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The 2021 Czech Parliamentary Electoral Reform[1]

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Abstract:

*Electoral systems, seen as the most specific manipulative instrument of politics, thus come to the forefront of politicians' interests. Recently, the Parliamentary Electoral Act in Czechia was amended. The case study focuses on a brief reflection on this electoral system change enforced by Constitutional Court judgment. The shortcomings of the 2002 electoral system have been identified; discussed are changes in electoral legislation and the political consequences thereof, including by simulating electoral results since 2002 under the new electoral system and comparing them with those under the previous Parliamentary Electoral Act, e.g. by analysing the overall seats–votes proportionality, parliamentary parties' over-/ underrepresentation or malapportionment, and confronting the political consequences of the new Parliamentary Electoral Act with the 2021 Constitutional Court judgment. Despite the many flaws in the Court's reasoning and the **inconvenient** timing, there was some space for the political elites to remedy the deficiencies of the 2002 electoral system. The case study concludes that the political representation did not take advantage of but rather missed the opportunity to remedy the Czech electoral legislation.*

Key words: *politics of electoral reform; Czech Republic; Constitutional Court; political consequences; seats–votes proportionality*

Introduction

Electoral systems are seen as '*the most specific manipulative instrument of politics*' (Sartori 1968: 273) and thus come to the forefront of politicians' interests. For instance, politicians often try to improve their positions by changing electoral rules when given the opportunity (Riker 1986). Recently, the parliamentary electoral system was changed in Czechia. However, the decisive impetus for this electoral reform was not so much the temptation of the elite majority to secure some advantage, but a judgment of the Czech Constitutional Court of 2 February 2021.

Much of the discussion about the Czech parliamentary electoral system may be of constitutional importance because Czechia is a country where the general principle of the electoral system is embedded in the Constitution. In the case of elections to the Chamber of Deputies (lower house of Parliament), the Constitution requires elections to be held

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'according to the principle of proportional representation' (The Constitution of the Czech Republic: art. 18). It was this requirement to which a group of senators referred in a petition to the Constitutional Court in December 2017[3], but it took more than three years for the Court to publish the judgment.[4] Since the Court related the constitutional requirement of the principle of proportional representation for elections to the Chamber of Deputies to the inter-party allocation of seats at the national level, not the procedure *per se*, it annulled certain provisions of the existing Parliamentary Electoral Act as unconstitutional because their cumulative integrative effects excessively distorted the principle of proportional representation (Constitutional Court 2021).

As this change to the electoral system is quite recent, its scholarly reflection is still lacking. Hence, this case study seeks to explore in detail the 2021 Czech electoral reform. However, the politics of electoral reform does not occur in a vacuum since each change to the electoral system has its roots in a specific political constellation; without analysis thereof, it is impossible to understand the electoral reform process or its outcomes (cf. Renwick 2010: 84-85), and therefore this case study aims not only to describe the new electoral system and its political consequences but also to discuss briefly the causes and circumstances surrounding the electoral reform process.

The case study contains three sections. The first part of the article introduces research methods and data. The second section is devoted to a brief explanation of why and how the electoral reform took place. First, it provides a short inquiry into the February 2021 Constitutional Court judgment, by which the Court limited the scope for electoral reform (within the proportional list representation electoral system), and then it presents the changes to the Parliamentary Electoral Act introduced in 2021. Subsequently, possible political consequences of the new electoral system are discussed and compared with the effects of the old electoral rules. But if Renwick (2011) examines the impact of electoral reforms on both the *inter*-party (seats–votes proportionality) and intra-*party* dimensions of electoral systems (the degree of personalisation), this research has focused 'only' on the *inter*-party dimension – for two reasons. First, the electoral reform under review did not bring any change in the preferential voting mechanism and therefore no change in relation to the personalisation of electoral rules. Second, although the Constitutional Court did not specify what the new electoral system should look like in order to be constitutionally compliant because it does not have the competence to do so, it was clear from the judgment that the final seat allocation between parties at the national level under the new electoral system must be more proportional than under the old legislation (but it was unclear how *much* more).

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[3] The petition questioned the constitutionality of the Parliamentary Electoral Act, mainly the use of the d'Hondt formula in 14 electoral districts of varying magnitudes. The complaint alleged that the equal voting and proportional representation principles had been violated, with large parties being favoured. It also mentioned the fortuity and unpredictability of the system in smaller districts, where a small group of voters determined the election result, with it being mathematically impossible for small parties to obtain a seat in the smallest districts (in the Karlovy Vary and Liberec regions). The petitioners also questioned the steep additive legal threshold for electoral alliances because it did not meet the anticipated integrative role and instead resulted in the break-up of the intended electoral alliances. At the same time, the complaint highlighted the non-standard way of introducing the additive legal threshold (see Constitutional Court 2021).

[4] The Court defended its action arguing that it had been waiting on whether the Parliament on its own would decide to change the Parliamentary Electoral Act. This despite there being effectively no proposal for such an amendment for which the necessary parliamentary majority to pass existed.

Circumstances of the electoral system change

As noted above, it was a Constitutional Court judgment that provided the impetus for electoral reform. The Court annulled certain provisions of the Parliamentary Electoral Act of 2002 as unconstitutional because they violated the principles of equality of votes, the right to vote and equal opportunities for parties and alliances standing in elections and, as a result, their cumulative integrative effects excessively distorted the principle of proportional representation. Despite the Court's reasoning primarily targeting the problematic nature of the 14 electoral districts, it ultimately did not view the distribution of electoral districts itself as unconstitutional. It did find, however, the use of the d'Hondt formula in the 14 districts of varying magnitudes produced unconstitutionally high disproportionality and therefore abolished its implementation.[5] Similarly, the Court defended the existence of the legal threshold for electoral alliances as conforming with the Constitution but agreed with the petitioners that the legal threshold was excessive and inconsistent because it did not meet its purpose and could skew the election results. As a result, the Court annulled the legal threshold for electoral alliances (for case comment on the 2021 judgment, see Antoš, Horák 2021; Červinka 2021; Williams 2021). At the same, it would seem from the wording of the reasoning of the judgment that the Constitutional Court might prefer to adopt rules along the lines of the Parliamentary Electoral Act of 1995 (see Table 1).

Table 1: Parliamentary Electoral Act of 1995

	Act of Law 247/1995 Coll.
electoral formula	list PR
total number of seats	200
number and character of tier districting	two-tier districting lower tier: regional lists (8 districts) upper tier: national list, remainder seats
district magnitude[*]	M = 14 to 41 M_{av} = 25
mathematical formula	lower tier: LR-Hagenbach-Bischoff upper tier: LR-Hagenbach-Bischoff
legal threshold	nationwide: 5 % for a single party, 7 % for an electoral alliance of two parties, 9 % for an alliance of three parties, 11 % for alliances of four or more parties

Note: * The district magnitude is defined as the number of seats awarded to the given electoral district. In the case of elections to the Chamber of Deputies, the district magnitude is not fixed in advance by the Parliamentary Electoral Act but determined in proportion to votes cast in each electoral district. Thus, regional district magnitudes may vary from election to election.
***Source**: Act of Law 247/1995 Coll.*

With this decision, the political representation was placed in an uncomfortable position for several reasons. Although the Constitutional Court annulled only partial parameters of the electoral law, these were central provisions. Consequently, the elections could take place with the remaining torso of the Parliamentary Electoral Act, but it would be impossible to

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[5] However, the judgment admits the reintroduction of the d'Hondt formula for electoral districts large enough to allow a proportional allocation of seats among parties (Constitutional Court 2021: 58).

determine the election result. Moreover, the missing provisions had to be adopted quite quickly (this 'late' judgment was filed only eight months before the election date[6]) and during the Covid-19 crisis, even though their nature predicted a quite difficult path leading to a necessary political compromise. Last but not least, reaching the necessary compromise was further complicated by the fact that a minority government was in power and, at the same time, that opposition parties enjoyed a majority in the Senate (upper house of Parliament). As the Czech Constitution requires approval by both parliamentary chambers as regards electoral laws, with the opposition controlling the majority in the Senate, the ruling parties could not impose the electoral system as they wished. Instead, a compromise was needed between the Chamber of Deputies and the Senate.

The consequent political debates confirmed that a compromise on the new electoral rules would be difficult to reach. The ruling parties, Social Democrats (ČSSD) and especially the senior coalition partner ANO, wanted to implement a more proportional seat allocation among parties through a single nationwide district. The Ministry of the Interior therefore prepared two proposals: a single nationwide district with the allocation of all 200 seats at the national level from national party lists, and a procedure that seeks to approximate the system of double proportionality,[7] first by allocating seats among parties at the national level, and then by apportioning those party seats among regional party lists according to their share of the total party votes (Ministry of the Interior 2021: Annex 1; for more details on their political consequences, see Jarabinský, Líbal, Oreský 2021). The latter was based on an earlier proposal by MP Marek Výborný (Christian Democrats - KDU-ČSL; see Chamber of Deputies 2019). On the contrary, the opposition parties were more inclined to retain the electoral districts in the legislation.

Since a compromise was needed between the ruling and opposition parties, an alternative proposal was put forward by MP Marek Benda (Civic Democrats - ODS), according to which the 14 electoral districts were to remain, but a two-tier system was to be introduced with the inter-party seat allocation being calculated by the Imperiali largest remainders method (hereinafter 'LR-Imperiali') at the regional level and by the LR-Hagenbach-Bischoff method at the national level. And it was on the basis of this proposal that the electoral reform was implemented. Consequently, the necessary compromise was eventually found relatively quickly, but at the cost that the 2021 electoral reform 'only' added the missing provisions of the Parliamentary Electoral Act. The resulting compromise, however, seems to reach the maximum possible.

To sum up, based on Renwick's (2011) typology, the 2021 Czech electoral system change may be described as an elite bargain. Under the new electoral law, the seat allocation among parties takes place in two steps. First, seats are allocated at the regional level in the 14 electoral districts using the scarcely applied LR-Imperiali.[8] Second, if some

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[6] Since President Zeman had already announced the date of the elections on 28 December 2020, the campaign was already underway when the judgment was announced.

[7] The double proportionality system aims at a fair representation of the geographical division of the electorate as well as of the party division of the voters. The methods achieve this two-way fairness by apportioning both seats to districts and to parties proportionally to vote counts. The subsequent step is the essence of the method: the sub-apportionment of seats simultaneously by district and party. Such a procedure thus ensures both that each electoral district meets its district magnitude and that each party receives the total number of seats allocated at the national level (Pukelsheim 2017: ch. 14, 15).

[8] Across European countries, LR-Imperiali was used exclusively in Italy from 1946 to 1993 (see Seton-Watson 1983; Passarelli 2018). Another example of the use of LR-Imperiali in parliamentary elections is Ecuador in

seats remain unallocated, the law introduced a national tier, whereby all remainder seats and votes are transferred from the regional level. The higher-tier seats are first allocated among parties using LR-Hagenbach-Bischoff and then the higher-tier party seats are allocated among electoral districts based on the order created by the largest remainders of the given party in the first tier. A nationwide legal threshold for electoral alliances was reintroduced, but a less severe one, whereby a single party must garner 5% of the vote to pass the threshold, the alliance of two parties 8%, and three and more parties 11%.

Table 2: The 2021 electoral system change

	Act of Law 37/2002 Coll.		Act of Law 189/2021 Coll.
electoral formula	list PR	≈	list PR
total number of seats	200	≈	200
number and character of tier districting	single tier (14 regional districts)	≈	two-tier districting lower tier: regional lists (14 districts) upper tier: national list, remainder seats
district magnitude	M = 5 to 26 M_{av} = 14,29	≈	M = 5 to 26 (?) Mav = 14,29
mathematical formula	d'Hondt highest average method	→	lower tier: LR-Imperiali upper tier: LR-Hagenbach-Bischoff
legal threshold	nationwide: 5 % for a single party, 10 % for an electoral alliance of two parties, 15 % for an alliance of three parties, 20 % for an alliance of four or more parties	↘	nationwide: 5 % for a single party, 8 % for an electoral alliance of two parties, 11 % for an alliance of three or more parties

Sources: Act of Law 37/2002 Coll.; Act of Law 189/2021 Coll.

Methods and data

Since the Czech Constitutional Court ruled on the basis of specific election results, these results became the baseline data for the research. Specifically, the research sample includes the results of parliamentary elections since 2002, when the previous Parliamentary Electoral Act was adopted, with the source of the election data throughout this article being the official election archive of the Czech Statistical Office (2021).

Following the February 2021 Constitutional Court judgment, the research focused on the identified shortcomings of the old electoral legislation and compared them with what the results would have been had the new Parliamentary Electoral Act been applied. Hence, modelling election results, i.e., calculating the actual results of (several) previous elections under the new electoral system,[9] and their comparison with the actual election results serves for analysis of the possible political consequences of the 2021 electoral reform. Although such simulations are always necessarily linked to a specific past reality and thus cannot accurately predict future developments, they provide perhaps the most effective empirical basis for analysing the potential impact of electoral reform. Their use provides valuable information on the mechanical effects and expected general tendencies of the alternative electoral system that could not otherwise be obtained. Or, in other words, although simulating past election results provides only approximate and thus not always

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2006 and 2009 (Mustillo, Polga-Hecimovich 2018).

[9] See https://1url.cz/dK8SQ

completely reliable data, it offers very valuable information that is empirically based and difficult if not impossible to obtain by other research procedures.

Bearing in mind the limits of such an approach, we will then assess whether the new legislation makes it possible to address the identified shortcomings of the previous legislation. As the Constitutional Court argued by the overall seats–votes proportionality and over-/underrepresentation of parliamentary parties, following measures were employed. Over-/underrepresentation is determined in two ways. First, in accordance with the reasoning of the Constitutional Court, it is determined as the average number of votes *per* seat. And second, it is calculated using the advantage ratio (A), the value of which is given for each party separately as the proportion of seats (s_i) won and votes (v_i) received for a party i.

$$A_i = \frac{s_i}{v_i}$$

The score $A_i = 1$ corresponds to a perfectly proportional seat allocation of a given party i (compared to its share of votes). Scores $A_i < 1$ indicate underrepresentation of a given party i, with the further the score moves away from 1 (and conversely the closer it gets to 0), the more underrepresented the i is,[10] with $A_i = 0$ indicating that the party in question did not win any seats. Conversely, $A_i > 1$ indicates overrepresentation, with the resulting value A_i indicating the number of times that party i won a higher seat share than vote share.

Overall seats–votes disproportionality is determined by Gallagher's (1991) Least Squares Index (LSq).[11] The LSq is calculated by first squaring the difference between the proportion of votes (v_i) received and seats (s_i) won for a particular party i, then adding these values calculated separately for each party, dividing the sum by two, and subtracting the result.

$$LSq = \sqrt[2]{\frac{1}{2} \sum_{i=1}^{n} (v_i - s_i)^2}$$

Index values are in a closed interval from 0 to 100; $LSq = 0$ indicate the ideal of proportional inter-party seat allocation, while $LSq = 100$ would, on the contrary, indicate a completely disproportional seat allocation; thus, the higher the index value, the more disproportional the seat allocation among parties.

Last but not least, the research has also focused on the seats–votes disproportionality from a spatial perspective (malapportionment), with regional electoral districts as the point of reference. Here, malapportionment therefore may be defined as an uneven allocation of parliamentary seats among regional electoral districts as compared to their share of votes. To measure malapportionment (MAL), the adaption of the Loosemore and Hanby distortion index (Loosemore, Hanby 1971) was employed,[12] and it is thus calculated

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[10] E.g., $A_i = 0.5$ means that party i received only half the share of seats than would correspond to a perfectly proportional allocation of seats with respect to the share of votes received.

[11] Taagepera and Grofman (2003) assessed Gallagher's Least Squares Index and Loosemore and Hanby's (1971) distortion index as the best available, but with the caveat that Gallagher's index should be the preferred method for measuring the seats–votes disproportionality (cf. Monroe 1994). Similarly, Borisyuk, Rallings and Thrasher (2004) concluded that Gallagher's index should be used when the goal is to determine how different electoral systems affect the seat allocation among parties because it is significantly more sensitive to the specific features of the seat allocation process and therefore is more suitable than the distortion index, which is significantly affected by the number of wasted votes.

[12] Since there are no wasted votes in the case of malapportionment, one of the significant shortcomings of this

as follows: the proportion of seats in each district (s_i) is deducted from their proportion of the total votes (v_i), the absolute values of these differences for all districts are then added up and the result is divided by two.

$$MAL = \frac{1}{2}\sum_{i=1}^{n}|v_i - s_i|$$

This index provides information on how large a proportion of parliamentary seats was occupied by another region compared to the proportional seat allocation among the regional electoral districts. For example, *MAL* = 0.25 would imply that 25% of the total number of seats was allocated unevenly and hence occupied by other regional electoral districts than strict proportionality would imply.

The malapportionment index characterises the composition of the entire Chamber of Deputies, which may be useful for comparative purposes, but it does not reveal how the apportionment affects districts of different population sizes. Or more specifically, the malapportionment index does not detect whether there is an advantage in the parliamentary representation for large or small electoral districts (measured by population size). Thus, it is useful to add a tool to indicate the deviation from proportional representation for each electoral district. Consequently, the over-/underrepresentation of regions in the Chamber of Deputies is calculated in the same way as it was in the case of parties, i.e., using the advantage ratio (see above).

Political consequences of the electoral reform

Although the electoral reform attempted to address the Constitutional Court's February 2021 judgment, it did not in fact significantly reflect the actual shortcomings and source of problems in the law governing the elections to the Chamber of Deputies. Despite the introduction of the higher tier, changing the mathematical formula brought about 'only' a partial solution to the inequality among parties as identified by the Constitutional Court. But not even such a change could provide significant remedies.

Indeed, it is the district magnitude that is '*the decisive factor*' in determining the seats–votes disproportionality (Taagepera, Shugart 1989: 112),[13] with the proportions of votes and seats received close only in electoral districts with around 20 seats (Shugart 2000; cf. Sartori 1968: 279). However, there are only four such districts in the Czech parliamentary elections (namely, the Prague, Central Bohemian, South Moravian and Moravian-Silesian regions). Hence, the main (institutional) source of inequality in the 2002 law was predominantly the varying district magnitudes producing the different mechanical effects on seats–votes proportionality in each region (see Table 3). While seats were distributed almost proportionally in the large electoral districts (i.e., the Prague, Central Bohemian, South Moravian and Moravian-Silesian regions), the disproportionality of seat distribution disadvantaging smaller parties increased with the decreasing district magnitude.

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index is eliminated here (see footnote above). It is thus possible to follow established practice (see Samuels, Snyder 2001) and use this index instead of Gallagher's index, not least because of the ease of interpretation of the resulting scores.

[13] The relationship between disproportionality and the district magnitude is curvilinear (Rae 1971: 116–118), with the district magnitude of seven (Sartori 1968: 279) to eight seats (Colomer 2004: 54) being cited as critical.

Table 3: Vote share for which the last seat was awarded (in %)

(Electoral) Region	2002	2006	2010	2013	2017
Central Bohemian	3.73	3.84	3.41	3.07	3.17
Prague	3.38	3.45	3.10	3.00	3.24
South Moravian	3.49	3.72	3.08	3.42	3.43
Moravian-Silesian	3.61	3.69	3.33	3.49	3.54
Ústí nad Labem	5.84	5.91	4.99	5.19	5.37
South Bohemian	6.13	6.11	5.34	6.39	5.26
Zlín	6.49	6.51	5.20	6.10	5.75
Pilsen	6.54	7.02	6.26	5.64	6.05
Olomouc	6.78	7.09	5.81	5.68	6.28
Hradec Králové	6.88	6.70	6.42	6.76	5.78
Vysočina	6.57	7.33	6.71	5.75	7.16
Pardubice	7.63	8.24	6.47	6.85	6.16
Liberec	9.02	9.70	9.70	7.62	7.46
Karlovy Vary	12.35	11.96	11.65	10.66	8.86

Source: Czech Statistical Office 2021.

This is not to say that regional electoral districts (following the administrative division of the country) should be abolished. After all, most list proportional representation (PR) electoral systems are districted,[14] with electoral districts being typically designed using existing administrative-territorial units and simply apportioning a varying number of seats among districts (roughly) in proportion to population (Monroe, Rose 2002) or the electorate. In general, the existence of a higher number of electoral districts is desirable because it allows for the creation of a multiple and therefore richer political representation in terms of its internal structure. At the same time, the regional structure has already been an integral part of both party internal organisational structures and political careers in Czechia. Hence, it makes sense to maintain the existing regional electoral districts, but also include the higher (national) tier to ensure more proportional results.

However, if some proponents of replacing the d'Hondt formula with the largest remainder method (hereinafter 'LR method') argue that such a change allows the introduction of a second (higher) tier to compensate the seats–votes disproportionality caused by regional electoral districts, the chosen solution does not seem very effective, for two reasons. The first reason is the nature of the upper tier, which is not designed as compensatory but to allocate the remainder seats through the remainder votes from the lower tier. No significant differences can be expected in the number of remainder votes in the upper tier across parties – except for the extremely underrepresented parties after the lower-tier seat allocation (cf. Table 4), so the compensatory effect of such a tier is rather limited. See, e.g., the very first election held under the new law of 2021, with the coalition SPOLU having 158,247 votes, ANO 104,632 votes,[15] Pirates + STAN 131,904 votes and SPD 141,250 votes in the upper tier.

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[14] Israel, the Netherlands, and Slovakia are exceptions using single nationwide electoral districts.

[15] The significantly lower number of votes for ANO in the upper tier was because ANO won two more seats than SPOLU in the lower tier, even though ANO had 35,765 fewer votes than SPOLU.

Table 4: Modelling the number of votes in the upper tier under the 2021 Act

2002		2006		2010		2013		2017	
ČSSD	156,801	ODS	147,697	ČSSD	130,477	ČSSD	133,078	ANO	148,689
ODS	123,029	ČSSD	159,977	ODS	157,325	ANO	163,269	ODS	150,898
KSČM	165,612	KSČM	154,989	TOP 09	125,036	KSČM	110,363	ČPS	124,625
Coalition	126,641	KDU-ČSL	163,119	KSČM	124,626	TOP 09	137,478	SPD	119,050
		Greens	199,542	VV	120,079	ODS	172,579	KSČM	118,720
						Dawn	147,521	ČSSD	116,138
						KDU-ČSL	105,361	KDU-ČSL	145,486
								TOP 09	159,426
								STAN	176,411

Note: parties are ranked according to the total number of votes in the respective elections.
Source: author's calculations.

The second reason is the choice of the LR-Imperiali method. To achieve the compensatory effect, it is necessary to have an adequate number of seats to be allocated in the upper tier. However, LR-Imperiali aims to allocate as many seats as possible and therefore limits the number of seats in the higher tier (e.g., in the 2021 elections was a single remainder seat), of which there are considerably fewer than in the case of other LR methods. Consequently, with fewer seats in the higher tier, the space to compensate for the disproportionality produced by regional districts is necessarily reduced. As the number of relevant parties increases, the number of seats in the higher tier may increase, but at the same time the number of seats needed to compensate for lower-tier seat allocation disproportionality increases.[16]

Moreover, it should be noted that LR-Imperiali may even decrease the electoral quota to such an extent in the smaller electoral districts that a higher number of seats is distributed than the district in fact has. In this case, the excessive seats are taken away from the parties based on the lowest remainders after dividing by this quota. It does not necessarily represent a problem for seat allocation as such, but it is one of the other shortcomings of LR-Imperiali, which led Gallagher (1992) to point out that LR-Imperiali is '*outside the range of genuinely proportional methods, given its propensity to generate more full quotas than there are seats available*' (Gallagher 1992: 491).

Simulations of the election results under the new electoral system suggested that this will not occur frequently but may take place. If LR-Imperiali had been used in 2006, it would allocate nine instead of eight seats in the Liberec Region (Charvát 2021). In 2002, this would have involved as many as four constituencies (namely the Hradec Králové, Liberec, Olomouc and Pardubice regions). And that this is not just a hypothetical risk was confirmed in the very first elections under the new Parliamentary Electoral Act, when a higher number of seats than the district magnitude was allocated in three out of 14 electoral districts (namely in the Olomouc, Pardubice and Vysočina regions).

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[16] According to the simulations of election results from 2002 to 2017 under the new electoral system, there would be four seats in the upper tier in 2002, ten in 2006, eight in 2010, twenty-four in 2013 and thirty-four in the 2017 elections (author's calculations). However, Lebeda calculated that about thirty compensatory seats may be effective for the Czech parliamentary elections (Senate 2021). Thus, it seems that the number of remainder seats produced by LR-Imperiali may in most cases not be sufficient to compensate for the disproportions created in the regional districts.

Consequently, LR-Imperiali favours large parties more than do the other LR methods, and in this sense, its effect may be close to that of the d'Hondt formula. This has been confirmed by several studies examining the proportionality of various mathematical formulas, which have assessed LR-Imperiali not only as the least proportional LR method but even among the known mathematical formulas (Lijphart 1990, 1994; Gallagher 1992; Benoit 2000; Lebeda 2006). On the other hand, the Czech case does not seem to support Benoit's (2000: 387) finding that LR-Imperiali favours large parties more than the d'Hondt's formula does; it rather corresponds to the opposite conclusion of Lebeda's (2006) research that LR-Imperiali favours large parties less than the Imperiali or d'Hondt quota do.

As a result, replacing the d'Hondt formula with LR-Imperiali slightly reduced the overrepresentation of large parties, but it was far from eliminating the existing inequalities because the 14 unequally sized electoral districts were retained. This can be observed in the simulations of the 'critical' 2006 and 2017 election results under new electoral system. In the first case, the average number of votes per seat oscillates between 23,364 to 42,061 votes, and in the 2017 election between 21,741 to 29,868 votes (see Table 5). A slightly smaller yet still disproportional effect can be seen when simulating the 2013 election results; the Communists (KSČM) would need on average 20,585 votes per seat while ODS would need on average one-quarter votes more (Charvát 2021). Consequently, the threat of significant underrepresentation of smaller parties remains even after the 2021 electoral system change.

Table 5: Over-/underrepresentation of parliamentary parties in 2006 and 2017

2006 parliamentary election				
	average number of votes per seat		advantage ratio	
	2002 law	**2021 law**	**2002 law**	**2021 law**
ODS	23,364	23,364	1.14	1.14
ČSSD	23,363	23,683	1.14	1.13
KSČM	26,359	26,359	1.01	1.01
KDU-ČSL	29,747	32,226	0.90	0.83
Greens	56,081	42,061	0.48	0.64

2017 parliamentary election				
	average number of votes per seat		advantage ratio	
	2002 law	**2021 law**	**2002 law**	**2021 law**
ANO 2011	19,232	21,741	1.32	1.16
ODS	22,918	23,873	1.10	1.06
ČPS	24,836	22,766	1.02	1.11
SPD	24,481	23,416	1.03	1.08
KSČM	26,207	24,569	1.03	1.03
ČSSD	24,556	24,556	0.97	1.03
KDU-ČSL	29,364	26,695	0.86	0.95
TOP 09	38,402	29,868	0.66	0.85
STAN	43,693	29,129	0.58	0.87

Source: *author's calculations.*

Hence, the effect of the Imperiali quota seems to be slightly more proportional than with the d'Hondt formula, and the overall seats–votes disproportionality is lower under the new electoral system as required by the Constitutional Court (see Table 6).[17] However, the impact of the new electoral system on the overall proportionality is rather small, and therefore it is questionable whether the 2021 reform will be assessed as a sufficient change towards higher proportionality or whether in future the Constitutional Court will also assess the new electoral system as unconstitutionally disproportional if called upon to review the Parliamentary Electoral Act.

Table 6: Comparing the overall seats–votes disproportionality under the 2002 and 2021 Act

	2002	2006	2010	2013	2017	2021
2002 law	5.78	5.72	8.76	6.12	7.21	10.03
2021 law	5.41	5.31	8.61	5.79	4.10	10.34

Source: author's calculations.

Moreover, the simulations under new electoral system suggested that the use of LR-Imperiali in the 14 regions of varying magnitudes may violate the logical sequence of the election results, whereby a party gets fewer seats for more votes. If one applies the 2021 Parliamentary Electoral Act to the 2013 election results, Úsvit would receive 14 seats for 6.89% of the votes, KDU-ČSL would obtain 15 seats for 6.78% of the votes, the same as ODS with 7.73% of the votes (Charvát 2021). Unfortunately, this undesirable phenomenon was also manifested in the 2021 elections to the Chamber of Deputies; while SPOLU, the winning electoral alliance, received 71 seats for 27.79% of the votes, ANO with 27.12% of the votes obtained 72 seats. Not only may this lead to a reflection on the very quality of the new electoral system, as Jarabinský and Líbal (2021) noted, but it also raises the question of whether it conflicts with the constitutionally required principle of proportional representation, at least in the context of the recent interpretation of the Czech Constitutional Court.

Last but not least, the parliamentary representation may be determined not just by the number of votes distributed among political parties but also by the spatial distribution of those votes because '*elections and their outcomes involve interactions among people, places, and votes*' (Taylor, Gudgin, Johnston 1986: 192). While the mechanism for apportioning seats into electoral districts under the 2002 Parliamentary Electoral Act considered the spatial aspect of the distribution of electoral support as the district magnitude was derived from the proportion of the total number of votes cast in each region, the 2021 second-tier apportionment procedure risks creating spatial inequality caused by the disproportions in regional representation in the Chamber of Deputies.

Although the overall malapportionment is relatively low for the two Parliamentary Electoral Acts compared, it is evident that it would have doubled (in 2002, 2006 and 2010) or quadrupled (in 2013 and 2017) under the 2021 Electoral Act (see Table 7). Somewhat paradoxically, it is only in 2021 that we observe no impact of the electoral system change, especially because a single seat was allocated in the second tier, and this was also apportioned to the district that did not meet its district magnitude in the first tier.

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[17] The higher disproportionality under LR-Imperiali than under the d'Hondt formula in 2021 is largely due to the absence of parties with electoral support up to about 7% of the vote. It was such small parties that were most affected by the disproportional effect of the d'Hondt formula in Czechia, which at the same time resulted in a higher overall seats–votes disproportionality.

Table 7: Comparing malapportionment under the 2002 and 2021 Electoral Acts

	2002	2006	2010	2013	2017	2021
2002 law	0.73	0.74	0.79	0.91	0.84	0.86
2021 law	1.64	1.69	1.54	4.17	3.06	0.86

Source: author's calculations.

However, the spatial disproportions may be more pronounced if we focus our attention on the representation of individual regions in the Chamber of Deputies, especially that of the least populated regional districts. On the one hand, the least populated districts are more likely to produce remainder seats, but on the other hand, the second-tier seat apportionment reduces the probability that seats will be apportioned to the least populous electoral districts. Simulations of the election results suggest that this may happen especially if such regional electoral districts fail to award all or most of the seats in the first tier, in which case they may end up being underrepresented in the Chamber of Deputies (see Table 8).

Table 8: Comparing regional over-/underrepresentation under the 2002 and 2021 Parliamentary Electoral Acts

(Electoral) Region	2002 elections Seats 2002 law	2021 law	A 2002 law	2021 law	2006 elections seats 2002 law	2021 law	A 2002 law	2021 law	2010 elections seats 2002 law	2021 law	A 2002 law	2021 law	2013 elections seats 2002 law	2021 law	A 2002 law	2021 law	2017 elections seats 2002 law	2021 law	A 2002 law	2021 law	2021 elections seats 2002 law	2021 law	A 2002 law	2021 law
Central Bohemian	23	23 / *23*	1.02	1.02	23	23 / *23*	0.99	0.99	24	24 / *24*	1.00	1.00	25	24 / *23*	0.99	0.95	26	28 / *22*	1.00	1.07	26	26 / *25*	0.99	0.99
Prague	25	25 / *25*	1.02	1.02	25	25 / *24*	1.02	1.02	25	26 / *24*	1.03	1.07	24	24 / *23*	1.02	1.02	24	23 / *21*	0.99	0.95	23	23 / *23*	0.99	0.99
South Moravian	23	23 / *22*	1.00	1.00	23	23 / *22*	1.01	1.01	23	23 / *22*	1.01	1.01	23	25 / *20*	1.00	1.08	23	23 / *22*	1.00	1.00	23	23 / *23*	0.99	0.99
Moravian-Silesian	23	24 / *23*	1.00	1.04	23	23 / *22*	1.01	1.01	22	22 / *21*	0.99	0.99	22	24 / *20*	0.99	1.08	22	23 / *19*	1.02	1.06	22	22 / *22*	1.02	1.02
Ústí nad Labem	14	14 / *14*	1.00	1.00	14	15 / *13*	1.00	1.07	14	14 / *13*	1.00	1.00	14	15 / *12*	1.03	1.10	13	12 / *12*	0.97	0.89	14	14 / *14*	1.00	1.00
South Bohemian	12	11 / *11*	0.98	0.90	13	13 / *12*	1.03	1.03	13	13 / *12*	1.02	1.02	12	12 / *12*	1.00	1.00	13	14 / *9*	1.04	1.12	13	13 / *13*	1.04	1.04
Zlín	12	12 / *12*	1.01	1.01	12	11 / *10*	1.00	0.92	12	11 / *11*	1.02	0.93	12	11 / *11*	1.01	0.93	12	12 / *10*	1.03	1.03	12	12 / *12*	1.03	1.03
Pilsen	11	10 / *10*	1.01	0.92	11	11 / *10*	1.02	1.02	11	11 / *10*	1.03	1.03	11	9 / *9*	1.04	0.85	11	10 / *9*	1.03	0.93	11	11 / *11*	1.02	1.02
Olomouc	12	13 / *12*	0.96	1.03	12	12 / *12*	0.96	0.96	12	13 / *12*	0.98	1.06	12	13 / *11*	0.98	1.06	12	12 / *11*	0.99	0.99	12	12 / *12*	0.99	0.99
Hradec Králové	11	12 / *11*	0.98	1.07	11	10 / *10*	0.99	0.90	11	11 / *11*	1.00	1.00	11	12 / *10*	1.00	1.09	11	12 / *7*	1.00	1.09	11	11 / *11*	1.00	1.00
Vysočina	11	10 / *10*	1.03	0.94	10	10 / *9*	0.97	0.97	10	10 / *10*	0.97	0.97	11	11 / *9*	1.04	1.04	10	9 / *9*	0.96	0.87	10	10 / *10*	0.97	0.97
Pardubice	10	10 / *10*	0.97	0.97	10	10 / *10*	0.98	0.98	10	9 / *9*	0.97	0.88	10	11 / *8*	0.97	1.07	10	10 / *6*	0.98	0.98	10	10 / *10*	0.98	0.98
Liberec	8	8 / *8*	1.01	1.01	8	9 / *8*	0.99	1.12	8	8 / *8*	0.98	0.98	8	6 / *5*	1.00	0.74	8	8 / *7*	0.97	0.97	8	8 / *8*	0.97	0.97
Karlovy Vary	5	5 / *5*	0.98	0.98	5	5 / *5*	0.98	0.98	5	5 / *5*	1.00	1.00	5	3 / *3*	1.01	0.61	5	4 / *2*	1.04	0.83	5	5 / *5*	1.03	1.03

Note: the number in italics indicates the number of seats allocated in the first tier.
Source: author's calculations.

Conclusions

This case study sought to understand the origins and political consequences of the most recent electoral system change in Czechia. The impetus for the electoral reform was the February 2021 judgment of the Constitutional Court, which found the Parliamentary Electoral Act of 2002 to be inconsistent with the constitutional requirement for the principle of proportional representation in the elections to the Chamber of Deputies. Despite the many flaws in the reasoning and the inconvenient timing of the announcement of the judgment (coming just eight months before the parliamentary elections, which meant that electoral reform had to be adopted in a hurry), there was some room for the political elites to address and remedy the deficiencies of the 2002 electoral system. These shortcomings have been known for some time, as they were identified not only by scholarly case studies but to some extent also by the discussed Constitutional Court's judgment.

Moreover, shortly after the Constitutional Court's judgment, leading experts on electoral systems among political scientists and constitutional lawyers offered advice on how to change the electoral system to both meet the requirements of the Constitutional Court and bring about the desired value added (see e.g., Senate 2021). On the one hand, these proposals envisaged the preservation of 14 regional electoral districts as they were a necessary component given the needed natural development of political careers and the existing internal party organisational structures; on the other hand, the proposals also included efficient tools to eliminate the overall seats–votes disproportionality, specifically through an appropriately designed upper (national) tier.

Following the identification of the shortcomings of the 2002 Parliamentary Electoral Act, the content of the 2017 petition to the Constitutional Court and the wording of the reasoning of the Constitutional Court, the research focused on the overall seats–votes proportionality, over-/underrepresentation of relevant parties, and malapportionment under the old and new electoral systems. As a result, the case study found that the political representation did not take advantage of but rather missed the opportunity to eliminate the shortcomings of the Czech electoral legislation. Even after the recent electoral system change, discrepancies similar to those of the provisions repealed by the Constitutional Court in 2021 remain, although the intensity of their disproportional effects has decreased somewhat. Moreover, the disruption of the logical sequence, whereby a party gets fewer seats for more votes, may lead to a reflection on the very quality of the new electoral system because any electoral system should be predictable (intuitive) and with an expected outcome. And it is therefore questionable whether the 2021 electoral reform will be assessed as a sufficient change towards higher proportionality or whether in future the Constitutional Court will also assess it as unconstitutionally disproportional if called upon to review the Parliamentary Electoral Act again.

As a limitation of this study, it may be acknowledged that it assesses the effects of a new electoral system in a relatively short period and through simulations of past election results (which provide little simulation data). Such simulations consider the effects of electoral systems at a specific past point in time, and thus the actual election results will not be repeated. When employing election results simulations, one should always bear in mind that they indicate 'only' the expected impact of changes in the electoral system as they offer 'only' an exact mechanical recount of the votes cast under the specific conditions and specific electoral system setup. Moreover, the effects of any electoral system depend not

only on its mechanics but also on the relative strength of the parties. Hence, the predictive and forecasting value of these models is to some extent limited. These limits on the predictability of the possible effects of a changed electoral system increase exponentially as the proposed electoral system moves away from the setting of the original electoral system. And last but not least, simulations of election results may assess the changed mechanical effect of the new electoral system, but it is no longer within their power to account for the psychological effect of the alternative electoral systems.

Nevertheless, electoral simulations provide perhaps the most effective empirical basis for analysing the potential impact of electoral reform as they provide valuable information on the mechanical effects and the expected general tendencies of the alternative electoral system, which cannot be obtained in any other way. Moreover, the reform under review was minor as it only brought about a change in the mathematical formula, thus strengthening the predictive value of the simulations calculated. Further research may thus focus on electoral simulations with a larger amount of data through which the formulated findings could be verified.

Another limitation of the findings is that the research focused mainly on the inter-party dimension. Therefore, no attention has been paid to the mechanism of preferential voting, which seems to be another source of inequality in electoral competition (but this was also not the subject of the constitutional complaint). The number of candidates on the party lists is based on the district magnitude (from 14 candidates in the Karlovy Vary region to 36 candidates in Prague), but all voters have the same number (four) of preferential votes, and in all cases, the number of preferential votes any candidate needs to move up the list is equivalent to 5% of the votes cast for the regional party list. Consequently, the higher number of candidates on the list may reduce the importance of each preferential vote for the final composition of the Chamber of Deputies (see e.g., Lebeda 2005, 2007; Charvát 2013).

REFERENCES:

ACT OF LAW 247/1995 Coll., on elections to the Parliament of the Czech Republic.

ACT OF LAW 37/2002 COLL., Act amending Act of Law 247/1995 Coll., on elections to the Parliament of the Czech Republic.

ACT OF LAW 189/2021 COLL., Act amending Act of Law 247/1995 Coll., on elections to the Parliament of the Czech Republic.

ANTOŠ, Marek (2008). *Principy voleb v České republice*. Prague: Linde.

ANTOŠ, Marek; HORÁK, Filip (2021). Proportionality Means Proportionality: Czech Constitutional Court, 2 February 2021, Pl. ÚS 44/17. *European Constitutional Law Review*. Vol. 17, no. 3, pp. 538-552. https://doi.org/10.1017/S1574019621000328.

BENOIT, Kenneth (2000). Which Electoral Formula Is the Most Proportional? A New Look with New Evidence. *Political Analysis*. Vol. 8, no. 4, pp. 381-388. https://doi.org/10.1093/oxfordjournals.pan.a029822.

BORISYUK, Galina; RALLINGS, Colin; THRASHER, Michael (2004). Selecting Indexes of Electoral Proportionality: General Properties and Relationships. *Quality & Quantity*. Vol. 38, no. 1, pp. 51-74. https://doi.org/10.1023/B:QUQU.0000013239.55304.98.

ČERVINKA, Lukáš Lev (2021). The Czech Constitutional Court, the Unconstitutionality of the Electoral Legislation, and the Possible Constitutional Deadlock [online]. *DPCE Online*. Vol. 47, no. 2, pp. 2733-2750. [cit. 2021-10-12]. Available at WWW: <http://www.dpceonline.it/index.php/dpceonline/article/view/1382>.

CHAMBER OF DEPUTIES (2019). Sněmovní tisk 649: Návrh poslanců Marka Výborného, Jana Bartoška, Pavla Bělobrádka, Jiřího Miholy a dalších na vydání zákona, kterým se mění zákon č. 247/1995 Sb., o volbách do parlamentu České republiky a o změně a doplnění některých dalších zákonů, ve znění pozdějších předpisů [online] [cit. 2021-10-12]. Available at WWW: <https://public.psp.cz/en/sqw/text/tiskt.sqw?ct=649&ct1=0&o=8>.

CHARVÁT, Jakub (2010). Proporcionalita volebních výsledků: problémy, měření, vlivy. *Slovenská politologická revue/Slovak Journal of Political Sciences*. Vol. 10, no. 1, pp. 2-38.

CHARVÁT, Jakub (2013). *Politika volebních reforem v České republice po roce 1989*. Praha: Grada.

CHARVÁT, Jakub (2021). A Little Political Science Reflection on the Post-Reform Parliamentary Electoral System. In TUNGUL, Lucie *et al*. *Emerging Paradigms in the Shifting Foreign and Domestic Environments: The Czech Centre-Right's Solutions to the Political Challenges of 2022*. Přerov: Wilfried Martens Centre for European Studies, Konrad Adenauer Stiftung, and TOPAZ, pp. 52-61.

COLOMER, Josep M. (2004). The Strategy and History of Electoral System Choice. In COLOMER, Josep M. (ed.). *Handbook of Electoral System Choice*. London: Palgrave Macmillan, pp. 3-78. https://doi.org/10.1057/9780230522749_1.

CONSTITUTIONAL COURT OF THE CZECH REPUBLIC (2021). Judgment Pl. ÚS 44/17 of 2 February 2021.

CZECH STATISTICAL OFFICE (2021). Výsledky voleb a referend [online] [cit. 2021-10-12]. Available at WWW: <https://www.volby.cz/>.

GALLAGHER, Michael (1991). Proportionality, Disproportionality and Electoral Systems. *Electoral Studies*. Vol. 10, no. 1, pp. 33-51. https://doi.org/10.1016/0261-3794(91)90004-C.

GALLAGHER, Michael (1992). Comparing Proportional Representation Electoral Systems: Quotas, Thresholds, Paradoxes, and Majorities. *British Journal of Political Science*. Vol. 22, no. 4, pp. 469-496. https://doi.org/10.1017/S0007123400006499.

JARABINSKÝ, Ivan; LÍBAL, Miroslav (2021). Nový volební system, starý volební problem [online]. Praha: Institute H21, 12. 10. 2021 [cit. 2021-10-12]. Available at WWW: <https://www.ih21.org/news/novy-volebni-system-stary-volebni-problem>.

JARABINSKÝ, Ivan; LÍBAL, Miroslav; ORESKÝ, Jan (2021). Srovnání aktuálních návrhů volební reformy [online]. Praha: Institute H21, 2. 3. 2021 [cit. 2021-10-12]. Available at WWW: <https://www.ih21.org/news/srovnani-aktualnich-navrhu-volebni-reformy>.

LEBEDA, Tomáš (2005). Final Form of the Electoral System for the Chamber of Deputies. Problems of the Forced Reform of 2002. In NOVÁK, Miroslav; LEBEDA, Tomáš; TAAGEPERA, Rein. *Electoral Laws and Party Systems, the Czech Experience*. Dobrá Voda: Vydavatelství a nakladatelství Aleš Čeněk, pp. 107-124.

LEBEDA, Tomáš (2006). Proporcionalita volebních formulí poměrných systémů. *Sociologický časopis/Czech Sociological Review*. Vol. 42, no. 5, pp. 883-912. https://doi.org/10.13060/00380288.2006.42.5.03.

LEBEDA, Tomáš (2007). Electoral systems and voting behaviour: The case of the House of Deputies' elections in the Czech Republic. *Contemporary European Studies*. Vol. 2, no. 2, pp. 25-48.

LIJPHART, Arend (1990). The Political Consequences of Electoral Laws, 1945-85. *The American Political Science Review*. Vol. 84, no. 2, pp. 481-496. https://doi.org/10.2307/1963530.

LIJPHART, Arend (1994). *Electoral Systems and Party Systems: A Study of Twenty-Seven Democracies*. Oxford: Oxford University Press.

LOOSEMORE, John; HANBY, Victor J. (1971). The Theoretical Limits of Maximum Distortion: Some Analytic Expressions for Electoral Systems. *British Journal of Political Science*. Vol. 1, no. 4, pp. 467-477. https://doi.org/10.1017/S000712340000925X.

MINISTRY OF THE INTERIOR OF THE CZECH REPUBLIC (2021). Základní podkladová informace na jednání politických stran a hnutí k volebnímu systému do Poslanecké sněmovny v návaznosti na nález Ústavního soudu Pl. ÚS 44/17.

MONROE, Burt L. (1994). Disproportionality and malapportionment: Measuring electoral inequity. *Electoral Studies*. Vol. 13, no. 2, pp. 132-149. https://doi.org/10.1016/0261-3794(94)90031-0.

MONROE, Burt L.; ROSE, Amanda G. (2002). Electoral Systems and Unimagined Consequences: Partisan Effects of Districted Proportional Representation. *American Journal of Political Science*. Vol. 46, no. 1, pp. 67-89. https://doi.org/10.2307/3088415.

MUSTILLO, Thomas; POLGA-HECIMOVICH, John (2018). Measures and votes: Party performance under free list proportional representation with evidence from Ecuador. *Electoral Studies*. Vol. 56, pp. 124-135. https://doi.org/10.1016/j.electstud.2018.09.011.

PASSARELLI, Gianluca (2018). Electoral Systems in Context: Italy. In HERRON, Erik S.; PEKKANEN, Robert J.; SHUGART, Matthew S. (eds.). *The Oxford Handbook of Electoral Systems*. New York: Oxford University Press, pp. 851-870. https://doi.org/10.1093/oxfordhb/9780190258658.013.35.

PUKELSHEIM, Friedrich (2017). *Proportional Representation: Apportionment Methods and Their Applications*. Second Edition. Cham: Springer.

RAE, Douglas W. (1971). *The Political Consequences of Electoral Laws.* New Haven: Yale University Press.

RENWICK, Alan (2010). *The Politics of Electoral Reform: Changing the Rules of Democracy*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511676390.

RENWICK, Alan (2011). Electoral Reform in Europe since 1945. *West European Politics*. Vol. 34, no. 3, pp. 456-477. https://doi.org/10.1080/01402382.2011.555975.

RIKER, William H. (1986). *The Art of Political Manipulation*. New Haven: Yale University Press.

SAMUELS, David; SNYDER, Richard (2001). The Value of a Vote: Malapportionment in Comparative Perspective. *British Journal of Political Science*. Vol. 31, no. 4, pp. 651-677. https://doi.org/10.1017/S0007123401000254.

SARTORI, Giovanni (1968). Political Development and Political Engineering. In MONTGOMERY, John D.; HIRSCHMAN, Albert O. (eds.). *Public Policy: Volume XVII*. Cambridge: Harvard University Press, pp. 261-298.

SENATE OF THE CZECH REPUBLIC (2021). Setkání odborníků v Senátu Parlamentu ČR nad nálezem Ústavního soudu k zákonu o volbách do Parlamentu ČR [online]. 16. 2. 2021 [cit. 2021-09-12]. Available at WWW: <https://www.senat.cz/informace/galerie/videogalerie/video.php?id=791>.

SETON-WATSON, Christopher (1983). Italy. In BOGDANOR, Vernon; BUTLER, David (eds.). *Democracy and Elections: Electoral Systems and Their Political Consequences*. New York: Cambridge University Press, pp. 110-121.

SHUGART, Matthew S. (2000). District Magnitude. In ROSE, Richard (ed.). *International Encyclopedia of Elections*. London: Macmillan, pp. 66-68.

TAAGEPERA, Rein; GROFMAN, Bernard (2003). Mapping the Indices of Seats–Votes Disproportionality and Inter-Election Volatility. *Party Politics*. Vol. 9, iss. 6, pp. 659-677. https://doi.org/10.1177/13540688030096001.

TAAGEPERA, Rein; SHUGART, Matthew S. (1989). *Seats and Votes: The Effects and Determinants of Electoral Systems*. New Haven: Yale University Press.

TAYLOR, Peter J; GUDGIN, Graham; JOHNSTON, Ron J. (1986). The Geography of Representation: A Review of Recent Findings. In GROFMAN, Bernard; LIJPHART, Arend (eds.). *Electoral Laws and their Political Consequences.* New York: Agathon Press, pp. 183-192.

THE CONSTITUTION OF THE CZECH REPUBLIC. No. 1/1993 Coll. adopted on 16 December 1992.

WILLIAMS, Kieran D. (2021). First impressions and mixed feelings about Pl. ÚS 44/17 [online]. 19. 2. 2021 [cit. 2021-09-12]. Available at WWW: <https://kdwilliams7.medium.com/first-impressions-and-mixed-feelings-about-pl-%C3%BAs-44-17-e82dd646947e>.