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## Areas of socio-demographic hazards in the Lubelskie voivodeship, at the turn of the XX and XXI century

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## **AREAS OF SOCIO-DEMOGRAPHIC HAZARDS IN THE LUBELSKIE VOIVODESHIP, AT THE TURN OF THE XX AND XXI CENTURY**

**ABSTRACT.** The aim of the article was to point out reasons for the existence and spatial location of areas of socio-demographic hazards within the voivodeship, compared with the situation in the whole country, during the period of structural transformation. In order to achieve this objective, we have used the method of the demographic regress chain. The current level and deployment of the examined phenomenon both in Poland, and in the Lubelskie voivodeship, have been deeply influenced by particular demographic processes, which have taken place after the II World War, among others, the settlement of the western and northern lands, the level of internal migrations, dynamics of the natural movement, urbanization processes and various disparities regarding the national economic development. As far as the Lubelskie voivodeship is concerned, the areas which were mostly endangered with depopulation were the regions of limited communication accessibility, bad natural conditions, low level of economic development, or even real longstanding diminution of population, and major deformations within demographic structures. However, the low level of hazards was observed in the cities of the region, which was associated with the good demographic situation of these units.

**KEY WORDS:** the Lubelskie voivodeship, areas of socio-demographic hazards, depopulation.

Transformation of the Polish economic system, taking place within the last several years, has had a great influence on the demographic, as well as the social situation in our country. In the case of Central and Eastern European countries, including Poland, the regional development was considerably affected by broadly defined globalization processes, on one side (including elements of economic competitiveness and creativity), next to the structural transformation

and European integration on the other side (Soja, Zborowski, Raźniak, 2007). Problematic areas (described in the literature of the subject as hazard areas, areas retarded in their development, poorly developed areas, conflicted areas, areas suffering impecuniosity, depression areas, difficult areas, areas of production reserves) are currently one of the main interest targets of the active regional policy of the European Union. According to one of the principles of the European regional policy (principle of concentration) these areas might apply for the biggest possible financial support from resources of the Structural Funds (Churski, 2004). Nonetheless, the allocation of problematic areas is a multifarious procedure. This results from the fact that the concept of problematic regions (endangered areas), although commonly used, has not yet been distinctively and unambiguously defined.

While defining the notion regarding areas of socio-demographic threats, the specialist literature oftentimes points out the deficiency of the existence of a given feature (features), or else these features are identified solely for purposes of a specific thesis (Churski, 2004). Generally when describing the conception of problematic areas, they are perceived as a part of a greater geographical space, for example a district, a country or a group of countries (neighbouring countries), which are characterized by a low level of economic growth, poor dynamics of development, and the prevalence of negative results of the socio-demographic transformation process (after Zagożdżon, 1988; Jelonek, 1988; Eberhardt, 1989; Bański, 1999; Churski, 2004). Areas of this kind cause clearly defined problems, usually impossible to be solved within the regional capabilities, hence they require the involvement of external resources, especially the appropriate planning and programming of regional structures (Zagożdżon, 1988; Ciok, 1994). It is worth mentioning that the subject literature lacks both complex elaborations concerning the socio-demographic endangered areas, and their delimitation. These matters are mentioned solely within the scope of researches regarding the problematic areas. Most of the publications focus on the analysis of distinct demographic processes and phenomena, which result in negative socio-economic outcomes within these regions. Works that should be enumerated here, are those dealing with problems of depopulation (Eberhardt, 1989; Mischczuk, 1992), ageing of the population (Długosz, 1997, 1998, 2000; Kurek, 2000, 2002) or finally unemployment. The theoretical model of demographic threats, presented in the form of the “demographic regress chain”, is a new constituent of the specialist literature (Zborowski, 2002, 2004).

The chain illustrates that the depopulation of regions is one of the possible effects of negative socio-demographic procedures and phenomena (Fig. 1). Results of such a process may originate from the low level of socio economic growth not only within the rural areas, but also in the monocultural regressive

regions (Zborowski, 2002). There are five separate demographic structures distinguished within the model. The first one, that is *the socio-economic structure* characterizes the population of areas which are poorly developed, as far as the education and employment are concerned. The low level of human qualifications and the domination of individuals working within I or II sector of the economy affects the unemployment rate. Hidden unemployment (intensified by dismissals of quite a large group of people having two professions) occurs in the rural area, while within the regions of regressing industry it features a structural character. Economic underdevelopment influences *immigration behaviours of the population* (phase II). Increased migrations of people to large cities, as well

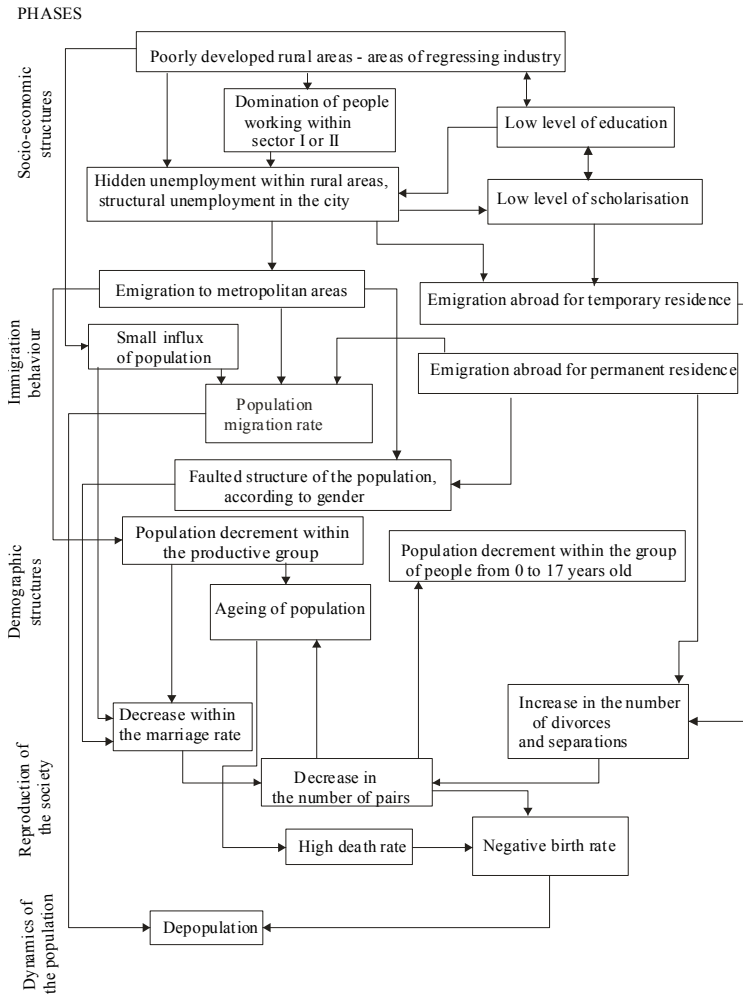


Fig 1. Chain of the demographic regress (Zborowski, 2002)

as abroad, can be observed within these districts. In most of the cases people migrating to metropolitan areas are fairly young, and the aim of their journey is the desire to improve their professional qualifications; moreover, they usually stay in the metropolis after graduation. Another group of immigrants includes people of low qualifications, who move to cities in order to find a new source of maintenance. Migration leads to disorders within *demographic structures*, principally relating to gender and age. What can be observed is the decrease in the participation of people of pre-working and working age, which shall result in the senescence of the society. Both complications in demographic structures, together with immigration behaviours, have a strong impact on *the reproduction of the population*. In the areas with the upset gender structure and considerable participation of people of working age, the marriage rate significantly decreases, which consequently leads to a substantial drop in the birth rate. Increased overseas migration causes growth in the number of separations and divorces, and this indirectly influences the decline in the number of births, and simultaneously results in the negative birth rate. Long lasting real diminution in the number of the population may beget the depopulation of a specific region (Zborowski, 2002).

In relation with the basic stages of the demographic growth of the areas retarded in their development, the following question arises: does the demographic regress occur in the discussed Lublin voivodeship? Subsequently, the main objective of the present elaboration was to indicate the areas of social and demographic hazard in the examined voivodeship in the year 2003, compared to the national situation.

The analysis covered 234 communes of the Lubelskie voivodeship (including 41 municipal communes and 193 country communes) in accordance with the administrative division of the 1<sup>st</sup> January 1999. Time confines of the research include the years 1988 and 2003, thus it reaches the beginnings of the system transformation. This enables us to keep trace of all the demographic transformations taking place in the Lublin voivodeship, during a relatively long time interval, lasting several years, which allows us to elicit trends of a secular character. In order to achieve this, the present thesis has utilised “the chain of the demographic regress” (Zborowski, 2002).

While choosing the population features the authors have used the following two criteria. The first of them has taken into consideration the conception of “the demographic regress chain”, utilized in the present elaboration. Therefore authors strove to carefully choose particular features, as to introduce a representative for each of the demographic phenomena and processes indicated in the regress chain. Whereas the second criterion have taken into account the possibility of obtaining appropriate statistical data. Ultimately, there were seven features exploited in this case study, namely: 1) higher education indicator, concerning

inhabitants who were 15 years old or more; 2) vocational education indicator, concerning inhabitants who were 15 years old or more; 3) net migration rate; 4) participation of working people in agriculture, compared to the overall number of working people; 5) ageing rate; 6) birth rate for 1,000 inhabitants; 7) population dynamics rate within the years 1988–2003. The majority of variables have been calculated according to the condition of 31.12.2003; however, the natural movement coefficient and the factor of the migration balance have been computed as averages from the years 2001/2003, so as to limit possible accidental values for these measures. The following parameters: basic and higher education indicators, and the participation of working people in agriculture, have been calculated on the basis of the results of the National Census of Population and Housing, 2002.

Establishing the level of socio-demographic dangers in the Lublin voivodeship have been performed with the help of the technique called the table of signs. The table of signs includes seven, aforementioned, features. Border values, in the form of the arithmetic average for the Lubelskie voivodeship, have been calculated for each of the measures. These values have enabled us to carry out a dichotomic classification of the analyzed variables, with the means of two signs: (+) and (-). Each of the variables was given the feature of stimulants or destimulants, due to the level of social and demographic hazards. Among the stimulates we can enumerate: the higher education factor, the birth rate, the migration balance and the population dynamics factor. Three indicators concerning: vocational education, ageing and the working people's participation in the agriculture, have been listed among destimulants. As far as stimulants are concerned, rising values of the measure indicated the decrease in the level of demographic hazards, while it is quite the opposite in the case of destimulants, where higher values of the features signify the increased level of danger. Communes, where the value of stimulants was above the average, were affixed with the mark (+), and if the value was below average, they were affixed with the sign (-). The situation with destimulants is quite the opposite, that are variables above average were given the mark (-), and below average (+).

Since the allocation of every possible combination of signs from each of the seven features would be an extremely complex task, categories of socio-demographic dangers have been established according to the following key: I class of hazards – category including “very low” risks, characterized communes, where 0, 1 or 2 traits indicated significant level of threat to the socio-demographic growth, which means that it placed itself above the average for destimulants, whereas below the average for stimulants. II class of hazards, of “low” risk level, included communes with 3 features denoting significant level of socio-demographic threats. III class, of “moderate” risk level distinguishes 4

“considerable” traits. Successive class- class IV, of “high” risk level consisted of units with 5 “considerable” features. The last class – class V, of “extremely high” risk level included communes, where 6 or even 7 traits denoted with a significant level of socio-demographic threats.

Allocated risk classes constituted the grounds for drawing maps illustrating social and demographic threats in 2003 not only in Poland (Fig. 2), but also in the Lublin voivodeship and its communal structure (Fig. 3). This allowed the authors to prepare the spatial exemplification of the mostly endangered areas, within the national and regional scale.

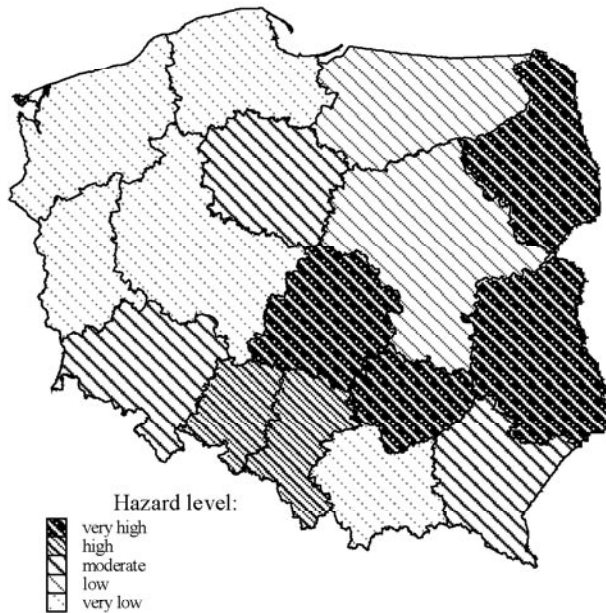


Fig 2. The level of socio-demographic hazards in Poland in 2003, according to voivodeships

*Source:* Personal elaboration, on the basis of the CSO statistical data and Results of the National Census of Population and Housing 2002, Warsaw, 2003.

The analysis executed for Poland has illustrated a significant differentiation within the level of socio-demographic risks in respective regions of the country (Fig. 2). The regional differentiation of this phenomenon has been influenced by specific demographic processes, which have taken place in Poland after the II World War (Długosz, 1997). Within the central and eastern parts of Poland, where strong immigration processes, deepened by the detrimental economic situation, have taken place for few dozens of years, a very high level of socio-demographic

threats was observed (Fig. 2). In 2003 these voivodeships (that is The Podlaskie, The Lubelskie, The Łódzkie and The Świętokrzyskie) were characterised by the significant participation of the working population in agriculture, high values of the demographic senescence factor and relatively high registered unemployment rate (Table 1). However, within the areas where in 2003 the actual birth rate was positive (The Małopolskie voivodeship, The Wielkopolskie voivodeship and The Pomorskie voivodeship), and the low participation of people in the post-working age (The Lubuskie voivodeship, The Wielkopolskie voivodeship, The Pomorskie voivodeship and The Zachodniopomorskie voivodeship) the level of social and demographic risks was the lowest one. The process of settling lands in western and northern Poland after the II World War, the level of integral migrations, dynamics of natural movement of population and the tradition of families with numerous children, and the recently shaping, mainly in strongly urbanized areas, model of family with one or no children, are only some of the factors which have found their reflection in the formalized demographic image of Poland (Długosz, 1997). Furthermore, disparities in the level of national economic growth, visible in the differentiation of social and professional structures (that is employment, education, unemployment, etc.), attract various types of variations in behaviour concerning the natural and immigration movement of population.

In association with the national socio-demographic problems, which have been outlined in the present case study, it is worth pondering on the fact which factors have influenced the differentiation of the level of socio-demographic hazard in the Lublin voivodeship and how is the spatial arrangement presented. On the basis of the performed analysis we can observe that areas of most significant demographic and social risks in the Lubelskie voivodeship can be divided into three fundamental spheres: 1) central (of Roztocze region) including communes gathered around Goraj, Radechnica and Turobina; 2) north-eastern sphere (represented for example by communes of Sosnówka, Podedwórze, Wyrki); and 3) south-eastern represented by communes located near the border, from Wola Uhruska through Dorohusk, Dubienka, Horodło, Hrubieszów, Dołhobyczów until Ulhówek (Fig. 3). Few communes located on the south-west of Kock created the distinct region of extremely high risk. Among these communes we can enumerate: Abramów, Baranów, Jeziorzany, Michów and Ułęż. During recent several dozens of years, the above mentioned spheres have been characterized by an actual significant diminution of population, caused by the negative balance of natural and migration movement (Fig. 4). The emigration, mainly of young people, have influenced the distortion of demographic structures. Regions mostly endangered demographically were dominated by population of post-working age, and what is more a surplus of women compared to men has been observed in the gender structure in the central, north-eastern sphere and in the Kock region. The



supremacy of women in the older age groups results from the biological reasons (over-mortality of men), and partly from historical reasons as well – outcome of the II World War (Miszczyk, 1992). The south-eastern sphere stands as an exception to this rule, since a shortage of women has been observed there, which is associated with their emigration to better developed centers or even overseas.

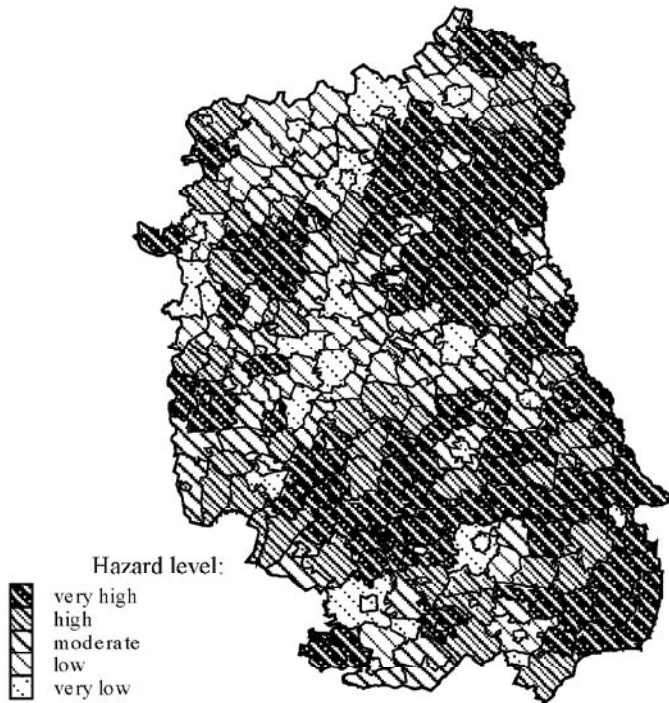


Fig 3. The level of socio-demographic hazards in the Lubelskie voivodeship in 2003

Source: Personal elaboration, on the basis of the CSO statistical data, 1988–2003.

Moreover, the disadvantageous economic situation of these areas (significant unemployment, considerable participation of people maintaining themselves from the work in agriculture, lack of industry and limited communication activity) did not encourage young people to stay and settle within these regions. As a consequence of detrimental outcomes of demographic processes and poor economic situation, these regions were endangered, to a great extent, with the ageing of the society and its depopulation.

Areas of moderate level of risk have been clearly outlined within the Lubelskie voivodeship. They have concentrated along main communication routes of the region. Among these regions one can enumerate: 1) communes located along

the prospective A-2 motorway, passing through Międzyrzec Podlaski – Biała Podlaska – Terespol (it is a sector of the route coming from Western Europe, and linking Rotterdam with Berlin, Poznań, Warsaw and then following the direction to Brześć, Minsk and Moscow); 2) communes located along the “Kiev route” (Piaski – Chełm – Dorohusk – Kowel – Kiev) together with its western extension going from Lublin, through Puławy, towards Radom, Łódź and Poznań; 3) communes located along the road no.19, running through Międzyrzec Podlaski, Lublin, Kraśnik, Janów Lubelski, located along the road from St. Petersburg, Tallinn, Riga and Kowno, through Białystok, Lublin, Rzeszów, Barwinek towards Budapest and the Balkan Peninsula; 4) communes located along the road no. 17 (Lublin – Krasnystaw – Zamość – Hrebenne – Lviev), which is the shortest connection between the Baltic coast and the Black Sea – from Gdańsk and Warsaw to Odessa, Moldavia and Romania. National and international road connections passing through the discussed region cause specific economic outcomes, result in the growth of economic activity, hence they activate the developmental possibilities of these regions (Gorzym-Wilkowski, 1995). A higher level of the economic growth in these communes has caused lesser transformations of demographic structures, natural and migration movement of population (Fig. 4).

Areas of low or very low level of socio-demographic dangers within the Lubelskie voivodeship have generally occurred in the cities of the region and in the communes constituting their suburban spheres.

Lublin, together with the surrounding rural areas such as: Jastków, Niedrzwica Duża, Niemce or Wólka, would be a good example. Significantly low level of hazards, occurring both in Lublin and in other cities of the region, proclaimed the good demographic situation of this area. It evinced in the increased proportion of people in the pre-working and working age, surplus of women over the number of men, and the positive migration balance. What is more, a well developed, as far as this region of the country is concerned, service and industry sector, and the fact that Lublin is the capital of this region and the main centre of youth education in this part of Poland, attracted neighbouring population and had a positive impact on the socio-demographic processes.

The present analysis has shown that particular demographic processes, which took place after the II World War, have significantly influenced the differentiated level of socio-demographic risks, both in Poland and in the Lubelskie voivodeship. The settlement of western and northern lands, the level of internal migrations, the dynamics of the natural movement, urbanization processes and differences relating to Polish economic growth are only some of the factors, which have affected the current level and location of the studied phenomenon. Areas within the Lublin voivodeship, which were mostly endangered with depopulation, were the regions of limited communication accessibility, bad natural conditions, or low

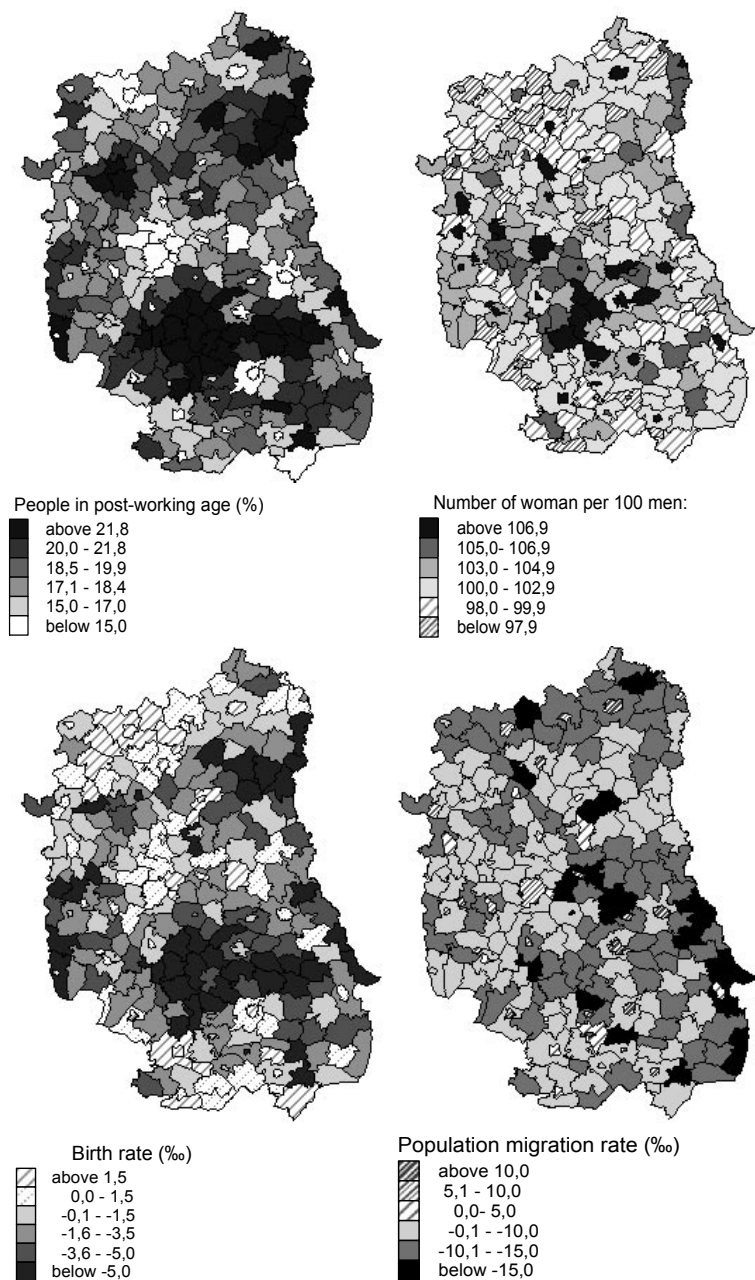


Fig 4. Chosen demographic measures in the Lubelskie voivodeship in 2003

Source: Personal elaboration, on the basis of the CSO statistical data, 2003.

level of economic development. Moreover the high level of socio-demographic risks was influenced by the real longstanding diminution of population, and major deformations within demographic structures (gender and age). However, the low level of risk was visible in the cities of the region and the suburban areas, which was associated with well developed urbanization processes and beneficial demographic situation of these units. We can assume that together with the popularised model of the family with one or no children, deepening economic crisis of the voivodeship and the still continuing real diminution of population, successive strengthening and expansion of the risk areas within this region.

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