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TERRITORIAL CAPITAL AS A FOUNDATION FOR THE ENDOGENOUS DEVELOPMENT OF BAGEL SYSTEMS OF SMALL TOWNS: A CASE STUDY OF THE GREATER POLAND VOIVODESHIP

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Abstract: Territorial capital is a modern, dynamically developing concept within regional studies that focuses on identifying key factors influencing the socio-economic development process from an endogenous perspective. It encompasses a set of material, intermediate, and intangible resources that are closely tied to a specific place, characterized by limited mobility and difficult to replicate in other areas. The main objective of this article is to determine the significance of territorial capital as a foundation for endogenous development in the context of bagel systems of small towns, which are characteristic of Poland. The spatial scope of the study includes selected urban municipalities (small towns with a population of up to 20,000 inhabitants) and their rural counterparts (bagel municipalities) located in one of Poland's voivodeships – the Greater Poland Voivodeship. The temporal scope covers both a static approach (the year 2022) and a dynamic approach (the period 2012–2022). The study employed both qualitative and quantitative methods, including Hellwig's development pattern method, and data from the Local Data Bank of Statistics Poland (GUS). The conducted research allows us to conclude that territorial capital plays a key role as the foundation for endogenous development in the context of bagel systems of small towns in the Greater Poland Voivodeship. The obtained results indicate a clear differentiation of the key factors influencing the development of territorial capital between small towns and the surrounding municipalities. Small urban centers exhibit a relatively higher level of development with a lower dynamic, while bagel municipalities show a lower level of development but a higher dynamic. The relationship between the level and dynamics of territorial capital development in the studied units is limited. The analysis of inequalities revealed a progressive convergence in small towns and increasing divergence in the surrounding municipalities, indicating a deepening of developmental disparities in the studied systems.

Keywords: territorial capital, development factors, bagel systems of small towns, small towns, bagel municipalities, Greater Poland Voivodeship, Hellwig's development pattern method

1 INTRODUCTION

Territorial capital is a modern, dynamically developing concept within regional studies that focuses on identifying key factors influencing the socio-economic development process from an endogenous perspective (Camagni, 2008; Perucca, 2014; Tóth, 2015, 2017; Fratesi and Perucca, 2018; Morretta, 2021; Orsi et al., 2022; Torre, 2025; Churski, 2024; Nowakowska, 2024). It encompasses a set of material, intermediate, and intangible resources that are closely tied to a specific place, characterized by limited mobility and difficult to replicate in other areas. Camagni (2008) defines territorial capital as a system of local, tangible and intangible, endogenous and exogenous assets, of public and private nature, that constitute the development potential of an area and whose presence enhances the efficiency of local production activities and place attractiveness. As Nowakowska (2024, p. 56) states, "the concept of territorial capital undoubtedly introduces new elements and builds a new perspective on the analysis of endogenous development at the local and regional scale. Its originality stems from perceiving a given place in a more holistic way, taking into account a broader set of material and intangible resources present within it (…)". Undoubtedly, the potential to apply the concept of territorial capital and its components (resources, factors) in scientific research holds significant cognitive value and introduces a new analytical perspective, both in regional and local-level studies.

In this study, the authors attempt to apply the concept of territorial capital and its components to local-level research, specifically in the context of bagel systems. In terms of administrative divisions, this concept encompasses two administratively separate but typically interconnected units of local government: a small town and its neighboring bagel municipality, which is a rural commune directly adjacent to the town (Gibas, 2016; Kozubek and Konecka-Szydłowska, 2025). The emergence of dual bagel systems in Poland is linked to the municipal reform carried out in the 1990s and subsequent government decisions that allowed rural areas previously included in urban-rural municipalities to establish their own rural municipalities with their administrative seat located in the town (Kamosiński, 2015). Currently, there are 157 such systems, making this issue a relevant topic for local governments in most Polish voivodeships, except for Opole and Silesia, where such territorial structures do not exist.

The main objective of this article is to determine the significance of territorial capital as a foundation for endogenous development in the context of bagel systems of small towns, which are characteristic of Poland. The spatial scope of the study includes selected urban municipalities (small towns with a population of up to 20,000 inhabitants) and their rural counterparts (bagel municipalities) located in one of Poland's voivodeships – the Greater Poland Voivodeship. The temporal scope covers both a static approach (the year 2022) and a dynamic approach (the period 2012–2022). To achieve the main objective of the study, the following research questions were formulated:

– How do the key factors influencing the development of territorial capital in municipalities within bagel systems of small towns in the Greater Poland Voivodeship differ from other municipalities in the region over the period 2012–2022?
– How does the level and dynamics of territorial capital development vary among municipalities in bagel systems of small towns in the Greater Poland Voivodeship in comparison to other municipalities in the region during 2012–2022?
– To what extent does the dynamics of territorial capital development in municipalities within bagel systems of small towns in the Greater Poland Voivodeship correlate with their level of development in comparison to other municipalities in the region?
– What is the scale of disparities in territorial capital development among municipalities in bagel systems of small towns in the Greater Poland Voivodeship over the period 2012–2022 in comparison to other municipalities in the region?

The research process aimed at achieving the main objective of the study consists of five stages. In the first stage, a literature review was conducted, analyzing the concept of territorial capital and its components. The second stage involved the selection of research methods and data sources used to analyze the chosen issue. In the third stage, the characteristics of the study area were presented, focusing on bagel systems of small towns in the Greater Poland Voivodeship. In the fourth and principal stage of the study, the research results were presented, illustrating the differentiation of factors, as well as the level and dynamics of territorial capital development. In the fifth and final stage, a discussion was conducted, and conclusions were formulated (Figure 1).

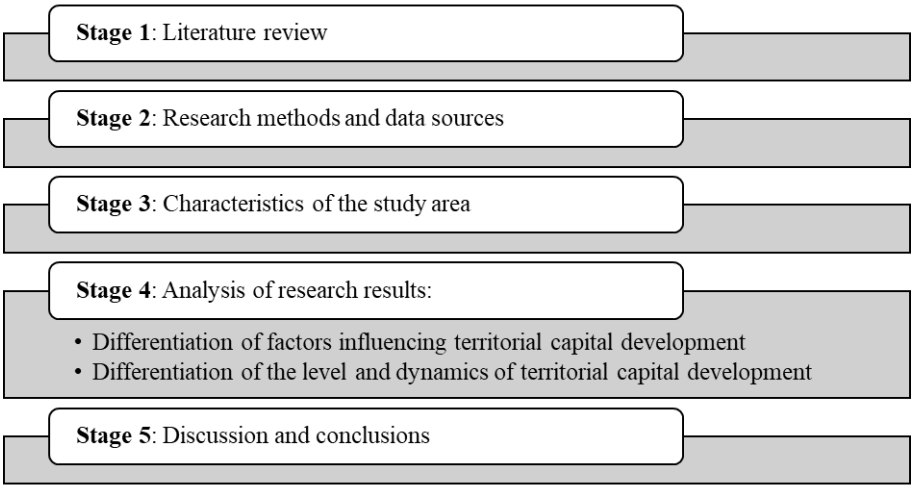


Figure 1 Research procedure applied in the study. Source: own elaboration

2 THEORETICAL FOUNDATIONS OF TERRITORIAL CAPITAL

The concept of "territorial capital" was introduced into the literature in the late 1990s in the context of shaping policies within the European LEADER program (Brańka and Kudłacz, 2017; Nowakowska, 2024). The term was applied in analytical works addressing the causes of spatial disparities in development within the OECD report (2001), and was later used in 2005 by the European Commission in the political discourse related to the evaluation of the implementation and future of the EU regional policy (Przygodzki, 2016). The author of the territorial capital concept, which forms the foundation of scientific research on the contemporary phenomenon of territoriality in European development literature, is R. Camagni (2008). He argues that territorial capital constitutes a broad set of material, intermediate, and intangible goods that are rooted in a specific place, and therefore limited in mobility and difficult to replicate. As such, they determine the uniqueness and exceptional nature of the investment environment in a given location (Churski et al., 2020).

The continuous development of scientific research in this field has contributed to the emergence of various approaches and numerous definitions of territorial capital (Capello et al., 2009; Perucca, 2014; Nowakowska, 2018; Szafranek, 2019; Churski et al., 2020). A common element that connects the different approaches is the interpretation of territorial capital as a set of resources (natural, human, artificial, organizational, relational, and cognitive), which are interrelated forms of capital actively used to foster socio-economic development. The interpretation of territorial capital goes beyond the physical nature of resources. It emphasizes their social and relational dimensions, highlighting that they are the product of the activities of actors inhabiting that space. In the concept of territorial capital, the relationships between its elements (assets, resources, and factors) are crucial. These relationships can either have a positive character, influencing the acceleration of development dynamics (mutual reinforcement), or a negative one, leading to the blockage of development (mutual weakening).

The theoretical-empirical operationalization of the concept of territorial capital most often involves adopting a specific set of factors (components), to which a corresponding set of indicators is assigned to describe this issue. In Camagni's work (2008), territorial capital is presented in two dimensions: competitiveness and materiality. Based on this, nine categories of goods are distinguished, including: relational, social, human, natural, cultural, and private capital. Furthermore, within these categories, several groups of factors and smaller development capitals are identified. The approach proposed by Jona (2015) includes seven factors (capitals): social, human, cultural, institutional, infrastructural, economic, and relational. A more generalized division is presented by Nowakowska (2017), who identifies three dimensions of development (territorial capitals): geographical, relational, and institutional. The geographical dimension is considered in the context of spatial proximity and the specific resources of the territory. The relational dimension refers to the activity and economic structure of a given territory, relating to the concepts of social and rela-

tional capital. The institutional dimension is treated as a set of norms and rules that apply in a given area. On the other hand, De Rubertis et al. (2019) distinguished two main categories of territorial capital factors: generative and accumulated. The first category includes human and social capital, which determine the actions taken by local actors. The second category includes elements created within these actions, which can be both material and immaterial, such as: organizations, businesses, production systems, and infrastructure. Furthermore, the authors highlighted the importance of the attractiveness factor, which serves as a measure of the success of a given area using local generative and accumulated factors. In the publications by Churski et al. (2020, 2021), in the operationalization of territorial capital as a meta-factor for socio-economic development, the relationships between five categories of development factors were considered. These include: human capital (i.e., qualifications, skills, knowledge, demographic situation, labor market, educational services, health), social capital (i.e., social activity, cooperation, trust, social norms, entrepreneurship, non-profit activity), material capital (i.e., material goods, fixed assets, technical and social infrastructure, natural resources, and the condition of the natural environment), financial capital (i.e., financial resources of residents, local governments, businesses, external funds, income, and expenditures), and innovations (i.e., innovativeness, business environment, knowledge diffusion). The statistical analysis carried out in relation to these factors, using a set of indicators, was supplemented with the results of social research, which allowed for a deeper identification of the relationships (both positive and negative) between the factors that build territorial capital. A modified approach to the operationalization of territorial capital was introduced in the work of Herodowicz et al. (2023), where four basic capitals were distinguished: intellectual (composed of social and human capital), material, financial, and innovations. It was initially assumed that two main chains of relationships exist, with a feedback loop between them. The first one includes the relationships: intellectual capital - financial capital - innovations - intellectual capital, and the second one includes the relationships: intellectual capital - innovations - material capital - intellectual capital. The originality of this work lies in the consideration of the relationships between capitals in reference to the five-element helix model (Carayannis and Campbell, 2012).

It should be emphasized that the concept of territorial capital has appeared in numerous works in the European academic literature within the fields of socio-economic geography, spatial economy, spatial planning, and economics. Camagni's (2008) pioneering contribution to the conceptualization of the term and the comprehensive taxonomy of territorial capital factors has been widely accepted and developed in various contexts, as well as critically analyzed by other European researchers from various scientific disciplines. In addition to the aforementioned works by authors from Italy and Poland, other studies addressing the issue of territorial capital can be found in Hungarian (Tóth, 2015, 2017; Faragó, 2019; Egyed and Rácz, 2020), Portuguese (Romão and Neuts, 2017; Orsi et al., 2022), and French (Lacquement and Chevalier, 2016; Pecqueur, 2022; Torre, 2025) literature.

In this study, the operationalization of territorial capital adopts the approach proposed by the team led by Churski (2020, 2021), which distinguishes five components of territorial capital, each assigned a corresponding set of indicators. Due to the availability of data (published data) and the adopted research approach (without conducting field studies), the indicators used in the study relate to the material dimension of territorial capital.

3 RESEARCH METHODS AND DATA SOURCES

To determine the significance of territorial capital as a foundation for endogenous development in the context of bagel systems of small towns, characteristic of Poland, both qualitative and quantitative methods were applied. The qualitative methods include a literature review, aimed at organizing existing knowledge regarding the concept of territorial capital and its components, treated as aspects of socio-economic development. The quantitative methods include a group of indicator-based methods (Czyż, 2016), which are examples of classical methods used in social-economic geography (Chojnicki, 1977). In the empirical research procedure outlined below, an algorithm consisting of three stages was applied.

In the first stage (1), the selection and reduction of partial indicators describing the five development factors (Churski, 2020, 2021) were carried out. Initially, 37 selected indicators were subjected to correlation analysis using the Pearson correlation coefficient (Pearson, 1895), which considered not only the pure statistical relationship but also the substantive interpretation of the linear relationship between the indicators within each of the adopted aspects of socio-economic development. As a result, 21 indicators were obtained, which are treated as diagnostic variables in the subsequent stages of the research procedure (Table 1).

In the second stage (2), a synthetic territorial capital development indicator for the municipalities of the Greater Poland Voivodeship was constructed using the taxonomic development pattern method proposed by Hellwig (Hellwig, 1968). The procedure for calculating this indicator was preceded by testing the normality of the distribution of the diagnostic variables. The results of the conducted tests showed a lack of normal distribution, so instead of the classic standardization method, the zeroed unitary normalization method was applied. This method not only eliminates the denominators from the normalized indicators and reduces the diagnostic variables to a comparable scale, but it also ensures equal range within the interval [0, 1] and allows for the normalization of features that take positive, negative, and zero values. The diagnostic variables were normalized based on the following formulas (Kukuła, 2000):

For the stimulant:

$$Z_{ij} = \frac{x_{ij} - min_i\, x_{ij}}{max_i\, x_{ij} - min_i\, x_{ij}}$$

Table 1 Diagnostic variables

Factor	Variable	Type
Human Capital	Population in the non-working age per 100 people in the working age	D
	Natural increase per 1,000 population	S
	Net migration (internal and international) per 1,000 population	S
	Outpatient clinics per 10,000 population	S
	Unemployed per 100 people in the working age	D
Social Capital	Employed per 1,000 people in the working age	S
	Foundations, associations, and organizations per 10,000 population	S
	Individuals running businesses per 1,000 population	S
	Share of higher officials, managers, and specialists among all council members (%)	S
	Housing benefits per 1,000 population	D
Material Capital	Share of legally protected areas in the municipality's area (%)	S
	Difference between the percentage of population using water supply and sewage systems	D
	Average usable floor area of a dwelling per person (m²/person)	S
	Share of dwellings with a flushing toilet (%)	S
	Share of dwellings with a connection to the gas network (%)	S
Financial Capital	Investment capital expenditures of municipalities per capita (PLN/person)	S
	Income from PIT per capita (PLN/person)	S
	Tax income per capita (PLN/person)	S
	Own income per capita (PLN/person)	S
	Financial and insurance activities entities per 10,000 population	S
Innovations	Commercial companies with foreign capital participation per 10,000 population	S

Explanation: S – stimulant, D – destimulant

Source: own elaboration.

For the destimulant:

$$Z_{ij} = \frac{max_i x_{ij} - x_{ij}}{max_i x_{ij} - min_i x_{ij}}$$

The normalized values of the diagnostic variables became the basis for determining the development pattern and antipattern (Nowak, 1990):

Pattern:

$$z_0 = \left[z_{01}, z_{02}, \ldots, z_{0m}\right] \rightarrow z_{oj} = \begin{cases} max_i \left\{z_{ij}\right\} & for \quad the \quad stimulant \\ min_i \left\{z_{ij}\right\} & for \quad the \quad destimulant \end{cases}$$

Antipattern:

$$z_{-0} = \left[z_{-01}, z_{-02}, \ldots, z_{-om}\right] \rightarrow z_{-oj} = \begin{cases} min_i \left\{z_{ij}\right\} & for \quad the \quad stimulant \\ max_i \left\{z_{ij}\right\} & for \quad the \quad destimulant \end{cases}$$

The synthetic territorial capital development indicator for each municipality was finally determined using the following formula (Nowak, 1990):

$$v_i = 1 - \frac{d_{i0}}{d_0}$$

where:

$$d_{i0} = \sqrt{\sum_{j=1}^{m} \left(z_{ij} - z_{0j} \right)^2}$$

$$d_{i0} = \sqrt{\sum_{j=1}^{m} \left(z_0 - z_{-0j} \right)^2}$$

The values of the calculated indicator range from [0, 1]. High values indicate that the municipality is close to the pattern (i.e., a high level of territorial capital development), while low values, on the other hand, indicate a greater distance from the pattern (i.e., a low level of territorial capital development).

In the third and final stage (3), the municipalities of the Greater Poland Voivodeship were classified on the scale of territorial capital development, expressed by the value of vi. The procedure was preceded by an assessment of the discriminatory ability of the calculated synthetic indicator for categorizing the spatial units under consideration. For this purpose, the G index was used based on the following formula (Sokołowski, 1984):

$$G = 1 - \sum_{I-1}^{N-1} min_i \left\{ \frac{v_i - v_{i+1}}{max_i \{d_i\} - min_i \{d_i\}}, \frac{1}{N-1} \right\}$$

The values of the calculated index range from [$0 \le G \le \frac{1}{N-1}$]. High values indicate a strong discriminatory ability, while low values indicate a weak ability in this regard. In this analysis, the value of G was 0.535, which lies within the upper limits of the variability range [$0 \le G \le 0{,}996$]. Therefore, it should be concluded that the calculated measure exhibits relatively high discriminatory power and allows for the considered classification to be carried out.

The classification of municipalities in the Greater Poland Voivodeship on the scale of territorial capital development, expressed by the value of vi was carried out based on the arithmetic mean and standard deviation for vi (Kaczmarek and Parysek, 1977), which allowed for the determination of five distinct classes of development level according to the following formulas:

1) high: $\left(v_i > \bar{v} + 1\frac{1}{2} s_v \right)$

2) average-high: $\left(\bar{v} + \frac{1}{2} s_v \le v_i \le \bar{v} + 1\frac{1}{2} s_v \right)$

3) average: $\left(\bar{v} - \frac{1}{2} s_v < v_i < \bar{v} + \frac{1}{2} s_v \right)$

4) average-low: $\left(\bar{v}-1\frac{1}{2}s_v \le v_i \le \bar{v}-\frac{1}{2}s_v\right)$

5) low: $\left(v_i < \bar{v}-1\frac{1}{2}s_v\right)$

The classification procedure is complemented by the analysis of inequalities in the level of territorial capital development among the municipalities of the Greater Poland Voivodeship, as well as the changes and trends occurring in this regard. In addition to the traditional coefficient of variation ($V=\frac{S}{\bar{X}}$, where "*S*" denotes the standard deviation, and " $\bar{x}$ " – mean arithmetic), three indices were used for the analysis of inequalities:

(1) Williamson (Williamson, 1965):

$$CV_W=\frac{1}{y}\sqrt{\sum_{i=1}^{n}\left(y_i-\bar{y}\right)^2\frac{P_i}{\sum P_i}}$$

(2) Gini (Dixon et al., 1987):

$$G_W=\frac{1}{n^2\bar{y}}\sum_{i=1}^{n}\left(2i-n-1\right)y_i$$

(3) Theil (Theil, 1996):

$$T=\frac{T_T+T_L}{2}$$

where:

$$T_T=\mathrm{GE}(1)=\frac{1}{n}\sum_{i=1}^{n}\frac{y_i}{\bar{y}}\ln\left(\frac{y_i}{\bar{y}}\right)$$

$$T_L=\mathrm{GE}(0)=\frac{1}{n}\sum_{i=1}^{n}\ln\left(\frac{\bar{y}}{y_i}\right)$$

The data used in this article comes from the Local Data Bank of the Central Statistical Office. The calculations were performed using MS Excel, and the results are presented in the form of figures, including both charts and maps.

4 CHARACTERISTICS OF THE STUDY AREA

The study area consists of bagel systems of small towns located in one of Poland's voivodeships – the Greater Poland Voivodeship, which is situated in the central-western part of Poland. The structures under examination in this study include two administratively separate, but typically linked in both nomenclature and function, local government units: small towns (urban municipalities with a population of up to 20,000 inhabitants) and the rural municipalities located in their immediate vicinity, referred to as bagel municipalities, which have their administrative seat in the town (Gibas, 2016; Kozubek and Konecka-Szydłowska, 2025). This arrangement means that small urban centers serve as the seat of government for both urban and

rural municipalities, and often also for county-level authorities (Kozubek, 2023a, 2023b). In the country's settlement system, these towns play an important role, as they serve as local centers for the surrounding rural areas (Rydz, 2006; Konecka-Szydłowska and Hauke, 2011; Korcelli-Olejniczak, 2020; Bański, 2022; Szmytkie and Sikorski, 2022). Their importance for the development of these areas is significant, as they serve as the foundation for shaping local, and even regional, economic growth and socio-cultural conditions. However, their role is often marginalized, and their potential for influence and synergy is underestimated (Heffner, 2016).

In the Greater Poland Voivodeship, which consists of 35 counties (including four cities with county rights) and 226 municipalities, including urban (19), urban-rural (97), and rural (110) municipalities, five bagel systems of small towns are distinguished, comprising a total of five pairs of urban and rural municipalities. These include: Chodzież, Czarnków, Obrzycko, Słupca, and Złotów (Figure 2), which are located in different parts of the studied voivodeship. This distribution may affect the nature and extent of their socio-economic connections with the surrounding areas (Konecka-Szydłowska, 2016).

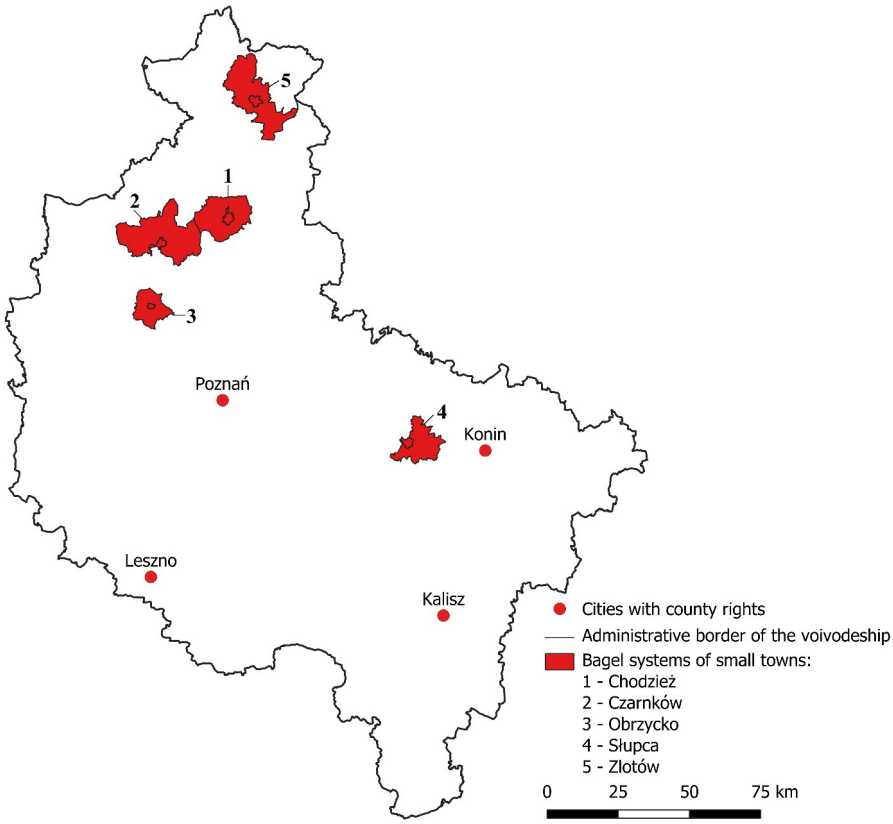


Figure 2 Study area. Source: own elaboration

The analyzed bagel systems cover a total area of 1,156.9 km², which constitutes 3.9% of the total area of the Greater Poland Voivodeship. The average area of such a system is 231.4 km², with the largest being the Czarnków bagel system (357.7 km²) and the smallest being the Obrzycko bagel system (114.6 km²). The average area of a single municipality within the analyzed systems is 115.7 km², with small towns averaging 9.7 km², and bagel municipalities averaging 221.7 km². The largest area is occupied by the rural municipality of Czarnków, and the smallest by the urban municipality of Obrzycko. The average ratio of the area of a small town to the bagel municipality in the bagel system is 1: 23 (Table 2). When comparing these data with the area of urban-rural municipalities that include small towns in the Greater Poland Voivodeship, it should be noted that they occupy significantly smaller areas, averaging 154.6 km². The average ratio of the area of a small town to the rural area in these municipalities is 1: 19 (data from 2022).

Table 2 Basic administrative and area data of municipalities in bagel systems of small towns in the Greater Poland Voivodeship in 2022

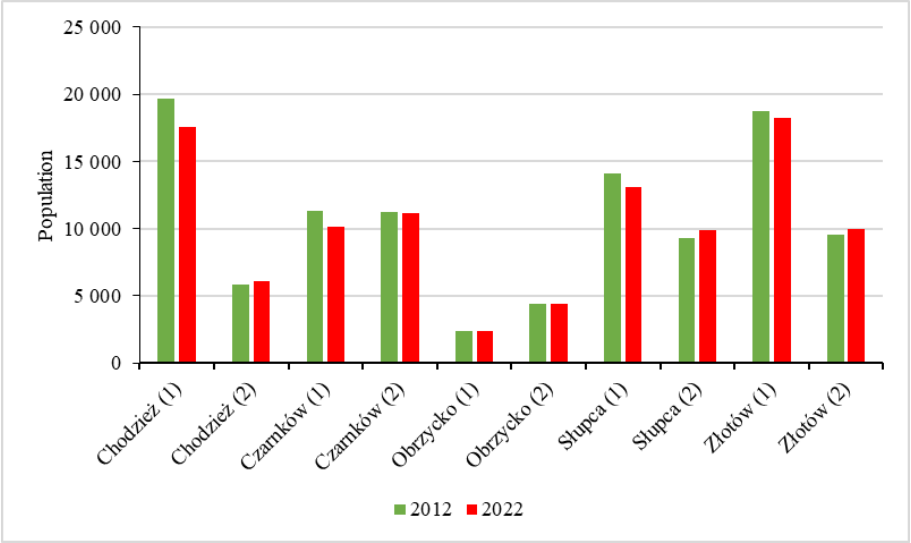
No.	Municipality	County	Seat of Authorities	Area [km²]
1	Chodzież (1)	Chodzież	Chodzież	12,8
	Chodzież (2)	Chodzież	Chodzież	213,0
2	Czarnków (1)	Czarnków-Trzcianka	Czarnków	10,2
	Czarnków (2)	Czarnków-Trzcianka	Czarnków	347,5
3	Obrzycko (1)	Szamotuły	Obrzycko	3,7
	Obrzycko (2)	Szamotuły	Obrzycko	110,8
4	Słupca (1)	Słupca	Słupca	10,3
	Słupca (2)	Słupca	Słupca	144,8
5	Złotów (1)	Złotów	Złotów	11,6
	Złotów (2)	Złotów	Złotów	292,3

Explanation: (1) Small town (urban municipality), (2) Bagel municipality (rural municipality)
Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS).

For the preliminary characterization of the study area, an analysis was conducted on selected social and economic characteristics of municipalities in bagel systems of small towns in the Greater Poland Voivodeship. The selection of these characteristics results from the need to identify the basic conditions for development, which serve as the starting point for the proper analysis of territorial capital in terms of its five components.

In the bagel systems of small towns in the Greater Poland Voivodeship, at the end of the studied period, the total population was 102,928 people, which accounted for 3.0% of the total population of the voivodeship. Compared to 2012, the popula-

tion decreased by 3,423 people. In 2022, the average population of a bagel system of a small town was 20,586 people. The largest system was the Złotów bagel system (28,222 inhabitants), and the smallest was the Obrzycko bagel system (6,817). The average population in a single municipality was 10,293 people, with small towns averaging 12,291, and bagel municipalities averaging 8,294. During the studied period, the highest population was concentrated in the Złotów urban municipality, while the smallest population was in the Obrzycko urban municipality (Figure 3).



Explanation: (1) Small town (urban municipality), (2) Bagel municipality (rural municipality)

Figure 3 Population of municipalities in bagel systems of small towns in the Greater Poland Voivodeship in 2012 and 2022. Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS)

The analyzed bagel systems are characterized by a varied dynamics of population change, with an overall downward trend. The average growth rate calculated for this period was 98.6%. When broken down by municipality types, this rate was 94.1% for small towns and 103.1% for bagel municipalities. The highest growth rates were recorded in the rural municipalities of Słupca (106.5%) and Złotów (104.6%), while the lowest were in the urban municipalities of Chodzież (89.5%) and Czarnków (89.3%). In most of the studied small towns, the growth rate was below 100%, except for Obrzycko (101.2%). In contrast, in bagel municipalities, this rate generally exceeded 100%, except for Czarnków (99.4%) (Figure 4). The high growth rates in municipalities surrounding urban centers are primarily due to migration from cities to suburban areas (Szymańska and Biegańska, 2011; Kajdanek, 2012; Rosner, 2016), which consequently experience various changes, both demographic and functional (Stelmaszewska, 2020).

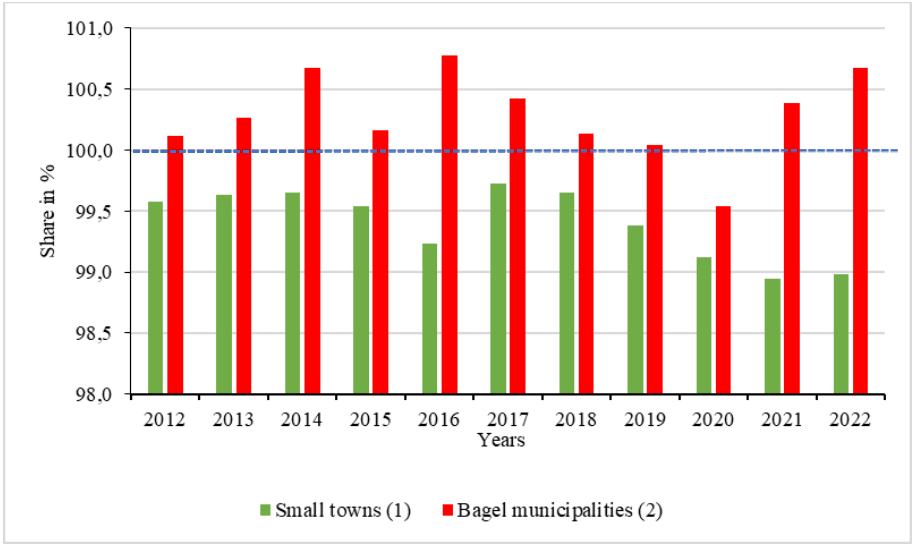
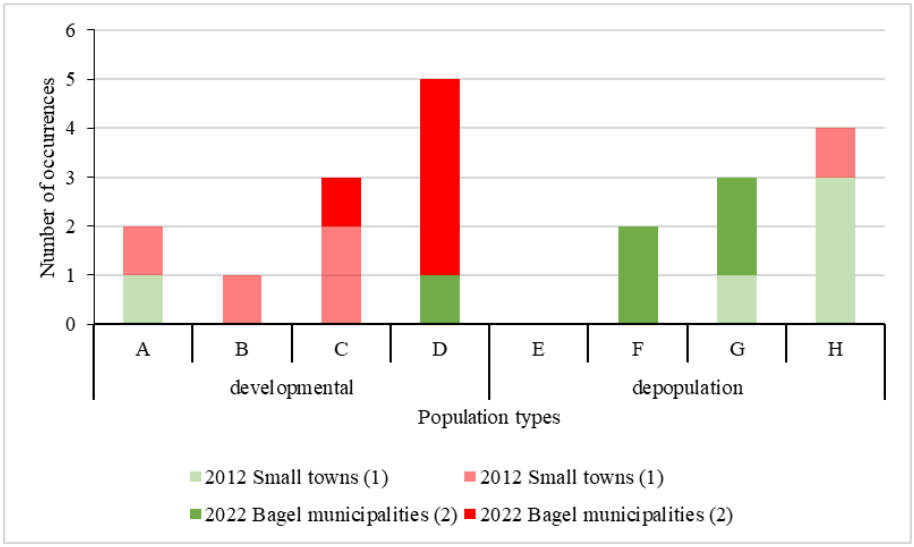


Figure 4 Average annual growth rate of population changes in municipalities in bagel systems of small towns in the Greater Poland Voivodeship in 2012-2022. Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS)

In light of Webb's (1964) classification of population types, the bagel systems of small towns exhibit diverse values of the components of actual growth. When broken down by municipality types, small towns in both studied years were mostly classified as depopulation types, losing population. An exception was the urban municipality of Obrzycko, which in 2012 belonged to type A and in 2022 to type D. In 2012, one small town was assigned to type G (Słupca), and three to type H (Chodzież, Czarnków, and Złotów). In 2022, two small towns were assigned to type F (Chodzież and Czarnków), and two to type G (Słupca and Złotów). On the other hand, the bagel municipalities in both studied years were mostly classified as growth types, gaining population. The exception was the rural municipality of Słupca, which in 2012 was classified as type H. In 2012, one bagel municipality was assigned to type A (Złotów), one to type B (Obrzycko), and two to type C (Chodzież and Czarnków). In 2022, the situation changed – one bagel municipality (Czarnków) remained in type C, while three were classified in type D (Chodzież, Obrzycko, and Słupca). These data suggest that bagel municipalities attract new residents, leading to their dynamic development at the expense of small towns, becoming strong growth areas (Figure 5).

In the bagel systems of small towns in the Greater Poland Voivodeship, at the end of the studied period, the total number of business entities was 102,928, which accounted for 2.5% of the total number of business entities in the voivodeship. Compared to 2012, the number of business entities increased by 2,104. In 2022, the average number of business entities in a bagel system of a small town was 3,055. The highest number of enterprises was recorded in the Złotów bagel system (3,539),

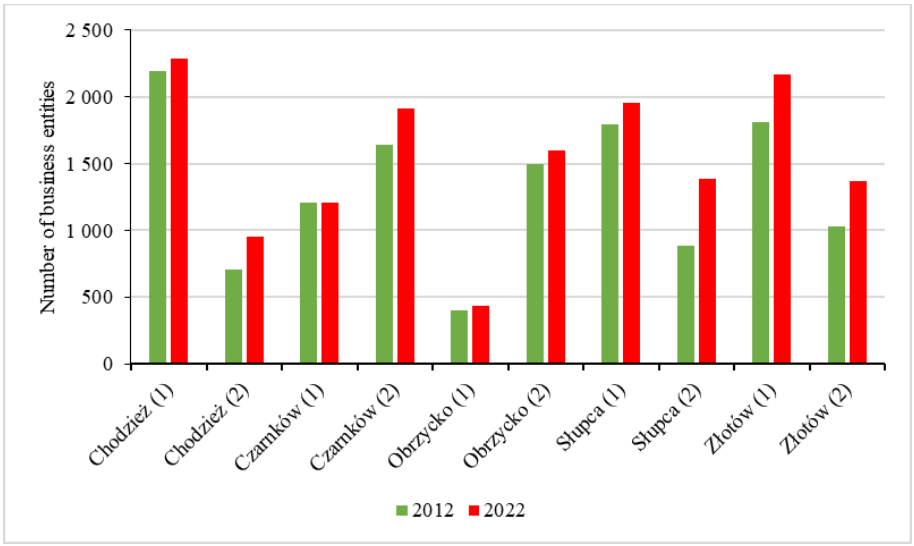


Explanation: Population types: A–D – developmental (increase in population); E–H – depopulational (decrease in population)

Figure 5 Population types of municipalities in bagel systems of small towns in the Greater Poland Voivodeship in 2012 and 2022. Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS)

while the lowest was in the Obrzycko bagel system (2,034). The average number of business entities in a single municipality was 1,527, with small towns averaging 1,610, and bagel municipalities averaging 1,445. During the studied period, the largest number of business entities was concentrated in the Chodzież urban municipality, while the smallest was in the Obrzycko urban municipality (Figure 6).

The analyzed bagel systems are characterized by a varied dynamics of changes in the number of business entities, with an overall upward trend. The average growth rate calculated for this period was 118.9%. When broken down by municipality types, the rate reached 108.3% for small towns and 129.6% for bagel municipalities. The highest growth rates were recorded in the rural municipalities of Słupca (156.1%) and Chodzież (134.6%), while the lowest were in the urban municipalities of Chodzież (104.1%) and Czarnków (99.8%). In most of the studied small towns and bagel municipalities, the growth rate was above 100%, except for the urban municipality of Czarnków (98.8%) (Figure 7). The high growth rates in both types of municipalities result from the overall increase in the number of business entities. However, this process is more dynamic in municipalities surrounding small urban centers, where conditions favor faster economic development. The attractiveness of these areas stems from socio-economic development driven by the neighboring towns (Bajwoluk, 2016; Harasimowicz, 2018).



Explanation: (1) Small town (urban municipality), (2) Bagel municipality (rural municipality)

Figure 6 Number of business entities in municipalities in bagel systems of small towns in the Greater Poland Voivodeship in 2012 and 2022. Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS)

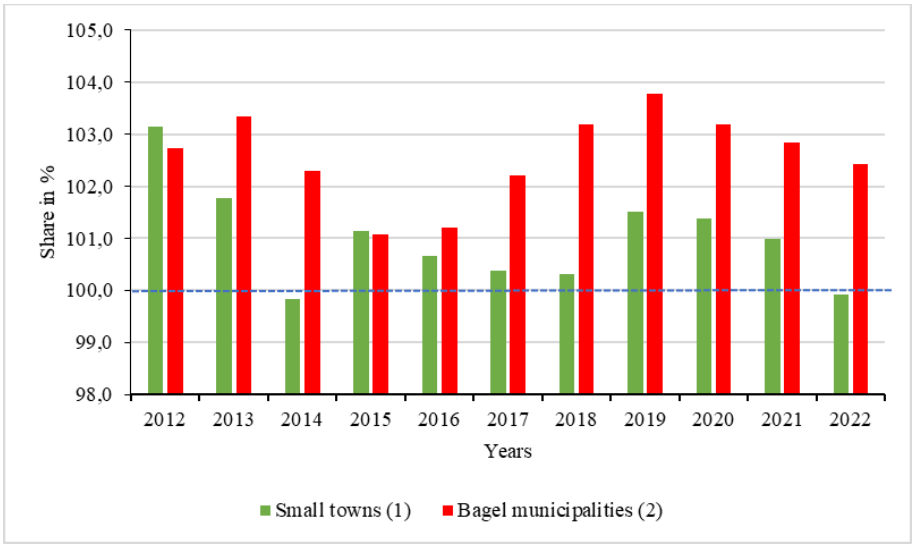
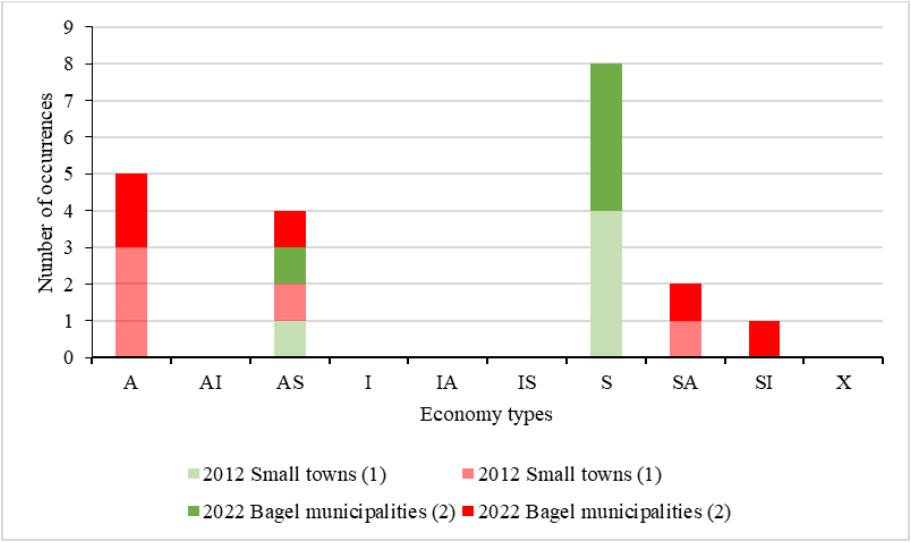


Figure 7 Average annual growth date of the number of business entities in municipalities in bagel systems of small towns in the Greater Poland Voivodeship in 2012-2022. Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS)

In light of Jerczyński's (1977) classification of economic types, the bagel systems of small towns are characterized by a varied share of the three traditional sectors of the national economy. When broken down by municipality types, small towns in both studied years were mostly classified as service-oriented. The exception was the urban municipality of Obrzycko, which in both 2012 and 2022 was classified as agricultural-service. The following municipalities were classified as service-oriented: Chodzież, Czarnków, Słupca, and Złotów. On the other hand, the bagel municipalities in both studied years were mostly assigned to agricultural types, although there were exceptions. In 2012, three bagel municipalities were classified as agricultural (Czarnków, Obrzycko, and Złotów), one as agricultural-service (Chodzież), and one as service-agricultural (Słupca). In 2022, the situation changed – two bagel municipalities (Czarnków and Obrzycko) remained in the agricultural type, one was classified as agricultural-service (Złotów), one as service-agricultural (Chodzież), and one as service-industrial (Słupca). The data above suggest that, despite the predominant agricultural type, the bagel municipalities are undergoing a gradual transformation towards a more diversified economy, incorporating both industry and services into their structure (Figure 8).



Explanation: Economic types: A – agricultural, AI – agricultural-industrial, AS – agricultural-service, I – industrial, IA – industrial-agricultural, IS – industrial-service, S – service, SA – service-agricultural, SI – service-industrial, X – no dominant function

Figure 8 Economic types of municipalities in bagel systems of small towns in the Greater Poland Voivodeship in 2012 and 2022. Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS)

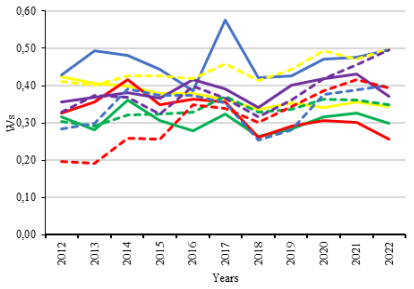
5 RESEARCH RESULTS

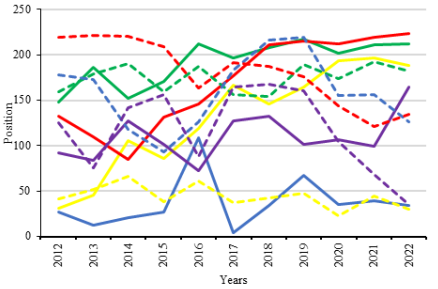
5.1 DIFFERENTIATION OF FACTORS INFLUENCING TERRITORIAL CAPITAL DEVELOPMENT

The attempt to identify key factors influencing the development of territorial capital in municipalities within different bagel systems of small towns in the Greater Poland Voivodeship during 2012–2022 was conducted by constructing subsynthetic indicators for each of the five development factors, which were represented by selected diagnostic variables (see: chapter Research Methods and Data Sources).

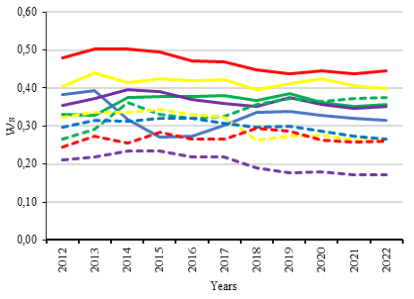
The key factors influencing the development of territorial capital in the Greater Poland Voivodeship during 2012–2022 exhibit significant spatial differentiation. The values of the calculated subsynthetic indicators, reflecting the level of development of individual aspects in municipalities across the region, range on average from 0.20 to 0.65 for human capital, from 0.15 to 0.69 for social capital, from 0.11 to 0.78 for material capital, from 0.05 to 0.79 for financial capital, and from 0.00 to 1.00 for innovations. In contrast, the values of these indicators for municipalities in bagel systems of small towns are more homogeneous and generally fall within the following ranges: human capital from 0.26 to 0.47, social capital from 0.20 to 0.47, material capital from 0.26 to 0.55, financial capital from 0.11 to 0.30, and innovations from 0.02 to 0.18. When broken down by municipality types within the studied systems, it can be observed that in small towns, the values of the subsynthetic indicators are higher: human capital ranges from 0.30 to 0.47, social capital from 0.31 to 0.47, material capital from 0.28 to 0.55, financial capital from 0.16 to 0.30, and innovations from 0.03 to 0.18. In contrast, the values in bagel municipalities are lower, with ranges as follows: human capital from 0.29 to 0.44, social capital from 0.20 to 0.35, material capital from 0.26 to 0.47, financial capital from 0.11 to 0.25, and innovations from 0.05 to 0.15. On average, the higher values of the subsynthetic indicators for small towns translate into better positions in rankings compared to the municipalities surrounding these towns. The average ranking of municipalities in the Greater Poland Voivodeship for the individual development factors was 114th place. For municipalities in bagel systems, the average positions were: human capital – 131st place, social capital – 107th place, material capital – 128th place, financial capital – 107th place, innovations – 81st place. In contrast, for municipalities in small towns, the average rankings were: human capital – 128th place, social capital – 61st place, material capital – 105th place, financial capital – 74th place, innovations – 84th place. In bagel municipalities, the average positions were: human capital – 135th place, social capital – 153rd place, material capital – 151st place, financial capital – 141st place, innovations – 78th place. Thus, it can be observed that the higher average values of the subsynthetic indicators in small towns allow them to occupy lower positions in the rankings compared to the municipalities surrounding small urban centers (Figure 9).

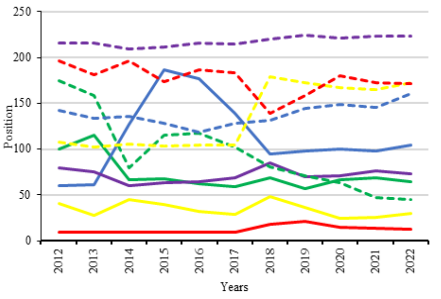
Human capital



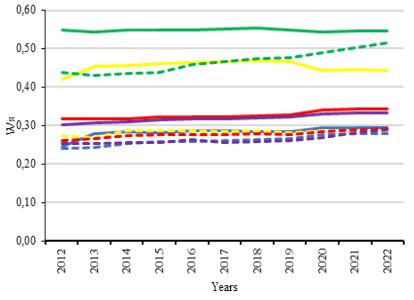


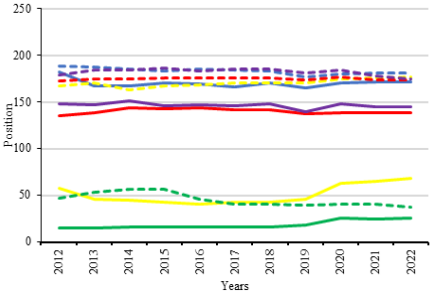
Social capital

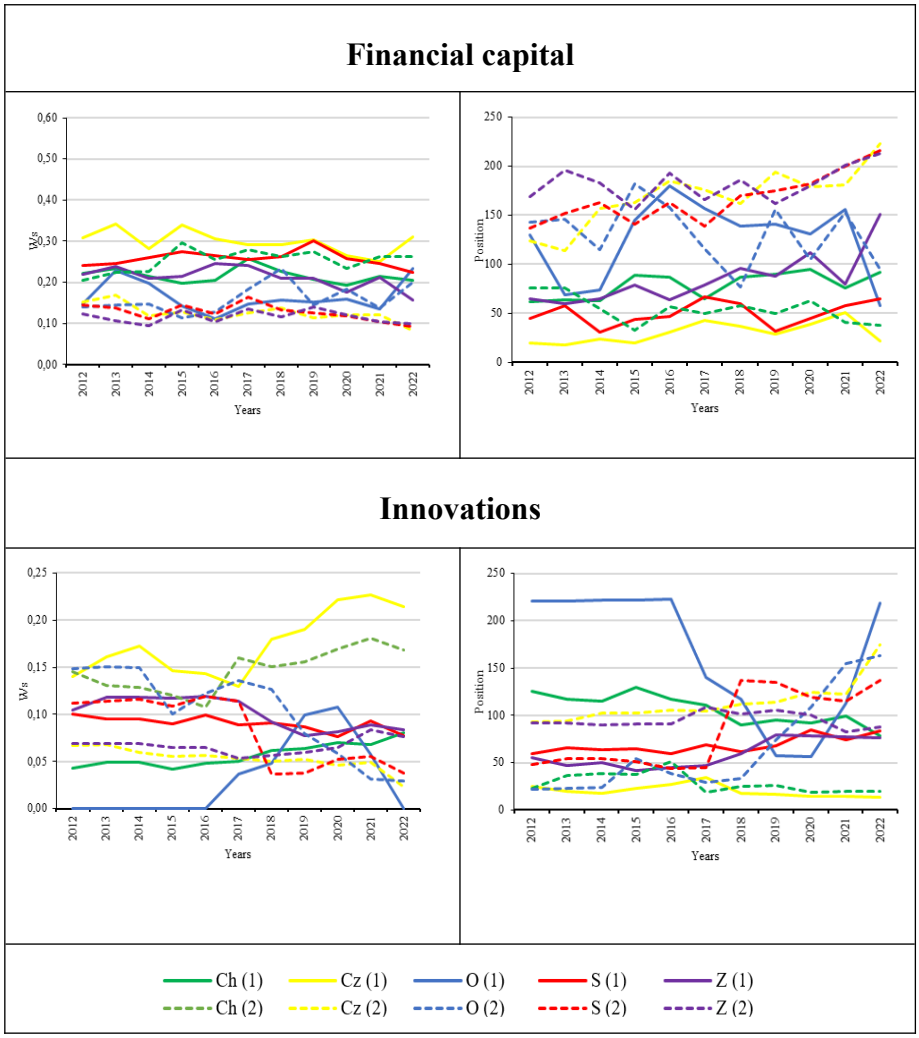




Material capital







Explanation: Ch – Chodzież, Cz – Czarnków, O – Obrzycko, S – Słupca, Z – Złotów; (1) Small town (urban municipality), (2) Bagel municipality (rural municipality)

Figure 9 Differentiation of territorial capital development factors in municipalities within bagel systems of small towns in the Greater Poland Voivodeship in 2012-2022. Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS)

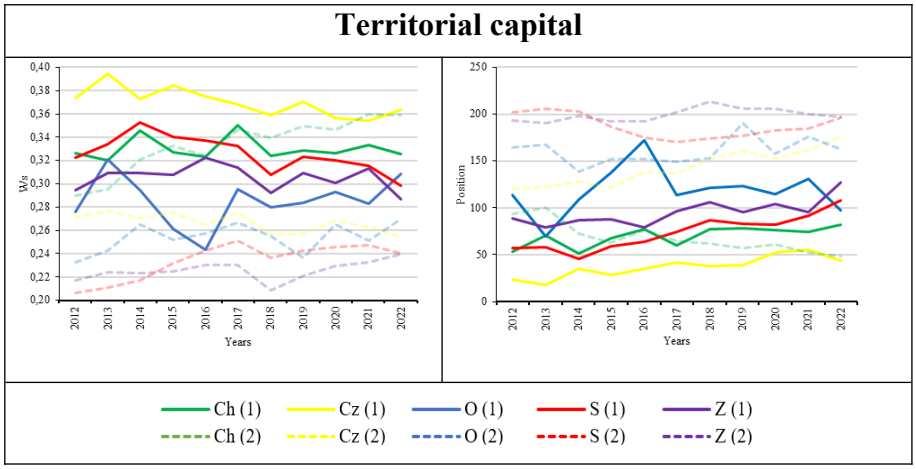
5.2 DIFFERENTIATION OF THE LEVEL AND DYNAMICS OF TERRITORIAL CAPITAL DEVELOPMENT

The attempt to identify the level and dynamics of territorial capital in municipalities within different bagel systems of small towns in the Greater Poland Voivode-

ship during 2012–2022 was conducted by constructing a synthetic indicator based on five key development factors, which were represented by selected diagnostic variables (see: chapter Research Methods and Data Sources).

Territorial capital in the Greater Poland Voivodeship during 2012–2022 is characterized by significant spatial differentiation, influenced by the factors discussed in the previous considerations. The values of the calculated synthetic indicator, reflecting the level of territorial capital development in the municipalities of the region, range on average from 0.16 to 0.65. In contrast, the values of this indicator for municipalities in bagel systems of small towns are more homogeneous, ranging on average from 0.22 to 0.37. When broken down by municipality types within the studied systems, it can be observed that in small towns, the values of the synthetic indicator are higher, ranging on average from 0.28 to 0.37, whereas in bagel municipalities, these values are lower, ranging from 0.22 to 0.33. The higher average values of the synthetic indicator for small towns translate into better positions in the rankings compared to the municipalities surrounding these towns. The average ranking of municipalities in the Greater Poland Voivodeship was 114th place. For municipalities in bagel systems, the average position was 115th place. On the other hand, the average position for municipalities in the small town group was 79th place, while for the bagel municipalities group, it was 151st place. Thus, it can be observed that the higher average values of the synthetic indicator in small towns allow them to occupy better positions in the rankings compared to the municipalities surrounding small urban centers. An exception to this trend is Chodzież, where since 2017, the rural municipality has occupied a better position than the urban municipality, which was the result of a series of social and economic events that took place in the structure of these units. During the studied period, small urban centers saw a deterioration in their ranking positions, except for the urban municipality of Obrzycko, which improved by 17 places. The decline in ranking positions was primarily influenced by indicators such as: population in the non-working age per 100 people in the working age and natural increase per 1,000 population. On the other hand, the rural counterparts improved their positions, except for the rural municipality of Czarnków, which dropped 56 places, and the rural municipality of Złotów, which experienced a slight decrease of 4 places. The improvement in the positions of rural counterparts was influenced by indicators such as: net migration (internal and international) per 1,000 population, unemployed per 100 people in the working age, housing benefits per 1,000 population, difference between the percentage of population using water supply and sewage systems, average usable floor area of a dwelling per person, and income from tax per capita (Figure 10).

The spatial distribution of the level of territorial capital development in the Greater Poland Voivodeship in 2022 shows that 13 municipalities (5.75% of the total) belong to the high development level class, with the majority of them located in Poznań County (76%). The class with an average-high development level includes 47 municipalities (20.80%). The most numerous class is the one with an average development level, comprising 92 municipalities (40.71%). The average-low development level class includes 69 municipalities (30.53%), and the low development



Explanation: Ch – Chodzież, Cz – Czarnków, O – Obrzycko, S – Słupca, Z – Złotów; (1) Small town (urban municipality), (2) Bagel municipality (rural municipality)

Figure 10 Differentiation of territorial capital development in municipalities within bagel systems of small towns in the Greater Poland Voivodeship in 2012-2022. Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS)

level class includes 5 municipalities (2.21%). Most bagel systems of small towns in the studied voivodeship fall into two development level classes. Small urban centers typically belong to the average development level class, except for the urban municipality of Czarnków, which is classified in the average-high class. On the other hand, the municipalities surrounding small towns are predominantly classified in the average-low development level class, except for the rural municipality of Chodzież, which is in the average-high class. The spatial distribution of the dynamics of territorial capital development in the Greater Poland Voivodeship during 2012–2022 shows that 20 municipalities (8.85% of the total) belong to the high dynamics class, with the majority being municipalities with an average and average-low development level (80%). The class with average-high dynamics includes 38 municipalities (16.81%). The most numerous class, as in the case of the development level, is the average dynamics class, comprising 86 municipalities (38.05%). The average-low dynamics class includes 76 municipalities (33.63%), and the low dynamics class includes 6 municipalities (2.65%). Most of the studied systems in the analyzed voivodeship can be assigned to two classes of development dynamics. Small urban centers generally belong to the average-low dynamics class, except for the urban municipality of Obrzycko, which is in the average class, and the urban municipality of Słupca, which is in the low dynamics class. The municipalities surrounding small towns are predominantly in the average-high dynamics class, except for the rural municipality of Czarnków, which is in the average-low class, and the rural municipality of Złotów, which belongs to the average class (Figure 11).

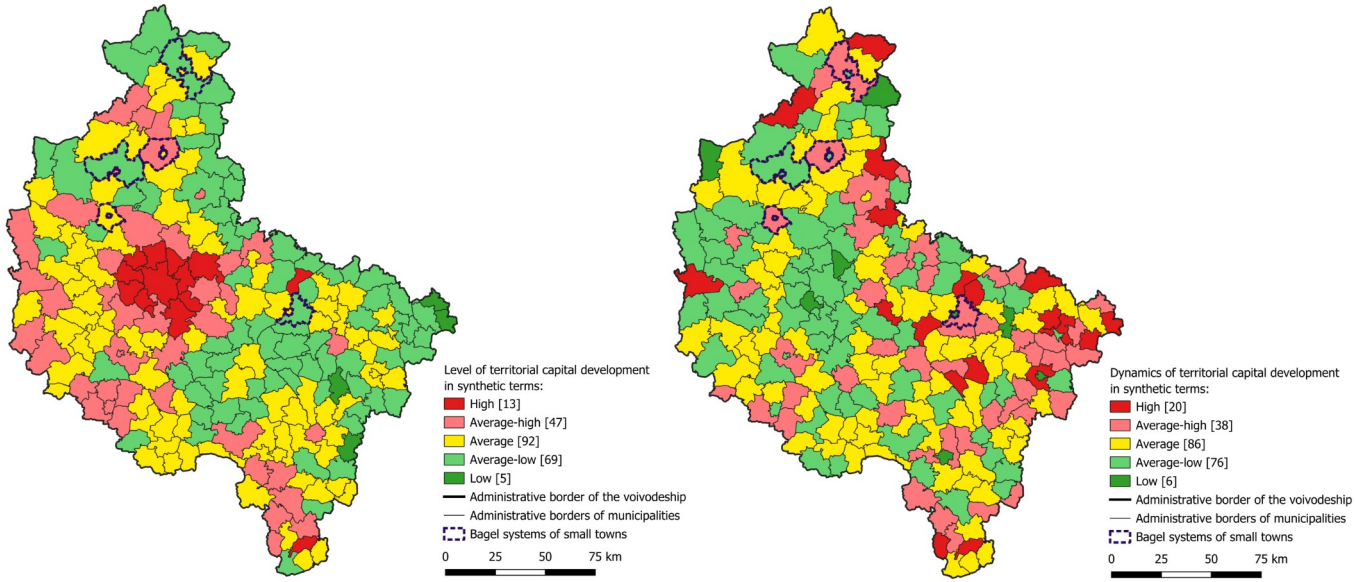


Figure 11 Spatial classification of the level and dynamics of territorial capital development in municipalities within bagel systems of small towns in the Greater Poland Voivodeship in 2022 and 2012–2022. Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS)

The relationship between the level and dynamics of territorial capital development in municipalities within bagel systems of small towns in the Greater Poland Voivodeship during 2012–2022 is practically insignificant, as the value of the Pearson linear correlation coefficient is -0.02, while for all municipalities in the voivodeship it is -0.237. This means that for the analyzed systems, there is no significant linear relationship between the level and dynamics of development, while for the entire voivodeship, the correlation is weak but more noticeable (Śleszyński, 2020). Nevertheless, the analysis of variable values indicates that in municipalities with a higher level of territorial capital development, the dynamics of development are usually lower, whereas in municipalities with a lower level of development, the dynamics may be higher. This suggests a tendency for slower development in more developed municipalities and faster growth in less developed ones, which may indicate their greater potential for improving socio-economic conditions in the future (Figure 12).

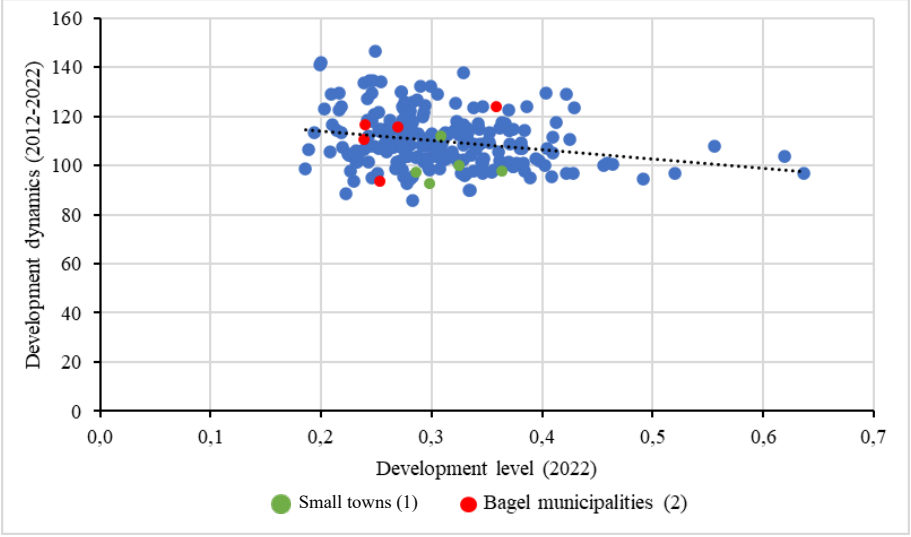


Figure 12 Relationship between the level and dynamics of territorial capital development in municipalities within bagel systems of small towns in the Greater Poland Voivodeship in 2012–2022. Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS)

The variability of territorial capital development, reflecting its inequalities, significantly differs between municipalities in the bagel systems of small towns and other municipalities in the Greater Poland Voivodeship. In small towns, variability is the lowest (with an average of 9.28%) and shows a downward trend, which may indicate decreasing disparities in the development of these units. In contrast, in bagel municipalities, variability is higher (with an average of 14.90%) and shows an upward trend, suggesting growing differences in their development. In the studied

years, the Greater Poland Voivodeship as a whole exhibits a higher level of variability (with an average of 25.14%) compared to small urban centers and their surrounding municipalities, although a downward trend is noticeable, which may indicate diminishing differences in territorial capital development between all municipalities in this region. The observed changes and trends are further confirmed by three indices: Williamson, Gini, and Theil, which indicate that in the case of small towns, there is convergence (the Williamson index dropped from 0.103 to 0.083; the Gini index from 0.057 to 0.046; the Theil index from 0.005 to 0.003). In the case of bagel municipalities, there is divergence (the Williamson index increased from 0.122 to 0.144; the Gini index from 0.073 to 0.078; the Theil index from 0.009 to 0.012). Meanwhile, for the entire Greater Poland Voivodeship, there is a noticeable leveling of the territorial capital development level (the Williamson index dropped from 0.428 to 0.397; the Gini index from 0.144 to 0.121; the Theil index from 0.034 to 0.024) (Figure 13).

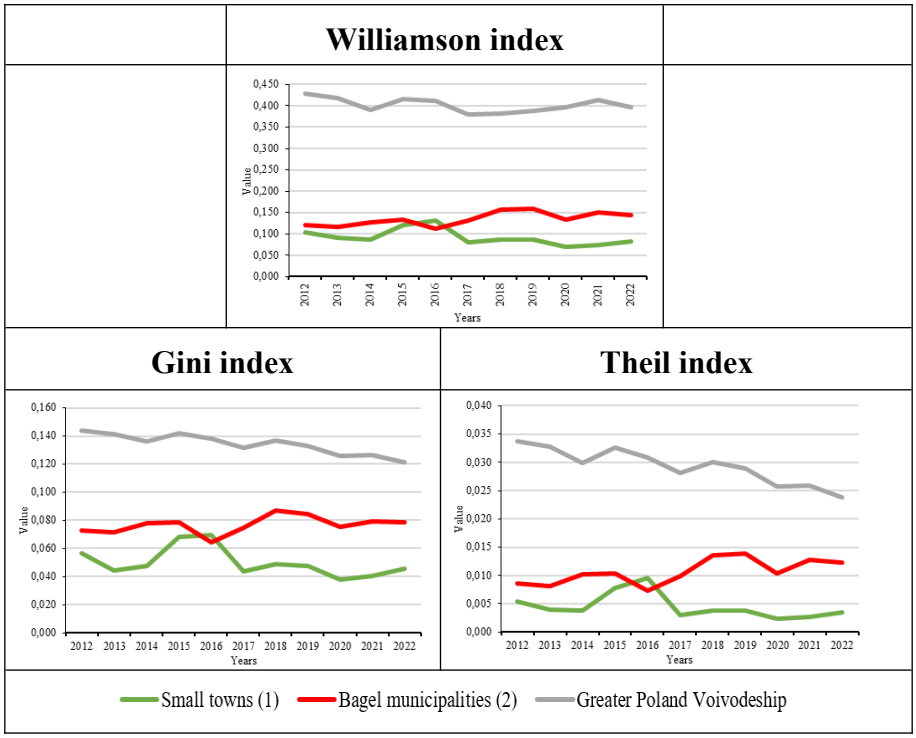


Figure 13 Level of territorial capital development inequality based on three inequality measures: Williamson, Gini, and Theil Indices for municipalities in bagel systems of small towns in the Greater Poland Voivodeship in 2012–2022. Source: own elaboration based on data from the Local Data Bank of Statistics Poland (GUS)

6 DISCUSSION

The relatively new concept of territorial capital has, on one hand, sparked significant interest among both theorists and practitioners, while on the other hand, it remains poorly grounded both theoretically and empirically, providing a good starting point for further research (Nowakowska, 2024). The concept of territorial capital undoubtedly introduces new elements into scientific discussions and builds a new perspective for analyzing endogenous development at both the regional and local levels. Three key issues can be highlighted. Firstly, an undeniable strength of the concept of territorial capital is its emphasis on the interaction between assets (factors) of different nature (material and immaterial), rather than a simple sum of territorial factors (Perucca, 2014). Thus, territorial capital can be treated as a basic endogenous foundation or a meta-factor for socio-economic development in territorial units. Secondly, introducing a territorial perspective on development into scientific and political discourse has become the basis for the redefinition of cohesion policy (Churski, 2024). The currently dominant paradigm of programming and implementing cohesion policy assumes the need to adapt intervention actions to the spatially diversified resources that form the territorial capital of individual units, especially at the local level, which is a fundamental assumption of the place-based approach. Thirdly, in relation to the issues discussed in this article regarding bagel systems and building territorial capital, the issue of administrative boundaries becomes crucial. It can be assumed that the local government reform carried out in the 1990s, which led to the creation of dual bagel systems, has effectively "closed" territorial capital within artificially defined administrative boundaries. According to Markowski (2016, p. 113), "a barrier to creating competitive territorial capital, as it turns out in practice, are administrative divisions related to the territorial organization of the state and the natural orientation of local government administration towards narrowly defined local interests, such as inter-municipal competition for taxpayers and voters. Since the essence of this capital is inter-municipal cooperation, partnership, trust, spatial cohesion, and high mobility of people in labor markets (…). If this is created, it gives a long-term competitive advantage to firms operating and locating in these areas (…). What is needed, however, are temporary coalitions of local government units within emerging functional links and the integration of actions in time and space in developmental projects." Therefore, fundamentally, in order to enhance the quality of territorial capital, there are two possible paths for the development of bagel systems: cooperation or consolidation, because, otherwise, existing administrative boundaries may serve as a barrier to building competitive territorial capital.

Despite the growing interest in the concept of territorial capital both in the academic community and in the practice of development policy, the theoretical foundations of this model remain a subject of discussion and critical analysis in the academic literature. According to Bodor and Grünhut (2015), the main reasons for these doubts lie in the individual dimensions of territorial capital, the factors (assets) and indicators assigned to them, as well as in the relationships between these elements. The authors point out the need for a "re-measurement" of the model, the distinction

between absolute and relative resources, and the reinterpretation of social capital as a crucial intangible resource of key importance. Faragó (2019), in his innovative taxonomy of Camagni's territorial capital, instead of prioritizing specific types of capital, emphasizes the fluidity of local resources shaped by the dynamically evolving interdependencies of various components of territorial capital. In his view, the success of implementing this concept depends not so much on the quality of the individual components but on the effectiveness of their local interdependencies and functioning within a network model.

7 CONCLUSION

The analysis conducted, aimed at determining the significance of territorial capital as a foundation for endogenous development in the context of bagel systems of small towns, characteristic of Poland, allows for the formulation of the following final conclusions:

- The differentiation of key factors influencing the development of territorial capital in municipalities within bagel systems of small towns is clearly visible when compared to other municipalities in the Greater Poland Voivodeship. Small towns achieve higher average values of subsynthetic indicators across all analyzed aspects of socio-economic development (human capital, social capital, material capital, financial capital, and innovations) than the surrounding municipalities. As a result, they occupy better positions in territorial capital development rankings, while bagel municipalities often rank significantly lower.
- The differentiation of the level and dynamics of territorial capital development in municipalities within bagel systems of small towns is clearly noticeable when compared to other municipalities in the Greater Poland Voivodeship. Small towns are typically characterized by an average level of development, while the surrounding municipalities primarily belong to the class with an average-low level of development. In contrast, with regard to the dynamics of territorial capital development, the situation is reversed – small towns exhibit average-low dynamics of development, while the municipalities surrounding them belong to the class with average-high dynamics of development.
- The dynamics of territorial capital development in municipalities within bagel systems of small towns correlates with their level of development to a very limited extent. The value of the Pearson linear correlation coefficient indicates the lack of a significant linear relationship between these variables in the case of municipalities in bagel systems. In contrast, when compared to other municipalities in the voivodeship, this relationship is weak but more noticeable. Nevertheless, the analysis suggests a certain tendency, whereby municipalities with a higher level of territorial capital development tend to exhibit lower dynamics of development, while municipalities with a lower level of development are characterized by higher dynamics of development.

– Inequalities in the level of territorial capital development significantly differ between municipalities in bagel systems of small towns and other municipalities in the Greater Poland Voivodeship. In small towns, the variability of territorial capital development is lower and shows a downward trend, which may indicate decreasing disparities in the development of these units. In contrast, in bagel municipalities, variability is higher and shows an upward trend, suggesting growing differences in their development. This is confirmed by the three calculated inequality indices: Williamson, Gini, and Theil, which indicate convergence in small towns and divergence in bagel municipalities.

The conducted research on territorial capital in the bagel systems of small towns in the Greater Poland Voivodeship provides significant application-related conclusions that can be utilized in the ongoing discussion about the directions of territorial-administrative reforms in Poland, which has been taking place since 2013, initiated by the publication of the report "Assessment of the Situation of Local Governments" Ocena sytuacji samorządów lokalnych (Boni, 2013a) and the study "Polish Bagels" Polskie obwarzanki (Boni 2013b) prepared by the Ministry of Administration and Digitization. In contrast to earlier assumptions advocating the automatic merging of cities and bagel municipalities, as expressed in the works of Dąmbska and Trzyna (2013), Hausner (2013), Wojciechowski (2014), and Sześciło (2019), the research results, similarly to the analyses by Kachniarz and Hubar (2025), clearly indicate the heterogeneity of these systems, rather than their homogeneity, as was previously assumed. The studied units do not form a uniform set but differ significantly in both the level and dynamics of territorial capital development: small urban centers achieve a relatively higher level of development with a lower dynamic, while bagel municipalities exhibit a lower level of development but a higher dynamic. This differentiation has important practical consequences, as it points to the need to move away from uniform solutions in favor of a place-based policy (Churski, 2018). Therefore, the results of the conducted research provide an important voice in the current debate on the future of bagel systems in Poland and offer a basis for a more balanced approach to potential territorial-administrative reforms, based on the analysis of local conditions.

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Územný kapitál ako základ pre endogénny rozvoj bagelových systémov malých miest: Prípadová štúdia Veľkopoľského vojvodstva

Súhrn

Hlavným cieľom článku je určiť význam územného kapitálu ako základu endogénneho rozvoja v kontexte bagelových systémov malých miest, ktoré sú charakteristické pre Poľsko. Priestorový rozsah štúdie zahŕňa vybrané mestské obce (malé mestá s počtom obyvateľov do 20 000) a ich vidiecke náprotivky (bagelové obce) nachádzajúce sa v jednom z poľských vojvodstiev – Veľkopoľskom vojvodstve. Časový rozsah zahŕňa statický (rok 2022) aj dynamický prístup (obdobie 2012 – 2022). Štúdia využila kvalitatívne aj kvantitatívne metódy vrátane Hellwigovej metódy vývojových vzorcov a údaje z Lokálnej dátovej banky Štatistického úradu Poľska (GUS). Článok zameraný na určenie významu územného kapitálu ako základu endogénneho rozvoja v kontexte bagelových systémov malých miest, charakteristických pre Poľsko, umožňuje formulovať niekoľko záverov. Diferenciácia kľúčových faktorov ovplyvňujúcich rozvoj územného kapitálu v obciach v rámci bagelových systémov malých miest je jasne viditeľná v porovnaní s inými obcami vo Veľkopoľskom vojvodstve. Malé mestá dosahujú vyššie priemerné hodnoty subsyntetických ukazovateľov vo všetkých analyzovaných aspektoch sociálno-ekonomického rozvoja (ľudský kapitál, sociálny kapitál, materiálny kapitál, finančný kapitál a inovácie) ako okolité obce. V dôsledku toho zaujímajú lepšie pozície v rebríčkoch rozvoja územného kapitálu, zatiaľ čo bagelové obce sa často umiestňujú výrazne nižšie. Diferenciácia úrovne a dynamiky rozvoja územného kapitálu v obciach v rámci bagelových systémov malých miest je jasne viditeľná v porovnaní s inými obcami vo Veľkopoľskom vojvodstve. Malé mestá sa typicky vyznačujú priemernou úrovňou rozvoja, zatiaľ čo okolité obce patria predovšetkým do triedy s priemerne nízkou úrovňou rozvoja. Naopak, pokiaľ ide o dynamiku rozvoja územného kapitálu, situácia je opačná – malé mestá vykazujú priemerne nízku dynamiku rozvoja, zatiaľ čo obce, ktoré ich obklopujú, patria do triedy s priemerne vysokou dynamikou rozvoja. Dynamika rozvoja územného kapitálu v obciach v rámci bagelových systémov malých miest koreluje s ich úrovňou rozvoja vo veľmi obmedzenej miere. Hodnota Pearsonovho korelačného koeficientu naznačuje absenciu významného lineárneho vzťahu medzi týmito premennými v prípade obcí v bagelových systémoch. Naopak, v porovnaní s inými obcami vo vojvodstve je tento vzťah slabý, ale výraznejší. Analýza však naznačuje určitú tendenciu, pričom obce s vyššou úrovňou rozvoja územného kapitálu majú tendenciu vykazovať nižšiu dynamiku rozvoja, zatiaľ čo obce s nižšou úrovňou rozvoja sa vyznačujú vyššou dynamikou rozvoja. Nerovnosti v úrovni rozvoja územného kapitálu sa medzi obcami v bagelových systémoch malých miest a ostatnými obcami vo Veľkopoľskom vojvodstve výrazne líšia. V malých mestách je variabilita rozvoja územného kapitálu nižšia a vykazuje klesajúci trend, čo môže naznačovať znižovanie rozdielov v rozvoji týchto jednotiek. Naopak, v bagelových obciach je variabilita vyššia a vykazuje rastúci trend, čo naznačuje rastúce rozdiely v ich rozvoji. Potvrdzujú to tri vypočítané indexy nerovnosti: Williamsonov, Giniho a Theilov, ktoré naznačujú konvergenciu v malých mestách a divergenciu v bagelových obciach.

Uskutočnený výskum územného kapitálu v bagelových systémoch malých miest vo Veľkopoľskom vojvodstve poskytuje významné závery, ktoré možno využiť v prebiehajúcej diskusii o smeroch územno-správnych reforiem v Poľsku, ktorá prebieha od roku 2013 a ktorú iniciovalo zverejnenie správy „Hodnotenie situácie miestnych samospráv“ a štúdie „Poľské bagely“, ktorú vypracovalo Ministerstvo správy a digitalizácie. Na rozdiel od skorších predpokladov obhajujúcich automatické zlučovanie miest a obcí typu „bagel“, ako sú vyjadrené v prácach Dąmbskej a Trzy-

ny (2013), Hausnera (2013), Wojciechowského (2014) a Sześciły (2019), výsledky výskumu, podobne ako analýzy Kachniarza a Hubara (2025), jasne naznačujú heterogenitu týchto systémov, a nie ich homogenitu, ako sa predtým predpokladalo. Študované jednotky netvoria jednotný súbor, ale výrazne sa líšia úrovňou aj dynamikou rozvoja územného kapitálu: malé mestské centrá dosahujú relatívne vyššiu úroveň rozvoja s nižšou dynamikou, zatiaľ čo obce typu „bagel“ vykazujú nižšiu úroveň rozvoja, ale vyššiu dynamiku. Táto diferenciácia má dôležité praktické dôsledky, pretože poukazuje na potrebu odkloniť sa od jednotných riešení v prospech politiky založenej na mieste (Churski, 2018). Výsledky vykonaného výskumu preto poskytujú dôležitý hlas v súčasnej diskusii o budúcnosti bagelových systémov v Poľsku a ponúkajú základ pre vyváženejší prístup k potenciálnym územno-administratívnym reformám, založený na analýze miestnych podmienok.