Sustainable development of rural municipalities of the Wielkopolska Voivodship – an attempt at evaluation

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Abstract: The article is an attempt at presenting the possibilities for applying one of the available research methods to the evaluation of sustainable development. The undertaken research seems to be particularly challenging to conduct due to methodology problems (in terms of the selection of indicators, the availability of data, and the evaluation of the results), however, it seems to be relatively significant for the research on sustainable development in a broader context. The aim of this study is to evaluate the sustainable development of rural municipalities of the Wielkopolska Voivodship (the Polish superior administrative unit). In the analysis of the subject matter of the study, the taxonomic method (the linear ordering method) was used, which allows extracting the areas which are similar in terms of the studied features, as well as dividing them into the regions of similar conditions for development. Having analyzed the reference data and the selected synthetic sustainable development indicators, it seems that it is the economic aspect which undermines the level of sustainability of Wielkopolska Voivodhip's rural municipalities.

Keywords: sustainable development, rural areas, rural municipalities, taxonomic methods

JEL codes: Q01, R58

1. Introduction

The intensified industrial activity, the negative changes occurring in the natural environment, and the exacerbation of social problems are the cause of an increased interest in the idea of sustainable development. Although the aims, rules and methods employed in order to support this

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form of development are fairly well identified on the level of various research areas, the sustainable development of rural areas still requires a deeper analysis.

As a consequence of lifestyle changes and the progress of civilization, rural areas are facing the challenge of fulfilling certain modern functions. The production of public goods and the protection of the environment require the commitment on the part of both the inhabitants and other entities functioning in these areas. A special role in the implementation of the rules of sustainable development is played by the local governments of rural municipalities. Their decisions have an impact on the coherence, purposefulness, and efficiency of the undertaken actions, as well as on combining the social goals with the strategic vision of the development of a municipality. Sustainable development is a vital condition for the competitiveness of rural areas. In the process of building this competitiveness, more and more significance is attached to the local knowledge and the involvement of the members of the local communities[1]. The scale and the pace in which the rules of this development are implemented are determined by the efficiency of a local government, its condition and preparedness to apply modern solutions, supported by the knowledge about the local resources and the opportunities and threats related to the development of municipalities.

The aim of this study is to evaluate the sustainable development of the rural municipalities of the Wielkopolska Voivodship. The undertaken research seems to be particularly difficult to conduct due to methodology problems (in terms of the selection of variables, the availability of data, and the evaluation of the results), however, it seems to be relatively significant for the research on sustainable development in a broader context.

2. The essence of the sustainable development of rural areas

The paradigm of sustainable development has occupied the foremost position in the strategies for development employed on the global, regional, and local scale[2]. Although the awareness that sustainable development is the right choice is becoming increasingly common, putting its tenets

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[1] Local knowledge is understood as the knowledge used on a daily basis by the members of a local community.

[2] The problem of sustainable development is also present in the key strategies: *The 2030 Agenda for Sustainable Development, Sustainable Development Goals,* United Nations, New York, 25-27 September 2015; *Europe 2020. Strategy for Intelligent Development, Supporting Social Inclusion,* The European Commission, Brussels, 3 March 2010; *Strategy for Sustainable Development of Rural Areas, Farming and Fisheries 2012-2020*, Ministry of Agriculture and Rural Development, Warsaw, 25 April 2012, *Sustainable Development Strategy for Poland up to 2025,* Ministry of Environment, Warsaw, December 1999.

into practice of the economic, social and political life encounters difficulties and still poses a serious problem. When confronted with reality, the strategies for local and regional development based on the tenets of sustainable development frequently fail to produce satisfactory results. The actual scope of the undertaken actions indicates that sustainable development is often a mere declaration which does not always translate into real action. Difficulties in pursuing strategies cannot, however, lead to giving up building them altogether, since by means of setting the objectives of a strategy, the society makes a choice which reflects their values and expectations.

Sustainable development of rural areas has a special place in this strategy towards development due to the significance of the functions performed by rural areas in the whole social – economical system of a given country. According to the classification presented by Wilkin (2007: 3-5), the basic functions of rural areas include:

1) economic functions with a commercial and non-commercial character, concerning not only agricultural production, but also increasingly varied economic activity performed in rural areas.

2) nature functions – connected with the use of the natural resources in manufacturing processes and for municipal aims,

3) social functions, concerning broadly understood living conditions of the inhabitants of rural areas, satisfying their various needs, e.g. connected with livelihood, education, culture, healthcare and politics,

4) cultural functions, relating to maintaining and developing rural cultural traditions which are the essence of local, regional and national identity.

The subject matter literature emphasizes that the essence of the sustainable development of rural areas which results directly from the functions they perform is not only the obvious aiming at improving the level and quality of life of the inhabitants, but it also consists in the provision of public goods, without which addressing the needs of all the members of a community would be doomed to failure. The public goods provided by rural areas include (Vatn, 2001, cited in Falkowski, 2010: 55; Niedzielski, 2015: 86):

▪ environmental goods, such as biodiversity, landscape, soil quality, and hydrographic conditions,

▪ economic goods, among which the most important is food safety, food security, and energy security,

- social – cultural goods, including economic and social viability of rural areas, enriching the national culture, shaping the local, regional and cultural identity.

From this point of view, all strategies towards the development of rural areas should be modelled in such a way that by means of social-economic policies sustainable and multifunctional development of these area is ensured, having regard to general and local conditions. However, it should be borne in mind that one of the major stages of the implementation of the concept of sustainable development means putting into practice particular rules and monitoring the progress of this process. The result of such supervision allows the evaluation of the attained results and drawing a map for the future directions of development. Despite a highly limited database needed to evaluate the progress of the growth of the sustainability of rural areas development, it seems essential to make an attempt at using it, even with the awareness of its limitations, which prevent the analysis from being precise and accurate.

3. Methodology

The content of the study includes the analysis and evaluation of the extent to which the development of the rural areas of the Wielkopolska Voivodship is sustainable. The object of the study are all rural municipalities of Wielkopolska in 2009 and 2014. The analysis of the research problem was conducted with the use of the method of taxonomic measure (the linear ordering method) allowing finding areas which are similar to each other in terms of the studied features and clustering them into the regions with similar conditions for development (Mruk et al., 2003: 203). The indicators applied in the analysis were the subjective choice of the authors and are among a number of possible solutions to the research problem.

One of the key stages of this method is a proper selection of diagnostic variables. To date, no complex set of features has been compiled which could be employed to evaluate the level of the sustainability of development. It implies the necessity to use selected, and above all, available features (Kołodziejczyk et al., 2014: 26). The study was conducted with the use of data collected by the Central Statistical Office in the Local Data Bank. The character of the variables was identified on the basis of substantive premises. The Pearson correlation coefficient, as well as the

coefficient of variation were used to evaluate the usefulness of the considered potential variables. The set of variables selected for the study and their character are presented in Table 1[3].

Table 1. The evaluation of the sustainability of Wielkopolska Voivodship's rural municipalities - the character of the studied features

Specification	Name of variable	Type of variable
ECONOMIC DIMENSION		
X1	Municipalities' own revenues per capita (in PLN)	STIMULANT V.
X2	Employment rate per 1,000 population	STIMULANT V.
X3	Officially registered unemployment rate (in% of working age population)	DESTIMULANT V.
X4	Economic operators per 1,000 population in working age	STIMULANT V.
SOCIAL DIMENSION		
X5	Municipalities' expenditure on schooling and education (PLN per capita)	STIMULANT V.
X6	Municipalities' expenditure on culture and the conservation of the national historic and artistic heritage (PLN per capita)	STIMULANT V.
X7	Municipalities' expenditure on fire and public safety measures (PLN per capita)	STIMULANT V.
X8	Internal migration balance (no. of persons)	STIMULANT V.
X9	Public libraries borrowers per 1,000 population	STIMULANT V.
ENVIRONMENTAL DIMENSION		
X10	Municipalities' expenditure on municipal services and environment protection (PLN per capita)	STIMULANT V.
X11	Annual use of water in rural households per capita (in m^3)	DESTIMULANT V.
X12	Population using a sewerage system, in % of total population	STIMULANT V.
X13	Forest cover (in %)	STIMULANT V.

Source: own elaboration.

The basic measures of descriptive statistics of diagnostic variables to be further analyzed are presented in Table 2. As seen in the compilation, the highest variation (both in 2009 and 2014)

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[3] Initially, 25 variables were selected for the study. Due to the formation of correlations between the variables and the references of the coefficients to their critical values, 10 variables were eliminated. The critical value of the coefficient of variation was 10%, which resulted in the elimination of further 2 variables which did not meet the requirement of adequate diversity.

occurred in the case of the internal migration balance (3.54 and 4.11), and the lowest variation in the case of municipalities' expenditure on schooling and education per capita (0.18 and 0.14).

Table 2. The evaluation of the sustainability of Wielkopolska Voivodship's rural municipalities - basic characteristics of the breakdown of the selected diagnostic variables

Variable	Mean		Standard deviation		Variation coefficient		Minimum		Maximum	
	2009	2014	2009	2014	2009	2014	2009	2014	2009	2014
X1	1012.93	1438.70	687.29	777.13	0.68	0.54	370.50	681.04	5080.63	5453.91
X2	127.28	142.90	102.28	116.08	0.80	0.81	23.53	24.53	862.24	881.09
X3	6.87	6.02	2.74	2.56	0.40	0.43	1.66	1.78	13.13	12.64
X4	107.51	126.53	36.81	44.26	0.34	0.35	51.18	60.61	274.61	348.70
X5	1051.34	1290.27	191.94	185.90	0.18	0.14	604.46	797.51	1805.64	2170.67
X6	78.65	125.81	50.70	77.85	0.64	0.62	9.83	17.03	312.81	393.29
X7	34.51	34.57	31.81	20.90	0.92	0.61	6.56	10.50	203.91	113.97
X8	42.76	32.67	151.55	134.13	3.54	4.11	-82.00	-72.00	1056.00	922.00
X9	139.21	130.72	53.74	58.46	0.39	0.45	0.00	0.00	283.05	318.12
X10	110.61	192.62	73.93	116.06	0.67	0.60	36.13	40.42	524.85	749.11
X11	35.45	37.84	10.78	8.81	0.30	0.23	14.70	19.50	91.30	69.60
X12	31.41	45.14	17.26	21.96	0.55	0.49	0.00	0.00	68.60	99.90
X13	22.00	22.14	14.39	14.45	0.65	0.65	0.38	0.39	69.71	69.73

Source: own calculation.

One of the stages of the taxonomic method is the normalization of variables with different names and a varied range of values. The analysis used one of the methods employed in normalization, i.e. the zero unitarization method, with the following formula (Olejnik, 2006: 198-199)[4]:

a) for stimulant variables:

$$z_{ij} = \frac{x_{ij} - \min x_{ij}}{\max x_{ij} - \min x_{ij}}$$

b) for destimulant variables:

$$z_{ij} = \frac{\max_{ij} - x_{ij}}{\max x_{ij} - \min x_{ij}}$$

where:

z_{ij} – normalized value of j-variable of i-municipality

x_{ij} – value of j-variable of i-municipality.

On the basis of the set of normalized diagnostic variables, the synthetic indicator of development was established, i.e. a taxonomic measure of sustainable development of a

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[4] Apart from unitarization, the subject matter literature includes the following methods of normalization: ranking of variables, procedures based on quotient transformation and the standardisation of variables (Mynarski et al., 1992: 122-125).

municipality (TMSD) for particular orders and a general indicator for 2009 and 2014[5]. For this purpose, the non-model linear ordering method was employed[6]:

$$TMSD_t = \frac{1}{m}\sum_{j=1}^{m} Z_{ij}$$

where:

t – sequence number of a municipality

j – sequence number of diagnostic variable

m – diagnostic variables in total.

The results of linear ordering were the basis for clustering the municipalities into homogenous groups, with the same attained level of sustainability of development both in general and particular dimensions in 2009 and 2014. The classification of the municipalities was based on the value of the mean synthetic indicator (for the whole studied population) and standard deviation from the mean. In the case of the indicators specifying the level of sustainable development in general and in the economic, social and environmental dimensions, four groups of the values of the indicators were established for each dimension, in which the groups of municipalities were included:

- with a very high level of development,
- with a high level of development,
- with a low level of development
- with a very low level of development[7].

The obtained results allowed specifying the aspects of sustainable development which undermine the level of sustainability of a municipality.

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[5] A synthetic sustainable development indicator assumes the values from the range [0,1] – the higher the value of an indicator, the better the situation of an object (Łogwiniuk, 2011:15).

[6] Non-model formulas of the aggregation of variables typically consist in the averaging of the values of the normalized variables Z_{ij} in the section of variables, taking into account the weighting factors. Among the various weighting systems, the most common weighs in empirical research are stable ones, which means that each variable in a taxonomic analysis has the same significance. It is compliant with the essence of sustainable development, which assumes that the orders: economic, social and environmental, are equal. Apart from non-model methods, there are also model methods which require constructing a model object (Mynarski et al., 1992: 122, 131).

[7] Rural municipalities with a very high level of development: $(TMSD_{med.} + \sigma)$ and more; rural municipalities with a high level of development: $(TMSD_{med.})$ to $(TMSD_{med.} +\sigma)$; rural municipalities with a low level of development:: $(TMSD_{med.})$ to $(TMSD_{med.} - \sigma)$; Rural municipalities with a very low level of development: $(TMSD_{med.} - \sigma)$ and less.

4. Results of the study

Evaluating the level of the sustainability of the development of Wielkopolska's rural municipalities in 2009 and 2014, it can be stated that each time a majority of municipalities presented a low level - a low and very low synthetic sustainable development indicator in both cases concerned about 55% of the municipalities (Table 3 and Figure 1). For each aspect of sustainable development, the highest percentage of the municipalities achieved a low level of development. In the case of the economic dimension, there were 51.3% of such municipalities in 2009 and 43.5% in 2014, and in the case of social order the percentage was 42.6% and 47.8% respectively. The percentage of the municipalities with a low level of development in the environmental dimension stood at 34.8% and 37.4%.
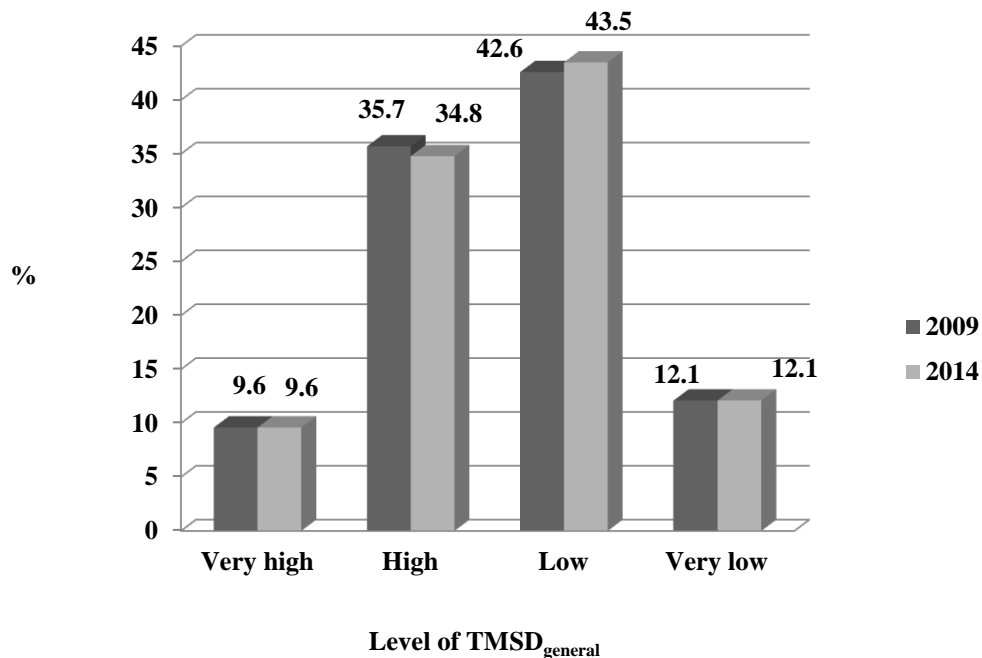
Table 3. Wielkopolska Voivodships' rural municipalities - the level of sustainability of development

Synthetic sustainable development indicator	2009		2014	
	TMSD value	No. of municipalities	TMSD value	No. of municipalities
$TMSD_{general}$				
- very high	above 0.3969	11	above 0.4097	11
- high	0.3152-0.3969	41	0.3226-0.4097	40
- low	0.2335-0.3151	49	0.2378-0.3225	50
- very low	below 0.2335	14	below 0.2378	14
$TMSD_{economic.}$				
- very high	above 0.4017	12	above 0.4193	13
- high	0.2644-0.4017	33	0.2848-0.4193	40
- low	0.1271-0.2643	59	0.1503-0.2847	50
- very low	below 0.1271	11	below 0.1503	12
$TMSD_{social}$				
- very high	above 0.3558	13	above 0.3783	17
- high	0.2684-0.3558	39	0.2794-0.3783	33
- low	0.1810-0.2683	49	0.1805-0.2793	55
- very low	below 0.1810	14	below 0.1805	10
$TMSD_{environmental}$				
- very high	above 0.5091	16	above 0.5027	18
- high	0.4128-0.5091	41	0.4035-0.5027	37
- low	0.3165-0.4127	40	0.3043-0.4034	43
- very low	below 0.3165	18	below 0.3043	17

Source: own calculation.

As results from Table 3, among the three dimensions of sustainable development, it was the environmental dimension for which the highest percentage of the municipalities achieved a very high TMSD – 13.9% in 2009 (10.4%, for the economic, and 11.3% for the social dimension), in 2014 it reached the level of 15.7% (11.3%, for the economic, and 14.8% for the social dimension).

Figure 1. The structure of the Wielkopolska Voivodships' rural municipalities according to the level of the sustainability of development

Source: own elaboration on the basis of Table 3.

On the basis of the conducted analysis of reference data and the calculated synthetic sustainable development indicators – in general and in particular dimensions, it seems that what has undermined the level of sustainable development of the rural municipalities of the Wielkopolska Voivodship to the greatest extent is the economic dimension. This is evidenced, inter alia, by the fact that in 2009 over 60% of the analysed units had a low and very low level of development in the economic dimension, but also by the fact that it was the only dimension of sustainable development, in the case of which the percentage of the municipalities with its very low level increased in 2014.

The comparison of the structure of the rural municipalities of the Wielkopolska Voivodship specified on the basis of the level of the sustainability of development in particular dimensions allows the conclusion that in 2014, as compared with 2009, the percentage of the municipalities characterised by a high level of development increased in each dimension. Probably it is not a significant increase: 1-3.5%, however, taking into account the fact that the factors influencing sustainable development of rural areas are multidimensional and complex, it should be expected that the results of many actions undertaken with a view to accomplishing such development can be visible neither soon nor as a dynamic improvement of the indicators. In some cases, a 5-year comparative period may not suffice.

The environmental dimension of the sustainable development of rural areas proved to be exceptional compared with other dimensions due to the highest percentage of municipalities with both very high (14-15%), and very low indicator of development (15-16%) in both years. This phenomenon indicates that undoubtedly the implementation of pro-environmental activities by individual municipalities differ. Since pro-environmental activities are usually connected with high costs, projects which are the most frequently carried out are the pro-environmental ones, since they are enforced by law.

The most dynamic and at the same time vital changes in the structure of the rural municipalities of Wielkopolska can be observed between 2009-2014 in the case of the structure of the units analysed in the aspect of social development. The percentage of the municipalities with a very high level of development increased by 3.5% (from 11.3% in 2009 to 14.8% in 2014), by the same amount decreased the percentage of the municipalities with a very low level of development (from 12.2% in 2009 to 8.7% in 2014). It indicates the intensified activities of many local government bodies of rural municipalities in terms of solving social problems, but still a prevalent number of the municipalities finds it difficult to carry out their social tasks, which is evidenced by the fact that in 2014 as many as 65 out of 115 studied municipalities achieved a low or very low level of development in the social dimension.

The completion of the goals of sustainable development and the implementation of its rules largely depend on the financial situation of a given local government unit. This argument can be verified by finding a correlation coefficient between the municipalities' own revenues per capita and the formation of the synthetic sustainable development indicator and indicating the breakdown of the above features together with the regression function (Figure 2 and 3).

Figure 2. The correlation between the synthetic sustainable development indicator (general) and municipalities' own revenues per capita (scatter graph, 2009)
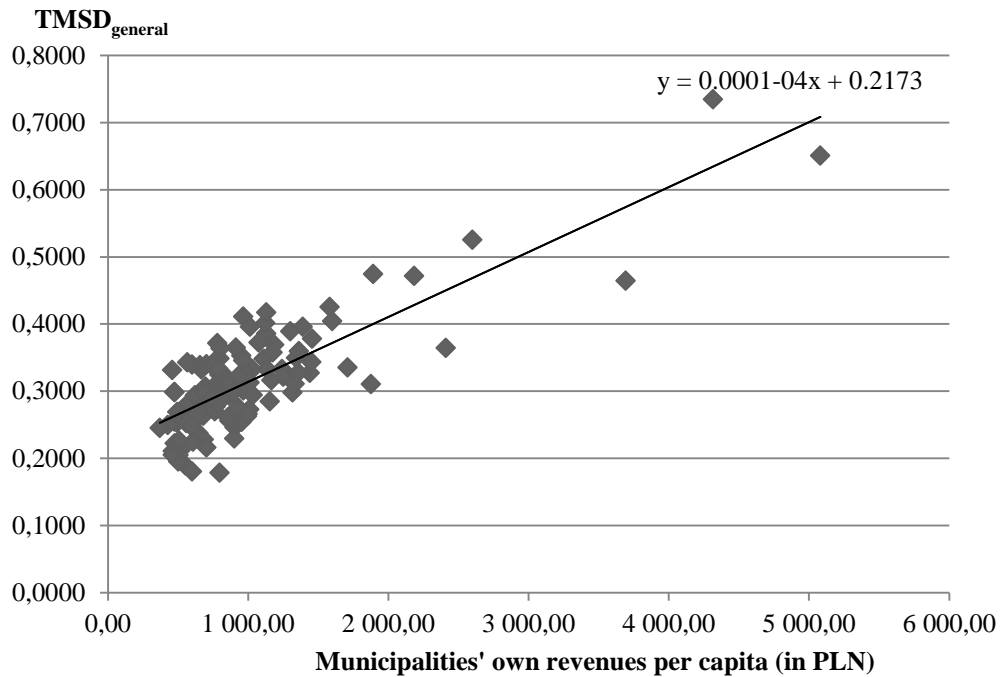
Source: own elaboration.

Figure 3. The correlation between the synthetic sustainable development indicator (general) and municipalities' own revenues per capita (scatter graph, 2014)
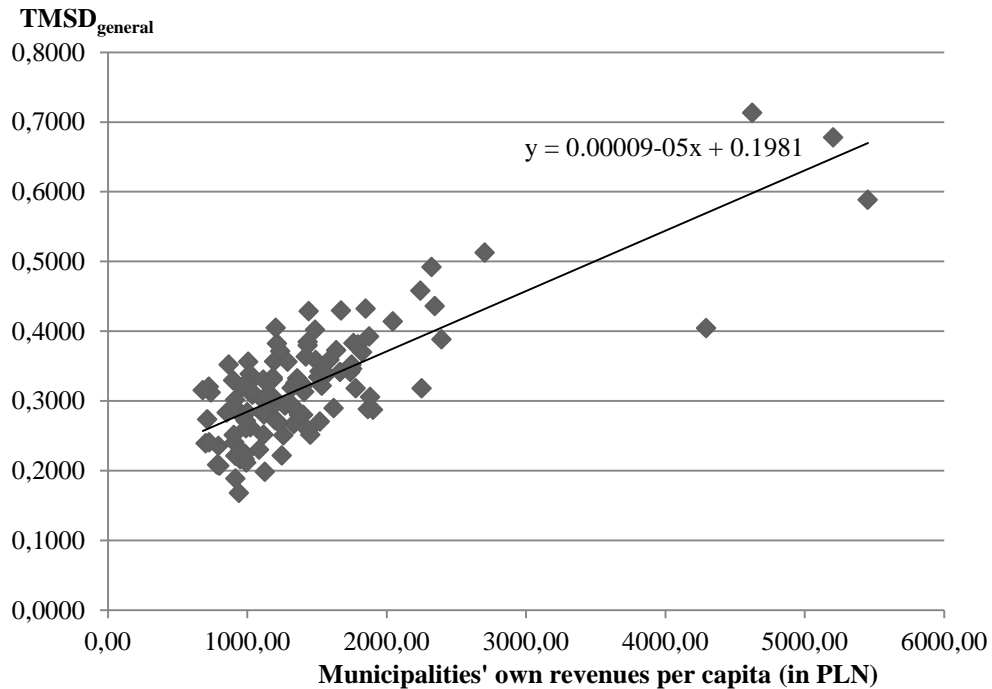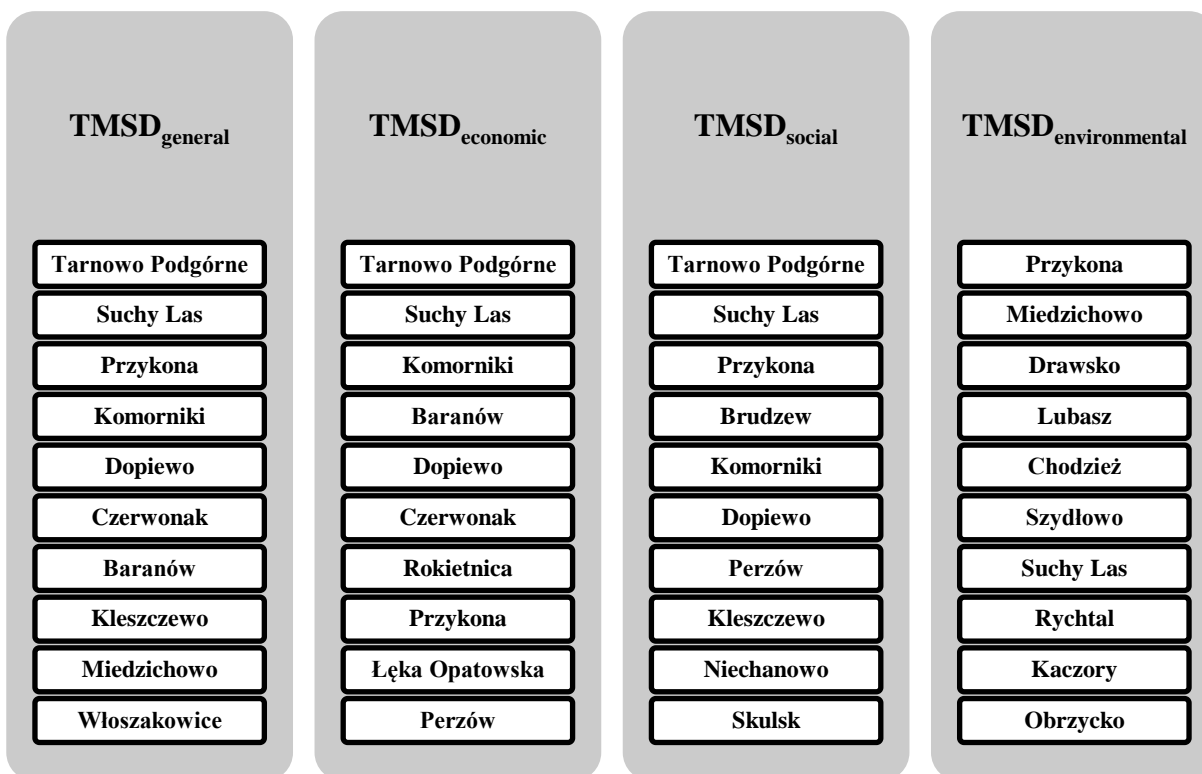

Source: own elaboration.

The correlation between municipalities' own revenues per one capita and $TMSD_{general}$ is linear – the value of the TMSD indicator rises with the revenues. The correlation coefficients between the indicated variables were 0.8132 for 2009 and 0.7922 for 2014 respectively, which confirms the strong linear correlation.

The economic situation of a municipality is one of the key (if not the most important) factors which determine the sustainable development of rural areas. This fact is evidenced by the results of linear ordering and the ranking of rural municipalities of the Wielkopolska Voivodship depending on the synthetic sustainable development indicator. In 2009, from among 10 municipalities with the highest $TMSD_{general}$, seven were located in the Poznań district. All 7 municipalities were also in the group of 10 municipalities with the highest synthetic sustainable economic development indicator (Tarnowo Podgórne, Suchy Las, Komorniki, Czerwonak, Dopiewo, Kleszczewo and Rokietnica), as well as 11 rural municipalities with the highest own revenues per capita in the Wielkopolska Voivodship. In 2014, among 10 rural municipalities from Wielkopolska, 6 units from Poznań district were found (Tarnowo Podgórne, Suchy Las, Komorniki, Czerwonak, Dopiewo, Kleszczewo) – five of them were in the top 10 municipalities in terms of $TMSD_{economic}$ (except Kleszczewo).

It is particulrly interesting that in 2009 the top ten of rural municipalities of Wielkopolska with the highest $TMSD_{general}$ included only four municipalities from the top 10 of municiplaities achieving the highest synthetic sustainable environmental development indicator. Only two rural municipalities from Poznań district were among them (Tarnowo Podgórne – 1st place in TMSDgeneneral, and 4th place in $TMSD_{environmental}$, Czerwonak – 4th and 6th place respectively, Przykona – 6th and 9th place, Kaczory – 8th and 5th place). In 2014, a similar phenomenon occurred in the case of only 3 municipalities, including one from the Poznań district (Suchy Las – 2nd place in the $TMSD_{general}$ and 7th place in $TMSD_{environmental}$) (Figure 4). The conclusion is clear: the environmental dimension is considerably less important for the shaping of the global synthetic sustainable development indicator within the employed methodology.

The idea of sustainable development places clear emphasis on the equality of all the dimensions, however, the conducted analysis suggests that in practice the economical issues are the ones which dominate. From the point of view of rural municipalities' local governments, the starting point for any activities is the prospect of financing them.

Figure 4. Ranking rural municipalities of the Wielkopolska Voivodship on the basis of the synthetic sustainable development indicator (2014)

$TMSD_{general}$	$TMSD_{economic}$	$TMSD_{social}$	$TMSD_{environmental}$
Tarnowo Podgórne	Tarnowo Podgórne	Tarnowo Podgórne	Przykona
Suchy Las	Suchy Las	Suchy Las	Miedzichowo
Przykona	Komorniki	Przykona	Drawsko
Komorniki	Baranów	Brudzew	Lubasz
Dopiewo	Dopiewo	Komorniki	Chodzież
Czerwonak	Czerwonak	Dopiewo	Szydłowo
Baranów	Rokietnica	Perzów	Suchy Las
Kleszczewo	Przykona	Kleszczewo	Rychtal
Miedzichowo	Łęka Opatowska	Niechanowo	Kaczory
Włoszakowice	Perzów	Skulsk	Obrzycko

* Top 10 municipalities.

Source: own elaboration.

A good social – economic situation allows looking at the development of a municipality from a much broader perspective. In the ranking of the municipalities with the highest $TMSD_{general}$, in 2009 there were five municipalities, and in 2014 six municipalities, which were also in the top ten municipalities with the highest sustainable social development indicator. In the case of the ten municipalities with the highest $TMSD_{general}$ indicators, a certain regularity can be seen – most of them were also among the ten municipalities with the highest $TMSD_{economic}$ and $TMSD_{social}$ indicator, but individual units were also in the top 10 municipalities with the highest $TMSD_{environmental}$. One of the factors influencing the above mentioned correlations is, beyond doubt, the character of a municipality, its location (proximity to a metropolis), and the type of its main activity. The confirmation of this fact is the list of rural municipalities, which in both studied years achieved the highest level of sustainable environmental development, e.g. Drawsko,

Lubasz, Chodzież, Szydłowo, Kaczory, and Obrzycko – all located in the areas which are rich in forests, with varied landscape, and less industrialized.

5. Conclusion

The article presents one of research methods which can be employed to evaluate the sustainability of development of rural areas. The choice of the objective diagnostic features, determined mainly by their availability, remains debatable. The precision of the evaluation of the level of this phenomenon is seemingly influenced by the number of the analysed features. Unfortunately, the availability of features is to a great extent determined by the amount of data subjected to analysis. Extending the technical scope of the variables would definitely allow performing more complex analyses.

When evaluating the level of sustainability of Wielkopolska's rural areas development, it can be stated that it was low in the case of most units. The low and very low synthetic sustainable development indicator concerned more than half of the municipalities. The formation of the indicators was mainly influenced by the studied features characterising the economic dimension of the development, e.g. own revenues per capita of a municipality. Achieving a certain level of socio-economic development frequently becomes a factor stimulating the activities reflecting this modern form of development. Only after certain financial means are available and the basic needs of the local community are met, is it possible to launch the projects whose aim is to meet the higher needs of the community, both locally and globally. The idea of sustainable development of rural areas, as indicated before, is closely linked to fulfilling modern functions by these areas, including the provision of public goods. A more intense activity of the local governments of rural municipalities in terms of the "production" of public goods is usually to be seen in the case of the municipalities which are economically (financially) strong, as well as competitive.

The analysis of the level of sustainability of the rural municipalities of the Wielkopolska Voivodship concerned the period of five years. In that time slight changes occurred in the formation of the synthetic sustainable development indicator in general and in particular dimensions. To present the consequences of the implementation of the rules of sustainable development, it is undoubtedly necessary to extend the scope of the analysis – this concept requires not only requires altering the way of acting, but also long-term thinking.

The wide range of possibilities offered by the taxonomic methods in the analysis of the level of sustainability of rural areas may improve the decision-making processes of those who manage the local or regional development. The condition necessary for these methods to be used more commonly is further discussion about expanding the system of monitoring, collecting and storing data, particularly those concerning the units of the lower administrative level, i.e. municipalities.

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Próba oceny zrównoważonego rozwoju gmin wiejskich województwa wielkopolskiego

Streszczenie

Artykuł stanowi próbę prezentacji możliwości zastosowania jednej z dostępnych metod badawczych do oceny zrównoważonego rozwoju. Podjęte zadanie badawcze jest z jednej strony niezwykle trudne do realizacji - ze względu na problemy metodologiczne (wybór wskaźników, dostępność danych, ocena wyników), z drugiej jednak – wydaje się dość istotne z punktu widzenia szeroko pojętych badań nad zrównoważonym rozwojem. Celem opracowania jest próba oceny zrównoważonego rozwoju gmin wiejskich województwa wielkopolskiego. W analizie problemu badawczego zastosowano metodę taksonomiczną (metodę porządkowania liniowego), która pozwala na wyodrębnienie obszarów podobnych do siebie pod względem badanych cech oraz umożliwia ich pogrupowanie w rejony o podobnych warunkach rozwoju. Na podstawie przeprowadzonej analizy danych źródłowych i wyznaczonych syntetycznych wskaźników zrównoważonego rozwoju wydaje się, iż to aspekt ekonomiczny w największym stopniu osłabia poziom zrównoważenia gmin wiejskich województwa wielkopolskiego.

Słowa kluczowe: zrównoważony rozwój, obszary wiejskie, gminy wiejskie, metody taksonomiczne