The Financial Condition of Communes in Poland (2010 vs. 2019)

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Abstract:

Purpose: The examination and assessment of the financial condition of communes in Poland in the spatial aspect, using the standard indicators related to financial independence and financial burdens imposed on their budgets by current expenditure, and the authors' indicators related to the possibility of communes to satisfy the requirements of residents.

Design/Methodology/Approach: The study used the methods of descriptive statistics. Detailed analyses were carried out based on the authors' calculations using MS Excel.

Findings: The financial condition of communes in Poland is varied when interpreted in terms of time and spatially, when measured with standard indicators used by, among others, the Ministry of Finance in Poland, and with the measures proposed by the authors, it differs, and therefore the changes in the finances of these units are assessed differently. Also, the variations in the values of the standard indicators do not explicitly indicate the direction of changes of the financial condition of communes.

Practical implications: State institutions in their work on the changes in the system of revenue in LGUs in Poland, aimed at adjusting the amounts of the financial resources available to them to the range of tasks allocated for realization. Local authorities in the annually determined amounts of financial resources which they can implement to realize their tasks, having included the burdens resulting from the long-term contractual obligations they are bound by.

Originality/Value: Expanding the research on the financial condition of LGUs by approaching this matter through the prism of indicators reflecting the possibilities of local authorities to define the amounts and the directions of their budgetary expenditure.

Keywords: Self-government community, local government unit (LGU), LGU finance, financial condition, measures, meeting needs.

JEL codes: H41, H72, H76.

Paper type: Research article.

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1. Introduction

Local government finance provides an exciting and constantly developing field for academic research. This mainly concerns assessing the financial condition of individual LGUs, analyzed from diverse points of view and in different periods, to capture changes occurring in the public domain. These changes may result from implementing reforms and modifications to the system of public finances, including tax regulations and the progressing decentralization of public tasks. The presentation of these changes and their evaluation is conducted using various tools and methods, including -with varied success -solutions which have been employed for years in assessing the financial condition of companies, and leads to the functioning in the subject literature of the inconsistent terminology in this field. Examples are the often interchangeably used terms such as financial condition, financial health, and financial situation.

There is also a significant diversity regarding the methods of measuring the financial condition of a given LGU, which is linked to the perception of a self-government unit, and in particular, its role, source of revenue, directions of its expenditure, and the effects of its activity.

2. Literature Review

For some authors (Groves *et al.*,1981; CICA, 1997; Lin and Raman, 1998; Wang *et al.*, 2007; Ritonga, 2014; Bieniasz and Gołaś, 2015), the financial condition of a local government unit (LGU) means the adequate level of taxation, budgetary balance and the limited role of debt in financing its activities. This means the financial condition of LGUs, which allows the local authorities to meet both their present and future financial obligations towards creditors, consumers, employees, taxpayers, suppliers, voters, and others (Berne, 1996). It is a condition in which it is possible to maintain the existing activity of LGU authorities without the necessity of increasing their debt, it is the level up to which LGUs can increment their financial resources through debt and revenue in order to be able to meet the growing needs of their communities, as well as the degree of LGU's dependence on financial resources remaining beyond its control (cf. Canadian Institute of Chartered Accountants (CICA) (1997, 2009).

This also implies four different dimensions of solvency (in cash, understood as the ability to generate the financial means required to ensure liquidity, budgetary, as the ability to generate revenues necessary to cover budgetary expenditure, assuming the minimization of a potential deficit, long-term, interpreted as the ability to service long-term obligations, that regarding the scope of services provided, regarding both their adequate level as well as their quality to ensure the health and general wellbeing of residents) (Groves *et al.*, 1981; Nollenberger *et al.*, 2003, International City/County Management Association (ICMA) 2003). This also means the ability of local government to meet on-time their financial obligations and ensure continuity in

providing service for the local community (ICMA, 2003; Hendrick, 2004; Zafra-Gómez et al., 2009).

Taking a different approach to defining the financial position of LGUs resulted in the application of various measures in its assessment. Mercer and Gilbert (1996), when examining communes in Nova Scotia in Canada, created a comprehensive index of their financial condition based on 17 indicators grouped into four dimensions (revenue and expenditure, taxation, debt, and economy). Wang, Dennis, and Tu (2007) proposed an index of financial condition for US states based on the new financial accounting model introduced by the Governmental Accounting Standard Board (GASB, 1999) in Statement no. 34. In Spain, Zafra-Gómez *et al.* (2009) elaborated a model for examining LGUs financial condition based on indicators of the quality of the provided services, while Cabaleiro Casal *et al.* (2013) proposed a method of assessing the financial condition (financial health) of communes based on the dimensions indicated by CICA (1997; 2009), which finally comprised 20 indicators, unfortunately with a complicated calculation procedure.

In Indonesia, Ritonga (2014) researched measuring the financial condition of LGUs based on data provided in their financial reports in the period 2007-2010. The study applied 18 indicators grouped into six dimensions: short-term solvency, long-term solvency, budgetary solvency, financial independence, financial flexibility, and solvency at the level of services. In Poland, Bieniasz and Gołaś (2015) suggested assessing communes' financial condition and adapting the TOPSIS method (Technique for Order Preference by Similarity to an Ideal Solution). Using this method, they examined the financial condition of rural communes in the Wielkopolska voivodeship in 2007–2011 based on the following indicators, budgetary, per resident, debt, and the ability to service it (Stanny, 2017).

In the opinion of the authors of this study, the financial condition of LGUs should also be addressed from another viewpoint, namely the purpose of the activity of the indicated entities, which is to satisfy the everyday needs of the members of the local community. Therefore, it should be identified with the ability of LGUs to provide services and supplying residents with the required commodities, inadequate quantity, and quality. The objective for local authorities in every LGU should be to reach the highest possible level of such abilities. The approach adopted in this study allowed for the construction of three new measures of LGUs' financial condition (calculated in the study for communes in Poland, based on data from 2010 and 2019). Their analysis facilitated observing changes in the values of the proposed indicators over time and spatially and their comparison with the indicators of LGUs financial condition commonly used for many years by the Ministry of Finance in Poland.

3. Research Methodology

The research undertaken in this study concentrated on 1) calculating six indicators of the financial condition of communes in Poland, classified into two groups (the standard ones and those elaborated by the authors), and 2) explaining the differences at the level of information which result from the interpretation of these indicators, as well as their differentiation in the examined years, with the inclusion of the spatial location of the studied units.

Indicators on which the study was based are as follows:

- 1) three measures used by the Ministry of Finance in Poland (MF, 2020) to assess the financial condition of LGUs, namely:
 - a) share of current expenditure in the general expenditure of LGUs (W1),
 - b) share of debt-servicing costs in current expenditure (W2),
 - c) share of own revenue in the general revenue of LGUs, which describes the level of their financial independence (W3),
- 2) three measures elaborated by the authors, namely:
 - a) share of own revenue in financing current flexible expenditure connected with LGUs own tasks (i.e., expenditure on own tasks after excluding fixed expenses such as: costs of servicing debt, costs of labour and the obligatory contributions), in the revenue for financing own tasks (W4),
 - b) share of revenue allocated to own tasks in financing current expenses related to the realisation of these tasks (W5),
 - c) share of revenue characterised by the financial independence of local authorities in financing current fixed costs (comprising costs of servicing debt, costs of labour, the obligatory contributions, and other expenses of a similar nature) (W6).

The values of all the measures are expressed in percentages. The indicators were calculated for the statistical commune in Poland and the statistical commune in particular voivodeships. The authors used for these purposes the processed and aggregate concatenation of the values from communal budgets such as:

- a) own revenue, including share in state taxation,
- b) revenue from general state subsidy,
- c) revenue from subsidies for own tasks,
- d) revenue in general,
- e) current expenditure comprising costs of labour (salaries and those deriving from remuneration),
- f) current expenditure for servicing debt,
- g) current expenditure in the form of subsidies,
- h) current expenditure in general.

The indicated data were obtained from the official statistics of GUS, namely the Local Data Bank (BDL) for 2010, which was the first year of the currently binding act on public finance (Ustawa, 2009), and for 2019, i.e., the last year for which such data were available at the time in the database mentioned above. The study used the method of descriptive analysis of the selected values, followed by statistical analysis.

The research covered communes in Poland, whose total number decreased by two during the period under examination (resulting from being incorporated into the neighbouring communes), amounting to 2,477. The majority is made up of rural communes (62% in 2019), although during the studied decade, their number decreased by 39 (to 1537) in favour of the growing number of rural-urban communes (638 in 2019). In addition, the authors noted a slight drop in the number of urban communes (from 304 in 2010 to 302 in 2019). The change in the status of communes took place in most of the voivodeships, and to the highest degree, in Świętokrzyskie (Figure 1).

For the indicators elaborated by the authors proposed in this study, there were established four levels of their value (Table 1), reflecting the communes' financial independence level. Next, based on the obtained values of indicators for the statistical communes, the authors classified the communes regarding individual voivodeships. Hence four typological groups were distinguished, their boundaries determined based on the arithmetical mean (\bar{x}_i) and standard deviation (s_{xi}) for the individual measures (Zeliaś 2000).

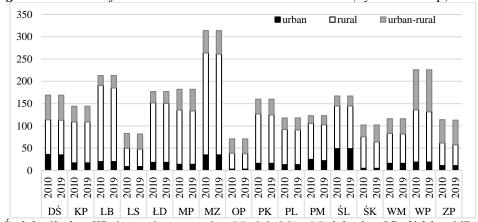


Figure 1. Number of communes in Poland in 2010 and 2019 (by voivodeship)

DŚ -dolnośląskie, KP -kujawsko-pomorskie, LB -lubelskie, LS -lubuskie, ŁD -łódzkie, MP - małopolskie, MZ -mazowieckie, OP -opolskie, PK -podkarpackie, PL -podlaskie, PM - pomorskie, ŚL -śląskie, ŚK -świętokrzyskie, WM - warmińsko-mazurskie, WP -wielkopolskie, ZP - zachodniopomorskie

Source: Own creation based on:

https://eteryt.stat.gov.pl/eteryt/raporty/WebRaportZestawienie.aspx (accessed 08.04.2021).

Table 1. Classes of examined units with the criterion of division

Croun	Criterion of	Value of inc	Level of	
Group	division	2010	2019	indicator
I		W1: $x_i \ge 76.65$	W1: $x_i \ge 85.23$	
		W2: $x_i \ge 1.40$	W2: $x_i \ge 0.86$	
	$x_i \geq \bar{x}_i + s_{xi}$	W3: $x_i \ge 50.84$	W3: $x_i \ge 48.70$	Very high
	•	W4: $x_i \ge 48.06$	W4: $x_i \ge 47.72$	
		W5: $x_i \ge 52.29$	W5: $x_i \ge 69.44$	

	T		T	
		W6: $x_i \ge 49.26$	W6: $x_i \ge 32.06$	
П		W1: $74.93 \le x_i < 76.65$	W1: $83.08 \le x_i \le 85.23$	
		W2: $1.17 \le x_i < 1.40$	W2: $0.74 \le x_i < 0.86$	
		W3: $44.62 \le x_i < 51.84$	W3: $43.27 \le x_i \le 48.70$	Uigh
11	$\bar{x}_i \leq x_i < \bar{x}_i + s_{xi}$	$W4: 42.74 \le x_i < 46.64$ W4: $45.59 \le x_i$	W4: $45.59 \le x_i < 47.72$	High
		W5: $48.26 \le x_i < 51.62$	W5: $66.08 \le x_i \le 69.44$	
		W6: $44.78 \le x_i < 49.26$	W6: $28.40 \le x_i \le 32.06$	
Ш	= 4 4 =	W1: $73.22 \le x_i < 74.93$	W1: $80.93 \le x_i \le 83.08$	
		W2: $0.94 \le x_i < 1.17$	W2: $0.62 \le x_i < 0.74$	
		W3: $37.40 \le x_i < 44.62$	W3: $37.84 \le x_i < 43.27$	Low
	$\bar{x}_i - s_{xi} \le x_i < \bar{x}_i$	W4: $38.85 \le x_i < 42.74$	W4: $43.45 \le x_i < 45.59$	Low
		W5: $44.90 \le x_i < 48.26$	W5: $62.71 \le x_i < 66.08$	
		W6: $40.29 \le x_i < 44.78$	W6: $24.74 \le x_i \le 28.40$	
IV		W1: $x_i < 73.22$	W1: $x_i < 80.93$	
		W2: $x_i < 0.94$	W2: $x_i < 0.62$	V1
		W3: $x_i < 37.40$	W3: $x_i < 37.84$	
	$x_i < \bar{x}_i - s_{xi}$	W4: $x_i < 38.85$	W4: $x_i < 43.45$	Very low
		W5: $x_i < 44.90$ W5: $x_i < 62.71$	W5: $x_i < 62.71$	
		W6: $x_i < 40.29$	W6: $x_i < 24.74$	

Source: Own elaboration based on (Zeliaś, 2000: 151).

4. Results and Discussion

By the adopted procedure and based on the values obtained for the individual indicators, the authors carried out a comparative analysis of the communes in terms of their financial condition. As a result, the values of the indicators, together with the classification of communes into the four groups, are presented in Table 2.

Table 2. Indicators of the financial condition of communes in Poland in 2010 and 2019 (in %)

Region*		Standard indicators						Authors' indicators					
	W1		W2		W3		W4		W5		W6		
	2010	2019	2010	2019	2010	2019	2010	2019	2010	2019	2010	2019	
DŚ	74.35	82.04	1.56	1.06	55.58	51.84	50.37	49.02	49.18	61.71	43.61	32.71	
KP	75.85	89.57	1.03	0.73	42.09	40.99	48.14	47.11	50.24	70.26	40.87	24.28	
LB	73.54	81.18	0.80	0.69	31.34	32.86	41.59	42.21	50.51	67.52	39.83	25.27	
LS	72.57	84.17	1.40	0.81	44.92	47.03	44.87	47.62	51.10	65.00	39.83	29.45	
ŁD	73.88	80.99	1.08	0.58	46.39	46.59	47.07	47.86	46.33	64.54	45.41	30.17	
MP	76.06	83.23	1.29	0.82	37.32	38.11	45.58	43.58	47.24	68.77	44.86	25.07	
MZ	75.53	83.41	1.30	0.65	49.44	45.76	46.62	45.63	43.10	65.07	51.59	30.35	
OP	76.70	83.07	0.86	0.68	47.85	46.43	43.71	43.91	48.02	61.16	45.60	33.53	
PK	75.20	81.41	0.96	0.68	33.07	35.21	44.79	42.48	52.30	66.80	38.63	26.08	
PL	72.23	80.80	0.92	0.62	37.87	39.65	46.26	48.54	47.00	64.39	45.56	26.08	
PM	73.54	82.78	1.24	0.80	44.78	41.21	46.99	46.17	48.42	71.33	44.88	23.69	
ŚL	76.34	83.67	0.92	0.59	53.86	48.79	45.77	43.25	43.31	60.27	49.27	34.54	

ŚK	71.45	81.87	1.08	0.90	35.13	37.50	44.69	44.62	56.05	65.69	34.85	26.73
WM	73.41	84.47	1.22	0.85	40.40	39.16	46.25	46.01	52.90	72.14	38.94	21.56
WP	77.01	84.55	1.13	0.70	49.62	45.61	47.22	45.69	47.98	67.89	48.59	28.06
ZP	76.47	85.83	1.59	0.77	51.29	50.23	47.91	47.97	50.75	64.74	42.92	30.31
\bar{x}_{i}	74.93	83.08	1.17	0.74	44.62	43.27	42.74	45.59	48.26	66.08	44.78	28.40
Sxi	1.71	2.15	0.23	0.12	7.22	5.43	3.89	2.13	3.36	3.37	4.49	3.66

Note: * markings as in Figure 1, green - group I, blue - group II, yellow - group III, red - group IV.

Source: Own elaboration based on the BDL data (www.stat.gov.pl- accessed 10.03.2021).

In assessing the financial condition of communes, one of the most commonly applied indicators is the one showing the share of current expenditure in the general expenditure. From 2010 to 2019, the level of current expenditure in respect of the expenditure in general (W1) in the statistical commune in Poland rose by over eight percentage points to reach 83.08%. This increase took place in communes of all the 16 voivodeships (Figure 2), from 6% (in Podkarpackie, Opolskie) up to nearly 14% (in Kujawsko-Pomorskie). After ten years, communes located in six voivodeships achieved the status of areas with a high or very high level of that indicator compared with the national mean, namely those in Kujawsko-Pomorskie, Małopolskie Mazowieckie, Śląskie, Wielkopolskie, and Zachodniopomorskie. In six other regions, the indicator remained relatively low, while in the remainder of the country, communes in some regions increased or reduced their distance from the national mean. In 2010 and 2019, there was a notable difference between the regions with the highest and the lowest levels of the analyzed indicator, which grew from over 5% to almost 9%.

On average, in Poland, during the examined period, there was a decrease in the burden of servicing debt within the current expenditure of communes (from 1.17% to 0.74%), and this change concerned all the regions. However, after the ten years under study, six voivodeships still reported in the least a high level of that indicator (W2), and in communes of eight regions, it was, at the most, low.

Particular attention should be drawn to the share of own revenue in the general revenue of communes (indicator W3), which reflects the level of self-sufficiency of a commune and its non-dependence on the revenue from the state budget. During 2010-2019, the average level of the indicator slightly decreased (by over one percentage point) to 43.27%, which occurred in communes in nine voivodeships. Communes located in most voivodeships retained their status regarding the national mean (except for those in Małopolskie, Pomorskie and Zachodniopomorskie), while the difference between communes in the individual regions was pretty significant. Whereas in 2010, communes in some voivodeships noted the share of their revenue in the general revenue at the level of 54% up to 56%, others reported only that of 31% up to 33%. In 2019 that difference, although somewhat reduced, remained high (19%).

Therefore, one can see the relevance of the share in state taxation in the amount of general revenue remaining at the disposal of individual communes. The lowest levels of that indicator were noted in communes in the regions where agriculture is the dominating source of income for their residents, while at the same time, there is a relatively low number of taxpayers registered as legal entities. Another picture of the financial condition of communes in Poland emerges when one examines it through the prism of the values of the indicators proposed by the authors of this study, which relate to the possibility of satisfying the needs of the residents of a local self-governing community.

In 2010, the average value of the authors' indicator W4 for the statistical commune in Poland amounted to 42.74%, and in 2019 it increased to 45.59%. After ten years, only the communes in six of the voivodeships increased their revenues to finance flexible expenditure on their tasks. In both years of understudy, a very high or high level of this indicator about the national mean was noted for communes in the same ten voivodeships located in the north and central of Poland. In five south regions (Małopolskie, Opolskie, Świętokrzyskie, Podkarpackie, Śląskie), the high level dropped to the low one, or very low one, while in Lubelskie the low level noted initially declined to the shallow one. In 2010 and 2019, there was a visible difference between the regions with the highest and the lowest level of the indicator, as some of them could allocate over 48% of their revenue on financing their flexible expenditure on their tasks, while others only 42% to 43%.

In 2019 the average level of the indicator W5 proposed by the authors amounted to 66.08% and was higher by almost 18 percentage points than in 2010. In all the voivodeships, communes raised the current flexible expenditure financed from the revenue allocated for their tasks (Figure 2). That increase fluctuated from nearly 10% (Świętokrzyskie) up to almost 23% (Pomorskie). On the national average scale in both analysed years, in communes of five voivodeships the value of this indicator was at least high (Kujawsko-Pomorskie, Lubelskie, Podkarpackie, Pomorskie, Warmińsko-Mazurskie), and in five voivodeships it was low and extremely low (Łódzkie, Mazowieckie, Opolskie, Podlaskie, Śląskie).

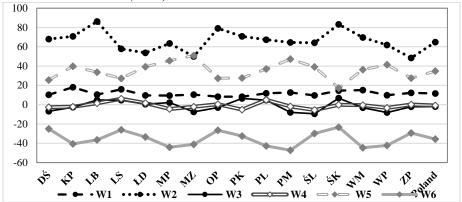
The significant spread in the values of W5 remained practically unchanged (13% in 2010 and 12% in 2019) because of the increase in both the maximum (by 16%) and minimum (by 17%) values. Even the level which in 2010 still qualified communes of a given region into the group with at least significant current flexible expenditure financed with the revenue allocated for their tasks, in 2019 became too low and did not appear for any statistical commune in any of the regions, and this means a deterioration in the financial condition of the analysed LGUs.

In 2010-2019, the average value of the indicator W6 proposed by the authors regarding the statistical commune in Poland decreased by over 16 percentage points (to 28.40%). Communes in all the voivodeships noted a decline in the share of funds allocated for financing fixed expenses within the revenues characterizing the financial

independence of local authorities. This drop varied from 8% (Świętokrzyskie) to over 21% (Mazowieckie). In four regions analysed in both years under study, the level of this indicator was at least high on the national scale (Dolnośląskie, Łódzkie, Mazowieckie, Opolskie, Śląskie, Wielkopolskie), and in five it was, at the most, low (Kujawsko-Pomorskie, Lubelskie, Podkarpackie, Świętokrzyskie, Warmińsko-Mazurskie). There was a decrease in the difference between the extreme values of this indicator for both years (from around 17% down to 13%) as a result of both the decline in the maximum value (by nearly 19%), as well as the minimum one (by over 13%). In 2019 no communes in any of the regions managed to obtain the lowest value of the indicator for 2010.

Therefore, the share of funds allocated for financing fixed expenditure within the revenue of LGUs characterized by financial independence dropped significantly. Such a change can be explained mainly by the improvement of the results for the operational budgets of communes (the positive difference between current revenue and current expenditure) during that period and their budget results in general (in 2010, an annual budget deficit was reported by 2153 communes, while in 2019 -1054). The effect was a drop in investment expenditure in these units (Kotlińska, 2018), confirmed by the change in their revenue structure. Loans and credit to finance investment in 2010 accounted for 66.3% of the revenues, whereas in 2019, merely 47.0%.

Figure 2. Speed of change in the values of indicators of the financial condition of communes in 2010-2019 (in %)



Note: Markings as in Figure 1. Source: Own elaboration.

5. Conclusions and Recommendations

Based on the carried-out research and conducted analyses, it can be stated that:

1) the financial condition of communes in Poland has varied over time (it was better in 2010 than in 2019) and spatially (a clearly visible differences in regard to various regions),

- 2) the financial condition of communes in Poland during the period 2010-2019, measured with standard indicators used by, among others, the Ministry of Finance in Poland, and also with indicators proposed by the authors of this study, is varied and thus the changes in the finances of these units of local government are assessed differently, although for both groups of indicators these changes are visible,
- 3) the changes in the values of standard indicators do not unambiguously indicate the directions of the changes (deterioration, improvement) in the financial condition of communes (a slight drop in the share of their own general revenues, lower costs of servicing debt within current expenditure, increased share of current expenditure in general expenditure), because an 'improvement' of a part of them does not mean the improved financial condition of the communes,
- 4) the changes in the values of the indicators proposed by the authors of this study, which describe the financial condition of communes-even though calculated based on the same statistical data as the standard ones -do not leave any doubt that during the period 2010-2019:
 - a) the financial condition of communes in Poland in regard of their ability to satisfy the needs of the local community has deteriorated;
 - on average in the country communes had at their disposal a bigger amount of own revenues to finance flexible expenditure on their own tasks, but their possibilities were spatially diversified because in ten voivodeships this level dropped;
 - c) there was an increase in current flexible expenditure financed with revenues allocated for communes' own tasks, which indicates a growing share of expenditure financed with transfers from the state budget;
 - d) there was a drop in the amount of revenues characterised by the high level of financial independence of communes, financing current expenditure connected with long-term contractual obligations and other obligatory payments), which indicates limiting investment expenditure in these units, representing their development and thus the better satisfaction of the needs of members of their local self-governing community;
- 5) the best financial condition during the study period was observed in communes located in the following voivodeships:
 - a) from the viewpoint of standard indicators, respectively:
 - W1, W2 -in Lubelskie, Podlaskie, Łódzkie,
 - W3 -Dolnoślaskie, Ślaskie,
 - b) from the viewpoint of the authors' indicators, respectively:
 - W4 -Dolnośląskie, Łódzkie, Zachodniopomorskie,
 - W5 -Warmińsko-Mazurskie, Podkarpackie,
 - W6 -Ślaskie.

The deteriorating financial condition of communes in Poland prompts the following recommendations:

- an increasing scope of communes' tasks and the related rise in current expenditure
 of these units, as well as the need for local authorities to satisfy the growing
 demand on the part of local communities for goods and services financed by
 LGUs, require relevant changes in the revenue system of these fundamental units
 of local government;
- 2) the revenue system of communes should consider to a higher degree the differentiation of these units manifested by:
 - a) the amount of revenues available to them, strongly linked to the type of business activities of their residents and the financial results of the legal entities located in their territories,
 - b) the obligatory financing of public tasks realised by the entities from outside the public finance sector,
 - c) the scale of functional properties comprised in the pool of communal real estate;
- 3) it is necessary to check the efficiency of the indicators constructed by the authors of this study in relation to larger sets of communities (divided into types), taking into account their location in regard to the town/the centre which affects the level and structure of their revenues (Kotlińska, 2019), as well as their budgetary expenditure, also in the longer term.

References:

- Berne, R. 1996. Measuring and Reporting Financial Condition. In: Handbook of Public Administration. Ed. Perry, J.L., San Francisco: Jossey-Bass. https://dx.doi.org./10.1111/j.1540-5850.2007.00872.x.
- Bieniasz, A., Gołaś, Z. 2015. Kondycja finansowa gmin wiejskich Wielkopolski w latach 2007-2011. Journal of Agribusiness and Rural Development, 1(35), 27-37. https://dx.doi.org/10.17306/JARD.2015.3.
- Cabaleiro-Casal, R., Buch-Gómez, E.J., Vaamonde Liste, A. 2013. Developing a Method for Assessing the Municipal Financial Health. American Review of Public Administration, 43, 6. https://accessed:10.1177/0275074012451523.
- Canadian Institute of Chartered Accountants (CICA). 2009. Public Sector Statements of Recommended Practice (SORP), 4. Indicators of Financial Condition, Toronto.
- Canadian Institute of Chartered Accountants CICA). 1997. Indicators of Government Financial Condition, Toronto.
- GASB (Governmental Accounting Standards Board). 1999. Statement no 34. Basic Financial Statements and Management Discussion and Analysis for State and Local Governments. GASB, Norwalk, CT.
- Groves, S.M., Godsey, W.M., Shulman, M.A. 1981. Financial indicators for local governments. Public Budgeting and Finance, 1. https://dx.doi.org./10.1111/1540-5850.00511.
- Hendrick, R. 2004. Assessing and measuring the fiscal heath of local governments, Urban Affaires Review, 40(1). https://dx.doi.org./10.1177/1078087404268076.
- ICMA (International City/County Management Association). 2003. Evaluating Financial Condition. A Handbook for Local Government. ICCA, Washington, DC.
- Kotlińska, J. 2018. The result of the LGU budget in the context of the mission of local governments, Studia Regionalne i Lokalne, 1. doi: 10.7366/1509499517102.

- Kotlińska, J. 2019. Wpływ lokalizacji gminy na wielkość i strukturę dochodów podatkowych. In: Wpływy podatkowe jednostek samorządu terytorialnego i czynniki je kształtujące. Ed. Śmiechowicz, J., Szołno-Koguc, J. Wyd. UMCS, Lublin.
- Lin, W., Raman, K.K. 1998. The housing value-relevance of governmental accounting information. Journal of Accounting and Public Policy, 17(2). https:///dx.doi.org./10.1016/S0278-4254(98)10004-2.
- Mercer, T., Gilbert, M. 1996. A financial condition index for Nova Scotia municipalities. The Government Finance Review, 12(5).
- Ministerstwo Finansów. 2020. Wskaźniki do oceny sytuacji finansowej jednostek samorządu terytorialnego w latach 2017-2019, Warszawa.
- Nollenberger, K., Groves, S.M., Valente, M.G. 2003. Evaluating Financial Condition: A Handbook for Local Government, Washington, DC. International City/County Managers Association.
- Ritonga, I.T. 2014. Modelling local government financial conditions in Indonesia. Victoria University Melbourne.
- Stanny, M. 2017. Pomiar kondycji finansowej jednostek samorządu lokalnego -kwerenda międzynarodowa, Nierówności Społeczne a Wzrost Gospodarczy, 49(1). doi: 10.15584/nsawg.2017.1.28.
- Wang, X., Dennis, L.M., Tu, Y.S.J. 2007. Measuring financial condition: A Study of US states. Public Budgeting & Finance, 27(2). https://dx.doi.org./10.1111/j.1540-5850.2007.00872.x.
- Zafra-Gómez, J.L., López-Hernández, L.M., Hernández-Bastida, A. 2009. Developing a Model to Measure Financial Condition in Local Government: Evaluating Service 184 lex localis. Journal of Local Self-Government.
- Zeliaś, A. (ed.). 2002. Taksonomiczna analiza przestrzennego zróżnicowania poziomu życia w Polsce w ujęciu dynamicznym, Wydawnictwo Akademii Ekonomicznej w Krakowie, Kraków.