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Impact of selected socio-economic factors on migration patterns in Poland

Abstract

This paper identifies the impact of socio-economic development on migrations in Poland. It analyses the influence the development exerts on population's migrations within the country. In addition, counties were ranked by their socio-economic development on the basis of such criteria as: the average investment in enterprises in PLN per capita, the average number of newly registered business entities per 1,000 inhabitants, a percentage growth in the number of apartments in 2010 against 2005, a monthly gross salary against the national average salary 2005–2010 and the average unemployment rate, from 2005–2010. Averaged data for poviats (administrative region of the 2nd order) reported for 2005 to 2010 were used to eliminate any short-term fluctuations of the economic condition which could come as a result of large investment projects or bankruptcies of enterprises; these could have caused an abrupt rise in unemployment. In consequence, they could trigger a momentary swift in ratios, disfiguring the end result. Next, a typology of poviats followed based on their socio-economic advancement and here the results were confronted with the net population migration index calculated for the analysed period. The typologies closing the paper present the interdependencies of the socio-economic development and movement of people. It was proven that the socio-economic development and its advancement is a factor which influences migrations of population in Poland. A division between a more developed western part of the country and considerably less developed eastern part of the country is showing. Furthermore, the largest cities and their outskirts have the highest economic potential.

Key words: migration; socio-economic development; suburbanization

Introduction

A.G. Champion (1994) run comprehensive research on migration of population in developed European countries. He presented and discussed 18 types of migrations occurring after World War II, which refer to the main types defined by B. White (1993). The researcher identified three main migration groups and their time frame. The 1950s and 1960s witnessed labour market-related migrations followed by a stage of family reunification and, recently, post-industrial migrations. In turn, L. Kurekova (2013) discussed contemporary migration theories at many levels, with

a particular emphasis on labour-market related movement of people from Eastern European countries to Western European countries. In addition, the impact of high economic growth and globalisation on migrations of highly qualified experts to metropolises of Western Europe and the USA is mentioned (Sassen 1994; Beaverstock 2005). Similarly, migrations in metropolitan areas were analysed by many authors. P. Knox (1994) analysed migratory behaviour using the largest American cities as his case studies and he pointed out that younger people tended to change their place of residence more often than older people and that migration decisions came easier to those who had already migrated. The author concluded that migration decisions were often influenced by the attitude towards property – those who rented apartments or houses tended to migrate more than those who owned them.

P. Boyle (1994) was yet another author analysing reasons for migration in the context of suburbanisation. In his opinion, the middle class migrates from a central city to its metropolitan area because of industrial plants located in the outer zone (Dorocki 2008; Szymańska, Płaziak 2014; Płaziak, Szymańska 2014). He believes that other important triggers of such phenomena are lower land and housing prices and attractive natural environment. One could also say that migrations within the metropolitan area are more intensive than movement of people from the outside the area (Gordon, Vickerman 1981), as confirmed by the thesis presented by A.G. Ravenstein (1885). On the other hand, according to demographic trends, the majority of migrants between 30 and 39 years of age, with children not older than 10 (Johnson, Macieski 2009). Also Central and Eastern European cities witness suburbanisation processes which are particularly evident in the 21st century in suburban zones of Prague and Brno (Sýkora, Ourednek 2007), Budapest (Nagyváradi et al. 2011) and Moscow (Mason, Nigmatullina 2011).

The topic of migration in Poland in population balance relations was dealt with by E. Zdrojewski (2000) and other authors. E. Zdrojewski proved that the highest growth in migration was reported in the most developed and urbanised regions. This observation was confirmed by previous research by P. Eberhard (1989) who also observed that migrants came mainly from economically deteriorated areas moving to developed urban centres (Dorocki 2012). According to the author, this caused disfigurement of demographic structures and education in these areas. In turn, Z. Długosz (1985) came up with a typology of migration based on a method of taxonomy of the mean differences. He also presented a typographs' method which uses the value of influx, outflow, migration balance and turnover for population and ranked all Polish cities in a static and a dynamic ranking.

Reasons for migration in Poland were analysed and presented by many authors. It was found that migrations were largely caused by family factors, and those related to employment/job and apartment/housing (Grochowski 2004). In addition, migrants often change their place of residence by moving to a location to which they have been commuting (Gawryszewski 1974). Z. Rykiel and A. Żurkowa (1981) came up with essential characteristics of migration in Polish cities, which may serve as the basis for following changes in directions of people's migration occurring in the 1970s. Their in-depth analysis showed differentiation of migration in terms of the size of the target centre. Large cities reported a positive migration balance while small and medium-sized cities reported a negative migration balance. Furthermore, the authors noticed a trend consisting in moving

from small satellite towns to central urban centres. On the turn of 20th and 21th century, the process reversed in consequence of a progressing suburbanisation processes (Kurek, Gałka, Wojtowicz 2014; Nowotnik 2012; Zborowski et al. 2011; Gałka, Warych-Juras 2011; Raźniak 2007), which had already occurred in western parts of Poland and spread to its central and eastern part (Zborowski, Raźniak 2013). However, 21th century has witnessed initiation of the counterurbanisation process occurring on the coast of the Baltic Sea, lake districts in the north of Poland, and mountain areas of Poland with attractive landscape (Raźniak 2013a; Winiarczyk-Raźniak, Raźniak 2012; Raźniak 2009).

The purpose of the paper is to describe the level of socio-economic development across Poland and its influence on population's migrations within the country.

Methods

In order to identify the differentiation of Poland in terms of its socio-economic development, a ranking of poviats was created on the basis of 5 indicators:

- the average investment in enterprises in PLN per capita, 2005–2010,
- the average number of newly registered businesses per 1,000 inhabitants, 2005–2010,
- a monthly gross salary to the national average (the national average = 100), 2005–2010,
- growth in the number of apartments, 2005–2010,
- the average unemployment rate, 2005–2010.

The above-listed indicators can determine the position of a poviat position in a regional ranking. High investment made by enterprises and a rapidly growing number of new businesses may be reflected by creation of new jobs. In addition, a large supply of apartments offers more opportunities for a wider choice, as well as increases a price competition, which is important in relocation one's residence. Migration may be also prompted by the intent to increase one's income, which may be related to the average salaries in a given area. Furthermore, a low unemployment rate may suggest that a region may offer more employment opportunities. Note that the analysis of the gross monthly salary was based on the official statistics published by the Central Statistical Office and may be different from the actual values because of non-recorded and not reported income which is difficult to estimate. Note that the employment-related research is also based on the official statistics of the Central Statistical Office and does not include work performed without any formal/contractual basis and persons who are temporarily abroad but remain registered as unemployed with the Polish Labour Office. In light of the above-mentioned, the actual figures may be slightly lower than the official statistics. In consideration of growing labour costs borne by employers and employees, the discrepancies between the official and actual employment-related data may intensify, though.

The mean rank method was applied in order to build a ranking of poviats based on the socio-economic development criteria. The top poviat in the ranking scored 379 (as there are 379 poviats in Poland) and the bottom poviat scored 1. The sum of the scoring for the five indicators produced a ranking of poviats in terms of their

socio-economic development. A poviat could score no more than 1,895 (379 x 5) and not less than 5 (1 x 5).

On the basis of the above-discussed hierarchy, a typology of poviats based on the socio-economic advancement was build (figure 1). The analysed poviats were classified as follows: type 1 – demonstrating a very high socio-economic development (poviats which scored more than 1,200); type 2 – poviats demonstrating high socio-economic development (1,000–1,199); type 3 – poviats demonstrating medium socio-economic development (scoring from 800 to 999); type 4 – poviats demonstrating low socio-economic development (scored 600–799) and type 5 – poviats demonstrating very low socio-economic development (scoring below 600).

Then the population net migration index (figure 2) and the average influx of population from another voivodeship (by poviats – figure 3), were created.

To sum up relations between the degree of the socio-economic development and population migration, typology of poviats were defined, with poviats divided into 9 types (figure 4): type *a* – demonstrating low socio-economic development (scoring <800) and a high negative net migration index (<–2‰); type *b* – demonstrating medium socio-economic development (scoring between 800 and 1100) and a high negative net migration index (<–2‰); type *c* – demonstrating advanced socio-economic development (scoring >1100) and a high negative net migration index (<–2‰); type *d* – demonstrating low socio-economic development (scoring <800) and a low negative net migration index (–2‰ – 0‰); type *e* – demonstrating medium-advanced socio-economic development (scoring between 800 to 1100) and a low negative net migration index (–2‰ – 0‰); type *f* – demonstrating advanced socio-economic development (scoring >1100) and a low negative net migration index (–2‰ – 0‰); type *g* – demonstrating low socio-economic development (scoring < 800) and a positive net migration index; type *h* – demonstrating a medium socio-economic development (scoring from 800 to 1100) and a positive net migration index; type *i* – demonstrated high socio-economic development (scoring >1100) and a positive net migration index. It should be assumed that type *i* is the best one, type *h* is fine, while *c, e* and *f* could be classified as poor. On the other hand, poviats classified to *a, b, d* and *g* types offer the lowest socio-economic development.

For the purpose of more general conclusions, an aggregated typology of the socio-economic development was prepared (figure 5) on the typology based on the socio-economic advancement and the migration balance (see figure 4). Three types were defined: type I demonstrating high developmental advancement (types *h, i*), type II demonstrating a medium-advanced development (types *c and e*) and type III demonstrating a low economic development (type *a, b, d, f, g*).

Socio-economic development advancement in the case of selected indicators

Warsaw scored 1,869 and topped the ranking (1,869 against the total of 1,895). In addition, the highest socio-economic development is guaranteed in large cities (Gdańsk, Poznań, Krakow and Wrocław). Note that poviats in the vicinity of Warsaw ranked high, with 4 poviats ranking in the top 20. These were: Piaseczno, Warszawski Zachodni, Pruszków and Grodzisk Poviats. This may indicate a strong effect of the capital city on its rapidly growing suburban zone which is also

noticeable around other urban centres (Domański 2010). The following poviats of the Podkarpacie voivodeship (voivodeship is an administrative region of the 1st order) ranked at the bottom of the ranking: Lubaczów (scored 248), Nisko (scored 276), Strzyżów (279).

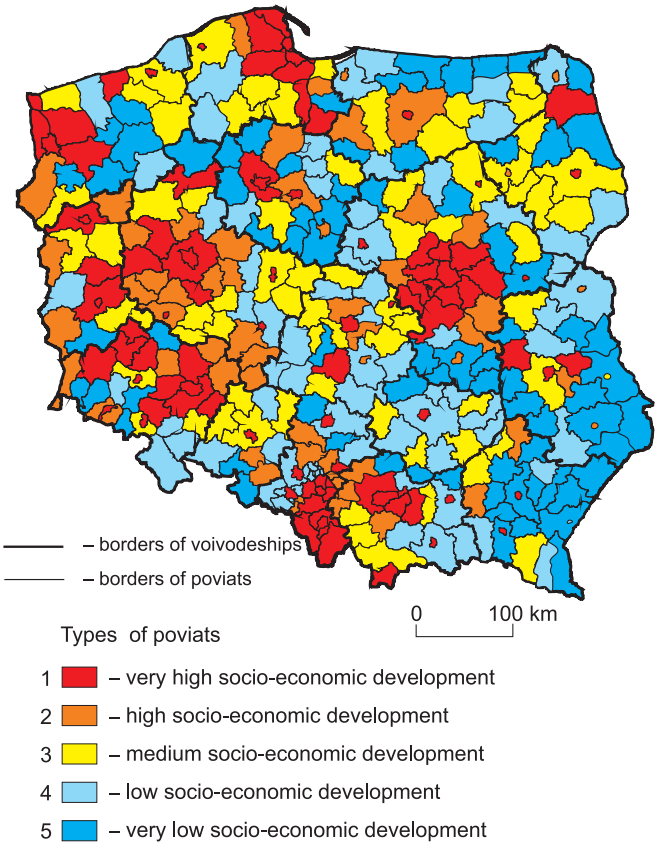

Fig. 1. Typology by selected socio-economic factors, 2005–2010
Source: Own study, based on the data from the Central Statistical Office

The ranking unveiled a division into large cities with their peripheral zone and high socio-economic development (Warsaw, Wrocław, Krakow, the TriCity, Poznań, Szczecin) and other areas (figure 1). The clearest presentation of the division offers Warsaw and its outskirts, with as many as 12 poviats classified as type 1. Such development leads to erasing physiognomic differences between the city and its suburban zone (Korenik 2011), creating a large metropolitan area. However, note that Polish suburban zones have witnessed intensified investment only since the early 21st century and, in this respect, they are considerably backward when compared to other developed countries where such phenomena occurred in the mid-20th century (Champion 1994; White 1993). Furthermore, note that the positive types surrounding the capital are moved westwards, towards the city of Łódź. This could

be the beginning of a large bipolar Warsaw-Łódź system. Such a system could create a developmental opportunity, in particular for relatively poorly developed Łódź voivodeship. In addition, EU countries are located to the west of Warsaw and they are the main trade partners of Poland. Similarly, the outskirts of the city of Poznań tend to lean west. Also the south of Poland witnesses formation of a belt of poviats demonstrating medium and high socio-economic advancement, which stretches from the border with Germany through Wrocław, the Katowice Conurbation to Krakow Metropolitan Area. In said region, there are big cities (Krakow, Wrocław), as well as industrial districts (Katowice Conurbation, Legnica & Głogów Industrial District) generating high investment and jobs. The axis of the area is A4 (E40) motorway from Germany through Wrocław to Krakow (and partially to Rzeszow) and one needs to remember that accessibility is one of the key economic (Raźniak 2012a) and migration (Kopecky, Suen 2009) triggers. Relatively few country districts show high socio-economic development and are located far from large cities. If such cases were reported, they mainly coincided with mineral resources found in their areas and, consequently, large corporations mining the deposits. They ensure relatively many jobs and high salaries; that, in turn, offers better housing conditions (Legnica and Głogów Basin, Łęczyca Poviat, Bełchatów Poviat). Similarly, outstanding natural attractions may guarantee high development, as exemplified by: the Tatra Poviat (the mountains), Kołobrzeg Poviat (the sea), Augustów Poviat (lakes). Other parts of the country (in particular in the east of Poland), see an intensified contrast between smaller cities classified as type 1 and 2 and other areas demonstrating low and very low development (type 4 and 5). Generally, types 1 and 2 are located in western Poland. It mainly applies to the Greater Poland voivodeship, Lubuskie voivodeship and the central part of the Lower Silesian voivodeship. It comes as a result of high investment of companies and a rapidly growing number of new businesses (Raźniak, Winiarczyk-Raźniak 2014; Raźniak 2012b). The key reason behind it is the proximity of Germany, the main trade partner for manufacturing plants operating in Poland (Informacja o sytuacji..., 2012). On the other hand, the central and eastern part (except for Warsaw–Łódź system) demonstrated low and very low advancement in terms of development (types 4 and 5). In particular, Świętokrzyskie, Podkarpackie and Lubelskie voivodeships are at the bottom of the ranking. They are all located in the south-eastern part of Poland where advanced development was guaranteed in larger cities only.

Net population migration index

In recent years, spatial distribution of the net population migration index has been significantly polarised. The highest values of the indicator were reported in suburban zones, with the suburban zone of Warsaw taking precedence. Said zone reports positive values of the indicator. The zone consists of as many as 10 poviats and the indicator is more than 3 persons per 1,000 inhabitants (figure 2). In addition, the impact of the capital is stronger from the west than from the east. It could be consequent upon an improved road and transport access to these areas, as well as upon relative proximity of a large sales market i.e. the city of Łódź.

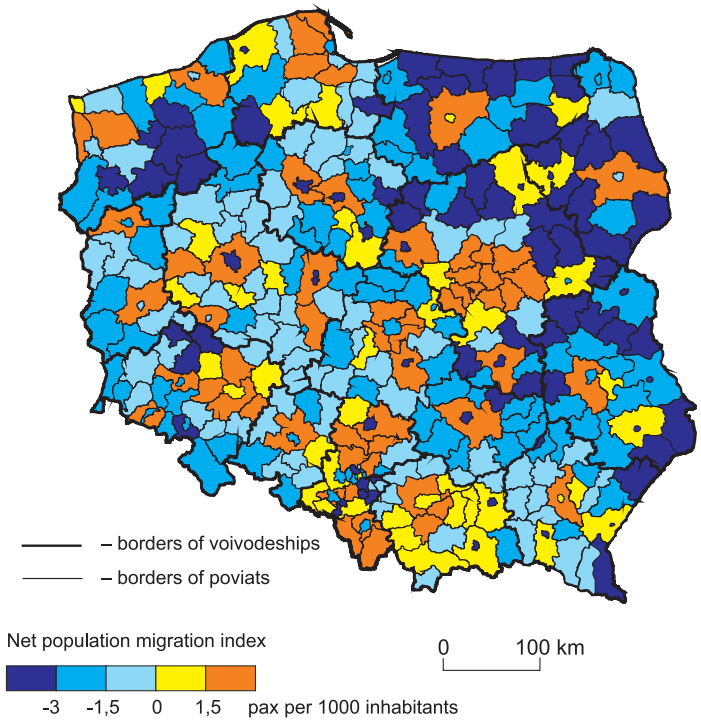

Fig. 2. The average net population migration index by poviats, 2005–2010
Source: Own study, based on the data from the Central Statistical office

In addition, a zone strongly impacted by central cities existed in the outskirts of Krakow, Poznań, Wrocław and the Tricity (including cites: Gdańsk, Gdynia and Sopot). In turn, the city of Łódź experiences a somewhat delayed suburbanisation processes when compared to other large cities of Poland. At present, it seems that accessibility is among key factors affecting the extent and directions of suburbanisation both in Poland and abroad (Baum-Snow 2008; Mason, Nigmatullina 2011). Still, the majority of townships reported a negative migration balance, with the exception of Warsaw, Wrocław, Krakow and Rzeszow. On the other hand, cities in Poland offer highly advanced socio-economic development (see figure 1); however, an increasing number of people is looking for less expensive places to live in the outskirts. Such less expensive locations attract people both from centrally located cities and from other voivodeships of the country. In addition, they can use a well-developed infrastructure and labour market of cities nearby. In turn, regions situated outside of large metropolitan areas reported a fairly negative migration balance even if some showed advancement of socio-economic development. Principally, the above-mentioned applied to poviats – homes of large industrial plants which dominate the local labour market (Puławy poviat, Legnica and Głogów coal basin). Such types of entities may offer no alternative employment outside the dominant companies. In consequence, any turbulence experienced by the dominant sector may have a negative

impact on the socio-economic development. On the other hand, large metropolitan areas find it easier to survive a crisis of one or even more economic sectors because of their more differentiated market.

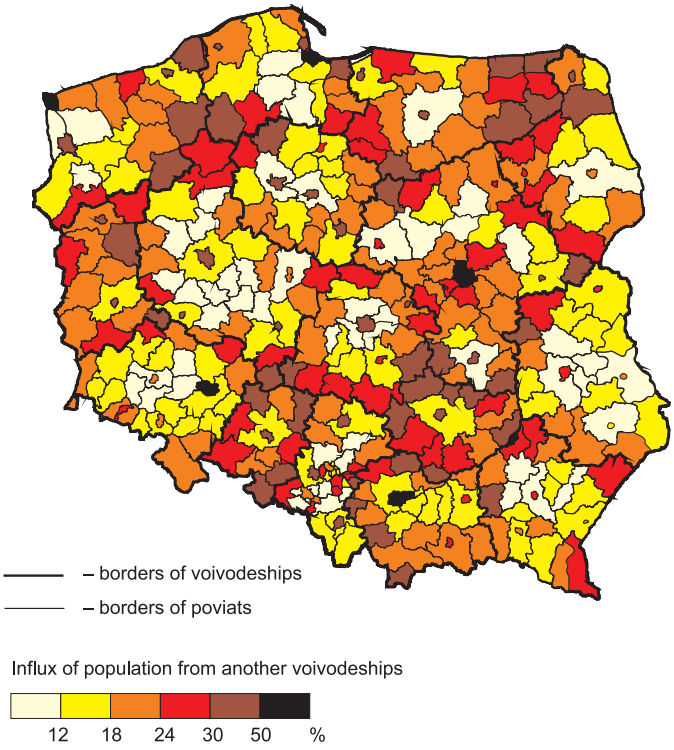

Fig. 3. The average influx of population from another voivodeship by poviats, 2005 – 2010
Source: Own study, based on the data from the Central Statistical office

Analysing the average influx of population from another voivodeship to poviats one may see that the influx was higher than 50% in as few as 6 cities (figure 3). Warsaw, Krakow and Wrocław occupy the leading positions here as they rapidly grow their international connections (Raźniak 2013b) which results in creating new jobs. In addition, these three cities as the only large cities with more than 0.5 million population reported positive migration balances (see figure 2). In light of the above, one can say that strong supraregional impact of Warsaw, Krakow and Wrocław, which are capitals of voivodeships demonstrating a high economic development potential (Bogdański 2012; Kurek 2010) results in the excess of influx over outflow which sets off strong suburbanisation processes in their outskirts. Also in other cities the percentage is relatively high. Note that the high socio-economic development of Warsaw outskirts affects its attractiveness among migrants coming from other voivodeships and heading not only for the capital but also for its suburban zone. More than 24% of people from other voivodeships flew into the above-mentioned counties. So far, the suburban zone of Warsaw is the only zone of

such a degree of attractiveness to migrants. Suburbs of other large cities do not report influx of migrants higher than 18%, which indicates that their socio-economic advancement remains lower than the development of the capital city. In this respect, one can see that migrants' interest in suburban zones is deteriorating in proportion to the size of population of a central city – outskirts of medium-sized cities (from 100,000 to 300,000 inhabitants) are only slightly attractive to migrants from other voivodeships. However, a trend has emerged to migrate larger distances to settle down in the suburbs of large cities. This shows that directions of migrations in Poland are undergoing a transformation which, so far, can be seen in Warsaw urban region. By the 1980s, the impetus of migrants would mainly hit cities (Eberhard 1989) while now it goes beyond the borders of voivodeships as migrants tend to choose suburban zones for their residence. Also, see a high percentage of migrants from other voivodeships in areas located far from large urban regions, which, on the other hand, offer outstanding natural attractions. Picturesque landscapes of the Mazurian Lake District, beaches on the Baltic Sea coast or highlands in the south of Poland are particularly attractive to residents of large cities of Poland (Raźniak 2009) who look for unpolluted natural environment and landscapes that cannot be found in cities. Therefore, these are the areas having higher indicators of quality of life, and residents of these areas present different lifestyles (Winiarczyk-Raźniak 2004, 2006, 2011). This could also be the initial phase of counterurbanisation process when migrants move to areas located within a large distance from big cities in search for peace and quiet, in particular when they retire and no longer need to commute to work on a daily basis.

Correlation between advancement of the socio-economic development and population migration

The strongest *i* type could be predominantly found in the largest metropolitan areas of Poland (Warsaw, Krakow, Wrocław) with a wide zone of well-developed poviats popular among migrants (figure 4). Łódź, the third largest city of Poland, had a very different situation. It could have been a result of the 1990s crisis in the textile industry which was mainly connected with the market of the former USSR (Jakóbczyk-Gryszkiewicz, 2011).

Even if large central cities were classified as less advanced types (e.g. Poznań, TriCity, Szczecin), in their suburbs the best type – type *i* prevails. A correlation between occurrence of the types and the size of population in a given area was found. The smaller a city is, the less advanced the type was to which its suburban poviat was classified. In addition, note the spatial dependence on the east-west axis. Better types prevail in the western and central part of Poland, indicating a higher socio-economic advancement contrasted with predominantly week and the least advanced types in the eastern part. Generally, one may say that suburbanisation processes occurring around the largest cities increase the socio-economic advancement of their outskirts.

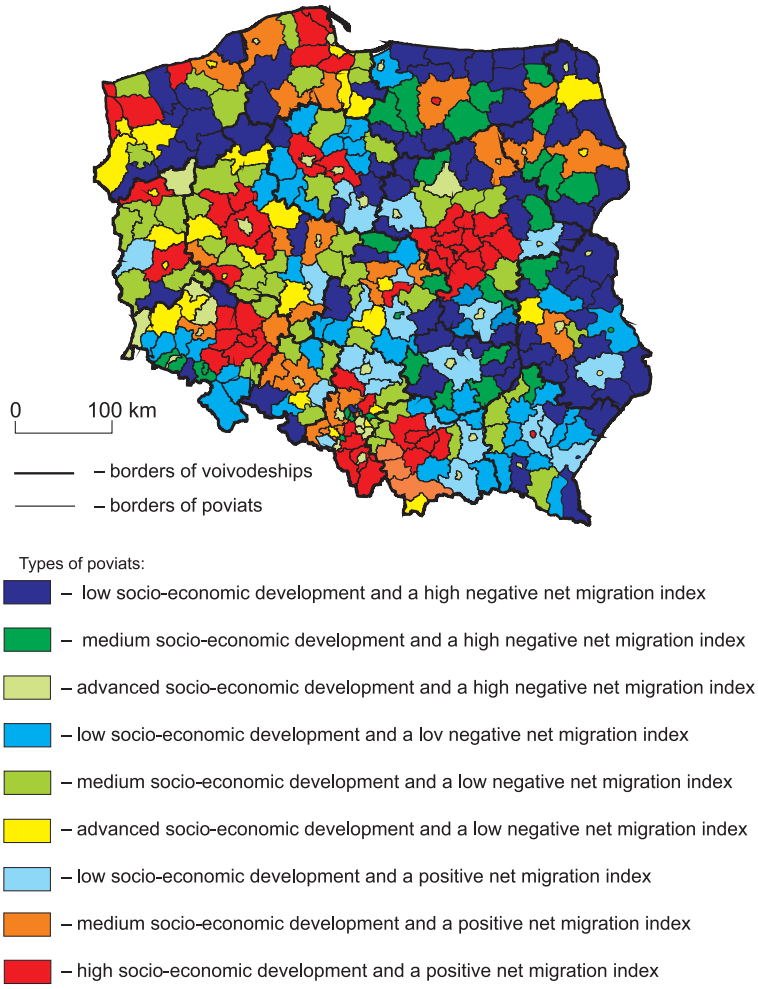

Fig. 4. Consolidated typology by advancement of the socio-economic development and net population migration index, 2005–2010

Source: Own study, based on the data from the Central Statistical office

This shows a very clear division of Poland into its eastern, poorly developed part and its western, more advanced part (figure 5). In addition, a large Warsaw-Łódź urban region was seen emerging; however, mutual links of these two cities are not as dense as links between some Western European cities (Allen 2010; Wall, Knap van den 2011). Furthermore, the influence of transport access resulting from the routing of the A4/E40 motorway in the south-western part of Poland was also appreciated. What is more, type I with the most advanced socio-economic development prevails in large cities and their suburbs. In smaller urban centres, development is generally less advanced (type II) while their outskirts have been classified as type III, demonstrating the lowest development. This is mostly the case of poviats in central and eastern Poland.

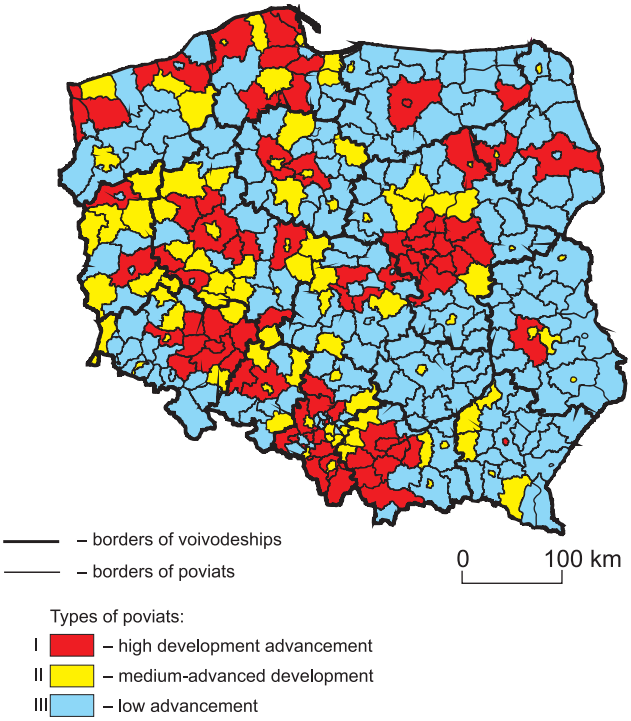

Fig. 5. A synthetic typology by advancement of the socio-economic development and net migration index, 2005–2010
Source: Own study, based on the data from the Central Statistical office

Summary

The socio-economic development and its advancement is a factor which influences the migration of population in Poland. A division between the more developed western part and a much weaker eastern part of the country is showing. Furthermore, the largest cities having the highest economic potential are the most economically advanced. Their impact on the neighbouring areas can be observed as popularity of these areas for settlement and residential purposes is growing. In addition, migrants moving between voivodeships find them increasingly attractive. For the time being, this applies largely to the urban region of Warsaw. This may suggest transformation in migration directions from inflows to the largest cities observed by 1980s when compared to migrants to their outskirts in 20th century. Migrations to suburban areas are mainly prompted by search for less expensive property and higher quality of life. On the other hand, residents of suburbs may enjoy the economic, business and service facilities offered by a neighbouring large city. However, in the largest urban regions, no interdependency between the number of population and social and economic development has been established. As a result of the

1990s crisis of the light industry, which used to be the leading industry of the city of Łódź, the city's social and economic developed is not as advanced as indicated by the size of local population. In turn, Warsaw and its outskirts reported the highest development which also translated into a considerable inflow of population into the area. In the future, it is likely to set up a bi-polar Warsaw-Łódź system, in particular in consideration of the fact that, since 2013, both cities have been connected by a motorway. This may accelerate the pace of growth of the city of Łódź. High level of social and economic development in locations far from large urban centres did not determine their attractiveness among migrants. In such cases, high ratios are typically consequent upon development of one economic sector which, during the crisis and downward market trends in sales of some products, could result in redundancies and deteriorating of people's perspectives. Furthermore, large cities have a suburban zone having a positive migration balance and high degree of development while cities of a smaller size have a suburban zone with a positive migration balance while their social and economic development is weaker. Note that there are areas of outstanding natural qualities where development of tourism may also contribute to higher local development, often reflected by the attractiveness of these locations for those choosing them as their final destination. In this group, there are residents of large cities migrating to the coastal area, lake regions or to the mountains, triggering counter-urbanisation processes. In general terms, the population tends to migrate to areas which guarantee high socio-economic development.

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