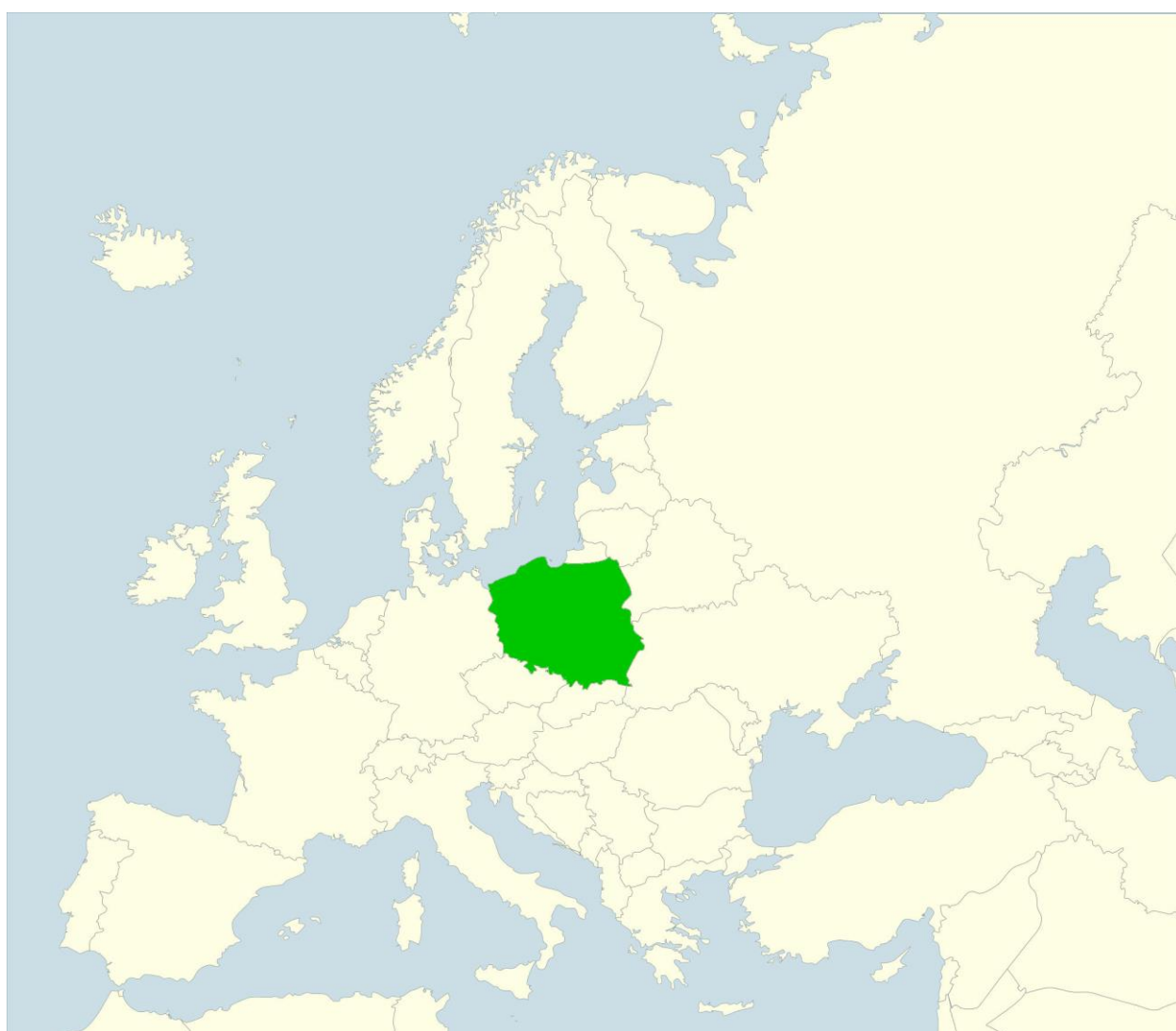


THE IMPACT OF LOCATION ON THE ROLE OF SMALL TOWNS IN REGIONAL DEVELOPMENT: MAZOVIA, POLAND

Konrad Czapiewski, Jerzy Bański, Magdalena Górczyńska¹



¹ Dr. Konrad Czapiewski, Prof. Dr hab. Jerzy Bański, Department of Rural Geography and Local Development; Dr. Magdalena Górczyńska, Department of Urban and Population Studies, Institute of Geography and Spatial Organization, Polish Academy of Sciences, Twarda 51-55, 00-818 Warszawa; e-mails: konrad@twarda.pan.pl, jbanski@twarda.pan.pl, mgor@twarda.pan.pl.

Abstract: The paper explores the role of small towns in the Mazovia region in Poland which is both characterized by rural areas and the suburban zone of Warsaw. The analysis of changes in the local labour markets reveals that microregions formed by small peripheral towns were more resistant to changes than those located in the suburban area of Warsaw. The latter were absorbed by the capital city whose zone of influence expanded in the detriment of adjacent small towns and their microregions. Using the concept of exogenous functions performed by small towns, we also shed light on their role with regard to the surrounding areas (with dominant agricultural function) in the past decade. The values of the service concentration index (SCI) and the level of population concentration showed that the majority of services to local and neighbouring inhabitants were delivered in small county towns located in the periphery. On the other hand, small county towns located in the vicinity of Warsaw mainly provided services to their inhabitants.

Key words: small towns, central functions, local labour market, concentration index, Poland

1. Introduction

Small towns are important components of national and regional urban systems and perform different roles. Oberti (1997) suggests that their specificity lies in their location within local and regional networks. This means that social phenomena in small towns are somehow more “local” than in big cities, due to the greater relevance of proximity relationships and often deep historical roots (George, 1984). The presence of a certain level and quality of infrastructure (administration, education system, services to individuals and companies, trade) is another distinguishing feature (Santamaria, 2000). The territorial context permits the intermediation and connexion of the different types of urban and rural settlements, and contributes to the establishment of a balanced urban system. Recent years have witnessed significant territorial changes resulting in the hierarchical and static nature of classical theories of the urban system being challenged by new ideas of more open, dynamic and interactive small towns (Dematteis, 2001). This evolution provides new challenges and opportunities for these urban units as they seek new roles within functional and urban networks.

Small towns play an important role in urban systems and in territorial development in the country and at regional and local level (e.g. Lambe, 2008; Vaishar et al., 2015). On a local scale, they are the engines of local economic development, notably in rural regions (Heffner, 2003; Lamprecht, Marszał, 2004; Shucksmith et al., 2005). They constitute a link between big urban centres and rural areas. Relationships between small towns and their rural surroundings influence the direction and level of local and regional development. Nowadays an increase in the functional diversity of small towns is observed, mainly as a result of greater economic diversification of rural areas (Courtney et al., 2007). This process is undoubtedly triggered by the Common Agricultural Policy, including its idea of a multifunctional development of agricultural farms and programs supporting multiple activities in rural areas. Small towns are the primary place of supply for local businesses and farms in goods and services, and the first place where they sell their products (Tacoli, 1998). Furthermore, small towns are considered transmitting nodes in national and regional development policies, and optimal place for basic social services location for the rural population (Hinderling, Titus, 2002; Satterthwaite, Tacoli, 2003).

The most relevant policy aim for small towns sought to promote polycentric spatial development and an urban-rural relationship (ESDP, 1999; Territorial Agenda, 2020). The pursuit of polycentric development sought to contribute to the competitiveness of the EU by achieving more balanced patterns of development and within this aim it was the intention to develop a new partnership between urban and rural areas. The partnership would require integrated approaches to development and co-operation between towns and their surrounding rural areas, within which small (and medium-sized) towns had a crucial role as both engines of growth and centres for employment and service provision. In a polycentric urban system the small and medium-sized towns (SMT) and their interdependencies form important hubs and links in rural areas, particularly

in more remote regions and where larger metropolitan centres are absent. The policy aim was a recognition that SMT had an essential role in the preservation of the settlement structure and the cultural landscape.

The evolution of the territorial cohesion discourse is also highly relevant to SMT and the Green Paper on Territorial Cohesion (CEC, 2008) identifies such towns as a central element in the territorial diversity of Europe. The Green Paper emphasises the role of small cities and towns for a balanced territorial development of the EU particularly in the intermediate and predominantly rural regions. Effective co-ordination and co-operation between strong networks of cities and towns are seen as essential and it is recognised that small towns often play a more important role than their size might suggest in more remote areas. The ability of these towns to provide access to services, infrastructure and jobs is seen as crucial in addressing rural depopulation and maintaining an acceptable quality of life.

The most important recent EU reference documents relevant to the development of SMT are the EU 2020 Strategy for smart, sustainable and inclusive growth (CEC, 2010) and the Territorial Agenda for the European Union 2020 (Territorial Agenda, 2020). The emphasis on urban – rural interactions in earlier spatial policy documents is retained and there is an emphasis on improving the connectivity between urban and rural areas to ensure access to job opportunities and services of general interest.

The considerable attention given to small towns in policy documents is a recognition that many are struggling to define their roles and to gain the appropriate position in Europe's economic fabric. The global economic crisis has added a new dimension to the challenges facing many small towns and their surrounding rural areas where they do not possess the same level of economic and social resilience as large metropolitan areas. Reductions in public sector spending and jobs will also have a detrimental impact in many areas.

This paper explores the role of small towns (defined as up to 20,000 inhabitants) in the socio-cultural and economic development in the Mazovia Voivodeship (Poland). In the Polish context, the case study region has a particular significance because it represents the highest level of development (concentrated in Warsaw) but also the highest socio-economic disparities. The study pays particular attention to peripheral small towns which perform the function of capitals in counties (LAU1). Our research hypothesis is that the significance of small towns in peripheral areas is greater than it could be awaited considering their demographic and economic potential; they also perform more important functions for the development of neighbouring territories than larger towns located in the vicinity of Warsaw agglomeration.

The paper begins with an overview of research on the role of small towns in Poland and an outline of national and regional policies addressing them. Then, we present the case study area and research methods adopted. The analytical section first sheds light on the role of small towns as local labour markets in the Mazovia region and then centres on the functions played by counties' capitals being small towns. The main findings are discussed in the final section.

2. Small towns in Poland

The Central Statistical Office (CSO) in Poland defined a 'city' as a settlement unit, predominantly built-up and serving non-agricultural functions, that has been granted civic rights (through a special municipal law) or city status by specific regulations. According to this definition, the size of a unit (area and population) does not determine its status, but the awarded 'city' status. There is no official definition allowing to clearly single out small towns. Bański (2006) claimed that certain small towns perform economic functions (e.g. in terms of employment structure) which are more characteristic for villages than for urban areas. Other scholars argued that small towns (with less than 10,000 inhabitants) are an integral part of rural areas (Hunek, 2005), or more precisely they constitute local hot spots for socio-economic development for their rural surroundings (Heffner, 2005). In Polish studies on small towns usually the 20,000 population threshold is taken, and so it will be done in this paper.

Empirical evidence on the role of small towns

Research concerning small towns concentrated on their current position in national and/or regional urban systems (Bagiński, 1998; Dams-Lepiarz, 2003) as well as on the changes of their role (Jażdżewska, 2007). The majority of research focused on the relationship between small towns and their surrounding areas. Mayfield et al. (2005) argued that state interventions (e.g. infrastructural investments and tax reductions for private capital) in favour of SMT in rural areas are needed, as both post-socialist transition and pro-metropolitan policies in the 1990s placed SMT at a structural disadvantage. Taking the examples of small towns in the Lodz region, Lamprecht (2004) underscored the administrative function played by small towns as a key factor enabling them to expand their share of influence. In addition, service provision to surrounding areas was a major function of small towns (Heffner, 2003; Lamprecht, 2004; Lamprecht, Marszał 2004; Pałka, 2005, Kulczyńska, 2007). The process of tertiarisation of the economy occurring in Poland since the 1990s has been also observed in small towns (Kobojek, Marszał, 2014) but to a different degree. The level of tertiarisation depended upon functions played in neighbouring towns and region's functional specialisation e.g. development of tourist and health resorts in small towns in mountainous areas in the southern Poland (Konecka-Szydłowska et al., 2010). Due to the post-socialist transition, many small towns converted from mono- to multifunctional which not only stimulated their prosperity but also contributed to improved standards of living (Nytko-Wołoszczuk, 2005). Apart from the changing functional structure of small towns, the quality of their urban centres also experienced improvements mainly due to new investments (Kwiatek-Sołtys et al., 2014). The development of small towns and their socio-economic functions depend to a certain extent on the functional type of the larger area where they are located (Kobojek, Marszał, 2014) and their location, be it in the proximity of larger urban centres or in the periphery (Heffner, Marszał, 2006; Bański, Czapiewski, 2012). Because of this position, these small towns better developed residential function (Kobojek, Marszał, 2014). Kwiatek-Sołtys (2005) claimed that the proximity of urban agglomerations leads to both positive (e.g. greater number of enterprises, better technical infrastructure) and negative effects (e.g. underdeveloped services: education, healthcare) for small towns.

In terms of population change, only small towns located in urban-rural fringes of large cities (Warsaw, Poznan, Gdansk, Krakow) experienced rapid growth mainly due to suburbanisation since the mid of the 1990s (reinforced between 2000 and 2010) while others, located in peripheral areas often struggled with depopulation (Zborowski et al., 2012). On the other hand, Czapiewski (2006) argued that the location in agricultural or non-agricultural areas did not affect the socio-economic condition of small towns.

Role of small towns in public policies and strategies

While the interest in small towns continues to grow among scholars in Poland, public policies also progressively recognize their significance. For instance, the National Strategy for Regional Development 2010-2020 (2010) pointed the need for a development of small towns as local urban centres, mainly in terms of public services provision and the quality of life (National Strategy, 2010). In the National Spatial Development Concept 2030 in Poland (2011), the main function of small towns was described briefly as provision of services to rural areas. The document also emphasised the need for development of towns of local importance aimed to increase employment opportunities outside agriculture. Special support for medium-sized and small towns was given in the case of Western Poland and Eastern Poland, notably to reinforce the linkages between local urban centres and their surrounding areas in order to improve the access of inhabitants from rural areas to services and local labour markets (National Spatial Development Concept, 2011).

The role of small towns also gained attention in the recently adopted National Urban Strategy 2023 (2015). The document underscores their greater barrier to entry in modern development activities, which results from financial and institutional capacities, etc. In addition, small and medium-sized towns are more vulnerable to the adverse effects of economic crises, demographic changes, and other unfavourable phenomena. The National Urban Strategy recognizes a double role of small towns: they balance the pace of development in regions and as local development centres they provide services to rural areas. In addition, it was recommended that smaller towns

shall benefit from the development of large urban centres through the use of created there innovation, opportunities for competence improvement, increasing employment opportunities and educational paths. This shall be reinforced via the improvement of transport infrastructure and dissemination of information and communication technologies, as well as social and cultural infrastructure, in order to create a more favourable competitive position of SMT as attractive places to live and do business. There are several components that require strengthening: innovation, human and social capital, institutional capacity and infrastructure efficiency (National Urban Strategy, 2015).

On a regional level, policy issues concerning small towns largely revolve around the distribution of financial resources for regional investments, or identifying priorities and actions that need to be taken for each town. Regional and national policy, expressed through planning documents (e.g. the regional development strategy, the national outline for spatial planning, the national development plan), paints a very broad and vague picture of the pathways of development of small towns, owing to the development priorities of the region or country. Generally, these do not constitute a major impediment to any one of the possible directions of socio-economic development of a town. A more important question is the current national development paradigm, which places special emphasis on metropolitan areas, i.e. big cities. Small towns located beyond metropolitan areas are not given their due attention, and therefore suffer problems related to the labour market, lack of funding, and unfavourable demographic and social processes.

3. Case study area and research methods

In 2015, there were 86 towns in the Mazovia Voivodeship. Small towns (up to 20,000 inhabitants) constituted approx. 71% of all urban units and were inhabited by 16% of urban population in the region. Twenty two cities were classified as medium-sized towns (20,000-75,000 inhabitants) and three as big cities (Warsaw, Radom, Płock). The number of towns in Mazovia varied over the past century. In 1870, 28 towns within the current limits of the region had lost their city rights as punishment for taking part in the January Uprising in 1863, directed against the policy of conquest employed by the Russian Empire. Due to the loss of status many of these towns declined and 15 have never regained the urban privileges. Nevertheless, their urban morphology and buildings still confirm their previous status (e.g. Solec nad Wisłą, Czersk, Maciejowice).

Considering the urban system in the Mazovia Voivodeship, it is composed of five levels. Warsaw and its metropolitan area form the first layer, then two large regional urban centres (Radom and Płock) are followed by three sub-regional cities (Siedlce, Ostrołęka and Ciechanów), and finally small county towns and small towns as seats of communes correspond to fourth and fifth hierarchical levels (Strategy for the Development..., 2006, 2013). While this hierarchy is not surprising, it clearly positions small towns in the regional urban system and defines their development potential and opportunities. The regional strategy for development pays particular attention to reinforce the competitiveness of Warsaw and its metropolitan area. Nevertheless, a number of goals is also defined with regard to sub-regional cities, small towns and rural areas. These are mainly aimed at supporting socio-economic and territorial cohesion in the region. For instance, integration of transport systems and more effective transfer nodes (including park and ride infrastructure in small towns and suburban areas) is seen as a tool to ensure better accessibility to cities and also within sub-regions (Strategy for the Development, 2006, 2013). Despite these explicit goals in the regional strategy, no particular objectives or instruments directly addressing small towns were formulated in the Regional Operational Programme for Mazovia Region 2007-2013 and 2014-2020 (Regional Operational Programme, 2011, 2014).

Our methodological approach follows mainly the quantitative analyses – we used mainly the secondary data from Central Statistical Office. As the official statistics lack information on the number of economically active employed persons, we exploited the estimated data elaborated by R. Wiśniewski in the project “Development Trends of Mazovia” (Śleszyński et al., 2012).

In order to explore the role of small towns, we used two independent but complementary research approaches. First, the changing role of small towns as local labour markets (in 2006 and 2011)

was identified using a two-step methodology elaborated in the project ESPON TOWN² (Servillo, 2014). In the first step we identified job centres by selecting them from all municipalities³. This selection was based on two criteria: (1) size: threshold value of minimum 1,000 jobs (minimal number of jobs) and (2) functionality: job centre as the main commuting destination from at least one municipality. In order to assess the number of jobs, we combined the data on the number of the economically active population and commuters (incoming and outgoing). In the next step we identified microregions. Assuming that not every job centre is strong enough to become an urban centre and to form its own microregion, the delineation of microregions was based on two conditions: minimum population size (20,000 inhabitants) and territorial integrity (creation of complex units).

Second, we identified the changes in the role of small towns (capitals of counties) as service centres for the inhabitants of surrounding rural areas using the service concentration index (SCI) calculated in 2005, 2010 and 2014. The index demonstrates the level of concentration of different entities delivering services in the county capital with regard to the number of entities in the whole county ($SCI = NS_{\text{capital}}/NS_{\text{county}}$, where: SCI – service concentration index, NS_{capital} – number of services in county's capital, NS_{county} – number of services in county).

We selected nine types of services which were operationalized using the following variables:

- education – number of pupils in secondary schools
- pre-school education – number of places in kindergartens
- economy – number of economic entities
- health care 1 – number of health care facilities
- health care 2 – number of drugstores
- sport and recreation – members of sport clubs
- culture – number of books in public libraries
- commerce 1 – number of supermarkets
- commerce 2 – area of permanent market places

4. Main findings

Small towns as local labour markets

The investigation begins with the delineation of urban centres and microregions following the two-step analysis. The first criterion of a minimum of 1,000 jobs was fulfilled in 299 municipalities out of 314 in Mazovia region in 2006 and in 2011. Concerning the second criterion, 35 municipalities in 2006 constituted the main commuting destination for at least one municipality but the smallest six microregions (with less than 20,000 inhabitants) were excluded from the final list of urban centres. In 2011, 29 municipalities were main commuting destinations for at least one municipality, and two of them did not reach the population threshold. In the final stage, we made additional amendments of microregions' territory based on our expert knowledge on local preconditions and differentiation. The aim was to consolidate existing areas into spatially continuous territories. We changed the territorial attachment in the case of nine communes (that is in 3% of all analysed municipalities) in 2006 and 2011. As a result, 29 urban centres and microregions were delineated in 2006 and 27 in 2011 (Fig. 1).

² Small and Medium sized Towns in their Functional Territorial Context, Research Activity RA4 Regional and Settlement-level Analysis.

³ The basic unit of territorial self-government (LAU2).

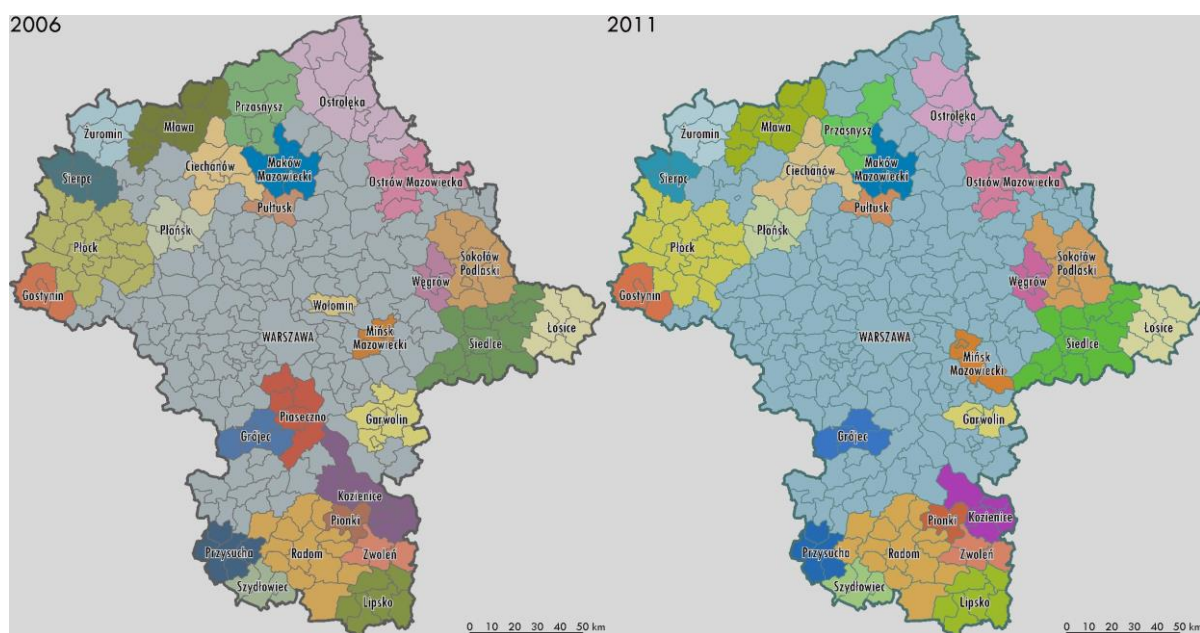


Fig 1. Microregions in the Mazovia Voivodeship in 2006 and 2011. Source: own elaboration

Considering their size, four types of microregions can be distinguished (Table 1). The microregions created around small towns contained approx. 4 - 5 communes; those around medium-sized towns approx. 8 and those around subregional centres (Radom and Płock) over a dozen. The microregion of Warsaw was composed of 159 communes (50% of all the communes in the Mazovia Voivodeship). On average, 60% of the jobs in each microregion were concentrated in its urban centre.

Between 2006 and 2011, the population and the number of jobs in small towns (centres of microregions) decreased by 10%, while in medium-sized towns by 25%. In the case of subregional centres these values remained unchanged whereas they increased by 10% in Warsaw.

Tab 1. Urban centres and their microregions in Mazovia Voivodeship.

Type of towns	Name	Town (2011)		Microregion (2011)			Concentration of jobs to population in towns	
		Population (thous.)	Number of jobs (thous.)	Population (thous.)	Number of jobs (thous.)	Number of communes	2006	2011
Small towns	Lipsko	6,0	2,9	36,2	13,6	6	1.33	1.31
	Przysucha	6,2	2,7	26,1	8,8	4	1.33	1.29
	Łosice	7,2	3,6	32,6	12,1	6	1.35	1.35
	Zwoleń	8,2	3,5	26,7	9,8	3	1.15	1.16
	Zuromin	9,0	3,8	36,7	12,7	5	1.21	1.22
	Maków Mazowiecki	10,3	4,2	27,9	9,9	5	1.14	1.15
	Szydłowiec	12,3	4,8	34,8	11,0	4	1.23	1.25
	Węgrów	12,8	5,8	24,5	9,6	3	1.14	1.15
	Grójec	16,3	7,8	44,8	18,2	4	1.14	1.18
	Garwolin	17,1	9,4	41,1	16,5	4	1.42	1.38
	Przasnysz	17,4	7,9	40,0	15,1	5	1.18	1.20
	Kozienice	18,6	9,2	50,1	20,2	5	1.29	1.23
	Sierpc	18,8	7,9	34,5	13,0	4	1.12	1.11
	Sokolów Podlaski	18,8	9,9	54,2	21,3	8	1.36	1.34
	Pułtusk	19,2	8,2	27,9	10,8	2	1.10	1.10
	Gostynin	19,3	7,9	36,6	13,7	3	1.09	1.09
Pionki	19,7	7,2	29,7	10,1	2	1.08	1.08	
Average		13,9	6,3	35,6	13,3	4.3	1.20	1.20

Medium-sized towns	Płońsk	22,6	10,1	48,1	18,8	5	1.12	1.15
	Ostrów Mazowiecka	23,0	10,0	51,7	19,8	6	1.12	1.13
	Mława	30,9	13,8	66,8	26,2	9	1.12	1.14
	Wołomin	37,5	17,9	---	---	---	1.10	---
	Mińsk Mazowiecki	39,5	16,3	66,5	26,1	4	0.98	1.05
	Piaseczno	43,2	22,4	---	---	---	1.09	---
	Ciechanów	45,3	21,1	83,4	33,9	8	1.12	1.15
	Ostrołęka	53,4	25,1	98,6	40,7	6	1.14	1.14
	Siedlce	76,5	38,9	149,7	64,9	13	1.17	1.17
	Average	41,3	19,5	62,8	25,6	5,7	1.11	1.16
	Subregional centres	Płock	124,3	60,8	234,9	99,1	16	1.16
Radom		220,6	93,7	357,0	138,7	15	1.09	1.09
Average		172,5	77,3	296,0	118,98	15,5	1.11	1.11
Capital	Warszawa	1708,5	1013,4	3524,3	1725,8	159	1.16	1.21

Source: own elaboration based on data from the CSO.

Central functions in county⁴ towns

Between 2005 and 2014 the average value of the service concentration index (SCI) in the Mazovia region was equal to 52%, while the concentration of population in the capitals of the counties was 36%. This indicates that almost one and a half more service activities are concentrated in the capitals of the counties than it would be assumed considering their demographic potential. This value indirectly indicates a greater range of exogenous functions played by these towns. Secondary education is the most concentrated public service in the county towns which is one of the obligatory tasks of counties in Poland. Moreover, supermarkets also had a greater level of concentration while markets and libraries were least concentrated. The concentration level did not change much in the studied period in the capitals of counties. On the other hand, supermarkets, kindergartens and economic entities became slightly dispersed, while secondary schools more concentrated.

The highest values of the SCI for individual services characterized counties whose capital was a sub-regional centre (e.g. in ciechanowski county 73%, siedlecki 71%, radomski 67%, and in płocki 66%), or occurred in the peripherally located counties (e.g. in sierpecki, szydłowiecki, mławski, gostyniński). On the other hand, the lowest values of the SCI characterized counties located in Warsaw suburbs (e.g. in warszawski zachodni county 23%, wołomiński 24%, and grójecki 30%).

The analysis of the concentration of population with regard to services concentration also provides interesting findings. The greatest concentration of services in relation to the concentration of inhabitants occurred in przysuski county (3.3-fold higher concentration of services in relation to the population). Moreover, other peripherally located counties (mostly along the border with other voivodeships) obtained greater values, for example lipski county (2.9), białobrzegi (2.8), łosicki (2.6), zwoleniński (2.6), garwoliński (2.5), żuromiński (2.5), szydłowiecki (2.3), płoński (2.2), sierpecki, węgrowski, kozienicki and makowski (2.0). Counties located in Warsaw suburban area are characterized by significantly lower values of services concentration in relation to the concentration of the population (Fig. 2).

⁴ The county (powiat) is a unit of administrative division and a constituent part of the province. Each county encompasses between several and more than ten neighbouring communes (pl. *gmina*). This status, after the new, three-level territorial breakdown of the country was introduced in 1999.

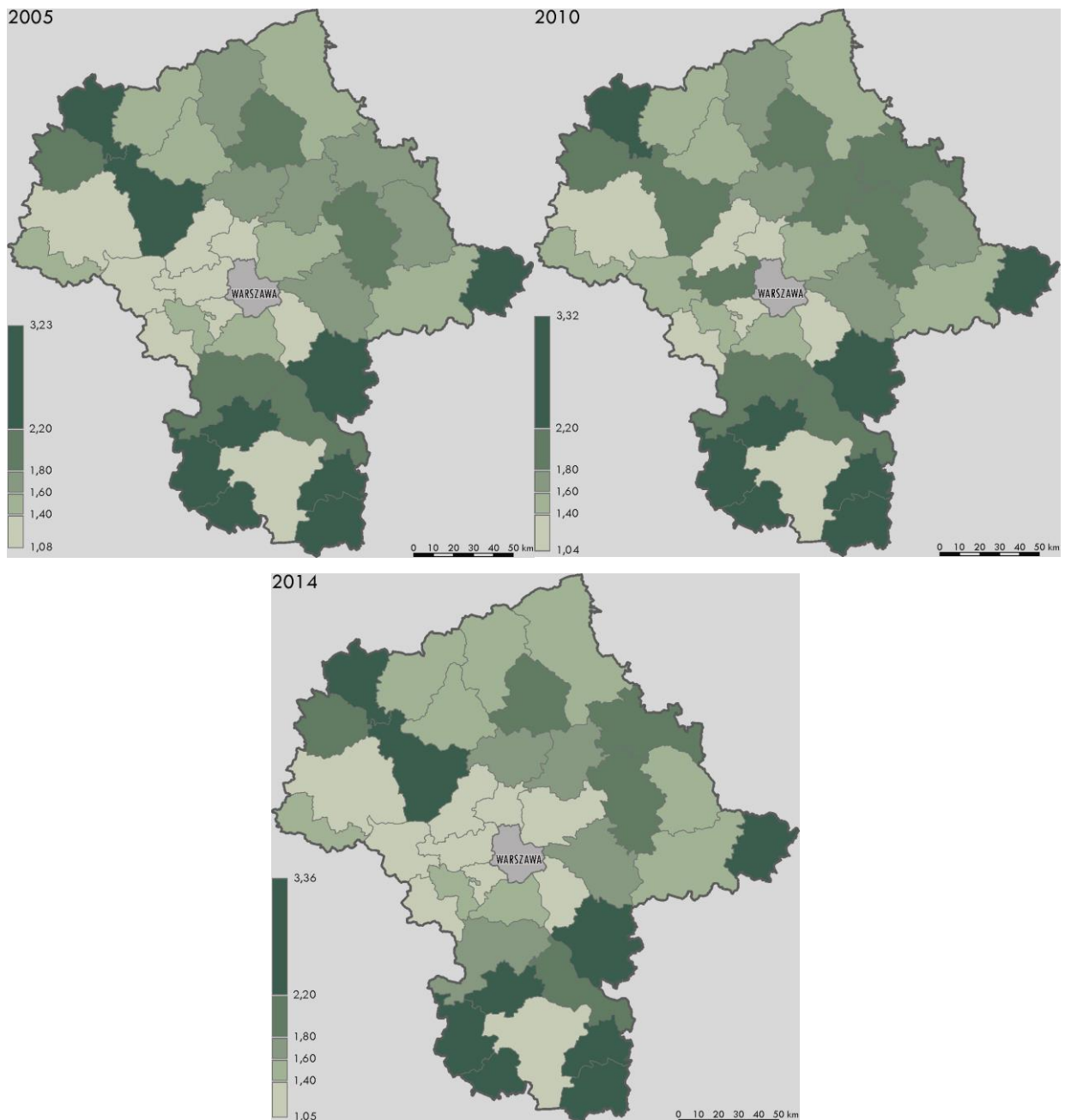


Fig 2. Synthetic SCI index for ten selected categories of services with regard to population concentration in counties in the Mazovia voivodeship in 2005, 2010 and 2014. Source: own elaboration based on data from the CSO.

These findings confirmed the importance of the county towns and among them the small towns with the highest level of concentration particularly in peripheral areas in Mazovia region. Indeed, the majority of services are delivered in these towns. Small county towns located within Warsaw agglomeration mainly provide services to their inhabitants. Other county's residents often take advantage of services offered in other towns in the county, or in Warsaw.

Tab 2. Concentration of selected categories of services in county towns in 2014 (in comparison with 2005 and 2010).

Typology of towns	Concentration of selected services in county towns									Concentration of services to population in towns		
	Education	Pre-school education	Economic entities	Health care 1	Health care 2	Sport & recreation	Culture	Commerce 1	Commerce 2	2005	2010	2014
Small towns	76%	44%	39%	42%	54%	37%	30%	65%	32%	1,95	1,94	1,89
Medium-sized towns	82%	44%	37%	51%	53%	44%	36%	63%	33%	1,62	1,61	1,61
Subregional centres	88%	70%	68%	73%	72%	62%	47%	81%	39%	1,16	1,17	1,19

Note: Service categories considered: Education: number of pupils in secondary schools, Pre-school education: number of places in kindergartens, Economy: number of economic entities, Health care 1: number of health care facilities, Health care 2: number of drugstores, Sport and recreation: members of sport clubs, Culture: number of books in public libraries, Commerce 1: number of supermarkets, Commerce 2 – area of permanent market places. Source: own elaboration based on data from the CSO.

5. Discussion of results and conclusions

Theoretically, the urban system in the Mazovia Voivodeship takes a quite polycentric form with the capital city in the centre, surrounded by two large regional centres (Płock and Radom) and three smaller sub-regional centres (Siedlce, Ciechanów and Ostrołęka). The latter are surrounded by small and medium-sized county towns. However, taking into account population numbers or functional structure, it turns out that such distribution of towns created a very strong polarization in the region. Mazovia is characterized by excessive differences in demographic and economic potential between Warsaw and the other areas in the region (Bański, Czapiewski, 2015).

The population is concentrated mainly in the central part of Mazovia region. Considering the differentiation of functional structure, Warsaw dominates and is followed by Płock and Radom. These cities concentrate most of the economic potential and hamper the development of smaller towns. Due to this spatial distribution a greater number of smaller towns is present in the north and east of the region than in the west and south (where Płock and Radom created their own zones of influence). The research carried out in 2010 showed that due to absence of bigger cities, towns located in that area would possibly develop additional social and economic functions, and in that way, they could become important local centres for development (Bański, Czapiewski, 2012).

This particular monocentricity in Mazovia region was confirmed in the course of the delineation of microregions based on commuting flows. Small towns located in the proximity of Warsaw (e.g. Pruszków, Piastów, Serock, Radzymin) remained in the 'shadow' of the capital city – under the strong influence of the agglomeration – and they were not capable to develop their own zone of influence. The composition of microregions changed between 2006 and 2011 mainly in favour of the capital city. Warsaw agglomeration extended its zone of influence: it absorbed microregions of Wołomin and Piaseczno and several municipalities previously appertaining to other microregions (e.g. of Mińsk Mazowiecki, Garwolin and Kozienice). Radom and Płock did not change much their zones of influence while sub-regional centres retained their previous zones of influence (Siedlce) or reduced them (Ciechanów and Ostrołęka). The microregion of Ostrołęka experienced the biggest loss: in 2006 it contained ten municipalities, and respectively five in 2011.

Peripherally located small towns and their microregions deserve particular attention. They usually create relatively extensive microregions (usually composed of several municipalities), whose range did not change over the past years (see: size of labour markets). These findings confirmed the first part of the hypothesis telling that the role of these small towns is greater than their demographic and economic potential suggest. Indeed, these urban centres play an important

socio-economic role at local level. Our finding is in line with results of previous research showing that small peripheral towns in Mazovia play an important role with regard to adjacent rural areas in terms of services, trade, transport, production, administration and secondary education (Servillo, 2014). In this perspective, they perform more functions than similar towns located in the proximity of Warsaw which also enables us to accept the second part of the hypothesis.

Furthermore, this study revealed that small towns had slightly higher concentration of jobs than bigger cities, which confirmed that they were important local labour markets for municipalities in their microregions. In addition, small towns located in peripheries of the region obtained the highest values of the index (except Garwolin), which led to the conclusion that those category of urban centres concentrated the greatest job resources in microregions.

Our research also showed that apart from the local labour market function, peripheral small towns played a very important role in service delivery for neighbouring municipalities which was in line with findings in other countries (Satterthwaite, Tacoli, 2003; Vaishar, Zapletalová, 2009). The value of service concentration index to population concentration was much higher than in the bigger cities. Notably small county towns obtained higher values of this indicator e.g. in terms of secondary education and supermarkets. In other words, small county towns were important centres of education and trade. This finding is consistent with other studies, which revealed that non-market services, industry and market services dominated the employment structure of small towns (Konecka-Szydłowska et al., 2010; Kwiatek-Sołtys et al., 2014) and that carrying the status of a county town helped certain small towns in their economic progress (Kwiatek-Sołtys, 2005).

Non-market services were mainly developed in peripherally located towns, away from bigger urban centres (Bański, Czapiewski, 2012). This peculiarity results from the socio-economic transformation in Poland since the early 1990s and the related liquidation of jobs in industry in small towns in Mazovia. As a consequence, the importance of employment in public services increased. This raises serious concerns about the future of small towns peripherally located. On the other hand, on the outskirts of Warsaw metropolitan area, there are a few small towns where industry played an important role. In those towns, previously operating large industrial plants were divided into smaller entities due to restructurization (e.g. in Głinojeck, Łochów), or small local businesses succeeded in creation of cooperation networks with industry and construction sectors in Warsaw or in sub-regional centres and county towns (e.g. Tłuszcz, Kosów Lacki, Różan, Łaskarzew, Żelechów, Raciąż).

Mazovia represents a particular case study region with a very strong social and economic impact of the capital city which largely determines the scope and form of influence of smaller towns in its hinterlands. Warsaw distorts or degrades the role that smaller towns could perform with regard to the adjacent areas and their inhabitants. Thus, the importance and functional diversity of smaller towns increase with the growing distance from Warsaw. More distant towns form important nodes delivering local services, as well as they are key centres in terms of trade and administration. These are mainly service town, delivering services to their residents and people from neighbouring villages. The open question remains whether any tools and particular support to small towns in Poland and notably in the Mazovia region shall be elaborated in the coming years. Although regional strategic documents recognize the role of small towns and so do the numerous studies in this field, we still lack any tailor-made support to strengthen the economic potential of small towns which would help them to avoid the trap of becoming 'only' the cores for services of general interests delivery. In the case of small towns in the vicinity of Warsaw, although they will continue taking advantage of additional funding schemes (under EU regional programs) and investments, their linkages with the capital city will be reinforced and their dependence maintained. Probably, this would be one of the side-effects of new development schemes, integrated territorial investments, adopted to address the problems and to strengthen the competitiveness of Warsaw functional urban area in the period 2014 - 2020.

- [1] Bagiński, E. (1998). *Małe miasta w strukturze osiedleńczej Polski*. Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej.
- [2] Bański, J. (2006). *Geografia polskiej wsi*. Warszawa: Polskie Wydawnictwo Ekonomiczne.
- [3] Bański J. & Czapiewski K. (2012). *Policentryczność rozwoju Mazowsza* (pp. 71-88). In: *Mazowsze Studia Regionalne 10*. Warszawa: Mazowieckie Biuro Planowania Regionalnego w Warszawie.
- [4] Bański, J. & Czapiewski, K. (2015). A vision of the polycentric development of the Mazovia region in Poland. *Geografický časopis* 67(4), 301-321.
- [5] CEC (2008). *Green Paper on Territorial Cohesion: turning territorial diversity into strength*, Brussels.
- [6] CEC (2010). *Europe 2020: a strategy for smart, sustainable and inclusive growth*, Brussels.
- [7] Courtney, P., Mayfield, L., Tranter, R., Jones, P. & Errington, A. (2007). Small towns as 'sub-poles' in English rural development: Investigating rural-urban linkages using sub-regional social accounting matrices. *Geoforum*, 38, 1219-1232. DOI: 10.1016/j.geoforum.2007.03.006.
- [8] Czapiewski, K. (2006). Małe miasta w przestrzeni rolniczej i nierolniczej – analiza porównawcza sytuacji społeczno-gospodarczej. *Studia Obszarów Wiejskich* 11, 73-84.
- [9] Dams-Lepiarz, M. (2003). Małe miasta w sieci osadniczej województwa lubelskiego w okresie transformacji ustrojowej w Polsce. *Annales Universitatis Mariae Curie-Skłodowska, Sectio B* 58, 157-172.
- [10] Dematteis, G. (2001). Shifting cities (pp. 113-128). In Minca, C., ed., *Postmodern Geography, Theory and Praxis*. Oxford: Blackwell.
- [11] *ESDP European Spatial Development Perspective* (1999). Brussels: European Commission.
- [12] George, P. (1984). La città Media nella Megalopoli (pp. 143-151). In: Muscarà, C., ed., *Megalopoli Mediterranea*. Milano: Fanco Angeli.
- [13] Heffner, K. (2003). Małe miasta a rozwój obszarów wiejskich. *Biuletyn Komitetu Przestrzennego Zagospodarowania Kraju* 207, 227-246.
- [14] Heffner, K. (2005). *Czynniki rozwoju obszarów wiejskich – rola małych miast* (pp. 299-329). In Rosner, A., ed., *Uwarunkowania i kierunki przemian społeczno-gospodarczych na obszarach wiejskich*. Warszawa: Institute of Rural and Agricultural Development PAN.
- [15] Heffner, K., Marszał, T., eds. (2006). Uwarunkowania rozwoju małych miast. *Biuletyn Komitetu Przestrzennego Zagospodarowania Kraju* 226.
- [16] Hinderink, J. & Titus, M. (2002). Small towns and regional development: Major findings and policy implications from comparative research. *Urban Studies*, 39(3), 379-391. DOI: 10.1080/00420980220112748.
- [17] Hunek, T. (2005). Dywersyfikacja aktywności rolniczej Polski: zarządzanie upadkiem (pp. 57-68). In Zawalińska, K., ed., *Rozwój obszarów wiejskich. Doświadczenia krajów europejskich*, Warszawa: Institute of Rural and Agricultural Development PAN.
- [18] Jażdżewska, I. (2007). Rola małych miast w miejskiej sieci osadniczej *Polski* (pp. 31-46). In Rydz, E., ed., *Podstawy i perspektywy rozwoju małych miast*. Słupsk: Akademia Pomorska w Słupsku.
- [19] Kobjek, E. & Marszał, T. (2014). Local development and the role of small towns in space organisation in contemporary Poland (pp. 37-60). In Marszał, T., ed., *Origin Spatial Development of Contemporary Poland in Łódź University Geographical Research*, Łódź: University Press.

- [20] Konecka-Szydłowska, B., Zuzńska-Żyśko, E., Szmytkie, R. (2010). Role of services in the economies of small towns of Silesia region and Wielkopolskie voivodehip. *Bulletin of Geography Socio-Economic Series* 14(1), 51-62. DOI: 10.2478/v10089-010-0014-1.
- [21] Kulczyńska, K. (2007). Małe miasta województwa lubuskiego – rola i funkcjonowanie (pp. 57-70). In Rydz, E. ed., *Podstawy i perspektywy rozwoju małych miast*. Słupsk: Akademia Pomorska w Słupsku.
- [22] Kwiatek-Sołtys, A. (2005). The role of small district towns in the urban agglomeration system in Poland. *Bulletin of Geography socio-economic series*, 3(4), 135-140.
- [23] Kwiatek-Sołtys, A., Wiedermann, K., Mainet, H. & Edouard, J.-Ch. (2014). The Role of Industry in Satellite Towns of Polish and French Metropolitan Areas – Case Study of Myślenice and Issoire. *Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego* 25, 194-211.
- [24] Lambe, W. (2008). *Small Towns, Big ideas, case studies in small town Community Economic Development*. Chapel Hill: University of North Carolina.
- [25] Lamprecht, M. (2004). Small towns and development of rural areas: the case of the voivodship of Łódź. *European Spatial Research and Policy* 11(2), 41-56.
- [26] Lamprecht, M. & Marszał, T. (2004). Small towns in Central Poland and their role in regional development (pp. 137-151). In Gok, T. & Marszał, T., eds., *Urban and regional development - concepts and experiences*. Warszawa: Committee for Spatial Economy and Regional Planning PAN.
- [27] Mayfield, L., Courtney, P., Tranter, R. & Jones, P., eds. (2005). *The role of small and medium-sized towns in rural development*. [Final report, QLK5-2000-01923 – Marketowns – Deliverable 19]. Villa Real: University of Trás os Montes i Alto Douro.
- [28] *National Spatial Development Concept 2030* (2011). Koncepcja Przestrzennego Zagospodarowania Kraju 2030, uchwała nr 239 Rady Ministrów z dnia 13 grudnia 2011 r.
- [29] *National Strategy for Regional Development 2010 - 2020* (2010). Krajowa Strategia Rozwoju Regionalnego 2010 - 2020: Regiony, Miasta, Obszary Wiejskie, uchwała Rady Ministrów z dn. 13 lipca 2010 r.
- [30] *National Urban Strategy 2023* (2011). Krajowa Polityka Miejska 2023, Ministerstwo Rozwoju, Warszawa, uchwała Rady Ministrów 20.10.2015.
- [31] Nytko-Woloszczuk, B. (2005). The standards of living in small towns of Opole Province in the light of particular indexes. *Bulletin of Geography Socio-Economic Series* 3(4), 141-152.
- [32] Oberti, M. (1997). Structures sociales comparées des villes moyennes (pp. 7-43), In Bagnasco, A. & Le Galès, P., ed., *Villes en Europe*. Paris: La Découverte.
- [33] Pałka, E., ed. (2005). *Funkcje obszarów wiejskich*. Kielce: Wydawnictwo Akademii Świętokrzyskiej.
- [34] *Regional Operational Programme for the Mazovia Region 2007 - 2013*, Regionalny Program Operacyjny Województwa Mazowieckiego 2007 - 2013, 2007 (changed in 2011) Regionalny Program Operacyjny Województwa Mazowieckiego 2007 - 2013, Urząd Marszałkowski Województwa Mazowieckiego, Warszawa.
- [35] *Regional Operational Programme for the Mazovia Region 2014 - 2020*, Regionalny Program Operacyjny Województwa Mazowieckiego 2014 - 2020, 2014, Regionalny Program Operacyjny Województwa Mazowieckiego 2014 - 2020, Urząd Marszałkowski Województwa Mazowieckiego, Warszawa.
- [36] Santamaria, F. (2000). La notion de "ville moyenne" en France, en Espagne et au Royaume-Uni. *Annales de Géographie*, n° 613, 227-239.
- [37] Satterthwaite, D. & Tacoli, C. (2003). *The urban part of rural development: the role of small and intermediate urban centres in rural and regional development and poverty reduction* [working papers]. London. International Institute for Environment and Development.

- [38] Servillo, L., ed., (2014). *TOWN, small and medium sized towns in their functional territorial context* [Scientific Report]. Luxembourg: ESPON.
- [39] Shucksmith, M., Thompson, K. J. & Roberts, D. (2005). *The CAP and the Regions: the territorial impact of the Common Agricultural Policy*. Wallingford: CABI Publishing.
- [40] *Strategy for the Development of the Mazovia Voivodeship until 2020* (2006). Strategia Rozwoju Województwa Mazowieckiego do roku 2020, Uchwała nr 78/06 Sejmiku Województwa, 29.05.2006.
- [41] *Strategy for the Development of the Mazovia Voivodeship until 2030*, 2013, Strategia Rozwoju Województwa Mazowieckiego do 2030 roku Innowacyjne Mazowsze, Uchwała nr 158/13 Sejmiku Województwa Mazowieckiego, 28.10.2013.
- [42] Śleszyński, P., Czapiewski, K., Komornicki, T., Stępnik, M., Świątek, D., Węclawowicz, G., Deręgowska, A., Janc, K., Jaworska, B., Rosik, P., Siłka, P. & Wiśniewski, R. (2012). *Spoleczno-demograficzne uwarunkowania rozwoju Mazowsza*. Warszawa: Mazowieckie Biuro Planowania Regionalnego,
- [43] Tacoli, C. (1998). Urban–rural interactions: A guide to the literature. *Environment and Urbanization* 10(1), 147-166. DOI: 10.1177/095624789801000105.
- [44] *Territorial Agenda of the European Union 2020: Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions* (2011). EU.
- [45] Vaishar, A. & Zapletalová, J. (2009). Small Towns as Centres of Rural Micro-Regions, *European Countryside*, 1(2), 70-81. DOI: 10.2478/v10091-009-0006-4.
- [46] Vaishar, A., Šťastná, M. & Stonawská, K. (2015). Small Towns – Engines of Rural Development in the South-Moravian Region (Czechia): an Analysis of the Demographic Development, *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 63(4), 1395-1405. DOI: 10.11118/actaun201563041395.
- [47] Zborowski, A., Soja, M. & Łobodzińska, A. (2012). Population trends in Polish cities – stagnation, depopulation or shrinkage? *Prace Geograficzne*, 130, 7-28. DOI: 10.4467/20833113PG.12.017.0658.