

ENDOGENIC CONDITIONS FOR THE DEVELOPMENT OF NON-AGRICULTURAL ECONOMIC ACTIVITIES IN RURAL COMMUNITIES OF EASTERN AND WESTERN REGIONS OF POLAND

Mirosław SOŁTYSIAK^{1*}, Dariusz ZAJĄC²

¹ Rzeszow University of Technology; miroslaw@prz.edu.pl, ORCID: 0000-0003-3366-1537

² University of Rzeszow; dzajac@ur.edu.pl, ORCID: 0000-0001-7918-1366

* Correspondence author

Purpose: The aim of the article is to identify and evaluate endogenous conditions for the development of non-agricultural economic activity in rural communes of eastern and western regions of Poland

Design/methodology/approach: The article identifies and evaluates endogenous conditions for the development of non-agricultural economic activity in rural communes of eastern and western regions of Poland. The empirical material of the article concerns both all rural communes in the country and all rural communes in the eastern and western regions of Poland. The figures come from the Local Data Bank of the Central Statistical Office in Warsaw and concern the years 2020-2021. The empirical material collected and ordered was developed in descriptive, tabular, and graphical form, using comparative analysis. In addition, a score assessment was made of all diagnostic features illustrating the endogenous determinants of the development of non-agricultural economic activity in rural communes of eastern and western regions of Poland against the background of the entire country for 2021.

Findings: The analysis of statistical data confirmed the research hypothesis, which assumes that the activity of inhabitants of rural communes in eastern and western regions of Poland in the development of non-agricultural economic activity is diverse and shows a relationship with the quality of its endogenous conditions, with these conditions being clearly the best in units with high activity of inhabitants in this regard.

Originality/value: The originality of the work lies in the approach to the analysis of the research issues undertaken. For the purposes of research, the author's indicator of activity of residents in the development of non-agricultural economic activity in a given local government unit (commune) against the background of the country and other local government units (communes) was compiled and used. In addition, a point assessment of endogenous conditions for the development of non-agricultural economic activity in the surveyed local government units against the background of the country was made. The work is directed primarily to local government officials responsible for the conditions, opportunities, and directions of local socioeconomic development of rural communes in Poland.

Keywords: rural communes in Poland, economic activity of inhabitants, non-agricultural economic activity, endogenous conditions of development

Category of the paper: research paper.

1. Introduction

Conditions of endogenous development are divided into two groups, i.e., traditional and modern. Traditional conditions are closely related to production resources, i.e. land, natural environment, as well as human and material capital. On the other hand, modern ones include: the ability to improve the quality of owned resources, social capital, development of cooperation and network organizational forms based on local resources, the structure of the economy and its ability to adapt to changing external conditions, including innovation, as well as environmental conditions and efficiency activities of local institutions. It should be added that endogenous development occurs only when development factors pass from the state of typical resources to a situation of recognizing and assessing the use value and proper use. Only launched and used resources become active development factors. In addition, endogenous development often also requires the impact of exogenous factors, among which the following should be mentioned: the emergence of external demand for resources or for finished products or services and obtaining external support. Therefore, the concepts of endogenous development recognise that one should count on one's own strengths and capabilities and base development on one's own endogenous potential, as well as develop cooperation with other regions (Szymła, 1997; Głąbicka, Grewiński, 2005; Pietrzyk, 2005; Falkowski, 2006; Heffner, 2007; Kosiedowski, 2008; Ślusarz, 2008; Czudec, 2011; Gałązka, 2011; Korenik, 2011; Olejniczak, 2016).

Each commune is characterized by a separate specificity, which is determined primarily by such features as: type of commune (urban, urban-rural, rural), location in space and accessibility (suburban areas, border areas, valuable natural areas, etc.), population and demographic (number and structure of population, quality of human and social capital, socio-cultural characteristics, changes in the number of inhabitants, i.e. growth, stagnation, decline), level of development and structure of the economy, labor market and unemployment, tangible and intangible resources, infrastructure (social, technical, institutional), natural environment (quality, values), local initiatives (establishing and developing cooperation, entrepreneurship, innovation, openness to new solutions). On the other hand, the conditions in which the local government functions, i.e. the characteristics of the local environment (commune), largely determine its financial situation (level and structure of income and budget expenditures, debt) and determine the possibilities and directions of its activities. in terms of further socio-economic development.

Particularly important determinants of development, including nonagricultural economic activity and the functioning of the local government, are therefore in the endogenous (often specific and unique) features of the local environment (commune). These features have a significant impact on the scale, directions, and dynamics of socio-economic development and are also the original (sort of natural) conditions in which local government functions and conducts its own development policy, including nonagricultural economic activity.

As a result, nonagricultural economic activity develops well in rural areas around larger urban centres and located along main communication routes, where there is a significant degree of population concentration, a significant labor market, appropriate infrastructure, greater wealth of the population, high demand, high own incomes of communes, convenient location in relation to the sales market. Non-agricultural economic activity also develops well where there are traditions of running a business, where there are better educated, entrepreneurial people and leaders, as well as in communes with high activity of local governments and other institutions, and in rural areas where there are special natural and cultural values predisposing to the development of tourism. Therefore, the most important factors stimulating the development of non-agricultural economic activity in rural areas are: location, human, social and financial capital as well as activities of local governments, while the most important barriers to its development are: demand barrier and unfavorable demographic structures, especially in peripheral rural areas (Duczkowska-Piasecka, 1997; Wilkin, 1997; Kłodziński, Rosner, 2000; Kamińska, 2011; Duczkowska-Małysz, Duczkowska-Piasecka, 2014; Zarębski, 2015; Brodziński, Brodzińska, 2016; Kulawiak, 2022).

The eastern regions of Poland are voivodeships with a low level of socioeconomic development, characterized by low population density, low quality of human, social and intellectual capital, low level of development of technical, social and institutional infrastructure, limited territorial accessibility and low level of income of the population and local government units. Therefore, these are voivodeships that meet the definition criteria used for peripheral areas. On the other hand, the western regions of Poland in the geographical and natural sense are the Oder basin stretching between the Sudetes and the Baltic Sea, and in the economic sense they are a more developed and prosperous part of the country, especially in comparison to the eastern regions. The location of the western regions of Poland in the vicinity of Germany and the Czech Republic, as well as in the vicinity of the Scandinavian countries, creates an opportunity for their further socio-economic development, which can be accelerated primarily by establishing and using mutual relations and economic relations (cross-border cooperation) (Mogła, Zaleski, Zathej, 2011; Kudełko, 2013; Balińska, 2015; Czudec, Majka, Zając, 2018; Grzebyk, Miś, Stec, Zając, 2019; Miś, Zając, 2020).

2. Research aim, empirical material, and research methods

The aim of the article is to identify and evaluate endogenous conditions for the development of nonagricultural economic activity in rural communes of eastern and western regions of Poland.

The article presents a research hypothesis, which assumes that the activity of inhabitants of rural communes in eastern and western regions of Poland in the development of non-agricultural economic activity is diverse and shows a relationship with the quality of its endogenous conditions, with these conditions clearly the best in units with high activity of residents in this range.

The empirical material of the article concerns both all rural communes throughout the country and all rural communes in the eastern and western regions of Poland, this is in six voivodeships, this is Lubelskie, Podkarpackie, and Podlaskie as well as Dolnośląskie, Lubuskie and Zachodniopomorskie¹. The figures come from the Local Data Bank of the Central Statistical Office in Warsaw and concern the years 2020-2021. The collected and ordered empirical material was developed in a descriptive, tabular, and graphical form, using the comparative analysis.

Data on the dynamics of establishing new and closing existing business entities are often considered the main source of information about the activity of residents in the development of nonagricultural business activities, as well as about the condition of the economy in a given area, for example, in a commune. These indicators take into account not only hard factors of economic growth, but also those immeasurable, related to investors' moods and their expectations as to the possibility of undertaking and conducting nonagricultural economic activity. The rate of growth in the number of registered business entities proves the high activity of the inhabitants in the development of nonagricultural economic activity, as well as the improvement of the economic situation in a given area, e.g., in a commune, and implies many positive phenomena in the form of multiplier effects in the economy. On the other hand, the decrease in the number of registered business entities indicates a deterioration of the general climate for entrepreneurship and may even mean closing a given area, e.g. a commune, for investments and development of non-agricultural business activity (Zarębski, 2015; Brodziński, Brodzińska, 2016). For the purposes of research, the author's indicator of activity of residents in the development of non-agricultural economic activity in a given local government unit (commune) against the background of the country and other local government units (communes) was compiled and used. The construction of this indicator consists in the fact that the number of economic entities per 1000 working-age population in the previous year (i.e., 2020) in the country was added to the number of newly registered economic entities per 1000 working-age population in the surveyed year (i.e., 2021) in the country. Then, their sum was adopted as a value of 1.0 for the country, and the advantage or underweight of this sum in all rural communes in Poland compared to the country was assessed accordingly. Subsequently, from the number calculated in this way, both for the country (i.e. 1.0) and for all rural communes in Poland, the % of economic entities deregistered in the surveyed year (i.e. 2021) was subtracted. It should be added that for the index value of up to 0.50,

¹ One of the administrative borders of these provinces is the state border.

it was assumed that the activity of the inhabitants in the development of nonagricultural economic activity is weak, for the value of 0.51-0.75, this activity is moderate, and for the value of 0.76 and more, that she is tall. Taking into account the above assumptions, all rural communes in the country and all rural communes in the eastern and western regions of Poland were divided into three groups, depending on the activity of their inhabitants in the development of non-agricultural economic activity. It should be emphasised that this is a new approach to the research problem addressed in the article.

In turn, for the identification and assessment of endogenous conditions for the development of nonagricultural economic activity in rural communes covered by the research, the following diagnostic features illustrating them in 2021 were analysed: population density (population per 1 km²), percentage of working age population, nonworking age population per 100 working-age population, birth rate per 1000 population, migration balance for permanent residence per 1000 population, employed persons per 1000 working-age population, registered unemployment rate (%), percentage of population using water, sewage and gas networks, total income of commune budgets per capita (PLN), own revenues of communes' budgets per capita (PLN), share of own revenues in total revenues of communes' budgets (%), total expenditures of communes' budgets per capita (PLN), investment expenditures of communes' budgets per capita (PLN) and share of investments in the total expenditure of communes' budgets (%).

In addition, the article evaluates all diagnostic features illustrating the endogenous determinants of the development of nonagricultural economic activity in rural communes covered by the research against the background of the entire country for 2021. Individual diagnostic characteristics were compared with the national average, assumed as 100 points, and their advantage or underweight was assessed accordingly in all rural communes covered by the research. Then all points were summed and the average was calculated (graphs 1-4).

3. Results

Analysing the economic activity of inhabitants of rural communes in Poland in terms of taking up and developing non-agricultural economic activity, it should be noted that the percentage of communes characterised by moderate activity in this respect is clearly the largest (55.4%). On the other hand, a smaller percentage is represented by rural communes, where the activity of inhabitants in the field of taking up and developing nonagricultural economic activity is high (23.4%) and those where this activity is weak (21.2%). The situation in this respect is completely different in the eastern and western regions of Poland. For in the case of rural communes of eastern regions, the percentage of units characterised by high activity of inhabitants in the field of taking up and developing non-agricultural economic activity is clearly the smallest (5.1%), while the percentage of communes with moderate and low activity of

inhabitants in this respect is 51.6, respectively. % and 43.3%. On the other hand, in the case of rural communes in the western regions, the percentage of units with low activity of inhabitants in the field of taking up and developing non-agricultural economic activity is clearly the smallest (6.7%), while the percentage of communes with moderate and high activity in this respect is similar, i.e. 47, 9% and 45.4%. All this partly confirms the research hypothesis put forward in the article (Table 1).

An important factor determining the possibilities and needs of economic development in a given area (e.g., in a commune) is the demographic situation, understood as the shape of natural and migration processes of the population and its structures by sex and age. In addition, it is of fundamental importance for the development of rural areas, which is confirmed by the results of the research and analyses (Frenkel, 1999; Pięcek, 2007, Zegar, 2011; Grzebyk, Miś, Stec, Zając, 2019).

Rural communes in Poland are characterized by worse demographic conditions and a worse situation on the labor market, compared to the averages for the whole country, and this applies to such features as: population density, natural increase per 1000 population, number of employees per 1000 population in working age and the registered unemployment rate and concerns mainly communes in the eastern regions. On the other hand, in the case of characteristics such as: the percentage of working-age population, the number of nonworking-age population per 100 working-age people, and the net migration for permanent residence per 1000 population, the situation is better in rural communes than in the whole country, especially municipalities in the western regions. However, rural communes in Poland are differentiated in this respect, depending on the activity of their inhabitants in the development of nonagricultural economic activity, and in the case of most of the analysed features characterising demographic conditions and the situation on the labor market, they are best presented in the group of communes with high activity of inhabitants in the development of nonagricultural economic activity, and the worst in the group of communes with low activity of inhabitants in this respect, and this applies both to rural communes throughout Poland and to rural communes in its eastern and western regions, which partially confirms the research hypothesis presented in the article (tab. 1).

Infrastructure is, in a way, the backbone of the economy and the basis for all economic activity, conditioning its scope, structure, and spatial distribution. The level of its development largely determines the attractiveness of both the entire region (voivodship) and the local environment (county, commune) and determines its development potential. Among the elements of infrastructure that play an important role in the economic activation of a given area (e.g. communes), as well as in shaping the living conditions of the inhabitants, there are primarily roads, communications, electricity and gas networks, water supply, and sewage systems, which has been confirmed in many studies and analyses. It should be added that the use of infrastructure as an important factor in the development of rural areas is related to the implementation of an appropriate investment policy in this respect. Investment policy is the

domain of activity of local authorities, and its aim is to increase the attractiveness and credibility of the countryside as a place to live and create jobs through the development of non-agricultural economic activity. However, a serious obstacle in the development of infrastructure in rural areas is the high cost of most such projects, which mainly results from the dispersion of the settlement network. In general, it can be stated that the infrastructure in rural areas in Poland is still relatively underdeveloped, although there are very large regional and local differences in this respect (Gałązka, 1999; Pięcek, 1999; Czudec, 2003; Kołodziejczyk, 2009; Jarosiński, 2011; Kołodziejczyk, 2013; Grzebyk, Miś, Stec, Zając, 2019).

Table 1.

Selected characteristics characterising the demographic conditions and the situation on the labor market in rural communes covered by the research in 2021

Specification	Rural communes			
	Total	According to the value of the inhabitants' activity indicator in the development of non-agricultural economic activity		
		Do 0,50	0,51-0,75	0,76 i więcej
Poland				
Number of communes	1523	323	844	356
Population density - population per 1 km ²	72,8	44,2	67,4	111,6
Percentage of the working age population	59,6	59,4	59,5	60,0
Population at non-working age per 100 people at working age	67,8	68,5	68,1	66,6
Natural increase per 1000 population	-5,4	-8,5	-5,5	-2,3
Migration balance for permanent residence per 1000 population	0,6	-3,8	-0,4	7,1
Working people per 1000 people of working age	192,6	136,2	184,5	263,0
Registered unemployment rate	4,9	6,0	5,0	3,6
Eastern regions of Poland				
Number of communes	349	151	180	18
Population density - population per 1 km ²	58,3	44,7	65,7	97,9
Percentage of the working age population	59,4	59,1	59,5	60,9
Population at non-working age per 100 people at working age	68,6	69,4	68,3	64,4
Natural increase per 1000 population	-7,7	-9,9	-6,4	-2,8
Migration balance for permanent residence per 1000 population	-1,9	-3,9	-1,1	6,7
Working people per 1000 people of working age	150,4	126,1	161,9	239,0
Registered unemployment rate	6,1	6,5	5,7	5,6
Western regions of Poland				
Number of communes	163	11	78	74
Population density - population per 1 km ²	49,2	32,2	39,6	61,8
Percentage of the working age population	60,2	59,9	60,1	60,3
Population at non-working age per 100 people at working age	66,2	67,1	66,5	65,8
Natural increase per 1000 population	-5,3	-7,3	-6,5	-3,6
Migration balance for permanent residence per 1000 population	3,1	-2,1	-0,5	7,6
Working people per 1000 people of working age	204,4	182,9	181,6	231,6
Registered unemployment rate	4,5	5,0	5,1	3,8

Source: Central Statistical Office in Warsaw.

Table 2.

Selected characteristics characterising infrastructural conditions in rural communes covered by the research in 2021

Specification	Rural communes			
	Total	According to the value of the inhabitants' activity indicator in the development of non-agricultural economic activity		
		Do 0,50	0,51-0,75	0,76 i więcej
Poland				
Percentage of population using the water supply system	85,8	84,0	85,3	88,9
Percentage of the population using the sewage system	40,3	29,8	38,7	53,8
Percentage of population using the gas network	19,7	11,8	17,1	33,0
Eastern regions of Poland				
Percentage of population using the water supply system	78,2	79,9	76,4	81,3
Percentage of the population using the sewage system	34,5	30,5	36,7	46,9
Percentage of population using the gas network	24,2	16,2	29,6	37,0
Western regions of Poland				
Percentage of population using the water supply system	93,0	96,3	94,3	91,1
Percentage of the population using the sewage system	53,0	51,5	50,0	56,3
Percentage of population using the gas network	21,5	12,1	12,1	32,7

Source: Central Statistical Office in Warsaw.

In rural communes in Poland, as in the whole country, the most developed infrastructure element is the water supply network, followed by the sewage network, and the least developed is the gas network, especially in communes in the western regions. However, there is a variation in this respect between rural communes, depending on the activity of their inhabitants in the development of nonagricultural economic activity, especially in the case of sewage and gas networks. Well, they are best developed in the group of rural communes with high activity of residents in the development of nonagricultural economic activity, and this applies both to rural communes throughout Poland, as well as in its eastern and western regions, which partially confirms the research hypothesis presented in the article. On the other hand, in rural communes throughout Poland and in its eastern regions, the worst developed sewerage and gas network can be found in a group of communes with low activity of inhabitants in the development of nonagricultural economic activities. However, in the case of the western regions of Poland, groups of rural communes with weak and moderate activity of inhabitants in the development of non-agricultural economic activity are characterised by similar accessibility of the population to these elements of the infrastructure (Table 2).

The basic condition for effective and efficient implementation of statutory tasks by communes is to ensure stable budgetary revenues, not only allowing for financing current expenses, but also enabling undertaking new investment tasks, including those conducive to the development of non-agricultural economic activity (Czudec, 2021).

Table 3.

Selected characteristics characterising the economic and financial conditions in rural communes covered by the research in 2021

Specification	Rural communes			
	Total	According to the value of the inhabitants' activity indicator in the development of non-agricultural economic activity		
		Do 0,50	0,51-0,75	0,76 i więcej
Poland				
Total revenues of communes' budgets per capita in PLN	6.621,0	6.402,9	6.528,8	7.037,4
Own revenues of communes' budgets per capita in PLN	2.284,6	1.797,0	2.141,7	3.065,6
Share of own revenues in total revenues of commune budgets in %	33,6	27,6	32,2	42,5
Total budget expenditures of communes per capita in PLN	6.044,7	5.796,3	5.958,0	6.475,6
Investment expenditures of communes' budgets per capita in PLN	975,5	949,9	933,7	1.098,1
Share of investment expenditures in total expenditures of commune budgets in %	15,4	15,5	15,0	16,2
Eastern regions of Poland				
Total revenues of communes' budgets per capita in PLN	6.372,4	6.311,3	6.338,7	7.222,8
Own revenues of communes' budgets per capita in PLN	1.786,6	1.658,2	1.758,5	3.144,9
Share of own revenues in total revenues of commune budgets in %	27,7	26,0	27,7	42,9
Total budget expenditures of communes per capita in PLN	5.768,3	5.703,4	5.776,4	6.231,5
Investment expenditures of communes' budgets per capita in PLN	976,0	991,1	952,3	1.085,4
Share of investment expenditures in total expenditures of commune budgets in %	16,2	16,5	15,8	16,6
Western regions of Poland				
Total revenues of communes' budgets per capita in PLN	6.880,6	7.406,1	6.570,7	7.129,2
Own revenues of communes' budgets per capita in PLN	3.054,7	3.329,1	2.579,3	3.514,9
Share of own revenues in total revenues of commune budgets in %	42,9	42,0	38,7	47,5
Total budget expenditures of communes per capita in PLN	6.271,5	6.706,3	6.044,7	6.446,0
Investment expenditures of communes' budgets per capita in PLN	1.021,0	1.089,5	939,5	1.096,8
Share of investment expenditures in total expenditures of commune budgets in %	15,3	13,2	14,7	16,3

Source: Central Statistical Office in Warsaw.

In rural communes in Poland, the average value of total budgetary income per capita is lower than the national average, where it amounts to PLN 7,226.5, and this applies in particular to communes in eastern regions. However, rural communes are differentiated in this respect, depending on the activity of their inhabitants in the development of nonagricultural economic activity. The average value of total budgetary income per capita of rural communes is clearly the highest in the group of communes with high activity of inhabitants in this respect, but this applies only to rural communes throughout Poland and in its eastern regions. For in the case of the western regions of Poland, the average value of total budgetary income per capita of rural communes is clearly the highest in the group of communes with low activity of inhabitants in

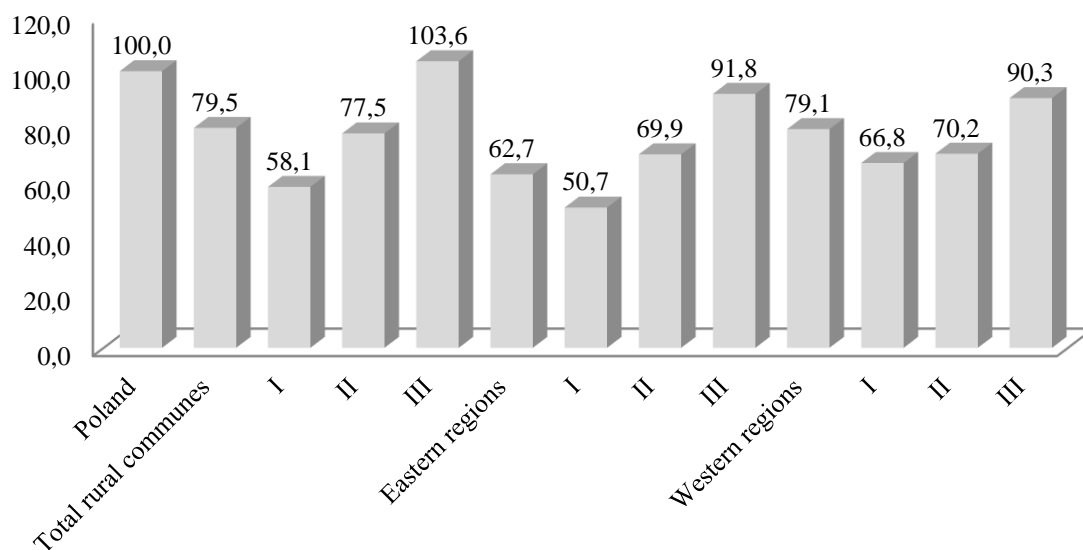
the development of nonagricultural economic activities. On the other hand, the lowest average value of total budgetary income per capita of rural communes throughout Poland and in its eastern regions is characterised by a group of communes with low activity of inhabitants in the development of non-agricultural economic activities, and in the case of western regions of Poland, a group of communes with moderate activity of inhabitants in this respect (Table 3).

Rural communes in Poland are characterised by a lower average value of their own budgetary revenues per capita and a lower share of these revenues in the total revenues of commune budgets, compared to the averages for the entire country, which amount to PLN 3,479.2 and 48.1%, respectively, are municipalities in the eastern regions. However, there is variation in this respect between rural communes, depending on the activity of their inhabitants in the development of nonagricultural economic activity. The average value of own revenues per capita of rural communes' budgets and the share of these revenues in the total revenues of communes' budgets are by far the highest in the group of communes with high activity of inhabitants in the development of non-agricultural economic activity, and this applies both to rural communes throughout Poland and to rural communes in eastern and its western regions, which partially confirms the research hypothesis presented in the article. On the other hand, they are the lowest in the group of rural communes with low activity of residents in this respect, but this applies only to rural communes throughout Poland and in its eastern regions, because in the case of western regions of Poland, the lowest average value of own budgets of rural communes per capita and the lowest share of this income in the total income of commune budgets is in the group of communes with moderate activity of inhabitants in the development of non-agricultural economic activity (Table 3).

In rural communes in Poland, the average value of total budget expenditure per capita is lower than the national average, which is PLN 6,870.1, and this applies especially to communes in eastern regions. However, rural communes are differentiated in this respect, depending on the activity of their inhabitants in the development of nonagricultural economic activity. The average value of total budget expenditure per capita of rural communes is clearly the highest in the group of communes with high activity of inhabitants in this respect, but this applies only to rural communes throughout Poland and in its eastern regions. On the other hand, in the case of the western regions of Poland, the average value of total budget expenditure per capita of rural communes is clearly the highest in the group of communes with low activity of inhabitants in the development of non-agricultural economic activities. On the other hand, the lowest average value of total budget expenditures per capita of rural communes throughout Poland and in its eastern regions is characterised by a group of communes with low activity of residents in the development of non-agricultural economic activities, and in the case of western regions of Poland, a group of communes with moderate activity of residents in this respect (Table 3).

Rural communes in Poland are characterised by a similar average value of investment expenditure per capita similar to that in the whole country (PLN 1,024.0), especially in western regions. However, there is variation in this respect between rural communes, depending on the activity of their inhabitants in the development of nonagricultural economic activity. The average value of investment expenditures per capita in the budgets of rural communes is by far the highest in the group of communes with high activity of inhabitants in the development of non-agricultural economic activity, and the lowest in the group of rural communes with moderate activity of inhabitants in this respect, and this applies both to rural communes throughout Poland, as well as rural communes in its eastern and western regions, which partially confirms the research hypothesis presented in the article (Table 3).

On average, the share of investment expenditure in the total budget expenditure of rural communes in Poland is similar to the average for the whole country, where it amounts to 14.9%, and this applies especially to communes in western regions. There are also no major differences in this regard between the selected groups of rural communes, with a slightly higher share of investment expenditure in the total expenditure of commune budgets in the group of communes with high activity of residents in the development of non-agricultural economic activity, and this applies in particular to rural communes throughout Poland and in its western regions (Table 3).

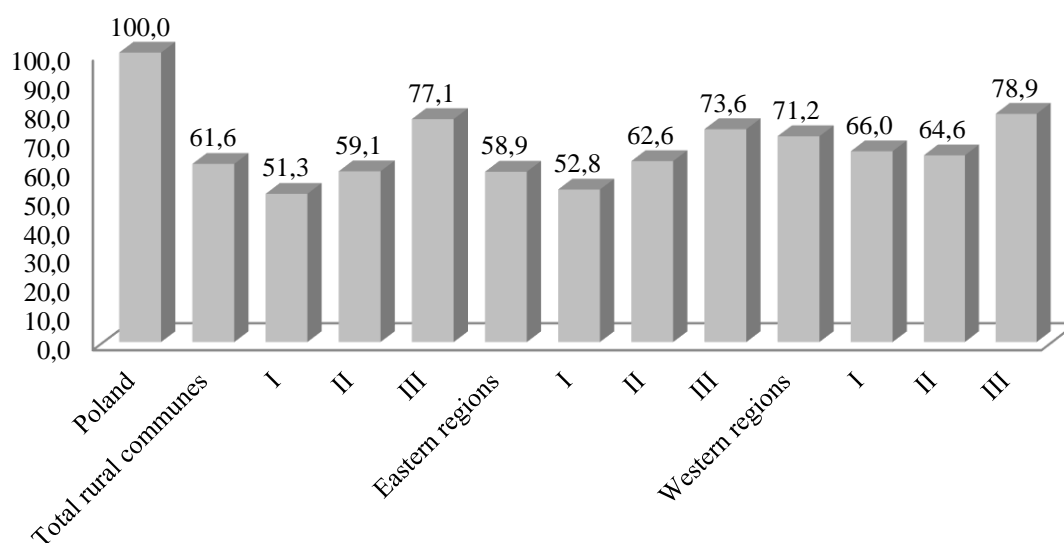


Explanations: I - rural communes, in which the value of the residents' activity indicator in the development of non-agricultural economic activity is below 0.51; II - rural communes, in which the value of the residents' activity indicator in the development of non-agricultural economic activity is from 0.51 to 0.75; III - rural municipalities, in which the value of residents' activity indicator in the development of non-agricultural economic activity is 0.76 and more.

Figure 1. Score assessment of demographic conditions and the situation on the labor market in rural communes covered by the research against the background of the country for 2021 (Poland = 100.0 points).

Source: Own study.

Figure 1 shows the results of the scoring concerning demographic conditions and the situation on the labor market in rural communes covered by the research against the whole country for 2021. It should be noted that rural communes in Poland are characterised by, on average, worse demographic conditions and a worse situation on the labor market, compared to the average for the whole country, and this is especially true for rural communes in the eastern regions. However, there is a clear differentiation in this respect between selected groups of rural communes, depending on the activity of their inhabitants in the development of nonagricultural economic activity. By far the best situation in this regard and the closest to the average for the entire country is in the group of communes with high activity of inhabitants in the development of non-agricultural economic activity, and this applies to both rural communes throughout Poland and rural communes in eastern and western regions, which partially confirms the research hypothesis put forward in the article. On the other hand, it is the worst in the group of rural communes with low activity of the inhabitants in the development of non-agricultural economic activities, especially in rural communes in the eastern regions. On the other hand, in the group of rural communes with moderate activity of inhabitants in the development of nonagricultural economic activity, demographic conditions and the situation on the labor market are at an average level and are very similar in rural communes of the eastern and western regions, with the exception that they are slightly worse compared to those that characterize this group of communes throughout Poland.



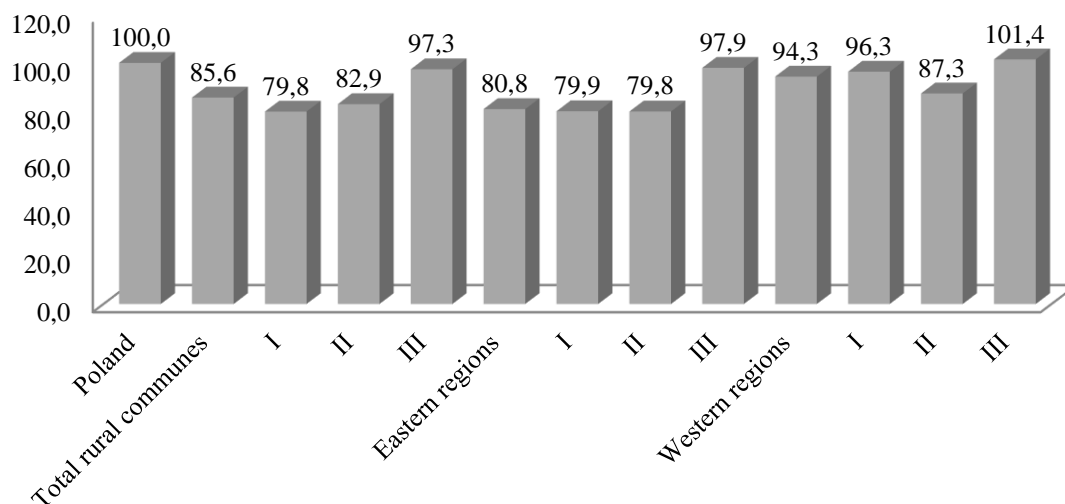
Explanations: as in diagram 1.

Figure 2. Score assessment of infrastructural conditions in rural communes covered by the research against the background of the country for 2021 (Poland = 100.0 points).

Source: Own study.

Figure 2 presents the results of the score assessment with respect to infrastructural conditions in rural communes covered by the research against the whole country for 2021. On its basis, it should be noted that rural communes in Poland are characterised by, on average, worse infrastructural conditions, compared to the averages for the whole country, and this is

especially true for rural communes in the eastern regions. However, there is a clear differentiation in this respect between selected groups of rural communes, depending on the activity of their inhabitants in the development of nonagricultural economic activity. Well, by far the best infrastructure conditions are characterized by a group of communes with high activity of residents in this respect, and this applies to both rural communes throughout Poland and rural communes in its eastern and western regions, and this partially confirms the research hypothesis put forward in the article. On the other hand, the worst situation in this respect is in the group of rural communes with low activity of inhabitants in the development of nonagricultural economic activity, but this applies only to rural communes throughout Poland and in its eastern regions. However, in the case of rural communes in the western regions of Poland, the infrastructural conditions are similar in the group of communes with low and moderate activity of their inhabitants in the development of nonagricultural economic activity, and at the same time, similar to those characterizing the group of rural communes with moderate activity of inhabitants in the development of non-agricultural economic activity throughout Poland and in its eastern regions.



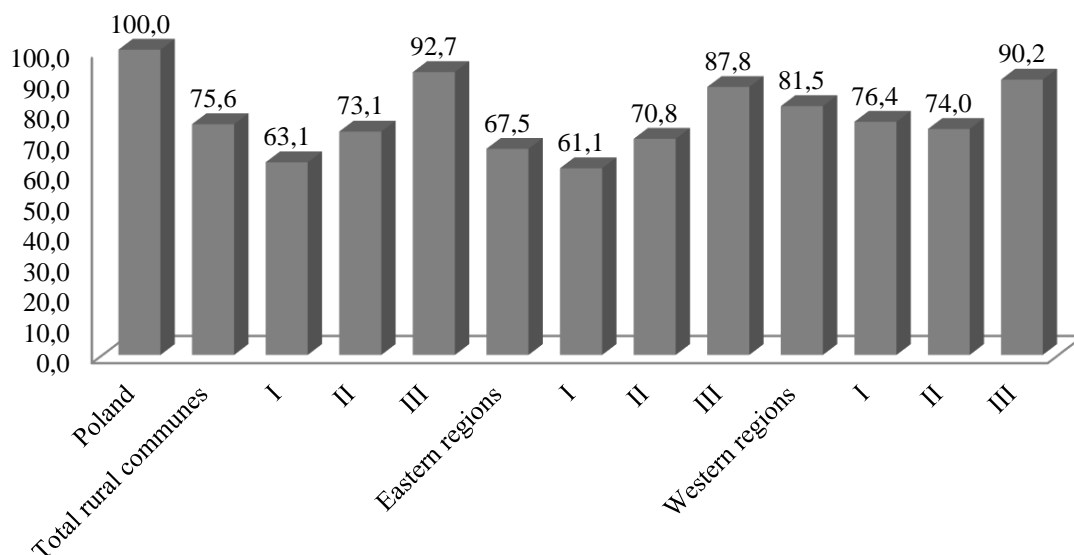
Explanations: as in diagram 1.

Figure 3. Score assessment of economic and financial conditions in rural communes covered by the research against the background of the country for 2021 (Poland = 100.0 points).

Source: Own study.

Figure 3 presents the results of the score assessment regarding economic and financial conditions in rural communes covered by the research against the whole country for 2021. It should be noted that rural communes in Poland are characterised by, on average, slightly worse economic and financial conditions, compared to the average for the whole country, and this is especially true for rural communes in eastern regions. However, there is a differentiation in this respect between selected groups of rural communes, depending on the activity of their inhabitants in the development of nonagricultural economic activities. The best economic and financial conditions are characterised by a group of communes with

high activity of residents in this respect, and this applies both to rural communes throughout Poland and to rural communes in its eastern and western regions, which partially confirms the research hypothesis presented in the article. On the other hand, in the group of rural communes with weak and moderate activity of inhabitants in the development of nonagricultural economic activity, the economic and financial conditions are slightly worse and similar, especially in rural communes throughout Poland and in its eastern regions.



Explanations: as in diagram 1.

Figure 4. Score assessment of endogenous conditions for the development of non-agricultural economic activity (i.e. demographic conditions and the situation on the labor market, as well as infrastructural, economic and financial conditions) in rural communes covered by the research against the country in 2021 (Poland = 100.0 points).

Source: Own study.

Figure 4 presents the results of the scoring on endogenous conditions for the development of nonagricultural economic activity (i.e. demographic conditions and the situation on the labor market, as well as infrastructural, economic and financial conditions analyzed together) in rural communes covered by the research against the background of the entire country for 2021. On its basis, it should be noted that rural communes in Poland are characterized by, on average, worse endogenous conditions for the development of non-agricultural economic activity, compared to the average for the entire country, and this is especially true for rural communes in the eastern regions. However, there is a clear differentiation in this respect between selected groups of rural communes, depending on the activity of their inhabitants in the development of nonagricultural economic activity. By far the best endogenous conditions for the development of nonagricultural economic activity are characterized by a group of communes with high activity of inhabitants in this respect, and this applies both to rural communes throughout Poland and to rural communes in its eastern and western regions, and this partially confirms the research hypothesis presented in the article. On the other hand, the worst situation in this respect is in the group of rural communes with low activity of inhabitants in the development of non-

agricultural economic activity, but this applies only to communes throughout Poland and in its eastern regions. Because in the case of rural communes in the western regions of Poland, endogenous conditions for the development of nonagricultural economic activity are similar in the group of communes with weak and moderate activity of their inhabitants in this respect and at the same time similar to those characterising the group of rural communes with moderate activity in the development of non-agricultural economic activity. business activity throughout Poland and in its eastern regions.

4. Summary and conclusions

Non-agricultural economic activity is the domain of responsible, creative, and courageous people, focused on achieving the assumed goals, including the desire to make a profit. It is also a real manifestation of an entrepreneurial attitude toward the environment and the ability to take advantage of emerging opportunities and market opportunities.

The development of nonagricultural economic activities is particularly important in rural areas, thanks to which they become more attractive, richer, and diversified, and also perform many important functions, both from the point of view of the economy and society.

The economic activity of the inhabitants of rural communes in Poland in the development of nonagricultural economic activity is, however, diversified and this applies both to communes throughout Poland, as well as in its eastern and western regions. In the case of rural communes throughout the country, the largest percentage are units with moderate activity of residents in this respect, in the case of rural communes in the eastern regions the percentage of units characterised by high activity of residents in this respect is the smallest, and in the case of rural communes in the western regions the lowest percentage are units with poor activity of the inhabitants in the development of nonagricultural economic activity.

Analysis of statistical data showed that rural communes in Poland are characterised by, on average, worse endogenous conditions for the development of nonagricultural economic activity, compared to the average for the whole country, and this applies in particular to communes in eastern regions.

However, rural communes throughout Poland and in its eastern and western regions are differentiated in terms of many diagnostic features illustrating their endogenous conditions for the development of nonagricultural economic activity, depending on the activity of the inhabitants in this respect. In the case of most comparisons, the group of rural communes with high activity of inhabitants in the development of nonagricultural economic activity is the most favourable. In addition, it was also confirmed by the point evaluation of endogenous conditions for the development of nonagricultural economic activity in the surveyed local government units against the background of the country, carried out in the article.

All this, therefore, allows us to confirm the research hypothesis put forward in the article, which assumes that the activity of the inhabitants of rural communes in eastern and western regions of Poland in the development of nonagricultural economic activity is diversified and is related to the quality of its endogenous conditions, with these conditions being clearly the best in units about the high activity of the inhabitants in this area.

It should be added that the presented results of the analysis of statistical data provide relevant and up-to-date knowledge that may be useful primarily for local government officials responsible for the conditions, opportunities and directions of local socioeconomic development of rural communes in Poland. At the same time, it justifies the need to continue similar research and analyses.

References

1. Balińska, A. (2015). Czynniki rozwoju terenów peryferyjnych Polski Wschodniej. *Journal of Agribusiness and Rural Development*, 2(36), pp. 153-160.
2. Brodziński, Z., Brodzińska, K. (2016). Uwarunkowania aktywności społeczno-gospodarczej podmiotów sektora MSP na terenach przygranicznych województwa warmińsko-mazurskiego. *Journal of Agribusiness and Rural Development*, 1(39), pp. 31-38.
3. Czudec, A. (2003). Rola infrastruktury w rozwoju obszarów wiejskich. In: A. Czudec, G. Ślusarz (eds.), *Regionalne uwarunkowania rozwoju wiejskich obszarów przygranicznych Polski i Ukrainy* (pp. 37-44). Rzeszów: Uniwersytet Rzeszowski, Państwowy Uniwersytet Rolniczy we Lwowie-Dublanach.
4. Czudec, A. (2011). Endogeniczne uwarunkowania rozwoju obszarów wiejskich (Przykład Podkarpacia). In: W. Kamińska, K. Heffner (Ed.), *Dychotomiczny rozwój obszarów wiejskich? Czynniki progresji, czynniki peryferyzacji* (pp. 161-182). *STUDIA KPZK PAN, Tom CXXXVIII*. Warszawa.
5. Czudec, A. (2021). Finanse jednostek samorządu terytorialnego w okresie pandemii. *Finanse Komunalne*, 5, pp. 7-18.
6. Czudec, A., Majka, A., Zajac, D. (2018). Impact of European Union Cohesion Policy at Local Level (Rural Areas of Eastern Poland Case Study). *Lex localis - Journal of Local Self-Government*, Vol. 16, No. 4, pp. 785-803.
7. Duczkowska-Małysz, K., Duczkowska-Piasecka, M. (2014). Rodzinna przedsiębiorczość na obszarach wiejskich wobec wyzwań globalnych. In: R. Sobiecki (ed.), *Przedsiębiorstwo rodzinne w gospodarce globalnej* (pp. 117-145). Warszawa: SGH.
8. Duczkowska-Piasecka, M. (1997). Małe i średnie przedsiębiorstwa na terenach wiejskich (ich rola, znaczenie oraz możliwości i bariery rozwojowe). In: M. Kłodziński, A. Rosner

- (eds.), *Ekonomiczne i społeczne uwarunkowania i możliwości wielofunkcyjnego rozwoju wsi w Polsce*. Warszawa: SGGW, pp. 245-265.
9. Falkowski, K. (2006). Endogeniczne czynniki rozwoju społeczno-gospodarczego regionów przygranicznych na pograniczu polsko-rosyjskim. *International Journal of Management and Economics*, 20, pp. 47-61.
 10. Frenkel, I. (1999). Wiejskie obszary problemowe pod kątem widzenia sytuacji demograficznej. In: A. Rosner (ed.), *Typologia wiejskich obszarów problemowych* (pp. 25-37). Warszawa: IRWiR PAN.
 11. Gałązka, A. (1999). Zróżnicowania społeczno-gospodarcze a rozwój infrastruktury komunalnej na obszarach wiejskich. In: A. Stasiak (ed.), *Wpływ zróżnicowań regionalnych na możliwości przekształceń wsi polskiej*. *Biuletyn KPZK PAN*, z. 188. Warszawa.
 12. Gałązka, A. (2011). Czynniki rozwoju w wybranych teoriach rozwoju regionalnego. In: Z. Strzelecki (ed.), *Gospodarka regionalna i lokalna w Polsce. Czynniki i bariery* (pp. 36-42). Warszawa: SGH.
 13. Głąbicka, K., Grewiński, M. (2005). *Polityka spójności społeczno-gospodarczej Unii Europejskiej*. Warszawa: Dom Wydawniczy ELIPSA.
 14. Grzebyk, M., Miś, T., Stec, M., Zajac, D. (2019). *Skala, kierunki i dynamika zmian społeczno-gospodarczych na obszarach wiejskich wschodniej Polski po przystąpieniu do Unii Europejskiej*. Poznań: Bogucki Wydawnictwo Naukowe, p. 232.
 15. Heffner, K. (2007). Rozwój społeczno-gospodarczy obszarów wiejskich. Definicje-Uwarunkowania-Zależności-Czynniki-Skutki. Badania zróżnicowania rozwoju obszarów wiejskich. In: A. Rosner (ed.), *Zróżnicowanie poziomu rozwoju społeczno-gospodarczego obszarów wiejskich a zróżnicowanie dynamiki przemian* (pp. 11-26). Warszawa: IRWiR PAN.
 16. Jaroński, K. (2011). Urządzenia infrastruktury komunalnej jako podstawowy czynnik rozwoju lokalnego i regionalnego. In: Z. Strzelecki (ed.), *Gospodarka regionalna i lokalna w Polsce. Czynniki i bariery* (pp. 159-178). Warszawa: SGH.
 17. Kamińska, W. (2011). Pozarolnicza aktywność gospodarcza osób fizycznych na obszarach wiejskich w Polsce. In: W. Kamińska, K. Heffner (eds.), *Obszary wiejskie. Wielofunkcyjność. Migracje. Nowe wizje rozwoju*. *STUDIA KPZK PAN, Tom CXXXIII* (pp. 103-127). Warszawa.
 18. Kłodziński, M., Rosner, A. (2000). Małe i średnie firmy a rozwój gospodarczy obszarów wiejskich. In: M. Kłodziński, A. Rosner (eds.), *Rozwój przedsiębiorczości na terenach wiejskich wschodniego i zachodniego pogranicza* (pp. 136-147). Warszawa: IRWiR PAN.
 19. Kołodziejczyk, D. (2009). Przestrzenne zróżnicowanie infrastruktury technicznej na obszarach wiejskich. In: E. Rydz, R. Rudnicki (eds.), *Procesy przekształceń przestrzeni wiejskiej*. Warszawa: IGiPZ PAN.
 20. Kołodziejczyk, D. (2013). *Rozwój infrastruktury a cechy wiejskich społeczności lokalnych w latach 2005-2011*. Warszawa: IERiGŻ-PIB.

21. Korenik, S. (2011). *Region ekonomiczny w nowych realiach społeczno-gospodarczych*. Warszawa: CeDeWu.
22. Kosiedowski, W. (2008). *Regiony Europy Środkowo Wschodniej w procesie integracji ze szczególnym uwzględnieniem wschodniego pogranicza*. Toruń: UMK w Toruniu.
23. Kudełko, J. (2013). *Uwarunkowania i kierunki rozwoju województw Polski Wschodniej jako regionów słabo rozwiniętych*. *Studia KPZK PAN, t. CLI*. Warszawa.
24. Kulawiak, A. (2022). Pozarolnicza działalność gospodarcza a rozwój społeczno - gospodarczy gmin wiejskich województwa łódzkiego. *Przedsiębiorczość-Edukacja, 18(1)*, pp. 64-78. <https://doi.org/10.24917/20833296.181.6>.
25. Miś, T., Zając, D. (2020). Results of European Union Cohesion Policy in Terms of Quality of Life Improvement on a Regional Level (as Exemplified by Eastern Poland). *Lex localis - Journal of Local Self-Government, Vol. 18, No. 1*, pp. 53-69.
26. Mogiła, Z., Zaleski, J., Zathay, M. (2011). *Wykorzystanie przygranicznego położenia terenów znajdujących się w zachodniej części Polski dla rozwoju społeczno-gospodarczego*. Wrocław, p. 197.
27. Olejniczak, K. (2016). Znaczenie endogenicznych czynników rozwoju regionalnego w świetle badań empirycznych. *Barometr Regionalny, Tom 14, Nr 1*, pp. 35-41.
28. Pietrzyk, I. (2005). Paradygmaty rozwoju terytorialnego. In: W. Kosiedowski (ed.), *Gospodarka i polityka regionalna okresu transformacji* (p. 57). Toruń: UMK w Toruniu.
29. Pięcek, B. (1999). Wiejskie obszary problemowe pod kątem widzenia infrastruktury. In: A. Rosner (ed.), *Typologia wiejskich obszarów problemowych* (pp. 39-57). Warszawa: IRWiR PAN.
30. Pięcek, B. (2007). Wiejskie obszary wyludnienia w Polsce. *Wiadomości Statystyczne, nr 12*.
31. Szymła, Z. (1997). Badanie zróżnicowań regionalnych w Polsce. In: R. Roszkiewicz (ed.), *Związki polityki gospodarczej z polityką regionalną* (p. 174). Wrocław: AE we Wrocławiu.
32. Ślusarz, G. (2008). Wykorzystanie endogenicznych czynników regionu w kształtowaniu jego konkurencyjności. *Roczniki Naukowe SERiA, Tom X, Zeszyt 2*, pp. 257-262.
33. Wilkin, J. (1997). Przedsiębiorczość na wsi - główne determinanty i uwarunkowania. In: S. Makarski (ed.), *Przedsiębiorczość w agrobiznesie, a rozwój terenów wiejskich*. Trzcianica: AR w Krakowie, Wydział Ekonomii w Rzeszowie, pp. 25-33.
34. Zarębski, P. (2015). Typy obszarów wiejskich w Polsce ze względu na poziom rozwoju społeczno-gospodarczego i dynamikę przedsiębiorstw. *Wieś i Rolnictwo, 3(168)*, pp. 63-77.
35. Zegar, J. St. (2011). Model rolnictwa a żywotność obszarów wiejskich. In: W. Kamińska, K. Heffner (eds.), *Dychotomiczny rozwój obszarów wiejskich? Czynniki progresji, czynniki peryferyzacji*. *STUDIA KPZK PAN, Tom CXXXVIII* (pp. 35-60). Warszawa.