DIVERSIFICATION OF FISCAL AND ECONOMIC CONSEQUENCES OF MUNICIPAL TAX POLICY ON THE EXAMPLE OF REAL ESTATE TAX

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A b s t r a c t

The aim of the article was to assess the fiscal and economic differentiation of the municipal tax policy on the example of real estate tax in Polish cities with poviat status. This is an important theoretical and practical issue. On the one hand, the application of high tax rates may contribute to an increase in the budgetary revenues of cities, and on the other hand, may discourage potential investors from operating in the city and deteriorate its economic and social condition. The research allowed to state that the use of municipal tax policy is an instrument that strongly regulates fiscal and economic processes taking place in local government. It was found that the largest real estate tax revenues were in cities with a fiscal tax policy (where the highest tax rates were applied), while cities with relatively low real estate tax rates achieved in 2018-2020 an average revenue three times lower than cities applying fiscal tax policy. Moreover, the research proved that the most developed local governments in terms of socio-economic use applied fiscal tax policy. The least developed socially and economically was the group of cities with a liberal tax policy, and therefore applying relatively low tax rates.

ZRÓŻNICOWANIE FISKALNYCH I GOSPODARCZYCH SKUTKÓW GMINNEJ POLITYKI PODATKOWEJ NA PRZYKŁADZIE PODATKU OD NIERUCHOMOŚCI

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A b s t r a k t

Celem artykułu była ocena zróżnicowania fiskalnych i gospodarczych skutków gminnej polityki podatkowej na przykładzie podatku od nieruchomości w polskich miastach na prawach powiatu. Jest to zagadnienie istotne, zarówno pod względem teoretycznym, jak i praktycznym. Stosowanie wysokich stawek podatkowych z jednej strony może się przyczyniać do wzrostu wpływów budżetowych miast, z drugiej natomiast może zniechęcić potencjalnych inwestorów do prowadzenia działalności na terenie miasta i pogorszyć jego stan gospodarczy i społeczny. Badania pozwoliły stwierdzić, że wykorzystanie gminnej polityki podatkowej jest instrumentem silnie regulującym fiskalne i gospodarcze procesy zachodzące w samorządzie terytorialnym. Ustalono, że największe dochody z tytułu podatku od nieruchomości odnotowały miasta, w których prowadzono fiskalną politykę podatkową (tzn. stosowano najwyższe stawki podatkowe), natomiast miasta stosujące relatywnie niskie stawki podatku od nieruchomości uzyskały w latach 2018-2020 średni dochód trzykrotnie niższy niż miasta stosujące fiskalną politykę podatkową. Ponadto w toku badań dowiedziono, że najbardziej rozwinięte pod względem społeczno-gospodarczym samorządy stosowały fiskalną politykę podatkową. Z kolei najmniej rozwinięta społecznie i gospodarczo była grupa miast prowadząca liberalną politykę podatkową, stosująca zatem relatywnie niskie stawki podatkowe.

Introduction

The local government has been organisationally and legally separated in the state structure. Its independence has been guaranteed in the legal act of the highest rank among other sources of law, which in Poland is the Constitution of the Republic of Poland (1997). A functional manifestation of self-government independence is handing over to it all tasks in the field of public affairs, which can be attributed a local character. Such organization of exercising power in the state is associated with the introduction of broadly understood decentralization (Wichowska, 2021, p. 199-201).

The basic determinant of decentralization – its scope and level, is ensuring financial autonomy for local government units. In this aspect, revenues is of key

importance. Thanks to the accumulated own revenues, the local government can define and implement its own tasks and set its own priorities in this regard. The municipalities own revenues includes taxes, local fees and property revenue. In the literature on this subject, the most important among own revenues are those from local taxes and fees (Gornowicz & Wichowska, 2017, p. 65-67), which are closely related to the territory of a given local government unit.

In addition to the possibility of collecting their own revenues, municipalities have statutory fiscal powers that allow them to freely determine the amount of tax rates and other elements of the tax technique, especially in the field of taxes: agricultural, forestry, real estate, means of transport, inheritance and donations. Tax policy of municipalities allows to stimulate its development. Decisions made by local government authorities thus affect not only the level of own revenues, but also the possibilities of financing public tasks. These, in turn, affect non-fiscal aspects such as the socio-economic development of a local unit.

In connection with the above, the article deals with the problem related to the dilemma of local units with regard to the application of appropriate tax policy and its fiscal and economic consequences. The use of high rates of local taxes may contribute to an increase in budget revenues in a given unit and, consequently, to having greater possibilities in the implementation of local government tasks, but on the other hand, it may lead to less economic activity undertaken in a given local government unit or transfer of activities by entities to other municipalities. This may happen as a result of the city's deteriorating tax competitiveness.

The aim of the research was to evaluate the fiscal and economic differentiation of the municipal tax policy on the example of real estate tax. The following research hypothesis was adopted in the research: an increase in the real estate tax rate increases the budget revenue on account of it and improves the socio-economic development of the city. This dependence is important for local government units conducting fiscal policy, as well as for the entire society, because the level of local development affects the life and its quality of every resident.

The territorial scope of the research covered all cities with poviat rights in Poland. According to the Act of 5th June 1998 on poviat local government (1998), a city with poviat rights is a municipality that performs poviat tasks under the terms of this act. These units are characterized by a relatively high frequency of economic, demographic and social changes, which was the reason why they were indicated as a research entity in this article. Currently, there are 66 municipalities in Poland, these are: Jelenia Góra, Legnica, Wałbrzych, Wrocław, Bydgoszcz, Grudziądz, Toruń, Włocławek, Biała Podlaska, Chełm, Lublin, Zamość, Gorzów Wielkopolski, Zielona Góra, Łódź, Piotrków Trybunalski, Skierniewice, Kraków, Nowy Sącz, Tarnów, Ostrołęka, Płock, Radom, Siedlce, Warsaw, Opole, Krosno, Przemyśl, Rzeszów, Tarnobrzeg, Białystok, Łomża, Suwałki, Gdańsk, Gdynia, Słupsk, Sopot, Bielsko-Biała, Bytom, Chorzów , Częstochowa, Dąbrowa Górnicza, Gliwice, Jastrzębie-Zdrój, Jaworzno, Katowice, Mysłowice, Piekary Śląskie, Ruda

Śląska, Rybnik, Siemianowice Śląskie, Sosnowiec, Świętochłowice, Tychy, Zabrze, Żory, Kielce, Elbląg, Olsztyn, Kalisz, Konin, Leszno , Poznań, Koszalin, Szczecin and Świnoujście.

The study used data from the Local Data Base of Statistics Poland. The research also used data on the amount of real estate tax rates applied by municipalities, which come from the Tax Portal of the Ministry of Finance, and the budget revenues obtained from the Local Data Base. Due to the limited availability of statistical data, in particular data on the amount of the property tax rate, the analysis was carried out for 2018-2020.

The average level of real estate tax revenues to cities budgets was used to examine the fiscal effects of the municipal tax policy. In the next stage of the research, the research sample was grouped in terms of the tax policy pursued in accordance with the typology proposed by Swaniewicz (1996). And then the indexes of changes in the amount of revenues to municipal budgets due to real estate tax were calculated and compared with the type of tax policy applied.

The level of socio-economic development of cities was assessed using the TOPSIS method (*Technique for Order Preference by Similarity to an Ideal Solution*). This method consists in analyzing the level of the phenomenon under study using a set of indicators and replacing it with the analysis of an aggregated quantity, called a synthetic measure. Its construction consists in determining the distance of each multi-feature object from the so-called pattern and anti-pattern of development (Sokołowska & Filipowicz-Chomko, 2015, p. 176). The study was conducted in the following stages:

1. Selection of features and determining the direction of their preferences in relation to the level of economic development.

2. Unitarization of the values of simple features.

The character of the features was standardized by transforming the destimulant into stimulants and the values of all features were brought to comparability. Uniitarization was carried out on the basis of the following formulas:

For a stimulant:

$$z_{ik} = \frac{x_{ik} - \min_i\{x_{ik}\}}{\max_i\{x_{ik}\} - \min_i\{x_{ik}\}}, \quad (i = 1, 2, \ldots, n; \ k = 1, 2, \ldots, m).$$

For destimulant:

$$z_{ik} = \frac{\max_i\{x_{ik}\} - x_{ik}}{\max_i\{x_{ik}\} - \min_i\{x_{ik}\}}, \quad (i = 1, 2, \ldots, n; \ k = 1, 2, \ldots, m),$$

where:

$\max_i\{x_{ik}\}$ – maximum value of the *k*-th feature,

$\min_i\{x_{ik}\}$ – minimum value of the *k*-th feature.

3. Calculation of the Euclidean distance of individual aggregate units from the pattern $z^+ = (1, 1, \ldots, 1)$ and anti-pattern of development $z^- = (0, 0, \ldots, 0)$:

$$d_i^+ = \sqrt{\sum_{k=1}^{m}(z_{ik} - z_k^+)^2}, \quad d_i^- = \sqrt{\sum_{k=1}^{m}(z_{ik} - z_k^-)^2}.$$

4. Determination of the value of a synthetic feature using the TOPSIS method:

$$q_i = \frac{d_i^-}{d_i^+ + d_i^-}, \qquad (i = 1, 2, \ldots, n).$$

Higher values of measure indicate a higher level of socio-economic development of the municipality. Stages 2 to 4 were repeated for the remaining years in accordance with the adopted research period.

The level of socio-economic development depends on the type of measures selected for its calculation, however, there are no commonly known universal solutions in this regard. The complexity of the phenomena occurring in the development process implies the use of various measures reflecting the symptoms of this phenomenon (Marks-Bielska *et al.*, 2017, p. 24). The literature on the subject distinguishes four levels of regional development (Miłek & Paluch, 2016, p. 93): demography and the labour market, the level of social development, the level of economic development and the level of technical infrastructure. On the basis of the research of the above-mentioned authors, the features describing the socio-economic development were selected. These qualities were: X_1 – number of people registered as unemployed for more than 1 year, X_2 – number of beneficiaries of environmental social welfare per 10 thousand residents, X_3 – percentage of residential buildings connected to the water supply, X_4 – length of the active sewage network, X_5 – number of apartments, X_6 – number of units removed from the REGON register per 10 thousand residents, X_7 – population per seat in the cinema, X_8 – number population per 1 km^2, X_9 – the number of people of working age, X_{10} – number of people using the gas network, X_{11} – the number of investment outlays in gross enterprises, X_{12} – number of electricity consumers, X_{13} – number of natural persons running a business per 10 thousand residents, X_{14} – number of entities entered in the REGON register per 10 thousand residents, X_{15} – usable floor space of apartments, X_{16} – birthrate, X_{17} – average monthly gross remuneration, X_{18} – balance of migration, X_{19} – sale of thermal energy during the year, X_{20} – gross fixed capital formation. Indices X_1, X_2 and X_6 were assumed as destimulants, the remaining variables were considered stimulants.

The article consists of three parts: the theoretical background of the problem, analyzes of the fiscal effects of the municipal tax policy in the field of real estate tax, and analyzes of the economic consequences of this policy. The article ends with a summary containing the most important conclusions from the research and proposals for further research directions.

Tax policy of municipalities in the field
of real estate tax – theoretical background

The main instrument stimulating the socio-economic development within the adopted in municipalities strategy is the fiscal policy. It is defined as deliberate actions undertaken by the local government aimed at achieving the assumed goals, with the use of appropriately selected methods that result from the adopted legal and financial standards (Felis, 2018, p. 145). Its aim is both to stimulate the local government units economy and to attract investors. Local business generates a very important category of budget revenues, which are largely responsible for the revenue autonomy of municipalities and the ability to make financial decisions (Wichowska & Wierzejski, 2019, p. 83). To achieve the above-mentioned goals, it is necessary, inter alia, a properly constructed and developed system of local taxes, the logic of which should result from the strategic goal implemented by municipalities (Felis, 2015, p. 80).

Local self-government may enact general provisions of local tax law, i.e. for the area of the entire municipality it manages and individual decisions. All kinds of allowances and exemptions, whether general or individual, are a form of incentives to support local socio-economic development. Fiscal policy may also serve to limit the types of activities undesirable from the point of view of the municipality and local community by establishing maximum tax rates (Podstawka & Rudowicz, 2010, p. 80).

The policy adopted by the municipality can be classified in various ways. This study adopts one of the best known typologies of local tax policy, developed by Swianiewicz (1996, p. 93). The author distinguished, in the case of real estate tax, the policy:

– liberal, when the rates of all taxes are relatively low;

– fiscal, when the rates of all taxes are high;

– stimulating, when the rates of taxes related to non-agricultural economic activity have been lowered;

– populist, when high taxes on economic activity and low taxes on residents have been applied.

Contemporary and in-depth studies of local tax policy include, inter alia, in the work of Łukomska and Swianiewicz (2015) and the Felis monograph (2015). The authors of the first study confirmed, inter alia, is that:

– decreasing the rates causes a decrease in budget revenues;

– local tax issues are a marginal topic of political debates in municipalities;

– the most important decisions on tax policy depend primarily on the mayor (executive authorities) – and the treasurer;

– the activity of municipality in tax policy is usually associated with putting themselves in the position of voters' representatives;

– the tax policy of municipalities is highly diversified, depending on the size of the given unit, its location in relation to the largest agglomerations, socio-economic characteristics and the level of development of the region;

– manifestations of tax competition are noticeable in local tax policy and that most politicians and local government employees do not have extensive proposals for changes to the local tax system.

In the second study, the main goal was to verify the research hypothesis, according to which, with the current structure of real estate taxes, the freedom of local tax policy by municipalities is limited. The literature on the subject also discussed issues related to the diversification of the tax policy of municipalities in the area of the most important local taxes, the effectiveness and intensity of the tools used in the area of tax authority granted to municipalities, as well as financial and non-financial consequences of tax policy. The conclusions reached by researchers of these issues include following:

– municipalities do not pursue a sufficiently flexible policy aimed at maintaining revenues at a constant level, and when they lower tax rates and apply their own allowances and exemptions, they follow non-fiscal goals (Śmiechowicz, 2016, p. 174);

– the effectiveness of lowering real estate tax rates in order to attract new investors to the local market is low (weak correlation between the rates of tax on buildings related to running a business and the quantities describing quantitatively the functioning of economic entities in municipalities) (Korolewska, 2014, p. 105);

– tax policy is correlated with the amount of tax revenues, but this relationship is not constant (Felis & Rosłaniec, 2017, p. 113).

Opinions on the effects of the tax policy implemented by municipalities vary. Many studies indicate that the tax policy of municipalities, but also of the state as a whole, is an instrument used to implement fiscal and non-fiscal functions, stimulating the socio-economic development of the micro-region and the state, and not only an expression of tax authority and passive implementation of statutory tasks (Filipiak, 2015, p. 224; Wierzbicka *et al.*, 2021, p. 91, 92). This development is a complex phenomenon that aggregates both qualitative elements and changes taking place in the economic, political, cultural, legal, institutional and technological spheres (Nazarczuk & Marks-Bielska, 2013, p. 40). Human capital, which depends on the competitive potential of the regional economy, also exerts a strong influence (Merło & Bogdański, 2017, p. 411, 412) and social capital constituted by universities that prepare qualified staff (Stanowicka, 2021, p. 689). Therefore, quantitative changes, expressed by economic growth indicators and qualitative transformations, such as a change in the quality of manufactured goods and services, are important. Socio-economic development at the regional level is a process based on the systematic improvement of the living conditions of the population and the growth of the region's potential (Miłek & Paluch, 2016, p. 90-92).

Pursuant to Art. 168 of the Constitution of the Republic of Poland (1997), local government units have the right to set the amount of local taxes and fees to the extent specified in the Act. The issues of granting local self-governments the tax authority are also regulated by the provisions of the European Charter of Local Self-Government (1985), which in Art. 9 stipulates that at least part of the financial resources of local communities should come from local fees and taxes, the amount of which these communities are entitled to determine in the scope specified by the Act. Kornberger-Sokołowska (2016, p. 190) notes that the Polish legislator has granted such law only to municipalities, and that it does not apply to all taxes constituting the source of municipal revenue. The author points out that the tax control over tax revenues is limited. Pursuant to Art. 217 of the Constitution, full power of taxation, including the right to impose taxes and determine their basic structural elements, rests with the legislature. Thus, municipalities have limited tax jurisdiction consisting in shaping those structural elements of local taxes that affect the amount of tax burdens. Tax jurisdiction varies according to the type of local tax. In the case of real estate tax, it includes the possibility of setting tax rates within the limits specified by the Act, introducing general tax exemptions, differentiating tax rates for individual objects of taxation, managing tax collection by means of collection, appointing collectors and determining the amount of remuneration for collection (Kornberger-Sokołowska, 2016, p. 193).

Real estate tax in the municipalities revenues system is of key importance due to its high share in total budget revenues. It is the most important and most efficient source of local revenue, and has the most important fiscal significance for the budgets of many municipalities, especially large-city and industrial ones. Revenue from this proves the revenue potential of municipalities and they meet the desired features of local taxes, which are: efficiency, even distribution of the tax base, unambiguous and permanent territorial relationship with the municipality, its "visibility" and the prevalence of burdens (Czempas, 2009; Felis, 2016). Pursuant to the provisions of the Act on Local Taxes and Charges (1991) this tax is subject to land (their area), buildings or parts thereof (usable area) and structures or their parts related to running a business (the value constituting the basis for calculating depreciation in a given year or the value of from the last year, when the structure was fully depreciated). Taxpayers are natural persons, legal persons, organizational units without legal personality who have the right to use real estate specified in the act, in particular their owners, independent or dependent owners, or perpetual users. The rates of this tax are the ratio of the tax amount to the tax base. The legislator defines their maximum level expressed annually in the regulation.

Fiscal consequences of the municipal tax policy

In the first stage of research on the fiscal effects of municipal tax policy, the focus was on the financial analysis of budget revenues from real estate tax and finding a relationship between their level and the tax rate applied. Table 1 shows the average revenues to municipal budgets on this account and the average tax rate on residential buildings in 2018-2020.

Table 1

Average revenue of Polish cities from real estate tax and average tax rates for residential buildings in 2018-2020

City	Average revenue	Average tax rate	City	Average revenue	Average tax rate
1	2	3	4	5	6
Warszawa	1,228,930,376.62	0.77	Ruda Śląska	79,462,882.44	0.57
Kraków	543,859,757.70	0.78	Jaworzno	79,294,109.96	0.71
Gdańsk	476,004,168.92	0.78	Świnoujście	75,134,254.07	0.78
Wrocław	461,020,606.40	0.78	Legnica	70,822,945.59	0.74
Łódź	448,331,457.81	0.79	Koszalin	70,509,571.70	0.58
Poznań	436,479,966.90	0.57	Konin	67,007,454.86	0.63
Szczecin	253,459,563.87	0.70	Elbląg	63,690,405.86	0.71
Katowice	243,169,091.20	0.71	Kalisz	62,832,365.91	0.64
Płock	240,810,120.83	0.76	Wałbrzych	62,706,696.15	0.55
Bydgoszcz	238,037,394.39	0.79	Jastrzębie-Zdrój	55,599,505.28	0.78
Lublin	213,730,143.88	0.78	Nowy Sącz	54,017,184.91	0.73
Gliwice	180,482,354.24	0.68	Grudziądz	53,082,126.20	0.73
Dąbrowa Górnicza	178,460,850.64	0.67	Jelenia Góra	52,338,734.56	0.76
Białystok	163,712,682.11	0.75	Słupsk	52,169,631.64	0.76
Gdynia	158,089,893.99	0.79	Piotrków Trybunalski	51,412,412.51	0.77
Bielsko-Biała	150,747,749.28	0.73	Suwałki	49,415,709.95	0.75
Częstochowa	145,677,532.22	0.75	Mysłowice	47,570,928.35	0.79
Sosnowiec	137,587,929.89	0.79	Żory	43,315,161.64	0.79
Opole	133,313,245.60	0.74	Ostrołęka	42,213,651.74	0.67
Toruń	126,486,738.73	0.52	Siedlce	39,223,821.19	0.70
Rzeszów	124,077,234.26	0.78	Chełm	36,391,965.62	0.72
Włocławek	120,810,098.08	0.68	Krosno	36,200,974.14	0.74
Kielce	114,243,603.99	0.66	Przemyśl	35,400,534.91	0.79
Tychy	111,351,072.07	0.64	Siemianowice Śląskie	35,186,905.39	0.60
Radom	111,257,187.32	0.75	Leszno	35,023,669.17	0.68
Olsztyn	108,303,803.79	0.64	Zamość	33,481,691.88	0.73

1	2	3	4	5	6
Rybnik	101,613,730.50	0.71	Łomża	29,154,740.74	0.69
Zabrze	92,075,024.79	0.73	Biała Podlaska	27,988,606.19	0.60
Tarnów	85,290,755.02	0.73	Skierniewice	27,414,297.07	0.73
Gorzów Wielkopolski	84,027,988.41	0.69	Piekary Śląskie	26,938,542.18	0.53
Zielona Góra	83,759,478.85	0.42	Świętochłowice	26,286,773.24	0.74
Chorzów	82,422,770.01	0.79	Tarnobrzeg	22,687,523.23	0.76
Bytom	80,010,215.76	0.76	Sopot	20,743,871.71	0.73

Source: own elaboration based on Statistic Poland – Local Data Bank (2022).

The highest average revenue to the municipal budget from real estate tax was achieved in Warsaw at the level of PLN 1,228,930,376.62, where the average tax rate was PLN 0.77 per square meter. The value of inflows exceeded PLN 200 million in: Kraków, Gdańsk, Wrocław, Łódź, Poznań, Szczecin, Katowice, Płock, Bydgoszcz and Lublin. In this group of municipalities, the average tax rate on residential buildings was in the range between PLN 0.71 and PLN 0.79 per square meter, except for Poznań, where a relatively low rate was adopted, i.e. PLN 0.57 per square meter. The tax rates were similar in Zielona Góra (PLN 0.42 per square meter), Ruda Śląska (PLN 0.57 per square meter), Koszalin (PLN 0.58 per square meter), Wałbrzych (PLN 0.55 per square meter) and Piekary Śląskie (PLN 0.53 per square meter).

In the next stage of the research, the cities were divided according to the tax policy pursued in accordance with the typology proposed by Swianiewicz (1996). A summary of this division is provided in Table 2.

The group of municipalities pursuing a liberal tax policy includes cities where, in the analyzed period, numerous reductions in the property tax rate of similar amounts were applied. At the same time, it is the most popular policy applied among the studied sample, it referred to 28 cities. In cities applying the fiscal tax policy in 2018-2020, the highest possible real estate tax rates were most often adopted. The cities applying the stimulus policy experienced the highest reductions in tax rates on land and buildings related to running a business. The last group to be distinguished were municipalities applying a populist tax policy, which were characterized by a relatively low tax rate on residential buildings. All the identified groups of cities, according to the tax policy pursued, were analyzed in terms of their average property tax revenue. The results are presented in Figure 1.

The highest average revenue was recorded among cities applying fiscal tax policy, it amounted to approximately PLN 320 million. The average revenue of PLN 116 million was reported by local government units applying populist tax policy. The next place was taken by a group of cities with a liberal tax policy

Typology of cities with poviat status in Poland according to the applied fiscal
policy in relation to real estate tax rates

| Type of type of fiscal policy	Cities	Number of cities
Liberal	Legnica, Wałbrzych, Włocławek, Chełm, Zamość, Piotrków Trybunalski, Skierniewice, Nowy Sącz, Ostrołęka, Siedlce, Krosno, Przemyśl, Tarnobrzeg, Białystok, Łomża, Suwałki, Jaworzno, Piekary Śląskie, Siemanowice Śląskie, Sosnowiec, Świętochłowice, Zabrze, Żory, Kielce, Elbląg, Olsztyn, Świnoujście i Leszno.	28
Fiskal	Wrocław, Bydgoszcz, Lublin, Łódź, Kraków, Warszawa, Gdańsk, Gdynia, Sopot, Bytom, Chorzów, Jastrzębie-Zdrój, Rybnik, Poznań i Szczecin.	15
Stimulating	Jelenia Góra i Mysłowice	2
Populist	Grudziądz, Toruń, Gorzów Wielkopolski, Biała Podlaska, Zielona Góra, Tarnów, Płock, Radom, Opole, Rzeszów, Słupsk, Bielsko-Biała, Częstochowa, Dąbrowa Górnicza, Gliwice, Katowice, Ruda Śląska, Tychy, Kalisz, Konin i Koszalin.	21

Source: own elaboration.
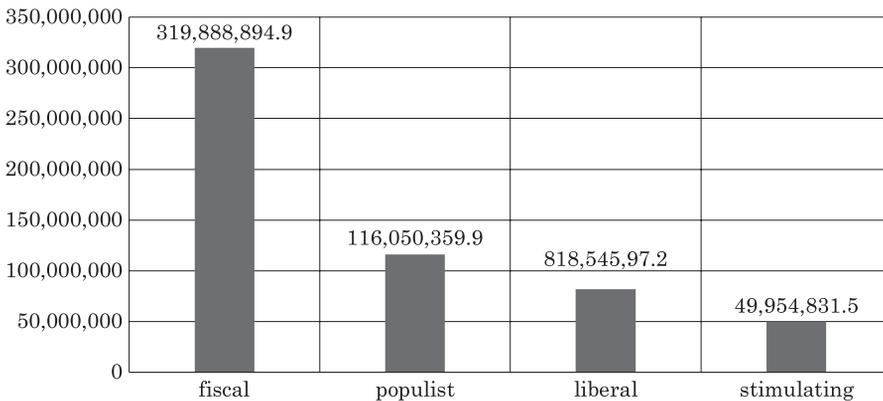
Fig. 1. Average property tax revenue depending on the type of tax policy in 2018-2020 [PLN]
Source: own elaboration based on Tax Portal of the Ministry of Finance, online.

with an average property tax revenue of less than PLN 82 million. The last
group in the list were municipalities applying a stimulating tax policy, where
the average revenue in the analyzed period was approximately PLN 50 million.

In order to analyze the evolution of budget revenues in particular groups
of cities, Figure 2 shows the dynamics of changes in revenues to the city budget
from real estate tax in the subsequent years of the research period compared
to the initial year 2018.

The results of the research indicated that the cities pursuing a populist
and fiscal tax policy in the analyzed period recorded an increase in revenue
from real estate tax, while this increase in cities applying a populist tax policy
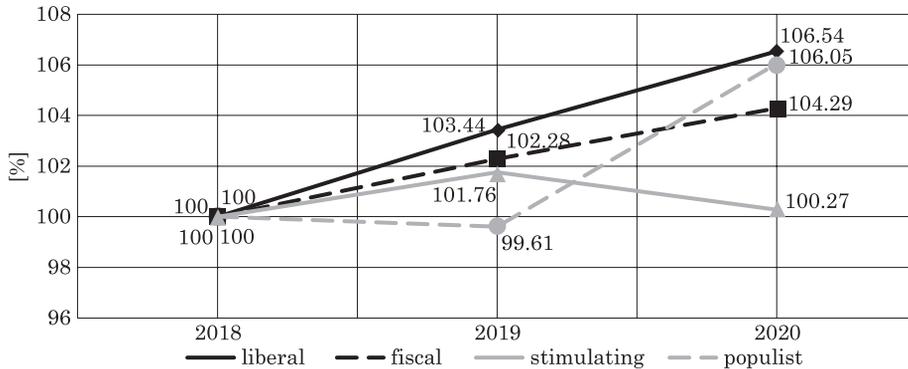
Fig. 2. Single-base indices of changes in the revenue of municipal budgets from real estate tax in 2018-2020 depending on the type of tax policy
Source: own elaboration based on Tax Portal of the Ministry of Finance, online.

was higher by about 2 percentage points than in units where a fiscal policy was adopted. In 2019, cities conducting a liberal tax policy saw a decrease in budget revenues by approximately 0.5% compared to 2018, but in 2020 these revenues increased by approximately 6% compared to the base year. Units that applied the stimulus policy initially achieved a revenue increase of around 2% in 2019 compared to 2018, and in 2020 the level of revenue decreased by 0.3% compared to the base year.

Economic consequences of municipal tax policy

In order to determine the economic effects of the municipal tax policy, the level of development of cities with poviat rights was quantified using a synthetic measure of socio-economic development using the TOPSIS method, according to the procedure specified in the methodological part of the article. The measure of socio-economic development in the subsequent years of the research period and its average value are presented in Table 3.

Warsaw was invariably the most developed city in the analyzed group in terms of socio-economic terms. The city of Kraków, Wrocław and Gdańsk also took the lead in the ranking. The lowest values of the development measure were found in the cities of Przemyśl, Świętochłowice, Grudziądz and Tarnobrzeg. In the context of the purpose of the research, it was considered crucial to relate the measure of socio-economic development to the type of applied policy. Therefore, it was important to find the relationship between the amount of the adopted tax rates and the level of the city's development. For this purpose, the average level of the measure of socio-economic development in groups of cities classified according to their tax policy was examined. The results of this activity are presented in Figure 3.

Table 3

Measure of socio-economic development and its average level
in cities with poviat status in 2018-2020

City	2018	2019	2020	Mean	City	2018	2019	2020	Mean
Warszawa	0.6562	0.6552	0.6506	0.6540	Zabrze	0.1360	0.1379	0.1368	0.1369
Kraków	0.3727	0.3879	0.3857	0.3821	Leszno	0.1377	0.1366	0.1361	0.1368
Wrocław	0.3303	0.3479	0.3508	0.3430	Świnoujście	0.1311	0.1379	0.1366	0.1352
Gdańsk	0.2996	0.3054	0.3010	0.3020	Tarnów	0.1296	0.1379	0.1379	0.1351
Poznań	0.2889	0.2934	0.2849	0.2891	Rybnik	0.1329	0.1379	0.1313	0.1340
Łódź	0.2199	0.2239	0.2270	0.2236	Bytom	0.1273	0.1392	0.1318	0.1328
Szczecin	0.2216	0.2326	0.2151	0.2231	Jaworzno	0.1306	0.1317	0.1334	0.1319
Katowice	0.2103	0.2091	0.2192	0.2129	Wałbrzych	0.1319	0.1273	0.1326	0.1306
Lublin	0.2041	0.2143	0.2142	0.2109	Elbląg	0.1284	0.1271	0.1342	0.1299
Gdynia	0.2016	0.2037	0.2045	0.2033	Jastrzębie-Zdrój	0.1291	0.1319	0.1270	0.1293
Białystok	0.1911	0.2025	0.1909	0.1948	Nowy Sącz	0.1230	0.1282	0.1272	0.1261
Rzeszów	0.1873	0.1914	0.1935	0.1907	Kalisz	0.1274	0.1234	0.1270	0.1259
Bydgoszcz	0.1934	0.1909	0.1851	0.1898	Zamość	0.1247	0.1276	0.1246	0.1256
Bielsko-Biała	0.1854	0.1893	0.1862	0.1870	Łomża	0.1208	0.1268	0.1237	0.1238
Chorzów	0.1773	0.1831	0.1813	0.1806	Ostrołęka	0.1257	0.1227	0.1221	0.1235
Toruń	0.1714	0.1751	0.1762	0.1742	Mysłowice	0.1230	0.1235	0.1239	0.1235
Opole	0.1721	0.1778	0.1724	0.1741	Żory	0.1188	0.1213	0.1203	0.1201
Gliwice	0.1716	0.1748	0.1746	0.1737	Ruda Śląska	0.1167	0.1192	0.1192	0.1184
Olsztyn	0.1699	0.1673	0.1705	0.1692	Siemianowice Śląskie	0.1144	0.1171	0.1189	0.1168
Zielona Góra	0.1637	0.1643	0.1660	0.1647	Włocławek	0.1139	0.1171	0.1158	0.1156
Kielce	0.1631	0.1632	0.1661	0.1642	Biała Podlaska	0.1138	0.1165	0.1150	0.1151
Sopot	0.1657	0.1579	0.1550	0.1595	Konin	0.1123	0.1136	0.1159	0.1139
Częstochowa	0.1572	0.1605	0.1593	0.1590	Siedlce	0.1299	0.1060	0.1050	0.1136
Tychy	0.1544	0.1645	0.1554	0.1581	Suwałki	0.1149	0.1146	0.1109	0.1135
Sosnowiec	0.1531	0.1636	0.1527	0.1565	Piekary Śląskie	0.1070	0.1163	0.1154	0.1129
Koszalin	0.1532	0.1592	0.1501	0.1541	Skierniewice	0.1099	0.1140	0.1109	0.1116
Gorzów Wielkopolski	0.1548	0.1520	0.1501	0.1523	Krosno	0.1126	0.1103	0.1114	0.1114
Płock	0.1481	0.1527	0.1504	0.1504	Chełm	0.1069	0.1128	0.1138	0.1112
Radom	0.1478	0.1469	0.1491	0.1479	Piotrków Trybunalski	0.1058	0.1104	0.1104	0.1088
Dąbrowa Górnicza	0.1435	0.1440	0.1392	0.1422	Tarnobrzeg	0.1063	0.1048	0.1072	0.1061
Legnica	0.1413	0.1411	0.1413	0.1412	Grudziądz	0.1014	0.1057	0.1078	0.1050
Słupsk	0.1399	0.1397	0.1424	0.1407	Świętochłowice	0.1026	0.1058	0.1035	0.1040
Jelenia Góra	0.1412	0.1386	0.1407	0.1402	Przemyśl	0.1009	0.0984	0.0944	0.0979

Source: own elaboration based on Statistic Poland – Local Data Bank (2022).
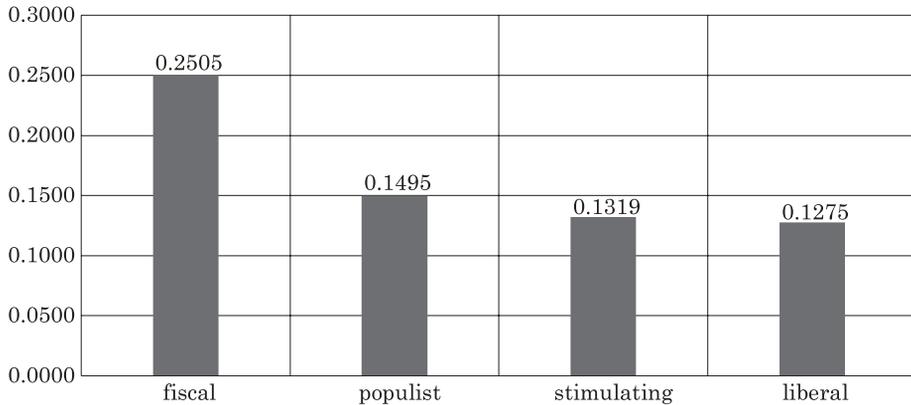
Fig. 3. Average measure of socio-economic development in groups of cities with poviat status
in 2018-2020 depending on the type of tax policy
Source: own elaboration based on Statistic Poland – Local Data Bank (2022)

Cities with poviat status applying fiscal tax policy were characterized by the highest average measure of socio-economic development. It was on average 0.25. The cities with populist fiscal policy were characterized by a lower development rate, then those that pursued a stimulating policy, and lastly, a liberal tax policy. Changes in the described value over the years 2018-2020 are shown in Figure 4.
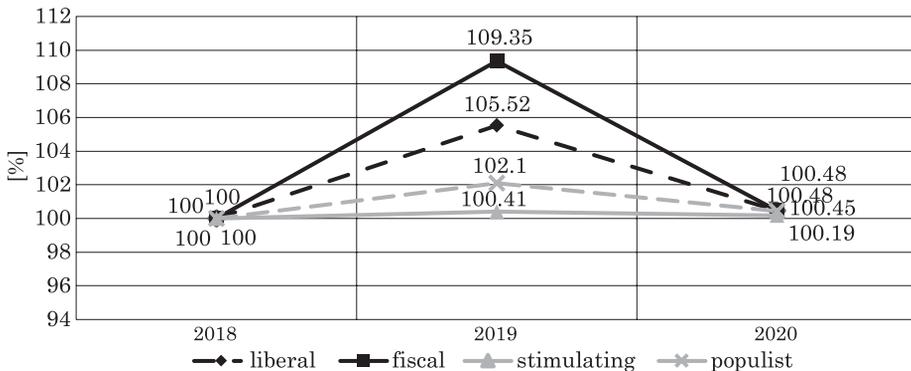

Fig. 4. Single-base indices to measure socio-economic development in 2018-2020 depending
on the type of tax policy
Source*:* own elaboration based on Statistic Poland – Local Data Bank (2022).

In all analyzed groups of cities, an increase in the measure of socio-economic development was observed in 2019. This increase was the highest among cities applying the fiscal tax policy (by approx. 10% compared to 2018), lower in cities applying a liberal tax policy (by approx. 6%), then in cities applying a populist tax policy (by approx. 2%), and the lowest in cities applying a stimulating tax

policy (by approx. 0.5%). In 2020, all groups recorded a decrease in the level of the measure of socio-economic development and approached the value of the indicator at the base year level. Municipalities pursuing a populist tax policy maintained the indicator at a level of approx. 1.5% higher than in 2018. It can be assumed that this situation was not directly related to the collection of property tax, but to the effects of the COVID-19 pandemic.

Conclusions

The literature review proved that the diversification of the effects of the municipal tax policy has been a subject that has been discussed in large numbers by economists for decades, and opinions in this area are still varied. However, it is noted that when making decisions, local government units should take into account financial and economic aspects, as well as social and economic effects.

The analysis of the fiscal consequences of the municipal tax policy presented in the article proved that the cities with fiscal tax policy recorded the greatest financial profits. The results are reflected in economic theory – the higher the tax rates applied, the more revenue was achieved. In the years 2018-2020, cities applying relatively low real estate tax rates obtained budget revenue on this account over three times lower than cities applying fiscal tax policy. An analysis of changes in these revenues has shown that growth is a stable, gradual process for individuals with the highest tax rates. On the other hand, municipalities that adopted a liberal tax policy initially recorded a decrease in revenues, and only in 2020 an increase. Therefore, the first part of the research hypothesis was confirmed.

The functions of tax policy can be divided into fiscal and non-fiscal. Decisions made by local government units affect both budget revenues and the entire municipality environment, such as changes taking place in the economic and social sphere. The study of the measure of socio-economic development in each of the four groups of cities listed on the basis of the tax policy in place allowed for the assessment of the cities in terms of quality. The results of the research indicated that the most developed local governments applied fiscal tax policy, which confirms the second part of the research hypothesis. On the other hand, the least developed socially and economically was the group of cities pursuing a liberal tax policy, and therefore applying relatively low tax rates.

Based on the presented data, it can be concluded that the application of the highest possible tax rates is the most favorable for municipalities, both in terms of fiscal and economic terms. However, will long-term fiscal policy pursuit have the same effects? This issue is of particular interest in the context of future research. The Laffer curve concept, well-known to economists, describing the relationship between the tax rate and the amount of tax revenues, may be an

interesting point of reference in the context of local politics. It may turn out that reaching a certain limit, the application of the highest tax rates, its further application or increasing it will become unprofitable for cities, and even slow down the economic development of a municipality.

Translated by Author

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