

## ON CITY-REGION RELATIONS. TOWARDS THE URBAN-RURAL REGION OF WARSAW

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with 8 figures and 1 table in the text

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### *Zusammenfassung*

*Über Beziehungen zwischen Stadt und Region. Auf dem Weg zu einer städtisch-ländlichen Region von Warschau*

*Seit 1989 hat Warschau [Warszawa] einen beträchtlichen Funktionswandel erlebt, der von einer Modernisierung seines physischen Gefüges begleitet war. Dennoch gibt es einige Faktoren, welche die künftige Entwicklung der Stadt beeinträchtigen könnten. Unter ihnen erscheint die weiterhin bestehende soziale und ökonomische Ungleichheit zwischen der Stadt und der sie umgebenden Region als der bedeutendste. Dieses Problem wurde in strategischen Dokumenten zur Raumordnung angesprochen, zumeist auf zwei Arten: Eine zielt auf ein Übergreifen wirtschaftlicher Aktivitäten in die peri-urbane Zone ab, verbunden mit einer Vergrößerung des städtischen Arbeitsmarktes durch Investitionen in die Verkehrsinfrastruktur. Der andere Ansatz ist die Förderung funktionaler Polyzentrität*

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auf regionaler Ebene, indem besonders die sogenannten subregionalen Zentren entwickelt werden – etliche Mittelstädte im Umkreis von etwa 100 bis 120 Kilometern von Warschau –, mit dem Ziel, interurbane, intraregionale Verbindungen zu stärken.

Dieser Beitrag zeigt einige Grenzen dieser Ansätze auf und skizziert einen alternativen Weg, die Stadt-Regions-Beziehungen zu entwickeln – einen Weg, der auf dem Konzept der städtisch-ländlichen Region beruht. Dieses Konzept betont die Bedeutung von Umweltqualität als Attraktionsfaktor von peripher gelegenen kleineren städtischen und ländlichen Orten für Migranten und wirtschaftliche Aktivitäten einschließlich wissensintensiver Funktionen. Im Falle der Warschauer Region mit ihrem großen, viele Annehmlichkeiten bietenden ländlichen Raum erscheint eine solche Entwicklungsperspektive als besonders relevant. Vor diesem Hintergrund präsentiert und interpretiert der Beitrag einige Ergebnisse eines Forschungsprojekts, das von der Autorin durchgeführt wurde und das auf die Entwicklung kulturell-kognitiver Funktionen in ausgewählten Klein- und Mittelstädten ausgerichtet war.

Schlagwörter: Warschau, Metropolregion, städtisch-ländliche Region, kulturell-kognitive Funktionen

## Summary

Since 1989 Warsaw [Warszawa] has been marked by considerable functional change, accompanied by modernisation of its physical tissue. Yet, there are some factors that can retard Warsaw's future development. Among them, the most important appears to be the persisting social and economic disparities between the city and its surrounding region. This problem is discerned in strategic spatial policy documents and tends to be addressed in two ways: One of these aims at the generation of spill-over of economic activity towards the peri-urban zone and an enlargement of the city labour market via investment in transportation infrastructure. Another approach is to promote functional polycentricity at the regional level by focusing on the development of the so-called sub-regional centres – several medium-sized cities situated within the radius of ca. 100–120 kilometres from Warsaw, with the goal of strengthening interurban, intra-regional linkages.

In this paper some limitations of the above-mentioned approaches are exposed, and an alternative path for the evolution of the city-region relations is outlined, based on the concept of the urban-rural region. This concept emphasises the importance of environmental assets as factors in attracting migrants and economic activities including knowledge-intensive functions to peripherally situated, smaller urban and rural places. In the case of the Region of Warsaw with its extensive, amenity-rich rural countryside, such a development perspective may seem especially relevant. Against this background, in the paper some results are presented and interpreted that are derived from a research project conducted by the author focusing on the development of cultural-cognitive functions in selected small and medium-size towns in the Region.

Keywords: Warsaw, metropolitan region, urban-rural region, cultural-cognitive functions

## 1 Introduction

Over the last decades, the city of Warsaw [Warszawa] has become a scene of rapid physical as well as functional change. While maintaining its leading position within Poland's urban system in the domain of public administration and high-ranking services, it has succeeded to attract new specialised functions including the financial sector, business control, scientific research, as well as other knowledge-based activities. The city is generally regarded as the main carrier of systemic transformation and development processes at the national level and its position among major European cities has gradually improved over time (ESPON 1.1.1 2004; NORDEA METROX 2008; ŚLESZYŃSKI 2008; KORCELLI-OLEJNICZAK 2012a; DERUDDER et al. 2012).

Still, some doubts may arise concerning the sustainability of the observed development trends. The Mazovian Voivodship [województwo mazowieckie], the region of Warsaw, features deep socio-economic disparities between the core, i.e. the Warsaw metropolitan area (which accounts for 60% – 1.7 million in the city and 1.5 million in the metropolitan ring – of the in total 5.3 million inhabitants), and the rest of the territory. The Mazovian Voivodship with a GDP per capita exceeding by 50% the national average<sup>1)</sup> is characterised by the highest polarisation among Poland's 16 administrative regions. While new investment tends to be concentrated within the city and the metropolitan ring (MENDEL 2013), the peripherally situated rural municipalities are among the least developed nationally. It can be assumed that the structural weakness of the surrounding region has a negative impact upon Warsaw's overall performance and is one of the factors, which may in the future constitute a barrier to its sustained development.

The main strategic documents of the Mazovian Voivodship (MAZOWIECKIE BIURO PLANOWANIA REGIONALNEGO 2006, 2013) regard territorial cohesion as one of the key goals of spatial policy in the Region. At the same time, in the diagnostic sections they point to significant intra-regional disparities which are regarded as a barrier to future socio-economic development. These disparities are reflected and supported by continuing migratory outflow from non-metropolitan areas. As the above-mentioned documents claim, a reconciliation between the two to some extent contradictory goals of competitiveness and territorial cohesion can become realistically achieved via economic activation of the Region's periphery, and the development of sub-regional centres. It is also postulated that conditions are to be created, mainly in the form of infrastructural investment that would allow for a spatial extension of Warsaw's labour market, i.e. the growth of its immediate functional area. These two objectives are later in the paper referred to as policy scenarios 1 and 2 – “centralised deconcentration” and “metropolitan area extension”, respectively.

It is argued here that the above policy directions are difficult to be implemented. At the same time it is pointed out that Scenario 3 – polarisation, implying a continuation of prevailing trends, would lead to an intensification of backwash effects in the Region's intermediate zone, one extending beyond the metropolitan area – a decline or loss of economic and social functions performed by local urban centres. It is claimed that the policy

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<sup>1)</sup> Between 2003 and 2012 this difference increased from 152.3 to 163.3% (see KOZAK 2014).

directions proposed can either prove to be unrealistic, mutually excluding, or largely unprofitable for the Region as a whole.

While discussing development directions of the Warsaw Metropolitan Region, an alternative scenario is presented – one based on the concept of the urban-rural region which is believed to reconcile the needs of both the region's core and its hinterlands, while at the same time avoiding a peri-urbanisation of the region's intermediate zone. It is hypothesised that this concept offers a more adequate framework both from the analytical and policy perspective. It allows for attributing a major role to the use of local, endogenous assets and also formulates preconditions for the development of intra-regional linkages.

Based on results of the research project granted by the Polish National Science Centre<sup>2)</sup>, some evidence is provided for the existence of endogenous assets embedded in the Region's extended hinterland related to population, activities and natural environment and of conditions suited for the development of the metropolitan region of a urban-rural type. With reference to the assumption that the shift towards a knowledge-based economy brings about dramatic changes both in the economic landscape (SCOTT 2012) and in the evolution of city-region relations, the focus is put on the development of cultural-cognitive functions in selected small and medium-sized towns in the Region of Warsaw.

The analysis presented aims to demonstrate that there exists an alternative to the policy goals proposed in the regional development strategies as well as to those development directions that are identified as most probable according to trends observed. The alternative, which goes back to the classical concept of the metropolitan region (GRASS 1922; MCKENZIE 1933; DICKINSON 1934), as opposed to the idea of metropolitan areas, finds its source in contemporary discussions over urban-rural partnership which is postulated in the European Union's (EU) strategic policy documents (ESDP 1999; EUROPEAN COMMISSION 2007; EUROPEAN COMMISSION 2010). Direct theoretical background for the hypothesis discussed derives from the author's study on the integrated and dynamic concept of the metropolitan region (KORCELLI-OLEJNICZAK 2012) as well as from research carried out within the EU 6<sup>th</sup> Framework Programme PLUREL pertaining to peri-urbanisation processes and the development of urban-rural regions.

The paper consists of six sections. In section two, following the introduction, development trends and spatial policy directions, as proposed for the Region of Warsaw, are confronted with some basic dimensions of metropolisation processes and, more specifically, evaluated against a conceptual typology of metropolitan regions. Section three introduces the concept of the urban-rural region focusing on those aspects that are relevant to the present study. This leads in section four to the identification of factors and preconditions, which seem to make this concept particularly applicable in the context of the debate on the future development of the Warsaw Region. In section five, the previous discussion is illustrated by examining functional profiles of selected small and medium-sized towns in the Region and the way these profiles change over time. The final section presents concluding remarks which include suggested policy directions.

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<sup>2)</sup> NCN Project No. N N306 057340; research conducted in the period 2011-06-13 – 2015-06-12, entitled "The development of the system of cities of the Warsaw Metropolitan Region in the light of population and functional change".

## 2 Metropolis and the rest: Development prospects and scenarios for the Warsaw Region

While the major part of contemporary research on metropolisation processes relates to functional change and social structure of cities as well as to the development of metropolitan areas, regional effects of these processes have over the last decades remained less highlighted and analysed. Some attempts, however, at a 'regional turn' have been made, for example, the so-called 'new regionalism' (TOMANEY & WARD 2000) or the reassessment of notions and measures of polycentricity with respect to settlement structures (BURGER & MEIJERS 2012). They also include the new understanding of functional relations between urban and rural areas (BENGS 2005) according to which it is the urban region (or the metropolitan region) that represents an adequate scale of reference for both research and spatial policy.

In the case of Poland, the focus on the metropolitan region is especially important due to the existing city-region disparities in socio-economic development (GORZELAK & SMĘTKOWSKI 2005; DOMAŃSKI 2010) as well as persisting inter-regional inequalities between metropolitan and non-metropolitan regions (HEFFNER 2012). The German concept of European Metropolitan Regions (ARING 2009), in the light of which the national territory can be practically fully covered by metropolitan regions (consisting of metropolitan areas and their extended hinterland zones), promotes the idea of 'decentralised concentration', thus attempting to reconcile the spatial policy goals of competitiveness and territorial cohesion. According to this concept, the highly specialised metropolitan functions can be shared between the main urban centre and smaller, regional nodes, while economic spread effects tend to contribute to the development of the wide regional hinterland. Such extended metropolitan regions may be regarded as engines of growth, competitive on a national and international level, while cohesive on a regional scale.

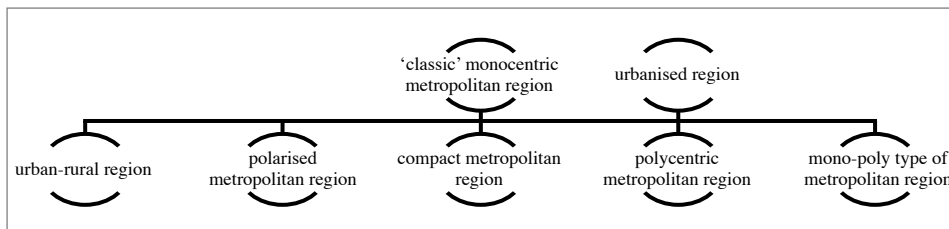
In the Polish National Spatial Development Concept 2030 (MINISTERSTWO ROZWOJU REGIONALNEGO 2011) emphasis is put on the major urban centres (their functional urban areas) as basic components of national settlement structure – their connectivity and mutual functional linkages, i.e. the city networks. At the same time, the role of metropolitan regions in sustaining territorial cohesion is not sufficiently emphasised.

### 2.1 Typology of metropolitan regions

In the present situation, characterised by spatial socio-economic polarisation trends, policies aiming at an improvement of territorial cohesion at the national and regional level need to follow two parallel directions (see KORCELLI-OLEJNICZAK 2012b). Firstly, an intensification of interaction within the network of large urban centres should be supported, so as to allow for some deconcentration of high-ranking, metropolitan functions from Warsaw to other major cities. This is generally in accord with one among the strategic goals as indicated in the National Spatial Development Concept. Parallel to this, however, policies aiming at the development of a new model of city-region interaction should be introduced, in accordance with the criteria of interdependence, as formulated in some contemporary concepts referring to the development of metropolitan regions.

A typology of such conceptual approaches, elaborated in an earlier study (KORCELLI-OLEJNICZAK 2013a), is presented below (Fig. 1). The scheme includes two basic types of metropolitan regions: The ‘classic’ monocentric metropolitan region, characterised by a centralised pattern of internal linkages with the dominance of the core area, the metropolis and the urbanised region (see BOUDEVILLE 1978) with its distributed functional specialisation, non-hierarchical pattern of internal linkages and spatial diffusion of social and economic activities. The so-called derivative types of the metropolitan region, i.e. theoretical (generalised) expressions of ‘real-world’ regions, are the following:

- a. The **polarised region** with a strong dominance of the core and backwash effects in the hinterland, in the course of which a notable share of its valuable resources including human capital and specialised functions are taken over by the metropolis. Such processes result in growing internal disparities, the weakening position of subregional centres and an enlargement of the metropolitan shadow zone.
- b. The **polycentric metropolitan region**, a contemporary form of the urbanised region, once introduced by J.-R. BOUDEVILLE and analysed by K. DZIEWOŃSKI (1990), a structure which has in numerous cases developed on the basis of industrial conurbations in the process of their spatial and functional change. A polycentric region may be bi- or multi-centred, with functional linkages developed between its major urban nodes. In some cases, a polycentric region consists of two or more smaller metropolitan regions (and is then referred to as the *polycentric mega-city region*; see HALL & PAIN 2009).
- c. The **mono-poly type of metropolitan region**, an intermediate form between the polarised and the polycentric region with an articulated division of functions between individual urban centres. A metropolitan region of the mono-poly type has a main city-core area and relatively well-developed, functionally specialised subdominant centres.
- d. The **compact metropolitan region** – an extended metropolitan area, characterised by deconcentration of functions encompassing cities and other areas situated beyond the daily commuting zone of the main city which generate mutually overlapping, local interaction systems linking the smaller centres to the metropolitan core.
- e. The **urban-rural region**, where functional complementarity between its constituent parts – the core, the intermediate zone and the rural hinterland – is focused upon, and where development of the peri-urban zone extending beyond the metropolitan ring reflects the progressing fusion between urban and rural spaces.



Source: KORCELLI-OLEJNICZAK 2013a

Fig. 1: Types of metropolitan regions

## 2.2 Three development scenarios?

As mentioned above, analyses of socio-economic development in the Warsaw Region suggest a continuation of observed spatial polarisation trends in the future. At the same time, according to the strategic policy documents (MAZOWIECKIE BIURO PLANOWANIA REGIONALNEGO 2006, 2014), the overall performance of the Region should be enhanced by implementing a wide spectrum of cohesion-oriented policy measures. Such measures would aim at the economic activation of peripheral zones as well as the strengthening of functions and up-grading the built-up environment of selected medium-sized cities – the sub-regional centres. In the related policy-oriented studies, the role of infrastructural investment is also emphasised which, as a result of the improved spatial accessibility, might bring about an extension of the Warsaw labour market toward the intermediate zone (extending beyond the metropolitan area), the latter suffering from out-migration and a low level of economic activity. These spatial policy directions and their possible outcomes are portrayed below in the form of alternative development scenarios. They are also confronted with possible consequences of observed present-day patterns of spatial development in the Region.

**Scenario 1**, here referred to as **centralised deconcentration**, reflects the general outlook represented in regional policy documents. According to this approach, the postulated policy direction allows for the functional specialisation of sub-regional centres within the region and also strengthens the core area. This would imply the development of a mono-poly type of the region characterised by internal integration with a pronounced dominance of the main urban node and a subordinate, but still important role to be played by sub-regional centres performing less-specialised functions. The basis for the development of such a territorial system would consist of economically viable and demographically stable medium-sized cities, functionally linked with the region's core, but also mutually networked and organising their immediate hinterland zones.

As indicated earlier, the underlying assumptions, as used in this scenario, i.e., the strong position to be achieved by the sub-regional centres as well as their functional interdependence can be questioned in the light of recent empirical evidence (KOMORNICKI et al. 2012). The study referred to points at the weak, fragmented economic base of the Region's cities of sub-regional rank as well as to a lack of interaction among these urban centres. In fact, in line with the National Strategy of Regional Development (MINISTERSTWO ROZWOJU REGIONALNEGO 2009), the Region's recent strategy identifies three problem areas which are specifically focused on the sub-regional centres and their surrounding zones (the Ostrołęka-Siedlce area, the Płock-Ciechanów area and the Radom area), while formulating one of the targets for the policy support as "a restructuring and revitalisation of cities and other areas experiencing a loss of their socio-economic functions" (MAZOWIECKIE BIURO PLANOWANIA REGIONALNEGO 2014, p. 23). These functional deficiencies seem to prove that the development goals as specified in the policy scenario discussed should be considered as unrealistic to be achieved in the foreseeable future, i.e., in the mid-term perspective.

**Scenario 2**, here referred to as **metropolitan area extension**, which is often called upon in policy-related studies concerning functional relations between Warsaw and the Region, anticipates its evolution towards a form here referred to as compact metropolitan

region. New investment, first of all in transportation infrastructure, would generate an increased spatial population mobility in the Region and result in an extension of the field of daily commuting to Warsaw – for work, education, leisure, and other services. This direction of change, while generally advantageous for the Region’s core, would quite likely contribute to backwash effects in the outer parts of the metropolitan area as well as in the more distant, intermediate zone of the Region. This might be expressed, e.g., in a decline of selected service functions (banking, insurance, etc.) in smaller towns situated in the metropolitan ring.

**Scenario 3**, of **socio-economic polarisation**, represents the direction of change that derives from observations of the current operation of market mechanisms and processes, which show a growing city-region divide. The polarised type of the metropolitan region, which is revealed by the trend’s extrapolation, is characterised by an increasing concentration of high-ranking functions in the Region’s core, i.e. the city and the metropolitan area of Warsaw, and a faltering of intraregional interactions, those linking the core, the intermediate zone and the wider, rural hinterland. Similarly to Scenario 2, the trend-based scenario may be considered as a threat to a sustainable, integrated and cohesive development of the Region bringing about growing disparities between the metropolitan and non-metropolitan areas, the latter not being able to profit from otherwise possible spread effects, i.e. the diffusion of economic activities originating from the core (DOMAŃSKI 2010). Following this model, also the city of Warsaw would in the long-term perspective be negatively affected by failing to benefit from functional ties with the wider regional hinterland.

Against the scenarios presented, a question should be posed, whether an alternative development direction might be feasible that could address the development needs and utilise the resources of both the Region’s core, its intermediate zone with small and medium-sized urban places as well as the wider, predominantly rural hinterland. As noted earlier in the paper, such a direction for the evolution of the Region of Warsaw can be sought by referring to the concept of the urban-rural region.

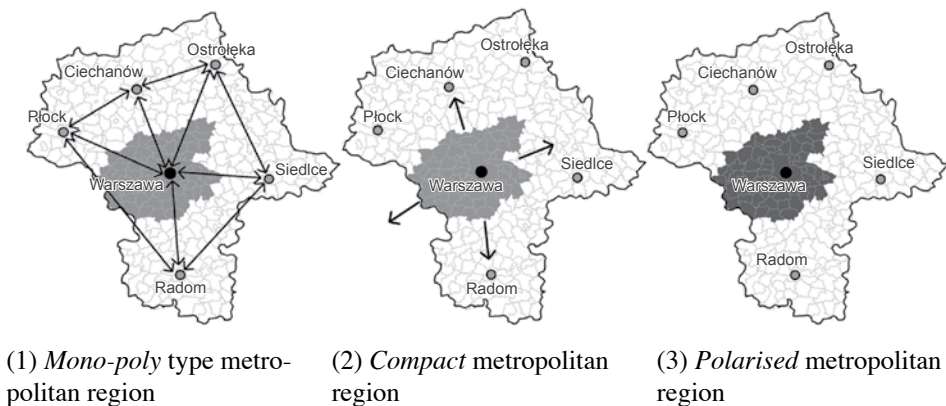


Fig. 2: Expected and proposed development scenarios for the Warsaw Metropolitan Region (author’s elaboration)



### 3 The concept of the urban-rural region

The concept of the urban-rural region builds upon discussions underlying the elaboration of the European Spatial Development Perspective (ESDP 1999), which referred to the idea of urban-rural partnership as a way of supporting co-operation and functional complementarity between urban and rural areas at both a national and a regional level. Such a direction allows to reconcile the two seemingly contradictory spatial policy objectives of competitiveness and cohesion, the latter in both its territorial and social dimension. The significance of urban-rural relations was also raised in the Territorial Agenda of the EU (EUROPEAN COMMISSION 2007) and in the EU2020 Strategy (EUROPEAN COMMISSION 2010). Some attempts aimed at the implementation of the basic rules of policy focused on urban-rural partnership that have been made in the case of metropolitan regions in Germany, where the core area, the metropolitan city and its functional area, together with the extended hinterland constitute the space of mutual responsibility (BLOTEVOGEL 2010).

Urban-rural relations at the regional level have found reference in numerous concepts within the classical spatial economic theory. Both W. CHRISTALLER'S (1933) market areas with their urban places and non-urbanised territory and H. VON THÜNEN'S (1826) model of agricultural land use can be considered as archetypes of the contemporary urban-rural regions. Also in more recent concepts, such as the *daily urban systems* (BERRY 1973) and the *functional urban regions* (HALL 1973), some assumptions pertaining to urban-rural relations can be found. A real prototype of the urban-rural region was presented by FRIEDMANN & MILLER (1965) in their concept of the urban field which anticipated the merging of urban and rural space in the course of integration of metropolitan and non- or inter-metropolitan areas.

One of the aspects, often pointed to in the discussions on urban-rural relations, is the contradiction of policy objectives and differences in development level between urban and rural areas. There is some evidence, however, that the development goals for city and region can be merged and disparities between these areas reduced. This is due to the shortening of civilisation and economic distance along the urban-rural continuum, the observed blurring of functional distinction between urban and rural areas (ESPON 2004; BENGS 2005), formation of peri-urban zones, the *Zwischenstadt* phenomenon (SIEVERTS 1998), 'decentralised concentration' of population and functions.

The above trends result from general, inter-connected processes registered in developed countries, in Europe in particular. An increasing importance of migration to rural areas and small urban places, which is motivated by environmental values is related to the process of population aging, the development of the knowledge society as evidenced by the growing significance of creative activities including those in the cultural-cognitive sector, which is especially sensitive to environmental quality. In addition to this, the development of advanced technology and the growing perception of the importance of ecosystems services performed by rural areas considerably contribute to their attractiveness. The emergence of strong local elites, the so-called new spaces of consumption and, as a consequence, the gentrification of rural areas (LEBER & KUNZMANN 2006) are phenomena observed and documented in regions often regarded as lagging in socio-economic terms. At the same time, it is recognised that a metropolis which is not surrounded by attractive

landscape zones can offer only limited life quality (KUJATH & STEIN 2009). Empirical results, however, show that the attracting power of natural amenities is only then effective, when other, including demographic, economic as well as spatial accessibility factors are met. Hence, natural amenities appear to be only a catalyst, a contextual factor that fosters gentrification processes within rural areas (CHI & MARCOULLAR 2009).

Spatial structure of urban-rural regions may be conceptualised as consisting of three basic, functionally interdependent components or subsystems, i.e. urban, rural and peri-urban areas (NILSSON et al. 2013), the latter characterised by multi-functionality and a rapid transition of land-use patterns. The position of rural areas within the regions is defined by their role as both the providers of ecosystems services as well as places of ex-urban residence and spaces for the location of those economic activities, for which environmental assets constitute a major attracting factor. The urban-rural regions evolve along with economic and demographic change and the related alteration of social values. They also vary in space depending upon the character of natural environment as well as on the intensity and morphology of urban and rural settlement. In spatial policy terms (PIORR, RAVETZ & TOSICS 2011; KORCELLI et al. 2012) urban-rural regions are interpreted as multi-territorial, functional aggregates, making it feasible to account for important links and interdependencies that tend to be by-passed in urban and regional development strategies. With their boundaries adjustable to the policy agenda, such units may be especially suitable for the indication of cross-sectoral policy issues and for the co-ordination and implementation of cohesion-oriented place-based policies.

#### **4 Towards the urban-rural Region of Warsaw**

As discussed above, the concept of the urban-rural region reflects present-day trends and aspirations, increasingly popular in developed countries, concerning lifestyle, life quality, and, more and more frequently, work conditions; all of these exhibiting ecological, i.e. environmental connotations. Indirectly, the development of urban-rural regions in their contemporary forms is related to such processes as demographic change, the growing role of meritocracy and welfare, the rise of the creative class and of a knowledge-based economy.

When referring to the Metropolitan Region of Warsaw, it is necessary to notice that in most studies and policy documents its extent is defined by the boundaries of the respective administrative region, i.e. the Mazovian Voivodship. It is observed, however, that with respect to certain activities at least, the functional range of the Warsaw Region extends de facto into the territory, which formally belongs to adjacent territorial units. The use of the concept of the rural-urban region with its assumption of flexible regional delineation criteria appears to be particularly suitable in this regard. This also applies to its other features including spatial and functional structure as well endogenous assets (Table 1).

The urban-rural Region of Warsaw, here presented as a prospective, hypothetical construct (see also KORCELLI-OLEJNICZAK 2013b), includes, in addition to the Mazovian Voivodship, a belt of the Warmian-Mazurian Voivodship [województwo warmińsko-mazurskie] in the north, together with a smaller part of the Podlaskie Voivodship [województwo

Contemporary features of the Region	Spatial and functional structure	Endogenous assets
limited development potential of sub-regional centres; incomplete functional structure; underdevelopment of technical infrastructure; at the national scale – a peripheral location of urban centres; a weakening of human capital due to out-migration.	There is evidence for the existence of a three-zone structure of the Region: (1) the core, with a metropolitan shadow at its edge, characterised by backwash effects; (2) the intermediate zone with sub-regional centres; (3) the peripheral zone – rural hinterland where the backwash effects are weaker, and the relations with the core less intense.	unique environmental assets when including considerable parts of the Masurian Lake District [Pojezierze Mazurskie]; local urban centres which identify their development in the relationship with Warsaw and their immediate surroundings rather than with the nearest urban centre of regional or sub-regional level; the ambition to participate in the global economic circulation, specifically with respect to culture and recreation.

Source: Own elaboration

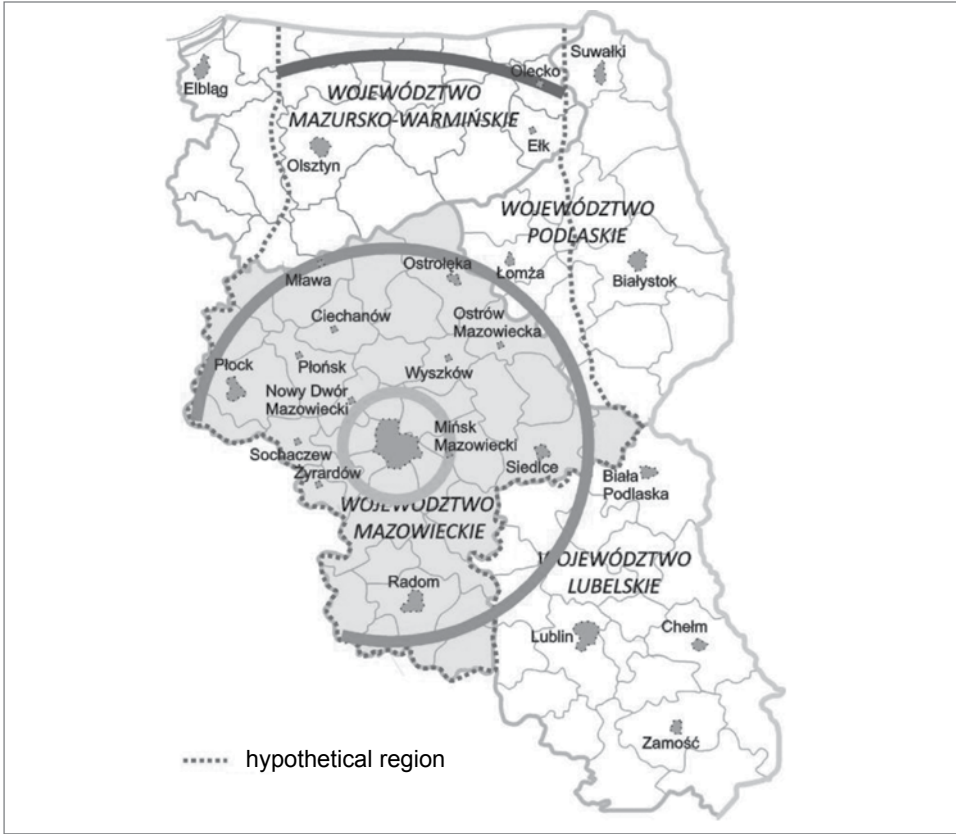
Tab. 1: Preconditions and development potential of the Warsaw Metropolitan Region

two podlaskie] in the east. Hence, it includes the major part of the Mazurian Lake District [pojezierze mazurskie] which constitutes the prime recreational, tourist as well as (even though mainly on a seasonal basis) residential hinterland – an extra-urban zone for the city of Warsaw. This generates numerous kinds of its other functional linkages with the city.

When identified for the purpose of the study, the Region encompasses the core area, consisting of the city and the metropolitan area of Warsaw with its two sub-zones – the suburban and the peri-urban areas (the latter also referred to as outer or external metropolitan ring), the intermediate zone with the sub-regional urban centres of Radom, Płock, Siedlce, Ostrołęka and Ciechanów and the (predominantly) rural hinterland zone, where, within the local urban network, two cities – Ełk and Łomża –, which in policy studies and documents are identified as centres of sub-regional rank, are situated (see Fig. 3).

Two categories of urban places can be distinguished among the 16 towns selected for the purpose of the study. Among them, there are seven sub-regional centres with population sizes of 45,000 (Ciechanów) to 223,000 (Radom) and nine smaller, local centres with 22,000 (Olecko) to 42,000 (Żyrardów) inhabitants. Their accessibility to Warsaw, measured by road distance, ranges from less than 50 to above 250 km, whereas the inner zone of the Region, i.e. the metropolitan area, is contained within the radius of approximately 50 and the intermediate zone up to 120 km from the city centre.

Taking as the point of departure the general concept of the metropolitan region (KORCELLI-OLEJNICZAK 2012b), it was assumed that an important aspect of such a spatial-functional structure is represented by creativity and innovativeness of functions performed by urban places. Therefore, this sector requires particular attention in the present context. While there is a general tendency for such activities to cluster in the region's core areas (STRYJAKIEWICZ 2010), in the case of urban-rural regions, however, one may expect some

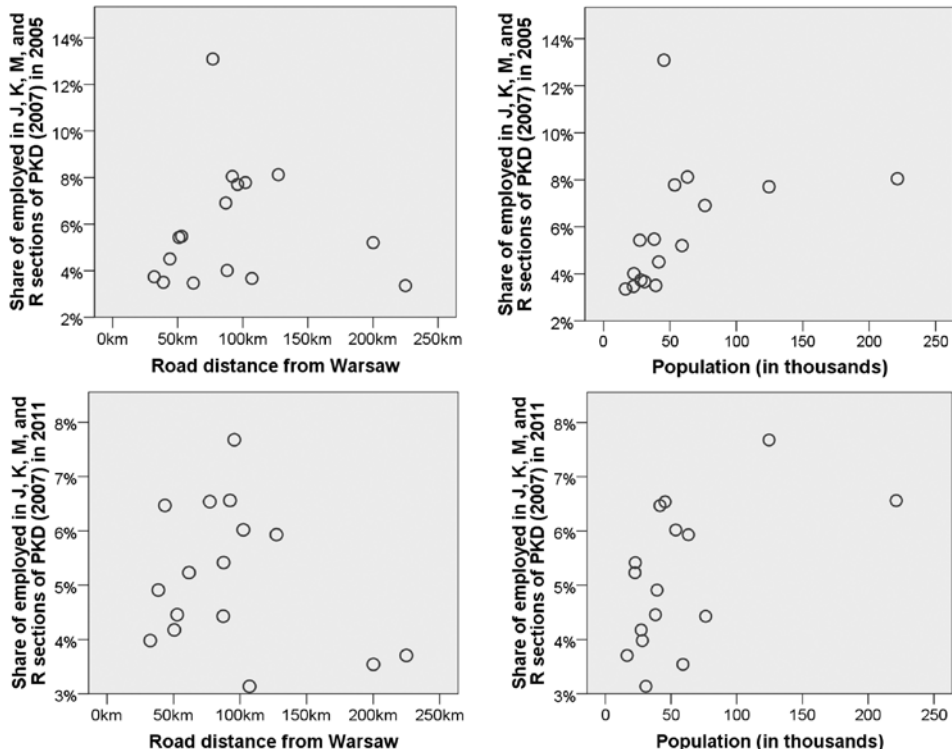


Source: Own elaboration – KORCELLI-OLEJNICZAK 2012b

Fig. 3: The urban-rural Region of Warsaw – a hypothesis with circular lines denoting the range of constituent zones

evidence for their diffusion towards or a locally stimulated growth in other areas including peripheral zones of the regions. Herewith, questions are posed pertaining to the place of creative activities in the functional structure of selected, small and medium-sized towns in the Warsaw Region. The analysis of interdependence between the role of cultural-cognitive activities in the functional profiles of urban places, their size, road distance from Warsaw (Fig. 4) and educational composition of population may allow for drawing some inference concerning the spatial structure of the Region.

Among factors that have shaped urbanisation patterns in the Warsaw Region over the last decades are: a shrinking economic base of a number of small and medium-sized towns as an effect of the decline of traditional industrial functions; a restructuring of commercial functions; and the territorial-administrative reform of 1999 in Poland which introduced (in fact re-established) poviats [powiat] (NUTS-4 units) as an intermediate level of local government and reduced the number of voivodships [województwo] from 49 to 16. It



Source: Own elaboration

Fig. 4: Correlation between the share of persons employed in cultural-cognitive activities and road distance from Warsaw as well as size of the town in 2005 and 2011

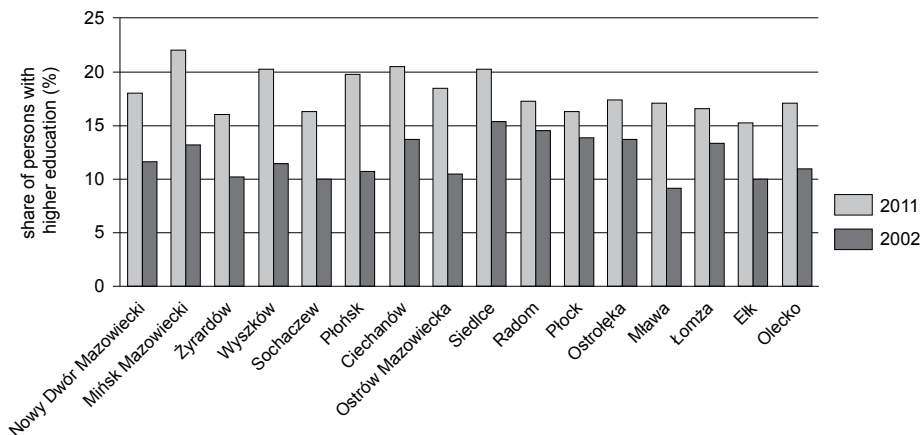
can be found that in the case of some urban places the declining functions are gradually replaced by new activities, whereas special significance is related to the development of functions included in the so-called cultural-cognitive sector. It may be assumed that the performance and the range of these functions depend both on the endogenous potential of the particular urban centre and its immediate surroundings as well as on its location in the Region of Warsaw. In other words, it is expected that there is a spatial dimension related to the process of functional restructuring, namely the geographical situation of individual urban centres within the Region.

The 16 urban places selected were examined with respect to the share of cultural-cognitive activities in their functional structure (share in the total employment) in firms and institutions with nine and more employees in the years 2005, 2008, 2009 and 2011. These activities were assumed to consist of the following European Classification of Activities sections: information and communication (J), financial and insurance activities (K), professional, scientific and technical activities (M), arts, entertainment and recreation (R). This was supported by an analysis of basic demographic trends including age and educational structure.

Since a large share of firms in the Region employs less than nine persons, the above analysis was complemented by a questionnaire survey covering 350 small and micro-firms, active in eight cultural and cognitive branches of the economy including publishing, computer programming, financial, legal and accounting services, architectural and engineering activities, advertising and market research, libraries. In the third phase of the analysis 30 in-depth interviews with local experts and representatives of cultural and cognitive professions were carried out in three out of the 16 towns studied, one per each respective zone of the Region.

Regarding the share in total employment of cultural-cognitive activities, among variables that differentiate the set of towns under analysis are: Population size, distance from Warsaw and the location of the former voivodship centre. The results confirm SCOTT's (2012) thesis according to which the distribution of cultural-cognitive activities tends to comply with urban size hierarchy: A decrease of the former voivodship centres' share between 2005 and 2011 can be noticed reflecting a diminishing role of those towns in a broader territorial scale.

At the same time, the former voivodship centres, which featured overproportioned shares of persons with higher education, experienced a lower increase compared to smaller urban places (Fig. 5). This may confirm the criticism expressed earlier in the paper of the suitability of assumptions underlying the policy scenario of centralised deconcentration (see Section 2.2). In general, one can point to a congruence of change in the employment share discussed and the education indicators, as those towns which feature higher than average increases in shares of persons with higher education were also characterised by a growth or lower than average decrease in the share of the cultural-cognitive sector in total employment.

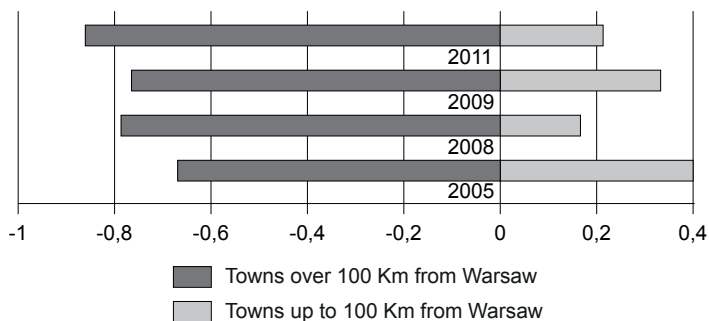


Source: Own elaboration based on data from national censuses 2002 and 2011

Fig. 5: Share of persons with higher education in 2002 and 2011

The analyses conducted indicate that the interdependence between the share in total employment of cultural-cognitive activities and the town's distance from Warsaw, expressed

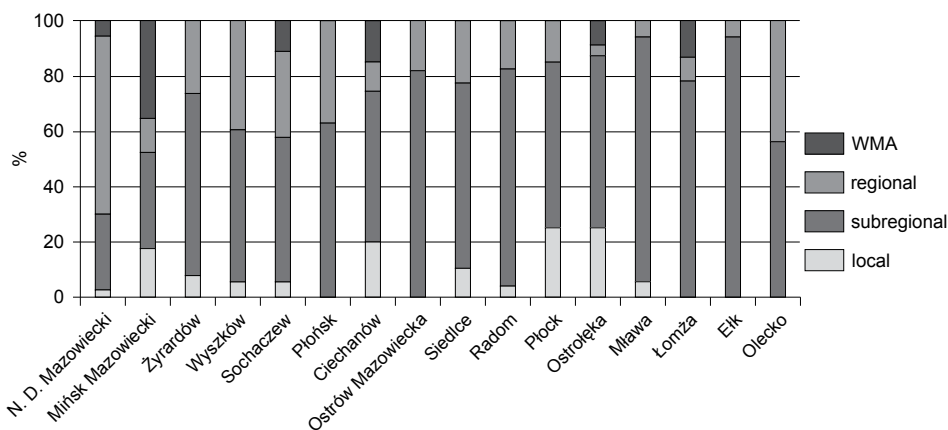
by rank correlation, is non-linear. Among these towns that are situated within the radius of 100 kilometres from the Region’s centre it assumes positive, while for those more distant urban places negative values. This implies that proximity to Warsaw has a discouraging effect on the development of cultural-cognitive functions in urban places that are situated within the metropolitan area. Their relatively low shares may suggest that the metropolitan area is at a phase of development of its spatial-functional structure, when residential suburbanisation precedes decentralisation of specialised economic functions (Fig. 6).



Source: Own elaboration based on data from the CENTRAL STATISTICAL OFFICE, Warsaw

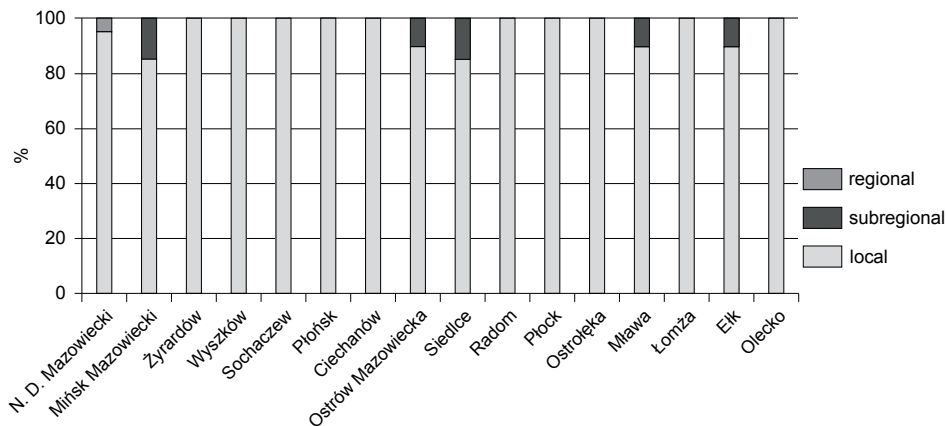
Fig. 6: Spearman correlation index – share in cultural-cognitive activities of employed in 16 towns versus road distance from Warsaw

The survey-based enquiry concerning small firms shows that while their labour catchment area is primarily local (Fig. 7) the market range tends to be higher than local, in some cases even of regional scale (Fig. 8). In this respect no differences can be noticed between the individual towns.



Source: Own elaboration

Fig. 7: Range of firms according to the market area



Source: Own elaboration

Fig. 8: Range of firms according to the catchment area

Accessibility to Warsaw was estimated as an important positive location factor by firms providing business services including computer services, architecture and engineering branches, while in the case of consumer-oriented activities, financial services in particular, its role was evaluated as negative. This finding points to a dampening effect of the proximity to Warsaw with respect to these functions.

The case studies focusing on three towns selected for the purpose of the project reveal features and trends that may be interpreted as specific for each of the major constituent zone of the Region. Their situation within the Region is reflected in functional profile, social composition as well as patterns of spatial linkages. The case of Olecko, located in the north-eastern part of the Mazurian Lake District, documents the increasing importance of environmentally determined life quality as a factor attracting not only leisure-oriented functions, i.e. second homes and sports facilities, but also representatives of creative professions active in arts and crafts. It also reveals the role of other endogenous resources – local traditions and skills in building territorial specialisation – in this case the design and production of yachts as well as of a variety of wooden merchandise, mostly for distant, international markets.

A different case is that of Mława, a medium-sized powiat centre situated in the intermediate and suffering from the backwash effects zone of the Region – an urban place characterised by the lowest share of cultural-cognitive activities in total employment among the towns studied. It illustrates the existence of development barriers which are attributed to the dominance of local economy by price competition-oriented functions (in this case LG Electronics Ltd. assembly activities), the lack of chances to fulfil the growing aspirations of the younger generation and consequent out-migration flows.

Finally, Mińsk Mazowiecki presents the case of a town's integration into the Warsaw metropolitan area, its change from a self-sustained industrial centre and a seat of military installations into a destination area for migration originating from more distant urban and rural places and aiming at the Warsaw labour market. This gives rise to a major role played



by the construction and real estate sector in the town's functional structure. Out-flow of some of the middle class to Warsaw does not hamper a moderate development of cultural-cognitive activities, in a large part of a higher than local range.

Based on these case studies and the survey analysis of small and micro firms, an outline of a pattern of intra-regional functional linkages can be drawn, including the links focused on the city of Warsaw. In this respect considerable differences are revealed between economic activity and the sphere of consumption. As to the former, the links of the towns studied with Warsaw are of a relatively low intensity. Conversely, the capital city represents the main point of reference as a location of highly-specialised functions for the Region, in particular educational, medical and cultural services. This is documented by Olecko, in the case of which the less distant voivodship capitals, i.e. Białystok and Olsztyn represent intervening opportunities in this respect. In fact, out of the three towns selected as case studies, Olecko is representing the extended hinterland zone of the Region, which reveals a more balanced pattern of interaction with Warsaw compared to the other towns. It constitutes not only a destination for seasonal residence of Warsaw's population, but also attracts representatives of cultural-cognitive professions (artists in particular), who at a certain stage of their career choose the town for their permanent place of living and their place of activity.

## 5 Conclusions

In the light of the study, it is relevant for both research and spatial policy purposes to consider the extended hinterland zone as a constituent part of the Warsaw Metropolitan Region and, hence, to account for the development of linkages related to the anticipated evolution of locational preferences on the part of residents and economic activities. This is explicitly possible within the framework of the concept of the urban-rural region with its emphasis put on multi-territorial coordination of policies oriented towards urban and rural areas. The approach, as much as it applies to regions of comparable settlement structure and environmental characteristics in the European Union at large, has not found its appropriate reflection on the Polish scene so far. Evidence for this is provided by assumptions and objectives of policy scenarios which are discussed in the present paper. The concept of the urban-rural region highlights the importance of life quality related to the environmental milieu (but also stimulated by other, accompanying factors) in attracting migrants and advanced economic activities including those based on knowledge and creativity to smaller towns and rural areas in regional hinterlands. Such a trend may lead to the development of other functions based on local resources as well as to a more balanced pattern of functional relations within the Region.

On the basis of the project's findings one cannot unequivocally answer the question whether the Metropolitan Region of Warsaw evolves in the direction of a region of urban-rural type. It is nevertheless possible to find suitable preconditions for this trend to occur. The spatial structure of the Region including its settlement pattern and the natural environment point to an adequacy of such an approach. Ongoing investment in the sphere of public services and in technical and recreational infrastructure, in most cases publicly

financed with a significant participation of EU funds, have to some extent counteracted the growing intra-regional polarisation. It can be anticipated, however, that such investment activity is likely to slow down once the present EU financial perspective comes to an end.

It has been argued in the paper that the concept of the urban-rural region is especially applicable; firstly, where large disparities between the region's core and periphery constitute a development barrier; secondly, where the region's hinterland is equipped with assets and activities complementary from the point of view of overall regional development. These phenomena are prominent in the case of the Warsaw Metropolitan Region, especially when it is conceptualised to encompass the external hinterland zone. A major advantage of using the concept is that it defines conditions for the utilisation of the hinterland's area resources as a stimulus for the development of the region as a whole. Such trends may be unveiled during the next decades owing to external factors including a general growth of the knowledge-based economy and the societal evolution in the direction of a knowledge society. Hence, the application of the assumptions underlying the urban-rural concept in regional development programmes should be related to a long-term perspective. The urban-rural region is therefore to be interpreted as a target model of spatial organisation, in place of those strategic planning studies and documents that aim at centralised deconcentration and metropolitan area extension.

Following this logic, it may be assumed that in the face of foreseeable demographic conditions (with their major dimension being population ageing) the peripheral zone of the Warsaw Region – the rural hinterland with the interspersed networks of local urban places – will over time experience some economic progress based on residential, recreational, health protection as well as cultural-cognitive functions and ecosystems services including ecological farming, provided for other parts of the Region and beyond. For this evolutionary development path of the Region to be sustained a long-term, pro-active policy support is required, based on the efforts of regional and local governments, but primarily on decisions to be taken at the national level. These efforts and decisions should focus on environmental protection, social and technical infrastructure, human capital development as well as on standards of the functioning of public institutions. They are also to be complemented by a better recognition of the role of the cultural heritage including the historic and symbolic values. Such a development scenario seems to be adequate for the Warsaw Region, where the competitiveness of the core may soon be hampered by the lack of cohesion at the regional level. The development of the Warsaw Region as an urban-rural region being a positive challenge for regional policy should therefore find a suitable reflection on the regional and national spatial policy agenda.

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