

10.2478/nispa-2024-0004



The 2020 Czech Regional Elections in the Shadow of the Covid-19 Pandemic: Electoral Participation in the Spread of the Pandemic

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Abstract:

The aim of the paper is to analyze the 2020 Czech regional elections held after the most intensive phase of the election campaign occurred during an unprecedented outbreak of new COVID-19 cases. Shortly after the elections, the Czech government of premier Andrej Babiš officially announced a state of emergency, and the Czech Republic became one of the world's COVID-19 hardest-hit countries within a few weeks. Our analysis focuses especially on trends in the association between the 7-day incidence of COVID-19 and voter turnout between September 19 and November 14 at the level of 206 Czech microregions. While our results show a considerable rise in COVID-19 incidence per 100,000 people in Czech microregions with higher turnout, this effect was partly modified by age as the rise of COVID-19 in microregions with older populations occurred much later.

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Keywords:

COVID-19, Czech Republic, electoral participation, regional elections, turnout

1. Introduction

It came as little surprise that the circumstances of the COVID-19 pandemic attracted the intensive interest of social scientists, including political scientists. Some of them focused on the possible influence of the pandemic on voting behaviour as well as voter turnout (e.g., Baccini et al., 2021; Giommoni & Loumeau, 2020; Morris & Miller, 2022), others looked at politicians' rhetoric under the pandemic circumstances (e.g., Dada et al., 2021; Lilleker et al., 2021; Montiel et al., 2021; Novotný, 2022), but one can also find studies on the ways elections were limited by COVID-19 (e.g., James & Alihodžić, 2020). As for the third group of studies, Landman and Di Gennaro Splendore (2020) assessed some risks posed by the COVID-19 pandemic to the conduct of genuine and transparent elections and concluded that there were many unknowns as the epidemic was progressing and as governments were responding (Landman & Di Gennaro Splendore, 2020, pp. 1064). More importantly, they stressed that missing solutions could undermine the health of democracy and compromise the fundamental human rights to vote and participate in governance (Landman & Di Gennaro Splendore, 2020; Haist & Novotný, 2023).

One of the possible solutions is not to postpone elections but organize them on the planned date. This solution was used in the case of the regional elections in the Czech Republic that were held on 2 and 3 October 2020, i.e. under the circumstances of the COVID-19 epidemic. In this context, Klimovský et al. (2021) pointed out that these elections could be considered a risk event because they were held when the highest peak of newly confirmed cases of COVID-19 was achieved before the official declaration of the country's second state of emergency (3,795 cases). The most intensive phase of the election campaign thus occurred in September, when an unprecedented outbreak of new COVID-19 cases occurred as part of the second wave of the COVID-19 epidemic in the Czech Republic (Kouba & Lysek, 2021). In addition, just a few days later, the government officially declared a second state of emergency (on 5 October), and the Czech Republic became one of the world's hardest-hit countries within a few weeks. More importantly, Palguta et al. (2022) conducted a natural experiment in this context to show that in elections to the Senate (upper chamber of the Czech parliament), held on the same date as elections to regional legislatures,⁵ COVID-19 infections grew

⁵ Senate elections are held biannually to renew one-third of the seats. Senate constituencies are much smaller compared to regional elections.

significantly faster in voting compared to non-voting constituencies. These developments clearly substantiate the following research question: Is it possible to find a relationship between the organization of the 2020 regional elections in the Czech Republic and the rapid deterioration in public health in the country?

The results and analysis of the 2020 Czech regional elections presented below thus contribute to the ongoing debate on the safeness of elections under the COVID-19 epidemic (e.g., Bach et al., 2021; James, 2020). From a broader perspective, they also contribute to the existing body of research on how people perceive the risk of COVID-19 around the world. For instance, the evidence presented by Dryhurst et al. (2020) supported the assumption that epidemic risk perceptions correlate, inter alia, with socio-cultural factors across countries. On this matter, electoral participation could be proposed as a suitable indicator because the decision to participate is, in a way, the expression of a voter's perception of the gains and losses linked to voting in elections.

From a theoretical point of view, we accept the assumptions of the theory of dynamic (social) systems (see e.g. Prigogine & Stengers, 1984) that the influence of an external factor (in this case the COVID-19 pandemic) can destabilize a system (society), possibly resulting in its fluctuation or even bifurcation. Of course, although we primarily investigate the role of an external factor (the pandemic) in the system's behaviour (electoral participation), we also acknowledge the possible existence of internal factors (for instance populist politics) influencing voters' willingness to go to the polls. However, with regard to inaccessibility of the data, we will focus primarily on the effect of external factors.

2. Emerging research interests and state of the art

Several authors have already examined the safeness of elections in terms of the spread of COVID-19, but these research efforts have been fragmented. In addition, existing results are rather dubious because their interpretation brings as many explanations as doubts. For instance, the research of Bertoli et al. (2020) was inspired by the decision of the French government to hold the first round of municipal elections on 15 March 2020, i.e. at the beginning of the epidemic. They suggested that this event could lead to local excess mortality in the weeks following the municipal elections and concluded that there was a relationship between higher turnout and a significantly higher death count, in particular for the elderly population. More importantly, the relationship was the strongest approximately five weeks after the election day. Cassan and Sangnier's (2022) results on the same elections were similar to those presented by Bertoli et al. (2020), as they confirmed that in-person voting is a risk event under the circumstances of the COVID-19 epidemic.

On the other hand, Zeitoun et al. (2021) who also analysed data from France offered a somewhat different approach by testing reciprocal associations between the

intensity of the epidemic in the country and the level of participation in municipal elections across the whole territory of France. They concluded that the local intensity of the COVID-19 epidemic in France did not have any local impact on citizens' participation. Moreover, the level of participation in the 2020 elections had no impact on the spread of the epidemic. The 2020 French municipal elections were analysed by Bach et al. (2021), too. However, instead of the impact on voters and their health or participation, they focused on the possible impact of the elections on the mortality of male candidates over 60. In total, their analysis of data for more than 160,000 persons did not find any causal effect of active participation (candidacy) in the 2020 municipal elections on mortality in comparison with mortality of the general population.

According to Cotti et al. (2020), who analysed data on the Wisconsin primary elections, there is a clear relationship between COVID-19 and voting in person. They considered this finding an additional but insufficient piece of evidence toward a causal link. On the contrary, Feltham et al. (2020) examined the impact of voting on the spread of COVID-19 after the 2020 US primary elections in 1,574 counties across 34 states. While they did not find any relationship between COVID-19 deaths and the primaries, they warned that some restrictions, e.g. physical distancing or mask wearing, should be applied during general elections. Similar policy recommendations can be found in Cotti et al. (2020), who stressed that it might be prudent for both policymakers and electoral administrators to approve and apply some specific measures, e.g. increasing the number of polling stations and introducing flexible voting times, early voting opportunities, or curbside voting. Similar recommendations were formulated by James and Alihodžić (2020), who pointed out that the best available safeguards for electoral integrity during natural disasters could be the introduction or expansion of low-tech solutions such as early voting, strengthened risk management, but also transparent and inclusive decision-making (James & Alihodžić, 2020, pp. 344). Even more detailed recommendations for electoral administrators were proposed by Birch et al. (2020).

The COVID-19 pandemic thus generally increased the risk of participating in public events, among them elections. Picchio & Santoline (2021) assessed whether voter turnout in the 2020 local government elections in Italy was affected by the COVID-19 pandemic. Based on intermunicipal variability of the mortality rate among the elderly, they found out that a 1-percentage-point increase in the elderly mortality rate decreased voter turnout by 0.5 percentage points, with no gender differences in the behavioural response. The effect was especially strong in densely populated municipalities. They did not detect statistically significant differences in voter turnout between different levels of autonomy from central government.

Furthermore, some scholars have linked cost and life stress to lower voter turnout, with clear implications for voting during the COVID-19 pandemic. Merkley et al. (2022) inquire whether COVID-19 reduced turnout intention and how election agencies can mitigate this effect. They used a series of six surveys and conjoint experiments

implemented on samples totalling over 28,000 Canadian respondents and collected between July and November of 2020 to show that: 1) priming people to think about COVID-19 reduces turnout intention, especially among those who feel most threatened by the disease; 2) safety measures for in-person voting, such as mandatory masks and physical distancing, can improve safety perceptions and willingness to vote in person, and 3) providing people with information about in-person voting safety precautions mitigates the negative effect of COVID-19 priming.

3. Data and methods

Cotti et al. (2020) examined the relationship between in-person voting and the spread of COVID-19 in Wisconsin using Wisconsin Department of Health Services data on: (1) the number of tests for COVID-19, and (2) the number of positive test results. We use a similar approach in our analysis. However, while Cotti et al. (2020) used cell phone location data to demonstrate increased visits to areas near polling locations on election day, we do not use such data, as they are not available in the Czech Republic.

We are aware of the fact that the spread of COVID-19 was determined by various socio-political factors since the beginning of the epidemic, including consistency of policy responses and official social distancing and stay-at-home policies, the public's attitudes towards social distancing guidelines, and real behaviour of the citizens. In any case, sharing indoor spaces was confirmed as a major risk factor in the transmission of SARS-CoV-2 (e.g., Allen & Marr, 2020). On this matter, although voting in polling stations is not a large-scale gathering, a significant share of voters preferred to vote in a conventional way, i.e. by visiting polling stations. This fact allows us to test the relationship between voter turnout and the development of confirmed COVID-19 cases.

Our primary indicator (dependent variable) is the trend in 7-day incidence of COVID-19 between September 19 and November 14. By covering a longer time series starting two weeks before and continuing several weeks after the elections, we should be able to assess the contribution of the elections to any growth of the number of positive COVID-19 test results. However, given the number of factors directly or indirectly influencing the spread of the coronavirus infection in the long run but not related exclusively to the elections, we are primarily interested in comparing the 2–3 weeks before and after the elections. These data were made publicly available by the Institute of Health Information and Statistics of the Czech Republic, Ministry of Health of the Czech Republic. We use data at the level of the Czech Republic's 205 microregions (administrative districts of Municipalities with Extended Powers), since these microregions can be considered to be relatively natural regional units. This level of analysis was also chosen for its good explanatory power in terms of territorial unit similarity and for the relatively simple accessibility of secondary data.

Furthermore, we use two independent variables observed at the same level of aggregation to control their effects on the 7-day incidence of COVID-19. These include data on turnout and the age structure of individual microregions (proportion of the population aged 65 and over), as we expect a higher incidence of COVID-19 in demographically older microregions. Data for the independent variables were obtained from the Czech Statistical Office's (CZSO) Public Database.⁶ We used two statistical techniques. First, we applied correlation analysis to obtain a basic description of the relationship between the incidence of COVID-19 and turnout in all populations and separately in the age groups of 65 and over and 75 and over. Second, we employed multiple linear regression (the least squares method, OLS) to control the effects of turnout and the age structure of individual microregions on the development of the COVID-19 epidemic.

4. The context and results of the 2020 regional elections in the Czech Republic

The Czech Republic has long been struggling with a decline in citizens' confidence in politics and democracy and its impact on voter turnout (Kostelka, 2014; Linek & Petrúšek, 2016; Maškarinec, 2022). In this context, the dissatisfaction of the population affected by coronavirus restrictions could be expected to increase. Before the regional elections, it was clear that a significant proportion of citizens would be infected with the virus or quarantined as a result of epidemiological measures. To allow them to participate in the elections, a special law was passed. Quarantined people were able to use drive-in polling stations to minimize interpersonal contact and the possible spread of the virus.

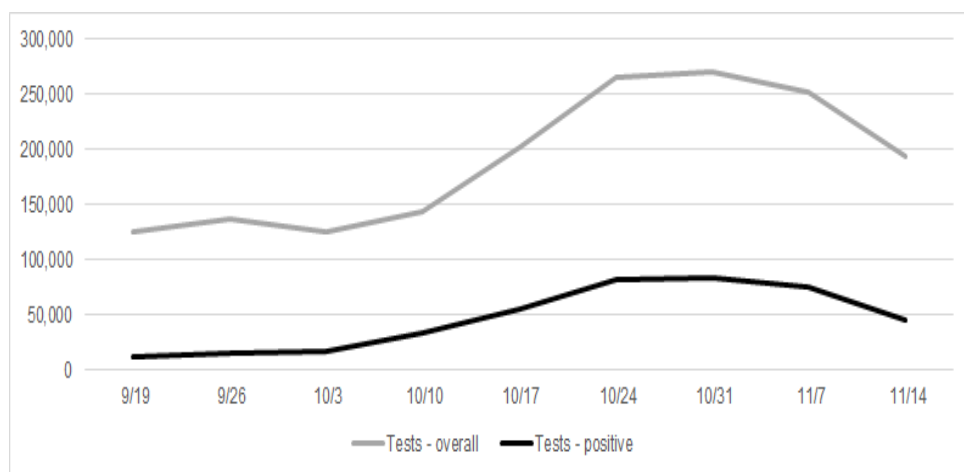
The unexpected arrival of the pandemic and the consequent restrictions constituted a great interference in political competition around the world. Political parties had to fundamentally change their campaign plans for the upcoming regional elections. It was not possible to physically meet the voters, and there were no public gatherings. Political issues changed dramatically. Everything was different than originally planned. Political marketing thus had to focus almost exclusively on social media and a limited number of television debates. Those focused almost exclusively on the pandemic situation and the impact of COVID-19 on the economy, education (Flores & Swennen, 2020), and other areas, including mental health (Pandey et al., 2020). Traditional regional issues were no longer interesting, and the main point was only

⁶ The CZSO Public Database is available at: <http://vdb.czso.cz/vdbvo/en/uvod.jsp>, accessed 28 July 2021.

whether the government was dealing well with the current situation. Many elections in the pandemic context can suitably be labelled “single-issue elections”. The same was true for the Czech Republic, where regional elections are deemed second-order elections dominated by nationwide parties and reflecting changing trends in support for those parties as well as nationwide campaign issues (Šárovec, 2017; Kouba & Lysek, 2021; Maškarinec, 2023; Maškarinec & Charvát, 2023). The relatively extreme conditions of the Czech Republic’s 2020 regional elections were exacerbated by the populist rule of a minority government of ANO2011 and the Social Democracy headed by Andrej Babiš (see Naxera & Stulík, 2022). The prime minister’s record of spreading inconsistent attitudes may have made some social groups more concerned about voting in the elections – especially the oldest generation, one of the most vulnerable groups.

To start with the overall development of the COVID-19 epidemic during monitored period of time, we can see a considerable rise of positive test results starting approximately one week after the regional elections, which took place on October 2 and 3, 2020 (Figure 1). At first sight, this can be explained by the accompanying growth of the number of tests conducted. However, the share of positive results on total number of tests conducted grew steeply from 10–14% before the elections to almost twice the value after the elections (October 17, 2020, Table 1).

Figure 1:
7-day COVID-19 incidence in the Czech Republic



Source: Authors’ own based on Czech Statistical Office, Institute of Health Information and Statistics of the Czech Republic, Ministry of Health of the Czech Republic, 2024

Moving on to correlation analysis, our data suggest that the elections played some role in the spread of the COVID-19 epidemic (Figure 2). Especially two weeks after

election day, we can see a considerable rise of the correlation between turnout and COVID-19 incidence per 100,000 people in Czech microregions from 0.249 (October 3, i.e. a week before election) to 0.384 (October 17), followed by a weakening of that association. Thus, although the elections likely were not the only factor behind the escalation of the epidemic, the comparison of 7-day incidence in the three pre-electoral weeks, when the relationship was relatively constant (in the range of 0.249–0.281), with the subsequent period suggests that the relationship strengthened precisely because Czech citizens participated in the regional elections, and higher regional turnout resulted in a higher incidence of COVID-19 in given microregions.

Table 1:

7-day COVID-19 incidence in the Czech Republic and share of positive results on total number of tests conducted

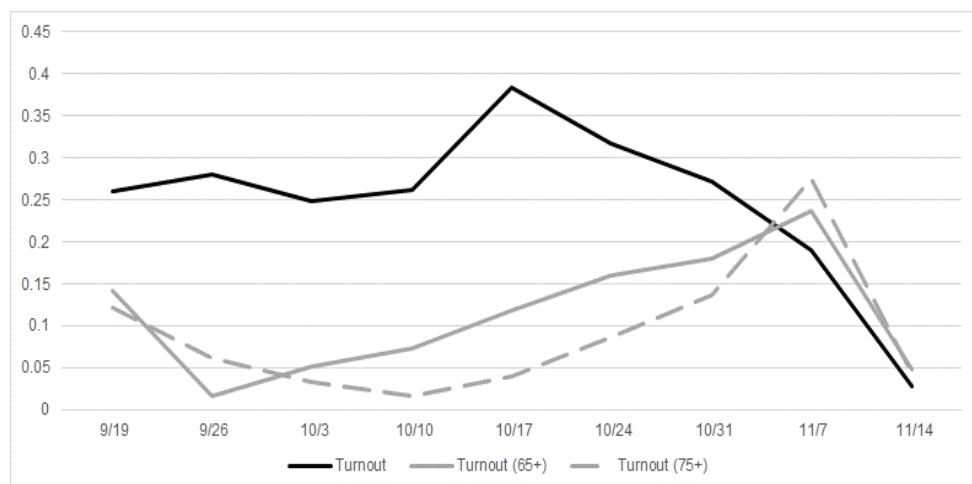
	9/19	9/26	10/3	10/10	10/17	10/24	10/31	11/7	11/14
Tests – overall	126.061	136.499	124.861	143.588	202.857	265.117	270.506	251.983	193.070
Tests – positive	12.906	14.985	17.328	33.401	54.821	81.968	84.297	75.834	45.881
%	10.24	10.98	13.88	23.26	27.02	30.92	31.16	30.09	23.76

Source: Authors’ own based on Czech Statistical Office, Institute of Health Information and Statistics of the Czech Republic, Ministry of Health of the Czech Republic, 2024

In contrast to the correlation between voter turnout in the 2020 Czech regional elections and COVID-19 incidence in the general population, a detailed focus on older age groups (people aged 65 and over and 75 and over) (Figure 2; Appendix 1) reveals some significant differences. The rise in the association between participation in regional elections and the number of COVID-19 infections emerged two weeks after election day. Yet in the case of older generations, this rise was substantially delayed and only occurred two or three weeks later.

Figure 2:

Correlation between voter turnout in Czech regional local elections and COVID-19 incidence per 100,000 people (Pearson correlation coefficient)



Source: Authors' own based on Czech Statistical Office, Institute of Health Information and Statistics of the Czech Republic, Ministry of Health of the Czech Republic 2024.

Finally, Table 2 reports the effect of electoral participation and the age structure of Czech microregions on COVID-19 incidence per 100,000 people during the entire monitored period of time. Here again, we can confirm that the effect of microregional turnout increased considerably two or three weeks after the regional elections as the positive effect of the turnout variable doubled, then dropped again after some weeks. However, while the effect of turnout on COVID-19 incidence was positive in all cases, the effect of the second independent variable (age structure) had no constant direction. While there was a very weak negative association between microregions with a higher share of the population aged 65 and over and the number of COVID-19 incidence in weeks before the Czech regional elections, the effect of the variable changed to the positive direction two weeks after the regional elections. More importantly, the fact that the positive effect grew substantially three or more weeks after elections again suggests that the spread of the COVID-19 virus in the elderly population was more due to other factors than electoral participation of people aged 65 and over. However, we must be cautious about our results as the regression model's performance was rather low in most cases, as indicated by the value of adjusted R-squared (with the highest explaining capacity of the model two weeks after the elections). Although we found some effect of electoral participation on the spreading of the COVID-19 epidemic in the Czech regional elections at the level of 205 Czech microregions, other factors also played a role, as indicated by the changing effect of the age structure variable.

Table 2:
Determinants of COVID-19 incidence per 100,000 people (OLS)

	9/19	9/26	10/3	10/10	10/17	10/24	10/31	11/7	11/14
Turnout	0.040*** (0.010)	0.038*** (0.009)	0.042*** (0.011)	0.075*** (0.019)	0.150*** (0.026)	0.166*** (0.035)	0.141*** (0.036)	0.079** (0.030)	0.005 (0.025)
Age (65+)	-0.026 (0.030)	-0.023 (0.027)	-0.034 (0.033)	-0.040 (0.056)	0.088 (0.075)	0.037 (0.102)	0.289** (0.105)	0.378*** (0.087)	0.314*** (0.073)
Constant	-0.016 (0.708)	0.191 (0.623)	0.518 (0.780)	0.852 (1.319)	-2.438 (1.754)	0.711 (2.398)	-2.911 (2.455)	-2.702 (2.044)	-1.444 (1.714)
N	205	205	205	205	205	205	205	205	205
Adj. R²	0.062	0.073	0.057	0.062	0.145	0.092	0.099	0.109	0.075

Note: Statistical significance levels:
***p < 0.001, **p < 0.01, *p < 0.05.

5. Discussion and conclusion

The aim of this paper has been to analyse the role of electoral turnout in the 2020 Czech regional elections in the rise of COVID-19 incidence, as the Czech Republic became one of the COVID-19 hardest-hit countries in the world within a few weeks after the elections. Overall, the basic description of our dataset has shown that the organisation of the regional elections somewhat contributed to the spread of the COVID-19 pandemic, as especially two weeks after the elections, there was a considerable rise of the correlation between turnout and COVID-19 incidence per 100,000 people in Czech microregions. Importantly, we found a considerable difference between the rise of COVID-19 incidence in the general population and people of retirement age, among whom the increase in new cases of COVID-19 infections appeared much later.

Similarly, the results of the regression analysis confirmed that the effect of regional turnout increased considerably two or three weeks after the regional elections (and then dropped again after some weeks) although this effect was valid for the whole population of Czech microregions. In contrast, the fact that a relatively strong rise of COVID-19 incidence in demographically older regions occurred much later after the elections suggests that the spread of the COVID-19 virus in the elderly population was to a greater

extent due to other factors than electoral participation of people aged 65 and over. However, as individual data are not available, we can only hypothesize that many older citizens were not infected at the polls, where they perhaps did not go precisely due to their concerns of getting infected (which were logically greater in the older age groups to whom the COVID-19 infection posed a much greater, often lethal risk), but only later, due to contacts with individuals who may have gotten infected while voting in the regional elections. Similarly, Palguta, Levínský and Škoda (2022) showed that in the October 2020 Senate elections (held only in a part of the Czech Republic, unlike regional elections), COVID-19 incidence accelerated two or three weeks after the elections – but not in the population above 65. This, together with a decline of turnout in that population between the regional elections of 2016 and 2020, suggested increased absenteeism in Senate elections among older cohorts in the context of a peaking COVID-19 pandemic.

Our findings suggest that holding elections during a pandemic may discourage voters from going to the polls and thereby weaken the democratic process. The time of the pandemic was conducive to the spread of various fears and concerns, which likely posed obstacles to electoral participation among vulnerable individuals in particular. Moreover, the Czech government, headed by the populist Andrej Babiš (see Maškarinec & Novotný, 2020; Bláha, 2023; Naxera et al., 2023), was one of those proceeding inconsistently in fighting the pandemic. It alerted the population and spread concerns but also downplayed the situation at times, which likely exacerbated the fears of electoral participation just in the oldest generation, among others. In this unsettling situation, it was certainly possible that turnout decreased in the 65+ age group, or even in other groups that may have found it difficult to assess the situation and the widespread alarming news, as suggested by our findings. We demonstrate that this effectively undermined the safety of the elections. We also point to the need to explain the risks consistently and responsibly and, with regard to elections as the democratic census, to remove barriers (not only) in terms of fears of infection due to voting in the election. In hindsight, it only can be hypothesised to what extent this was an intended or unintended strategy.

There is an array of research topics for further study of the associations between the COVID-19 pandemic and electoral participation. As we concentrated on studying external factors, future research should shed light on the role of dynamic internal (endogenous) factors, especially the above-mentioned populist politics. Here, for example, discursive institutionalism (unlike other forms of new institutionalism, see Schmidt, 2008) might help us explain in more depth the dynamics (and continuity) of change through ideas and discursive interaction, including the effects of discursive ideas and Babiš's populist politics on the attitudes of voters in regional elections.

Furthermore, in countries that chose to delay their elections, we could analyse the circumstances of and arguments surrounding that choice, as well as its impacts on election results. It would be similarly interesting to focus on alternatives to in-person

voting and their introduction during the pandemic, especially the forms of postal or electronic voting that allow people to vote safely and may limit the decline of turnout during a pandemic. However, such postal or electronic voting systems might give rise to other problems such as electoral fraud or low integrity/transparency. The design of voting methods for pandemic situations should be based on careful weighing between vote integrity and democratic representation.

Finally, with regard to future policy implications, our research suggested that states and their institutions must be prepared to deal with other unexpected events (Taleb's "black swans") in the future. Such problems may go beyond the organization and course of elections. As a result, the whole system needs to be not only more robust but also procedurally more flexible. The dynamic social systems theory informs us that just an improvement of state institutions (on various levels of governance) may result in a more stable political system. Some previous studies showed that impacts of the COVID-19 pandemic were felt in many areas where a systemic improvement to the institutional setting was necessarily (e.g. Androniceanu, 2020; Chubarova et al., 2020; Nemec et al., 2020; Țiclău et al., 2020; Klimovský, Malý and Nemec, 2021); for instance, changes in technologies should be accompanied by changes in other organizational elements (like people or processes). The challenge posed by the pandemic to leadership styles and working models, as well as internal and external collaboration (Špaček, Navrátil and Ochraňa, 2023), exposed the necessity of a new functional system of cross-border management (Novotný & Böhm, 2022; Böhm et al., 2023) and interconnected social systems for public governance, especially in social affairs (Babšek & Kovač, 2023), together with a very important role of public leadership and strategic responses at the local level (Plaček et al., 2020) as well as at the national level. This can be demonstrated on the different approaches to managing the spread of COVID-19 taken by the governments (or Prime Ministers, more respectively) of CEE countries (Lupu et al., 2020; Androniceanu & Marton, 2021; Nemec, 2021; Hințea et al., 2022; Haist & Novotný, 2023).

Acknowledgment

This study was prepared under a grant project supported by the Czech Science Foundation, Grant No. 20-04551S, "Patterns of Quality of Democracy at Regional Level in the V4 Countries: Looking Inside the Black Box".

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Appendix – Supplements

Appendix 1:

Correlation between voter turnout in Czech regional local elections and COVID-19 incidence per 100,000 people (Pearson correlation coefficient)

Age group	9/19	9/26	10/3	10/10	10/17	10/24	10/31	11/7	11/14
All	0.261	0.281	0.249	0.262	0.384	0.317	0.272	0.190	0.028
65+	0.142	0.016	0.052	0.074	0.118	0.160	0.180	0.237	0.048
75+	0.121	0.061	0.034	0.016	0.040	0.086	0.136	0.275	0.043

Source: Authors' own calculations based on Czech Statistical Office, Institute of Health Information and Statistics of the Czech Republic, Ministry of Health of the Czech Republic, 2024.

The statements relating to ethics and integrity policies:

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.