

PERI-URBAN DEVELOPMENT AS A SIGNIFICANT RURAL DEVELOPMENT TREND

JADWIGA BIEGAŃSKA¹, STEFANIA ŚRODA-MURAWSKA¹, ZENIJA KRUZMETRA²,
FRANK SWIACZNY³

¹Department of Urban Studies and Regional Development, Nicolaus Copernicus University, Toruń, Poland

²Institute of Social Science and Humanities, Latvia University of Agriculture, Jelgava, Latvia

³United Nations DESA Population Division, New York, USA*

Manuscript received: October 26, 2017

Revised version: January 18, 2018

BIEGAŃSKA J., ŚRODA-MURAWSKA S., KRUZMETRA Z., SWIACZNY F., 2018. Peri-urban development as a significant rural development trend. *Quaestiones Geographicae* 37(2), Bogucki Wydawnictwo Naukowe, Poznań, pp. 125–140. 1 table, 8 figs.

ABSTRACT: The paper focuses on demographic and social changes caused by peri-urban development in rural areas in Latvia, Poland, and Germany after the system transformation began. The article analyses peri-urban development as a mostly rural phenomenon, and as a process of rural displacement. Rural development interacts with urban influences, changing the role and functions of rural areas. This is reflected by a departure from agricultural functions, more intensive construction activities and changes in land use. This also includes intensive socio-demographic and socio-cultural changes. Simultaneously there are significant population inflows, both urban and rural (from more peripheral rural areas), an increase in population density, changes of population structure etc. The paper shows that peri-urban development as a general rural trend began later in the countries of Eastern and Central Europe (after the transformation) than in Western Europe, but the processes and phenomena presently observed in Eastern and Western Europe are similar.

KEY WORDS: rural development, peri-urban development, rural areas, socio-demographic changes

Corresponding author: Jadwiga Biegańska, Department of Urban Studies and Regional Development, Nicolaus Copernicus University, ul. Lwowska 1, 87-100 Toruń, Poland, e-mail: jadwigab@umk.pl

* The views and opinions expressed in this paper are those of the Author and do not represent those of the United Nations.

Introduction

In Europe fundamental changes in the population structure of rural areas occurred at the turn of the 21st century. The emergence of the post-industrial society, in particular, led to new value systems and thus gave rise to different ideas about the fundamental nature and public role of rural areas. These areas began to be

perceived as very attractive and as a desired destination for possible migration. In Western Europe this special way of thinking about rural areas has developed early, in some countries even before World War II. As a result, in many European countries there has been an expansion of city-adjacent, although formally rural, areas which have seen private housing built on former farmland.

The aim of this study is to determine the demographic, social and economic aspects of changes observed in peri-urban areas in three European countries. Poland, Latvia and Germany were selected for analysis because the development of each of these three European states followed a different path in the second half of the 20th century, a consequence of the differences in their respective political situations. However, after 1990, the transformation of political systems began in Poland, Latvia and the former German Democratic Republic, a process which involved switching from a centrally-planned economy to a market economy. The changes occurring after 1990 led to increasing similarities in models of socio-economic development in these countries, which in turn resulted in Poland and Latvia joining the European Union (EU) in 2004.

Therefore, it seems worth investigating whether the processes that result from the growing interest of city dwellers in the rural areas adjacent to cities, as observed in Western European countries, also occur analogously – albeit with a certain delay – in post-socialist countries, and – if so – whether they are similar in terms of intensity and character.

The smallest country is the Republic of Latvia inhabited in 2016 by 1,968,957 people, which

with an area of 64,573 km² gives the population density of 30/km² (CSB, 2017). We must remember here that the current state and its population structure are the result of transformations that have occurred in Latvia predominantly after 1990. From 1949 to 1990 the Latvian Soviet Socialist Republic was one of the constituent republics of the Union of Soviet Socialist Republics (USSR). The Latvian economy was centrally managed and became a part of the USSR economic system. Only on 21st August 1991 did Latvia declare full independence and became a separate state. Population development in Latvia after 1990 was mostly influenced by the transformations in its economy (growing unemployment, property structure transformations, an unstable labour market etc.). During the years 1990–2016 the population decreased by 26.1% from the 2,668,140 citizens in 1990 (Fig. 1).

The causes included not only the emigration of Russians, Ukrainians and Belarussians who left the country in large numbers in the early 1990s, but also the negative rate of natural growth observed since the 1990s (Eberhardt 1998). The reasons for the population loss include the increased emigration of Latvians after 2004, i.e. after joining the EU, and following the economic crisis of 2009–10 (Wołkonowski 2014). Such a great change

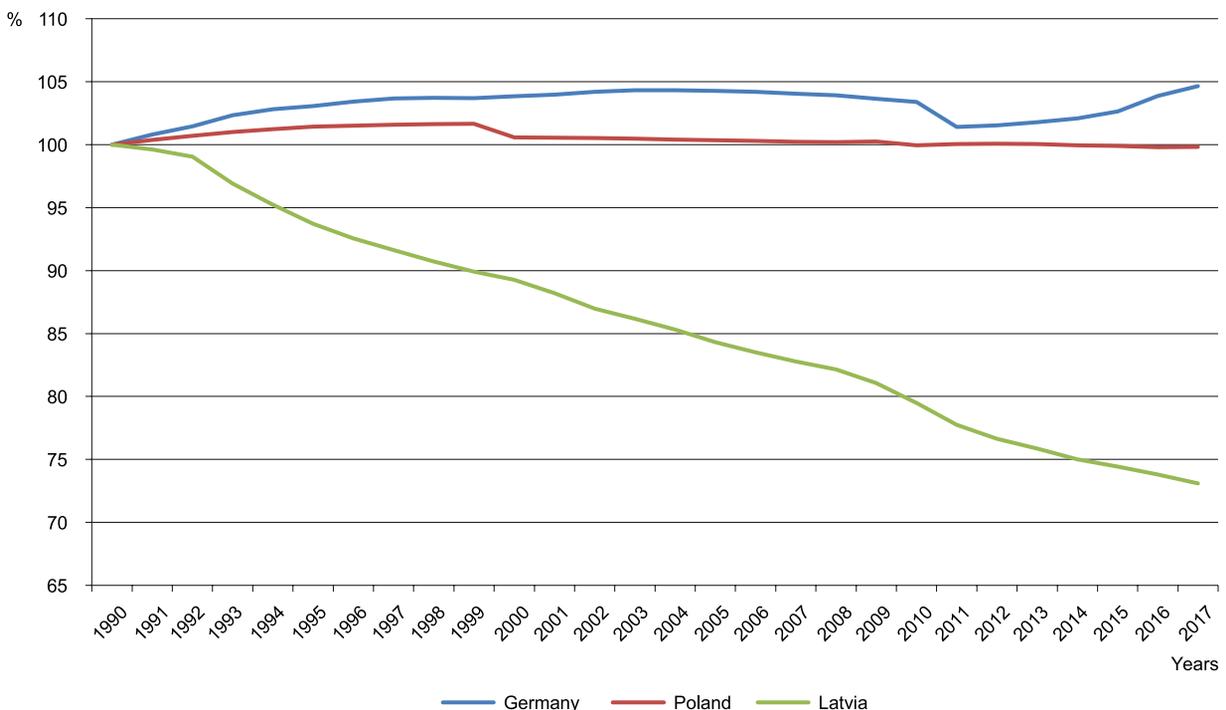


Fig. 1. Population changes in Germany, Latvia and Poland: 1990–2017 (1990 = 100%).
Source: author's own based on data derived from Eurostat.

is reflected in the spatial distribution of the population. Latvia is one of those countries with an extremely prominent centre-periphery population distribution structure (Dahs 2017): 68 % live in urban areas whilst 32% in rural ones (CSB 2017). Latvia is a country with long traditions of mono-centric development, but in the recent decades we can also observe the population concentrating in areas around large cities, especially Riga, which highlights the trends of peri-urbanisation processes. The capital city of Riga accounts for 32% of the total population; this is the highest proportion among the member states of the EU, *ex aequo* with Tallinn in Estonia (*The Economic...*, 2017). Riga is the largest centre of economic activity and is still growing thus continuing a historical trend, and therefore the surroundings of Riga still constitute the most attractive area for newcomers. This is also evidenced by the fact that approximately 40% of internal migration involves the city (Krisjane et al. 2017).

Similar patterns of population development connected with the fall of the Eastern Bloc are characteristic of the much larger (312,679 km²) country of Poland, inhabited in 2016 by 38,432,992 people with the population density of 122.9/km² (BDL GUS). From 1945 to 1990 the Polish People's Republic also remained within the USSR's sphere of influence, and its administrative command economy, irrational and ineffective, was subordinated to the doctrine of socialism. Like Latvia, after the rise of the independent state (1989), population development was related to the transformation of the economic system. However, migration in Poland did not reach the Latvian level and a negative population growth rate was not observed before 2002 (Rządowa Rada Ludnościowa 2014). As in Latvia, increased emigration was associated with joining the EU. Generally, in the years 1990–2016 the population figures changed only slightly (Fig. 1). We must remember, however, that currently it is estimated that circa 2.5 million Poles are now temporary emigrants (GUS, 2017). The population distribution is shaped by the birth rate and the net migration rate; population data indicate that since the late 1990s the key factor shaping the spatial population distribution has been migration, mostly the flow from cities into rural areas. Thus, considering the spatial distribution of the population in Poland, it should be noted that the southern part of the country is

relatively densely populated. The further north the lower the population density. On a national scale, NE and NW parts have had a relatively low population density for several decades. Spatially, cities are areas with the highest population density, particularly the large ones (such as Warsaw, Cracow, the cities of the Silesian conurbation, Poznań, Gdańsk, Łódź, etc.) and their suburban zones (Biegańska 2013).

The third country analysed – and the largest considering its area and population – is the Federal Republic of Germany with 82,175,684 inhabitants in 2016. What is especially important is that its socio-economic development in the second half of the 20th century has to be discussed with regard to two countries, i.e. the socialist German Democratic Republic (East Germany), which remained under the Soviet influence, and the Federal Republic of Germany (West Germany) with a social market economy (since 1949 to the present). While the trends in the socio-economic development of East Germany in the years 1949–1990 were like those observed in Poland or Latvia, the situation in West Germany was entirely different. In turn, after the year 1990 and the unification of Germany, the socio-economic transformations that took place in East Germany were similar to those observed in the two other countries but developed at a faster pace; whereas West Germany continued its development based on a social market economy. However, in terms of population development, in the early 1990s significant changes occurred in both parts of Germany. While the new *Länder* (the area of former East Germany) recorded a slight population decrease over the years 1990–2016 (1990 – 16 million people, 2014 – 15.9 million), the old *Länder* saw a total population increase from 63.7 million people in 1990 to 65.2 million in 2014. Beginning from the 1990s, in East Germany the dominant trends were internal migration to West Germany and a negative natural growth rate, while West Germany recorded population growth resulting primarily from the influx of internal and international migration. The spatial distribution of Germany's population clearly shows the particularly attractive areas of the suburbs around the largest cities such as Berlin, Munich and Stuttgart (Środa-Murawska 2013). These areas are characterised by a high level of economic development resulting, e.g. from the presence

of new technology businesses and rich cultural opportunities, which draw not only highly qualified labour force but also job-seeking immigrants (Kröhnert et al. 2007). By contrast, the territories of former East Germany, except for the largest cities and areas adjacent to Berlin, are perceived as less attractive migration targets.

The economic development of these three countries has also been reflected in demographic transformations. In the case of Poland, Latvia and former East Germany, the population could move freely only after 1990. Therefore, it is assumed that while in West Germany the processes related to peri-urbanisation began and progressed in a way similar to other Western countries, in Poland, Latvia and East Germany the process of peri-urbanisation really began only after 1990.

The research for Latvia was conducted on the basis of data collected from the Latvian Central Statistical Bureau, field surveys and literature studies. The data used here mostly concern changes in the population figures, population density, directions and intensity of internal and international migration, main motives for migration from cities to rural areas, and the main socio-economic characteristics of migrants. For Poland the data mainly came from the Local Data Bank of Statistics Poland and literature studies. The main points of interest were population change, directions and intensity of internal and international migration and the main socio-economic features of migrants moving to suburban areas of large cities. Source data for Germany were obtained from a database published online by the Federal Statistical Office (Statistisches Bundesamt – Destatis) and from information sets in the statistical yearbooks. The analysis utilised information on demographic features, i.e. population, births and deaths, population inflows and outflows, and socio-economic aspects including data on trends in construction (numbers of new buildings completed). As the study used three different databases (for Poland, Latvia and Germany) and there was no compatibility among the three sets of statistical data for each country, different indicators were taken into consideration in each case; however, this still made it possible to trace and compare the conditions and determine the demographic, social and economic aspects of changes observed in peri-urban areas in these three countries. Significantly, these

peri-urban zones represent a very high proportion of their overall areas, and generally there is a substantial concentration of the population there (*Territory Matters...*, 2006).

Theoretical background

The division between urban and rural spaces began to blur already in the 19th century with the formation of nation states, the development of industry, mass transportation and the rising number of private automobiles (Bengs, Schmidt-Thome 2006; Korcelli et al. 2012; Ravetz et al. 2013). This in turn led to the need for new research and redefining concepts related to urbanisation. For a long time, urbanisation signified only the growth in the number of city dwellers and the spatial expansion of cities (Tisdale 1942). A ground-breaking text opening the way for its new, broader definition was an essay by Louis Wirth, “Urbanism as a Way of Life”, which became a bridge between demographic, often quantifying, definitions of urbanisation, and new ones, embracing its multidimensionality. Wirth’s concept was based on two very important observations: that what he described as ‘urbanism’ firstly has its roots in large modern cities and secondly signifies a sum of attitudes, behaviour patterns and interactions which – although formed in big cities – do not have to remain a prerogative of urban areas (Szymańska, Biegańska 2011). This fading of differences between the country and the city regarding certain functions as well as the creation of intermediary areas (the so-called ‘city in-between’, cf. Sieverts 1997) have become with time characteristic features of modern settlement systems (Korcelli-Olejniczak 2012; Dymitrow, Stenseke 2016; Dymitrow et al. 2017; Krzysztofik et al. 2017).

One change that has attracted particular attention is the shift in what a rural area means to local residents (Hoggart 1990; Cloke, Goodwin 1992; Ilbery 1998; Garrod et al. 2006; Korf, Oughton 2006). Under the conditions of industrialisation, cities were the main draw, and the main flow of migration was in the direction of the city as a political, industrial, administrative and cultural hub. During the second half of the 20th century, people all over the world began to change the orientation of their social values, and wealthier

citizens began to look for living spaces outside city centres – in suburban districts and in closer or more distant rural areas.

Population movements from cities to rural areas, from larger to smaller settlement units, which had already been observed in the 1960s, were first described by Brian J. L. Berry (1976, 1978) who named them counter-urbanisation. However, when analysing it, we ought to remember that, depending on the factors influencing the migrants' decisions, counter-urbanisation can be identified with ex-urbanisation, displaced urbanisation and anti-urbanisation. In the first case, counter-urbanisation involves the migration of affluent city inhabitants who move to rural areas looking for more beneficial living conditions; in the second, it relates to the migrants' attempts to lower the costs of living; and in the third, the important element is a conscious rejection of the city lifestyle (Lowry 1990; Mitchell 2004). Yet, whatever the migrants' decisions are, the ultimate outcome, i.e. 'deconcentration' or decentralisation, is exactly the same (Dahms, McComb 1999). Numerous Western European studies on counter-urbanisation led to the conclusion that its outcome will be rural revival or rural regeneration, resulting from an urban decline. With time this categorical conclusion was revised and made less strict. It was considered that counter-urbanisation does not require a decline of the city for the country to thrive, nor does it signify a return to a rural lifestyle because concentration and 'deconcentration' can occur simultaneously, and depending on conditions a single factor can lead to clustering or concentration but also to scattering or 'deconcentration' (Grzeszczak 1996).

It is currently assumed that modern urbanisation predominantly takes the form of uncontrolled urban sprawl, mostly in the form of residential buildings, spreading over rural areas formerly used as farmland. This phenomenon is regarded as an advanced form of suburbanisation or counter-urbanisation (Brueckner 2000; Kaplan et al. 2004; Czerny 2005; Parysek, Mierzejewska 2005). The most important features of areas affected by urban sprawl are low detached residential buildings; few other buildings; a lack of continuity in built-up space (known as leap-frogging) in the form of a mosaic of urbanised and agricultural/natural areas; and functional segregation

involving rows of similar or even identical detached single-family houses (Kaplan et al. 2004; Czerny 2005).

In contrast to urban sprawl and counter-urbanisation, peri-urbanisation signifies expansion of urbanisation through large-scale decentralisation (Grzeszczak 1996). It is worth stressing here that although the processes called peri-urbanisation started as early as at the beginning of the second half of the 20th century, there is still no unified definition, as pointed out by Wehrhahn (2000), Korcelli et al. (2012), Ravetz et al. (2013) and others. Nevertheless, it is generally accepted that after World War II in parts of Belgium, France and Switzerland existing settlements adjacent to large cities saw an extension on their fringes. In these areas significant transformations occurred regarding the built-up area, socio-economic development and changes in the population while the emerging residential zones maintained a spatial structure characteristic of rural areas. To describe these changes that have been taking place since the 1970s in urban research in France (Aydalot 1985; Aydalot, Garnier 1985) and later in Switzerland and Belgium, a new term was introduced: peri-urbanisation (Gebhardt et al. 2007). Peri-urbanisation itself can be understood as a specific form of suburbanisation or as an independent process involving a particular kind of expansion of suburbanisation beyond the borders of suburbia, which ultimately is comparable to the concept of ex-urbanisation (Wehrhahn 2000 after Bähr 1997). Peri-urbanisation is also defined as those mixed areas under an urban influence but with a rural morphology (Caruso 2001). Generally speaking, however, as Perlik points out (1999), it is in peri-urban zones where the character of rural areas is – partly – transformed by the introduction of the urban influence (Gehrlein 2012). In opposition to counter-urbanisation (Wehrhahn 2000; Fielding 1989; Champion, Vandermotten 1997), peri-urbanisation in itself is not understood as inter-regional 'de-concentration' connected with metropolitanisation on the one hand, and the loss of relationship with the metropolis in peri-urban areas on the other (Markowski, Marszał 2006; Budner 2008), but rather as a specific form of spatial de-concentration creating areas outside the direct suburban zone but in the influence sphere of the metropolis (Wehrhahn 2000).

However, the majority of analyses define a peri-urban area by pointing out the main differences between it and a suburban area. According to Wehrhahn (2000), it is accepted that within a peri-urban area:

- development of buildings affects rural areas;
- newly created peri-urban settlements do not maintain a continuously built-up zone with the city, characteristic of the early phase of ring-shaped suburbanisation, but emerge independent and sometimes distant from centres;
- workplaces are located much farther from places of residence than in the case of suburban areas;
- there is a lack of businesses providing for the basic needs of the inhabitants, such as shops and other services; such needs are fulfilled in smaller higher-level centres located in suburban areas and the city centre;
- the demographic structure of the population is much more diverse than in suburban areas;
- migration to the peri-urban zone is accompanied by greater changes in lifestyle (particularly regarding leisure time) than migration to suburban areas;
- there is still an economic and social-cultural connection with the centre and/or suburban areas.

Peri-urban territories generally have a mosaic-type structure, with alternating typical elements of both urban and rural environments (building coverage, landscape, use of land, etc.) (Atkinson 1999; Cavailhes et al. 2004; Hoggart 2005a, 2005b; Halfacree 2006a, 2006b, 2007; Bocz et al. 2008; Hornis et al. 2008). Despite the agricultural origins of such areas, they are closely linked to cities, a substantial increase in the population takes place, and considerable geographic mobility is a characteristic of their inhabitants.

Peri-urban development is tightly connected to technological (motor vehicle, telecommunications, IT) and infrastructural development (road and IT networks) as well as socio-economic processes. It is very difficult to separate peri-urban area from neighbouring areas; its borders, in most cases, cannot be clearly delineated. Peri-urban areas are areas of 'mixed' or 'integrated' functions, where consumption and production compete for land. Residential consumers and agricultural producers co-exist. Peri-urban areas show rural

character due to the presence of the agro-forestry sector which accounts for an important part of its total economic activity. Aspects of a social class are often very visible (the choice of places of living, housing, etc.), mainly as differences in lifestyle between the urban, rural and peri-urban populations. The urban 'in-moving' population has a more significant effect on the rural 'native' population in the peri-urban area than the other way round (Bocz et al. 2008: 4-5).

Iaquinta and Drescher highlight several components which are used to formulate the concept of peri-urban areas, arguing that these components identify urbanisation and urbanism:

- the demographic component (including increased population numbers and densities);
- the sectoral component of the economy (first of all the number of people employed outside the agricultural sector);
- the socio-psychological component (including an awareness of the urban lifestyle) (Iaquinta, Drescher 2000).

The level of urbanisation is often described only on the basis of the first two components, while the third is often forgotten despite the fact that it is the most direct and basic indicator of urbanisation: socio-psychological perception or responses to it. It is precisely the socio-psychological component which reflects the values, attitudes, tendencies and behavior patterns of people who live in rural areas that are influenced by urbanisation (Iaquinta, Drescher 2000).

Previous research into changes affecting rural territories has mostly been conducted following two approaches. The first focuses on urban expansion, the second on the social and economic evolution of rural areas. The former is based on the assumption that cities are central locations of activity in relation to peripheral areas. Rural areas are regarded as a zone into which urban activities can be shifted. The scholars of the NEWRUR project "Peri-urbanisation: A Phenomenon on the Rise Throughout Europe" (2001-2004) argued that for the time being there was a lack of an integrated analysis of the processes of peri-urbanisation in Europe. They perceived peri-urbanisation as a mostly rural phenomenon, as a process of rural displacement. In this process endogenous rural development interacted with an urban influence, changing the role and functions of rural areas (*Peri-urbanization - a phenomenon...*, 2004).

The spread of peri-urban areas is likely to become one of the main development trends in rural areas in the future (Caruso 2001). Therefore, it is important to gain a broader understanding of peri-urban processes and changes in the population structure in many European countries, including Latvia, Poland and Germany, as investigated in this paper.

Research results

Latvia

Since the restoration of Latvia's independence in the late 20th century, significant changes have been seen in rural areas, and today Latvia is similar to many other countries in the world in terms of simultaneous migration not only from rural to urban areas, but also in the opposite direction, with urban residents migrating to rural areas near cities.

Latvia, once a country of immigration, has become a country of emigration, particularly in the first half of the 1990s and since joining the

European Union in 2004. The population density in 2013 was only 31/km². In the years 2000–2013 the population shrank from 2.2 million to just 2.0 million. Despite this decrease at the national level, the population around Riga and other large urban centres is growing. The agricultural origins of such territories notwithstanding, they are functionally linked to urban centres, and a substantial increase in the population occurs there. These areas have mixed-functions with both urban and rural features, and peri-urban development is active there. Such a rapid influx of urban residents into certain rural territories in Latvia is an entirely new phenomenon, which has resulted from a particularly rapid change related to the above-mentioned processes (Figs 2, 3).

The authors analysed changes in population numbers between 2005 and 2011 in the areas which surround the eight largest cities of Latvia in order to assess the situation in peri-urban spatial development (Fig. 2). These analysed cities were Riga, Jelgava, Ventspils, Liepāja, Valmiera, Jēkabpils, Rēzekne and Daugavpils. The authors considered data related to increases in the population, including those that can be attributed to

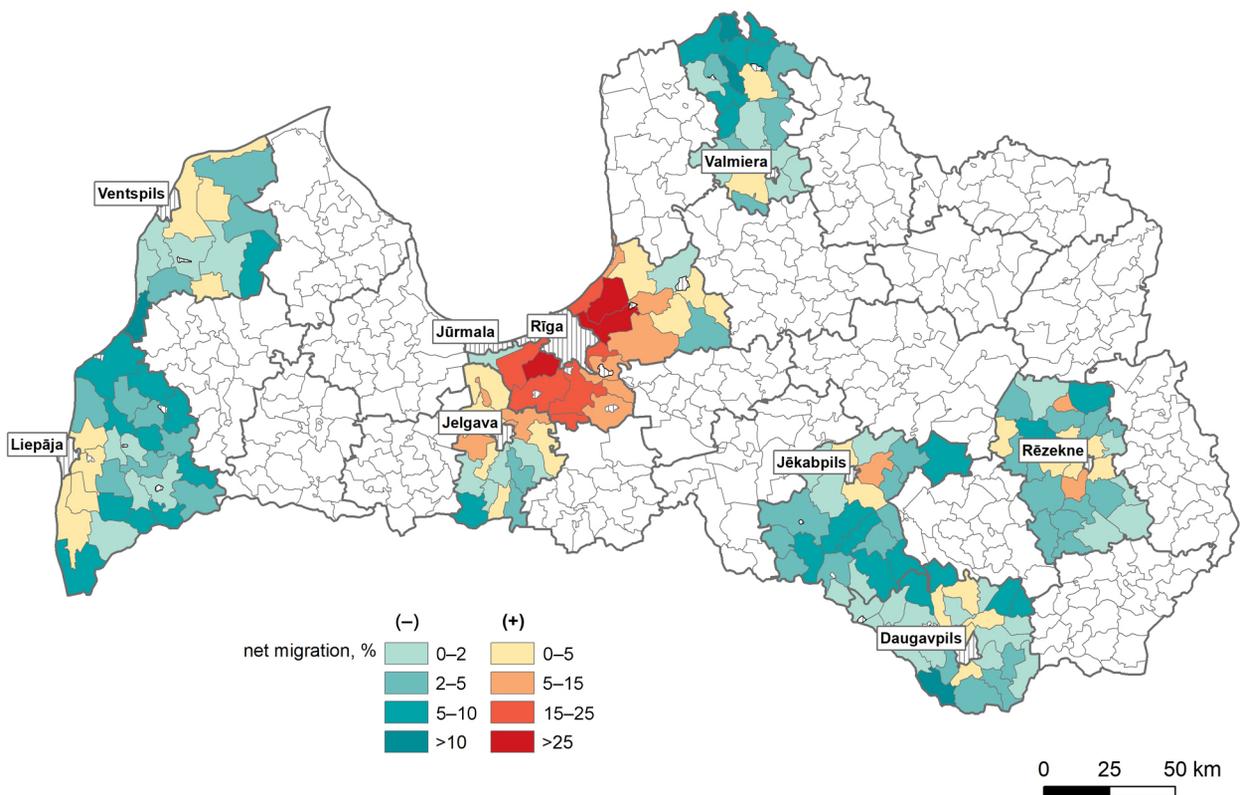


Fig. 2. Long-term internal and international migration around urban centres in Latvia: 2005–2011. Source: Kruzmetra 2011; Rasnica, Kruzmetra 2014.

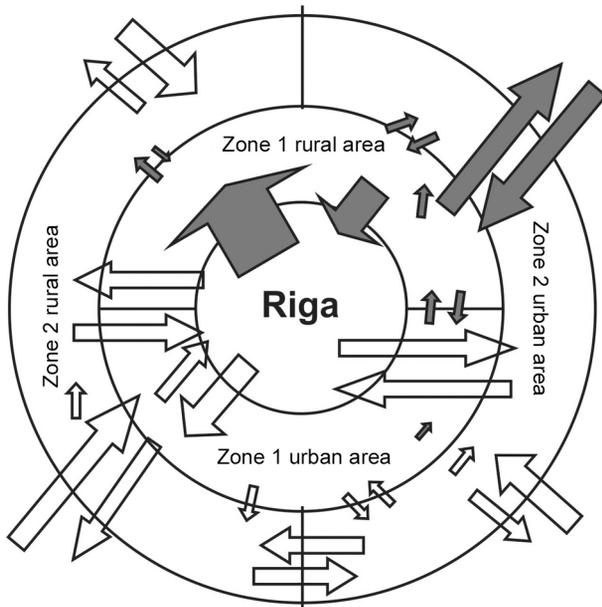


Fig. 3. Complexity of migration flows in the peri-urban zone of Riga.
Source: Kruzmetra 2011 according to data from Latvia CSB.

migration. The data show the greatest population increase in the Riga District; in some districts the increase exceeds 25% while smaller population increases of up to 5% occurred in some districts around the other largest cities of Latvia; however, in other areas the population constantly decreases.

The peri-urban development process involves suburbanisation, counter-urbanisation, centripetal migration (Ford 1999), and a shift to more attractive places of residence in the peri-urban area. It means that that migration flows in the peri-urban zone differ by directions as well as by motivations behind them. Communities in peri-urban territories are not homogeneous; they are made up of different groups of people who have different interests. Fig. 3 shows the complexity of migration flows in the peri-urban zone of Riga, where the highest population increase has occurred. The authors analysed the directions of migration flows, looking both at the directions of migration flows in the peri-urban territory of Riga and at absolute numbers of migrants there. On the basis of the results, a conclusion can be drawn that in rural territories of peri-urban areas, particularly in Zone 1 (the zone closest to the city border), the dominant group are migrants from Riga – nearly three-quarters (74.2%) of all migrants. Even if elements of the endogenous model of rural development can be found here,

the authors believe that the large number and proportion of migrants from Riga indicate that changes in peri-urban areas occur mostly due to the expansion of the city itself, as opposed to changes in rural development (the socio-economic development of rural areas).

The second research results are from a survey that was conducted from 2007 to 2009 and covered 2,367 respondents who were divided into four groups according to how long they had lived in the area:

1. Those who were born there,
2. Those who moved to the peri-urban territory of Riga prior to 1991,
3. Those who moved to the peri-urban territory of Riga between 1991 and 2000,
4. Those who moved to the peri-urban territory of Riga after 2000.

The respondents who migrated from Riga after 2000 were compared to those who had never moved or had lived in the peri-urban area for more than 10 years. The latter respondents are younger, more likely to have a higher education and belong to higher income brackets, and more than 70% of them are employed. In terms of migration motives those from both groups arriving after 1991 are most likely to report family reasons (35.1% and 40.0%), while the second most often mentioned reason is housing (33.9%).

This confirms the fact that most migrants from Riga live in private houses and opportunities for owning a house in the peri-urban area are an important motivation for moving there. For the migrants from other towns and rural areas, work is the second most often cited reason (23.6%). For the migrants from Riga, the living environment is the third most cited reason (16.1%). The analysis of the motives shows that employment is becoming gradually less important for later groups of internal migrants to the peri-urban area while that of housing has been growing. The importance of the environmental factor has also increased in recent years.

Table 1. Motivation to move to peri-urban areas: the case of Latvia.

Till 1991	1991–2000	After 2000
1. Family circumstances	1. Family circumstances	1. Family circumstances
2. Work	2. Housing	2. Housing
3. Housing	3. Work	3. Environment

Source: author’s own.

Increasing stratification in Latvian society has led to a situation in which some urban residents in Latvia have reassessed their needs as welfare and income have increased, and have moved to rural areas near cities. A richer stratum of urban residents moved to rural areas (Caruso 2001). The result is that major social changes have occurred in many rural areas, and urban and rural residents assess them differently or even have different interests. The characteristic developments are: urban residents have moved to rural areas, the number of new private houses has increased, new housing estates have been built, a real estate market for land and private houses has been established and developed, agricultural land has been transformed into building land, and there has been an increase in the household income of a certain segment of the society. These changes most of all can be perceived visually.

In the rural areas located within zones influenced by a city, a new community model is emerging. This is based on four basic groups – locals, migrants from Riga, migrants from other cities, and migrants from other rural areas. However, there are also different values, needs and lifestyles which have led to transformations in line with the interests of the relevant groups.

Poland

After World War II, Poland, like other East-Central European countries, became a socialist country, and its socio-demographic, economic and infrastructural development broadly followed the patterns characteristic of this part of Europe. Overall, however, the post-war period until 1989, when the systemic transformations began, was characterised by an intensified migration of the rural population to cities and by their socio-economic development, driven in particular by industrialisation. Since the 1990s urbanisation has been halted, and the process of suburbanisation began (Biegańska, Szymańska 2013). To a large extent, it was the effect of the changing perception of rural areas, which started to be seen as attractive destinations for urban migrants, especially if rural places were situated not far from cities and/or had a good transport network so that migrants did not lose their connection to the city, continuing to work there or using its wide range of services. These phenomena initiated separate

paths of development for rural areas located in the suburbs and for those located peripherally to big cities (Szymańska, Biegańska 2011).

Analysing peri-urban development in Poland, we should remember an evenly distributed settlement system in the country. In each region (NUTS 2) there is at least one larger urban centre surrounded by a peri-urban zone and remote rural areas (Szymańska 2013). Another important factor determining their rate of development is the past partitions of Poland before the reestablishment of the nation state, which resulted in different dynamics of socio-economic processes in western, eastern and southern Poland (Węclawowicz et al. 2006). Nevertheless, regardless of the region, the peri-urban zones of big cities are characterised by a high dynamics of numerous processes.

With regard to demographics, since the 1990s peri-urban areas have been the rural areas with the highest rate of population growth (Fig. 4). This is predominantly the effect of ongoing migration (mostly from cities, but also from peripheral rural areas), leading to a high positive internal migration balance (Fig. 5). Moreover, considering the fact that most of the migrants are relatively young with families and planning

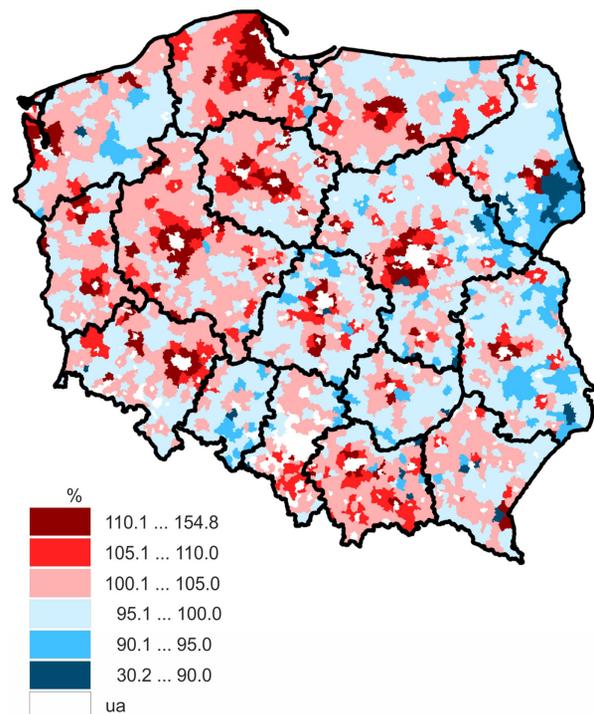


Fig. 4. Population changes in rural areas in Poland (2005–2011 in relation to 1999–2004; 1999–2004 considered as 100%).

Source: Biegańska 2013; ua – urban areas.

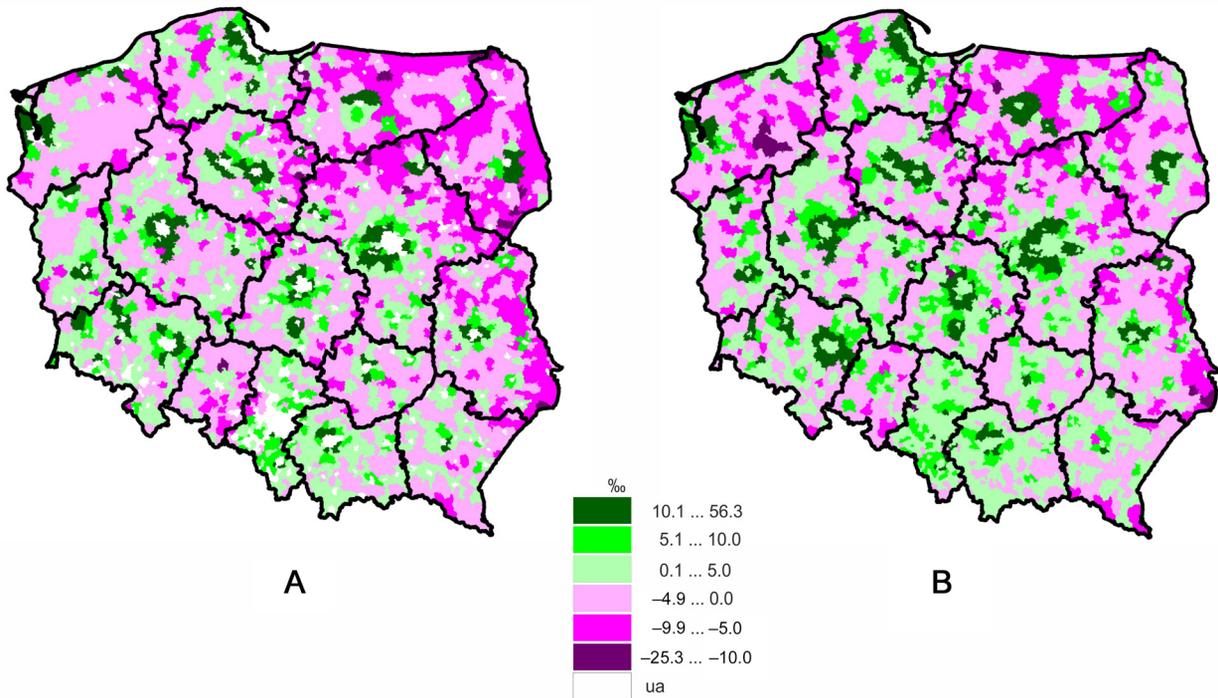


Fig. 5. Migration balance per 1,000 population in rural areas of Poland.

Source: author on the basis of data collected from the Local Data Bank, the Central Statistical Office; A - 1999–2004; B - 2005–2011; ua - urban areas.

to expand, the rate of population growth is also shaped by a relatively high birth rate. As a consequence, high positive real population growth is observed in peri-urban areas in comparison to all rural areas in Poland. At present, the peri-urban areas of big cities are the only areas in Poland (both urban and rural) where some degree of rejuvenation of the population age structure or a slowdown in the ageing of the population have been observed (Szymańska, Biegańska 2014).

The great demographic potential of rural areas surrounding big cities is also reinforced by the positive socio-economic characteristics of these areas. As research shows, in comparison to other rural areas, peri-urban ones have the highest share of the population with secondary and higher education, the highest percentage of the self-employed and of those with non-agricultural income (Biegańska, Szymańska 2013). Along with the population surge in peri-urban zones the highest number of firms per 1,000 people of working age and their most dynamic growth have also been noted there (Biegańska, Szymańska 2013), which determines the level of socio-economic development and living conditions. The latter, considered using indicators such as useable floor space of housing per person, water supply, bathrooms, flushed toilets,

and central heating (Szymańska, Biegańska 2012), point also to the much better quality of housing and infrastructure in peri-urban zones. Moreover, since the 1990s peri-urban zones of big cities have been the areas of the most intense construction work (Biegańska, Szymańska 2013; Rogatka 2014).

As mentioned above, migration from the city to the country, mainly of the so-called middle class (Sadura et al. 2017), started a new type of transformation in Poland, both in the rural areas and in the whole settlement system. This new phenomenon of migration into the peri-urban areas and simultaneously the process of peri-urbanisation of formerly rural areas has sparked a number of studies aimed at determining its main features in the Polish context (Lisowski, Grochowski 2009; Grochowski 2011; Korcelli-Olejniczak 2012; Mazur et al. 2015; Mrozik, Idczak 2015; Idczak, Mrozik 2016). However, as in similar studies in other countries, it is essential here to provide, on the one hand, a complex analysis of peri-urbanisation and describe its morphological, functional, ecological and socio-economic aspects, and, on the other hand, inform the rational spatial planning of these areas, which have both urban and rural features (see Korcelli et al. 2012; Grochowski et al. 2015).

Germany

The term ‘peri-urban’ is only infrequently used with regard to Germany, mostly in the work of French or Swiss scholars (Dezert et al. 1991; Schuler 1992; Perlik 1999; Gehrlein 2012 after Werhahn 2000; Hoggart 2016). This stems from the fact that in the French and Swiss Alps processes of peri-urbanisation were observed much earlier than in Germany, particularly within Lombardy, Côte d’Azur and in the intra-Alpine region around such metropolises as Grenoble, Innsbruck or Trento (Perlik 2001). Currently in Germany, as in Belgium or Great Britain, peri-urban areas cover one third of the national area, while in the Netherlands they constitute up to 80%. (Pauleit et al. 2016 after Nilsson, Nielsen 2013).

In the case of peri-urban areas, when comparing the old and new *Länder*, the specific duality of transformations should above all be accounted for, regarding, for example, demographic phenomena (Szymańska et al. 2008) or socio-economic development (Środa-Murawska 2013).

In the old *Länder*, intensified urbanisation (construction, demographic and socio-cultural aspects) of previously rural areas was observed already in the 1980s (Basten 2005), while in some regions of the new *Länder*, the process of peri-urbanisation was observed only after 1990 (Zimmermann 2006). The explicit diversification of demographic processes between regions as a characteristic feature of the peri-urbanisation of areas adjacent to cities, located both in the old and new *Länder*, was already in *place* in 1995. However, in the new *Länder* the process was still in its initial phase in 1995 and limited to a few larger cities, and especially the surroundings of Berlin. Between 2011 and 2014 the population of peri-urban areas, despite slow or negative natural growth, remained almost stable around the large cities of the new *Länder* and, even more so, adjacent to the large agglomerations of the old *Länder*, while peripheral areas saw a considerable decline of their population (Figs 6 and 7).

At the national level, we observe an emerging internal division between urban, peri-urban and rural areas (on both sides of the former

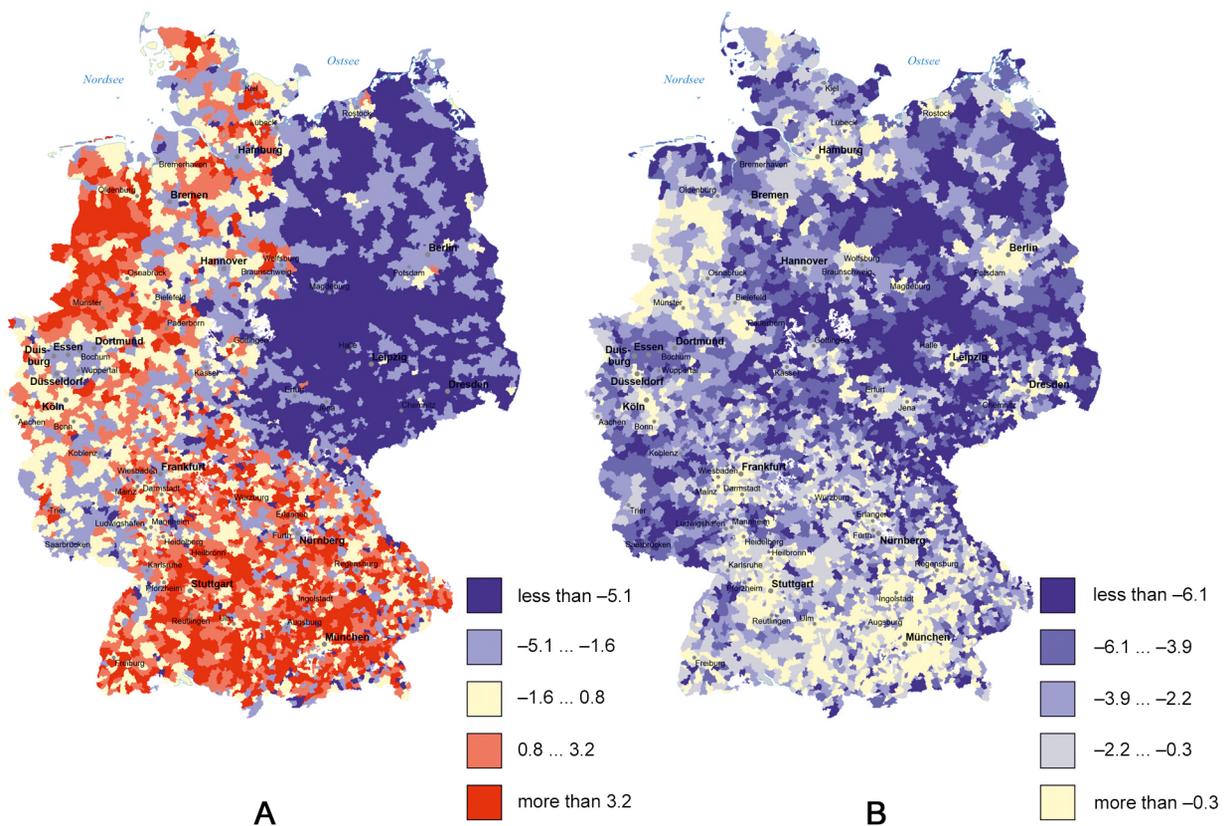


Fig. 6. Natural increase per 1,000 population in Gemeinde: 1995 and 2012. Source: Bundesinstitut für Bau-, Stadt- und Raumforschung, Bonn, 2017, A - 1995; B - 2012.

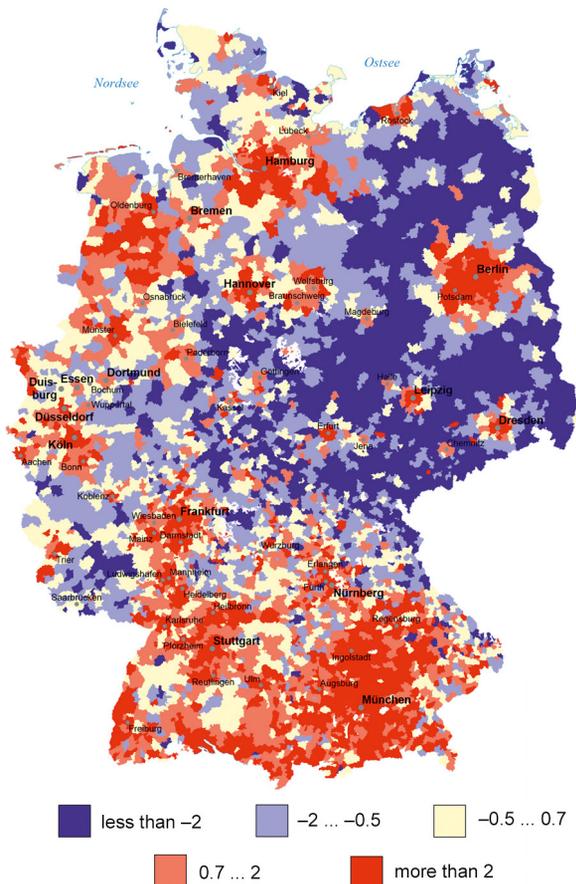


Fig. 7. Population changes in Gemeinde: 2011–2014 (2011 = 100%).

Source: Bundesinstitut für Bau-, Stadt- und Raumforschung, Bonn, 2017.

German-German border). In 2012, the peri-urban areas of large cities in East and West Germany displayed similar figures. Similarly, the rate of change in the population size in peri-urban areas from 2011 to 2014 (Fig. 7) shows that population growth is a characteristic feature of peri-urban areas of the largest cities in both old and new *Länder*. In turn, studies of the completed new construction, a different aspect of peri-urbanisation show, that in 2003 a considerably higher number of new buildings per 1,000 inhabitants were a characteristic feature of peri-urban areas of the biggest cities in Western Germany. However, by 2012, areas around the biggest cities in East Germany were also marked by higher figures than the rural areas (Fig. 8).

Thus, in Germany areas particularly attractive for internal migration are large metropolises, in particular the peri-urban of Munich, Berlin and Hamburg as well as the regions of Rhein-Main

and Rhein-Neckar in West Germany. After the intense period of suburbanisation in West Germany in the 1970s and 1980s these areas are still targets for immigration that occurs between the rural areas and cities, and are usually described as peri-urban spaces (Wehrhahn 2016). In East Germany the surrounding areas of Berlin and to a lesser extent of cities such as Rostock, Magdeburg, Leipzig and Dresden are also affected by peri-urbanisation.

In recent years there is an increasing evidence, however, that city cores are attracting a rising number of internal migrants in younger age groups and that families are less likely to move from the city cores to the peri-urban surroundings once they have children (Swiaczny 2016). Currently, there is no consensus if this observation constitutes a new trend and longer time series are needed before further research can give new insight into the recent signs of re-urbanisation. At the same time the first generation of new peri-urban settlements in East Germany, built right after the beginning of the system transformation in the 1990s, are now entering a phase of ageing in place and are facing challenges whether they can manage a succession of a new generation of family migrants in the future, given the declining number of the population in the respective age group due to the ongoing demographic change (Friedrich et al. 2014).

Conclusions

Summing up, it should be stressed that peri-urbanisation is an increasingly relevant current issue. This can be witnessed by the growing number of studies on peri-urban areas in individual countries (such as Poland) as well as by the appearance of the definition of the concept and the publication of data on peri-urban areas in statistical yearbooks (*Territory Matters...*, 2006). At the same time peri-urbanisation is an issue difficult to research due to discrepancies in the definitions and descriptions of the very process of peri-urbanisation formulated in particular countries. This implies significant difficulties for comparative research. An example is the presented analysis of peri-urbanisation in Poland, Germany and Latvia in which it was impossible to find a set of identical indicators. Furthermore, although the process of peri-urbanisation does take place in

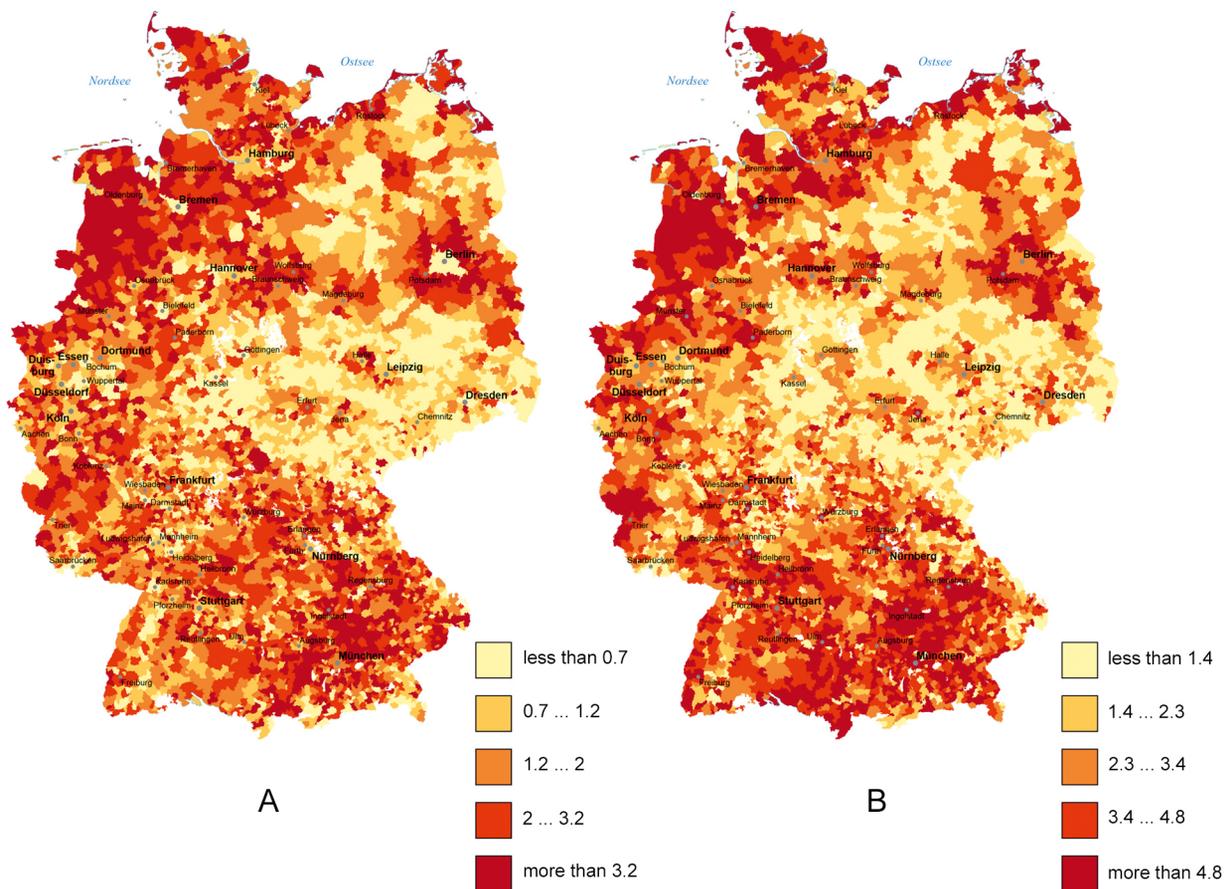


Fig. 8. Number of new residential buildings completed per 1,000 population in Gemeinden in Germany.
Source: Bundesinstitut für Bau-, Stadt- und Raumforschung, Bonn, 2017.

these countries, there is relatively little research devoted to discussing this phenomenon.

However, on the basis of literature and statistical data analysis, it should be pointed out that the process of peri-urbanisation can occur only if the population can move freely. It is thus possible in countries where citizens' individual preferences have a decisive influence on places of residence or its change.

In the paper we have aimed at showing that peri-urban development as a general rural trend began later in the countries of East-Central Europe (after the beginning of the system transformation) than in Western Europe, but the processes and phenomena observed presently in East-Central Europe are the same. In each country analysed, i.e. in Latvia, Poland and Germany, regardless of their pasts, peri-urban areas compared to remoter rural areas are presently the zones of intensive demographic, social, economic and infrastructural changes, and all studies show that this trend will continue. Hence, in the peri-urban areas a

cumulation of social and economic capital supportive of development is found. Yet, we should remember that from the point of view of spatial planning, current rural development with newly created peri-urban zones is very uneven. The situation causes many problems with the efficient management of rural space, especially that the development of peri-urban areas has contributed to the formation of new types of settlement patterns and newly urbanised landscapes in rural areas, requiring rational spatial planning. The results presented in this paper emphasise the need for ongoing comparative research in other East-Central European countries, focusing on the perception of different groups of residents.

The relevant phenomenon of peri-urbanisation still requires further extended studies covering not only the intensity and directions of migration but their implications as displayed in regional statistics. The above analysis has revealed the need for interdisciplinary, in-depth studies covering a variety of regions.

References

- Atkinson A., 1999. Principles and Components of a Strategic EPM process relevant to the peri-urban interface (PUI). Online: http://discovery.ucl.ac.uk/39/1/DPU_PUI_Atkinson.pdf (accessed 12 December 2016).
- Aydalot P., 1985. Le développement de la périurbanisation en France (The development of periurbanisation in France). *DISP* 80/81: 84–89.
- Aydalot P., Garnier A., 1985. Périurbanisation et suburbanisation: des concepts à définir (Peri-urbanisation and suburbanisation: Concepts to be defined). *DISP* 80/81: 53–55.
- Bähr J., 1997. *Bevölkerungsgeographie* (Population geography). UTB, Stuttgart.
- Basten L., 2005. *Postmoderner urbanismus. Gestaltung in der städtischen Peripherie* (Postmodern urbanism. Design in the urban periphery). LIT Verlag, Münster.
- Bengs C., Schmidt-Thomé K., 2006. ESPON 1.1.2. Urban-rural relations in Europe. Final report. ESPON, Luxembourg. Online: https://www.espon.eu/sites/default/files/attachments/fr-1.1.2_revised-full_31-03-05.pdf (accessed: 12 November 2017).
- Berry B.J.L., 1976. The counterurbanisation process: Urban America since 1970. *Urban Affairs Annual Review* 11: 17–30.
- Berry B.J.L., 1978. The counterurbanisation process: How general? In: Hansen N.M. (ed.), *Human settlement systems: International perspectives on structure change and public policy*. Ballinger, Cambridge Mass.: 25–49.
- Biegańska J., 2013. Rural areas in Poland from a demographic perspective. *Bulletin of Geography. Socio-economic Series* 20: 7–22.
- Biegańska J., Szymańska D., 2013. The scale and the dynamics of permanent migration in rural and peri-urban areas in Poland – some problems. *Bulletin of Geography. Socio-economic Series*, 21: 21–30.
- Bocz G.A., Nilsson C., Pinzke S., 2008. Peri-urbanity – a new classification model, rural futures: Dreams, dilemmas, dangers. Compilation. Online: www.ruralfuturesconference.org/.../Gyorgy%20Angelkott%20Bocz.pdf (accessed 8 December 2016).
- Brueckner J.K., 2000. Urban sprawl: Diagnosis and remedies. *International Regional Science Review* 23(2): 160–171.
- Budner W.W., 2008. Procesy metropolizacji i rozwoju metropolii w Polsce (The processes of metropolisation and development of metropolises in Poland). *Acta Scientiarum Polonorum. Administratio Locorum* 7(1): 5–16.
- Caruso G., 2001. Periurbanisation, the situation in Europe: A bibliographical note and survey of studies in the Netherlands, Belgium, Great Britain, Germany, Italy and the Nordic Countries. Final report. Online: http://publications.uni.lu/bitstream/10993/10153/1/Caruso_PeriUrbanEuropeDATAR.pdf (accessed: 7 November 2017).
- Cavailles J., Peeters D., Sekeris E., Thisse J., 2004. The peri-urban city: Why to live between the suburbs and the countryside. *Regional Science and Urban Economics* 34: 681–703.
- Central Statistical Bureau of Latvia, 2017. *Resident population at the beginning of the year*. Electronic database <http://data.csb.gov.lv/> (accessed: 5 November 2017).
- Champion A., Vanderhoff C., 1997. Migration, counterurbanization and regional restructuring in Europe. In: Blotevogel H.H., Fielding A.J. (eds.), *People, jobs and mobility in the new Europe*. Wiley, Chichester: 69–90.
- Cloke P., Goodwin M., 1992. Conceptualizing countryside change: From post-Fordism to rural structured coherence. *Transactions of the Institute of British Geographers* 17: 321–336.
- Czerny M., 2005. *Globalizacja i rozwój. Wybrane zagadnienia geografii gospodarczej świata* (Globalisation and development. Selected issues concerning global economic geography). PWN, Warszawa.
- Dahms F., McComb J., 1999. ‘Counterurbanization’, interaction and functional change in a rural amenity area – A Canadian example. *Journal of Rural Studies* 16(2): 129–146.
- Dahs A., 2017. *Role of the socioeconomic factors and regional policy in the demographic development of Latvia*. Doctoral Thesis. University of Latvia, Riga.
- Dezert B., Metton A., Steinberg J., Garnier J.B., 1991. *La périurbanisation en France* (Periurbanisation in France). S.E.D.E.S., Paris.
- Dymitrow M., Biegańska J., Grzelak-Kostulska E., 2017. Dep- rivation and the rural-urban trap. *Tijdschrift voor economische en sociale geografie*, early view: 1–22. DOI 10.1111/tesg.12263.
- Dymitrow M., Stenseke M., 2016. Rural-urban blurring and the subjectivity within. *Rural landscapes: Society, environment, history* 3(1): 1–13.
- Eberhardt P., 1998. Problematyka narodowościowa Łotwy (The issue of nationality in Latvia). *Zeszyty Instytutu Geografii i Przestrzennego Zagospodarowania PAN* 54. IGIPZ PAN, Warszawa.
- Fielding A.J., 1989. Migration and urbanization in Western Europe since 1950. *The Geographical Journal* 155: 60–69.
- Ford T., 1999. Understanding population growth in the peri-urban region. *International Journal of Population Geography* 5: 297–311.
- Friedrich K., Knabe S., Warner B., 2014. *Kontinuität und Umbrüche im suburbanen Mosaik Sachsen-Anhalts: die Zukunft eines Wohnungsmarktsegments im demographischen Wandel* (Continuity and breaks in the suburban mosaic of Saxony-Anhalt: The future of the housing market in demographic change). IFL, Leipzig.
- Garrod B., Wornell R., Youell R., 2006. Re-conceptualizing rural resources as countryside capital: The case of rural tourism. *Journal of Rural Studies* 22: 117–128.
- Gebhardt H., Glaser R., Radtke U., Reuber P., 2007. *Geographie, Physische Geographie und Humangeographie* (Geography, physical geography and human geography). Spektrum, Berlin/Heidelberg.
- Gehrlein U., 2012. An der Randern der Metropole: Entwicklung, Funktion und Probleme periurbaner Raume in der Rhein-Main-Region (On the edge of the metropolis: Development, function and problems of peri-urban space in the Rhine-Main region). In: Monstadt J., Robischon T., Schoenig B., Zimmermann K. (eds), *Die diskutierte Region, Probleme und Planungsansätze der Metropolregion Rhein-Main*. Campus Verlag, Frankfurt/New York: 155–174.
- Główny Urząd Statystyczny (Statistics Poland), 2017. *Informacja o rozmiarach i kierunkach czasowej emigracji z Polski w latach 2004–2016* (Information on the size and directions of temporary emigration from Poland in the years 2004–2016). Warszawa. Online: https://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5471/2/10/1/informacja_o_rozmiarach_i_kierunkach_emigracji_z_polski_w_latach_20042016.pdf (accessed: 18 December 2017).
- Grochowski M., 2011. Metropolizacja a kształtowanie ładu przestrzennego układów zurbanizowanych (Metropo-

- lisation and the formation of spatial order in urbanised systems). *Mazowsze, Studia Regionalne* 6: 167–172.
- Grochowski M., Korcelli P., Kozubek E., Sławiński T., Werner P., 2013. Peri-urban futures: Scenarios and models for land use change in Europe. In: Nilsson K., Pauleit S., Bell S., Aalbers C., Sick Nielsen T. (eds), *Peri-urban futures: Scenarios and models for land use change in Europe*. Springer, Berlin, Heidelberg: 131–167.
- Grzeszczak J., 1996. Tendencje kontrurbanizacyjne w krajach Europy Zachodniej (Counterurbanisation tendencies in the countries of Western Europe). *Prace Geograficzne* 167, IGiPZ PAN, Warszawa.
- Halfacree K., 2006a. From dropping out to leading on? British counter-cultural back-to-the land in a changing rural-ity. *Progress in Human Geography* 30(3): 309–336.
- Halfacree K., 2006b. Rural space: Constructing a three-fold architecture. In: Cloke P., Marsden T., Mooney P.H. (eds), *Handbook of Rural Studies*. Sage Publications, London: 44–62.
- Hoggart K., 1990. Let's do away with rural. *Journal of Rural Studies* 9: 245–257.
- Hoggart K., 2005a. City hinterlands in European space. In: Hoggart K. (ed.), *The city's hinterland: Dynamism and divergence in Europe's peri-urban territories*. Ashgate, Aldershot: 1–18.
- Hoggart K., 2005b. Convergence and divergence in European city hinterlands: A cross-national comparison. In: Hoggart K. (ed.), *The city's hinterland: Dynamism and divergence in Europe's peri-urban territories*. Ashgate, Aldershot: 155–169.
- Hoggart K., 2016. City hinterlands in European space. In: Hoggart K. (ed.), *The city's hinterland: Dynamism and divergence in Europe's peri-urban territories*. Routledge, London and New York: 1–18.
- Hornis W., van Eck J.R., 2008. A typology of peri-urban areas in the Netherlands. *Tijdschrift voor Economische en Sociale Geografie* 99(5): 619–628.
- Iaquinta D.L., Drescher A.W., 2000. Defining peri-urban: Understanding rural-urban linkages and their connection to institutional contexts. *Land Reform Land Settlement and Cooperatives* 2000(2): 8–26.
- Idczak P., Mrozik K., 2016. Peryurbanizacja w poznańskim obszarze metropolitalnym (Peri-urbanisation in the Poznań metropolitan area). *Studia i Prace WNEiZ US* 46(2): 243–254.
- Ilbery B., 1998. *The geography of rural change*. Longman, Essex.
- Kaplan D.H., Wheeler J.O., Holloway S.R., 2004. *Urban geography*. Wiley&Sons Press, Hoboken.
- Korcelli P., Grochowski M., Kozubek E.B., Korcelli-Olejniczak E., Werner P., 2012. *Development of urban-rural regions: From European to local perspective*. IGiPZ PAN, Warszawa.
- Korcelli-Olejniczak E., 2012. Region metropolitalny – pojęcie, struktura przestrzenna, dynamika (Metropolitan area – notion, spatial structure, dynamics). *Prace Geograficzne* 235, IGiPZ PAN, Warszawa.
- Korf B., Oughton E., 2006. Rethinking the European countryside – can we learn from the South? *Journal of Rural Studies* 22: 278–289.
- Krisjane Z., Apsite-Berina E., Berzins M., Grīne I., 2017. Regional topicalities in Latvia: Mobility and immobility in the countryside. *Proceedings of the 2017 International Conference "Economic Science for Rural Development"* No. 45 Jelgava, LLU ESAF, 27–28 April 2017, 127–133.
- Kröhnert S., Medicus F., Klingholz R., 2007. *Die demographische Lage der Nation Wie zukunftsfähig sind Deutschlands Regionen?* (The demographic situation of the nation. How sustainable are Germany's regions?) Deutscher Taschenbuch Verlag, München.
- Kruzmetra Z., 2011. *Changes in rural settlement patterns of peri-urban areas of Latvia*. University of Latvia, Riga.
- Krzysztofik R., Dymitrow M., Grzelak-Kostulska E., Biegańska J., 2017. Poverty and social exclusion: An alternative spatial explanation. *Bulletin of Geography. Socio-Economic Series* 35: 45–64.
- Lisowski A., Grochowski M., 2009. Procesy suburbanizacji. Uwarunkowania, formy i konsekwencje (Suburbanisation processes. Determinants, forms and consequences). In: *Ekspertyzy do koncepcji zagospodarowania przestrzennego kraju*. Ministerstwo Rozwoju Regionalnego, Warszawa: 217–280.
- Lowry I.S., 1990. World Urbanization in Perspective. *Population and Development Review* 16: 148–176.
- Mahon M., 2007. New population; shifting expectations: The changing experience of Irish rural space and place. *Journal of Rural Studies* 23: 345–356.
- Markowski T., Marszał T. (eds), 2006. *Metropolie, obszary metropolitalne, metropolizacja. Problemy i pojęcia podstawowe* (Metropolises, metropolitan areas, metropolisation. Basic problems and notions). KPZK, Warszawa.
- Mazur M., Bański J., Czapiewski K., Śleszyński P., 2015. Wiejskie obszary funkcjonalne – próba metodyczna wyznaczenia ich obszarów i granic (Rural functional areas – methodological attempt at determining their areas and boundaries). *Studia Obszarów Wiejskich* 37: 7–36.
- Mitchell C.J.A., 2004. Making sense of counterurbanization. *Journal of Rural Studies* 20: 15–34.
- Mrozik K., Idczak P., 2015. Suburbanizacja w wybranych gminach wiejskich Bydgosko-Toruńskiego Obszaru Metropolitalnego (Suburbanisation in selected rural communes of the Bydgoszcz-Toruń Metropolitan Area). *Studia i Prace Wydziału Nauk Ekonomicznych i Zarządzania* 42(2): 183–194.
- Nilsson K., Nielsen S., 2013. The future of the rural urban region. In: Nilsson K., Pauleit S., Bell S., Aalbers C., Sick Nielsen T. (eds), *Peri-urban futures: Scenarios and models for land use change in Europe*. Springer, Berlin/Heidelberg: 405–429.
- Parysek J.J., Mierzejewska L., 2005. Między dezurbanizacją a reurbanizacją: Nowe oblicze urbanizacji w Polsce (Between deurbanisation and reurbanisation: A new image of urbanisation in Poland). In: Jażdżewska I. (ed.), *Współczesne procesy urbanizacji i ich skutki*. Wyd. UŁ, Łódź: 47–56.
- Pauleit S., Sauerwein M., Breuste J., 2016. Urbanisierung und ihre Herausforderungen für die ökologische Stadtentwicklung (Urbanisation and its challenges for ecological urban development). In: Breuste J., Pauleit S., Haase D., Sauerwein M. (eds), *Stadtökosysteme: Funktion, Management und Entwicklung*. Springer-Verlag, Berlin/Heidelberg: 1–30.
- Peri-urbanisation – a phenomenon the rise throughout Europe. NEWRUR research Project 2001–2004. Online: http://newrur.grenoble.cemagref.fr/newrur_cd/doc_pdf/p0etape1com_gb.pdf (accessed 8 December 2016).
- Perlik M., 1999. Urbanisationszonen in den Alpen. Ergebnis wachsender Pendeldistanzen (Urbanisation zones in the Alps. Result of increasing commuters' distances). *Revue de géographie alpine* 87(2): 147–165.

- Perlik M., 2001. Wirtschaftliche Strukturtypen als Indikator für die Verstärkung der internationalen Netzwerkeinbindung der Alpenstädte (Economic structure types as an indicator of the strengthening of the international network integration of Alpine towns). *Revue de géographie alpine* 89(1): 87–103.
- Rasnaca L., Kruzmetra Z., 2014. The population and labour market flows in the ex-socialist non-urban areas of Latvia. In: Babiakova B., Bandlerova A., Brown D., Kaleta A., Kulcsar L.J., Singelmann J. (eds), *Social and economic transformations affecting rural people and communities in Central and Eastern Europe since 1990*. Slovak University of Agriculture in Nitra, Nitra.
- Rasnaca L., Kruzmetra Z., 2014. The population and labour market flows in the ex-socialist non-urban areas of Latvia. In: Babiakova B., Bandlerova A., Brown D., Kaleta A., Kulcsar L.J., Singelmann J. (eds), *Social and economic transformations affecting rural people and communities in Central and Eastern Europe since 1990*. Slovak University of Agriculture in Nitra, Nitra.
- Ravetz J., Fertner C., Sick Nielsen T., 2013. The dynamics of peri-urbanization. In: Nilsson K., Pauleit S., Bell S., Aalbers C., Sick Nielsen T. (eds), *Peri-urban futures: Scenarios and models for land use change in Europe*. Springer, Berlin/Heidelberg: 13–44.
- Rogatka K., 2014. *Dynamics and structure of building movement in Poland at the turn of 21st century*. PhD thesis defended at the Faculty of Earth Sciences, Department of Urban Studies and Regional Development, Nicolaus Copernicus University, Toruń.
- Rządowa Rada Ludnościowa, 2014. *Sytuacja demograficzna Polski. Raport 2013–2014* (Demographic situation in Poland. Report 2013–2014). Warszawa. Online: https://bip.stat.gov.pl/files/gfx/bip/pl/defaultstronaopisowa/461/1/1/raport_rrl_2013-2014.pdf (accessed: 18 December 2017).
- Sadura P., Murawska K., Włodarczyk Z., 2017. *Wieś w Polsce 2017: diagnoza i prognoza* (The countryside in Poland 2017: Diagnosis and forecast). Fundacja Wspomagania Wsi, Warszawa.
- Sieverts T., 1997. *Zwischenstadt. Zwischen Ort und Welt, Raum und Zeit, Stadt und Land* (Between city. Between place and world, space and time, city and country). Vieweg, Braunschweig.
- Środa-Murawska S., 2013. Przestrzenne zróżnicowanie poziomu rozwoju społeczno-gospodarczego Niemiec (Spatial differentiation of Germany's level of socio-economic development). *Nierówności Społeczne a Wzrost Gospodarczy* 31: 308–317.
- Swiaczny F., 2015. Auswirkungen des demografischen Wandels auf die regionale Bevölkerungsdynamik in Deutschland (Effects of demographic change on regional population dynamics in Germany). *Raumforschung und Raumordnung* 73(6): 407–421.
- Szymańska D., Biegańska J., 2011. Fenomen urbanizacji i procesy z nim związane (The phenomenon of urbanisation and related processes). *Studia Miejskie* 4: 13–38.
- Szymańska D., Biegańska J., 2012. Infrastructure's and housing's development in the rural areas in Poland – some problems. *Journal of Infrastructure Development* 4(1): 1–17.
- Szymańska D., Biegańska J., 2014. Charakterystyka obszarów wiejskich w Polsce w kontekście starzenia (The profile of rural areas in Poland in the context of ageing). *Studia Obszarów Wiejskich* 35: 89–108.
- Szymańska D., Środa-Murawska S., Biegańska J., 2008. Germany – two demographically different states? *Bulletin of Geography. Socio-economic Series* 10: 85–91.
- Szymańska, D., 2013. *Geografia osadnictwa* (Settlement geography). PWN, Warszawa.
- Territory matters for competitiveness and cohesion*, 2006. Facts of regional diversity and potentials in Europe. ESPON Synthesis Report III, results by 28 November 2006, Bruxelles. Evidence from the ESPON 2006 Programme. Online: www.espon.eu/export/sites/.../peter-mehlbye_presentation_28-11-2006.pdf (accessed 10 December 2016).
- The Economic Profile of Riga 2017*. The Riga City Council City Development Department. Online: http://www.liaa.gov.lv/files/liaa/attachments/pdf_rigas_ekonomikas_profils_2017_eng.pdf (accessed: 20 November 2017).
- Tisdale H., 1942. The process of urbanization. *Social Forces* 20(3): 311–316.
- Węclawowicz G., Bański J., Degórski M., Komornicki T., Worcelli P., Śleszyński P., 2006. *Przestrzenne zagospodarowanie Polski na początku XXI wieku* (Spatial development of Poland at the beginning of the 21st century). IGiPZ PAN, Warszawa.
- Wehrhahn R., 2000. Zur Peripherie postmoderner Metropolen: Periurbanisierung, Fragmentierung und Polarisierung, dargestellt am Beispiel Madrid (To the periphery of postmodern metropolises: Periurbanisation, fragmentation and polarisation, illustrated by the example of Madrid). *Erdkunde* 54(3): 221–237.
- Wehrhahn R., 2016. Bevölkerung und Migration (Population and migration). In: Freytag T., Gebhardt H., Gebhardt U., Wastl-Walter D. (eds), *Humangeographie kompakt*. Springer-Verlag, Berlin/Heidelberg: 39–66.
- Wirth L., 1938. Urbanism as a way of life. *The American Journal of Sociology* 49(1): 1–24.
- Wołkonowski J., 2015. Trendy w emigracji siły roboczej krajów bałtyckich w latach 2003–2013 (Trends in the emigration of Baltic states' workforce in the years 2003–2013). *International Business and Global Economy* 33: 140–153.
- Zimmermann C. (ed.), 2006. *Zentralität und Raumgefüge der Großstädte im 20. Jahrhundert* (Centrality and spatial structure of the cities in the 20th century). Franz Steiner Verlag, Stuttgart.