Coefficients for Real Estate Tax in Statutory Cities of the Czech Republic

Gabriela KUKALOVÁ, Olga REGNEROVÁ*, Daniela PFEIFEROVÁ and Lucie KOVAŘÍKOVÁ

Czech University of Life Sciences Prague, Prague, Czech Republic; kukalova@pef.czu.cz; oregnerova@pef.czu.cz; pfeiferova@pef.czu.cz; xkovl014@studenti.czu.cz

* Corresponding author: oregnerova@pef.czu.cz

Abstract: The paper focuses on real estate tax coefficients and their use in selected municipalities in the Czech Republic. Real estate tax is one of the tax revenues, which make up on average 67% of municipal budget revenues in the Czech Republic. Municipalities in the Czech Republic can, based on the decision of the council, adjust the amount of coefficients and thus increase the real estate tax revenue. The objective of our paper is to evaluate the use of real estate tax coefficients in the period 2016-2020 by statutory cities in the Czech Republic: Děčín, Frýdek-Místek, Havířov, Chomutov, Jablonec nad Nisou, Karviná, Kladno, Mladá Boleslav, Most, Opava, Prostějov, Přerov, Teplice and Třinec. Municipalities use the possibility to correct or set the coefficients only to a limited extent, as follows from the results of the analyzes. In the analyzed period, the coefficient was adjusted according to the number of inhabitants in the given statutory cities. A coefficient of 1.5 was set in 10 cities out of a total of 14. The local coefficient was determined for at least a certain period of the analyzed period in only 6 statutory cities. The results show that in municipalities where the local coefficient is set, the share of income from real estate tax in the tax and total income of the municipality increases significantly. This also increases the financial independence of the municipalities.

Keywords: real estate tax; municipality; coefficient; revenues; budget

JEL Classification: H71; H21; H24

1. Introduction

Territorial self-governing units compile their own budget, which is based on planned revenues and expenditures. Tax revenues and subsidy programs play a key role in financing the expenditure side of municipal budgets. They also play a crucial role on the revenue side of municipal budgets. Land tax revenues generate revenue for city budgets in more or less all EU countries. Real estate taxes are not harmonized in the EU. According to Janoušková and Sobotovičová (2021), real estate taxation in the EU has significant autonomy and is based on national traditions in connection with the redistribution of public resources.

Previous research has addressed the importance of real estate tax based on different aspects. According to Drabek (2015), a conscious tax policy is a basic condition for the autonomy and financial self-sufficiency of municipalities. Correct determination of the real estate tax base also according to the research Źróbek et al. (2016), affects the amount of revenue from this tax. A study by Cammeraat and Crivelli (2020) points to the importance of

considering all the factors that affect real estate tax revenue in Italy. The size of the real estate tax rate can be according to Makovská et al. (2020) also dependent on local policy strategy. According to Olejniczak et al. (2020) Polish municipalities have more freedom in shaping real estate rates than Czech municipalities. As reported by Blazic et al. (2016) the introduction of these taxes is perceived by differently qualified professionals and the public. The issue of collecting this tax in China is also addressed in the Huang (2018) study.

The real estate tax in the Czech Republic consists of two partial taxes: land taxes and taxes on buildings and units. Unlike most EU countries, the Czech Republic prefers the principle of determining the tax base using physical indicators (i.e., land area, built-up area, number of floors). The entire revenue of this tax goes to the municipal budget, so it is important that municipalities can, within their partial tax jurisdiction, influence the total amount of funds that become part of the municipal budget by adjusting the basic rates of both land tax and building and unit tax (Janoušková & Sobotovičová, 2021; Pfeiferová et al., 2020).

The Real Estate Tax Act (Collection of Laws, 1992) allows municipalities to adjust or set 3 types of coefficients. The municipality has the possibility to increase or decrease the coefficient by which the basic tax rate is multiplied (the coefficient assigned to individual municipalities according to the number of inhabitants). For specific taxable buildings, the municipality may introduce a coefficient of 1.5, which multiplies the basic tax rate (Collection of Laws, 1992). In addition, municipalities may set a local coefficient. This is a coefficient of 1.1 to 5 determined to one decimal place, which allows to increase the calculated tax liability for real estate in the whole territory of the municipality or in individual parts of the cadastral territory of the municipality (Collection of Laws, 1992).

According to Kameníčková (2019), real estate tax in 2017 accounted for 7% of total revenues for all municipalities. Bečica (2014) also addresses the relationship between real estate tax revenue and the introduction of a local coefficient for municipalities in the Czech Republic. According to Sedmihradská and Bakoš (2016), only 8% of municipalities in the Czech Republic use the local coefficient and its determination depends on the political composition of their executive bodies and the overall structure of budget revenues and expenditures.

By setting coefficients for real estate tax, municipalities can influence the amount of real estate tax revenue. Based on the analysis of Kukalová et al. (2021b) shows that municipalities in the Czech Republic use this power only partially. The use of individual coefficients also differs. Real estate tax revenue is low and below potential.

Conferring to these studies, an increase in real estate tax coefficients can serve as an alternative to strengthening the financial self-sufficiency of municipalities. The aim of the analyzes is to evaluate how selected municipalities in the Czech Republic use the possibility of introducing or adjusting real estate tax coefficients. The paper is part of a comprehensive analysis (Kukalová et al., 2021a), which evaluates the potential of real estate tax in the Czech Republic.

2. Data and Methodology

The article evaluates the coefficients usage in the Czech statutory cities. The analysis does not include Czech regional cities, which are also statutory cities, because the analysis of the use of coefficients in regional cities in the Czech Republic has already been performed for the

period 2016-2020. The data for analyzes and subsequently also the results of analyzes are clearly presented in tables, where the following abbreviations are used for individual statutory cities: Děčín (DE), Frýdek-Místek (FM), Havířov (HA), Chomutov (CH), Jablonec nad Nisou (JN), Karviná (KA), Kladno (KL), Mladá Boleslav (MB), Most (MO), Opava (OP), Prostějov (PV), Přerov (PR), Teplice (TP) and Třinec (TR).

Comparison of the use of coefficients in selected municipalities (statutory cities) is part of the analyzes. The general binding regulations have been analyzed in chronological order and provide an overview of whether the said statutory cities have adjusted the coefficient according to population or set a coefficient of 1.5 or a local coefficient (Table 1).

Table 1. The real estate tax coefficients set in the Czech statutory cities (General binding regulations of the mentioned municipalities)

	Effectiveness of the general binding regulation	Coefficient assigned to the municipalities according to the population (CP)	Coefficient 1.5 (C1.5)	Local coefficient (LC)
DE	since 01/01/2015	3.5 in the whole territory	1.5	has not been set
FM	01/01/2016 – 12/31/2017	4.5 or 2.5 for specific parts of the territory	1.5	2
	since 01/01/2018	4.5 or 2.5 for specific parts of the territory	1.5	has not been set
HA	since 01/01/2007	2.5 or 2.0 or 1.6 for specific parts of the territory	1.5	has not been set
CH	01/01/2012 – 12/31/2019	4.5 in the whole territory	1.5	2
	since 01/01/2020	4.5 only for building plots in the whole territory	1.5	2
JN	since 01/01/2015	2.5 in the whole territory	has not been set	has not been set
KA	since 12/31/2009	3.5 or 1.6 for specific parts of the territory	1.5	2
KL	since 01/01/1994	3.5 or 2.5 or 2.0 or 1.6 for specific parts of the territory	has not been set	has not been set
MB	01/01/2016 - 31/12/2017	2.0 in the whole territory	1.5	4
	since 01/01/2018	2.0 in the whole territory	1.5	3
MO	since 01/01/2016	3.5 or 2.0 or 1.6 for specific parts of the territory	1.5	2
OP	since 01/01/2011	3.5 or 2.0 or 1.6 for specific parts of the territory	has not been set	2
PV	01/01/2013 - 31/12/2020	3.5 or 2.5 or 1.6 for specific parts of the territory	has not been set	has not been set
PR	since 01/01/2013	3.5 or 2.5 or 2.0 for specific parts of the territory	1.5	has not been set
TP	since 01/01/2012	4.5 for the whole territory	1.5	has not been set
TR	01/01/2008 - 31/12/2018	2.5 or 2.0 or 1.6 or 1.4 for specific parts of the territory	1.5	has not been set
	since 01/01/2019	2.5 or 2.0 or 1.6 for specific parts of the territory	1.5	has not been set

Data on real estate tax revenues in absolute terms were obtained from the final accounts of individual statutory cities. Revenues for individual years of the analyzed period are shown

in Table 2. These data were used for the following analyzes and comparison of revenues from real estate tax per capita of a particular statutory city. The following analyzes evaluate the share of income from real estate tax in the total income of the municipality and the share in the tax income of the municipality.

Table 2. Real estate tax revenues in the Czech statutory cities (in thousand CZK) (The final accounts of the mentioned cities)

	2016	**2017**	**2018**	**2019**	**2020**
DE	27,785	28,568	28,053	28,639	28,428
FM	65,519	65,301	37,766	37,587	37,318
HA	40,500	40,655	42,097	41,468	42,965
CH	65,000	69,061	72,092	65,478	64,248
JN	20,244	20,215	20,717	20,704	20,804
KA	53,935	56,309	59,607	61,104	60,011
KL	37,583	38,151	37,543	37,800	37,105
MB	143,176	147,400	114,292	114,645	117,560
MO	83,707	80,014	79,207	80,124	80,389
OP	64,831	65,266	65,138	66,247	65,357
PV	28,875	29,529	29,612	30,014	28,330
PR	36,550	36,482	36,268	37,694	36,866
TP	35,761	36,459	36,464	36,329	36,431
TR	35,805	35,066	35,778	36,032	36,112

3. Results

The performed analyzes of generally binding decrees show that the approach of statutory cities to the determination or correction of coefficients is different. Most statutory cities have made some correction of the coefficient according to the number of inhabitants and often set it differently for different parts of the municipality. The coefficient of 1.5 was not determined in the analyzed period in only four of the 14 statutory cities. The local coefficient was set by only five statutory cities throughout the analyzed period, the city of FM had a local coefficient set only in 2016 and 2017. The local coefficient was set by the municipalities at 2, only in Mladá Boleslav, when this coefficient was set in 2016 to 2017 at 4, since 2018 it has been reduced to 3 (Table 1).

The amount of income in absolute terms was almost constant for the individual statutory cities during the analyzed period, with the exception of the cities of Frýdek-Místek and Mladá Boleslav. With effect from 1 January 2021, the generally binding decree issued by the statutory city of Frýdek-Místek abolished the local coefficient, which was set at 2 in 2016 and 2017. This reduced real estate tax revenue from CZK 65 million to CZK 37 million. (Table 2). The statutory city of Mladá Boleslav reduced the local coefficient from 4 to 3 from 1.1.2018. There is also a significant reduction in absolute real estate tax revenues from CZK 147 million to CZK 114 million (Table 2).

Real estate tax revenues per capita are highest in statutory cities, where a local coefficient is set. Mladá Boleslav shows the highest yields per one inhabitant in the analyzed period (Table 3), especially in the period 2016-2017, when a local coefficient of 4 was set. After its reduction, incomes decreased by approximately CZK 800 per one inhabitant. The average

income from real estate tax in 2020 was CZK 980 per one inhabitant in the monitored cities. In 2017, however, the average income from this tax was 1,046 CZK per one inhabitant. The difference was mainly due to the reduction of the local coefficient in Mladá Boleslav and the abolition of the local coefficient in Frýdek-Místek (Table 1, Table 3).

Table 3. Real estate tax revenues per one inhabitant (in CZK)

	2016	**2017**	**2018**	**2019**	**2020**
DE	557	577	570	587	593
FM	1,147	1,151	670	672	678
HA	551	555	582	577	612
CH	1,335	1,417	1,481	1,344	1,329
JN	443	442	453	452	459
KA	981	1,035	1,114	1,157	1,179
KL	549	556	546	547	539
MB	3,257	3,346	2,588	2,577	2,641
MO	1,252	1,198	1,189	1,211	1,230
OP	1,123	1,137	1,142	1,170	1,167
PV	654	671	676	687	653
PR	831	833	833	873	868
TP	719	734	736	733	733
TR	1,001	985	1,013	1,026	1,038
average (all statutory cities)	1,021	1,046	971	972	980

Table 4. Percentage of the real estate tax revenues in the total revenues of the selected municipalities (in %)

	2016	**2017**	**2018**	**2019**	**2020**
DE	3.18	3.07	2.67	2.59	2.54
FM	5.84	5.51	3.00	2.74	2.60
HA	3.13	2.83	2.67	2.58	2.53
CH	6.63	7.13	6.53	5.05	5.39
JN	2.40	2.33	1.91	1.77	1.84
KA	4.17	4.41	5.01	4.61	5.03
KL	1.94	1.80	2.08	2.13	2.17
MB	14.57	14.51	8.43	8.62	9.58
MO	6.55	5.54	5.34	5.14	4.92
OP	5.22	5.16	4.80	4.35	4.37
PV	3.37	3.14	2.66	2.64	2.32
PR	4.00	3.92	3.27	3.24	3.04
TP	3.82	3.63	3.36	3.12	3.10
TR	4.88	4.96	4.73	4.33	4.43
average (all statutory cities)	4.98	4.85	4.03	3.78	3.85

The average share of real estate tax revenues in the total revenues of the analyzed municipalities in 2020 was 3.85% (Table 4). Only in 6 of the 14 statutory cities was this share higher (Table 4). Mladá Boleslav has the highest share of income from real estate tax in the total income of the statutory city. In 2016 and 2017, this share was almost 15%, after reducing

the local coefficient from 1 January 2018, it was approximately 9%. The influence of the determined local coefficient is evident within the performed analyzes; in the municipalities that set it, the average share of real estate tax revenues in total budget revenues is higher.

The most important (and highest) aggregate item of the revenue part of municipal budgets is represented by tax revenues. Real estate tax accounts for an average of 6.16% of the total tax revenues of the monitored statutory cities in the period 2016-2020 (Table 5). The average share for the period of 2020 alone is 6.59%. The trend of the share in the period 2016-2019 is declining with one exception (Karviná 2017-2018). The highest values of the share are reported by Mladá Boleslav, which together with Chomutov exceeded the 10% share in 2020 (Table 5). In Mladá Boleslav, the share has decreased significantly since 2018 (Table 5), when the local coefficient decreased (Table 1). Jablonec nad Nisou shows the lowest share of real estate tax in total tax revenues in 2020 (Table 5).

Table 5. Percentage of the real estate tax revenues in the tax revenues of the selected municipalities (in %)

	2016	2017	2018	2019	2020
DE	4.10	3.85	3.46	3.35	4.10
FM	8.06	7.44	4.10	3.83	8.06
HA	4.17	3.77	3.65	3.40	4.17
CH	10.47	9.55	9.15	7.64	10.47
JN	3.52	3.16	2.94	2.71	3.52
KA	6.76	6.37	6.48	6.39	6.76
KL	3.75	3.45	3.15	2.90	3.75
MB	18.13	17.36	13.18	11.80	13.16
MO	8.51	7.29	6.79	6.57	8.51
OP	7.44	6.73	6.39	6.23	7.44
PV	4.42	4.14	3.85	3.66	4.42
PR	5.74	5.40	4.93	4.80	5.74
TP	4.71	4.57	4.27	3.91	4.71
TR	7.50	6.76	6.42	6.05	7.50
average (all statutory cities)	6.95	6.42	5.63	5.23	6.59

The approach of statutory cities to the use of coefficients can be compared with the results of other studies, which are part of comprehensive analyzes within the real estate tax in the Czech Republic (Table 6). The results of the current analysis show that the share of statutory cities that have adjusted the coefficient by population (CP) in the total number of statutory cities (excluding regional cities) is 92.85%. A similar analysis for regional cities (Pfeiferová et al., 2020) showed the use of CP in all regional cities, i.e., 100% share. The analysis performed for all municipalities in the Czech Republic shows that the share of municipalities with CP correction in the total number of municipalities is approximately 11% in the analyzed period (Table 6). The use of the coefficient 1.5 (C 1.5) can also be compared within the above analyzes. The share of statutory cities with a set C 1.5 is 71.43%, the share of regional cities is 100%, the share within all municipalities in the Czech Republic is less than 24% (Table 6). Coefficient 1.5, like CP, is used more in large municipalities (with a higher population). Janoušková and Sobotovičová (2016) proved the dependence between the

number of inhabitants and the determination of C 1.5. The results of the analyzes further show that the share of statutory cities that use the local coefficient (LC) is significantly lower than for other coefficients. In the period 2016-2017, the share was 42.86%, since 2017 only 35.71%. The use of LC in regional cities shows similar results, the share of regional cities with a set LC was 41.67%. Within all municipalities in the Czech Republic, this share was only about 10% (Table 6).

Table 6. Shares of municipalities that corrected or set real estate tax coefficients (in%)

Type of analysis	coefficient	2016	2017	2018	2019	2020
Share of statutory cities with set / corrected coefficients in the total number of analyzed statutory cities (our research)	CP	92.85	92.85	92.85	92.85	92.85
	C 1.5	71.43	71.43	71.43	71.43	71.43
	LC	42.86	42.86	35.71	35.71	35.71
Share of regional cities with set / corrected coefficients in the total number of regional cities (excluding Prague) (Pfeiferová et al., 2020, own research)	CP	100.00	100.00	100.00	100.00	100.00
	C 1.5	100.00	100.00	100.00	100.00	100.00
	LC	41.67	41.67	41.67	41.67	41.67
Share of municipalities with set / corrected coefficients in the total number of municipalities in the Czech Republic (Kukalová et al., 2021; own research)	CP	11.23	11.29	11.36	11.34	11.37
	C 1.5	23.41	23.76	23.71	23.65	23.72
	LC	9.16	9.57	9.72	9.53	10.34

4. Discussion

By setting real estate tax coefficients, the municipality can influence the amount of income from this tax as well as its share in total revenues and tax revenues. The determination of the local coefficient has a fundamental effect on the amount of income from real estate tax. Bečica (2014) also addresses the relationship between real estate tax revenue and the introduction of a local coefficient for municipalities in the Czech Republic. The analysis of real estate tax revenues in the regional cities of the Czech Republic was performed by Pfeiferová et al. (2020). The results show that the income from this tax per capita is the highest in those municipalities where a local coefficient has been set.

The amount of the share of real estate tax revenues in total revenues and tax revenues is related to the use of coefficients by the analyzed cities, especially with the determination of the local coefficient (Pfeiferová et al., 2020). This is also confirmed by the results of the analysis in the statutory cities of the Czech Republic. In the municipalities that set the local coefficient, the average share of real estate tax revenues in total and tax budget revenues is higher. According to Kameníčková (2019), the share of real estate tax in total income in 2017 for all municipalities in the Czech Republic was 7%. The results of analyzes in statutory cities show that this share was only 4.85% in 2017. The different result is mainly due to the fact that these are municipalities with a higher population. A large number of municipalities with a small population figure in the average amount for the whole of the Czech Republic, and these municipalities generally have higher shares of real estate tax in total income (Kameníčková, 2019).

In general, it can be stated that municipalities set the local coefficient only to a small extent. A total of 596 municipalities had a local coefficient in 2019, which represented 9.5% of the total number of 6,258 municipalities in the Czech Republic (Kukalová et al., 2021a). The reason for the very limited use of the local coefficient was the fact that municipalities could set this

coefficient at 2 or 3 or 4 or 5, in the whole territory of the municipality, and thus would burden the increased tax for all inhabitants of the municipality (Kukalová et al., 2021a). From 1 January 2021, municipalities may set a local coefficient of 1.1 to 5 to one decimal place, for the entire territory of the municipality or for individual parts of the cadastral territory of the municipality (Collection of Laws, 1992). The advantage of this new way of determining local coefficients is that they can be determined, for example, only in certain parts of the municipality, where there are, for example, establishments that produce negative externalities. The increase in real estate tax due to the determination of the local coefficient will not affect the inhabitants of the municipality, but only these establishments (Kukalová et al., 2021a).

5. Conclusions

Revenues from real estate tax belong to the tax revenues of the municipal budget and form an important part of these budgets. Real estate tax is the only tax whose revenue can be influenced by the municipality by adjusting or setting selected coefficients. Any change in the coefficients must be determined by a generally binding decree, according to the rules. From the performed analyzes of generally binding decrees that in the monitored period 2016-2020, the correction of the CP was carried out in all the mentioned statutory cities. The coefficient of 1.5 was determined by 10 analyzed municipalities. During the period under review, the LC was set in six statutory cities for at least a certain period. In 2020, the LC was set only in five statutory cities (in Chomutov, Karviná, Most and Opava – in the amount of 2, and in Mladá Boleslav – in the amount of 3).

Municipal revenues from real estate tax per capita have always been highest in cities, which set a local coefficient. This also increases the financial independence of the municipalities, which can use these funds to finance other public goods. The share of real estate tax revenues in total revenues averaged 3.78-4.98% for each year of the period under review. The share of real estate tax revenues in the tax revenues of the budgets of the given municipalities averaged 5.23-6.95% for each year of the observed period. The amount of the share of real estate tax revenues in total revenues and in tax revenues is related to the use of coefficients by the analyzed cities, especially with the determination of the local coefficient. The statutory city of Mladá Boleslav had the highest share of real estate tax revenues in total and tax revenues, as it determined the highest local coefficient in comparison with other statutory cities. In the period 2016-2017 it was a LC of 4, since 2018 it was 3.

The results of the analyzes further show that the frequency of correction or determination of coefficients in statutory cities is similar to that in regional cities. The share of statutory cities that have made a CP correction is higher than 90% and the share of statutory cities that have set C 1.5 is higher than 70%. Within regional cities, these shares are 100%, but within all municipalities in the Czech Republic, the share of municipalities with CP correction is only about 11%, with the set C 1.5 it does not reach 24%. The shares of municipalities with the established local coefficient are lower when comparing the results of the above analyzes, however, in statutory and regional cities they are approximately 40%, while in the whole of the Czech Republic only 10%. Although it is possible to significantly increase real estate tax revenues and thus the financial independence of municipalities by setting a local coefficient,

municipalities use this option to a lesser extent than in the case of other coefficients. However, these coefficients do not have the same potential as the local coefficient.

Given that in the current economic situation, the motivation of municipalities to invest in their development will increase, it will be necessary to use all available funds on the revenue side. Increasing real estate tax revenues will continue to be one of the options for obtaining these resources. The use of this potential in other municipalities in the Czech Republic will be the subject of our further research.

References

Act No. 338/1992, *On real estate tax*. Czech Republic. The Parliament of The Czech Republic.

Bečica, J. (2014). Czech Municipalities and Real Estate Tax. In *19th International Conference: Theoretical and Practical Aspects of Public Finance 2014* (pp. 19–27). Praha, Czech Republic.

Blazic, H., Simovic, H., & Stambuk, A. (2016). Introduction of a Local Real Estate Tax in Croatia: a Survey of Expert and Public Opinion. *Lex Localis-Journal of Local Self-Government*, *14*, 53-74. https://doi.org10.4335/14.1.53-74

Cammeraat, E., & Crivelli, E. (2020). Justifiably unpopular? The Italian property tax and inequality. *Applied Economics Letters, 28*(17), 1468-1473. https://doi.org/10.1080/13504851.2020.1827129

Drabek, K. (2015). Identification of the Urban Municipalities of the Malopolska Region in Terms of Changes in the Real Estate Tax Rates in Business Activities of Enterprises in the Period 2010-2015. In A. Nalepka, & A. UjwaryGil (Eds.), *Proceedings of the 14th Conference on Business and Non-Profit Organizations Facing Increased Competition and Growing Customers' Demand* (pp. 223-232). https://hdl.handle.net/11199/8965

Financial Administration of the Czech. Republic. (2020). *Information provided pursuant to Act 106/1999 Coll., On Free Access to Information*.

Huang, Y. (2018). Design of the Elements of Real Estate Tax on Possession from Real Estate Tax in the UK. In R. Green, I. Solovjeva, Y. Zhang, R. Hou, & E. McAnally (Eds.), *Proceedings of the 3rd International Conference on Judicial, Administrative and Humanitarian Problems of State Structures and Economic Subjects (JAHP)* (pp. 150-154). https://download.atlantis-press.com

Janoušková, J., & Sobotovičová, Š. (2016). *Utilization of Municipal Coefficient for Increase of Property Tax Revenues. Overview article*. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj 03JG0o-j1AhVas6QKHSsCAR4QFnoECBIQAQ&url=https%3A%2F%2Fwww.sting.cz%2Facta%2F4-2016%2 Facta4 _2016_web_07.pdf&usg=AOvVaw0cIbDiVRT9SyGCVYQWGHuj.

Janouskova, J., & Sobotovičova, Š. (2021). Approaches to Real Estate Taxation in the CR and the EU Countries. *International Advances in Economic Research*, *27*(1), 61-73. https/doi org/10.1007/s11294-020-09813-0

Kameníčková, V. (2019, June 6). *Jak se liší příjmy obcí podle krajů?* Deník veřejné správy. http://www.dvs.cz/clanek.asp?id=6775143&ht=da%F2+z+nemovit%FDch+v%ECc%ED

Kukalová, G., Moravec, L., Weber, K., Pfeiferová, D., Askarbayeva, S., & Kozlová, H. (2021a). *Možnosti optimálního nastavení daně z nemovitých věcí z pohledu obce.* Tax Research Centre. https://prezentace.czu.cz/danemo/kompletni-studie-moznosti-optimalniho-nastaveni-dane-z-nemovitych-veci-z-pohledu-obce

Kukalová, G., Pfeiferová, D., Kuchařová, I., Regnerová, O., & Šturmová, D. (2021b). Coefficients of Real Estate Tax: Case Study of the Czech Republic. In J. Maci, P. Maresova, K. Firlej, & I. Soukal (Eds.), *Hradec Economic Days*. University of Hradec Králové. https://doi.org/10.36689/uhk/hed/2021-01-048

Malkowska, A., Gluszak, M., Marona, B., & Telega, A. (2020). The Impact of the Electoral Cycle on Area-Based Property Tax in Poland. *Eastern European Economics*, *58*(6), 517-535. http://doi.org/10.1080/00128775.2020.1798160

Pfeiferová, D., Ulrych, M., Kuchařová, I., & Kozlová, H. (2020). Usage of Coefficients for Real Estate Tax in Regional Cities of the Czech Republic. In P. Jedlicka, P. Maresova, K. Firlej, & I. Soukal (Eds.), *Proceedings of*

the International Scientific Conference on Hradec Economic Days 2020 (pp. 598–605). University Hradec Kralove. https://doi.org/10.36689/uhk/hed/2020-01-068

Olejniczak, J., Bednarska-Olejniczak, D., Maci, J., & Svobodova, L. (2020). Real Property Tax in Polish Communes of the Polish-Czech Border Region. In P. Jedlicka, P. Maresova, K. Firlej, & I. Soukal (Eds.), *Proceedings of the International Scientific Conference on Hradec Economic Days 2020* (pp. 565–573). University Hradec Králové. https://doi.org/10.36689/uhk/hed/2020-01-032

Sedmihradská, L., & Bakoš, E. (2016). Municipal Tax Autonomy and Tax Mimicking in Czech Municipalities. *Lex Localis-Journal of Local Self-Government*, *14*(1), 75–92. https://doi.org /10.4335/14.1.75-92

Źróbek, S., Manzhynski, S., Zysk, E., & Rassokha, Y. (2016). Some aspects of local real estate taxes as an instrument of land use management. *Real Estate Management and Valuation, 24*, 93-105. https://doi.org/10.1515/remav-2016-0024