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The dynamics of a policy of higher local property taxation applied by the Czech local governments: what should be learned?

Bohuslav PERNICA¹, Pavel ZDRAŽIL²

Abstract: This paper presents the dynamics of an implementation of the policy of a higher local real estate coefficient as an innovation in the fiscal policy of local governments in post-communist Czechia. The punctuated equilibrium theory is applied in order to show the dynamics of diffusion of this fiscal innovation among 6,258 municipalities in the period 2009–2021. In order to get a more complex picture of local governments' behaviour, dynamics are studied in a nexus of various approaches to fiscal federalism. In particular, the S-shaped curve and spatial analysis are employed within the analytical framework. The results suggest the policy of a higher local real estate coefficient is spreading out in municipalities known for a higher level of population and industry concentration where is a need for a high level of public services. Secondly, the policy is applied most frequently in populated areas and regions challenging structural challenges contributing to their depopulation. Thirdly, considering the election cycles, the local governments act on issues of a level of local taxation tactically. Finally, the spatial analysis revealed the approach of tactical changing of local taxes is rather concentrated in the north-western part of Czechia (i.e., in the underdeveloped region with obsolete economic structure). On the other hand, the spatial division of municipalities that surrounded the policy of higher local taxation is equal across the country. We also argue the impact of tax-mimicking behaviour may be less determinant than the previous studies suggested. On contrary, the factors like population density, depopulation, and substitution of the declining tax revenues seem to be more of determining factors for Czech municipalities.

Keywords: property taxes; local government; public policy; punctuated equilibrium, the Czechia

JEL: H71; R51; H21

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Introduction

After the collapse of communism in Central and Eastern Europe, post-communist municipalities in the region benefited from a fiscal decentralization (Rodriguez-Pose & Kroijer, 2009). Despite a relaxation of intergovernmental relations in the 1990s, the Czech fiscal intergovernmental relations remained rather centralized (Smith *et al.*, 2011; Bryson, 2010). However, the local governments were empowered in the 2000s to determine a part of their tax revenues by setting the level of real estate coefficient (Sedmihradská, 2013). This fiscal innovation relaxing the tights of local governments to the central government was a response to the financial crisis of 2007–2008 and it was expected as a panacea against fiscal stress experienced by the local governments. In particular, by its very nature, the levying of this kind of tax cannot be subject to the phenomenon of tax evasion, which is a major problem in many post-communist countries (Androniceanu *et al.*, 2019).

Since 2009, the Czech local governments can opt for a specific level of the local real estate coefficient, a variable multiplying the basis of the assessment of property tax. This coefficient, set before a new fiscal year by the local government, varies from 1 to 5. Surprisingly, the number of municipalities applying the policy of a higher local real estate coefficient increased from 389 in 2009 to 703 in 2021 (MFCR, 2021). Also, the number of municipalities opting for this policy is still on rising although there is no fiscal stress because of economic recovery. In 2021, 11% of 6,258 municipalities applied this policy, and ca 1/3 of the population lived in municipalities applying this fiscal innovation (CZSO, 2021). The number of these municipalities keeps rising over the local elections in 2010, 2014, and 2018. Hence, higher taxation is not considered by taxpayers as detrimental and the policy of higher local real estate coefficient can be hardly considered as yield stick competition and tax-mimicking due to a vague pattern in the spatial distribution of the municipalities applying this innovation over specific regions in the polity (Zdražil & Pernica, 2018; 2021). Also, it seems that something more could be behind this agenda-setting. At least, an implementation of the policy of higher taxation is in progress on a background of other kinds of intergovernmental relations (Stoker, 1995; Trench, 2006) within federalism (Krane & Leach, 2018) at the national, sub-national, and supra-national level of governing. Hence, studying a dynamic of diffusion of the policy of a higher local real estate coefficient in a whole in a nexus of intergovernmental relations may contribute to a better understanding of the local governments' decision-making.

With all that in mind, the aim of this paper is to determine the dynamics of an implementation of the policy of a higher local real estate coefficient in Czechia and to try to expose a background of these dynamics in a response to the national paradigm of public administration (Androniceanu & Georgescu, 2022; Androniceanu *et al.*, 2022; Androniceanu & Georgescu, 2021). This is operationalized in the paper by geo-coding of municipalities, which is a structuring

vehicle of regional development and territorial administration in Czechia. A municipality is considered an object of different kinds of federalism and the dynamics of relaxing fiscal federalism are seen in a nexus of another kind of federalism (Oates, 1998; 1999).

The paper is organized into seven sections. The introduction is followed by the two sections theorizing the issues of dynamics of diffusion of a particular policy in a polity. These sections are followed by the research design section and results section where the dynamics of spreading of the policy of higher local property taxation in Czechia is presented by an application of the Punctuated Equilibrium Theory at various levels of federalism in an EU country. This result presentation is followed by the discussion and conclusions sections.

1. Literature review

1.1. Federalism and local governments' policy

According to Krane & Leach (2018), there are five classes of federalism setting partial intergovernmental relations within a polity: constitutional federalism, states' rights federalism, administrative federalism, centralized federalism, and new federalism.

Constitutional federalism indeterminates sharing of power among the national government and the states and their local governments. States' rights federalism reflects a sharing of power only up to certain barriers protecting the states. Administrative federalism is about sharing of power on varying partnership bases. Centralized federalism focuses on the sharing of power with the goals and procedures of the national government dictating implementation. And the new federalism is about the sharing of power on the basis of defined national and state functions.

Also, the diffusion of a particular policy within a whole (a polity) can be studied from the different points of view of federalism in order to get a comprehensive picture of the impact of the particular policy. In this opinion, a particular kind of federalism texturizes a specific region from the point of view of a purpose. A manifestation of federalism in a state is done usually with means of geo-coding. Also, municipalities may be classified into groups in accordance with the purpose of partial policies and practical needs of state administration. In the nexus with the classes of federalism defined by Krane & Leach (2018), Table 1 presents a sample of geo-coding applicable for purpose of analysis of intergovernmental relations in a particular state.

**Table 1. The classes of federalism and explicit purpose
of geo-codes applicable for specific purposes**

federalism	geo-codes	purpose
Constitutional federalism	A geo-coding focusing on types of a municipality determined by a national tradition (culture)	A reflection of the historic background of integration of the municipalities under the power of

federalism	geo-codes	purpose
		the central government
States' rights federalism	A geo-coding is an instrument of the integration of nations in a con/federative state	A subdivision of countries for statistical purposes
Administrative federalism	A geo-coding developed for the purpose of public administration on an inner territory on behalf of the central government	A sharing the power with a model of a shared state administration
Centralized federalism	A geo-coding focusing on a specific policy dictated by the centre	Control of implementation of particular policies sponsored by a particular centre of the state power
New federalism	A geo-coding (a scale) chosen for an assessment of the region by the level of socio-economic development as a result of severe public policies aimed at a specific region	Needs of social geography and regionalism when setting a strategy of socio-economic development of a region

Source: adapted from Krane & Leach, 2018

The authors' interest in this study is to identify different patterns of implementation dynamics of the local government's policy of higher local property taxation in Czechia among different types of municipalities. Hence, this study's ambition is to contribute to the theory of intergovernmental relations in a post-communist environment from different perspectives of federalism marking in Czechia, an EU country still in transition.

1.2 Problem statement

There are a lot of issues that might be addressed when studying the policies of local governments and local governments' decision-making. Nonetheless, these phenomena are usually studied as isolated and they are seen from a prospect of a particular theory. E.g., the policy of higher local taxation in post-communist Czechia has been studied from the perspective of a "standard" behaviour of governments in "standard" capitalism. So, Sedmihradská & Bakos (2016) dealt with mimicking behaviour of local governments, Sobotovičová & Janoušková (2020) focused on taxpayer's opinion, Formanová *et al.* (2020) dealt with the link between the higher local taxation and results in communal elections, while Plaček *et al.* (2016) focused on connections between election cycle phases and local taxation. By using spatial analysis, Zdražil & Pernica (2018; 2021) were looking for links between taxation and quality of life as well as for stimuli encouraging the local governments to raise the local property taxation.

However, there are two points to be highlighted. Firstly, raising the local real estate coefficient is an option for more than 6,200 Czech local governments. Dividing Czechia into different regions by specific features, a diffusion of the innovation in the policy of higher taxation may be studied not only within a legally organized structure of governing regions but within regional structures defined by specific purposes as well. In such a case, changing the policy of higher local taxation by a variable of the local real estate coefficient may be considered as an evolutionary process within a particular whole and the policy of a higher local property tax coefficient might be analysed from the point of view of Baumgartner & Jones'

punctuated equilibrium model (2009). This did John (1999) for British local government finance in the early 1990s. Secondly, raising the local real estate coefficient affects intergovernmental relations because a local government reduces its dependency on the central government within the framework of national fiscal federalism (Smith *et al.*, 2011). I.e., the diffusion of a policy of higher local property taxation needs to be studied in a web of intergovernmental relations in order to understand the reasons behind this policy.

As presented by Zdražil & Pernica (2021), the socio-economic background matters when the Czech local governments prefer a higher local real estate coefficient. So, an investigation of specific public policy implemented in a web of other intergovernmental relations may have the potential to gain other knowledge on the thinking of policy actors. In this opinion, scrutinizing of dynamics of the spreading of particular policy among actors of the same status within a specific kind of federalism operating in different regions should contribute to a better understanding of their policy across different state territories. This fact is apparent when thinking about the socio-economic background (Georgescu *et al.*, 2020; Haseeb *et al.*, 2019; Kinnunen *et al.*, 2019; Nicolescu *et al.*, 2020) encouraging and limiting the local government to introduce a policy of higher local taxation.

Table 2. The size of the local real estate coefficient and a number of municipalities applying/giving up the policy of higher taxation, 2009–2021

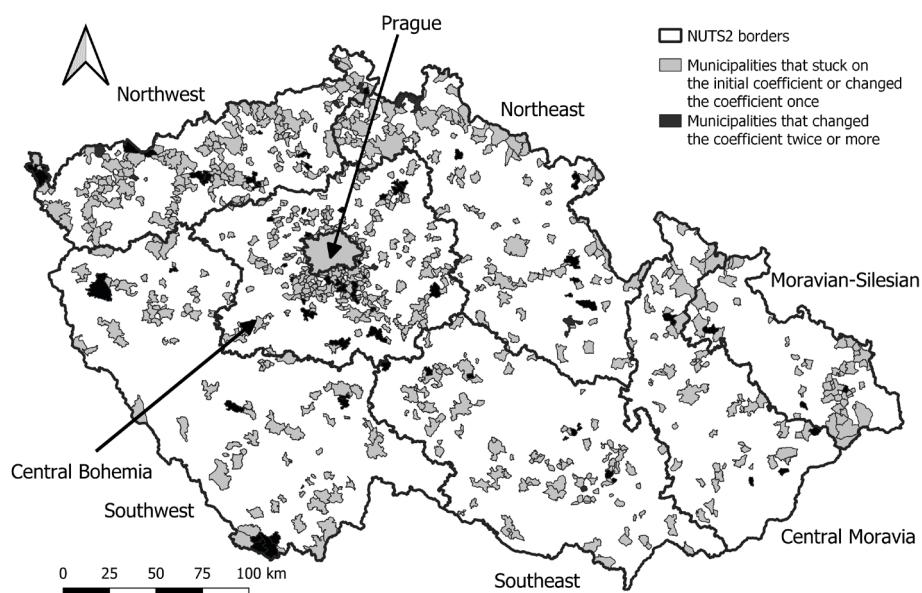
number of municipalities that	coefficient			
	2	3	4	5
ever applied	769	170	108	135
applied the policy in 2021	555	110	17	21
gave up the policy	161	10	-	-
number of municipalities that ever				
- reduced the coefficient by one grade		38		
- reduced the coefficient by two or three grades		10		
- rose the coefficient by one grade		34		
- rose the coefficient by two or three grades		14		
- applied all coefficients		1		

So far, there have been 874 municipalities that ever opted for the policy of higher local property taxation in Czechia. As presented in table 2, only 171 of them surrounded this policy in the period of 2009–2021; these applied the policy mainly for just one fiscal year (FY). Only ca 6 % of the local governments applied the policy of higher taxation for two-three FYs, while ca 4% of municipalities gave up the policy after more than three FYs.

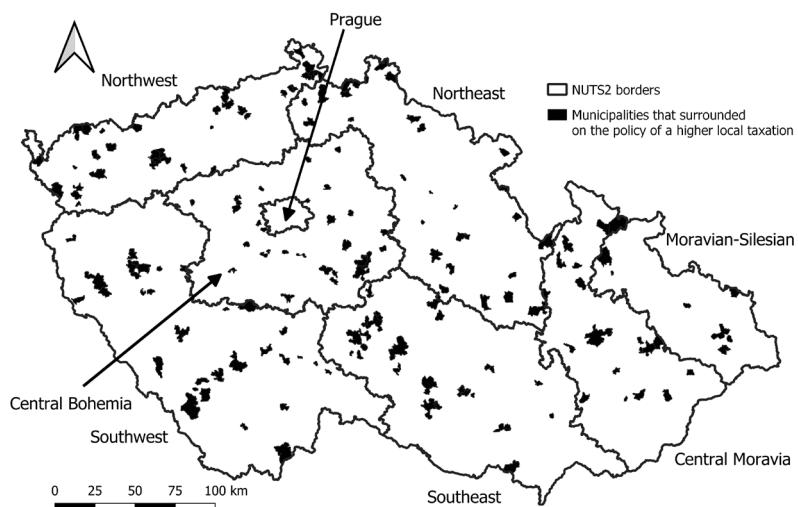
As presented in figure 1 and figure 2, at a first glance, there is a higher concentration of municipalities that ever opted for the policy of higher local property taxation in the north-western part of Czechia. However, there is no clear pattern of a rearrangement/abandonment of the policy from 2009-to 2021.

On the other hand, any implementation/rearrangement and any abandonment of this policy should be discussed with the results of Smith *et al.* (2011) research on expectations of the Czech local governments regarding relaxing the centralized fiscal federalism in Czechia. After getting a response from municipal management to their set of questions, Smith *et al.* (2011) scaled the Czech municipalities into three groups according to their autonomy (low, medium, and high) within the national fiscal federalism. These groups diverged in the significance of five factors (1 value of local property tax, 2 sufficient funding, 3 revenue autonomy, 4 central government autonomy, 5 spending autonomy) determining municipalities autonomy and “With the exception of Factor 1: Advantages of a Locally Implemented Property Tax, the differences between the three autonomy groups were all statistically significant.” (Smith *et al.*, 2011). Hence one can suggest, the Czech local governments did not pay so attention to this policy at the beginning of the period when the fiscal innovation of a higher local property tax might be applied (it is available since 2009), i.e. when Smith *et al.* (2011) collected data for their research.

Figure 1. Spatial distribution of the Czech municipalities – stability in the policy of higher local taxation, 2009-2021



**Figure 2. Spatial distribution of the Czech municipalities that surrounded on the
policy of higher local taxation, 2009-2021**



2. Research section

2.1 Research question

This bears a question of whether both the size of the municipalities and their functionality, in the particular kind of federalism, determines the dynamics of spreading of the policy of higher local property taxation over Czechia (or what does this)? Also, this research question implies another question of whether studying a specific public policy in a web of federalism may contribute to getting extra knowledge about a new phenomenon. In this case, this study is linked with spatial analysis.

2.2 Methodological framework

To fulfil the research objective, the Punctuated equilibrium theory (PET) framework is needed to be employed. The PET was inspired by the biological theory of punctuated equilibrium developed by Eldredge & Gould (1972) in order to explain a punctuated pattern of evolution observed in the fossil record, which was not explainable by phyletic gradualism. Later, the concept was employed in social sciences by Baumgartner & Jones (2009: 4) in order to study "...a number of important public policies over long periods of time. ...the development of issues both over time and across areas," and to "...demonstrate the forces that create both incrementalism in many circumstances and rapid changes in others." Their empirical focus on the dynamics of agenda-setting in the U.S. has been broadly reflected by scholars investigating public policy so far. Also, any spreading of a

particular policy in the polity is to be seen as incrementalism in different types of intergovernmental relations.

In order to study this public policy diffusion, the S-shaped curve is used (Boushey, 2012). So, the S-shaped curve is “remarkably like a punctuated equilibrium model in which the system shifts rapidly from one stable point to another” (Baumgartner & Jones 2009, 17). In particular, the PET model suggests the evolution of public policy and remains rigid for most of the time, while the major changes happen only in specific short periods. Boushey (2012) constructed the S-shaped curves in order to study the dynamics of diffusion of particular innovative policies among the states in the U.S. He constructed the diffusion model to provide “...a unifying framework for understanding three mechanisms leading to the diffusion of innovations: gradual policy diffusion driven by incremental policy emulation, rapid state-to-state diffusion driven by policy imitation and mimicking, and nearly immediate policy diffusion driven by state-level responses to a common exogenous shock.”

An S-shaped curve is a result of a division of the whole (composed of N-elements) by a number of its elements corresponding to a specific feature (n). Thus, the dynamics in a particular system, such as a polity, are presented by a fluctuation of a share of elements with specific features in the system over a particular period. In the beginning, the share converges to 0. The evolution ends when the share reaches 1. Assessing an evolution of more classes of elements in the whole, the S-shaped curves allow indication of patterns in evolution. I.e., different dynamics of particular elements in the whole driven by the same environment can indicate the different backgrounds of the evolution of the elements.

2.3 Kinds of federalism and geo-coding

When studying the dynamics of diffusion of a specific policy, the most interesting thing is a situation when the evolution of a group of actors is spread into two and more sub-populations. Also, there is an evolutionary turn that needs to be explained in detail. Also, studying the diffusion of higher local taxation in Czechia in 2009–2021 on the background of various kinds of inter-governmental relations will provide more knowledge than a simple application of a specific theory. The purpose is to find what differentiates these actors in specific kinds of public policy in the polity. Also, the geo-coding of municipalities reflects a particularity of intergovernmental relations determined by the classes of federalism.

With respect to access to data for a national case study, there are three geo-codes applicable for an assessment of the territory in an EU state:

- The Hampl's classification of the level of socio-economic development of the territory. It represents an assessment of the territory from the point of the theory of social geography (new federalism, a national geo-coding).

- The NUTS classification used by the EUROSTAT. A NUTS2 geo-code is instrumental in the European Union's Structural Funds and Cohesion Fund. Also, this classification is linked with the policy of regional development subsidized with the EU money (state's right federalism, an EU geo-coding).
- The FUAs (Functional Urban Areas) classification is used by the OECD for an assessment of the strategies of regional development. This classification stresses population density and access to public transport as key factors contributing to the development of the territory (centralized federalism, the OECD geo-coding developed for needs of development policy).

The aforementioned geo-coding of the state territory fragmented into municipalities are special-purpose ones. Hampl's classification assesses the territory on a scale of five levels (1–5) reflecting the stage of socio-economic development where 1 indicates the least developed municipality and 5 the most developed one. This classification has been applied for a determination of inner peripheries, municipalities whose population challenges some social exclusion for decades due to a slow-going territorial development (Musil & Müller 2008; Bernard & Šimon, 2017; Rahman et al., 2019; Siekelova et al., 2020). Also, the main purpose of Hampl's geo-code is to identify underdeveloped municipalities in order to address particular issues of a national policy of regional development more suitably. These underdeveloped municipalities are to consider as municipalities with low autonomy due to their small size and their functionalities.

The NUTS2 regional classification is an instrument for the European Commission when addressing issues of cohesion policy within its policy of the Europe of the Regions (Magone, 2003). So, this classification is significant in European fiscal federalism.

The FUAs geoclassification is a list of municipalities aggregated by the OECD (2021) in order to address priorities of regional development in the centres with a significant population concentration. In particular, FUA is defined as an important regional centre, expanded to include a background with which it is closely intertwined.

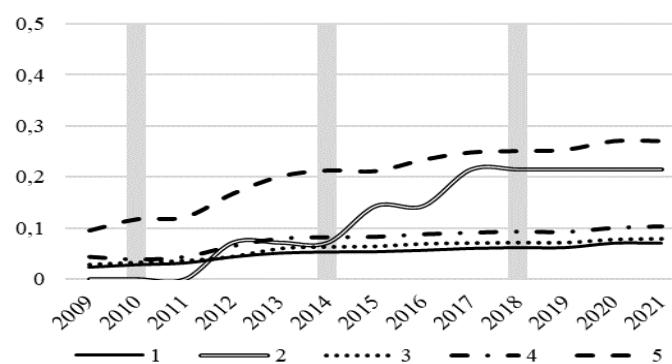
2.4 Data

The data for the PET analysis was linked from various sources. J. Müller provided a dataset containing Hampl's classification of the territory, which was applied in his paper on inner peripheries in Czechia (Musil & Müller, 2008). The NUTS2 geocodes were obtained from the Public database of the Czech Statistical Office (CZSO, 2021) while a list of FUAs has been acquired by the OECD (2021). Furthermore, the Financial Administration of Czechia (MFCR, 2021) provided internal data on municipalities applying the policy of a higher real estate coefficient since 2009.

2.5 Research results

When applying the analytical framework, we found the PET principles to be relevant for the process of implementing higher local taxation in the Czech municipalities since 2009. Also, we can construct the S-shape curves in order to see the dynamics of diffusion of the policy of higher local taxation from different perspectives of intergovernmental relations. This methodology's application is seen in Figures 3, 4, and 5. As milestones, the local elections in 2010, 2014, and 2018 are marked in grey in the pictures.

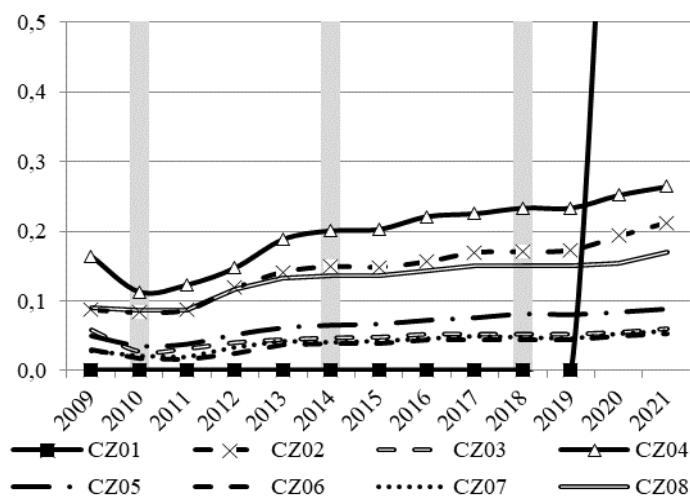
Figure 3. PET from the point of the view of the Hampl's classification – share of municipalities with increased local taxation, 2009-2021



Notes: 1... the less developed municipalities, 5... the most developed municipalities

From the spatial point of view (see figure 4), the policy of higher local taxation is more prevalent in the background of the capital city Prague; i.e., the areas of the Central Bohemia, but also in the Moravian-Silesian, and the Northwest NUTS2 region as already presented in Figure 1. The dynamics of evolution in the Northwest which might be considered as NUTS2 region with high concertation of industry in Czechia is rather a surprise because this region has been still challenging depopulation. In accordance with the rules of fiscal federalism in Czechia the size of the population in a municipality is the main factor determining local governments' revenues. Hence, losing population goes to a reduction of autonomy at any level of the municipality size. Also, regions facing up to depopulation seem to be in favor of the same security of revenues as the villages and the inner peripheries challenging exclusion from regional development.

**Figure 4. PET from the point of the view of the NUTS2 classification of regions –
share of municipalities with increased local taxation, 2009-2021**

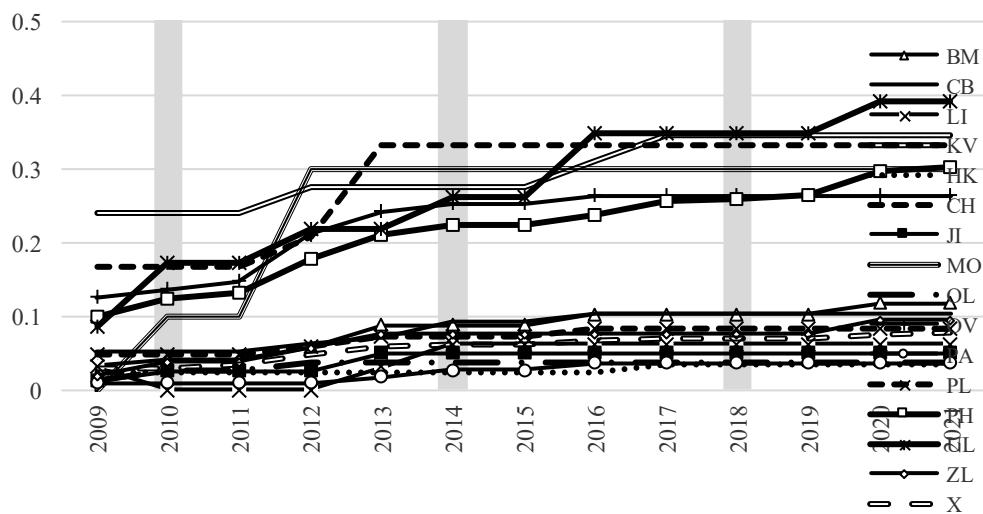


Notes: CZ01... Prague, CZ02... Central Bohemia, CZ03... Southwest, CZ04...Northwest,
CZ05...Northeast, CZ06... Southeast, CZ07...Central Moravia, CZ08... Moravian-Silesian

As presented in figure 5, there is a significant evolutionary spilt of municipalities into two groups when analysing the sample by FUAs. The higher dynamics of the diffusion of the policy of higher local taxation are typical for FUAs of Ústí nad Labem, Karlovy Vary, Chomutov, Most (all belong to the Northwest NUTS 2 region), Ostrava (Moravian-Silesian NUTS 2 region), and Praha (in the FUA classification contains also a large part of a Central Bohemia NUTS 2 region).

This finding links the two previous; i.e., the policy of higher property taxation is applied rather in places with higher population density, and the innovation spread is significantly faster only in some regions. Surprisingly, with an exception of the FUA of Praha, one should point out this FUAs challenge the process of depopulation. Moreover, regions of particular FUAs faced a large economic drop after the fall of the Iron Curtain, which has negatively affected development in past and continues to do so nowadays. Also, it raises a question of the need for a policy of higher local taxation in these FUAs because, e.g., the Northwest region is still experiencing a decline in quality of life as already presented by Zdražil & Pernica (2018).

**Figure 5. PET from the point of the view of the Functional urban areas (FUAs) –
share of municipalities with increased local taxation, 2009-2021**



Notes: BM... Brno, CB... Ceske Budejovice, LI... Liberec, KV... Karlovy Vary, HK... Hradec Kralove, CH... Chomutov, JI... Jihlava, MO... Most, OL... Olomouc, OV... Ostrava, PA... Pardubice, PL... Pilsen, PH... Prague, UL... Usti, ZL... Zlin; X... municipalities out of any FUA

All in all, the results suggest the policy of higher local property taxation is to expect in two types of regions in particular. It is typical for the populated places; i.e., larger cities and their background areas, and for regions with a propensity to a general decline in the quality of life, which was caused by structural challenges during economic transformation after the collapse of communism.

2.6 Discussion

Taking into account the systematic nature of the policy of higher local taxation, we ought to spot municipalities where this policy has been continuing over two local election periods; i.e., for nine fiscal years at least. Also, these local governments were able to defend the policy of higher taxation. The municipalities that abandoned their policy of higher local taxation opted only for the coefficients 2 and 3, and they were rather middle-size than small-size municipalities. In the contrast, the local governments preferring rather the coefficient of 4 or 5 to keep continuing the policy of higher taxation are rather small-size ones. Thus, taxation by the coefficient of 2 is rather typical for a population of the middle-size and large municipalities, and taxation by the coefficient of 5 is characteristic rather for small-size municipalities. At last, an affiliation to FUAs and metropolitan areas, and localization of municipality in proximity to these areas matter as well.

Considering the most similar previous research, unfortunately, Smith *et al.* (2011) did their study only with regard to the size of municipalities. So, it is difficult to find some implications for issues of autonomy and their data may be scrutinized more in detail when taking into account results regarding dynamics of the dispersion of the policy of higher local property taxation over the different types of regions marked by different federalisms.

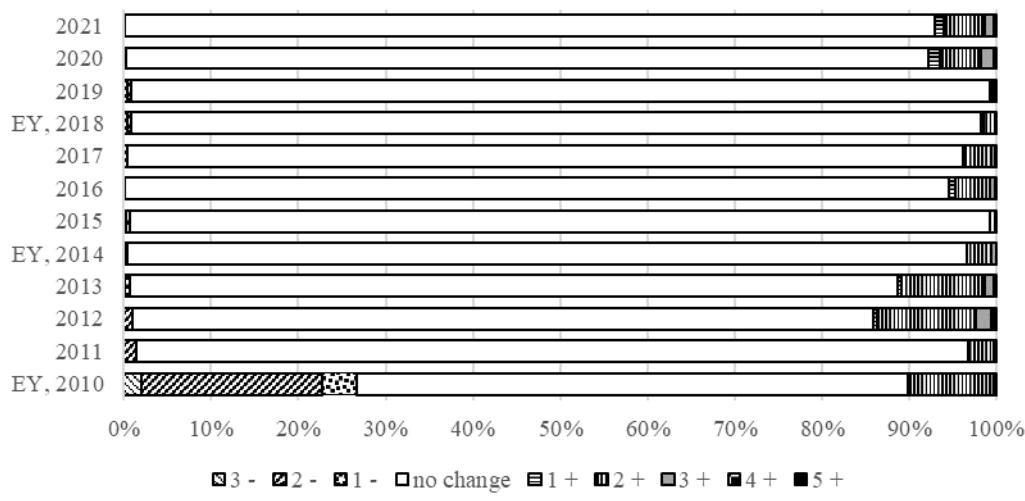
Nevertheless, with regards to Smith *et al.* (2011) research focused on autonomy expectation; a lot of inner peripheries opted for a coefficient higher than 2. Thus, local higher taxation should be considered as a vehicle of higher autonomy. There are 28 of 121 such as municipalities applying the policy of higher taxation for at least three fiscal years which opted for a coefficient higher than 2. There are 8 inner peripheries among 28 municipalities that have ever employed the coefficient of 5. Also, as usually the smallest-size municipalities, inner peripheries do not hesitate to raise the local taxation to the extreme level. As already presented in figure 3, the number of inner peripheries, opting for higher taxation keeps increasing. So, local governments they're more willing to relax their dependency on the central government by opting for a higher level of taxation than other local governments.

Besides, the policy of higher local property taxation is not unidirectional. As already presented in the problem statement section, there is a significant number of local governments, which have abandoned the policy. Let us compare the population of 171 municipalities that are surrounded by the policy of higher local taxation with the population of 480 municipalities continuing this policy for more than 9 fiscal years. From the population growth point of the view, 36% of municipalities that applied the policy experienced a population drop between 2009 and 2021. This share is only 26% when scrutinizing the population of municipalities continuing the policy of higher local taxation. Also, ca a quarter of local governments insists on higher taxation although this policy drives citizens out of the municipalities. Hence, one can suggest, higher taxation has not brought a better quality of life in these municipalities. A significant number of municipalities discussed belongs to the NUTS2 (Northwest). I.e. region, which is affected by a large portion of obsolete industrial facilities and significant structural unemployment (Zdražil & Pernica 2018). Also, the lack of labour in the region and a substantial presence of brownfields (CzechInvest, 2021) attract the local government's concern to raise real estate tax in order to counterbalance their tax revenue stints determined by the fiscal federalism.

We found also some signs of tactics for determining the level of local taxation in our sample of 6,258 Czech municipalities. So, such suspicious dynamics call for further explanation within a discussion part. In particular, the governments continuing the policy of higher local taxation have to defend their policy in local elections (2010, 2014, and 2018). So, they might opt for a tactic of taxation in order to keep the policy a systematic one.

As presented in figure 6, the FYs after an election year (EY) are usually associated with a lower intensity of local tax increases; i.e., it seems local governments are not willing either to raise or to drop the level of the local real estate coefficient. This is determined by the situating the date of the local election in the FY. The Czech local elections are scheduled in autumn, usually about two months after the day set by the power of law as the deadline for a determination of the local real estate coefficient for the upcoming FY. Hence, the local governments in power usually postpone the decisions on higher local taxation behind the elections. As shown in figure 6, local governments usually opt for changes in the level of taxation in the 2nd and 3rd FY after the elections. Considering these facts, the stability in the continuity of the policy of higher local taxation is disturbed periodically by the cycle of the local election. A simple rule of thumb shows that proximity to the election process causes higher stability in the extent of taxation - at the beginning and at the end of the election cycle. This behaviour is in line with findings by Alesina & Roubini (1992), who showed that phases of election cycles play an important role in tax decision-making processes.

Figure 6. Czech local governments acting and nod tactically as changes in the level of the local real estate coefficient (+/- increase/decrease by), 2009-2021



Notes: EY ... election year

Besides, a lot of local governments varied (revised) their taxation policy. They decided either on higher or lower taxation by an option of a different local real estate coefficient during the period of 2009–2021. Only 510 local governments stuck on the initial coefficient until 2021, 242 municipalities changed their decision once, 66 municipalities varied two coefficients and 12 municipalities varied the local coefficients three times or more. Hence, a considerable number of the local governments (39%) have been experimenting with setting “a bearable” taxation in

the municipality. So, one should also perceive these rearrangements as a tactical behavior in the policy of higher taxation, since based on figure 6, the decreasing of taxes is usually processed around the EY.

Considering the spatial dynamics of an internal innovation in the policy of local higher taxation, the municipalities are not acting tactically (sticking to the initial level of the local real estate coefficient in the period of 2009–2021). Nonetheless, municipalities that have acted tactically so far are rather situated in the western part of Czechia, in particular, in the Central Bohemia and the Northwest region. This result is in line with the above-mentioned higher concentration of municipalities that opted for the policy of higher local taxation in specific regions. On the other hand, municipalities that are surrounded by the policy of higher local taxation are evenly distributed across the country, as presented in Figure 2. So, there is no pattern of policy mimicking in such a case.

These patterns of local governments' behaviour are worth noticing. The results on spatial dynamics indicate there are different motivations (Ciobanu et al., 2019) for the implementation of the policy of local higher taxation in various regions of Czechia. In the prospect of the PET analysis covering the period of three local election periods and supported by means of spatial analysis, it is difficult to assess the behaviour of municipalities in Czechia as a simple "standard" tax-mimicking or yardstick competition as Sedmihradská (2013) and Sedmihradská & Bakoš (2016) did. In fact, an expansion of the number of municipalities applying the policy of higher local taxation is scattered over the Czechia. Some pattern of implementing this policy across Czechia is to observe just by the PET analysis employing geo-coding.

3. Conclusions

The PET is a standard method in public policy, which is employed in studying the dynamics of agenda-setting within a polity. By using the S-shape curves, the PET can explain the diffusion of innovations in public policy as a whole. The whole was Czechia composed of 6,258 municipalities authorized to raise local taxation of the real estate by a determination of the local real estate coefficient from 1 to 5. Since 2009 when the Czech municipalities were authorized to set a level of the local real estate coefficient, the number of municipalities that apply this instrument keeps rising. As presented by the S-shape curves analysing the set of municipalities applying the policy of higher local taxation via three geo-codes reflecting specific intergovernmental relations (federalism), there are differences in the dynamics of diffusion of the policy of higher local taxation among municipalities.

Firstly, this policy is a policy spreading out in municipalities known for a higher level of population and industry concentration where is a need of extensive public service in order to ensure a high level of public services. Secondly, the policy of higher local taxation is applied most frequently in populated areas and regions challenging structural challenges contributing to their depopulation. So, it is

questionable how rational is this policy in the late case. Thirdly, considering the election cycles, the local governments act in issues of a level of local taxation tactically. This behaviour impacts the dynamics of a higher local taxation policy, as municipalities proceed with fewer increases and more decreases of local property taxation over the pre-election time. Finally, the spatial analysis revealed the approach of tactical changing of local taxes is rather concentrated in the western part of Czechia. On the other hand, the spatial division of municipalities that surrounded the policy of higher local taxation was equal across the country.

All in all, this study brings important insight into the tax decision-making processes at the level of local governments. We argue the impact of tax-mimicking behavior may be less determinant than the previous studies suggested. On contrary, the factors like population density, depopulation, and substitution of the declining tax revenues seem to be more determining factors for Czech municipalities. At last, we believe our findings are not limited to the national specifics of Czechia, but that it is possible to transfer them to the environment of many other post-communist countries in central and Eastern Europe, at least.

Authors Contributions

The authors listed have made a substantial, direct, and intellectual contribution to the work, and approved it for publication.

Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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