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## SPATIAL SELF-IDENTIFICATION OF COMMUNES IN URBAN REGION AS AN IMPORTANT PERSPECTIVE FOR SHAPING A METROPOLITAN **AREA**

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#### **ABSTRACT**

Motives: The main manifestation of suburbanisation, which is crucial process shaping settlement system in Poland, are suburbs, whose spatial expansion and qualitative characteristics lead to the formation of new functional and spatial structures between the central city and its surroundings. In this sense, the process of suburbanisation is closely related to metropolisation, i.e. the growing importance in the economy of large urban regions or, more broadly, urbanised systems.

Aim: The purpose of this study is to trace the spatial policy of the communes making up the Bydgoszcz-Toruń Metropolitan Area (BTMA) concerning entries in their strategic and planning documents indicating the degree of metropolitan links.

Results: It was shown that these records would determine further actions affecting the advancement of the metropolisation process in urban region of Kujawsko-Pomorskie Voivodeship. Against the strategic and planning documents background, the vision for the creation of the Bydgoszcz-Toruń Metropolitan Area, present in the narrative of the two major cities, is quite different. It seems it will complicate the metropolisation process in the region.

Keywords: suburbanisation, metropolisation, urban transformation, spatial changes

### INTRODUCTION

The crucial process shaping the settlement network in Poland today is suburbanisation. Population migrations determine its dynamics and direction, usually associated with leaving central, often

unattractive parts of cities in favour of neighbouring areas, usually rural, offering a friendlier living environment (Maik, 2000; Zuziak, 2005; Parysek, 2008a). The primary manifestation of suburbanisation understood as a multifaceted socio-economic process are suburbs (Kajdanek, 2012a; McKenzie, 1993). Their

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spatial expansion and qualitative characteristics lead to the formation of new functional and spatial structures between the central city and its surroundings, which is known as urban region (Heffner, 2016; Liszewski, 1987). In this sense, the process of suburbanisation is closely related to the process of metropolisation (Jałowiecki, 2007; Markowski & Marszał, 2006), i.e. the growth in importance of large urban systems.

In the context of these large urban centres, which the Bydgoszcz–Toruń Metropolitan Area (hereinafter BTMA) area can unquestionably be regarded as processes closely related to metropolisation are not without significance. Therefore, this study aims to trace the spatial policy of the communes comprising the BTMA concerning the provisions of their strategic and planning documents indicating spatial self-identification as an important perspective for shaping a metropolitan area. The study poses the following research questions:

- 1. To what extent does the process of suburbanisation, closely linked to the process of metropolisation, shape the area's development?
- 2. Do the BTMA communes (the administrative region of the 3<sup>rd</sup> order in Poland, NUTS 5), at the level of strategic-planning documents, envisage actions aimed at the transformation from the agglomeration phase to the metropolisation phase, i.e. from the phase of an urban region to the phase of a metropolitan region?
- 3. How do the BTOM communes perceive their location in relation to the urban region's two main cities and the functional area as a whole?

The area selected for the study, the development pole of Kujawsko-Pomorskie Voivodeship (the administrative region of the 1st order in Poland, NUTS 2), is a bipolar urban region important for the settlement system of the whole country. However, it still has a relatively weak position in the network of international connections (Development Strategy of Kujawsko-Pomorskie Voivodeship 2030 – Acceleration Strategy 2030+). This makes the participation of its communes, already at the stage of shaping the vision for further development, of great importance for forming this metropolitan area.

#### LITERATURE REVIEW

According to the already classic urban region life cycle model, proposed by van den Berg et al. (1982), suburbanisation was treated as one of the phases of the urbanisation process that follows initial urbanisation and precedes the phase of deurbanisation and re-urbanisation. In this view, suburbanisation was seen as a process in which a higher rate of population growth was observed in the areas surrounding the city than in the city itself (relative decentralisation phase), followed by a further increase in population in the so-called periphery with a decrease in the central area (absolute decentralisation phase) (Kurek, 2014). Contemporary suburbanisation, considered to be the main process shaping the settlement network in highly developed regions around the world, is treated much more broadly. It is also usually equated with a phase of deurbanisation, according to van den Berg's understanding, which is characterised by an initial decline in population in the centre exceeding population growth in the periphery (relative deurbanisation phase), followed by a decline in the areas surrounding the city (absolute deurbanisation phase).

Modernisation is considered to be the leading cause of the suburbanisation phenomenon and process (Węcławowicz, 2018; Węgleński, 1992): (a) economic, resulting from an increase in the affluence of society, (b) technical, identified with the spread of increasingly improved means of transport and communication, and finally (c) social, related to the emergence of aspirations, mainly of the middle class, to live in more environmentally friendly surroundings (Antrop, 2004; Brueckner, 2000; Fielding, 1989; Środa--Murawska et al., 2017). The exodus of urban dwellers to neighbouring rural areas began earliest, as early as the beginning of the 20th century in the USA. After World War II, suburbanisation also began to be experienced in Western European countries. However, this process was postponed in Central and Eastern Europe, including Poland, which should be associated with implementing the socialist urbanisation model (Węcławowicz, 2018). This urbanisation was mainly stimulated by industrialisation with a centrally controlled economy and relatively slow modernisation. As a result, until the beginning of the 1990s, cities in Central and Eastern European countries were characterised by relatively high spatial compactness, clear boundaries between urban and rural areas and a lack of a developed suburban zone (Hirt & Kovachev, 2006; Sýkora, 1999; Szelenyi, 1996). The launch of the system transition initiated the change of a socialist city into a capitalist city (Bouzarovski et al., 2011; Rink et al., 2014). It gave impetus to a highly dynamic process of suburbanisation (Krišjāne et al., 2012; Sýkora, 1999; Sýkora & Ouredniček, 2007). This position concerning Poland is confirmed, among other things, in the research of Zborowski and Raźniak (2013) argue that the result of the system transition in the country is the intensive development of the suburbanisation process, which should be treated broadly and also include manifestations of the deurbanisation process (as proposed by van den Berg). A similar postulate is put forward by Lorens (2005), who believes that deurbanisation should be treated as an extreme form of suburbanisation. Thus, instead of suburbanisation, he discusses the concept of so-called advanced suburbanisation, acknowledging that it is one of the key phenomena shaping the contemporary settlement network in the country (cf. also Parysek & Mierzejewska, 2005; Parysek, 2008b; Runge & Kłosowski, 2011).

In a broad sense, the process of suburbanisation affects the city, causing profound changes within its socio-economic structure. However, it affects much more intensively the areas - usually rural surrounding cities, especially large ones, manifesting itself in the spillover of the spatial structure of cities and the uncontrolled development of suburbs and suburban centres (Lewyn, 2017). In such a context, suburbanisation is treated as a multidimensional phenomenon, paying attention primarily to its demographic aspect related to the influx of population, mainly of metropolitan origin, into suburban areas. However, other aspects are also significant, including the economic aspect of the suburbanisation of jobs being considered; the residential aspect is if attention is paid to the suburbanisation of housing (Zborowski,

2005). Alternatively, the social aspect is expressed in the spread of urban lifestyles in the suburbs (Biegańska, 2019; Kajdanek, 2011, 2012b).

In general, when discussing the process of suburbanisation, one can have in mind suburbanisation within the administrative borders of cities (inner suburbanisation) or suburbanisation outside city limits in the so-called closer suburban zone (outer suburbanisation), usually identified with the phenomenon of urban sprawl (Brueckner, 2000; Czerny, 2005; Kaplan et al., 2004). In its most advanced form, however, it can mean suburbanisation of the other suburban zone or so-called extended suburbanisation. Then, the main direction of its transformation is determined by processes such as counterurbanisation (Dahms & McComb, 1999; Fuguitt, 1991; Fuguitt & Beale, 1993, 1996), exurbanisation or peri-urbanisation (Taylor, 2011), i.e. urbanisation of areas adjacent to a more or less urbanised suburban zone. Thus, the successive phenomena and processes embedded in suburbanisation change the urban-rural relationship. The key observation, however, is that with them, the main product of suburbanisation, i.e. the suburban zone (suburbia), occupies an increasing area with a relatively stable area of the central city (Stanilov & Scheer, 2018). Therefore, it is essential not only to identify suburbanisation with the process of urbanisation of the suburban zone, i.e. extending the attributes of a city to areas hitherto lacking these attributes (Lisowski, 2005) but first and foremost to relate suburbanisation to the process of functional unification of the areas under its influence with the central city. While in the emerging agglomeration or urban region, the share of the area of the central city itself, which generates the suburban zone, is decreasing, the area of the suburban zone itself is increasing all the time. Spatial expansion, however, is not necessarily accompanied by sufficiently intensive functional links between the individual territorial units (communes) of the agglomeration or urban region, which condition the coherent development of the entire urbanised area and its transformation from the agglomeration phase to the metropolisation phase (Jałowiecki, 2009; Korcelli-Olejniczak, 2012; Korcelli et al., 2017; Smętkowski et al., 2008).

Meanwhile, intensive processes of metropolisation are currently being observed in many highly developed countries worldwide as the process of suburbanisation advances. The two processes are closely linked, as metropolisation is defined as an increase in the importance of the economy of large urban systems (Jałowiecki & Szczepański, 2002). As central points for employment, education and culture, metropolises concentrate population, creating developed and densely populated urban areas. As a result, suburban zones are expanding, providing an alternative to a growing population looking for a lower cost of living while enjoying the benefits of living on the city's periphery. On the other hand, suburbanisation can lead to further metropolitan growth, because residents of suburban zones benefit from the infrastructure and services offered by cities (Mieszkowski & Mills, 1993; Parker, 1993; Salamon, 2003; Sellers, 2005).

Metropolisation causes several changes, both in the use of space in cities and their suburban zones, ultimately creating a large and complex metropolitan area with a polycentric character. Its main characteristics are the lack of sharp boundaries between the city and its suburban zone, population concentration processes and the accumulation of socio-economic potential (Markowski & Marszał, 2006). The metropolitan area is a territorial settlement system with strongly outlined systemic aspects, consisting of, among others, (a) socio-economic links in the entire internal system of the metropolitan area, (b) a subsystem of daily links between residential centres and in terms of work, leisure, social relations; (c) a closed range of exogenous links of the centre within the settlement network of a given area; (d) widely understood the development of external links (Czyż, 2009). The emphasis on the formation of broadly understood links between the central city and its suburban zone stems from the belief that only large and metropolitan solid regions will be able to increase their competitiveness and play a significant role in the process of the global economy (Derudder, 2006; Sassen, 2018; Taylor & Derruder, 2015). Only then, it will be able to ensure an appropriately high quality of life for their inhabitants. These measures

are particularly relevant for cities and their suburban zones in Central and Eastern Europe, including Poland, where the transformation of the socialist city into a capitalist city started with a significant delay, as did the process of suburbanisation and the related process of metropolisation (Biegańska, 2019; Bierzyński et al., 2011; Szmytkie, 2021; Węcławowicz, 2013).

#### **MATERIALS AND METHODS**

From a settlement point of view, the area selected for the study forms a functional bipolar system in the Kujawsko-Pomorskie Voivodeship (cf. Szymańska et al., 2013). Its main axes are defined by the region capital cities of Bydgoszcz and Toruń, which are about 45 km apart (the distance between the centres of the two cities).

Discussions about the Bydgoszcz-Toruń agglomeration have a long tradition, dating back to the late 1940s and early 1950s. The basis for its delimitation, according to Sokołowski et al., (2014), was, among others, the planning-administrative criterion (Planning Commission of the Council of Ministers; 1960s, 1970s, after Sokołowski et al., 2014), the economic criterion (CSO, 1968), the functional-spatial criterion (Leszczycki et al., 1971), the demographic-economic criterion (Bańkowska, 1974; Swianiewicz & Klimska, 2005), or the transport criterion (Namysłowski, 1982). The Bydgoszcz and Toruń Metropolitan Areas were mentioned separately for the first time by Gontarski (1980). However, the BTMA was not discussed until the middle of the first decade of the 21st century (Table 1). On the one hand, this was related to the possibility of joint territorial investments (within the framework of Integrated Territorial Investments). On the other hand, it was a manifestation of the area's transformation under the influence of the suburbanisation process from agglomeration to metropolisation (Biegańska, 2019). Currently, it is assumed that the entire agglomeration, i.e. the cities of Bydgoszcz and Toruń, together with the suburban zones developing around them, pretend to be the BTMA (Maik, 2010; Sokołowski, 2009, 2014; Szymańska et al., 2013). This area is crucial for socio-economic development and

Table 1. Delimitation of the Bydgoszcz-Toruń settlement network in chronological terms in relation to the metropolisation process

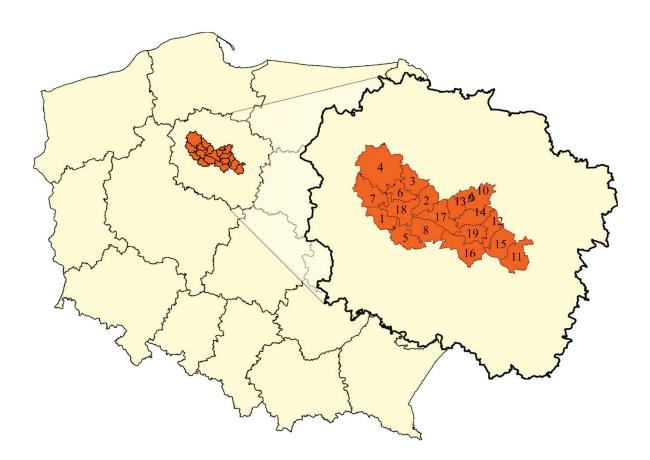
Author, year	Term, area name	Area characteristics (delimitation criteria)		
Gontarski, 1980	Bydgoszcz metropolis, Toruń metropolis	linkage criteria: economic-social, demographic, settlements		
Smętkowski, 2007	Bydgoszcz–Toruń metropolitan area	lack of specific criteria		
Komornicki, Śleszyński, 2009	core centres and suburban zones	good transport accessibility and/or concentration of urban features		
Union of Polish Metropolises	Bydgoszcz-Toruń Metropolitan Area	a administrative criterion (NUTS 3)		
Szymańska, Chodkowska- -Miszczuk, 2013	Bydgoszcz-Toruń Metropolitan (Functional) Area	socio-demographic and spatial-functional criteria		
Sokołowski et al., 2014	Bydgoszcz–Toruń Metropolitan Area	total urbanisation index		
The Concept of National Spatial Planning 2030	Bydgoszcz–Toruń Metropolitan Area	administrative criterion (NUTS 3), vision 2030: Bydgoszcz–Toruń Metropolitan Area as one of the 12 cores of a polycentric network metropolis		
The Development Strategy of Kujawsko-Pomorskie Voivodeship 2020 – Modernisation Plan 2020+	Bydgoszcz–Toruń Metropolitan Area	administrative criterion (NUTS 3)		

Source: own preparation based on Sokołowski (2014: 62–63), Union of Polish Metropolises (www.metropolie.pl), Sokołowski (2009); Szymańska et al., (2013), Sokołowski, (2014); The Concept of National Spatial Planning 2030, The Development Strategy of Kujawsko-Pomorskie Voivodeship 2020 – Modernisation Plan 2020+.

shaping the competitiveness of entire Kujawsko-Pomorskie Voivodeship. In addition, the potential of Bydgoszcz and Toruń, in particular, has allowed them to be recognised in national strategic documents as nodes of a network metropolis in Poland. This, in turn, means that they are essential centres from the whole country's development perspective but are still poorly positioned in the network of international links (The Development Strategy of Kujawsko-Pomorskie Voivodeship 2030 – Acceleration Strategy 2030+).

As of 2020, Bydgoszcz, with a population of 344,091, was in 8<sup>th</sup> place among the largest cities in the country, while Toruń, with a population of 198,613, was in 15<sup>th</sup> place. Thus, if the total population of these two capital cities were considered, this would give them a 5<sup>th</sup> place among all large cities in Poland. However, as dictated by its purpose, this study was not limited to an analysis of the large cities in the region but considered the entire BTMA. The inclusion of suburban zones in the study was due to the presence of the suburbanisation process in this area, which for almost 30 years (cf. Maik, 2000) has determined

the main direction of development of this area and shaped the functional and spatial linkages of its communes. When delimiting the BTMA for this study, the criteria for the partnership agreement of 27 June 2008 to establish the Bydgoszcz-Toruń Metropolitan Area were adopted. These criteria were also retained in the Concept of National Spatial Planning 2030 (in force in 2011-2020), in which it was crucial to base development on a polycentric network metropolis. Its core, in turn, was to be the most important Polish cities, including the duopoly of Bydgoszcz and Toruń. According to this vision, apart from the capital cities of Kujawsko-Pomorskie Voivodeship, the BTMA included the communes of Bydgoski Poviat (the administrative region of the 2<sup>nd</sup> order, NUTS 4) (Dabrowa Chełmińska, Dobrcz, Koronowo, Nowa Wieś Wielka, Osielsko, Sicienko, Solec Kujawski) and Toruński Poviat (town of Chełmża, Chełmża, Czernikowo, Lubicz, Łubianka, Łysomice, Obrowo, Wielka Nieszawka, Zławieś Wielka) (cf. Fig. 1). The area of the BTMA thus delimited, as of 2020, covered a total of 2,916 km<sup>2</sup> (16.2% of the area



**Fig. 1.** Location of the Bydgoszcz–Toruń Metropolitan Area against the background of Poland and Kujawsko-Pomorskie Voivodeship

Explanation: 1: Białe Błota, 2: Dąbrowa Chełmińska, 3: Dobrcz, 4: Koronowo, 5: Nowa Wieś Wielka, 6: Osielsko, 7: Sicienko, 8: Solec Kujawski, 9: Town of Chełmża, 10: Chełmża, 11: Czernikowo, 12: Lubicz, 13: Łubianka, 14: Łysomice, 15: Obrowo, 16: Wielka Nieszawka, 17: Zławieś Wielka, 18: City of Bydgoszcz, 19: City of Toruń Source: own preparation.

of the voivodeship) and was inhabited by 772,701 inhabitants (37.5% of the entire Kujawsko-Pomorskie Voivodeship).

The study makes use of various types of source materials. The starting point for the considerations undertaken was a review of the literature on broadly understood suburbanisation and closely related metropolisation. Another source of information was the Local Data Bank of the Central Statistical Office in Poland (LDB CSO), which provided statistical data on the demographic (dynamics of population change in %, overall migration balance per 1,000 population, percentage of registered in-migrations from cities in the total number of all in-migrations in

the internal movement in %), socio-economic (number of enterprises registered in the REGON system per 1,000 population, number of new enterprises in the REGON system per 1,000 population) and residential (number of dwellings completed per 1,000 population, average usable floor of 1 dwelling completed in m²) dimensions of suburbanisation. These indicators were analysed for the years 2000, 2010 and 2020, i.e. for periods successively related to (a) a relatively initial stage of the suburbanisation process in Poland, (b) a period of the highest dynamics of this process in the country so far, and (c) a period of specific stability of suburbanisation processes. The key part of the study was carried out based on the current,

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Table 2. Summary of strategic and planning documents at commune level

	Analysis of strategic and planning documents						
Poviats under analysis	Study of Conditions and Directions for Spatial Development	Development Strategy					
City of Bydgoszcz Poviat	Study of Conditions and Directions for Spatial Development of the City of Bydgoszcz	Development Strategy of the City of Bydgoszcz 2030					
City of Toruń Poviat	Study of Conditions and Directions for Spatial Development of the City of Toruń	Development Strategy of the City of Toruń 2020 with a Perspective to 2028					
	Study of Conditions and Directions for Spatial Development of the Commune of Białe Błota	Development Strategy of Białe Błota 2013–2025					
	Study of Conditions and Directions for Spatial Development of the Commune of Dąbrowa Chełmińska	Development Strategy of Dąbrowa Chełmińska 2014–2023					
	Study of Conditions and Directions for Spatial Development of the Commune of Dobrcz	Development Strategy of Dobrcz 2014–2025					
n 1 1 1 n	Study of Conditions and Directions for Spatial Development of the Commune of Koronowo	Development Strategy of Koronowo 2016–2025					
Bydgoski Poviat	Study of Conditions and Directions for Spatial Development of the Commune of Nowa Wieś Wielka	Development Strategy of Nowa Wieś Wielka 2020+					
	Study of Conditions and Directions for Spatial Development of the Commune of Osielsko	Development Strategy of Osielsko 2020+					
	Study of Conditions and Directions for Spatial Development of the Commune of Sicienko	Development Strategy of Sicienko 2015–2020+					
	Study of Conditions and Directions for Spatial Development of the Commune of Solec Kujawski	Development Strategy of Solec Kujawski 2014–2020+					
	Study of Conditions and Directions for Spatial Development of the Town of Chełmża	Development Strategy of the Town of Chełmża 2016–2022					
	Study of Conditions and Directions for Spatial Development of the Commune of Chełmża	Development Strategy of Chełmża 2015–2025					
	Study of Conditions and Directions for Spatial Development of the Commune of Czernikowo	Development Strategy of Czernikowo 2022–2030					
	Study of Conditions and Directions for Spatial Development of the Commune of Lubicz	Development Strategy of Lubicz 2021–2028					
Toruński Poviat	Study of Conditions and Directions for Spatial Development of the Commune of Łubianka	Development Strategy of Łubianka 2015–2023					
	Study of Conditions and Directions for Spatial Development of the Commune of Lysomice	Development Strategy of Łysomice 2018–2028					
	Study of Conditions and Directions for Spatial Development of the Commune of Obrowo	Development Strategy of Obrowo 2016–2023					
	Study of Conditions and Directions for Spatial Development of the Commune of Wielka Nieszawka	Development Strategy of Wielka Nieszawka 2015–2025					
	Study of Conditions and Directions for Spatial Development of the Commune of Zławieś Wielka	Development Strategy of Zławieś Wielka 2015–2023					

Source: own preparation.

binding strategic and planning documents of the local level (including studies of conditions and directions for spatial development of communes belonging to the Bydgoszcz-Toruń duopoly and development strategies of these communes) (cf. Table 2), analysing the content contained therein in the context of positioning the analysed communes against the background of the whole BTMA and the diagnosis and directions of development of the BTMA communes that could support the metropolisation process. The analysis presented in the paper included (1) an inventory of the development strategies of the municipalities included in the Bydgoszcz-Toruń Metropolitan Area and (2) an inventory of other strategic documents of the municipalities included in the area. The research carried out to confirm the validity of the activities included in the strategic documents was based on the Building Blocks strategy. The research presented consisted of several basic stages: (a) territorial identification of the communes comprising the BTMA; (b) data search process using two keywords: metropolis, metropolitan area, Bydgoszcz-Toruń Metropolitan Area and BTMA; (c) compilation of existing strategic documents and adopted action plans; (d) tabulation of the extracted material; (e) analysis of the extracted data towards the assumed actions; (f) analysis of the actual actions assumed in the strategic documents in breakdowns. To further elaborate on the results resulting from the application of the Building Blocks strategic search, it was based on the measurement of keywords and phrases representing a given aspect of the information query, combined using the OR operator. The resulting metropolisation outline allowed for further analysis, particularly in the spatial context of the BTMA.

### **RESULTS**

#### Suburbanisation in BTMA

The starting point for these considerations was an analysis of the advancement of the suburbanisation process in BTMA carried out in the demographic, socio-economic and spatial dimensions. The data

were compiled here for the suburban communes as Bydgoski Poviat (all suburban communes of the city of Bydgoszcz) and Toruński Poviat (all suburban communes of the city of Toruń). Then, they were compared with (1) the capital cities of Kujawsko-Pomorskie Voivodeship, i.e. Bydgoszcz and Toruń, (2) Kujawsko-Pomorskie Voivodeship in general and (3) Poland in general to show the specificity of the process.

In the demographic dimension, three indicators were analysed in this context: the dynamics of population change, the overall migration balance per 1,000 inhabitants and the percentage of registered in-migrations from cities in the total number of all in-migrations in the internal movement. First of all, attention was paid to the dynamics of population change. Assuming the population in 2000 as 100%, it was noted that by 2020, the population in Bydgoski Poviat reached 139.4% compared to 2000 (in 2010 – 122.6%) and in Toruński Poviat - up to 134.6% (in 2010 - 119.6%). Against this background, the dynamics of population change were completely different in the region's capital cities, whose values below 100% indicated a decrease in the number of inhabitants. In Bydgoszcz, the rate was 97.0% in 2010 and 91.6% in 2020, while in Toruń, the values were 97.6% and 94.5%, respectively (Table 3). On the other hand, in the entire Kujawsko-Pomorskie Voivodeship and in Poland in general, the value of population dynamics oscillated around 100%, indicating a fairly stable situation in this respect.

The high dynamics of population changes of Bydgoski Poviat and Toruński Poviat, identified with the suburban zone of the city of Bydgoszcz and Toruń, in the period in question, is primarily a consequence of the intensive inflow of population, which is one of the most significant features of the suburbanisation process. It should be emphasised here that in 2000, the overall migration balance per 1,000 population in Bydgoski Poviat and Toruński Poviat was positive and amounted to 9.4 and 9.0% respectively, in 2010 – already 11.8 and 11.4%, and in 2020 – 12.9 and 10.1%. In the same years, both for the capital cities, Kujawsko-Pomorskie Voivodeship and the country in general

**Table 3.** Selected characteristics of Bydgoski Poviat and Toruński Poviat in comparison with the city of Bydgoszcz and the city of Toruń as well as Kujawsko-Pomorskie Voivodeship and Poland in general in selected years

	Number of residents		Dynamics of population change (2000 = 100%)		Overall migration balance per 1,000 population		Percentage of registered in-migrations from cities in the total number of all in-migrations in the internal movement (%)					
	2000	2010	2020	2000	2010	2020	2000	2010	2020	2000	2010	2020
POLAND	38,253,955	38,529,866	38,265,013	_	100.7	100,0	-0.5	-0.1	0.1	57.2	63.0	60.5
KUJAWSKO- -POMORSKIE	2,067,817	2,098,711	2,061,942	_	101.5	99.7	-0.5	-0.8	-1.0	52.2	58.0	56.9
Bydgoski Poviat	86,399	105,942	120,432	_	122.6	139.4	9.4	11.8	12.9	76.2	83.2	81.0
Toruński Poviat	81,385	97,347	109,565	_	119.6	134.6	9.0	11.4	10.1	70.1	78.5	74.4
Bydgoszcz	375,676	364,443	344,091	_	97.0	91.6	-1.1	-3.5	-4.9	56.9	50.2	48.3
Toruń	210,194	205,129	198,613	_	97.6	94.5	-1.4	-3.1	-1.7	48.3	51.6	46.9
	Number of enterprises registered in REGON system per 1,000 population		Number of new enterprises per 1,000 population		Number of dwellings completed per 1,000 population		Average floor area of 1 dwelling completed in m2					
	2000	2010	2020	2000	2010	2020	2002	2010	2020	2002	2010	2020
POLAND	83.3	101.5	121.9	6.6	10.4	8.6	2.6	3.5	5.8	99.3	106.1	88.7
KUJAWSKO- -POMORSKIE	81.6	88.6	101.7	6.3	9.3	7.6	2.1	2.8	4.7	96.5	103.0	92.0
Bydgoski Poviat	76.3	98.9	123.0	7.0	11.0	9.3	4.9	7.6	10.3	139.4	144.7	118.6
Toruński Poviat	69.2	81.2	106.1	5.8	10.4	9.2	3.2	5.1	7.7	144.2	131.3	117.3
Bydgoszcz	114.7	120.0	129.6	7.6	10.7	9.7	2.2	2.7	4.8	74.2	70.3	56.4
Toruń	108.7	115.9	137.1	8.4	12.3	10.0	3.0	3.6	9.7	77.0	66.5	64.0

Source: own preparation based on LDB CSO data (GUS.gov).

(the only exception here was the year 2020 when the value of the migration balance was 0.1‰), the overall migration balance was negative (Table 3).

A distinctive feature of suburbanisation for the highly developed regions in the World, including Poland, is the influx of people from cities, especially large ones, to the suburban areas. This was also the case for the analysed Bydgoski Poviat and Toruński Poviat. In 2000, 2010 and 2020, the percentage of registered in-migrations from cities in the total number of all registered in-migrations fluctuated between 76.2% (2000) and 83.2% (2010) in Bydgoski Poviat and between 70.1% (2000) and 78.5% (2010) in Toruński Poviat. Against this background, the value of the indicator for the city of Bydgoszcz and the city of Toruń was only around 50%. At the same time,

in Kujawsko-Pomorskie Voivodeship and in Poland in general, it did not exceed 2/3 of all registered in-migrations in any of the analysed years (Table 3).

In the socio-economic dimension, the number of enterprises registered in the REGON system per 1,000 population, often equated with the entrepreneurship indicator, and the number of new enterprises registered in the REGON system per 1,000 population was considered. In general, the highest values of both these indicators are characteristic of large cities. As one moves away from cities, the value of both these indicators decreases, as does the movement from the western to the eastern part of the country (Biegańska & Szymańska, 2013). However, a significant change in this respect has been caused by the process of suburbanisation, associated with the

movement of the relatively young and well-educated population to suburban zones, as well as with the location of economic activities outside the borders of large cities (Parteka & Martyniuk-Pęczek, 2018). These conclusions are also confirmed by data collected for Kujawsko-Pomorskie Voivodeship, which was back in 2000. For Bydgoski Poviat and Toruński Poviat, the number of enterprises in the REGON system per 1,000 population was 76.3 and 69.2, respectively. In the same year, these values for Bydgoszcz and Toruń were equal to 114.7 and 108.7. By 2020, the values of the indicator recorded for the suburban zone, i.e. Bydgoski Poviat and Toruński Poviat, increased to 123.0 and 106.1, while for Bydgoszcz and Toruń, the increase was not as significant, at 129.6 and 137.1 respectively (Table 1). Similar observations apply to the number of new enterprises registered in the REGON system per 1,000 population. However, in this respect, the differences between the cities and the suburban zone were not as significant (Table 3).

On the other hand, in the residential dimension of suburbanisation, the number of dwellings completed per 1,000 population and the average floor area of 1 dwelling completed in m<sup>2</sup> were analysed. As regards the first of the proposed indicators, it may be noted that in the subsequent years under consideration in Bydgoski Poviat and Toruński Poviat, the number of dwellings completed was increasingly higher. In 2000, 4.9 dwellings per 1,000 population were completed in Bydgoski Poviat; in 2010 - 7.6 dwellings, and 2020 - 10.3 dwellings. On the other hand, in Toruński Poviat, the values of the indicator were at the level of 3.2, 5.1 and 7.7 in subsequent years (Table 3). This, in turn, means an increase of 210.2% between 2000 and 2020 for Bydgoski Poviat and 240.6% for Toruński Poviat. Relatively significant increases in the number of new dwellings completed in the analysed years were also noted in the capital cities of Kujawsko-Pomorskie Voivodeship. However, in the case of capital cities, the average floor area of completed dwellings is much smaller, which results from the specificity of urban construction. In 2020, the average floor area of flats completed in Bydgoszcz was 56.4 m<sup>2</sup>, while in Toruń, it was 64.0 m<sup>2</sup>. Against this background, dwellings in the suburban zone, usually built in single-family developments, were incomparably larger. In Bydgoski Poviat, their average area was  $118.6 \, \text{m}^2$ , while in Toruński Poviat, it was  $117.3 \, \text{m}^2$  (Table 3).

The study of selected demographic, socioeconomic and residential indicators showed that the suburban zones, here associated with Bydgoski Poviat and Toruński Poviat, against the background of the whole settlement network, are characterised by a high migration balance, an increase in entrepreneurship and housing development. The indicated characteristics are determinants of suburbanisation processes, which have been identified as typical of the BTMA area. However, it should be clear that these processes are also typical of other suburban zones in the country (Biegańska, 2019).

# Diagnosis of activities influencing the metropolisation process in BTMA

The advancement of suburbanisation processes in the suburban zone of Bydgoszcz and Toruń, allows us to further look at possible measures enshrined in the strategic-planning documents of the individual communes, and to answer the question of whether the planned activities can accelerate the transition from the phase of agglomeration to the phase of metropolisation of the entire urban region. The study assumes that the provisions made in the strategic-planning documents reflect the direction of the actions adopted and, thus the changes that may affect the transformation of the entire urban region, including the metropolisation process (Table 4).

The starting point for this analysis stage was to pay attention to the diagnosis of individual settlements in the BTMA communes in supporting the metropolisation process and further envisaged activities in this regard. As the presence of a metropolitan city is crucial for the metropolisation process, an operational definition of a metropolitan city was adopted. As Maik (2013) states, a city identified as a metropolis must meet a minimum size threshold. According to Smętkowski et al. (2009), this threshold should be a minimum of 1 million inhabitants. Nevertheless,

Smoliński, P., Biegańska, J., Wójcik, M., Furdal, D., Wysocka, D., Grzelak-Kostulska, E. (2023). Spatial self-identification of communes in urban region as an important perspective for shaping a metropolitan area. Acta Sci. Pol. Administratio Locorum 22(3), 399–419.

Table. 4. Diagnosis and further directions of development in the BTMA communes that can support the process of metropolisation

Commune	Diagnosis in the context of metropolisation	Further directions of development in the context of metropolisation
Bydgoszcz	<ul> <li>Bydgoszcz is an important national centre of tertiary services (culture, science, health care, sports, administration) and in this respect plays the role of a major centre for most of the region</li> <li>the shaping and development of Bydgoszcz as a metropolitan centre; Bydgoszcz, together with the surrounding communes, forms an interconnected area with many conditions that is part of the projected metropolitan area</li> <li>implementation of the "metropolitan Bydgoszcz" programme aimed at strengthening Bydgoszcz's role as a strong metropolitan centre of national and international significance</li> <li>the chances for creating a bipolar metropolitan centre</li> </ul>	
Toruń	<ul> <li>the central city of Kujawsko-Pomorskie Voivodeship, due to the nature of the investments of international, national and local importance located there</li> <li>Bydgoszcz and Toruń as regional centres strengthening the metropolitan potential – of crucial importance for the social and economic development of the voivodeship</li> </ul>	<ul> <li>the need to strengthen existing links and create new ones between Bydgoszcz and Toruń with all BTMA communes, as well as between the two cities and each other. Mutual relations must be based on partnership and understanding of mutual needs</li> <li>the need to solve the transport problems of the voivodeship's largest cities with suburban areas in terms of the road network, and to fill in the gaps in urban transport links with neighbouring communes</li> </ul>
Białe Błota	<ul> <li>favourable transport location (access to important national roads, railway, airport)</li> <li>public transport</li> <li>poor state of road infrastructure</li> </ul>	
Dąbrowa Chełmińska	<ul> <li>unfavourable transport location (distance from the national road No. 80, no railway line)</li> <li>peripheral character of the commune (despite its location near the centre of Bydgoszcz)</li> </ul>	
Dobrcz	<ul> <li>the route of the \$5</li> <li>poor state of road infrastructure</li> <li>low level of urbanization of the commune, low level of socio-economic development</li> </ul>	
Koronowo	<ul> <li>favourable transport location (the main national roads S5 and DK25 run through the area of the commune, good communication with Bydgoszcz)</li> </ul>	
Nowa Wieś Wielka	<ul> <li>favourable transport location (national road 25 and S10, Bydgoszcz–Inowrocław railway line)</li> </ul>	
Osielsko	<ul> <li>favourable transport location (national road No. 5 and S10, main Bydgoszcz–Gdańsk railway line)</li> <li>public transport connections</li> <li>insufficient capacity of the road network causes traffic jams during rush hours</li> </ul>	
Sicienko	<ul> <li>very well developed road network, however only in the south-eastern part of the commune (DK80 DK25 DK10 and S5 route)</li> </ul>	

cont. Table 4		
Solec Kujawski	<ul> <li>high frequency of rail connections to the main cities of the voivodeship, large rail hub</li> <li>the (conflicting) interaction of the two cities poses the threat of creating a bedroom town</li> </ul>	
Town of Chełmża	<ul> <li>insufficient public transport links with Toruń and Bydgoszcz</li> <li>good transport accessibility (location near the A1 motorway, national road no 91 and provincial road no. 551)</li> </ul>	
Chełmża	<ul> <li>insufficient public transport links with Toruń and Bydgoszcz</li> <li>good transport accessibility (location near the motorway, national road no 91 and provincial road no 551)</li> </ul>	
Czernikowo	- lack of efficient road infrastructure	– the planned route of the Bydgoszcz and Toruń City railway
Lubicz	<ul> <li>very good communications with Toruń, including public transport;</li> <li>problem with road capacity, especially at the entrance to the city of Toruń, due to heavy traffic</li> <li>good transport accessibility (location near the A1 motorway, S10 motorway)</li> </ul>	
Łubianka	<ul> <li>lack of a transport network adequate to the needs of the inhabitants, difficult connections to Toruń and Bydgoszcz</li> <li>inadequate connections to towns of local importance (Chełmża)</li> <li>there is a dissonance between the road network defined in the strategy and the study</li> <li>lack of cooperation in the implementation of the municipal development strategy</li> </ul>	– the need for convenient transport links to bring the commune closer to the cities of the metropolis
Łysomice	<ul> <li>excellent road connections of the commune (access to the A1 motorway, national road 91)</li> <li>economic attractiveness of the commune – Pomorska Special Economic Zone</li> </ul>	
Obrowo	<ul> <li>presence of Lubicz motorway junction</li> <li>very heavy traffic, traffic congestion problem in the vicinity of the Lubicz motorway junction</li> <li>implementation of the partner communes programme</li> </ul>	
Wielka Nieszawka	<ul> <li>very good transport links with Bydgoszcz, Toruń and surrounding towns;</li> <li>presence of a main railway line (with stations in Cierpice and Brzoza)</li> <li>one of the highest indicators of the number of businesses registered per 1,000 people;</li> </ul>	
Zławieś Wielka	<ul> <li>convenient traffic location (access to national road No. 80)</li> <li>functioning of public transport</li> </ul>	

Source: own preparation based on strategic and planning documents.

in the case of a metropolis of a lower regional rank, it can be 0.5 million. In addition to the size criterion, a metropolitan city should be distinguished by a highly efficient economy based on specialised services, including scientific, consulting, financial, publishing and media services (Dymnicka & Parteka, 2010). Such a city should also be a place of concentration of innovation potential in the social, cultural and communication and infrastructure dimensions (Środa-Murawska et al., 2017). As a result, by being attractive business locations and offering a high quality of life, metropolises attract new residents, which entails territorial expansion, mainly in the form of an expanding suburban zone. This, in turn, requires building new ways of managing increasingly complex urban organisms and paying attention to developing ways of cooperation between the various local government units operating within them (Kaczmarek & Mikuła, 2007).

In the context of the analysed area, it should be noted that the city of Bydgoszcz and the city of Toruń form a bipolar settlement system, which results from their size measured by the number of inhabitants and their functions, including administrative ones, as the capitals of Kujawsko-Pomorskie Voivodeship. Both criteria are also significant in considering the area as a metropolis of regional importance or a metropolitan area. Given the assumed size threshold of a metropolis, none of the analysed cities individually meet this criterion, as their population does not exceed 0.5 million inhabitants. Together, however, they meet this criterion and jointly share functions resulting from their role as capital cities for the region. In the context of the diagnosis presented in the 'Study of Conditions and Directions for Spatial Development of the City of Bydgoszcz' and the 'Development Strategy of the City of Bydgoszcz 2030', the city is indicated as an important national centre of higherorder services (business, culture, science, sport, etc.). The formation and development of Bydgoszcz as a metropolitan centre are also emphasised. At the same time, it is noted that while there is a chance for the creation of a bipolar metropolitan centre, Bydgoszcz and the surrounding communes already form

a multi-correlated area that is part of the projected metropolitan area. Both in the 'Study of Conditions and Directions for Spatial Development of the City of Bydgoszcz' and the 'Development Strategy of the City of Bydgoszcz 2030', Toruń is also referred to as the central city of Kujawsko-Pomorskie Voivodeship, due to the nature of located investments of not only local but also national and international significance. Documents for the city of Toruń ('Study of Conditions and Directions for Spatial Development of the City of Toruń' and 'Development Strategy of the City of Toruń 2020 with a Perspective to 2028'), however, emphasise that both Bydgoszcz and Toruń are regional centres that together strengthen their metropolitan potential and are of decisive importance for the region's socio-economic development. It should also be noted that in the strategic and planning documents for Toruń, in development directions, special attention is given to the need to strengthen existing and create new links between the two cities and all the communes that make up the BTMA. Importantly, it is emphasised that mutual relations should be based on partnership and understanding needs. On the other hand, the need to solve transport problems, mainly in the suburban zones of both cities, is posed as one of the essential tasks, especially in the context of metropolitan links.

The process of metropolisation involves the relocation of urban lifestyles and urban solutions outside the central centre, but always with a firm and comprehensive domination of the city (Markowski & Marszał, 2006). This, in turn, causes that inhabitants of the spatially expanding suburban zone are forced to commute regularly to the centre of the urban region for, among other things, work, school, and higher-order services (Wysocka et al., 2021). Their considerable mobility results in one of the most critical problems and, at the same time, challenges in the suburban zone, i.e. transport (Wysocka et al., 2022), with this identified as a key factor affecting the cohesion of the metropolitan area. Moreover, transport-related issues are diagnosed as particularly relevant in light of the need to ensure the cohesion of metropolitan areas (Allen, 2013; Englman et al., 2012; Koźlak, 2013; Raimbault, 2014). Therefore, when

analysing the strategic-planning documents regarding the socio-economic characteristics relevant to the metropolisation processes for the communes that make up the BTMA, it was noted that they all devote considerable attention to this issue. Importantly in this context, on the one hand, the analysed suburban communes signalled favourable transport-related aspects in their strategic and planning documents, including: convenient transport location including access to the motorway (Lubicz), national roads (Białe Błota, Dobrcz, Koronowo, Nowa Wieś Wielka, Osielsko, Sicienko, town of Chełmża, Chełmża, Lubicz, Łysomice, Zławieś Wielka), railway (Białe Błota, Nowa Wieś Wielka, Osielsko, Solec Kujawski, Wielka Nieszawka) and airport (Białe Błota). Some of the suburban communes also pointed to the possibility of using public transport (Białe Błota, Lubicz, Zławieś Wielka). On the other hand, in addition to the favourable conditions for the development of transport, there were also transport-related problems inherent in the functioning of the suburban areas, i.e. the poor condition of the road infrastructure (Białe Błota, Dobrcz), insufficient capacity of the road network concerning the traffic (Osielsko, Czernikowo, Łubianka, Obrowo), development of the road network only in a limited part of the commune (Sicienko), and insufficient public transport links with Bydgoszcz and Toruń (town of Chełmża, Chełmża, Łubianka) or with local towns (Łubianka). It is worth noting that no single commune did not indicate transport as one of the problems to be solved or did not emphasise the favourable conditions for transport development. In addition, two communes outlined in further development directions the need for convenient transport links to bring the commune closer to the cities of the metropolis (Czernikowo, Łubianka). In addition to issues related to transportation, only two communes highlighted another of their assets of importance to the metropolisation process, namely economic attractiveness. In the commune of Łubianka, this attractiveness - as stated in the documents is due to the presence of a special economic zone, while in the commune of Wielka Nieszawka, it is due to one of the highest rates of entrepreneurship among the

population, measured by the number of enterprises registered in the REGON system per 1,000 population.

# Positioning of communes against the background of the BTMA

In addition to diagnosing activities that may affect the metropolisation process, it was also considered essential to establish how the analysed communes identify themselves against the background of the BTMA in the light of their strategic and planning documents. This kind of self-identification does not prejudge the pace of metropolisation. However, it allows outlining the direction of actions taken to strengthen the process and to determine how coherent the actions taken in the urban region will be. It is also important insofar as experience in Western European countries shows that for the success of "metropolitan" initiatives, the authentic involvement of local authorities as their most essential actors is crucial (Kaczmarek & Mikuła, 2007).

Turning to the analysis of the content of strategic and planning documents of the considered communes, regularities related to the self-identification of capital cities and the communes included in the suburban zone were shown. Regarding the cities performing capital functions in Kujawsko-Pomorskie Voivodeship, the perception of their role in the settlement system is slightly different (Table 5). Bydgoszcz, probably due to the larger scale of the city, situates itself as the leading centre in the region, especially in terms of higher-level services (culture, science, health care etc.). At the same time, the city's strategic and planning documents strongly emphasize the need to strengthen cooperation within the functional area of Bydgoszcz and the fact that Bydgoszcz, together with its functional area, already constitutes a metropolitan centre of national and international significance. Toruń, on the other hand, is seen as part of the Bydgoszcz-Toruń Metropolitan Area. In the city documents analysed, it is argued that both cities are of decisive importance for the socio-economic development of the voivodeship. Hence, there is a need to build good relations with the other capital of the voivodeship.

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Table. 5. Positioning of the analysed communes against the BTMA

Commune	1					
Bydgoszcz	<ul> <li>the role of the main centre for most of the region in terms of higher-level services (culture, science, health sport, administration)</li> <li>Bydgoszcz with its functional area as a metropolitan centre of national and international importance</li> <li>the need to strengthen cooperation within the Bydgoszcz functional area</li> </ul>					
Toruń	<ul> <li>Toruń as part of the BTMA; Bydgoszcz and Toruń as regional centres strengthening the metropolitan potential and being of decisive importance for the social and economic development of the voivodeship</li> <li>building the city's relations with the other capital city of the region</li> <li>the need to strengthen existing and create new links between Bydgoszcz and Toruń with all BTMA communes, as well as between the two cities and each other</li> </ul>					
Białe Błota	– commune as part of the suburban zone of the Bydgoszcz area					
Dąbrowa Chełmińska	<ul> <li>the commune as part of the suburban zone located in the immediate vicinity of Bydgoszcz</li> <li>the future development of the commune will depend on the economic condition of the city of Bydgoszcz and its importance in the settlement network of the voivodeship</li> </ul>					
Dobrcz	– commune as part of the suburban zone of the Bydgoszcz area					
Koronowo	– commune as part of the suburban zone of the Bydgoszcz area					
Nowa Wieś Wielka	<ul> <li>the commune as part of the Bydgoszcz suburban zone (the so-called "sleeping zone" for the city of Bydgoszcz)</li> </ul>					
Osielsko	– commune as part of the suburban zone of the Bydgoszcz area					
Sicienko	– commune as part of the suburban zone of the Bydgoszcz area					
Solec Kujawski	– the commune's fear of becoming a sleeper city for the two central cities of the BTMA region					
Town of Chełmża	– no precise information available					
Chełmża	– commune as a part of BTMA					
Czernikowo	<ul> <li>lack of precise information on this subject (despite investments within the Integrated Territorial Investments being signalled in strategic and planning documents)</li> </ul>					
Lubicz	– commune as part of the Toruń suburban zone					
Łubianka	– the commune as part of the suburban zone of the Bydgoszcz–Toruń agglomeration					
Łysomice	<ul> <li>the commune as part of the suburban zone of the Bydgoszcz–Toruń agglomeration</li> <li>the commune as an economic base for the city of Toruń</li> </ul>					
Obrowo	– commune as part of the Bydgoszcz–Toruń Functional Area and thus one of the members of the Union of the Integrated Territorial Investments of the Bydgoszcz–Toruń Functional Area					
Wielka Nieszawka	– commune as part of the Bydgoszcz–Toruń Functional Area and thus one of the members of the Union of the Integrated Territorial Investments of the Bydgoszcz–Toruń Functional Area					
Zławieś Wielka	<ul> <li>commune as part of the Bydgoszcz–Toruń Functional Area and thus one of the members of the Union of Integrated Territorial Investments of the Bydgoszcz–Toruń Functional Area</li> <li>commune with a suburban character due to its location between Bydgoszcz and Toruń</li> </ul>					

Source: own preparation based on strategic and planning documents.

Moreover, this need also applies to the other communes that make up the metropolitan area. Concerning the communes comprising Bydgoski Poviat, which in a simplified manner can be identified with the functional area of Bydgoszcz, it was observed that they position themselves very

strongly in strategic-planning documents as part of the suburban zone of only one city, namely Bydgoszcz. The only exception was Solec Kujawski, where concern was expressed about the city being created solely as a bedroom community for the region's capital cities. In the communes of Toruński Poviat, the belief that

they are part of the Bydgoszcz–Toruń Functional Area or the Metropolitan Area prevailed (Table 5).

#### **CONCLUSIONS**

The development of the analysed area, which includes the capital cities of the Kujawsko--Pomorskie Voivodeship and suburban communes, is mainly determined, as shown in this study, by the multifaceted processes of suburbanisation. At the same time, the growing importance in the world economy of global cities or urban regions makes it necessary to consider them in the context of the socio-economic transformations in suburban zones. For the development of such regions, including large cities, the activities involving the strengthening of metropolitan processes, which determine the transformation from the phase of agglomeration to the phase of metropolisation, are of increasing importance. Two elements are essential for the metropolitan processes: the size of metropolitan cities and their functions. The first criterion assumes that a metropolitan city must have a population of at least 0.5 million. As mentioned above, such a criterion in Kujawsko-Pomorskie Voivodeship is met by Bydgoszcz and Toruń together. However, this criterion is not met by either of these cities considered separately. The second criterion emphasises the importance of the functions performed. However, while, as shown in the study, both cities, in the light of their strategic-planning documents, define themselves as important national centres of higher-order services carrying out several investments also of international importance, it is very clearly indicated, for example, in the 'Development Strategy of Kujawsko-Pomorskie Voivodeship 2030 - Acceleration Strategy 2030+', that the considered bipolar system positions itself quite poorly not only against other international links but also against other large cities in Poland. One of the reasons for this unfavourable situation is the somewhat comparable scale of the two cities, and thus the performance of comparable functions and, paradoxically, the central location on the voivodeship's map and good accessibility

for the region's residents. Thus, one of the main challenges in the development of the urban region, but also entire Kujawsko-Pomorskie Voivodeship, is to develop the ability of both cities to carry out tasks of strategic importance for the quality of life and competitiveness of the economy. These challenges should focus intensely, as demonstrated in this study, but which is also emphasised in the 'Development Strategy of Kujawsko-Pomorskie Voivodeship 2030 – Acceleration Strategy 2030+', on the following areas:

- strengthening of the economy, which should be done primarily through more significant innovation and internationalisation of higher order services, including higher education, science and research and development activities, high culture institutions, highly specialised medical care, financial institutions and business environment institutions, administration of regional and supraregional importance, national defence institutions, highly specialised trade, media;
- development of public transport interconnections. Currently, the region is experiencing the dominance of automobile transport due to the relatively peripheral location of significant railroad stations, the low efficiency and standard of bus service. In addition, the airport, which falls into the category of small airports, is rapidly increasing its passenger numbers. It provides international connections to selected cities in the UK (London Stansted, London Luton, Birmingham, Bristol, Dublin) and a domestic connection to Warsaw Chopin International Airport. However, it is characterised by a weak network of connections provided by the national carrier PLL LOT compared to other regional ports. What is more, both of the voivodeship's headquarters are poorly accessible via roads of the highest rank and railroads of the highest standard;
- finally, the development of a model of cooperation that would provide the optimal direction for the development of the urban region, which is already responsible for stimulating the development of the region and taking part in the development of the country.

However, cooperation between the capital cities and the suburban zone developing around these cities seems to be one of the key elements determining further directions of development and ensuring the cohesion of the Bydgoszcz-Toruń duopoly in the context of the metropolisation process. As shown in the study against the strategic and planning documents background, the vision for the creation of the Bydgoszcz-Toruń Metropolitan Area, present in the narrative of the two major cities, is quite different. Bydgoszcz emphasises its overarching role in the current settlement system and links to its immediate hinterland. Toruń, on the other hand, which may be due to the slightly smaller scale of the city, emphasises the need to build good relations with the other voivodeship's capital and other communes included in the metropolitan area. At least at the stage of the entries made in strategic-planning documents, Toruń's vision seems to be closer to the optimal model of intergovernmental cooperation (Stead & Meijers, 2009), in which the following are considered essential elements: communication, cooperation, coordination of activities and, finally, integration.

Moreover, as literature studies indicate (Markowski & Marszał, 2006), the solutions proposed by metropolitan cities tend to spread to their entire area of influence. Therefore, it is not surprising that the communes of Bydgoski Poviat see themselves quite narrowly as part of the suburban zone of Bydgoszcz, while the communes of Toruński Poviat see themselves as part of the Bydgoszcz-Toruń Metropolitan Area. The different vision of the urban region, which defines the direction of development of the area, will complicate the metropolisation process. Regardless of the spatial self-identification of the communes, the crucial distinguishing feature should also be the activities aimed at strengthening the metropolitan potential of the area. However, the adopted optics of seeing the opportunities and potential solutions to the identified problems would be able to make these activities more effective. Unfortunately, the lack of a consensus vision for the area's development will not be a contributing factor, which may reinforce the BTMA's relatively unfavourable positioning in the international network.

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