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THE FINANCIAL CONDITIONS OF SUSTAINABLE DEVELOPMENT IN LOCAL GOVERNMENTS IN GMINAS OF THE SILESIAN VOIVODESHIP

Abstract. One of the most popular ideas behind development at all levels of management in recent years is sustainable development. This study attempts to analysis financial determinants of sustainable development in local governments. The paper included to analyse and evaluate budgetary revenues and expenditures on environmental protection in local government entities, their operational and total sustainability, based on the data obtained from the Central Statistical Office of Poland collected in Local Data Bank. The historical data collected in the study allowed for ex-post analysis, calculation of the necessary indicators and assess them in the years 2008-2014. The analysis was carried out through comparison, and the data for local governments in gminas of the Silesian Voivodeship were compared to arithmetic means of gminas in total in Poland.

Keywords: sustainable development, investment, local governments, budget

FINANSOWE UWARUNKOWANIA ZRÓWNOWAŻONEGO ROZWOJU SAMORZĄDÓW GMINNYCH W WOJEWÓDZTWIE ŚLĄSKIM

Streszczenie. Jedną z najpopularniejszych idei przyświecających rozwojowi na wszystkich poziomach zarządzania staje się w ostatnich latach zrównoważony rozwój. W opracowaniu podjęto rozważania na temat finansowych uwarunkowań ekorozwoju samorządów lokalnych. Przeprowadzono badania własne obejmujące analizę oraz ocenę dochodów i wydatków budżetowych JST poniesionych na ochronę środowiska, ich operacyjna i całkowitą zdolność do ekorozwoju na podstawie danych GUS zgromadzonych w Banku Danych Lokalnych. Zebrane dane historyczne umożliwiły podjęcie analizy ex-post, obliczenie wskaźników oraz dokonanie ich oceny w latach 2008-2014. Analiza została przeprowadzona w ujęciu porównawczym, dane samorządów gminnych w województwie śląskim odniesiono do średnich arytmetycznych dla gmin ogółem w Polsce.

Słowa kluczowe: ekorozwój, inwestycje, samorzady lokalne, budżet

1. Introduction

The problems of environmental protection are becoming more and more important in the context of local development and are reflected by both legal regulations and individual concepts of management. Sustainable development has evolved into one of the most popular ideas that promote development at all levels of management in recent years. The local level is becoming the most appropriate for sustainable development since a particular role is played by territorial self-governments. In particular, it performs the function of a host in its area while its statutory obligations include performance of tasks in the area of development of local environment¹. Therefore, the major principle of sustainable development is socio-economic growth which integrates political, economic and social initiatives while preserving balance in nature and ensuring sustainability of basic natural processes in order to guarantee meeting the basic needs of individual societies or citizens in both present and future generations². The main idea behind sustainable development is to preserve environment and natural resources for the generations to come, yet not through traditionally understood direct environmental protection but through changes in the model of development of civilization. These changes should consist in modification of the model of consumption, with less pressure on the environment as well as changing the system of values and the methods of management so that the environmental pressure does not exceed its capabilities of self-regulation³. The activities aimed at restoration of natural balance are impossible without investments in sustainable development. These investments represent the outlays connected with purchasing or producing physical property components necessary for performing the statutory tasks to protect the environment. In order to ensure that the investments are made, local governments must be equipped in suitable financial resources. However, limited internal resources often force these entities to use external funds.

Therefore, the main aim of the present study was evaluation of financial capacity of gminas (gminas are principal units of territorial division in Poland) in the Silesian Voivodeship for sustainable development. Due to the topic of this study, it is justified to bring closer the information about budgetary revenues and incomes in the entities of local government connected with environmental protection. The investigations presented in this paper attempt to answer to the following questions:

- What was the share of expenditures on municipal services management and environmental protection in the structure of budgetary expenditures in total in gminas of the Silesian Voivodeship compared to the gminas in total in Poland?

¹ J. Łukomska-Szarek: Ratio analysis in the process of management of sustainable development in local self-governments. „Sovremennyj Naucznyj Vestnik Seria: Ekonomiceskie nauki”, nr 1(140), 2013, pp. 85-97.

² A. Barczak: Zadania samorządu terytorialnego w zakresie ochrony środowiska. Dom Wydawniczy ABC, Warszawa 2006, s. 37.

³ J.S. Zegar: Kierowanie zrównoważonym rozwojem społeczno-gospodarczym. SGH, Warszawa 2003, s. 36.

- What shaped the structure of the percentage of expenditure on environmental protection in gminas of the Silesian Voivodeship compared to the gminas in total in Poland?
- What was the scope of investments in the area of environmental protection in local government entities?
- Was stagnation or a revival observed in Poland in 2008-2014 in investment activity of local government entities in the area of environmental protection?
- How has in the year 2008-2014 the total capacity for sustainable development in gminas of the Silesian Voivodeship compared to the gminas in total in Poland?

In order to deal with the above questions, the paper attempts to analyse and evaluate budgetary revenues and expenditures on environmental protection in local government entities. Against the background of the theoretical aspects, the study attempts to analyse and evaluate expenditures in gminas in the Silesian Voivodeship on the investments in sustainable development and financial sources used in these investments. The study points to total and operational capacity for development in local government. An additional indicator was also developed in order to evaluate total capacity for sustainable development in gminas. The analysis was carried out with dynamic approach based on the historical data from the Local Data Bank (Bank Danych Lokalnych, BDL). The period of the study was from 2008 to 2014.

2. The role of ecological investments in the management of sustainable development in gminas

Importance of local economy for development of particular gminas results from the changes which initiated the implementation of market economy and empowerment of local societies. The gmina is understood to mean a local and territorial social system with clearly defined borders and specific properties of the environment and socio-economic conditions⁴. Local development is connected with broadly understood socio-economic development of local societies. There are four basic goals of local development⁵:

- Building the optimum socio-economic spatial structure in a particular area to guarantee the most advantageous development of local economy.
- Development of an optimum functional system which ensures meeting the basic needs of the economy and inhabitants,
- Rational land development policies,
- Protecting environmental resources and preservation of the natural space.

⁴ D. Burzyńska: Rola inwestycji ekologicznych w zrównoważonym rozwoju gmin w Polsce. Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2012, s. 98.

⁵ M. Ziółkowski, M. Goleń: Zarządzanie strategiczne rozwojem lokalnym, [w:] H. Sochacka-Krysiak (red.): Zarządzanie gospodarką i finansami gminy. SGH, Warszawa 2006, s. 67.

An obligation to meet the basic needs of local societies results from compulsory provisions contained in the act on local self-government, although it can be pointed that the care for the economic development might limit other areas of development of society, such as the areas of environmental protection. Economic development often leads to the destruction and degradation of the environment and it should be emphasized that the deteriorating quality of the environment has a substantial effect on the quality of human life. Therefore, sustainable development is expected to represent the concept which does not inhibit economic development while preserving the natural environment⁶. The concept of sustainable development relates to a long-term ability of interaction between the economy and development while maintaining the criterion of proper attitude to the environment⁷. In the literature, sustainable development is often referred to as permanent development or eco-development⁸. The idea behind sustainable development is the change in disadvantageous trends in the environment which lead to increasing pollution and reduction in the gap between the rich and the poor⁹. The sustainable development idea postulates that implementing its assumptions and ingestion its convictions, can change human life in all globe for better. As per this philosophy, we should treat each other as a small part of enormous entity, and as a result look for people live comprehensively¹⁰. M. Keiner indicates that sustainable development is generally presented with respect to the three dimensions (and the relationships between each other): economy, society and environment¹¹.

In Poland, the theoretical aspects and implementing the concept of sustainable development has been disseminated among others through F. Piontek, and B. Piontek¹². According to the Environmental Protection Act in Poland, sustainable development means a socio-economic growth which integrates political, economic and social initiatives while maintaining balance in nature and in order to guarantee opportunities for meeting the basic needs of individual societies or citizens in both present and future generations¹³.

⁶ N. Carter: *The Politics of the Environment, Ideas, Activism, Policy*. Cambridge University Press, 2007, p. 195.

⁷ B. Piontek: *Koncepcje rozwoju zrównoważonego i trwałego Polski*. Wydawnictwo Naukowe PWN, Warszawa 2002, s. 14.

⁸ D. Burzyńska: *Rola inwestycji ekologicznych w zrównoważonym rozwoju gmin w Polsce*. Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2012, s. 29.

⁹ J.C. Dernbach: *Targets, Timetables and Effective Implementing Mechanism: Necessary Building Blocks for Sustainable Development*. "William & Mary Environmental Law and Policy Review", Vol. 27:79, 2002, pp. 78-136.

¹⁰ More on this topic: J. Blewitt: *Understanding Sustainable Development*. Earthscan, London 2008.

¹¹ M. Keiner: *Re-emphasizing sustainable development – the concept of 'evolutionability'*. "Environment, Development and Sustainability", No. 6, 2004, p. 381.

¹² Piontek B.: *Koncepcje rozwoju zrównoważonego i trwałego Polski*. Wydawnictwo Naukowe PWN, Warszawa 2002; Piontek F.: *Znaczenie narzędzi ekonomiczno-prawnych i rozwiązań organizacyjnych dla wdrażania rozwoju zrównoważonego*. „Rocznik Ochrony Środowiska (Annual Set The Environment Protection)”. No. 2, 2000, s. 237–26, Zaremba-Warmke S.: *Marketing jako narzędzie realizacji ścieżek strategicznych ekonomii zrównoważonego rozwoju*. „Rocznik Ochrona Środowiska (Annual Set The Environment Protection)”. No. 15, 2013, s. 2850–2862.

¹³ Ustawa z dnia 27 kwietnia 2001 r. – *Prawo ochrony środowiska* (Dz. U. 2001 Nr 62 poz. 627).

Sustainable development in local governments is determined by investment projects aimed at environmental protection. Gmina as the basic entity of local government has right to make independent decisions on the designation of the investment policies while choosing available and adequate resources and using suitable financial methods and instruments to implement these policies. The most of local investments are connected with social and technical infrastructure. Infrastructural and communal investments improve, in a permanent manner, the standard and quality of life of inhabitants and often affect the general improvement in the condition of the environment and often ensure proper conditions for development of business entities. Ecological investments are the most measurable, oriented not only towards the achievement of concrete material effects, but, first and foremost, towards improvement in the conditions in line with the environment and resources of the environmental development. They perform essential functions with substantial economic and social effect¹⁴. Ecological investments include in particular protecting water, air, ground, nature, landscapes and the environment against the noise as well as liquidation, utilization and treatment of the industrial and communal waste and land rehabilitation of landfills, spoil tips and sludge lagoons. The way of realization an investment undertaking in every local self-government unit as per sustainable development idea should make for creating these conditions which assure as small as possible threat for natural environment during implementing development process. Therefore the necessary is successive eliminating economic processes and activities (damaging for environment and people) with conservation appropriate the pace of economic growth¹⁵.

One can emphasize that the analysis of the literature points to the substantial role of ecological investments from the standpoint of local development, with particular focus on sustainable development in gminas. These investments represent an important instrument of management of sustainable development and the necessary element of the strategic policies.

3. Evaluation of budgetary expenditures in gminas in the Silesian Voivodeship on environmental protection in 2008-2014

Evaluation of investment expenditures on environmental protection was carried out based on the ex-post analysis and historical data obtained from the Central Statistical Office in Poland in 2008-2014. The major focus was on evaluation of the share of the expenditures on environmental protection in budgetary expenditures in total in local gmina governments. According to the division used of the budgetary classification, the expenditures on

¹⁴ D. Burzyńska: Rola inwestycji ekologicznych ..., op.cit., s. 233.

¹⁵ Łukomska-Szarek J.: Włóka M., The Sustainable Development Idea in Local Self-Government Units. "Oraldyn Fylym Zarsysy Seria: Ekonomiceskie nauki". 1(49), 2013, p. 75-83.

environmental protection are presented in total with communal expenditures. The Table 1 (below) contains the respective calculations for individual indicators.

Table 1

Ratio of expenditures on municipal services management and environmental protection in gminas of the Silesian Voivodeship compared to the gminas in total in Poland in 2008-2014 (in %)

TERRITORIAL UNIT		2008	2009	2010	2011	2012	2013	2014	
Gminas in total	Poland	W ₁	6,9	7,4	7,1	6,6	6,2	7,1	8,1
		W ₂	17	17,1	15,2	14,2	14,5	14,5	13,5
		W ₃	54,5	56,5	51,8	49,3	45,7	37,6	32,9
	Silesian Voivodeship	W ₁	10,6	11,5	8,6	7,2	7,1	8	9,7
		W ₂	30,4	30,2	20,9	16,4	16,7	16,3	17,3
		W ₃	64,9	68,4	54,4	47,1	46,0	42,2	40,7
Urban gminas	Poland	W ₁	6,8	7,4	6,3	5,3	5,2	6,3	7,5
		W ₂	16,3	17,7	12,7	9,2	10,1	10,8	10,3
		W ₃	55,3	58,3	45,8	39,2	39,8	32,4	27,6
	Silesian Voivodeship	W ₁	11,2	12,4	9,1	7,3	7,0	8,1	10
		W ₂	38,6	37,7	19,2	21,8	16,2	16,2	17,9
		W ₃	67,2	70,7	56,0	45,9	44,4	41,7	41,5
Urban and rural gminas	Poland	W ₁	8,8	8,6	9,4	9,7	9,0	9,3	10,3
		W ₂	32,9	33,7	24,3	17,1	26	24,4	22,2
		W ₃	57,3	54,9	58,0	59,3	54,3	44,6	39,9
	Silesian Voivodeship	W ₁	12,4	13,4	8,1	8,8	8,5	6,9	8,3
		W ₂	13,2	13,9	15,4	16,5	27,7	14,4	15,2
		W ₃	65,6	70,9	51,9	55,8	57,4	34,8	34,3
Rural gminas	Poland	W ₁	5,6	6,3	7,3	7,2	6,6	7,3	8
		W ₂	24,5	19,4	21,6	24,4	16,5	16,3	15,1
		W ₃	49,0	53,0	57,2	55,6	47,9	41,3	37,7
	Silesian Voivodeship	W ₁	5,9	5,3	5,9	6,4	6,6	7,9	8,8
		W ₂	11	8,1	9,4	12	15,2	17	14,7
		W ₃	40,4	36,4	44,2	48,6	48,9	47,3	38,1

* W₁ - The share of expenditures on municipal services management and environmental protection in the structure of budgetary expenditures in total in gminas; W₂ - Share of investment expenditures on municipal services management and environmental protection in total investment expenditures in gminas; W₃ - The share of investment expenditures in the structure of budgetary expenditures in total on municipal services management and environmental protection in gminas.

Sources: own calculations based on BDL, GUS.

Analysis of these indicators reveals that the share of expenditures on environmental protection was declining from 2009 to 2012, both in the gminas in the Silesian Voivodeship (from 11.5% to 7.1%) and in Poland in total (from 7.4% to 6.2%). However, it should be stressed that a regression in the expenditures on municipal services management and environmental protection in total was observed first and foremost in urban gminas in the Silesian Voivodeship (from 12.4% to 7%) while rural gminas were characterized by an increase in this measure (from 5.3% to 6.6%). Breaking the declining trend occurred in 2013 and continued in 2014. The total gminas in Poland increased share of spending on

environmental protection in the structure of total budgetary expenditures, first to 7.1% and then to 8.1%, while gminas in the Silesia province to 8% and 9.7%.

Furthermore, while evaluating the expenditures on the investments in sustainable development, it is useful to analyse the share of the investment expenditures on municipal services management and environmental protection in the investment expenditures in total. Detailed figures are presented in the Table 1 below. Investment expenditures on municipal services management and environmental protection accounted to over 30% of the investment expenditures in total in gminas of the Silesian Voivodeship in the first two years of the study. However, next years showed a decline in this value to ca. 21% and to over 16% in 2011-2012. These values were considerably higher compared to the arithmetic mean in gminas in total in Poland. Except for 2010, the highest values of the analysed index were reported by municipal and rural gminas while the lowest levels were found in rural gminas. In 2014 gminas located in the Silesia province generate higher expenditures on municipal services management and environmental protection, their share in total investment expenditure amounted to 17.3% and was 3.8% higher compared to the total gminas in Poland.

Furthermore, another indicator that represents the share of investment expenditures on municipal services management and environmental protection in budgetary expenditures in total can also be evaluated. A detailed comparison is presented in the data contained in Table 1. Investment expenditures in the structure of budgetary expenditures on municipal services management and environmental protection in total exhibited a declining tendency, although it can be indicated that in the first years of the analysis, the gminas in the Silesian Voivodeship in total were characterized higher indicators of over 60% compared to the arithmetic mean in Poland. However, from 2010, the amplitude of fluctuations ranged from 1 to 3%, and in 2014, up about 7%. Municipal gminas in the period of the study generated higher expenditures on sustainable development investments until 2010 while rural gminas spent more in 2011-2013.

Table 2

The structure of expenditures on the environmental protection in gminas of the Silesian Voivodeship compared to the gminas in total in Poland in 2008-2014 (in %)

SPECIFICATION		2008	2009	2010	2011	2012	2013	2014
Environmental protection expenditure in total		100	100	100	100	100	100	100
Expenditure on protection of ambient air and climate	Poland	2,00	1,00	1,40	2,30	2,60	2,4	3,9
	Silesian Voivodeship	4,40	2,00	3,90	5,60	5,60	5,9	2,5
Expenditure on wastewater management and water conservation	Poland	90,40	91,30	87,70	84,30	84,50	56,8	36,1
	Silesian Voivodeship	93,00	95,80	87,80	79,90	81,10	64,6	50,9
Expenditure on waste management	Poland	7,60	7,80	10,90	13,40	12,90	40,9	60,1
	Silesian Voivodeship	2,70	2,20	8,30	14,50	13,30	29,7	46,8

Sources: own calculations based on BDL, GUS.

The specific role in the structure of the expenditures on the environmental protection was played by the expenditures on air and climate protection, which is illustrated by the data contained in the Table 2. Their share ranged in the period studied from 1% to 3.9% in gminas in total in Poland and from 2% to 5.9% in gminas in the Silesian Voivodeship. It should also be indicated that the lowest values of the measure studied were observed in 2009 and 2014, while the following years showed a progression.

In 2008-2014, the expenditures on sewage management and water protection were characterized by both an increase and a decline and they accounted for from 36.1% to 91.3% of the expenditures on environmental protection in total in Poland and for from 50.9% to 95.6% in gminas in the Silesian Voivodeship. A relatively low share of the expenditures on waste management in gminas of the Silesian Voivodeship in 2008-2009 (over 2%) accounted in the following years 2010-2012 to from 8.3% to 14.5%, while from 2013 they have seen their soaring to 29.7% and in 2014 year to 46.8%. Gminas in total in Poland in 2011-2012 exhibited the values lower compared to gminas in the Silesian Voivodeship. Expenditure on waste management accounted for in 2014 until 60.1%.

4. Analysis of the investment potential of gminas in the Silesian Voivodeship

Analysis of the financial conditions for sustainable development in gmina local governments in the Silesian Voivodeship should be started from the evaluation of their developmental potential. Therefore, two indicators were used for quantification of operational and total capacity of local governments for development. Detailed calculations are contained in Table 3. Informational content of the above measures points to the opportunities for financing the outlays connected with development of local governments in gminas. Analysis of the operational capacity for development does not take into consideration the property revenues (the indicator can be used for projection of working expenses) whereas total capacity for gmina development includes these revenues, although they have minor effect¹⁶.

The ex-post analysis of financial capacity for development of gminas in the Silesian Voivodeship was based on the data available in the website of the Central Statistical Office in the Local Data Bank. The first step was to evaluate current revenues and expenditures, property revenues and budgetary revenues in total in local governments.

¹⁶ Dylewski M.: Przegląd metod oceny sytuacji finansowej JST, [w:] B. Filipiak (red.): *Metodyka kompleksowej oceny gospodarki finansowej jednostki samorządu terytorialnego*. Difin, Warszawa 2009, s. 197; M. Dylewski, B. Filipiak, M. Gorzałczyńska-Koczkodaj: *Metody analityczne w działalności jednostek podsektora samorządowego*. Difin, Warszawa 2010, s. 116-117; Łukomska-Szarek J.: *Operacyjna i całkowita zdolność do rozwoju jednostek samorządu terytorialnego*, [w:] H. Brandenburg (red.): *Projekty regionalne i lokalne – uwarunkowania społeczne i gospodarcze*, Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, Katowice 2012, s. 215.

Table 3

Operational and total capacity of development in gminas of the Silesian Voivodeship compared to the gminas in total in Poland in 2008-2014 (in %)

Specification		2008	2009	2010	2011	2012	2013	2014
Operational capacity of development in a unit of territorial self-government = $\frac{\sum_{t=1}^n (DB_t - WB_t)}{\sum_{t=1}^n DB_t} * 100$	Poland – Gminas in total	13,4	8,6	6,4	7,0	7,1	8,9	9,7
	Silesian Voivodeship – Gminas in total	14,4	8,2	8,4	9,1	7,8	8,4	10,1
Total capacity of development in a unit of territorial self-government $= \frac{\sum_{t=1}^n (DB_t - WB_t + DM_t)}{\sum_{t=1}^n D_t} * 100$	Poland – Gminas in total	19,9	15,7	16,3	17,2	17,4	17,7	18,4
	Silesian Voivodeship – Gminas in total	22,3	16,9	18,6	18,6	17,3	18,1	20,1

*DB_t – current revenues in a year t; WB_t – current expenditures in a year t; DM_t – property revenues in a year t; D_t – revenues in total in a year t.

Sources: own calculations based on BDL, GUS.

The next step was to compute individual indices that were analysed in 2008-2014, which also allowed for evaluation of the tendencies for changes in the analysed values. Analysis of the operational capacity of local governments in gminas of the Silesian Voivodeship points to a regression in the indicator studied in 2007-2010 from 15.6% to 8.4%. In 2011, this value was 9.1% and in 2012 it declined to 7.8%. A downward tendency was also recorded in 2007-2010 and in 2012 in gminas in Poland in total, although it can be emphasized that the gminas of the Silesian Voivodeship showed in the years studied higher operating capacity for development. Only in 2013-2014 there was an increase both operational and total capacity of development in local governments (in the Silesian province indicators were characterized by a progressive and were higher in the compared to gminas in Poland).

In the case of total capacity for development, gmina self-governments in the Silesian Voivodeship in 2007-2012 were characterized by higher investment potential compared to gminas in Poland in total. Urban gminas of the Silesian Voivodeship in 2007-2009 and 2010-2012 showed a declining tendency in developmental potential.

For the purposes of the present paper, a specific indicator was developed to measure total capacity of territorial self-government entities for sustainable development. It is given by the following formula:

Total capacity for sustainable development in a unit of territorial self-government =

$$\frac{\sum_{t=1}^n (DBOS_t - WBOS_t + DMOS_t)}{\sum_{t=1}^n DOS_t} * 100 \quad (1)$$

where:

DBOS_t – current revenues generated in the field of municipal services management and environmental protection in a year t;

WB_t – current expenditures generated in the field of municipal services management and environmental protection in a year t ;

$DMOS_t$ – property revenues generated in the field of municipal services management and environmental protection in a year t ;

DOS_t – revenues in total generated in the field of municipal services management and environmental protection in a year t .

The above indicator determines the capacity of local governments for financing the outlays for sustainable development investments from budgetary revenues generated through municipal services management and environmental protection. In the case of an operating surplus, local governments are allowed to use it for the investments in sustainable development. However, the needs in the field of ecological investments are much higher than the revenues generated. Therefore, it is necessary to acquire additional financial sources (especially EU funds, ecological funds, credits and loans). In the case of gminas in the Silesian Voivodeship in 2010, a positive value of the analysed indicator was recorded (15.4%). Other years have seen negative levels, which forced the gminas to look for additional financial resources on ecological investments.

Table 4

Total capacity for sustainable development in gminas of the Silesian Voivodeship compared to the gminas in total in Poland in 2008-2014 (in %)

TERRITORIAL UNIT		2008	2009	2010	2011	2012	2013	2014
Gminas in total	Poland	-108,3	-115,9	-22,4	-39	-35,4	-81,3	-105,7
	Silesian Voivodeship	-3	-15,3	15,4	-16,5	-4,4	-702,9	-852,3
Urban gminas	Poland	-74	-96,8	-39,6	-86,5	-74	22,1	5,6
	Silesian Voivodeship	7,2	-4,6	20,4	-14,2	-0,7	-86	-103,9
Urban and rural gminas	Poland	-153,5	-170,5	-13,3	-4,5	-3,9	-76,9	-85,6
	Silesian Voivodeship	-2,5	0,8	24,4	15,1	-15	-519	-431,7
Rural gminas	Poland	-206,8	-124,7	-0,5	-9,7	-12,3	8,7	9,3
	Silesian Voivodeship	-198,2	-271,7	-43,7	-64,7	-27,4	-49,1	-183,2

Sources: own calculations based on BDL, GUS.

It can be concluded based on the data contained in Table 4 that, despite the negative values of individual indices, gminas in the Silesian Voivodeship were characterized by higher total ability for sustainable development compared to gminas in total in Poland in 2008-2012. This concerned in particular the urban gminas and combined urban and rural gminas. The highest total capacity for sustainable development over the years studied was found in the urban and rural gminas in the Silesian Voivodeship - they generated positive indicators in 2009-2011 at the level of 0.8%, 24.4% and 15.1%, respectively. Urban gminas in 2008 recorded a positive value of the indicator (7.2%) while its value in 2010 rose to 20.4%.

5. Conclusions

The study confirmed the thesis of the higher degree of financial capacity for development, with particular focus on sustainable development in gmina self-government in the Silesian Voivodeship. In 2008-2012, these entities reported higher indices of investments in sustainable development compared to the Polish gminas in total. Investment expenditures on environmental protection accounted for over 30% of investment expenditures in total in gminas of the Silesian Voivodeship in the first two years of the study. However, the following years showed a decrease in this value to over 16% in 2012. The main determinant of these changes was the economic slowdown that resulted from the financial crisis started in the USA, which quickly affected the economic conditions in the European countries. Local governments, particularly in 2011-2012 were exposed to the effect of the crisis, which manifested itself in lower dynamics of budgetary revenues and translated into a slowdown in their investment activity.

Higher outlays on ecological investments were observed in the combined urban and rural gminas while the lowest values were found in rural gminas. This was caused by their total capacity for sustainable development. In the case of rural gminas, negative levels of the analysed measure were recorded, which led to the necessity for finding other sources of finance than budgetary revenues. The study demonstrated that the structure of expenditures for environmental protection was dominated by those connected with sewage management and protection of water. However, in 2013-2014, the substantial share was also observed for expenditures on waste management, with the least share found for the expenditures on air and climate protection. It can be stressed that financial capabilities to support sustainable development of local governments in gminas of the Silesian Voivodeship and in Poland are limited, with the most of indicators being negative over the period of 2008 to 2014. However, these entities in the period of the study started investments in terms of environmental protection. Although a gradual regression in investment expenditures in this area in expenditures in total was recorded, a gradual revival could be observed in 2013-2014.

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