

OBTAINING FUNDS FROM THE EU BUDGET BY RURAL COMMUNES OF THE MASOVIAN VOIVODESHIP

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Abstract. Non-repayable funds, including those offered within the framework of EU funds, constitute an important source of funding for activities undertaken by communes. The aim of the article is to define the level of absorption of funds from the EU budget by rural communes of the Masovian voivodeship in 2006-2009. The typology of the communes was done on the basis of the level of their socio-economic development (synthetic index z_i) and the amount of funds obtained (absorption index W_a). The statistical data came from the Local Data Bank (BDL) of the Central Statistical Office (GUS). Rural communes of the Masovian voivodeship are highly varied in terms of obtaining funds from the EU budget. In the case of 10.5% of the rural communes in the analysed voivodeship no funds were obtained from the EU in the period in question. Almost one third of the rural communes is characterised by a low level of development and a medium level of funds absorption. The least numerous (7%) are communes with a high level of development and low absorption. Communes with a low level of development and low absorption of EU funds exist in every subregion of the voivodeship.

Key words: rural communes, funds from the EU budget, level of development, types of communes

INTRODUCTION

Today, local governments and local authorities take over more and more duties and tasks [Kogut-Jaworska 2008], which makes it necessary to look for and use various, also exterior sources of funding. Money offered to beneficiaries within the scope of EU

funds constitutes an important source of funding for local government units, including communes, to perform their tasks. What matters is the fact that the funds are non-repayable, which makes them one of the most important sources of funding for investments [Finansowe... 2006]. Thus, they contribute to the socio-economic development on a local and regional scale. The rules and the purpose of using EU funds in subsequent programming periods have gradually changed. In practice, the level of using aid funds from the EU by local government units in Poland is varied [Finansowe... 2006, Stawicki et al. 2008, Dusza et al. 2009]. This is due to various reasons and conditioned by many factors.

The aim of the article is to define the level of absorption of funds from the EU budget by rural communes of the Masovian voivodeship in 2006-2009. The typology of the communes was done on the basis of the level of their socio-economic development and the amount of funds obtained. The level of development of rural communes was defined using a synthetic index of development (z_i) for the year 2010. The level of absorption was defined using an absorption index (W_a) that amounts to the sum of all funds obtained by a commune from the EU budget in 2006-2009 per capita. The fact that communes belong to respective subregions of Masovian voivodeship is reflected in the comparative analysis of the level of development of the communes in question and of the level of funds absorption. The Local Data Bank (BDL) of the Central Statistical Office (GUS) served as the source of data used in the study.

In Masovian voivodeship are 229 rural communes, which amounts to almost 73% of all communes of the voivodeship [Bank... 2010]. According to the Nomenclature of Territorial Units for Statistics [Nomenklatura... 2007] Masovian voivodeship consists of 6 subregions: ciechanowsko-płocki (with 22.7% of rural communes of the voivodeship), ostrołęcko-siedlecki (32.3%), radomski (17.5%), warszawski wschodni (15.3%), warszawski zachodni (12.2%) and the capital city of Warszawa.

DEFINING THE LEVEL OF DEVELOPMENT OF RURAL COMMUNES OF THE MASOVIAN VOIVODESHIP

On the basis of factual, formal and statistical criteria [Metody... 2006] a set of diagnostic variables was chosen to describe the level of socio-economic development.

To form the factual criteria enabling to indicate the variables describing the level of development of rural communes of the Masovian voivodeship the author took into account approaches presented by the following researchers: Taksonomiczna... [2000], Sej-Kolasa and Zielińska [2002], and Harańczyk [Finansowe... 2004]. The variables were then divided into categories. Selected variables are static and make it possible to position objects – in this case rural communes compared with other objects of the same type at a given moment.

Using formal criteria the author selected diagnostic variables that are measurable, complete and available in public statistics at the level of communes.

Taking into account statistical criteria, the author excluded variables which were excessively correlated with each other. Eventually, 16 variables¹ divided into 6 groups were used to create the synthetic index.

The synthetic index of development (z_i) describing the level of socio-economic development of rural communes of Masovian voivodeship was calculated using the method of standardized sums (also known as Perkal's method) [Perkal 1953, Chojnicki and Czyż 1973]. The synthetic index of development was created in subsequent stages [Wojewódzka 2007 a, b].

The range of values of the index z_i in 2010 in rural communes equals 0.3486. The average value of the index in a commune equals 0.3418 and differs significantly depending on the subregion to which the commune belongs. The highest average value of the index of development was noted in rural communes of the warszawski zachodni subregion (0.3969), and the lowest – in units belonging to the radomski subregion (0.3058).

Rural communes of the Masovian voivodeship in respective subregions were divided into groups (Fig. 1) on the basis of quartiles according to the value of the index z_i .

In the radomski subregion rural communes with a low level of socio-economic development predominate with 57.5% in 2010. On the basis of the index z_i one can note that only 2.5% of rural communes of this subregion are characterised by the highest level of development. On the other hand, in the warszawski zachodni subregion only 3.6% of rural communes are at the lowest level of development. In the warszawski zachodni and warszawski wschodni subregions communes with the highest values of the index z_i predominate, and their share in the total of communes of the two subregions equals 60.7% and 45.7% respectively. The ciechanowsko-płocki and ostrołęcko-siedlecki subregions show certain similarities in the structure of communes according to the index z_i : there exists no clear predominance of communes with either high or low level of development².

¹ Set of variables selected to create the synthetic index: x_1 – death rate (number of deaths per year per 1000 people), x_2 – number of health centres per 1000 inhabitants, x_3 – registered unemployment rate (%), x_4 – employed persons per 1000 inhabitants, x_5 – employment rate within the working-age population, x_6 – number of enterprises per 1000 inhabitants, x_7 – total commune budget revenues per capita (PLN), x_8 – total investment outlays per capita (PLN), x_9 – number of dwellings completed per 1000 concluded marriages, x_{10} – number of dwellings with a bathroom (in % of the total of inhabited dwellings), x_{11} – length of the water supply network in km per 1 km², x_{12} – length of the sewerage network in km per 1 km², x_{13} – length of commune hard surface roads in km per 1 km², x_{14} – number of local councillors with higher education in relation to the total number of councillors, x_{15} – number of secondary-school students per 1000 inhabitants, x_{16} – number of library users per year per 1000 persons. Calculating the index z_i for the year 2010 was one of many tasks performed within the scope of the present study. The variable x_{13} has not been included in the data published by BDL GUS since 2005. In order to maintain comparability of the calculated synthetic index the author used the value of the variable for the year 2004. Data concerning dwellings in 2010 was unavailable at the time of the research, therefore data from 2009 was used to calculate variables x_9 and x_{10} .

² More about changes in the level of development of rural communes of the Masovian voivodeship in 2004-2010 see Wojewódzka-Wiewiórska [2011].

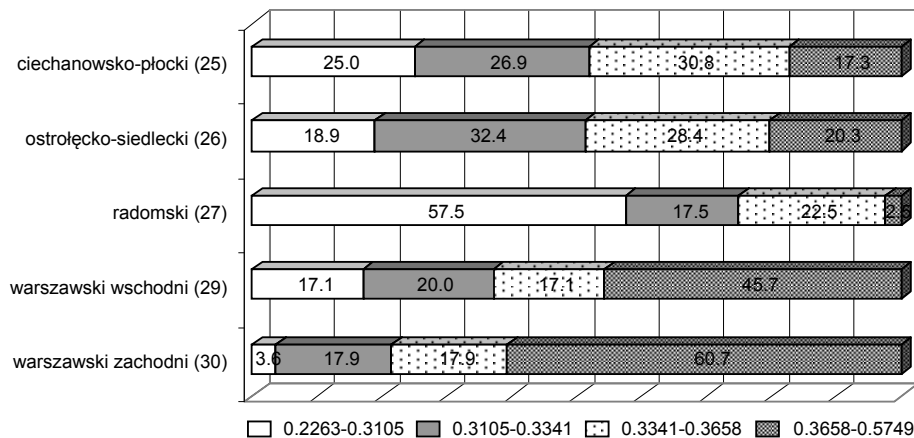


Fig. 1. Structure of subregions of the Masovian voivodeship according to the value of the index of development z_i for rural communes in 2010 (%)

Source: Wojewódzka-Wiewiórska [2011].

Rys. 1. Struktura podregionów województwa mazowieckiego według wartości wskaźnika rozwoju z_i dla gmin wiejskich w 2010 roku (%)

Źródło: Wojewódzka-Wiewiórska [2011].

DEFINING THE LEVEL OF ABSORPTION OF FUNDS FROM THE EU BUDGET BY RURAL COMMUNES

The level of absorption in rural communes was defined on the basis of an absorption index (W_a) that amounts to the sum of all funds obtained by a commune from the EU budget in 2006-2009 per capita (as at 31 December 2010).

Among the 10 communes with the highest values of W_a (Table 1) are no communes from the radomski subregion. Only in 5 rural communes of the voivodeship the value of the index exceeds 1000 PLN. It has to be underlined that communes whose W_a index equals 0 (which indicates the lack of absorption of funds from the EU budget in the period in question) constitute 10.5% (24 communes) of the total number of rural communes. Those are communes representing various levels of development and belonging to different subregions.

The average value of the W_a index for rural communes in the voivodeship in question equals 150.76 PLN and differs between subregions (Table 2). Analysing the maximum values of the index in communes from respective subregions one can also note clear differences between the communes. The maximum value of W_a equals from 507.99 PLN in the radomski subregion to 1432.34 PLN in the ostrołęcko-siedlecki subregion. The leading commune of the radomski subregion is only 26th among all communes of the Masovian voivodeship.

The highest share of rural communes with the lowest level of absorption of funds from the EU budget (Fig. 2) is found in the warszawski wschodni subregion (37.1%), whereas in the radomski subregion only 17.5% of rural communes belong to that group.

Table 1. Absorption index for the total of funds from the EU budget (W_a) for rural communes of the Masovian voivodeship in 2006-2009 (PLN)Tabela 1. Wskaźnik absorpcji środków ogółem z budżetu UE (W_a) dla gmin wiejskich województwa mazowieckiego w latach 2006-2009 (zł)

Ranking of the commune Pozycja gminy	Name of the commune Nazwa gminy	Name of the subregion Nazwa podregionu	Ranking of the commune out of all the communes in the voivodeship Pozycja gminy w rankingu dla wszystkich gmin województwa	W_a (PLN) W_a (zł)
1	Stoczek	ostrołęcko-siedlecki (26)	2	1 432.34
2	Klembów	warszawski wschodni (29)	4	1 226.70
3	Pokrzywnica	ostrołęcko-siedlecki (26)	7	1 108.04
4	Sarnaki	ostrołęcko-siedlecki (26)	8	1 101.24
5	Stare Babice	warszawski zachodni (30)	9	1 050.80
6	Radzanów	ciechanowsko-płocki (25)	11	896.79
7	Jadów	warszawski wschodni (29)	14	712.75
8	Opinogóra Górna	ciechanowsko-płocki (25)	15	712.20
9	Strzegowo	ciechanowsko-płocki (25)	16	702.59
10	Baranowo	ostrołęcko-siedlecki (26)	17	674.01

Source: compiled by the author from Bank... [2004-2010].

Źródło: opracowanie własne na podstawie Bank... [2004-2010].

Table 2. Absorption index for the total of funds from the EU budget (W_a) for rural communes of the Masovian voivodeship in 2006-2009 by subregionTabela 2. Wskaźnik absorpcji środków ogółem z budżetu UE W_a w gminach wiejskich województwa mazowieckiego w przekroju podregionów w latach 2006-2009

Subregion Podregion	Average W_a in the subregion (PLN) Średnia W_a w podregionie (zł)	Maximum value W_a in the subregion (PLN) Wartość maksymalna W_a w podregionie (zł)	Name of the commune Nazwa gminy
Ciechanowsko-płocki (25)	151.94	896.79	Radzanów (11)
Ostrołęcko-siedlecki (26)	164.28	1 432.34	Stoczek (2)
Radomski (27)	112.80	507.99	Borkowice (26)
Warszawski wschodni (29)	149.15	1 226.70	Klembów (4)
Warszawski zachodni (30)	169.07	1 050.80	Stare Babice (9)

Ranking of the commune out of all the communes in the voivodeship is given in brackets next to the name of the commune.

Source: compiled by the author from Bank... [2004-2010].

W nawiasie przy nazwie gminy podano miejsce w rankingu wszystkich gmin województwa mazowieckiego.

Źródło: opracowanie własne na podstawie Bank... [2004-2010].

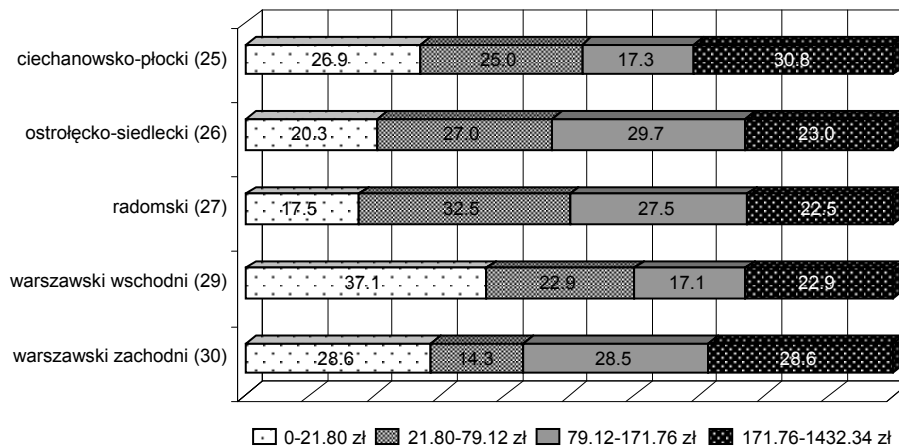


Fig. 2. Structure of subregions of the Masovian voivodeship according to the value of the index of absorption W_a for rural communes in 2006-2009 (%)

Source: compiled by the author from Bank... [2004-2010].

Rys. 2. Struktura podregionów województwa mazowieckiego ze względu na wartość wskaźnika absorpcji W_a w gminach wiejskich w latach 2006-2009 (%)

Źródło: opracowanie własne na podstawie Bank... [2004-2010].

In the warszawski zachodni and ciechanowsko-płocki subregions every second commune with the W_a index between 0 and 21.8 PLN did not obtain any funds, and in the ostrołęcko-siedlecki subregion there were 46% of such communes. Moreover, in the radomski and warszawski wschodni subregions the W_a index of every third commune from the first category equals 0 PLN, which means the commune did not obtain any funds from the EU budget in the period in question.

A high level of absorption of EU funds, i.e. above 171.76 PLN, is found in every third commune in the ciechanowsko-płocki subregion. In the warszawski zachodni subregion the share of communes with the highest values of the W_a index equals 28.6% and in the remaining subregions the value is comparable: 22-23%.

The value of the index of absorption of investment funds from the EU budget in the years 2006-2009 per capita equals between 0 and 1308.50 PLN³. 23.15% of all rural communes of the Masovian voivodeship did not obtain funds from the EU for investments. The % share of investment funds in the total of funds obtained from the EU budget between 2006 and 2009 equals below 15% in 44.1% of rural communes, of which one fourth obtained 0 PLN. On the other hand, in 39.3% of all rural communes of the voivodeship this share exceeded 75%; in 6.5% of these communes all funds obtained from the EU were earmarked for investments.

³ In statistical data made available by GUS no detailed division of funds according to their allocation is published, which fact considerably narrows down research possibilities.

TYOLOGY OF RURAL COMMUNES BASED ON THE LEVEL OF DEVELOPMENT AND ABSORPTION OF EU FUNDS

On the basis of the analysis of the two variables, i.e. the index of development of rural communes of the Masovian voivodeship (z_i) and the index of absorption of funds from the EU budget in 2006-2009 per capita (W_a), the author developed a typology of rural communes of the Masovian voivodeship.

Communes were divided into those with a low and a high level of development on the basis of the mean value of the development index z_i (0.3486). With the use of quartiles the author identified communes with a low, medium and high level of absorption of funds from the EU budget ($W_a \leq 21.80$ PLN, W_a between 21.80 and 171.76 PLN, $W_a \geq 171.76$ PLN). The communes were divided into 6 types (Fig. 3).

The development level (z_i)
Poziom rozwoju (z_i)

high wysoki	C	B	A
low niski	F	E	D
	low niska	medium średnia	high wysoka

The level of absorption of EU funds (W_a)
Absorpcja środków z UE (W_a)

Fig. 3. Types of rural communes according to the level of development (z_i) and absorption of funds from the EU budget (W_a)
Source: compiled by the author.

Rys. 3. Typy gmin wiejskich zależnie od poziomu rozwoju (z_i) i absorpcji środków z budżetu UE (W_a)
Źródło: opracowanie własne.

As a result of the division of rural communities into specific types, 145 communes (i.e. 63.3%) were found to be communes with a low level of development (type D, E, F), and 84 communes (36.7%) are characterized by a high level of development (type A, B, C). Communes with low absorption belong to types C and F, those with medium absorption represent types B and E, and those with high absorption belong to types A and D (Fig. 4).

The structure of Masovian voivodeship according to the level of development of rural communes, considering the mean value of the z_i index, can be considered as relatively unfavourable. 36.7% of rural communes of the voivodeship represent a high level of development. The largest share in the structure of the Masovian voivodeship (Fig. 5) is constituted by type E communes (low level of development, medium absorption), communes with a high level of development and low absorption (type C) constitute the smallest share. In type F communes (low level of development, low absorption) every

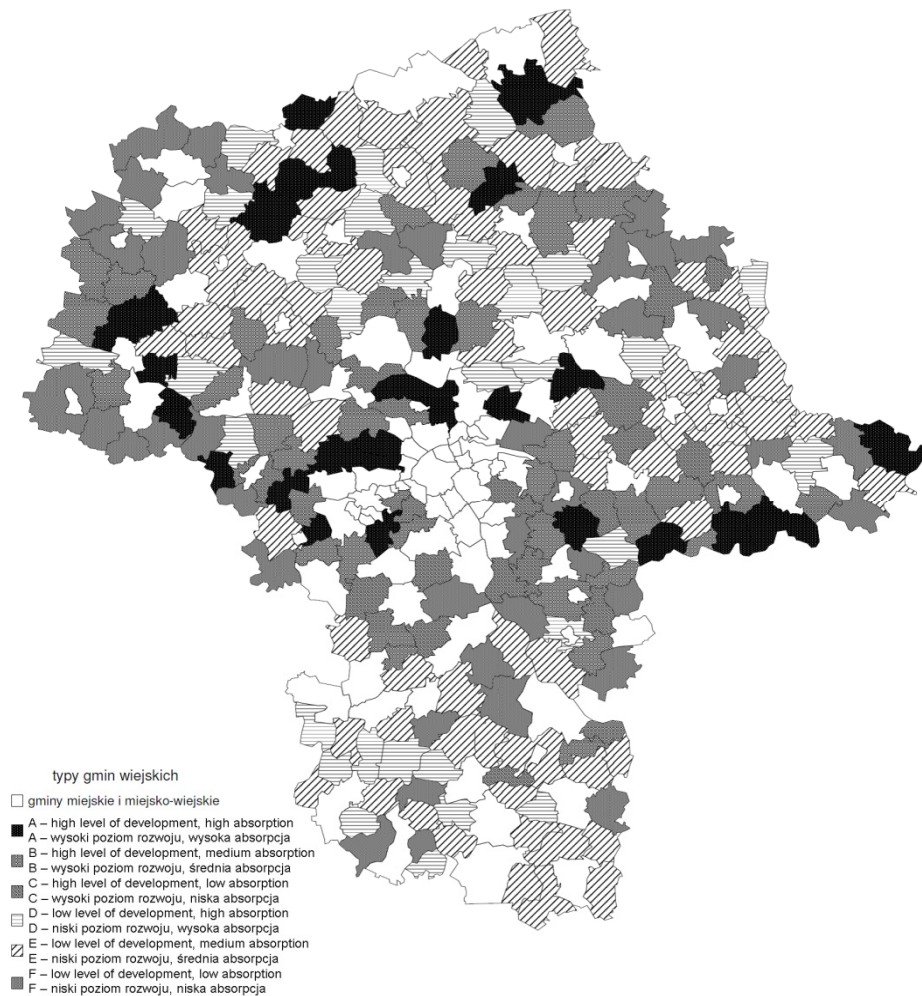


Fig. 4. Rural communes of the Masovian voivodeship according to types
Source: compiled by the author from Bank... [2004-2010].

Rys. 4. Gminy wiejskie województwa mazowieckiego według typów
Źródło: opracowanie własne na podstawie Bank... [2004-2010].

third commune belongs to the ciechanowsko-płocki subregion, 23.8% are those from the ostrołęcko-siedlecki subregion, 16.7% are those from the radomski subregion, the same value pertains to the warszawski wschodni subregion, and only 9.5% of type F communes belong to the warszawski zachodni subregion.

From 24 rural communes of the voivodeship in which the absorption of funds in the period in question equalled 0, the level of development of 4 communes was described as high, and of 20 communes as low. This means that the lack of absorption of EU funds occurred in one fourth of type C communes and in almost half (47.6%) of type F communes.

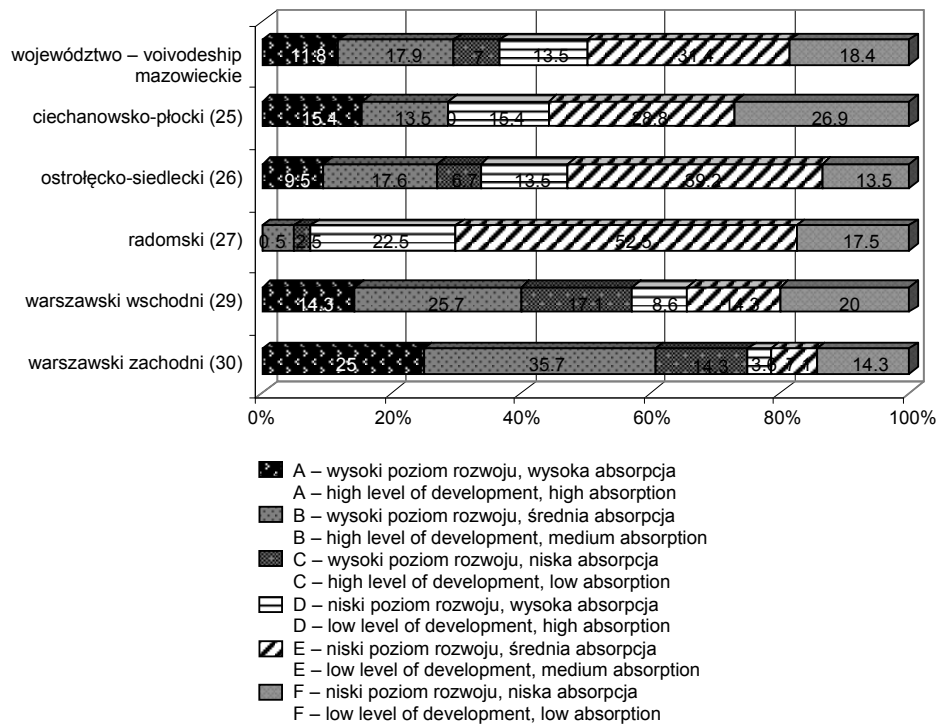


Fig. 5. Structure of the Masovian voivodeship and its subregions according to the type of rural communes (%)

Source: compiled by the author from Bank... [2004-2010].

Rys. 5. Struktura województwa mazowieckiego i poszczególnych podregionów ze względu na typ gmin wiejskich (%)

Źródło: opracowanie własne na podstawie Bank... [2004-2010].

In the warszawski wschodni and warszawski zachodni subregions rural communes type B (high level of development, medium absorption) preponderate, with 25.7% and 35.7% respectively. In the structure of the remaining subregions communes with a low level of development and medium absorption of funds from the EU budget (type E) predominate. The radomski subregion is particularly conspicuous, because it has no communes with a high level of development and high absorption, and every second commune of the subregion belongs to type E. The highest percentage of communes with high absorption of EU funds (communes type A and D) was noted in the ciechanowsko-płocki and warszawski zachodni subregions. In the warszawski zachodni subregion every fourth commune has a high level of socio-economic development and absorbs the most funds from the EU budget. Only in the radomski subregion no rural communes belonging to this type are present. It is worth mentioning that in every subregion a considerable percentage (from 13.5% to 26.9%) of type F communes could be noted (low level of development, low absorption).

CONCLUSIONS

On the basis of the research concerning defining the level of development of rural communes of the Masovian voivodeship (2010) and the absorption of funds from the EU budget in 2006-2009, as well as on the basis of the typology of the communes according to the two above variables, the following conclusions can be drawn:

1. The values of the z_i index describing the level of socio-economic development of rural communes in 2010 are between 0.2263 and 0.5749. The average value of the index equals 0.3418. The most favourable structure as to the level of development of rural communes is found in the warszawski zachodni subregion (60.7% of communes are those with the highest level of development), and the least favourable structure – in the radomski subregion (57.5% of communes are those with the lowest level of development).

2. Rural communes of the Masovian voivodeship are highly varied in terms of obtaining funds from the EU budget, which fact is confirmed by the values of the index of absorption of the total of funds from the EU budget per capita (W_a) in rural communes of the Masovian voivodeship in respective subregions. The absorption index equals from 0 to 1432.34 PLN, and its average value is 150.76 PLN. In the case of 10.5% of the rural communes no funds were obtained from the EU budget in the period in question.

3. Almost one third of the rural communes of the Masovian voivodeship is characterised by a low level of development and a medium level of absorption of the total of funds from the EU budget (type E). The least numerous (7%) within the structure of the voivodeship are communes with a high level of development and low absorption (type C). At the level of subregions, major differences in typology of rural communes are observed. Communes with a low level of development and low absorption of EU funds exist in every subregion of the voivodeship (type F), their % share ranging from 13.5% in the ostrołęcko-siedlecki subregion to 26.9% in the ciechanowsko-płocki subregion.

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POZYSKIWANIE ŚRODKÓW Z BUDŻETU UE PRZEZ GMINY WIEJSKIE WOJEWÓDZTWA MAZOWIECKIEGO

Streszczenie. Ważnym źródłem finansowania zadań gmin są bezzwrotne środki finansowe, w tym oferowane w funduszach Unii Europejskiej. Celem artykułu jest określenie poziomu absorpcji środków finansowych z budżetu UE przez gminy wiejskie województwa mazowieckiego w latach 2006-2009. Przeprowadzono typologię gmin, biorąc pod uwagę ich poziom rozwoju społeczno-gospodarczego (syntetyczny wskaźnik z_i) i wielkość pozyskanych środków (wskaźnik absorpcji W_a). Źródłem danych statystycznych był Bank Danych Lokalnych GUS. Województwo mazowieckie w przekroju gmin wiejskich jest wyraźnie zróżnicowane pod względem pozyskiwania środków z budżetu UE. U 10,5% badanych jednostek stwierdzono brak pozyskanych środków z UE w analizowanym okresie. Prawie co trzecia gmina wiejska województwa charakteryzuje się małym rozwojem i średnim poziomem absorpcji środków. Najmniejszy w strukturze województwa (7%) jest udział gmin reprezentujących wysoki poziom rozwoju i małą absorpcję. W każdym z podregionów występują gminy o niskim poziomie rozwoju i niskiej absorpcji środków z UE.

Słowa kluczowe: gminy wiejskie, środki z budżetu UE, poziom rozwoju, typy gmin

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