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TRENDS IN THE DEVELOPMENT OF RURAL MUNICIPALITIES IN THE MAŁOPOLSKA VOIVODSHIP

Key words: rural municipalities (local administrative units), socio-economic development, the Małopolska voivodship

ABSTRACT. The paper aims to identify the level of socio-economic development of rural municipalities in the Małopolska voivodship, present relevant development rankings, and describe changes in this area in 2003-2017. The development processes of rural municipalities are analysed in the context of the functions they perform as well as their position in the spatial system of Małopolska. Selected diagnostic characteristics allow for the calculation of the synthetic measure of development, leading to a linear presentation of Małopolska’s rural municipalities and their ranking in terms of socio-economic development. The ordering of municipalities is based on Hellwig’s method. Empirical analysis is based on the statistical data of the Central Statistical Office and the Statistical Office in Cracow. Development trends in the rural municipalities of Małopolska and relative growth gaps have a persistent character over time. The highest development levels are recorded in urbanised areas in which agricultural functions are considerably reduced, and are located in close vicinity of the regional centre of Cracow. On the other hand, the least developed rural municipalities in the region include those with a dominant agricultural function. The conducted research indicates that functional factors in the development of rural municipalities, related to economic structures, as well as spatial factors, related to the vicinity of regional centres, are closely correlated.

INTRODUCTION

Market mechanisms, increasingly intense competition and ongoing globalization processes lead to creating and broadening growth gaps between particular areas. Development drivers occur in those locations which are most attractive in terms of quality of life and business opportunities, which results in different growth rates and their effects in particular regions. Development processes are considered in the context of different scales of spatial systems, i.e. at transnational, national, regional and local levels. The basic objective of economic policies, implemented at various levels, is to stimulate socio-economic development.

Rural areas are usually characterised by lower levels of development than urban regions. Also, they face specific problems. The main barriers to development include inefficient agriculture (resulting from a high fragmentation of farms), limited financial resources, insufficient infrastructure, and low mechanization and specialization levels.
However, particular areas do not constitute a uniform group of entities, representing considerable diversity in terms of development. The diversity of development levels in rural areas is determined by two major groups of factors: historical conditions, affecting economic and social structures, and factors related to location in terms of the vicinity of multifunctional urban centres [Rosner 2011]. According to Jerzy Bański [2011], the major factors in developing rural areas include geographical factors connected with a close vicinity of big cities, natural conditions, raw materials and tourist attractions. However, the major factor is the vicinity of urban agglomerations.

The functional structure of rural areas is affected by historical, natural and socio-economic factors. Structural changes mainly result from the loss of the dominating role of agriculture in generating GDP, as well as the employment and income of the rural population [Czapiewski 2011]. Apart from farming, rural areas perform other functions related to industrial activities, recreation, tourism and housing.

The paper aims to identify the level of socio-economic development of rural municipalities in the Małopolska voivodship, present relevant development rankings, and describe changes in this area in 2003-2017. The development processes of rural municipalities are analysed in the context of the functions they perform, as well as their position in the spatial system of Małopolska.

**METHODS OF RESEARCH**

An assessment of the socioeconomic development of rural municipalities is based on the case of the region of Małopolska. The empirical analysis comprises the period of 2003-2017.

The assessment of the socio-economic development of analysed rural municipalities makes use of diagnostic variables describing various aspects of socio-economic development, with consideration given to the significance of conveyed information as well as limitations resulting from the availability of statistical data at commune levels. The selection of diagnostic variables is based on commonly used criteria, including: universality, measurability, availability, quality and interpretability [Zeliaś 2000]. The following characteristics are taken into consideration:

- \( x_1 \) – population per 1 km²,
- \( x_2 \) – net migration per 1,000,
- \( x_3 \) – share of people out of work in the total number of the working age population (%),
- \( x_4 \) – entities of the national economy in the Regon register per 1000,
- \( x_5 \) – tax revenue from legal and natural persons which constitutes a share of state budget receipts per one inhabitant (PLN),
- \( x_6 \) – property expenditure per one inhabitant (PLN),
- \( x_7 \) – number of cultural houses and centres, clubs and recreation centres per 10 thousand inhabitants.

The adopted diagnostic characteristics provide information on various aspects of socio-economic development in municipalities – attractiveness as a place of residence \( (x_1, x_2) \), labour market opportunities and the degree of the use of labour force \( (x_3) \), starting business activities \( (x_4) \), the wealth of societies \( (x_5) \), investment opportunities \( (x_6) \), and the degree of satisfying educational and cultural needs \( (x_7) \).
The selected diagnostic characteristics allow for the calculation of the synthetic measure of development, leading to a linear presentation of Małopolska’s rural municipalities and their ranking positions in terms of socio-economic development. The ordering of municipalities is based on Hellwig’s method. It represents a model method – making use of a model object with the highest values of input variables (in the case of stimulants) or the lowest values (for destimulants). A synthetic measure is construed on the basis of the measurement of the distance between the observed and model object with the use of Euclidean metrics [Młodak 2006, Panek 2009]. This measure assumes values (0;1). Higher values indicate a smaller distance between the analysed object and the model.

The adopted indicator (the synthetic measure of development) allows for presenting a ranking of rural municipalities. The analysis is conducted for two periods: the years 2003 and 2017. It allows to compare development levels achieved in the analysed municipalities, changes in time and determine the position of particular municipalities in comparison with other entities.

The results of the analysis of the development levels of rural municipalities are referred to their functional structure and positions in the region of Małopolska.

The analysis of the functional structure is based on the typology of municipalities proposed by Przemysław Śleszyński and Tomasz Komornicki, developed on the basis of the functional classification of municipalities [Śleszyński, Komornicki 2016], and the typology of municipalities proposed by a team of researchers headed by M. Stanna, based on differences among municipalities with regard to their socio-economic structures [MROW 2018].

In light of the above, rural municipalities of the voivodship of Małopolska are classified as five functional groups:

– municipalities with a dominant agricultural and traditional agricultural function,
– multiple income source municipalities with fragmented agriculture,
– multiple income source municipalities with a strong tourist function,
– multifunctional municipalities with a diversified sectoral structure,
– urbanised municipalities with a strongly reduced agricultural function.

Empirical analysis is based on the statistical data of the Central Statistical Office and the Statistical Office in Cracow.

RESULTS OF THE RESEARCH

The Małopolska voivodship comprises 121 rural municipalities. They are diversified in terms of their location, socio-economic development characteristics as well as their dominant economic functions.

Rural municipalities account for 66.5% of the total number of voivodship municipalities. Apart from rural municipalities, the voivodship has 14 boroughs (urban) and 47 urban-rural municipalities. The total surface of rural municipalities amounts to 9,881 km², accounting for 65.1% of the voivodship’s surface. They have 1,218.3 thousand inhabitants, representing 35.9% of the region’s population.

The district of Limanowa is characterised by the largest share of rural areas, which accounts for 95.2% of its area and 82.4% of the population. Rural areas have a significant
position in the districts of Nowy Targ, Tatry, Bochnia, and Gorlie. On the other hand, the district of Chrzanów has the smallest share of rural municipalities with only one entity occupying 14.9% of its area and accounting for 7.3% of its population; other similar districts are located in north west Małopolska: Olkus and Oświęcim.

The value of the synthetic development measure is calculated to determine the development level of the analysed municipalities. This allows to create a ranking of municipalities, depending on the highest to lowest values of this measure. In the next step, municipalities are divided into five groups depending on the achieved level of development.

In 2003, the value of the synthetic measure ranged from 0.654 in the commune of Zielonki in the district of Cracow to 0.013 in the commune of Słaboszów in the district of Miechów.

The group of the most developed rural municipalities, considerably differing from other areas, comprises 6 entities (Figure 1, Table 1): 4 municipalities in the district of Cracow (Zielonki, Mogilany, Zabierzów and Michałowice), one commune in the district of Olkusz (Bolesław), and one commune in the district of Myślenice – Siepraw. The value of the synthetic measure in these municipalities exceeds the level of 0.40, and ranges from 0.654 in Zielonki to 0.405 in Michałowice. The municipalities are highly urbanised and located in close vicinity of Cracow – the regional centre of Małopolska (with the exception of Bolesław).

Figure 1. Development levels of Małopolska’s rural municipalities in 2003
Source: own research based on the Central Statistical Office and the Statistical Office in Cracow
The second group comprises 19 relatively highly developed municipalities (the synthetic measure ranges from 3.00 to 3.99). Also, this group is dominated by strongly urbanised municipalities in which agricultural functions are much reduced. This group comprises Liszki, Wielka Wieś, Iwanowice (the district of Cracow); Oświęcim, Osiek, Przeciszów (the district of Oświęcim); Tarnów (in the district of Tarnów); Babice (in the district of Chrzanów), and Kłaj (in the district of Wieliczka). This group also comprises multi-income source municipalities with fragmented agriculture, in which inhabitants have other sources of income apart from farming. The analysed group comprises 8 municipalities: Tomice, Spytkowice and Wieprz (the district of Wadowice); Rzezawa and Bochnia (the district of Bochnia); Jerzmanowice-Przeginia (the district of Cracow); Chełmiec (the district of Nowy Sącz), and Gdów (the district of Wieliczka). This group also includes one

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<th>Value of the synthetic development measure</th>
<th>Name of the municipality (Functional type *)</th>
<th>2003</th>
<th>2017</th>
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<td>≥ 0.40</td>
<td>Zielonki (1), Mogilany (1), Zabierzów (1), Bolesław (1), Siepraw (1), Michałowice (1)</td>
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<td>[0.30-0.39)</td>
<td>Tomice (4), Tomice (4), Liszki (1), Wielka Wieś (1), Oświęcim (1), Tarnów (1), Spytkowice (4), Osiek (1), Rzezawa (4), Kocmyrzów-Luborzyca (2), Jerzmanowice-Przeginia (4), Bochnia (4), Babice (1), Chełmiec (4), Iwanowice (1), Krościenko nad Dunajcem (3), Kłaj (1), Wieprz (4), Przeciszów (1), Gdów (4)</td>
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<th>2003</th>
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* 1 – urbanised municipality with a strongly reduced agricultural function, 2 – multi-functional municipality with a balanced sectoral structure, 3 - multiple income source municipality with a strong tourist function, 4 – multiple income source municipality with fragmented agriculture, 5 – municipality with a dominant agricultural and traditional agricultural function

Source: own research based on the CSO and the Statistical Office in Cracow data
multifunctional commune with sectoral balance – Kocmyrzów-Lubiczyca (the district of Cracow), and one commune with a significant tourist function – Krościenko on the Dunajec River (the district of Nowy Targ). Among the above best developed municipalities not a single one has a dominant farming function.

The third group comprises relatively less developed entities – 38 municipalities. The majority of them represent multi-income source municipalities with fragmented agriculture. The fourth and largest group comprises 45 municipalities characterised by a very low level of socio-economic advancement. The functional structure of some of them has a dominant farming function, while others represent multi-income source entities with fragmented farming.

The lowest positions in the ranking (the fifth group) are taken by municipalities characterised by the lowest levels of development, in which the value of synthetic measure is below 0.10. This group comprises 13 municipalities. Eight of them have a dominant farming function: Szerzyny, Gromnik (the district of Tarnów); Trzciąż (the district of Olkusz); Gręboszów and Bolesław (the district of Dąbrowa); Książ Wielki, Kozłów, and Słaboszów (the district of Miechów). Two municipalities are multi-income source entities with fragmented agriculture: Kamienica and Słopnice (the district of Limanowa). Two others have a strong tourist function: Uście Gorlickie (the district of Gorlice), and Rytro (the district of Nowy Sącz). One commune in this group is marked by balanced sectoral development – Łabowa (the district of Nowy Sącz).

Figure 2. Development levels of Małopolska’s rural municipalities in 2017

Source: own research based on CSO and the Statistical Office in Cracow data
A similar analysis was carried out for the year 2017. The results indicate that in the period of a dozen or so years (2003-2017) the situation did not change considerably, which is confirmed by slight differences in the ranking of municipalities. Therefore, it can be concluded that development trends in the analysed municipalities and their ranking remain stable over time.

Similarly to the situation recorded 14 years earlier, and also in 2017, the unquestioned ranking leaders include highly urbanized municipalities in close vicinity of the city of Cracow: Wielka Wieś, Zielonki, Michałowice, Zabierzów, and Mogilany (Figure 2, Table 1).

Another group of relatively well-developed municipalities comprises 13 entities, including 9 highly urbanized municipalities: Liszki, Czernichów (the district of Krakow); Siepraw (the district of Myślenice); Biskupice (the district of Wieliczka); Oświęcim and Ośiek (the district of Oświęcim); Tarnów (the district of Tarnów); Babice (the district of Chrzanów), and Bolesław (the district of Olkusz). This group also includes the commune of Kocmyrzów-Luborzyca (the district of Cracow), characterised by balanced sectoral development, as well as 3 multi-income source municipalities with fragmented agriculture: Spytkowice (the district of Wadowice); Jerzmanowice-Przeginia (the district of Krakow), and Chełmieć (the district of Nowy Sącz).

The third group comprises 36 municipalities with the majority representing entities with fragmented agriculture, in which inhabitants have various sources of non-farming income. Another group comprises 59 municipalities characterised by a dominant farming function and multiple sources of income.

The least developed rural municipalities of the voivodship are typical farming areas. Among 8 municipalities with a value of synthetic measure below 0.10, 6 entities are included in this group: Słaboszów (the district of Miechów); Olesno, Radgoszcz, Gręboszów, Bolesław, and Mędrzechów (the district of Dąbrowa). One of the lowest positions is taken by Lipnica Wielka (the district of Nowy Targ) – a multi-income source commune, as well as Rytro (the district of Nowy Sącz) with a developed tourist function.

Generally, in 2003-2017, the ranking positions of rural municipalities in terms of their socio-economic development did not change to a significant extent (with some exceptions). The position of municipalities in close vicinity of Cracow is much higher: Igołomia-Wawrzeńczyce in the district of Cracow (46 places up in the ranking from number 89 to 43), and Trzyciąż in the district of Olkusz (32 places up in the ranking from number 113 to 81). Considerable improvements are also recorded for neighbouring municipalities on the border of the districts of Nowy Sącz and Gorlice: Korzenna, Grybowa, Gorlic and Moszczenica. In the rankings of rural municipalities they moved up by 44, 41, 30, and 32 places, respectively.

Simultaneously, the sharpest decline in rankings are recorded for the commune of Krościenko on the Dunajec River in the district of Nowy Targ, moving down by 49 places from number 21 to 70. Interestingly, relative levels of development deteriorated considerably in municipalities with a tourist function: Czorsztyn, in the district of Nowy Targ, and Biały Dunajec and Poronin, in the district of Tatra. Their positions, among rural municipalities of the region, moved down by 44, 40 and 35 places, respectively. It implies a low level of competitiveness of these tourist municipalities, whose environmental and natural potential is not effectively used to stimulate development processes. Apart from the
above municipalities, a much lowered position was recorded for Przeciszów, in the district of Oświęcim (by 47 places) and Charsznica, in the district of Miechów (by 41 places).

Małopolska voivodship is characterised by certain regularities with regard to the location of municipalities which represent different development levels and functional structures.

The highest development levels are recorded for the municipalities of the district of Cracow, which have lost their “rural” character in subsequent years, considerably reducing their farming functions. These municipalities represent highly urbanised areas, being part of the functional area of the regional centre of Cracow, inhabited by people settling down in suburban regions in conditions of suburbanization processes. They represent the most affluent areas. Inhabitants have high incomes, and they are often employed in Cracow – not in the municipalities where they reside. Also, they are characterised by the highest population density and net migration indicators. Relatively high development levels are recorded in the municipalities of the district of Wieliczka, neighbouring the district of Cracow in the east and west - the municipalities of the district of Oświęcim, Chrzanów and Olkus, located along the communication route from Cracow to Katowice, are also highly urbanized areas.

The municipalities in the east and south of Cracow are less developed (the districts of Wadowice, Myślenice, Sucha, Bochnia, Brzesko, Nowy Sącz and Tarnów). In most of these municipalities inhabitants have various sources of income, and agriculture is fragmented and dominated by small farms.

Low levels of development are recorded in the municipalities of the district of Nowy Targ with fragmented farming, and the district of Tarnów, dominated by municipalities with a dominant agricultural function, as well as the district of Tatry with municipalities representing a strong tourist function.

The municipalities of the districts of Gorlice and Limanowa represent the lowest levels of development. This group comprises municipalities in the districts of Miechów, Proszowice, and Dąbrowa, located in north and north-east Cracow. The above municipalities have a typically agricultural structure, which dominates other functions. Many of them are characterised by traditional farming.

CONCLUDING REMARKS

Development trends in rural municipalities of the Małopolska voivodship and relative development gaps have a persistent character. The highest advancement levels are recorded in urbanised areas in which the agricultural function is much reduced, located in close vicinity of the regional centre of Cracow. Municipalities located further from the regional centre rely on various sources of income, representing fragmented farms. Typically, agricultural municipalities are located in north and north-east Cracow, representing a dominant farming function. Simultaneously, these entities represent the least developed rural municipalities in the region. These conclusions are consistent with the results of other studies of various regional systems.
The conducted research indicates that, in the development of rural municipalities, functional factors, related to economic structures, and spatial factors, related to location in terms of close vicinity of regional centres, are strongly correlated.

A surprising phenomenon is deterioration in the position of municipalities with a strong tourist function. It would seem that tourism is a strong driver of development. The identification of reasons for this situation requires further research. It can be assumed that the ineffective use of the tourist potential (the beauty of the countryside, and natural resources) results from low development levels and underinvestment in tourist and communication infrastructure, which reduces the tourist attractiveness of these areas.

Market trends broaden development gaps. Intervention of public authorities would be necessary to stimulate the dynamic development of weaker municipalities. It is advisable to promote the multifunctional development of rural areas, especially in the context of a very small number of such municipalities (only 5) in the Małopolska voivodship. Multifunctional development consists of diversifying rural economies and departing from reliance on plant- and animal-based products. Services not related to agriculture include such functions as health resorts, recreation, pilgrimage tourism, agritourism, construction and transport. Simultaneously, industrial functions can result from local raw material deposits and the processing of agricultural materials.

Rural areas possess features which are hardly available in cities, such as the natural beauty of the countryside, lower costs of carrying out business activities, stronger social bonds and a resulting sense of security [Pietrzykowski 2018]. The effective use of the potential of rural municipalities, supported by appropriate public policies, will determine their development prospects. A lack of activities stimulating the growth of villages, on the other hand, will result in the further depopulation and marginalization of least developed municipalities.

BIBLIOGRAPHY


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**TENDENCJE ROZWOJU GMIN WIEJSKICH WOJEWÓDZTWA MAŁOPOLSKIEGO**

Słowa kluczowe: gminy wiejskie, rozwój społeczno-gospodarczy, województwo małopolskie

**ABSTRAKT**


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