks to help remedy them through the following analyses.

4 Methodology

All the data from the 2016 and 2020 municipal elections used in this study's exploratory analyses were obtained from the website of the Superior Electoral Court (TSE) on 12/10/2020. In particular, the following bases were used: "votacao_candidato_munzona_BRASIL", for the 2016 data (BRASIL, 2020a), and "quociente_eleitoral_partidario", for 2020 (BRASIL, 2020b). Although the "quociente_eleitoral_partidario" table for the 2016 election summarized the list of municipalities and the number of seats obtained by each coalition, the information was not individualized by party. Therefore, a method was developed to extract these data from the

⁴ After passing in the Federal Senate as Bill No. 110/2017 by the Chamber of Deputies, it became Law No. 13.488/2017 on October 6, 2017.

“votaca_candidato_munzona_2016_BRASIL” table.

Since the 2020 data were not complete for all municipalities, we preferred to make comparisons concerning the variation in the number of parties that participated in the 2016 and 2020 elections and the number of seats in the municipal councils per elected party using mean values. Analyses were also performed on parties’ participation in both elections, including a count of the number of municipalities in which each party presented candidates. Two indicators were created to help interpret the data: the “Campaign Success Index”, which is given by the ratio of the number of parties that elected at least one candidate for councilor by the number of parties that campaigned in each municipality; and the “Party Success Index”, which represents the fraction of municipalities in which the parties managed to elect candidates in relation to the total.

It is again noteworthy that the date of data extraction from the Superior Electoral Court’s website was 12/10/2020. This information is extremely important because the court constantly updates its data due to the results of legal actions filed by candidacies, which may cause new vote totals. Thus, the closer to the elections the data are consulted on its site, the greater the chance that they will undergo some revision that will alter them later. Based on this situation, in the analyses performed in this study, only the municipalities that had complete data available were considered. This may produce a small disagreement in comparisons with future studies that use the same database. At the time of data extraction - for 2016 - 99.95% of all Brazilian municipalities (5,567 municipalities) had available data. For 2020 the proportion was slightly lower, 95.01% of the total (5,292 municipalities). However, these small divergences are normal in comparative studies, and it is believed that any data updating will not be significant enough to cause changes in the conclusions reached in this study.

5 Results

As previously mentioned, it is possible to summarize the expected consequences of the end of coalitions in proportional elections under two points: better electoral performance for the major parties and reduction in party fragmentation. The 2020 election data grouped in this paper show that the reality of municipal elections is different from that of federal elections, both in terms of voters’ and parties’ behavior. Thus, although the results expected by the studies were partially achieved, questions also arose about phenomena that have not been so widely discussed, such as the large decrease in the number of parties running for election in small districts and the almost non-existent impact on party fragmentation in the city councils of large cities.

5.1 Variation in the number of parties running for elections

The 2020 election data show that, as in 2016, the larger the number of seats disputed in the municipality, the larger the number of parties that launched candidates. There is a contributing factor to this, since larger cities usually have a more intense political life with a larger number of

party representations. Besides, as Nicolau (1996) explains, in high-magnitude districts, Duverger's mechanical effect is smaller, favoring the dispute conditions for small parties and stimulating them to participate in the election. Table 1 shows that, in 2020, there was a reduction in the number of parties running for election, especially in lower-magnitude districts.

Table 1 – Mean number of parties participating in the proportional elections in 2016 and 2020 by district magnitude⁵.

	2016	2020	Variation
Low magnitude	12.2	6.2	-45.5%
Medium magnitude	22.0	13.6	-38.6%
High magnitude	31.5	27.4	-13.0%

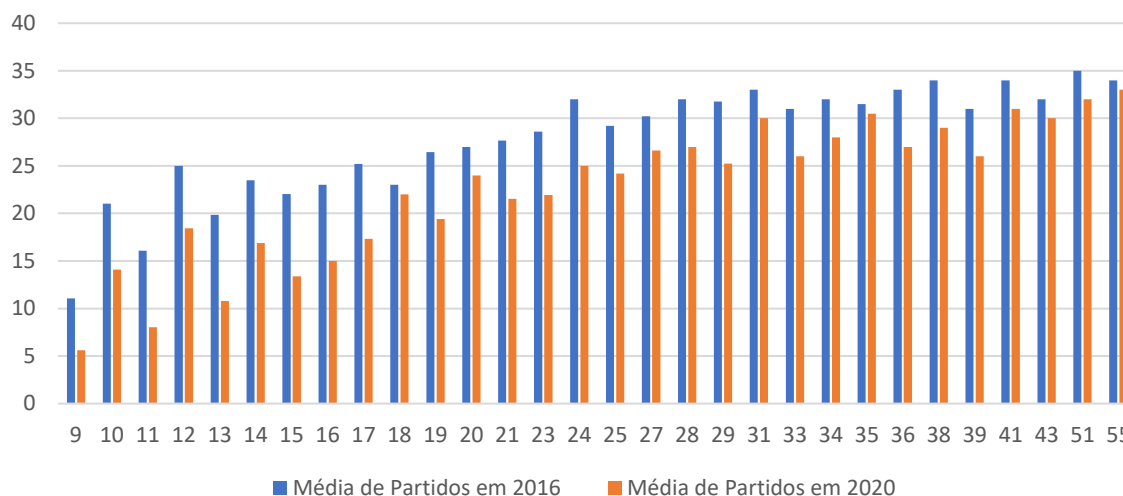
Source: Designed by the authors based on data from the Superior Electoral Court, 2020.

It can be observed that there was a reduction in the number of parties participating in the elections for councilor in all three categories, and this variation is possibly influenced by the district's size. It is noteworthy that the smaller the district, the higher the electoral quotient, proportionally. And even though parties no longer have to achieve the electoral quotient in order to dispute the electoral surplus seats, the data suggest that there is a force that continues to act in favor of large parties in smaller municipalities. One possible explanation is that party leaders' expectations that there would be an increase in the mechanic effect in the 2020 elections may have discouraged the launching of candidacies and consequently caused a reduction in the number of parties in the elections.

According to Nicolau (1995), this attitude would be explained by Duverger's psychological effect. According to the author, the psychological effect, besides influencing voters, also induces the party leaders' behavior in defining their electoral campaign strategies. These decisions would be made based on the expectation of how the mechanical effect could affect the parties' electoral opportunities. In the following graph, it is possible to observe that the mean number of participating parties consistently decreased regardless of the number of seats disputed in the municipality.

⁵ Districts' magnitude was classified according to Dalmoro and Fleischer (2005). Thus, the municipalities electing 8 to 15 councilors are considered to be of low magnitude; those electing between 16 and 24 of medium magnitude; and those electing more than 25 of high magnitude.

Graph 1 – Mean number of parties participating in the proportional elections in 2016 and 2020 by number of district seats.



Source: Designed by the authors based on data from the Superior Electoral Court, 2020.
(Mean Number of Parties in 2016; Mean Number of Parties in 2020)

The reduction in the number of parties in elections with the end of coalitions was great in the municipalities, but this is not a guarantee that the same will occur in state and federal elections. It is important to take into account that the parties' capillarity in small cities may have compromised their competitiveness, causing them to select the cities where they had better electoral chances. It is also important to consider the possible effects that the Coronavirus pandemic may have had on their strategies. Thus, the best parameters for what may occur in 2022 are probably the results provided by the capitals and high-magnitude municipalities, which usually have a larger number of party representations and where the mean reduction was much smaller (only 13%). However, an interesting question to be asked is how such reduction in the number of competitors affected the number of parties that succeeded in winning seats in the city councils. Some data that help elucidate these questions will be presented below.

5.2 Variation in the number of parties that elected councilors

One of legislators' concerns in eliminating coalition in proportional elections from the Brazilian legal system was to reduce party fragmentation in legislative houses, but without eliminating the chances that small parties could be represented there. As we have previously noted, the 2020 election data show us that there was indeed a reduction in the number of parties participating in the elections. But was there also a reduction among those electing councilors? Despite some distortions that will be later on presented, the next table shows that the mean figures for the number of parties in city councils decreased for municipalities of low, medium, and high magnitude.

Table 2 – Mean number of parties electing councilors in 2016 and 2020 by district magnitude.

	2016	2020	Variation
Low magnitude	6.2	4.5	-23.5%
Medium magnitude	9.4	8.0	-13.8%
High magnitude	17.4	16.9	-2.2%

Source: Designed by the authors based on data from the Superior Electoral Court, 2020.

According to Nohlen (2006), the larger the district, the stronger the manifestation of the proportional principle, in other words, the weaker the mechanical effect on its elections. Thus, the greater proportionality factor in the electoral formula, when applied in large districts, combined with the new rule for surplus distribution, could explain the fact that the mean number of parties elected for larger districts had a lower reduction in relation to those of medium and low magnitude. Furthermore, the number of parties running in these districts was larger, which also contributes to the fact that, in absolute terms, the number of successful parties was larger.

In fact, it is noteworthy that, regardless of district magnitude, the reduction in the number of “winning” parties in the 2020 election did not follow a similar proportion to the number of parties participating in the election.

Table 3 – Comparison of the variation in the mean number of parties participating in the election and those that succeeded in 2016 and 2020 by district magnitude.

	Variation in the mean number of parties participating in the elections	Variation in the mean number of parties with elected councilors
Low magnitude	-45.5%	-23.5%
Medium magnitude	-38.6%	-13.8%
High magnitude	-13.0%	-2.2%

Source: Designed by the authors based on data from the Superior Electoral Court, 2020.

That is, the effect of the end of coalitions in proportional elections seems to have had a greater impact on the number of parties running for seats than on the number of parties that won them. As previously mentioned, this was not exactly the effect expected by representatives with the passing of Constitutional Amendment 97/2017. The intention was to correct the distortions that coalitions caused in the proportionality of the vote/seat ratio, without making it impossible for small parties to participate. This point can be observed in the following excerpt from the advisory opinion by the rapporteur of this matter in the plenary session of the Chamber of Deputies, Deputy Shéridan:

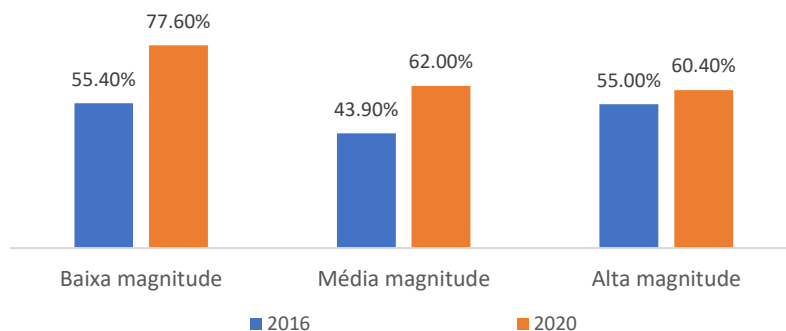
We are convinced that the end of coalitions will represent a great advance in

our political system, as it will provide voters with greater understanding and transparency about the consequences of their electoral choices and, at the same time, will guarantee greater governability and stability to our political system. Moreover, we were careful to ensure that the end of coalitions would not have the undesirable effect of making it impossible for small parties that represent important minority interests and contribute so much to the political debate in the Legislative Branch to survive (BRASIL, 2017b, p. 7).

The measure mentioned by the rapporteur was the inclusion in her advisory opinion of the Party Federation⁶, figure, which did not prosper after the parliamentary debates. In spite of this, it can be observed from that attempt that there was some concern on the part of representatives about how the end of coalitions could affect the existence of small parties.

Apparently, without the possibility of forming coalitions, the parties' strategy was to concentrate their efforts on the municipalities with the best chances of winning seats. Data show that they have been somewhat successful in doing so. Following the reduction in the number of contenders, especially in low-magnitude districts, there was an overall increase in the Campaign Success Index in 2020. The next chart shows the comparison of the mean Campaign Success Indices for 2016 and 2020, grouped by district magnitude.

Graph 2 – Mean Campaign Success Indices for 2016 and 2020 by district magnitude.



Source: Designed by the authors based on data from the Superior Electoral Court, 2020 (Low magnitude; Medium magnitude; High magnitude.)

The graph shows that the mean Campaign Success Index increased for all district sizes, that is, in 2020, among the parties that campaigned for councilors, a greater proportion succeeded in electing at least one candidate when compared to 2016. But does the Campaign Success Index relate to party fragmentation? It is known that there may be cases in which there are several parties with a very small number of seats in the city councils, and one or two with large numerical advantage. In this case the multiplicity of parties might not represent a problem for the functioning

⁶ The Party Federations would be a form of alliance between parties that would function as a coalition during the election period, but which would have to be maintained throughout parliamentary activities in the following legislature.

of the legislative house. Therefore, in order to have a better parameter on party fragmentation, it is important to analyze this new 2020 scenario using a tool that also provides a reference on what the distribution of seats among parties is like, such as the effective number of parties defined by Laakso and Taagepera (1979).

5.3 Effective number of parties in the city councils

Before visualizing the situation of party fragmentation in city councils through the effective number of parties, an attempt can be made to perform an analysis through a simpler indicator, such as the mean number of seats per party. The following table shows that, especially in smaller districts, there seems to have been a greater concentration of seats among parties and consequently the mean size of caucuses has increased.

Table 4 – Mean number of seats per party in 2016 and 2020 by district magnitude.

	2016	2020	Variation
Low magnitude	1.7	2.4	41.2%
Medium magnitude	1.7	2.1	23.5%
High magnitude	1.9	2.0	5.3%

Source: Designed by the authors based on data from the Superior Electoral Court, 2020.

Once again, it can be observed that the effect of the end of coalitions, by influencing the reduction of parties running for the city councils, may have generated more noticeable effects for low-magnitude districts that had a reduction in the competition for seats. This phenomenon is also evident in the figures for the effective number of parties⁷.

Table 5 – Mean effective number of parties in 2016 and 2020 by district magnitude.

	2016	2020	Variation
Low magnitude	5.2	3.7	-28.7%
Medium magnitude	7.7	6.3	-18.3%
High magnitude	12.5	11.8	-6.0%

Source: Designed by the authors based on data from the Superior Electoral Court, 2020.

When voting for the Constitutional Amendment Bill that extinguished coalitions in proportional elections, representatives may have expected a greater reduction in party fragmentation than that observed in the table above, especially for the largest districts, which are those with more similar elections to those at the federal and state levels. Regarding this result, the

⁷ The number of seats won by each party in the city councils was used to calculate Laakso and Taagepera's effective number of parties.

study by Borges, Silva and Ferreira (2020) is noteworthy. Based on the new electoral rules implemented by the 2017 political reform, the authors performed simulations using data from the 2016 municipal elections held in São Paulo and Belo Horizonte. They concluded that the end of coalitions would not have a significant impact on the reduction of the number of parties in the city councils. Although a significant reduction in the effective number of parties was observed in small districts - for large cities, the effect was actually compatible with the authors' conclusion.

However, regarding this result, it is important to consider two factors. The first is that the change in the rules for electoral surplus distribution, without a large decrease in the number of parties in the elections of the largest municipalities, may have counterbalanced the effect of the end of coalitions. Another aspect is that, perhaps, for a more conclusive result concerning the effects of the implemented changes, successive elections applying this rule will be necessary for a consolidation to occur in parties' electoral strategies and, consequently, also in the results.

5.4 Effect of the end of coalitions on the parties' electoral strategies in 2020

Another focus of analysis on the consequences of the end of coalitions in proportional elections is how this has affected parties' strategies. However, before considering the results for the 2020 elections, it would be interesting to know the reality of the 2016 elections. The following table shows the number of municipalities in which each party launched candidates for councilor and how many were successful.

Table 6 – Number of municipalities where each party ran for councilor seats in 2016.

	Municipalities with candidates	Municipalities with elected candidates	Achievement percentage
PMDB	5,067	3,734	73.7%
PSDB	4,610	3,091	67.0%
PSD	4,227	2,778	65.7%
PT	4,200	1,899	45.2%
PP	4,194	2,719	64.8%
PSB	3,996	2,291	57.3%
PDT	3,879	2,296	59.2%
DEM	3,633	1,921	52.9%
PR	3,604	2,012	55.8%
PTB	3,546	2,002	56.5%
PRB	3,020	1,229	40.7%
PPS	2,859	1,240	43.4%
PSC	2,756	1,159	42.1%
PV	2,564	1,094	42.7%

SD	2,491	1,110	44.6%
PC do B	2,245	743	33.1%
PROS	2,084	798	38.3%
PHS	1,968	685	34.8%
PSL	1,865	676	36.2%
PTN	1,723	612	35.5%
PEN	1,706	423	24.8%
PRP	1,453	467	32.1%
PTC	1,450	451	31.1%
PT do B	1,303	395	30.3%
PMN	1,238	415	33.5%
PSDC	1,191	329	27.6%
PRTB	1,142	321	28.1%
PMB	921	187	20.3%
REDE	712	158	22.2%
PSOL	584	34	5.8%
PPL	572	93	1.3%
PSTU	71	0	0.0%
PCB	46	1	2.2%
PCO	15	0	0.0%
NOVO	5	4	80.0%

Source: Designed by the authors based on data from the Superior Electoral Court, 2020.

It is also important for the analysis to include data on parties' coalition behavior. The following table shows the number of municipalities in which each party joined coalitions in the elections for councilor.

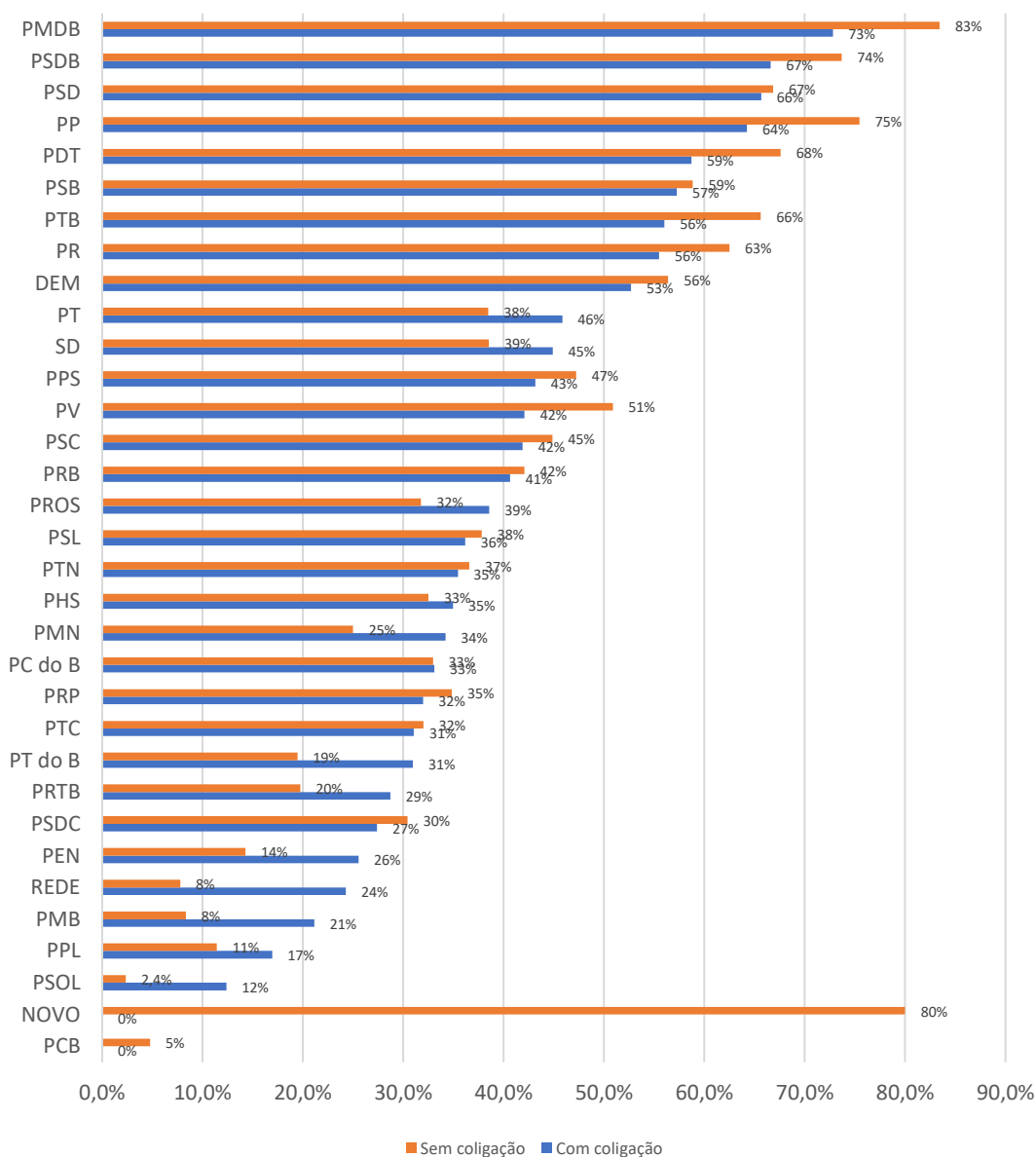
Table 7 – Number of municipalities where each party ran for councilor seats in 2016 in coalitions and without coalitions.

	In coalition	Without coalition	Percentage without coalition
PMDB	4,644	423	8.3%
PSDB	4,325	285	6.2%
PSD	4,055	172	4.1%
PT	3,836	364	8.7%
PP	3,970	224	5.3%
PSB	3,804	192	4.8%
PDT	3,666	213	5.5%
DEM	3,461	172	4.7%
PR	3,436	168	4.7%
PTB	3,386	160	4.5%
PRB	2,875	145	4.8%
PPS	2,715	144	5.0%
PSC	2,600	156	5.7%
PV	2,393	171	6.7%
SD	2,356	135	5.4%
PC do B	2,157	88	3.9%
PROS	1,999	85	4.1%
PHS	1,848	120	6.1%
PSL	1,783	82	4.4%
PTN	1,641	82	4.8%
PEN	1,594	112	6.6%
PRP	1,364	89	6.1%
PTC	1,375	75	5.2%
PT do B	1,231	72	5.5%
PMN	1,146	92	7.4%
PSDC	1,099	92	7.7%
PRTB	1,066	76	6.7%
PMB	861	60	6.5%
REDE	622	90	12.6%
PSOL	202	382	65.4%
PPL	502	70	12.2%
PSTU	15	56	78.9%
PCB	25	21	45.7%
PCO	-	15	100.0%
NOVO	-	5	100.0%

Source: Designed by the authors based on data from the Superior Electoral Court, 2020.

At this point, it is appropriate to refer to Soares' (1964) theory on parties' coalitionist behavior. The rationality of ideological resistance becomes very clear in the table above when the figures for the most ideological parties are analyzed, namely those highlighted in gray. Particularly, parties with more entrenched ideology, such as PCO and NOVO, did not make any alliances in the 2016 elections. However, contrary to what Soares (1964) reported in his study, the parties that made the most coalitions in those municipal elections were the large and medium-sized parties. But was the establishment of coalitions associated with better results for those parties? The next graph provides a sample of how running in coalitions affected party performance in the 2016 elections.

Graph 3 – Party Success Index⁸ for the 2016 councilor election with and without coalitions



Source: Designed by the authors based on data from the Superior Electoral Court, 2020. (Without coalition; In coalition).

⁸ The Party Success Index is obtained by the ratio of the number of municipalities with councilmen elected by the party to the total number of municipalities with candidates for councilor.

It is observed that, back in 2016, most of the parties achieved better results when they ran alone than when in coalition with another party. It is noteworthy that of the 15 major parties only two showed a worse performance when they ran independently - PT and Solidariedade -; however, among the 15 minor parties, 10 performed better in coalitions. At this point, it is important to recall a passage from the justification of Bill 2679/2003, presented by the Select Committee of the Chamber of Deputies for the Political Reform Study in 2003:

The aforementioned mechanics is usually ignored by voters, who vote for a candidate, unaware that the vote they cast for him/her may actually elect a candidate from another party. Not infrequently, a candidate from the largest party in the coalition fails to be elected because he/she is passed over by the smaller party. Without the coalition, the latter would not have reached the quotient.

This excerpt highlights exactly the effect that coalitions seem to have had on the 2016 election results, and which generated recurring complaints from the representatives from the major parties.

This overview of the 2016 results helps to analyze the influence that the end of coalitions in proportional elections had on parties' strategies in 2020. Several medium-sized and small parties have directories only in the largest cities, and the data show that, possibly in order to concentrate their forces, they reduced the number of municipalities with candidates for councilor. In his study, Albuquerque (2017) already pointed out that parties' capillarity in the Brazilian territory could have this kind of influence on the results.

Table 8 – Number of municipalities where each party ran for councilor seats in 2016 and 2020.

	2016	2020⁹
PMDB	5,067	3,236
PSDB	4,610	2,375
PSD	4,227	2,764
PT	4,200	2,813
PP	4,194	2,778
PSB	3,996	1,944
PDT	3,879	2,066
DEM	3,633	2,322
PR/PL	3,604	2,018
PTB	3,546	1,734
PRB/REPUBLICANOS	3,020	1,925
PPS/CIDADANIA	2,859	1,206
PSC	2,756	1,194

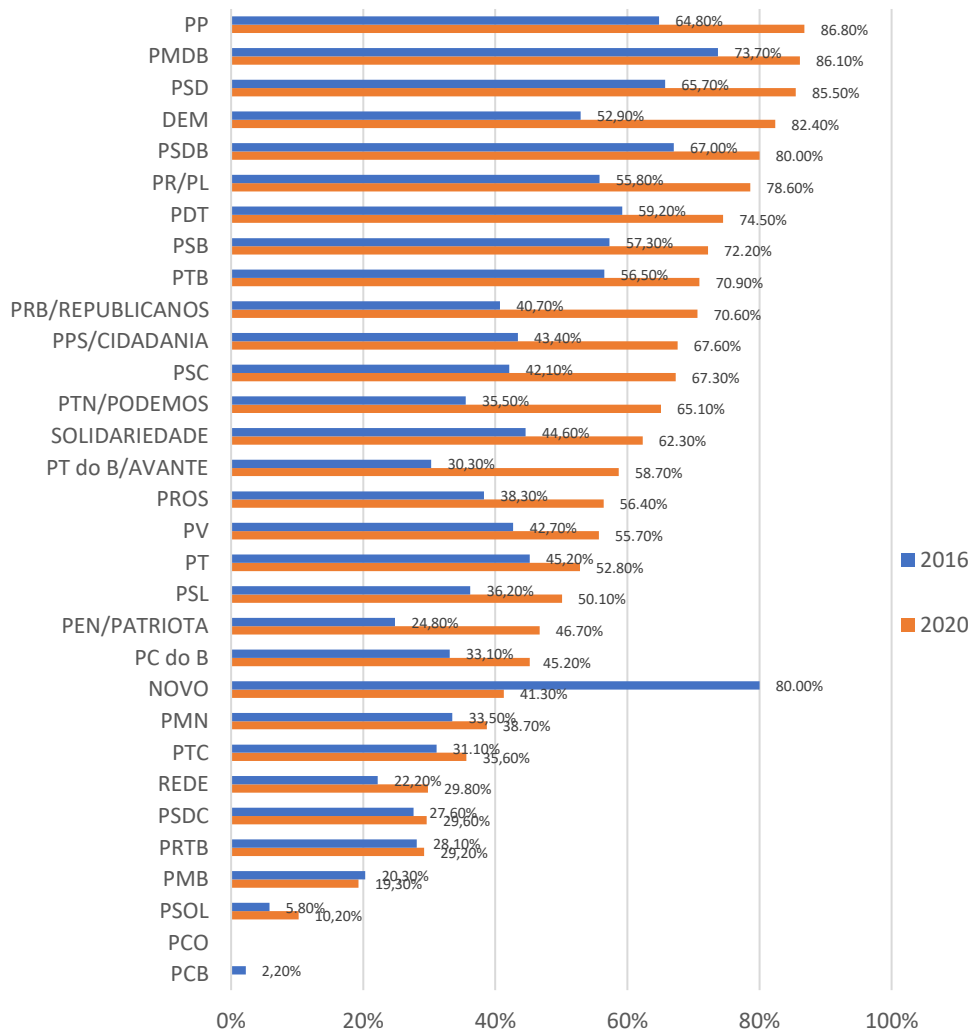
⁹ On the date of data extraction, December 10, 2020, only 5,226 municipalities had complete data available in Superior Electoral Court's repository of electoral data.

PV	2,564	856
SOLIDARIEDADE	2,491	1,155
PC do B	2,245	777
PROS	2,084	792
PHS	1,968	Merged with Podemos
PSL	1,865	1,555
PTN/PODEMOS	1,723	1,402
PEN/PATRIOTA	1,706	960
PRP	1,453	Merged with Patriota
PTC	1,450	421
PT do B/AVANTE	1,303	981
PMN	1,238	318
PSDC	1,191	311
PRTB	1,142	534
PMB	921	166
REDE	712	339
PSOL	584	530
PPL	572	Merged with PC do B
PSTU	71	45
PCB	46	24
PCO	15	23
NOVO	5	46

Source: Designed by the authors based on data from the Superior Electoral Court, 2020.

As can be seen in the table, with the exception of NOVO and PCO, all the other parties reduced the number of municipalities in which they launched candidates for councilor. Despite this reduction, the data also reveal that parties' success rates consistently increased.

Graph 4 – Parties’ Success Indices in the 2016 and 2020 councilor elections.



Source: Designed by the authors based on data from the Superior Electoral Court, 2020.

Only NOVO and PMB had lower indices than those achieved in 2016. The former’s drop was explained by the fact that, in 2016, the newly created party launched candidates for the city council in only five municipalities and, in 2020, there were more than 45 municipalities with that party’s candidates. So naturally there would be a reduction in its success index.

The latter’s result is associated with the loss of political power in the inter-election period. These data seem to convey the idea that, without the possibility of coalitions, the parties’ general strategy really changed, and the concentration of efforts in municipalities with a greater chance of winning seats was successful.

5.5 Distortions caused by the end of coalitions

As expected and even pointed out by researchers, such as Silva (2015), some electoral distortions occurred with the end of coalitions. Although the new rule for electoral surplus distribution has partially resolved the situation, one of the phenomena observed in the 2020 elections was the monopoly of parties in some municipalities. While in 2016 this happened in only one municipality, Nova América da Colina - PA, in 2020, at least 14 municipalities elected councilors from only one party, generating a one-party city council, with 13 of them in the Northeast. The following table shows the list of municipalities in which that phenomenon occurred:

Table 9 – List of municipalities with party monopoly in their city councils.

STATE	Municipality	The councilors' parties
MA	São Pedro dos Crentes	PSL
PI	Curral Novo do Piauí	MDB
PI	Belém do Piauí	MDB
RN	Frutuoso Gomes	MDB
RN	Viçosa	Republicanos
PB	Bom Sucesso	DEM
PB	Vista Serrana	MDB
PB	Monte Horebe	MDB
PB	Ouro Velho	DEM
PB	São José do Sabugi	DEM
AL	Cacimbinhas	MDB
SE	São Miguel do Aleixo	PSC
PE	Quixabá	Avante
RS	Barra do Rio Azul	PSD

Source: Designed by the authors based on data from the Superior Electoral Court, 2020.

It is noteworthy that only in São Miguel do Aleixo and in Barra do Rio Azul did the elected mayors belong to different parties from the councilors', PSD and PTB respectively, despite being from the same coalition in the majority election. In terms of institutional functioning, this situation can create a distortion in the relationship between the Executive and Legislative Branches. After all, besides legislating, it is the councilmen's role to supervise the mayor's actions. In addition to such an increase in party monopolies in city councils, an unusual phenomenon occurred that was not seen in 2016. In the 2020 elections, there were two municipalities where only candidates from a single party ran, MDB in Frutuoso Gomes, and the

PSD in Barra do Rio Azul.

The number of municipalities that elected councilors from only two parties also showed significant increase, from 33 in 2016 to more than 490 in 2020, including six medium-sized municipalities. Expanding this analysis to the city councils that will have at most four parties with representation, the data show an even more expressive increase: from 14.1% in 2016 to 47.2% in 2020. Since most of these changes occurred in the smallest municipalities, the question remains whether the way in which the end of coalitions was implemented could be responsible for a reduction in multipartyism in the inner regions of the country in the medium or long term.

Another unexpected phenomenon shown by the data was an increase in the effective number of parties in the municipal councils of more than 40% of the high-magnitude municipalities. Among them are Rio de Janeiro, Curitiba, Manaus, Fortaleza, Salvador, São Paulo, and Porto Alegre. The latter two are highlighted with an increase of 12% and 17%, respectively. This result, despite being a distortion when considering the expectations of the representatives who implemented the electoral changes, was not totally unexpected. As previously mentioned, Borges, Silva and Ferreira (2020) had already reached the conclusion in their study that the end of coalitions might not have a significant impact on the reduction of the number of parties in city councils. However, now with all the data from the 2020 elections available, this result deserves to be analyzed more carefully in future studies, especially considering that these municipalities are exactly those that present the closest electoral dynamics to that expected for the 2022 elections.

Finally, none of the inconsistencies discussed in this study is intended to question the validity of the end of coalitions in proportional elections. The goal is simply to point out the effects that occurred in the 2020 municipal elections and that were not expected with the adoption of that measure. It is very important to note that, in order to conclude whether these effects were occasional or will be recurrent, a longer observation of the implementation of the new rules with successive elections may be necessary.

6 Conclusions

This paper aims to present an exploratory and preliminary study on the effects that the end of coalitions in proportional elections may have caused on the results of the 2020 municipal elections. It is exploratory because it uses a database of the Superior Electoral Court that is still undergoing constant changes or revisions, and also because the analyses have a more qualitative nature, not using any statistical inference technique. It is preliminary because we intend to update the tables and graphs presented here when the TSE data is consolidated for all the municipalities. Despite these restrictions, the information presented is useful to provide an overview of how the end of coalitions may have changed the dynamics of municipal elections, especially in terms of

parties' strategies. The study has achieved interesting results on how coalitions possibly relate to party fragmentation, but it has also shown that their influence is affected, for example, by district size. Further studies on how such dynamics occurs regionally or the influence of the municipalities' demographic characteristics would be important to define a more complete picture, and are suggested for future research.

It is noteworthy that neither the studies reviewed nor the representatives' debates during the proposal's processing procedures intensively discussed a significant reduction in the number of parties that would participate in the elections, as observed in the data. The major focus was generally on the reducing effect of the number of parties that would achieve electoral success with the newly implemented rules (ALBUQUERQUE, 2017). However, as could be seen from the data, the former reduction was much more significant. This is also an excellent field for future research, since a more detailed analysis of party behavior and its effects on the nationalization of large parties and the concentration of small parties in the largest cities is worthwhile. It should be remembered that with the implementation of stricter performance rules, which will be enforced in the next elections, and consequently the extinction or merger of some parties, this phenomenon should aggravate by 2024.

Regarding the possible effects for the 2022 federal and state elections, it would be interesting to conduct a study focused on large cities' results for the 2020 municipal elections. It is known that elections in high-magnitude districts are the most similar in profile to federal and state elections due to the number of candidates and the electoral strategies adopted by the parties. Thus, a smaller reduction in party fragmentation was observed in these cities' councils, as previously pointed out by Borges, Silva and Ferreira (2020) and observed by calculating the effective number of parties in 2020. Due to the larger proportionality that the Brazilian electoral formula produces in the largest districts, a more significant reduction in party fragmentation in these places may require the implementation of specific rules for them. However, for any more consistent conclusion, this phenomenon should be analyzed in more detail, thus allowing a better understanding, preferably by observing new elections with the application of the same rule.

Regarding the party strategies adopted, it was found that they seem to have worked, resulting in an increase in the Party Success Index, especially for the larger parties. Future research can analyze if the decrease in the number of parties in these municipalities was followed by a reduction in the number of candidates, or if what happened was simply a local migration of candidates to the larger parties. The results also show that the ideas presented during discussions by representatives about coalitions' affecting the electoral results of medium-sized and large parties were partially correct (BRASIL, 1999). These parties did achieve better results in the municipalities where they ran in the municipal elections. However, the impossibility of making alliances resulted in their participation in a smaller number of municipal elections. Therefore, the Party Success Index increased, but the absolute number of municipalities with representation in

city councils was lower for almost all parties. This is in line with Braga (2006) who believed that coalition resources were essential for the parties' survival strategies at each of the federation's dispute levels and, consequently, for a greater degree of party nationalization.

The distortions observed, such as the monopoly of parties in some municipalities, are unlikely to be observed in state and federal elections due to the number of parties that participate in such elections - even in low-magnitude states, such as Acre, Roraima and the Federal District. However, the question remains whether the end of coalitions, which apparently reduced the number of parties with candidates in small municipalities in the medium term, may be responsible for a reducing effect of multi-party politics in the inner regions of the country over time. Another point observed, particularly for the municipalities where there was a party monopoly, was the relationship between the coalitions of the elected mayors and the legions that elected councilors. Two studies on this aspect would be interesting: one that follows up on the functioning of local politics in these municipalities where there will be no formal opposition; and a more in-depth study analyzing how the majority elections influenced the participation of the parties that ran for positions in the city councils. The increase in the effective number of parties in the city councils of more than 40% of the high-magnitude municipalities also deserves attention.

Finally, the intention is that this study can help future research by those seeking to understand the effects that this phenomenon can bring to the Brazilian political system, and also that it can open new avenues for questioning. The debate on this topic will certainly remain intense in the political science literature until the 2022 elections, and will most likely continue long after that.

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