# When Preferential Voting Really Matters: Explaining the Surprising Results of Parties in Electoral Coalitions* 

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#### Abstract

Preferential voting in a proportional list system is an essential means by which voters can significantly influence which particular politician will represent them. However, preferential voting takes on a new dimension when several parties run on the same list as a coalition. In this case, the in-tra-party competition may become inter-party competition, where one or more parties may gain significantly from preferential voting at the expense of their partners. Despite this, research on this topic has been significantly neglected. Using the case of the 2021 Czech general election, where two newly formed electoral coalitions (SPOLU and PIRSTAN) run, we examine the nature of preferential voting in this different context of electoral coalitions. In the first part of the analysis, when we analyzed the characteristics of all candidates of both coalitions, we first confirmed that the candidate effect commonly observed in the case of conventional candidate lists also exists in this context. At the same time, we found that the candidate effect (through the adequate distribution of influential characteristics across parties in a coalition) can also affect the inter-party competition (as was the case of the PIRSTAN coalition). In the second part of the analysis, we found that in the context of electoral coalitions, party characteristics can also have a substantial effect on preferential voting (as was the case of the SPOLU coalition). Thus, both of these categories of effects can exist in the case of coalition lists, and both can affect inter-party competition. Nevertheless, future research is needed to confirm whether these findings are generally valid or whether the Czech case is somehow deviant. Existing research on this topic does not allow for a comparison.


Keywords: preferential voting; electoral coalition; electoral alliance; candidate effect; effect of party characteristics; neighbourhood effect; party membership; Czech parliamentary election

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## 1. Introduction

Preferential voting in a proportional list system is one way that voters can relatively easily influence which particular politician will represent them. In this way, the personalization of elections is increased and democratic legitimacy is strengthened. However, preferential voting takes on a whole new dimension when more than one party runs on the same candidate list as part of a coalition. In such a case, the intra-party competition between candidates of one party on the list may be supplemented by an inter-party contest, in which one or more parties may gain or lose significantly from preferential voting at the expense of their coalition partners.

Existing research describes a number of effects that can be observed in preferential voting (see below), but has focused mainly on independently running parties. The aim of this paper is, therefore, to explain what preferential voting looks like in the context of multiple (otherwise independent) parties running in an electoral coalition (by electoral coalition we do not mean a lasting alliances). Specifically, we seek to answer the following questions. Do the effects (of candidates) observed in classical preferential voting also appear in the context of electoral coalitions? How can these effects (through the adequate distribution of influential characteristics across parties in a coalition) also affect the in-ter-party competition that occurs in the case of coalition lists? How is preferential voting in the case of coalition lists influenced by (party-related) effects only specific to this context?

To answer these questions, we first measure the effect of a candidate's characteristics commonly observed in classical preferential voting (single-party lists). We then investigate how the key candidate's characteristics are distributed across the parties in the coalitions and assess whether the characteristics of individual candidates can, as a result, also influence the inter-party competition. Next, we examine effects that may play role only in the context of electoral coalition lists since they are party-related. Specifically, we investigate which party characteristics (in a broad sense) can affect the number of preference votes for a party's candidates within a coalition list. To assess the overall effect of preferential voting on the distribution of seats within the coalition, we also include data on the concentration of preferential votes of individual parties in the coalition, which may be important in the distribution of seats.

The topic is important from both theoretical and practical perspectives. To date, theory to a great extent has neglected the question of preferential voting in electoral coalitions. It is possible that variables such as different organizational forms and the real strength of the member parties of coalitions influence voter behaviour and thus affect the composition of the members of an elected coalition. The question is whether it can be assumed that voter behaviour, in terms of preferential voting, follows the same patterns when a party stands alone or when it stands as part of an electoral coalition. We address this issue using the case of the 2021 election to the Chamber of Deputies ${ }^{1}$ of the Parliament of the Czech Republic. This election was interesting primarily because of the candidacy of two electoral coalitions formed by entities that had run independently in previous elections and that formed separate parliamentary clubs even after the 2021 election; but, most importantly,
due to preferential voting effects the ratios of the MPs elected for each party (in both cases) did not correspond to the ratios of the candidates or the estimated strength of the parties themselves.

The importance of the topic from a practical point of view also lies in the fact that the general electoral success of both electoral coalitions may inspire other entities to cooperate closely as well. Research on the SPOLU coalition is important because it brought together very different parties with different electoral strengths, organizational structures, internal political cultures, and experiences with pre-election coalitions, and other integration attempts under consideration in the Czech context are in a similar situation. The PIRSTAN coalition is, in turn, interesting from the point of view of the outcome, since the number of STAN MPs elected exceeded the number of MPs elected for the Pirates several times over, despite the fact that there were more Pirate candidates on the candidate lists and the party also contributed twice as much to the campaign financing (Starostové a nezávislí, 2020). Moreover, these two parties also have very different organizational forms. Thus, in order to avoid increasing tensions within the party (and hence political) system resulting from unpredictable proportions of elected MPs, it is important to understand the factors that influence the success of individual candidates in electoral coalitions.

## 2. Context of the election and design of candidate lists

The electoral system for the elections to the Chamber of Deputies is proportional with a flexible list - candidates are pre-ranked on the list, but voters can influence this ranking. To do so, a voter can (but does not have to) cast up to four preference votes within the selected candidate list, regardless of the size of the constituency or the candidate list ${ }^{2}$ (in 2021, the smallest electoral region had a maximum of 14 candidates on the lists, while the largest had 36). A panachage is not allowed. If a candidate receives a number of preferential votes equivalent to at least $5 \%$ of the votes for the list, he or she moves to the top of the list; if there is more than one such candidate, they are ranked according to the absolute number of preferential votes; in the event of a tie, the original ranking of the candidate on the list is decisive. The current preferential voting system has been in place since 2006 (Chytilek, Šedo, Lebeda, \& Čaloud, 2009, p. 313), and was first used in the 2010 election.

The system of preferential voting has a relatively large influence on the final composition of the legislature. While in 2002, under stricter regulations, 12 out of 200 MPs were elected thanks to preferential votes, and only 6 MPs in 2006, after the change of the system (according to which a smaller percentage of votes is required to move up the list), the number was 46 in 2010 (i.e. almost a quarter; at the same time, as a result of these shifts, one sixth of the regional party leaders were not elected), 29 in 2013, 27 in 2017, and 36 in 2021 (Boček, 2017; Volby.cz, 2022; Kneblová, 2010, p. 172; Kneblová, 2014, p. 248).

Czech politics has had only one experience (after the establishment of the Czech Republic in 1993) with the successful candidacy of an acknowledged electoral coalition (the Coalition) in 2002, which was an alliance of two centrist parties, the Christian Democratic Party (KDU-ČSL) and the Union of Freedom-Democratic Union (US-DEU). The
problematic nature of the coalition of two different parties (different in terms of number of members, degree of organisation, etc.) was first revealed at that time. Of the 31 seats won by the Coalition, 11 were filled by MPs elected through preferential votes (of the 169 MPs from other parties, only one was elected through preferential votes). Of these 11 MPs , nine were for the KDU-ČSL and only two for the US-DEU (Volby.cz, 2022), despite the fact that the candidates were mostly nominated in parity. The case from 2002 is thus similar to our case and can be seen as something of a precursor to what we saw in the 2021 election. However, this phenomenon - especially the question of the disparity and its reasons - has not received adequate academic attention.

The Czech 2021 parliamentary election was unusual due to the candidacy of strong electoral coalitions ${ }^{3}$, which were formed by five parliamentary opposition parties that sharply defined themselves against the parties of the governing minority coalition (ANO and the Social Democrats), as well as against the ad hoc government-supporting parties (the Communists and Freedom and Direct Democracy). One of the electoral coalitions (SPOLU) won the elections and together with the other (Pirates and Mayors - PIRSTAN) formed a majority government after the election.

The SPOLU coalition included the conservative-liberal Civic Democratic Party (ODS), the christian democratic KDU-ČSL, and the conservative TOP 09. All three were significant parties involved in government in the past (e.g. three prime ministers came from ODS before 2021), but in the period 2017-2021, they were all in opposition, and they worked closely together both in Parliament and at lower levels of government. The 2017 election results of KDU-ČSL and TOP 09 and their opinion polling in the following years hovered around the $5 \%$ electoral threshold. After the Senate and regional elections in autumn 2020, the three parties announced they were beginning negotiations to form an electoral coalition for the 2021 elections and signed a memorandum of cooperation. In the following weeks, they announced an agreement on the division of regional positions and on giving the role of joint leader to ODS (the biggest party of the coalition) chairman Petr Fiala.

In December 2020, the name of this coalition, SPOLU (in English, 'TOGETHER'), was announced, as well as the basis for the election programme. The coalition agreement was signed in April 2021 (ODS, 2021). In addition to the differences in ideological orientation outlined above, the parties differed in their approaches to European integration (the Eurosceptic ODS, the pro-integration KDU-ČSL, and TOP 09) and in the structure and membership strength of the parties themselves. KDU-ČSL had almost twice as many members (about 20,500 ) as ODS $(11,900)$ and nine times as many as TOP $09(2,500)$ (Authors' personal correspondence with party secretariats, 2022). KDU-ČSL, through its membership in various types of electoral coalitions at different levels of the electoral arena, has since 2002 become accustomed to mobilizing its membership to support its own candidates through preferential voting; the other two parties did not have this experience; respectively they had rather fresh experience from the 2020 regional elections, where preferential voting was not widespread.

At almost the same time, another coalition of the centre-left Czech Pirate Party (Pirates) and the centrist Mayors and Independents (STAN) began to emerge. The coalition agreement was approved by both entities in October and November 2020, and the coalition
agreement was signed in January 2021. The coalition had two declared leaders - Pirates chairman Ivan Bartoš and STAN chairman Vít Rakušan, with Bartoš as the prime ministerial candidate. The form of the coalition was based on the idea that the Pirates were roughly twice as strong as the Mayors, which was reflected in the agreement on campaign financing, the division of the positions of regional leaders etc. The coalition was called 'Piráti a Starostove̋' (PIRSTAN) (Starostové a nezávislí, 2020).

In Tables 5 and 6 in the results section below, it is possible to see the specific distribution of places on the candidate lists in different constituencies. The SPOLU tri-coalition was built on the dominance of ODS, about half the strength of KDU-ČSL, and the even weaker representation of TOP 09 . The proportional distribution of places (2.3:1.25:1) on the lists and the distribution of regional leaders (9 ODS, 3 KDU-ČSL, and 2 TOP 09) corresponded to this. In each region, a zipper system corresponding to local conditions was applied, but in many cases, it was fundamentally limited by the fact that only four places were allocated to a party (this happened four times in the case of KDU-ČSL and seven times in the case of TOP 09).

The two-party PIRSTAN coalition could have been more balanced, since it is easier to balance two parties than a larger grouping (the distribution of places on the list, distribution of leaders etc.). Looking at the overall numbers, the coalition seemed relatively balanced - 184 Pirate candidates, 158 STAN candidates (i.e. about 3:2.5). However, the reality was different. Of the 14 leaders of the regional candidates, only 4 represented STAN and 10 represented the Pirates. Furthermore, parity, which the coalition almost reached in terms of the numbers of candidates of both parties, was achieved mainly thanks to the lower, mostly unelectable, positioning of STAN candidates on the lists. For example, the first five positions on the lists for the Moravskoslezský region, Jihomoravský region, and Prague (which are the biggest regions) were occupied by only one STAN candidate (in the Jihomoravsky region in second place, in the other two regions in third place), while in the zipper way candidates alternated from eighth (Moravskoslezský) to ninth (Jihomoravský) to even sixteenth (Prague) place. In no region did STAN have fewer than seven candidates, but rather 9 or 10 .

The parties we are studying here each ran separately in 2017, and their voters used their preferential votes in different ways. The existing data do not show us how many voters used the preferential vote since each voter can use $0-4$ votes. We only know how many preferential votes each party received in each constituency and in what proportion to the total number of votes for that candidate list. Nevertheless, we still see noticeable differences. While the share of preferential votes in the total number of votes cast in 2017 was $10.17 \%$ for Pirates, it was $14.37 \%$ for STAN, $15.4 \%$ for ODS, $18.26 \%$ for TOP 09 , and $19.77 \%$ for KDU-ČSL (Volby.cz, 2022). Thus, KDU-ČSL voters cast almost twice as many preferential votes as Pirates voters.

Preferences measured for individual parties a few weeks before the 2021 elections showed that the Pirates had stronger support (12\%) than STAN (10.5\%) (Kantar, 2021). In the election, the PIRSTAN coalition received only $15.62 \%$ of the vote - less than the sum of the preferences of the two entities and less than expected. For the purposes of this article, however, the significant disproportion in mandate distribution is more interesting, as 33 of the 37 seats were won by STAN nominees and only four by the Pirates because of
preferential voting. In the case of the SPOLU coalition, the surveys showed a more than double lead for ODS (11.5\%) over TOP 09 (5\%) and KDU-ČSL (4.5\%), and thus a balance between the two smaller parties (Kantar, 2021). As a result, the SPOLU coalition won $27.79 \%$ of the votes and thus 71 seats. Of these, ODS gained 34 seats, KDU-ČSL 23, and TOP 0914 - even this ratio does not correspond to the estimated strength of the parties. In the following sections, we seek to explain these large differences.

## 3. Theory of preferential voting

Preferential voting has understandably received the most attention in systems where it affects the composition of the elected body from a party perspective (Marsh, 1985). This does not usually happen under a list-based proportional electoral system, where preferential voting serves to determine the composition of each individual party's representation. When a flexible list is used, the impact of preferential voting is even more limited than in an open list, where there is no predetermined order of candidates. Nevertheless, preferential voting is important even in the system with the flexible list and can lead to a higher representation of certain groups, such as women. However, a different situation arises for coalitions, where candidates from multiple parties are represented on a single list. Although there is cooperation between the parties at the time of the election, it may not continue after the election or, once in office, for the entire term. This means that even in a list-based proportional electoral system, preferential voting can significantly affect the final composition of the legislative body. The nature of preferential voting in this context is therefore of considerable importance.

### 3.1. Candidate effect: voter behaviour during the casting of preference votes

Existing literature has identified several patterns of behaviour that voters follow when using preferential votes. It seems (and is natural) that during preferential voting, voters give their preference to candidates they know (Lebeda, 2007). This familiarity can be divided into two notional categories. There can be indirect and distant familiarity, i.e. visibility, and personal familiarity with a candidate. The first category is a difficult concept to measure. Well-known and visible candidates receiving more preferential votes can be considered candidates who defend the mandate (Ansolabehere, Snyder, \& Stewart, 2000; Karvonen, 2011; Marsh, 1985, p. 374; Voda, 2014, p. 262). This is because these incumbents are more visible in their activities as MPs, appearing in the media and representing the institution to some extent. At the same time, their higher degree of popularity and visibility is implied by the very fact that these candidates have managed to win seats in the past (Voda, 2014, p. 262). This is particularly true in the context of parties that move candidates who have been successful in receiving preferential votes in past elections to higher positions on the list (André, Depauw, Shugart, \& Chytilek, 2017). Similarly, at least
in the Czech context, candidates who are active in regional politics can be considered known politicians with the potential to attract more preferential votes (Voda, 2005).

Personal familiarity is associated with the so-called neighbourhood effect, whereby voters favour candidates (including in their preferential voting) that they personally know from their neighbourhood (Arzheimer \& Evans, 2012; Cox, 1969; Gimpel, Karnes, McTague, \& Pearson-Merkowitz, 2008; Górecki \& Marsh, 2012; Johnston et al., 2004). Candidates are thus most likely to gain support in their neighbourhood. This effect may therefore result in a preference for home-based candidates, e.g. candidates from a given constituency (Campbell \& Cowley, 2014; Gallagher, 1980), but in preferential voting, it may also mean greater support for candidates from regional or county centres where they are 'neighbouring' more people (Voda, 2014).

However, knowing several candidates from a given political party presupposes a relatively high level of political knowledge on the part of the voter. Therefore, we observe different behaviour among voters who do not have enough information about specific candidates (which may especially be the case in list proportional electoral systems where voters vote for a party). In this context of limited information, voters rely on various shortcuts and heuristics (Brockington, 2003; Coffé \& von Schoultz, 2021; Johnson \& Miles, 2011; McDermott, 2005; Miller \& Krosnick, 1998; Popkin, 1991). This is often information listed directly on the candidate list that is easily accessible to the voter even at the polling place.

The largest (and repeatedly confirmed) effect in this regard is the ranking of candidates on the candidate list, where a higher ranking means a greater chance of receiving preferential votes (Blom-Hansen, Elklit, Serritzlew, \& Villadsen, 2016; Brockington, 2003; Faas \& Schoen, 2006; Gendźwiłł \& Marcinkiewicz, 2019; Johnson \& Miles, 2011; Lutz, 2010). Marking the first, most visible candidates is not only the easiest way for voters to use preferential votes (so-called donkey votes; see Mackerras, 1968; Mackerras, 1970); at the same time, in this way, voters can give their approval to the party and its candidate composition. As mentioned above, prominent candidates expected to receive preference votes are often placed in the top positions (André et al., 2017). It is the combination of all these factors that makes the order effect (or specifically, the primacy effect) so strong (Gendźwiłł \& Marcinkiewicz, 2019). However, this effect is not linear. It mainly affects the leader and the front of the candidate list, and then the effect weakens significantly or even disappears altogether (cf. Voda, 2014). In addition to the primacy effect described above, we can sometimes observe a recency effect, where candidates at the very end of the list are slightly favoured (but not over candidates at the front of the ticket, as the recency effect is usually smaller than the primacy effect) (Miller \& Krosnick, 1998; Spáč, 2016). In certain situations, voters may prefer candidates at the end of the list to play a practical joke, or they may thereby express disapproval of the actions of the party they still want to vote for. We can also observe a phenomenon wherein prominent figures are placed at the very end of the list and rely on preferential votes to get elected, which in effect strengthens their mandate.

Other shortcuts are related to the characteristics of the candidate, which are usually indicated on the candidate list. In the Czech Republic, these are age, occupation, municipality of residence, and political affiliation. The name of the candidate also includes academic or scientific titles, and, in the Czech Republic, the gender of the candidate can be easily
identified according to the name. It is the effect of the candidate's gender that has received probably the most attention in the existing literature, often in relation to the under-representation of women in representative bodies. However, this literature offers mixed conclusions. According to some authors, candidate gender can influence preferential voting, but the effect is not universally valid and also depends on voter characteristics and attitudes (Kirkland \& Coppock, 2018; Marien et al., 2017; Matson \& Fine, 2006; McDermott, 1997). However, other authors did not find an effect of gender in preferential voting (Carnes \& Lupu, 2016; McElroy \& Marsh, 2010; Pedersen, Dahlgaardb, \& Citi, 2019), which has also been the case in the Czech Republic (Lebeda, 2007; Voda, 2014), although preferential voting may be one of the reasons why the proportion of women in the Chamber of Deputies has recently increased (Stegmaier, Tosun, \& Vlachová, 2014). The presence of civic initiatives that support the granting of preferential votes to candidates with certain characteristics (often, it is women) is not an exception (see, e.g., Zakroužkuj ženu, n.d.). However, it is difficult to simply estimate the potential effect of these initiatives and make strong assumptions on that basis.

Existing research has also focused on voters' preference for elitist candidates, but here we find ambiguous results as well. Kelley and McAllister (1984) find that in the UK, an academic degree does not produce any effect in favour of a candidate; an advantage is found only in the case of an honorary degree. According to Gift and Lastra-Anadón (2018), the positive effect of a university degree is only observed for liberal voters. Campbell and Cowley (2014) even suggest that under certain circumstances, voters may prefer candidates without a university degree. In the Czech environment, according to Lebeda (2007), there is a positive effect of university education only for some parties that have a limited number of university-educated candidates on the list. Voda (2014) found that a doctoral (or higher) degree has a generally valid positive effect of on preferential votes.

McDermott (2005) demonstrated that occupation may play an important role as a shortcut in low-information decision making, as voters can derive from it the candidate's ability and qualifications to hold political office. Experienced candidates are thus usually preferred. Kirkland and Coppock (2018) elaborated on this. They concluded that for some voters (in the case of the United States, Democratic voters), political experience plays a role, while for others (Republican voters), work experience is important. In this respect, according to Carnes and Lupu (2016), voters are as likely to vote for political elites as for working-class representatives. Pedersen, Dahlgaardb, and Citi (2019) add to this that occupation complements (or replaces) the perception of a candidate's political position. Thus, leftist voters are more likely to identify themselves with a candidate from the working class. If we discuss the effect of specific occupations on the likelihood of receiving preferential votes, Campbell and Cowley (2014) find a positive effect of the occupation' local doctor'. They explain that in the UK, medicine is a trustworthy profession with the opportunity to form links within the community. According to Atkeson and Hamel (2020), the relationship between a candidate's profession and the specific office $\mathrm{s} /$ he is running for is important. In the case of running for parliament, we would probably expect a positive effect from the occupation of a professional politician.

The above-mentioned professions, that is, professional (mainly local) politicians and doctors, are among those that have been significantly represented in the Chamber of

Deputies of the Czech Republic since 1989 (Poláková \& Kostelecký, 2016). As in the described case of the UK, doctors are often well connected in the community in which they serve. At the same time, they are also perceived as skilled professionals who are able to solve complex problems. The doctor's profession is also considered the most prestigious in the Czech Republic, according to surveys (Poláková \& Kostelecký, 2016). Candidates who are already practicing the job of a politician may then be perceived as experts who are experienced in the relevant area and who will therefore be better able to carry out the work of an MP if elected. In the Czech Republic, the positive effect of the occupation of doctors and the occupation of professional politicians on a number of preferential votes was confirmed by Voda (2014). At the same time, local politicians have long enjoyed the greatest trust of all politicians in the Czech Republic (Centrum pro výzkum veřejného mínění, 2021), so it can be assumed that this specific political occupation has the largest effect.

Other information stated on the candidate list includes the name of the party that nominated the candidate and party affiliation (or the candidate can be non-partisan). The nominating party name is only relevant in the case of a coalition list. A voter can then easily find out which party of the electoral coalition nominated a candidate. The information about affiliation indicates which party the candidate is a member of. Non-party members can also be placed on the list. However, it has not been sufficiently explained whether and how this information may affect preferential voting. Non-partisan candidates may be preferred if there is general dissatisfaction with politics and politicians. On the other hand, such candidates may appear to be less experienced politicians, even though this may not be true, or may also have worse access to party resources. The strength and direction of the effect may depend on the specific party, as was shown by Voda (2014, p. 269).

Based on the theoretical assumptions and the findings described above, we expect that a relatively higher share of the preference vote will be obtained by: well-known candidates (whether publicly visible or well-known in their community), candidates with a higher ranking on the candidate list, and candidates who work as a doctors or politicians. At the same time, we have limited expectations for the existence of the same effect for female candidates and candidates with a university degree.

### 3.2. Party effect: preferential voting in the context of coalitions

It is very important to consider the different context of preference voting in the case of coalition lists (Marsh, 1985). In this context, intra-party competition becomes an inter-party competition. While existing research suggests that there is more intense competition in the case of coalition lists, which leads to the assumption that more preferential votes will be cast (Beblavý \& Veselková, 2014; Marsh, 1985; Millard \& Popescu, 2004), research has otherwise not focused much on this topic.

As mentioned above, if the party for which a particular candidate is running is indicated on the list, this information can be an important shortcut. Voters that vote for a coalition because of a particular party then can easily vote for their party's candidates in preference voting. This effect can be expected especially in a situation where multiple
well-established parties with consolidated support are running within a coalition, as was the case for the 2021 election. ${ }^{4}$ Johnson and Miles (2011) confirmed that if voters are faced with a choice between multiple candidates and have information about the candidates' party affiliation, this is the most important information on which they make their decision. In contrast, the effect of other factors (such as ranking on the list) diminishes as voters' knowledge increases (Brockington, 2003).

At the same time, not all voters vote for a coalition because a particular party is in the coalition. Voters who vote for the coalition as such (e.g. people who did not previously vote for any of the parties in the coalition) may, in turn, be influenced by the other effects described above. Nevertheless, if preferential voting within electoral coalitions depends on the division between party voters, the candidates from the strongest party within the coalition should seemingly benefit from preferential voting. On the other hand, each party may have differently disciplined voters, or the use of optional preferential votes may vary across parties, as shown in the Czech context by Kneblová (2014, pp. 240-243), or as we have illustrated above. However, this has been shown in the context of party, not coalition, candidate lists, where the incentive to use preferential voting differs (Marsh, 1985).

Karvonen (2011, pp. 13-17) used the case of Finland to show that preferential voting is more important for voters for small parties (in the sense of small electoral results) where very few elected representatives are expected. In this case, it matters more who will be among these few representatives. According to Karvonen, this effect also holds in the context of electoral coalitions.

The party's presence in a given constituency may also play a role in preferential voting in the case of a coalition list. A party that is active and therefore visible and well-known in the region may have an advantage. This presence and visibility within a given area can be expressed in terms of the number of party members in the region. These partisans can also help the party during the campaign. Meanwhile, previous research has confirmed that at the constituency level, there is indeed a relationship between the size of the membership base and the electoral performance of a political party (André \& Depauw, 2016; Fisher, Denver, \& Hands, 2006; Whiteley \& Seyd, 2003). Thus, we can, to some extent, speak of a neighbourhood effect of a political party. The candidates of a given party can then benefit from this advantage in preferential voting even if there is inter-party competition.

In the context of electoral coalitions, the concentration of preferential votes is also very important. Candidates of one party within a coalition may receive fewer preference votes overall, but if these votes are concentrated among a few candidates (usually the first, in accordance with the order effect), such candidates may be elected at the expense of the other party. According to Beblavý and Veselková (2014), greater concentration occurs in leader-based parties. Conversely, concentration is lower for parties with a collective identity based on a common ideology or values. According to the same authors, lower concentration may also be due to a larger number of independent candidates on the party's list. However, these effects have not been tested in the context of electoral coalitions. Karvonen (2011, pp. 13-17) found that within electoral coalitions, preference votes for candidates of larger parties are less concentrated than preference votes for candidates of smaller parties. At the same time, however, this greater concentration is due to the fact that smaller parties tend to have fewer candidates on the coalition ticket.

In the second part of the analysis, we test whether a relatively higher share of preferential votes will be obtained by candidates of parties that: are larger overall (have more electoral support), have voters who are more accustomed to using preferential votes, have a larger membership base.

## 4. Methods and data

Preferential voting in the context of coalitions can be influenced by various candidate characteristics, but only if one of the parties in the coalition offers candidates with such characteristics to a meaningful extent. At the same time, this coalition inter-party competition may be influenced by factors related to the nature of the parties themselves. Therefore, in order to explain voters' preference voting behaviour in the case of coalition lists, we split our analysis into two parts.

In the first stage of the analysis, we use regression models to examine the effect of variables that may influence the number of preference votes for a particular candidate. At the same time, we investigate how characteristics with an observed effect in a given coalition were distributed among the candidates of each party in the coalition, and thus whether the candidate effect played a role in the inter-party competition. If one of the coalition parties offers 'more attractive candidates' to the coalition's voters, this might affect the inter-party competition within the coalition.

Among the effects we examine is the familiarity of the candidate, which we operationalize through two binary variables: the MP's mandate defence and mandate in the regional council. Closely related to the candidate's local familiarity is the neighbourhood effect, which assumes both familiarity and support for the candidate in his or her place of residence. We measure this effect again through two variables. First, we investigate whether the relative support in the candidate's place of residence affects the likelihood of getting preferential votes. We measure this as the share of preferential votes for the candidate in his place of residence out of the total votes for the list in the same place. However, given the different sizes of municipalities, we also measure the effect of the size of the candidate's place of residence in the models. Another variable in the model that is partly related to the neighbourhood effect is the position of the mayor, since holding this position implies local familiarity. In a sense, this position can also be described as an occupation, but during the operationalization, we do not use the information stated on the candidate list but whether a candidate obtained the position of mayor after the previous local elections. Even so, we also test the effect of the occupation listed on the candidate list. In particular, for the reasons described above, we measure the effect of two specific occupations for which there is an assumption of a positive effect: any occupation as a medical doctor and any political occupation (i.e. legislative or executive mandate at any level of governance). ${ }^{5}$

We also measure the effect of education, which is a binary variable given the form of the data, i.e. whether or not the candidate has a university degree. The other binary variable measured is gender. The candidate's ranking on the ticket is also a variable
in the model, but within coalitions, the distribution of ranking on the ticket tends to be relatively even, so we do not expect this variable to explain inter-party competition or the surprising results of preferential voting. The dependent variable is then the share of preference votes within the coalition candidate list in a given constituency. However, since the lists vary in size across constituencies, candidates' percentage gains of preference votes are also affected - it is easier to achieve higher values for lists with fewer candidates. We therefore adopt the same standardization used, for example, by Voda (2014, p. 260). This consists of multiplying the percentage gain of preference votes of each candidate by the number of candidates on the given list and dividing by 25 (= average list size). In this form, the variable indicates what percentage gain of preference votes a candidate would receive if each list had 25 candidates (see the second row of Tables 1 and 2).

However, another complication for the use of a regression model is the values of the dependent variable, when there is a large number of candidates with a very small percentage of preference votes and a small number of candidates with a larger percentage of preference votes. Thus, the values of the dependent variable do not correspond to a normal distribution. Therefore, the variable is adjusted by the logarithm $(\log 10)$, which consequently affects the interpretation. In the case of the SPOLU coalition, the maximum value of the dependent variable after adjustment (now normally distributed) is 1.45 (originally $28.14 \%$ of preference votes), and the minimum is -0.43 (originally $0 \%$ of preference votes). In the case of the PIRSTAN coalition, the maximum value of the dependent variable after adjustment (now normally distributed) is 1.77 (originally $59.12 \%$ of preference votes), and the minimum is -0.64 (originally $0.23 \%$ of preference votes); see the third row of Tables 1 and 2.

Table 1: Preferential vote gains of SPOLU coalition candidates - descriptive statistics

|  | N | Minimum | Maximum | Mean | Std. Deviation |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Preference votes in percentage <br> before standardization and <br> adjustment | 343 | .00 | 20.56 | 3.9534 | 3.40993 |
| Preference votes in percentage <br> after standardization | 343 | .00 | 28.14 | 3.9691 | 3.86284 |
| Preference votes in percentage <br> after logarithm adjustment | 3426 | -.43 | 1.45 | .4596 | .33873 |
| Source: The authors. |  |  |  |  |  |

Table 2: Preferential vote gains of PIRSTAN coalition candidates - descriptive statistics

|  | N | Minimum | Maximum | Mean | Std. Deviation |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Preference votes in percentage <br> before standardization and <br> adjustment | 342 | .17 | 43.47 | 5.6446 | 6.00422 |
| Preference votes in percentage <br> after standardization | 342 | .23 | 59.12 | 5,5598 | 6.25462 |
| Preference votes in percentage <br> after logarithm adjustment | 342 | -.64 | 1.77 | .5382 | .42969 |
| Source: The authors. |  |  |  |  |  |

The age of the candidates is considered as control variables, as well as whether or not the candidate is a member of a political party.

In the second part of the analysis, also using regression models, we analyze variables that are not directly related to the individual candidates but to the nature of the parties in both coalitions. Thus, the unit of analysis here is the party at the level of a constituency; we conduct a separate analysis for each party. In this way, we try to explain what influenced the success of a party's candidates at the constituency level. By success, we mean the ability to win preferential votes for candidates nominated by each party. Due to the different sizes of constituencies and the attempt to explain inter-party competition within a coalition, we do not work here with absolute values but with ratios. For each variable, we measure the relative distribution of values between the parties in the coalition, expressed as a percentage, and test how this affected the proportion of preferential votes received. Therefore, the dependent variable is in the form of the percentage of preferential votes for the candidates of the given party out of all preferential votes for the whole coalition.

The first independent variable examined is the size of each party (the level of its electoral support) in a given constituency. We examine whether the size of (support for) a party corresponds to the number of preferential votes for the party's candidates. In view of the explanation above, when measuring this variable we use the percentage of coalition voters that were supporters of a given party in the coalition. We derive data on the size of each party from a post-election survey that measured support for the individual parties (close post-election surveys tend to be more accurate than pre-election data). We use a post-election survey by Kantar (2021), which is the only agency that conducted a post-election survey on a representative sample of the Czech Republic. To estimate party support in each region (constituency), we rely on the distribution that parties recorded in the last parliamentary elections in which they ran independently. While this approach is not ideal, it is justifiable from our point of view; while the level of support for a party may change in each election, the spatial distribution of this support does not change significantly in the short term of one election cycle in the Czech context (unless we observe a significant ideological or programmatic shift by the party). We are aware that this approach ${ }^{7}$ (as well as deriving party support from post-election polls) provides only approximate information about party support, but we believe it is sufficient for a rough assessment of party size and does not preclude its use within the models.

Another variable in the models is the number of party candidates in the electable places on the list, where electable places are defined as the first X places on each list, where X is the number of seats won by the respective coalition in the given district. The value has the form of a percentage of the number of candidates in the electable places on the whole coalition list. This variable tends to serve as more of a control variable, as we have seen that the seats won by each party often did not correspond to the order on the lists. We also test the effect of how the voters for each party in the coalition are experienced with using their preferential votes. For this reason, we use data showing preferential voting in the 2017 parliamentary elections at the constituency level. The variable is measured as the ratio of the number of preference votes to the number of votes for a party at the constituency level. At the same time, we also test the effect of the number of party members in each party coalition at the constituency level. Again, the variable has the form of a percentage, that is,
the percentage of the number of party members of a given party out of the total number of party members of all parties in the coalition.

To give an overall illustration and interpretation, at the end of the analysis we also present the concentration of preferential votes for individual parties in the coalitions since, in addition to the number of preferential votes, the concentration of preferential votes at the constituency level can also play an important role in winning seats. We operationalize the concentration of preference votes for party candidates as the share of preference votes cast for the top four ${ }^{8}$ party candidates within the coalition list out of all preference votes for that party's candidates on the list. The index, therefore, ranges from 0 to 1 , where 1 means that all the preferential votes for a given party were cast for the top four candidates from that party. Given the existence of a general order effect and the context of inter-party competition in the case of coalition candidacy, this operationalization has greater explanatory power than the Herfindahl-Hirschman index, which indicates the concentration of preference votes for all candidates of the party. In other words, what matters in a given context is how the highest-ranking candidates from each party perform (cf. Beblavý \& Veselková, 2014; Millard \& Popescu, 2004).

The analysis in the first part covers all the candidates of the two coalitions described above, with a candidate being a case in the analysis. In total, there are 342 (see endnote number 6) candidates for the SPOLU coalition, of whom 71 won a mandate, and 342 candidates for the PIRSTAN coalition, of whom 37 won a mandate. Candidates competed in 14 different large constituencies. In the second part, the unit of analysis is a party of the coalition list at the constituency level; thus, 14 cases figure in each of the five models. The main data source is the Volby.cz (2022). Data on party membership bases were obtained through correspondence with party secretariats. Data on mayors were obtained from the dataset of councillors and mayors elected after the 2018 local elections (FSS MU, 2019).

## 5. Results

### 5.1. SPOLU coalition

The linear regression model used to analyze the effect of the characteristics of the SPOLU coalition candidates was found to be significant and contributes to the explanation of the dependent variable. ${ }^{9}$

Multicollinearity was tested and was not found. According to the model, ranking on the candidate list, gender, university education, the occupation of doctor, the occupation of politician, size of the municipality of residence, the proportion of votes for the candidate out of the number of votes for the party in place of candidate's residence, defence of the mandate, and holding a seat in the regional council each has a significant effect ( $\mathrm{p}<0.05$ ). However, we do not find substantial effect sizes for all of these variables.

The effect of the share of votes for the candidate out of the number of votes for the party in the place of the candidate's residence, which we expected under the neighbourhood effect, is, contrary to expectations, negative, but it is almost negligible. At the same time, the effect of position as mayor was not confirmed either. The model confirmed the effect
of the size of the place of the candidate's residence but it is very small. If the population of the candidate's municipality increases by 10,000 inhabitants and all else remains the same, then the candidate scores 0.003 points more in the model. Thus, the existence of a neighbourhood effect was not confirmed in the case of the SPOLU coalition.

If the candidate is a woman (and the other monitored characteristics are the same), according to the model, she gets 0.073 points more than a man. If the candidate has a university degree (and other monitored characteristics are the same), the candidate will score 0.058 points more than a candidate without a university degree. A candidate who reports being a doctor will score 0.099 points more than a candidate who does not report a medical profession (holding other observed variables constant). A similar effect is confirmed when the candidate indicates the occupation of a politician - in this case, the candidate scores 0.066 points more than the candidate who does not indicate the political occupation.

The observed order effect was expected but does not contribute to explaining inter-party competition, as the candidates of all three parties were relatively evenly distributed on the list with respect to the strength of the coalition parties. However, the effect is smaller than we would expect, which can be attributed to the fact that in the case of a coalition list, voters are less likely to choose the simplest strategy of marking the highest-ranking candidates (see Brockington, 2003).

| Table 3: Effects of the characteristics of the SPOLU coalition candidates |  |  |  |
| :--- | :---: | :---: | :---: |
| Variable | Unstandardized Coefficients |  |  |
|  | Sig. |  |  |
| (Constant) | B | Std. Error |  |
| Position on the list | 0.722 | 0.069 | 0.000 |
| Age | -0.020 | 0.001 | 0.000 |
| Gender ${ }^{10}$ | -0.002 | 0.001 | 0.114 |
| Partisanship ${ }^{11}$ | 0.073 | 0.023 | 0.002 |
| University education ${ }^{12}$ | -0.043 | 0.045 | 0.346 |
| Occupation doctor ${ }^{13}$ | 0.058 | 0.027 | 0.036 |
| Occupation politician ${ }^{14}$ | 0.099 | 0.041 | 0.016 |
| Size of permanent residence | 0.066 | 0.023 | 0.004 |
| Percentage of votes for the candidate out of the number of votes <br> for the party in the place of the candidate's residence | 0.003 | 0.000 | 0.000 |
| Defence of the mandate ${ }^{15}$ | -0.004 | 0.000 | 0.000 |
| Regional deputy ${ }^{16}$ | 0.238 | 0.039 | 0.000 |
| Mayor ${ }^{17}$ | 0.113 | 0.032 | 0.000 |
| Source: The authors. | -0.010 | 0.033 | 0.766 |

According to general theoretical assumptions, the most crucial factor in the case of the SPOLU coalition was whether the candidate was well-known. The model predicts that the greatest effect on winning preferential votes is if the candidate defends the mandate or
if the candidate is a regional deputy. If the other monitored characteristics are the same, the difference between a candidate who defends the mandate and a candidate who does not defend the mandate is 0.238 points in favour of the candidate who is a MP. The candidate who is a regional deputy scored 0.113 points more than other candidates, holding the other variables constant. If we consider the distribution of candidates with these characteristics across the three parties of the coalition, we find that ODS nominated the most candidates defending mandates - 20 out of a total of 155 candidates. The two smaller coalition partners had fewer candidates on the lists - 86 for KDU-ČSL and 71 for TOP 09 and also fewer MPs. In the case of KDU-ČSL, there were seven such candidates; in the case of TOP 09 , only four were such candidates. A similar ratio is seen in the case of regional deputies. ODS nominated a total of 23 such candidates, KDU-ČSL 14 and TOP 09 7. The distribution of these most important candidate characteristics among the parties corresponded to how the parties performed in winning preferential votes (and seats), i.e. ODS quite reliably maintained its position as the strongest party of the coalition, and KDU-ČSL was more successful than TOP 09 in the contest between the two smaller coalition parties.

| Table 4: Effects of party characteristics of the SPOLU coalition parties |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ODS |  |  | KDU-čSL |  | TOP 09 |  |  |  |
| Model robustness | R square $=0,895$ <br> p $<, 001$ |  |  | R square $=0,951$ <br> p $<, 001$ |  | R square $=0,901$ <br> p $<, 001$ |  |  |  |
|  | Unstand. <br> Coefficients |  | Unstand. <br> Coefficients |  | Unstand. <br> Coefficients |  |  |  |  |
|  | B | Std. <br> Error | Sig. | B | Std. <br> Error | Sig. | B | Std. <br> Error | Sig. |
| (Constant) | 38.95 | 32.37 | 0.26 | 3.81 | 6.24 | 0.56 | 64.86 | 14.33 | 0.001 |
| Share of party candidates <br> in electable positions | 0.01 | 0.101 | 0.981 | -18 | - | - | -0.028 | 0.053 | 0.612 |
| Relative size of the party | -0.068 | 0.642 | 0.918 | -0.378 | 0.350 | 0.306 | -1.21 | 0.330 | 0.004 |
| Relative size of membership <br> base | 0.408 | 0.089 | 0.001 | 0.569 | 0.060 | 0.000 | 0.912 | 0.133 | 0.000 |
| Share of preferential votes <br> in 2017 | -0.163 | 0.165 | 0.350 | 0.058 | 0.118 | 0.634 | -19 | - | - |
| Source: The authors. |  |  |  |  |  |  |  |  |  |

Table 4 shows which characteristics of each party led to a party achieving a better result in the preferential voting in proportion to the other two coalition parties. We see that for all three parties, the number of party members is significant. As the relative number of partisans in a constituency (compared to other coalition members) increases by one percentage point in favour of ODS, the value of the ODS share of the preference votes in that constituency increases by 0.4 percentage points (keeping other monitored characteristics constant) $(\mathrm{p}<0.01)$. In the case of the KDU-ČSL, the increase in the share of preferential votes at the constituency level is 0.57 percentage points ( $\mathrm{p}<0.01$ ). In the case of TOP 09, there is even an increase of 0.9 percentage points ( $\mathrm{p}<0.01$ ). However, these findings need to be interpreted in the context of the total number of party members of all three parties.

If we consider the number of party members, we find that ODS had an average of 851 party members per constituency, KDU-ČSL had 1465 party members, and TOP 09 had only 183 party members. While the number of ODS party members was, at least to a certain extent, evenly distributed among all regions, we observe a much stronger party base in the Moravian constituencies for KDU-ČSL. This means that in these constituencies, KDU-ČSL had a high share of party members in relation to its two coalition partners. In the case of TOP 09, whose performance in the preferential voting was most influenced by the number of party members, there was a noticeably large difference between Prague and the rest of the country, which, given the relative success of TOP 09 in Prague, creates an effect appearing in the data.

|  | ODS |  |  |  | KDU-ČSL |  |  |  | TOP 09 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{aligned} & \tilde{n} \\ & \stackrel{0}{0} \end{aligned}$ |  |  |  | $\begin{aligned} & \tilde{n} \\ & \stackrel{0}{0} \\ & \sim \end{aligned}$ |  |  |  | N゙す |
| Praha | 21 | 185034 | 0.64 | 6 | 4 | 51730 | 1.00 | 2 | 11 | 118631 | 0.79 | 3 |
| Stř̌edočeský r. | 21 | 112949 | 0.62 | 6 | 4 | 20698 | 1.00 | 1 | 9 | 40884 | 0.68 | 3 |
| Jihočeskýr r. | 13 | 38772 | 0.61 | 2 | 5 | 23288 | 0.92 | 2 | 4 | 18254 | 1.00 | 1 |
| Plzeňský r. | 10 | 37695 | 0.69 | 2 | 5 | 12891 | 0.87 | 0 | 5 | 16265 | 0.92 | 2 |
| Karlovarskýr. | 5 | 10183 | 0.85 | 1 | 4 | 4391 | 1.00 | 0 | 5 | 6242 | 0.82 | 0 |
| Ústecký r. | 14 | 30982 | 0.49 | 2 | 6 | 9009 | 0.81 | 0 | 6 | 15848 | 0.81 | 1 |
| Liberecký r. | 9 | 26461 | 0.58 | 2 | 4 | 8660 | 1.00 | 0 | 4 | 10558 | 1.00 | 0 |
| Královéhradecký r. | 10 | 38395 | 0.71 | 2 | 5 | 24486 | 0.92 | 1 | 5 | 23285 | 0.94 | 1 |
| Pardubický r. | 10 | 31074 | 0.62 | 1 | 5 | 31432 | 0.93 | 2 | 4 | 12998 | 1.00 | 1 |
| R. Vysočina | 8 | 29168 | 0.73 | 1 | 8 | 32723 | 0.76 | 2 | 4 | 12609 | 1.00 | 1 |
| Jihomoravský r. | 17 | 93526 | 0.70 | 4 | 13 | 81907 | 0.66 | 4 | 4 | 30163 | 1.00 | 1 |
| Olomoucký r. | 10 | 36104 | 0.59 | 1 | 9 | 39403 | 0.79 | 3 | 4 | 11561 | 1.00 | 0 |
| Zlínský r. | 9 | 30715 | 0.74 | 1 | 9 | 45593 | 0.75 | 3 | 4 | 12205 | 1.00 | 0 |
| Moravskoslezský r. | 18 | 55090 | 0.68 | 3 | 12 | 51623 | 0.78 | 3 | 6 | 14237 | 0.81 | 0 |
| Total/Average | 175 | 756148 | 0.65 | 34 | 93 | 437834 | 0.83 | 23 | 75 | 343740 | 0.86 | 14 |
| Source: The authors. |  |  |  |  |  |  |  |  |  |  |  |  |

It is, therefore, possible to conclude that ODS, as the largest party with the most candidates occupying the electable places on the coalition list, did not have to rely as much on preferential votes. At the same time, however, ODS also nominated the most candidates with the characteristics most important to the coalition's voters in preferential voting. The
difference in the number of preference votes received between the other two coalition partners (see Table 5) can be explained quite well by the different party structures. While the KDU-ČSL had a large membership base in general and a very large membership base in several particular constituencies (basically all constituencies comprising historic Moravia), in which it was then most successful in winning preferential votes (in some constituencies reaching half of all preferential votes for the coalition), TOP 09 had many times fewer members and could in fact rely only on its membership base in Prague, where there were twice as many members as in any other TOP 09 membership base (742), and to a lesser extent on some other districts in Bohemia. This corresponds to the regions where the parties won seats, as shown in Table 5. At the same time, the fact that TOP 09 nominated half of the candidates with the characteristics that had the greatest positive effect on receiving preferential votes (MPs and regional deputies) compared to KDU-ČSL may have played a role.

The concentration of preferential votes, which is also shown in Table 5, has, unfortunately, a very limited explanatory value in the case of the SPOLU coalition since it is influenced by the fact that in many constituencies, small coalition parties nominated a small number of candidates - often as few as four. Concentration then gives a value of 1 , but the gains in preferential votes (and seats) are rather low in these constituencies, as they are constituencies where the parties are not very strong and therefore did not nominate more candidates within the coalition. The number of preferential votes also shows that the two smaller coalition parties complemented each other as partners of the larger ODS - KDU-ČSL collected preferential votes mainly in Moravia, TOP 09 in Bohemia. However, the difference is that in certain constituencies, KDU-ČSL managed to match or even outperform ODS in the preference vote. The same cannot be said for TOP 09. Overall, KDU-ČSL received more than 100,000 more preferential votes than TOP 09.

### 5.2. PIRSTAN coalition

The used linear regression model is significant in the case of the PIRSTAN coalition and contributes to explaining the dependent variable. ${ }^{20}$ Multicollinearity was tested and not found. This model revealed a number of variables with significant effects ( $\mathrm{p} \leq 0.05$ ). These are ranking on the candidate list, gender, university education, occupation as a politician, size of the municipality of residence, the proportion of votes for the candidate out of the number of votes for the party in the place of the candidate's residence, defence of a parliamentary seat, and holding the position of mayor.

Again, given the relatively even distribution of positions on the ballots, it is not very important to focus on the order effect, which has been confirmed. As in the case of the SPOLU coalition, the size of the candidate's place of residence has a positive effect but it is very small, even negligible. If the population of a candidate's municipality increases by 10,000 inhabitants and everything else remains the same, then the candidate will gain 0.003 more points.

Unlike in the case of the SPOLU coalition, where more distant familiarity or rather visibility (position as a MP or regional deputy) seems to be the most important factor in
receiving preferential votes, in the case of the PIRSTAN coalition, the most important factor was local personal familiarity, which is expressed here by holding the position of mayor. According to the model, a candidate who was mayor scored 0.212 points more than a candidate who was not mayor (keeping other variables constant). If then the frequency of candidate-mayors in both parties is considered, we reveal perhaps the main reason for STAN's huge success in preferential voting. While there were only four mayors out of 180 Pirate candidates, STAN was true to its name (Mayors and Independents) in this respect - out of 96 candidates, 62 held the post of mayor, i.e. two thirds.

The effect of the position of mayor is then linked to the occupation of politician, which also had a positive effect on the share of preferential votes received ( 0.101 more points than other candidates if keeping other variables at the same level). As in the previous case, the STAN candidates had an advantage, although not as significant - on the lists, $74 \%$ of STAN candidates indicated at least one political occupation, while in the case of the Pirates, it was $51 \%$. The defence of a parliamentary mandate also had a positive effect on receiving preferential votes, but this effect was almost half the size of the mayor's effect. If the other monitored characteristics are held constant, the candidate defending a parliamentary mandate gets 0.125 more points than the other candidate. Here the Pirates had an advantage, as they had 21 MPs on the coalition candidate list, while STAN had only five.

| Table 6: Effects of the characteristics of the PIRSTAN coalition candidates ${ }^{21}$ |  |  |  |
| :--- | :---: | :---: | :---: |
| Variable |  |  |  |
|  | Unstandardized Coefficients | Sig. |  |
| (Constant) | B |  |  |
| Position on the list | 0.583 | 0.091 | 0.000 |
| Age | -0.024 | 0.002 | 0.000 |
| Gender | 0.000 | 0.001 | 0.768 |
| Partisanship | 0.224 | 0.033 | 0.000 |
| University education | 0.059 | 0.048 | 0.222 |
| Occupation doctor | 0.123 | 0.035 | 0.000 |
| Occupation politician | 0.296 | 0.157 | 0.061 |
| Size of permanent residence | 0.101 | 0.036 | 0.006 |
| Percentage of votes for the candidate out of the number of <br> votes for the party in the place of the candidate's residence | 0.003 | 0.000 | 0.000 |
| Defence of the mandate | -0.004 | 0.000 | 0.000 |
| Regional deputy | 0.125 | 0.064 | 0.050 |
| Mayor | 0.011 | 0.044 | 0.799 |
| Source: The authors. | 0.212 | 0.043 | 0.000 |

Overall, the biggest effect in the case of the PIRSTAN coalition was the gender of the candidate. According to the model, if the candidate is a woman (and all other monitored characteristics are kept constant), she will get 0.224 more points than a man. However, if we look at the gender proportion of candidates for both parties of the coalition, we
find that there was not a very significant difference - in the case of Pirates, women made up $32 \%$ of the candidates, in the case of STAN it was $24 \%$. Thus, this variable cannot well explain the differences in the preference vote between the two coalition parties. Similarly, in another characteristic whose effect was proved - education - there was only a small difference between the candidates of the two parties ( $73 \%$ of the Pirates' candidates and $78 \%$ of the STAN candidates had a university education).

Table 7 shows that for both parties, the relative size (electoral support) of the party in a constituency had a positive effect on the relative gain of preferential votes within the coalition. In other words, as the relative support for a party within the coalition increased, the party's candidates received a larger share of preference votes. As the relative size of the Pirates' party within a constituency increases by one percentage point, the Pirates' share of the preferential votes within the coalition also increases by one percentage point (keeping other observed characteristics constant) ( $\mathrm{p}<0.01$ ). Under the same conditions, in the case of STAN, the value of the share of preferential votes within the coalition increases by 0.84 percentage points ( $\mathrm{p}<0.01$ ). In other words, the regression model shows that the proportion of preference votes received within the coalition depended to some extent on the relative size of the two parties in the respective constituency. If we then look at the balance of support for the two parties in each district, we find that in the period shortly after the election, STAN had more support in all constituencies except Prague, where STAN and the Pirates had the same level of support and where the Pirates won two of their four seats. On the other hand, given the operationalization of this variable (see the previous section), this finding should be interpreted with caution. Nevertheless, it seems that at the time of the election, STAN was no longer the smaller coalition partner and was at least as strong, if not stronger, than the Pirates.

Table 7: Effects of party characteristics of the PIRSTAN coalition parties

|  | Piráti |  |  | STAN |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Model robustness | R square $=0.746$ <br> p $<0.01$ |  |  | R square $=0.744$ <br> p $<0.01$ |  |  |
|  | Unstand. Coefficients |  | Unstand. Coefficients |  |  |  |
|  | B | Std. Error | Sig. | B | Std. Error | Sig. |
| (Constant) | -12.568 | 10.620 | 0.267 | 9.628 | 18.688 | 0.619 |
| Share of party candidates in <br> electable positions | -0.013 | 0.082 | 0.878 | 0.018 | 0.065 | 0.786 |
| Relative size of the party | 1.007 | 0.261 | 0.004 | 0.843 | 0.247 | 0.008 |
| Relative size of membership base | 0.072 | 0.193 | 0.716 | 0.141 | 0.165 | 0.415 |
| Share of preferential votes in 2017 | 0.216 | 0.284 | 0.467 | -0.089 | 0.121 | 0.482 |
| Source: The authors. |  |  |  |  |  |  |

As Table 8 shows, STAN, in agreement with what was described above, received an (often substantially) larger number of preferential votes in all regions. The Pirates were able to compete only in the Prague region and partially in the Ustecky region. However, it is also important that in most constituencies, STAN was able to better concentrate
preferential votes for its four highest-ranking candidates on the lists, i.e. those candidates who receive the most preferential votes and thus have the best chance of winning a seat. This, together with the larger number of preferential votes, played an important role in moving STAN candidates up the list and thus in their success in winning seats over Pirates candidates.

|  | Pirates |  |  |  | STAN |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | ~~ |  |  |  | $\sim$ <br> $\sim$ <br> $\sim$ |
| Praha | 22 | 116617 | 0.53 | 2 | 14 | 125374 | 0.65 | 4 |
| Středočeský r. | 18 | 43570 | 0.54 | 1 | 16 | 180259 | 0.71 | 5 |
| Jihočeskýr. | 12 | 18532 | 0.52 | 0 | 10 | 38006 | 0.66 | 2 |
| Plzeňský r. | 11 | 17775 | 0.61 | 0 | 9 | 36404 | 0.76 | 2 |
| Karlovarskýr. | 7 | 7613 | 0.77 | 0 | 7 | 16204 | 0.67 | 1 |
| Ústecký r. | 14 | 34669 | 0.75 | 1 | 12 | 44406 | 0.66 | 1 |
| Liberecký r. | 8 | 14903 | 0.75 | 0 | 9 | 65089 | 0.70 | 2 |
| Královéhradecký r. | 11 | 16356 | 0.60 | 0 | 9 | 44866 | 0.73 | 2 |
| Pardubický r. | 10 | 19358 | 0.61 | 0 | 9 | 31756 | 0.70 | 2 |
| R. Vysočina | 10 | 12480 | 0.61 | 0 | 10 | 32160 | 0.68 | 1 |
| Jihomoravský r. | 18 | 37413 | 0.44 | 0 | 15 | 70294 | 0.73 | 4 |
| Olomoucký r. | 12 | 17808 | 0.58 | 0 | 11 | 35212 | 0.68 | 2 |
| Zlínský r. | 11 | 16278 | 0.54 | 0 | 11 | 40933 | 0.64 | 2 |
| Moravskoslezskýr r. | 20 | 31958 | 0.43 | 0 | 16 | 41631 | 0.53 | 3 |
| Total/Average | 184 | 405330 | 0.56 | 4 | 158 | 802594 | 0.68 | 33 |
| Source: The authors. |  |  |  |  |  |  |  |  |

## 6. Conclusion and discussion

This analysis has sought to explain how preferential voting works in the context of electoral coalitions. We have studied this question using the case of the Czech election to the Chamber of Deputies in 2021, in which two electoral coalitions, SPOLU and PIRSTAN, were formed by parties running independently until that time.

We conducted the analysis in two phases - in the first phase, we used regression models to examine the effect of variables theorized to influence the preferential voting for a particular candidate. This is the approach commonly used in the context of the conventional
single-party candidate list, but here we examined the candidate's effect within electoral coalitions in order to determine whether the candidate's effect holds in this other context, i.e., whether the theory-confirmed candidate effect in intra-party competition also works in inter-party competition. However, we also investigated how the characteristics that influence preferential votes in a given coalition were distributed among the candidates of the individual parties. In the second phase, also using regression models, we analysed the effect of the characteristics of the parties in the coalition. This type of variables can only exist in the case of electoral coalitions that have candidates from multiple parties on the same list.

We found that both described categories of variables (candidate's characteristics, party characteristics) can affect (even simultaneously) preferential voting within electoral coalitions.

As in the case of conventional one-party lists, the candidate effect also plays a role in the context of coalition lists. At the same time, however, some characteristics (e.g., ranking on the ticket) have a smaller effect than we would expect in the case of a conventional party list. The characteristics of individual candidates can also influence the inter-party competition existing in the context of electoral coalitions, where the distribution of influential characteristics is key. If one of the parties in the coalition has more candidates with characteristics that are important to the coalition's voters, it increases the party's chances of gaining preferential votes and hence seats. In this way, the candidate effect can influence inter-party competition within the electoral coalition.

At the same time, however, the characteristics of a given party at the constituency level (party support, size of the membership base etc.) influence preferential votes and thus also play an important role. While the candidate effect is a well-established set of effects that has been confirmed here in a new context, the confirmed party effect on preferential voting is a newly described relationship that has not received much attention. It is something that does not exist in the case of conventional party lists and which therefore adds to the candidate effect. This type of variables then directly affects inter-party competition.

The analysis of the SPOLU coalition showed that the second type of variables was particularly important. The number of mandates won by individual parties, which do not correspond to the party strength, was mainly influenced by the different characteristics of the membership bases of the coalition parties. However, individual characteristics (such as familiarity of the candidate) also played a role, but these alone do not explain the disproportionate results.

In the case of the PIRSTAN coalition, on the contrary, it was rather the individual characteristics of the candidates (partly connected with the character of the subjects, however) that was important, i.e. mainly whether the candidate was a mayor, which represents a personal kind of familiarity with the candidate. The concentration of preferential votes seems to have played a certain - but not crucial - role as well. The size of the party, measured not by the number of party members but by the support for the party, also proved to be an important factor, as STAN changed from being the smaller party to at least a balanced partner with the Pirates during the existence of the coalition.

The second dimension (party characteristics) is difficult for coalition parties to change just before an election (they cannot increase their membership or support by a significant
amount), but if they know they have a disadvantage compared to their coalition partners, they must, even more than usual, pay attention to selecting candidates who will be able to benefit from the proven candidate's effects (the first dimension), which also work within electoral coalitions as we confirmed.

Our paper is a case study of one election influenced by polarized opposition to the policies of the incumbent ruling coalition in the one country. Thus, there is a strong need to conduct similar research in other countries where the same key assumptions exist (flexible proportional list electoral system, candidacy of electoral coalitions) and to find out whether the findings revealed in the Czech context correspond to the general trend or whether the Czech context is something exceptional. The reason why research on similar topic is lacking may be that, with few exceptions, we do not encounter successful electoral coalitions (by electoral coalition we do not mean a lasting alliance and post-election cooperation between two or more independently running parties - see the example of the French Socialists and Communists, who are held up by various studies as an example of a coalition, Golder, 2006) in countries with proportional electoral systems with relatively low closure clauses or coalitions composed of different types of parties. Leaving aside the very complex situation in Israel with its broad alliances composed of both parties and coalitions, or the examples from northern and southern Europe, where, of course, the coalitions in name are already merged parties (Red-Green Alliance in Denmark, Syriza in Greece), there remain only electorally unsuccessful, small coalitions (such as the Agreement of Nationalist Unity or the Republican Left of Catalonia-Sovereigntists in Spain), certainly not medium-sized or even winning elections, as in the Czech case in 2021.

How to better conceptualize and measure the aforementioned visibility and familiarity of candidates also remains a topic for further research. For example, determining whether personal involvement in various sports, cultural and social clubs, and functions may have a similar effect, or which other occupations are perceived as prestigious.

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## Endnotes:

1. The lower chamber of the Czech Parliament.
2. For the elections, the Czech Republic is divided into 14 differently sized constituencies which correspond to the regions of the Czech Republic.
3. In the Czech context, this is a rare occurrence. In history we can find only a few examples of electoral coalitions.
4. All the parties that were part of the two coalitions studied here had run independently in at least one (previous) parliamentary election.
5. A candidate may list more than one occupation; the determining factor was whether the occupation was listed among them.
6. One case, which had a value of 0 , cannot be adjusted by the logarithm. Therefore, the number of cases in the analysis is one less.
7. We consider this approach better than deriving the distribution of party support from regional elections, which are characterized by frequent coalition candidacies, often together with smaller regional parties.
8. A voter may cast up to four preferential votes.
9. (R square $=0.733, \mathrm{p}<0.001$ ).
10. Reference category is man.
11. Reference category is non-partisan candidate.
12. Reference category is candidate without university degree.
13. Reference category is candidate without stated occupation as a doctor.
14. Reference category is candidate without stated occupation as a politician.
15. Reference category is candidate defending a mandate.
16. Reference category is candidate who is not a regional deputy.
17. Reference category is candidate who is not a mayor.
18. For the KDU-ČSL, the variable 'share of party candidates in electable positions' is not included in the model because it caused multicollinearity, but in various modifications it was never significant in the model.
19. For TOP 09, the variable 'share of preferential votes in 2017' is not included in the model because it caused multicollinearity, but in various modifications it was never significant in the model.
20. $(\mathrm{R}$ square $=0.635, \mathrm{p}<0.001)$.
21. All reference categories of dummy variables are the same as in the model for the SPOLU coalition.

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