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UNEMPLOYMENT IN THE CONTEXT OF HUMAN RESOURCES IN THE EASTERN PART OF THE SLOVAK-POLISH BORDER REGION

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Abstract
The social-economic development in the border regions in the eastern part of the Slovak-Polish border area is difficult. It is determined by a wide range of factors of which, apart from location, the key role is played by human resources represented by inhabitants of nine border districts in the Prešov Region on the Slovak side, five powiats in the Malopolskie Voivodeship and six powiats in the Podkarpackie Voivodeship on the Polish side. The paper deals with the research of unemployment in the context of changes in the age and education structure of inhabitants in the last 15 years, such as human resources quality indicators in the demarcated region. The majority of the regions and powiats belong to the least developed regions within their national territory and that is also reflected in the development of registered unemployment. Inversely proportional dependence between the population development and educational level changes can be observed. While the population's educational level defined by the highest educational level achieved rises, the unfavourable population development negatively manifests itself in changed population age structure – decreased the share of youth population aged less than 15 in the region population and the increased post-productive group of population. For the future period continuous ageing of population is presumed that will be reflected in continuous labour force ageing. The situation is also worsened by the unfavourable migration trend associated with younger, economically active population leaving the region for work.

Key words
unemployment, human resources, age structure, educational structure, regional development factor, border region

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INTRODUCTION

Unemployment is one of demonstrations that the market economy running is closely linked with the labour market. In Slovak and Polish conditions it is a relatively new phenomenon and is related to social-economic changes in the end of 1990's. It is a social and economic problem that, apart from some concrete local or regional indicators, is also influenced by globalisation tendencies. From the point of territorial distribution research of economically active population, there are certain natural relations coming through in connection with economic advancement or underdevelopment of the region, with its location within the core-periphery territorial classification as well as in relation to human resources quality.

Any border area, its demarcation and characteristic features are very closely linked with the national border, its function and impact on the surrounding territory. The regions neighbouring with the national border (border regions) are a part of national (intrastate) regional structures on one side and on the other side also a part of international cross-border structures. The social and economic occurrences in border regions can be considered depending on the used territorial context (intrastate vs. cross-border). Within the intrastate territorial polarisation (core-periphery) the border regions on the Slovak and Polish side are mainly marginal ones, whether on the mesoregional (districts) of the local (municipalities) level. It is a multi-dimensional expression of the peripherality or marginality, not only within the meaning of territorial but also social and economic peripherality (Halás 2008). The results reached by Švecová, Rajčáková (2014) with respect to the comparison of the regions on the Slovak side with the central ones conclude that they are economically less developed regions with deepening negative demographic features (population ageing, birth-rate decrease, overall population drop), but also social impacts (unemployment increase, young population migration for work to other regions of the country or abroad, low average income, poverty increase etc.).

The paper's goal is to analyze the unemployment development in the eastern part of the Slovak-Polish border in the last 15 years especially in relation to the human resources quality expressed by the demographic and educational population structure as well as in relation to the existing labour market conditions. With regard had to the above mentioned specifications of the researched border location of the territory a partial goal will be to compare and evaluate the dynamics of the changes in the border regions on both border sides, on the Slovak and the Polish one.

THEORETICAL FRAMEWORK

Employment or unemployment is one of the social-economic level indicators of a region. It is traditionally understood in a close relation to the labour market. In

the paper, we strive to point out to its relation to human resources quality, especially with the demographic and educational structure.

Human resources are deemed to be one of the key factors determining a region's development as they can influence some other co-affecting factors (Mládek et al. 2006). They dispose of a varying level of adaptability to external conditions, and so they can actively use newly arising market opportunities or minimize arising threats (Michaeli et al. 2010). Similar opinion is shared by Lipták-ová (2007) and Slobodníková (2012) according to whom human resources are the most crucial element for region's development. Educated labour force is the key competitive factor.

The term Human Resources is closely linked with the term Human Capital. Slobodníková (2012) attributes a synonymous character to these terms and, adds the terms Human Potential and Labour force to them.

Along with work, capital, engineering and technology, human capital is an important factor in regions' development (Galor, Tsiddon 1997). The term human capital itself is difficult to define, because its definition is relatively broad. Schultz (1961 In Rafaj, Rehák 2017) considered human capital to be any obtained skills and knowledge that make a difference between qualified and unqualified labour force. According to OECD (2007) human capital is all knowledge, learning, skills, abilities and qualities of an individual that facilitate the creation of personal, social and economic welfare. Gajdoš (2001, p. 270) understands it as „people, their social-demographic characteristics and qualities, education, skills, creation as a source of their productive abilities, qualification". Čaplánová (1999, p. 42) uses the term human capital to name „aggregate of inborn and acquired abilities and knowledge that people dispose of".

Dobeš (2003) recommends dividing human capital into a general and specific one. General human capital is deemed to be universal abilities, skills and givennesses usable more-or-less in any sphere of human activities. More other authors (e.g. Dobeš 2001, Ďuričeková et al. 2010, Slobodníková 2012) divide the definition of human capital into two parts – human capital resources and its usage.

Human capital by its reproduction, education and abilities increases its value. This implies that the human capital value is not a stable quantity but variable, dynamic and constantly changing. Irreplaceable particularity of human capital is its creativity that cannot be substituted by anything else and so, it irreplaceably increases its value (Ďuričeková et al. 2010).

According to Slobodníková (2012) human capital (and human resources) influences the development of a region in two ways. Apart from the fact that they act as a client and a customer supporting the development of production and services, they also represent the work offer within the meaning of the labour force qualification. Therefore, the labour market and especially employment are an important part of human capital formation and its development in a region and vice versa.

In many papers by foreign (e.g. Workie-Tiruneh 1998 In Dobeš 2001) or domestic authors (e.g. Kačírková 1998, Hamada, Kasagranda 2013, Vidová 2013, Hronec et al. 2014) a positive relation between education and employment was confirmed. Educated people have better opportunities to choose a job. They are as well more skilled in the process of looking for a job. They adapt to an employer's requirements more flexibly. They manifest a higher level of innovation (Dobeš 2001).

Therefore, education and investments in education belong to one of the fundamental pillars of human capital formation. Education is a determining factor of labour force's ability to adapt to new conditions (Valach 2007).

By contrast, during unemployment human capital and resources depreciate. There is the same risk for an employee without further education, but with much slower course of depreciation of human capital (Tarišková, Skorková 2016). If he is not able to adapt to work and given work conditions, he has to bear health, economic and social impacts (Ďuričeková et al. 2010). A person without employment loses work and other habits (such as getting up earlier in the morning). The loss of knowledge, experiences and qualification leads to disqualification and thereby to the depreciation of human potential. The devaluation of an individual's human capital causes suffering not only to the individual himself, but also to the whole economics (The Big Sociology Dictionary 1996 In Porubčinová 2011).

Unemployment impacts have a broad-spectrum character. It is the main reason why unemployment is researched from various aspects by experts, namely from the point of demography, economy, psychology and sociology. Economists and sociologists deal with the unemployment issue more significantly and intensively than geographic provenance authors. The unemployment research in Slovakia has its specific features. More papers dealing with the topics were drawn up after 1990, when the problem of unemployment started to be discussed again. Practically from that time, unemployment is evident in our country and its increasing regional disparities can be observed. These circumstances lead to the increased interest in the research of territorial (geographic) aspects of unemployment in our conditions.

As fast growth of the unemployment rate was accompanied by very strong regional differentiation, it was closely related to overall regional development of the country and its individual regions. Only a limited number of authors were engaged in the unemployment problem in Slovak geographic literature. One of them was Bezák (1995, 2001), who was occupied with regional differences with respect to unemployment in Slovakia in his papers as well as with the relation between the development of regional and national unemployment, the regional labour market and the unemployment flow. Other authors were Székely (1999, 2001), Rajčáková (1999), Rosič (2002). All the authors put their minds to the issue of Slovak and regional unemployment as well as the unemployment of specific (endangered) population groups.

As for the latest papers dealing with territorial (geographic) aspects of unemployment we consider the most inspiring ones to be the papers by Rosič, Kaňuk (2009), Križan et al. (2009, 2010a, 2010b) and Rajčáková, Švecová (2010, 2014). Some of the mentioned authors pay their attention to the division of Slovak regions according to their social-economic level and search for the reasons of inadequate dimensions of certain regions. The analysis of the imbalance between the work offer expressed by the number of job seekers and job demand, expressed by job vacancies was the focus of Huber, Woergoetter (1997). They evaluated the sensitiveness of the regional unemployment rate to the changes on the national unemployment level. They noted that this sensitiveness is lower in the Slovak Republic i.e. the Slovak regions are in average more isolated from the national unemployment rate development, they are less influenceable by its development. Even the variability of the sensitiveness between the districts is higher in Slovakia.

The foreign authors' researches in the recent years have often focused on the research of social-economic indicators (including unemployment) in relation to the population's health or mortality rate. They understand the unemployment to be one of the factors influencing the population's health. Many studies point to the fact that unemployed people have worse health and higher mortality rate than the employed ones. It is generally acknowledged that the unemployed have lower quality of health and shorter life, especially men (Lindström 2009, Hayo 2007, Artazcoz et al. 2004).

A lower number of researches deal with the unemployment rate itself as a dependent variable and the indicators that imminently influence it (Coile, Levine 2007, Badinger, Url 2002). The papers focusing on similar issue in the surrounding countries should be also mentioned (Murawska 2016, Flek, Mysíková 2015, Kilimova, Nishnianidze 2017). All three papers deal with the research of the relation between the unemployment rate and social-demographic features, especially the relation between the educational level, gender and the age structure. The relation between the unemployment, demand on the labour market and educational structure in a region was observed in the papers by Pastore (2012), Szmielińska-Pietraszek, Szymańska (2015).

The majority of papers focused on unemployment deals with it on the national or the regional level (mesoregional level), sporadically on the district and the municipality level (microregional level). It evidently relates to a relatively good accessibility of the statistical database. The lower level (districts, municipalities) are the ones that are not paid attention to despite the fact that this point of view could be interesting or could disclose certain connections between the unemployment rate development and the influence of certain selected social-economic indicators on the local level. Sevä (2009) in his paper observes social risks on the local level (unemployment is one of the risks) in Sweden using the individual and multi-level

regress analysis. Strong influence of the demographic structure, education and the unemployment branch structure on the local unemployment rate in the small regions NUTS 4 level was established in the papers by Ciźkowicz et al. (2016).

DATA AND METHODS

In the analysis of population migration and the age structure we followed from the population census data in Slovakia in 2001 and 2011, in Poland in 2002 and 2011 and findings from the inter-census period in 2016. The population educational structure of the researched region comes out of the 2001 and 2011 Slovak census data and 2002 and 2011 Polish census data. As the outcome data we were finding out the numbers of inhabitants according to the highest achieved education that was recalculated per 100 inhabitants aged above 15 or 13 for both said periods. There was a certain problem with the comparison of the census data that consisted in the differences in finding methodology, in different school legislation that was also reflected in the school system and individual education levels.

The professional literature contains a lot of approaches to the selection of education indicators. A relatively frequent approach is e.g. the share of secondary or tertiary educated population in of various population age groups (of total population size, of population size older than 15 years, of population size aged 15-64 or 25-64 etc.). This approach was used by authors of population education level maps in *Atlas obyvateľstva Slovenska – Population Atlas of Slovakia* (Mládek et al. 2006) as well as the authors of the monograph *Školstvo na Slovensku v kontexte regionálnych disparít – Education in Slovakia Within the Context of Regional Disparities* (Lauko et al. 2011). Another approach is connected with using summary values – indexes or coefficients. Kulčár (2010) provides as an example the education index used by the UNO when calculating HDI, or the education index according to Klas (2000) calculated as a total of four-fold of the population share with tertiary education as the highest education achieved, the two-fold of the population share with secondary education as the highest education achieved and one-fold of other population's share. In their analysis, Rajčáková, Švecová (2014) use the education level index expressed as the population share with complete secondary education + three-fold of the share with tertiary education per inhabitants older than 15. In the study we used the methodology of education index calculation according to authors Blažek, Csank (2007). The index calculated as the share of the total of inhabitants with complete secondary education and a two-fold of tertiary educated population from the total population size aged more that 15 (for the Slovak side), or 13 (for the Polish side). Based on the comparison of the calculated values per districts and powiats with the average in the region or voivodeship, the administrative units were divided into three groups – with over-average values, with average values and with under-average values.

The methodical approach to collection and processing of statistical information on unemployment contains various differences. In Slovakia, the two essential statistical resources with respect to unemployment are *Selected Labour Force Survey* (SLFS, VZPS in Slovak language) and the *information system of unemployed job seekers via the Offices of Labour, Social Affairs and Family* (ÚPSVaR in Slovak language). Apart from the number of people who lost their jobs, the information on unemployment also relate to their overall development and structure on the labour market: from the point of age, gender, education, occupation classification, length of their unemployment and territorial distribution.

The SLFS is a standard method recommended by the Eurostat and ILO (International Labour Organization). This method of information acquisition on the labour market development is applied in all the developed countries with the market economy. In Poland it is executed by the Central Statistical Office (GUS), in Slovakia it is the Statistical Office of the Slovak Republic. As the methodology is compatible, it is possible to compare the data from both databases. This permanent monitoring of labour force enables analyzing of the position and the development of various types of households and citizens from the economic, social and demographic point of view. It provides details on the economic activity of population, data on employed persons divided in more detail and information on overall unemployment size including those unemployed who are not registered by the Labour Offices.

Since the SLFS data show relatively high deviation on lower levels (districts and municipalities in Slovakia, powiats and gminas in Poland) and are suitable to analyze up to the level of NUTS 3, as the source of status data on unemployment rate and structure the second methodology was used. It was the information system of the unemployed citizens seeking a job via the ÚPSVaR register in Slovakia that is possible to use for comparisons on the district level. The database in Poland follows from similar presumptions as the one in Slovakia while the unemployment data were sourced from the powiat and voivodeship labour offices (Urząd pracy), the Public Employment Services and the central labour database, of the Ministry of Labour and Social Affairs of the Polish Republic. Both data sources are comparable. The SLFS methodology and the labour offices statistics related to unemployment in the Slovak Republic and Poland provide mutually slightly different results of the unemployment rate. This fact is influenced by some factors. A brief overview of the basic factors influencing the unemployment rate from the SLFS and the labour offices statistics is documented in Table 1.

Within the researched regions we analyzed selected unemployment structures according to age, education and length of registration. The method of saving and archiving of the data from the point of the age structure was not consistent in both countries. The Slovak statistics used the age categories with 5-years intervals. The Polish statistical data contain 5 age categories – unemployed 24 years and under,

Table 1 Overview of essential factors influencing the unemployment rate from SLFS and Labour Offices statistics

Factors	SOURCE	
	SLFS	Labour Offices statistics
content specification of indicators9	standard ILO definitions	national legislation
techniques of data collection	sociological survey	registration based on citizen's personal request in his place of residence
Unemployment rate construction		
Numerator	number of the unemployed during a referential period	number of the unemployed in the researched month
Denominator	number of EAP, i.e. working people + the unemployed during a referential period	number of EAP, i.e. aggregate number of working people from SLFS + average monthly number of the unemployed
compatibility with international standards	compatible	incompatible

Source: Kostolná, Hanzelová, 1997

25-34 years, 35-44 years, 45-54 years and above 55 years. The individual age categories are not identical and, that is why we have recalculated the Slovak age categories to the 5 Polish intervals. Based on the calculation, we were able to compare the unemployed age structure on the Slovak and the Polish side of the region.

The number of education categories was unified, their number was decreased for the purposes of mutual comparison and clearer arrangement and thereby the following groups were created:

- without education and primary education,
- training school and secondary vocational school without maturita (secondary education without maturita),
- secondary vocational school with maturita exam, grammar schools (secondary education with maturita),
- higher, tertiary education and scientific specialization.

The evaluation of the unemployment according to the length of the registration period followed out of four basic categories: up to 3 months (short-term unemployment), 4-12 months (medium-term), 13-24 months (long-term) and more than 24 months (extremely long-term).

Researched Territory

The researched territory with the area of 15,840 km^2 is located on the north-east of Slovakia and south-east of Poland and represents a compact territory along the Slovak-Polish border. The relief along with political and historical development of both countries caused that the regions on the Slovak-Polish border were developing relatively separately despite their territorial closeness and without any significant mutual social-economic bonds. This led to differences in arrangement of population, in the settlement system, the structure and the placement of economic activities while even in the Slovak-Polish border area there is observed the increase in these differences in the direction from the east to the west (Więckowski, Michniak et al. 2012).

The demarcation of an area is conditioned by the administrative division of Slovakia and Poland. On the Slovak side, it consists of nine districts of the Prešov Self-Governing Region – Poprad, Kežmarok, Stará Ľubovňa, Bardejov, Svidník, Stropkov, Medzilaborce, Humenné and Snina. On the north, its border is identical with the national Slovak-Polish border, on the west with the border between the Prešov and Žilina Region, on the east with the national Slovak-Ukrainian border. The southern border is made by the district borders of Snina, Humenné, Stropkov, Svidník, Bardejov, Stará Ľubovňa, Kežmarok and Poprad. The territory of 6,322 km^2 is located on the northern part of the Prešov Region (it makes 70.5% of its total area) and each of the regions has an imminent territorial contact with the Slovak-Polish national border. The characteristic feature of the researched territory in Slovakia as a whole is its marginality in relation to the economic-administrative centres and development axis. One of the impacts is also the high unemployment rate not only in the Prešov Region, but also within the Slovak context. More than a half of the districts in the researched territory (Kežmarok, Svidník, Bardejov, Medzilaborce, Snina) belong to the group of the least developed districts in Slovakia.[1] Another important attribute is its border location that, from the point of social-economic development, represents certain limitations conditioned mainly by the problems in transport accessibility, incomplete infrastructure as well as in labour market functioning. Despite the real throughput of the Slovak-Polish national border, it seems more like an obstruction in the researched area despite the fact that the potential of the cross-border contact and cooperation is used rather occasionally and only in selected domains of activities with the emphasis put on the development of cultural-social contacts and tourism development (Rosič, Madziková 2014).

1 Under Act No. 336/2015 on least developed districts support and on amendment and supplementation to certain acts (hereinafter referred to as the „Act") that became effective on 15th December 2015 the least developed district (LDD) is considered to be a district in which the registered unemployment rate calculated from the disposable number of job seekers recorded by the Offices of Labour, Social Affairs and Family was in the period of at least nine calendar trimesters during the last twelve consecutive trimesters higher than 1.6-fold of the average registered unemployment rate in the Slovak Republic in the same period.

Regarding the focus of our paper, the territorial demarcation, apart from the above specified Slovak districts, also comprises the surrounding Polish administrative units on the powiats level. The Polish part of the Slovak-Polish border area is created by the powiats of two voivodeships – Malopolskie and Podkarpackie (Figure 1). From the Malopolskie one the following powiats are concerned: Tatrzanski, Nowotarski, Nowosadecki, Gorlicki, from the Podkarpackie Voivodeship: Jasielski, Krosnienski, Sanocki, Leski, Bieszczadzki. In the region, there are two towns with the powiat rights – Nowy Sacz in the Malopolskie Voivodeship and Krosno in the Podkarpackie Voivodeship. The total area of the Polish border territory is 9,518 km^2, of which 4,522 km^2 is created by the powiats of the Malopolskie Voivodeship (30% of the Malopolskie Voivodeship) and 4,996 km^2 the powiats of the Podkarkackie voivodeship (28% of the Podkarpackie Voivodeship area). Similarly as in the case of districts on the Slovak side, the Polish parts also consists of marginally located and, from the vast part, less developed region of Poland exclusive of the town powiats. The common feature from the point of urbanisation processes is the prevailing share of rural population, the urbanisation rate on the voivodeship level on the Polish side is 49.4% in the Malopolskie one and 41.6% in the Podkarpackie Voivodeship, which is at the same time the lowest share in Poland on this administrative level, on the Slovak side it is 48% in the Prešov Region. The likeness of both border regions from the point of location, physical-geographical situation and the overall social-economic character creates the grounds for the comparison and identification of similar or different tendencies that manifest themselves in the human resources development and changes in the unemployment rate.

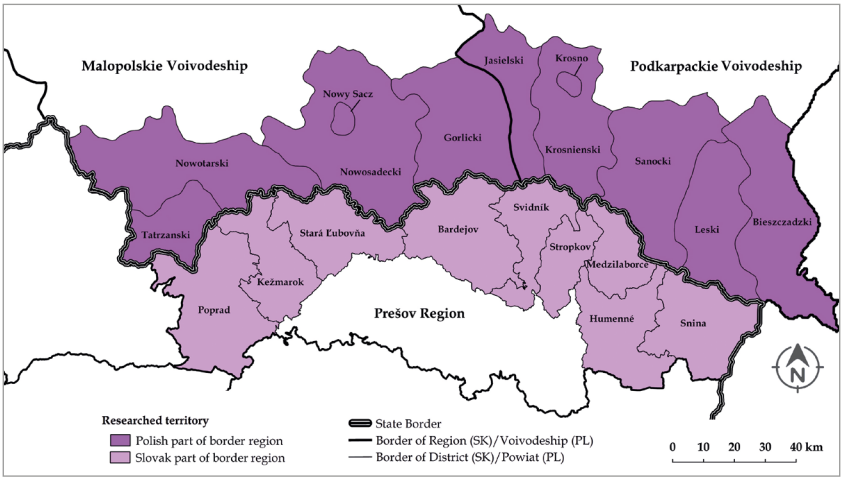

Figure 1
Location of the researched territory
Source: own processing based on the Statistical Office of the Slovak Republic data & the Central Statistical Office (GUS) Poland data

RESULTS AND DISCUSSION

Population Migration

The districts in the Slovak part of the region can be divided into two groups according to the population size. The first group is made of the districts with the highest number of inhabitants (at least within the context of the Prešov Region). Those are the Poprad, Bardejov, Kežmarok, Humenné and Stará Ľubovňa District. The second group consists of smaller districts, namely Snina, Svidník while the smallest number of inhabitants within the region live in the Stropkov (2.5%) and the Medzilaborce (1.5%) District. The smallest share of urban population live in the following districts: Stará Ľubovňa and Kežmarok – as much as 2/3 of population of these districts live in the countryside (year 2016). This situation is influenced by the territory's peripheral location and specific natural conditions causing disintegrated settlement structures. The Polish powiats can be similarly divided. Significantly stands out the Powiat Nowosadecki, the powiats with larger population are the Gorlicki, Jasielski and Krosnienski Powiats. The third group is made of the Tatrzanski, Nowotarski and Sanocki Powiat, that are slightly under-average rated. Significantly different are the Leski and Bieszczadzki Powiats which significantly lag behind as for the population size as well as its arrangement.

The population size development in the whole researched region was continuously growing from 1991, but similarly as on the entire-Slovakia level, on the entire-Poland level there is progressive deceleration of demographic development which is connected mainly with the changes in the reproduction situation and population ageing. Despite the increase in the number of region's population found in the last census in 2011, only in two districts of the monitored districts (Kežmarok and Stará Ľubovňa) we observe the growth of the population size in 2011-2016. In this case, the higher share of Romany population plays its part due to its specific reproduction behaviour and higher share of younger population. In the remaining districts of the territory in interest (Poprad, Bardejov, Humenné, Medzilaborce, Snina, Stropkov and Svidník) there is a tendency of progressive slight decrease in the population size in the last years. In the most declining districts, their problem is their peripheral and marginal location within Slovakia in contact with the Polish and Ukrainian borders and weaker transport connection to the important regional centres. Its role also plays the fact that they are smaller districts from the point of population size (Rosič et al. 2017). The very similar trend is monitored in the Polish part of the monitored region, but with slightly different development. The population in this territory is younger than on the Slovak side and has more favourable demographic behaviour (higher natality), but despite this fact, the tendency of progressive natality decrease or population mortality is also monitored here. The most positive development can be observed in the Nowosadecki Powiat. To the contrary, highest population mortality was recorded in the following powiats:

Leski, Jasielski and Bieszczadzki. This fact concerns their peripheral location and natural conditions of the area.

The mortality rate is not the deciding process influencing the size of natural increase in population in the European continent. It is a logical result of the age structure (Bleha 2009). In this case, mortality is higher in the districts with older population (Medzilaborce, Snina), and by contrast, the lowest mortality is observed in the Kežmarok and Stará Ľubovňa Districts (younger population age structure).

Both processes have an impact on the gross natural increase in population in the region. Based on this number, the districts and the powiats in the monitored region can be divided into three groups:

- districts and powiats with the natural increase in population higher than the average of the superordinate region – Kežmarok, Stará Ľubovňa, Nowosadecki, Krosnienski,
- districts and powiats with the natural increase in population lower than the average of the superordinate region – Poprad, Bardejov, Stropkov, Svidník, Tatrzanski, Nowotarski,
- districts and powiats with the natural decrease in population – Medzilaborce, Snina and in the last monitored year also the District of Humenné, Gorlicki, Jasielski, Sanocki, Leski and Bieszczadzki.

The decrease in population size or the slower growth of the population size in all the districts and powiats of the monitored territory is significantly influenced by a high number of emigrated people on a long term basis. This trend is typical for the whole Prešov Region, but also for the Podkarpackie and the Malopolskie Voivodeship, while its intensity progressively increases. It is a negative phenomenon that is the result of a long-term economic lag of the whole border territory. Due to the lack of inadequate work opportunities, there is emigration of younger and more educated population for work to other regions or to foreign countries.

Based on the gross migration balance value, we can divide the districts on the Slovak part in the monitored territory into three groups:

- districts with a population migration decrease lower than the regional average – Kežmarok and Stropkov,
- districts with a population migration decrease higher than the regional average – Poprad (except for 2016), Bardejov, Humenné, Snina, Stará Ľubovňa and Svidník,
- a specific is the Medzilaborce District where fluctuating values were recorded.

A slightly different situation is on the Polish side. A significant migration increase is observed in the Nowosadecki and Krosnienski Powiat that are important economic centres of the area and attract population from the surrounding Polish regions. They are partially responsible for the negative migration balance of the

remaining monitored powiats (the highest migration increase is in the following powiats: Gorlicki, Jasielski, Sanocki).

Based on the gross overall population increase/decrease value (Figure 2), the districts and the powiats in the monitored territory can be divided into three groups:

- districts and powiats with an overall population increase higher than the average of the superordinate region – Kežmarok and Stará Ľubovňa (in both cases the natural increase in population cannot compensate its migration loss so far), Nowosadecki and Krosnienski Powiat,
- districts with an overall increase in population lower than the average of the superordinate region or in one of monitored years with the overall population decrease – Poprad, Bardejov and Stropkov, powiats: Tatrzanski, Nowotarski, Gorlicki, Jasielski, Sanocki, Leski and Bieszczadzki,
- districts with an overall population decrease – Humenné, Medzilaborce, Snina and Svidník (in these districts there is a long-term negative trend with the possibility of further overall population decrease intensification).

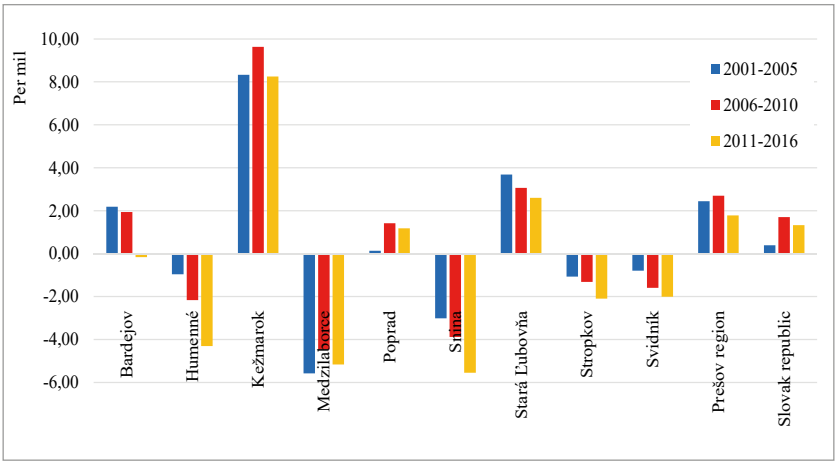

Figure 2
Gross overall increase in population in the Slovak part of the researched territory (‰)
Source: own processing based on the Statistical Office of the Slovak Republic data

Population Age Structure

The consequence of the younger population share decrease compared to the total population size is the progressive worsening of the population age structure that also relates to the decrease in population reproduction abilities and the growth of economic load. Population ageing that progressively accelerates is the consequence of the birth rate decrease and secondly, due to human life lengthening (Bleha

2009). This trend is coped with by the districts and powiats of the monitored region (Figure 3). The ageing index levelled up in the monitored region from 44 (2001) to 76 (2016).

As for the districts in the researched territory, the oldest population is in the Medzilaborce District. The youngest population was in Kežmarok and Stará Ľubovňa in 2016. On the Polish side of the region, the youngest population was in the Nowosadecki Powiat. To the contrary, the powiats with the oldest population were Sanocki and Leski. The age structure in the remaining powiats was very similar (Figure 4).

From the point of the presumed population development (Kolektív 2013) in the region, there are 6 districts belonging to a group of the presumed decrease in population size – Bardejov, Humenné, Medzilaborce, Snina, Stropkov and Svidník. More significant decrease is expected in the Medzilaborce District (-9.76%) because it is a territory with a difficult economic situation without any economic foundation from where people are moving out for work, whereby its age structure is to be significantly disrupted. At the same time, this district is typical for natural increase in population where the number of death people prevails over the number of newborns. The highest growth of the population size is presumed in the districts of Kežmarok and Stará Ľubovňa, where the development is significantly influenced by the share of Romany population, for whom higher natality, low average age and high children share in population are typical.

The middle aged population share continuously rises in the whole region but is higher on the Polish side. The Slovak part has younger population. Generally, the older age groups share rises and so does social dependence of older population.

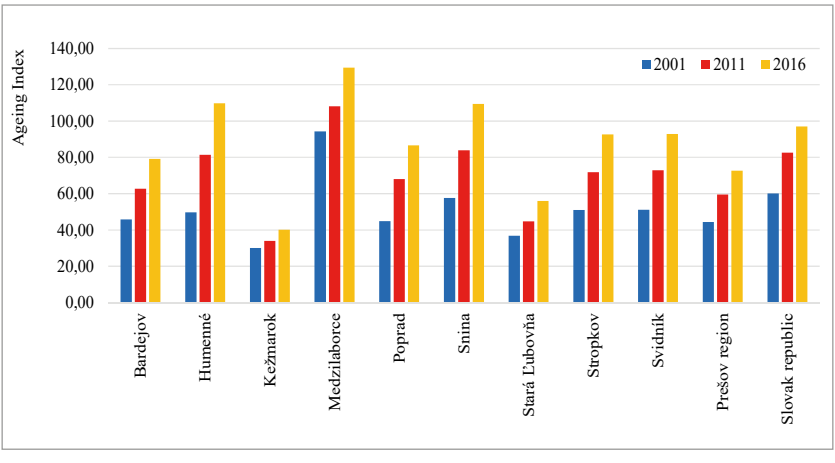

Figure 3
Ageing Index in the researched region's districts in 2001, 2011 and 2016
Source: own processing based on the Statistical Office of the Slovak Republic data

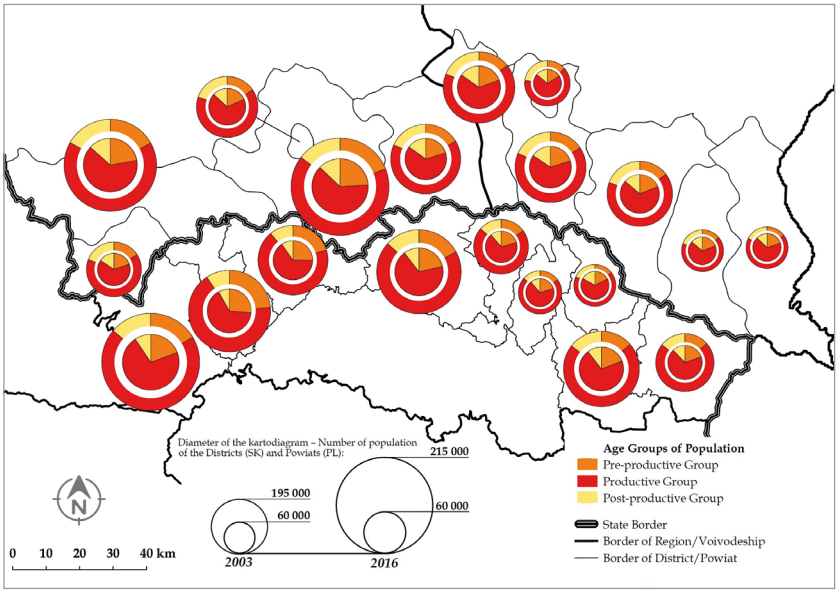

Figure 4
Share of population in the age groups according to the relation to economic activity (%)
Source: own processing based on the Statistical Office of the Slovak Republic data & the Central Statistical Office (GUS) Poland data

Population Education Structure

One of the determining indicators of human resources quality is the population educational level. The geographic location of the researched territory is also connected with the statements with respect to the under-average education level in border regions with higher share of population having only primary education and lower share of people with university education (Moravanská 2004). Based on the educational situation evaluation in the districts of Slovakia in 2001, three of the researched districts are classified into the group of districts with the unfavourable educational structure – Kežmarok, Stará Ľubovňa, Bardejov and Snina (Gajdoš 2004). The persisting problem of human resources' low level in the context of social inclusion is also proven in the findings by Rajčáková, Švecová (2014). In 2013, as much as seven of nine districts in the researched region were classified into the category with under-average level of human resources and only two of them – Poprad and Stará Ľubovňa reached the average level. The human resources analysis according to districts included the indicators of population movement, population age and educational structure, labour market status and indicators of economic and social level. The educational structure indicator using the data obtained in census in 2011 was used to evaluate the educational structure of population.

Numerous economic, sociological, geographical and other resources point out to growing importance of education even in the context of knowledge based economy. Majo, Šprocha (2016) understand education as a qualitative side of human capital that also reflects the dominant role of the knowledge-based economy, while as for development trends, there is a tendency of obtaining a higher education degree. At the same time, they declare that in Slovakia there is a „historically unique transformation of educational structure"(Majo, Šprocha 2016, p. 85).

The educational level in the districts of the researched area in 2011 can be seen in Figure 5. The biggest share from the point of individual degrees of education was found in population with complete secondary education with maturita (34.9%), it is followed by population with complete secondary education without maturita (26.4%), population with primary education and without formal education (21.8%), the share of population without any education 0.3%, and the smallest share is the population with tertiary education – all three degrees (13.4%). Compared to the educational structure of the Prešov Region population, the researched border region differs by the highest share of population with complete secondary education with maturita (Region's average 33.9%) and with primary education (Region's average 20.9%) and smaller share of inhabitants with tertiary education (Region's average 14.3%) and inhabitants with secondary education without maturita (Region's average 26.8%).

More significant differences with respect to the degrees of education achieved can be seen in the comparison of the educational structure according to individual districts. The highest share of population that highly exceeds the researched area's and region's average with primary education is found in the Kežmarok District (28.3%) which is due to young population and higher share of Romany community. The other way round, the smallest share is found in the Humenné District (16.6%), where there is population with secondary education with maturita and population with tertiary education which is over even the Region's average (36.5% or 18.3%). The highest share of secondary educated people without maturita are in the Stará Ľubovňa District (28.3%) which, apart from others, is connected with the development of secondary training schools until 2008 and the dominant position of these schools as for the share of secondary schools' students. In the secondary education degree, the dominant one is the Poprad District (40.1%) with traditionally numerous and diversified network of secondary vocational schools, that were linked with the industrial production in the district in the past. The highest share of university educated people of all is in the Humenné District (18.3%) and together with people with secondary education with maturita, it is a district with the highest education index in the researched region.

In 2011, the education index average value was 62.7 and, compared to the Region as a whole, it was a little lower (average in the Prešov Region 63.5). Compared to 2001, the most dynamical growth was in the group of people with

tertiary education, on the similar level remained people with secondary education with maturita. The most significant decrease was recorded in the group of people with primary education, even the share of population with secondary education without maturita slightly decreased. The growth rate (2011/2001) in the monitored districts generally correlates with the development in the whole Region (Table 2).

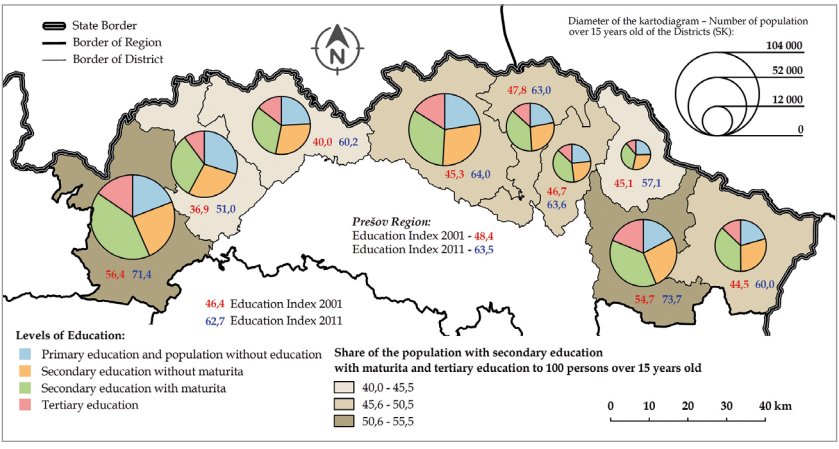

Figure 5
Education structure of population in the Prešov Region districts on the Slovak-Polish border in 2011
Source: own processing based on the Statistical Office of the Slovak Republic data

Considering the education index in 2011 and comparing it with the average values in the Prešov Region, we can divide the districts into three groups:

- first group consisting of districts with education index significantly lower than the regional average (71-74%) – Humenné, Poprad with distinctive representation of population with complete secondary education and tertiary education,
- second group consisting of the districts having the index values approximately on the regional level (63-64%) – Bardejov, Stropkov, Svidník with distinctive share of population with secondary education with maturita,
- last third group is represented by the districts having the index values under the regional average (less than 63%) – Stará Ľubovňa, Snina, Medzilaborce and with a notable difference the Kežmarok District (51%).

We proceeded analogically also in the case of Polish border regions (Table 3). The calculated education index values in 2011 were compared with the average values in the Malopolskie (66%) or Podkarpatskie Voivodeship (59%). As presumed, the highest values were found in the towns with the powiat status – Nowy Sacz (81%) and Krosno (84%). Not even one of the remaining powiats reached the index

Table 2 The population share growth index according to the degree of highest education achieved in 2001, 2011 in the border districts in the Prešov Region

District	Primary education	Secondary without maturita	Secondary with maturita, higher vocational	Tertiary education	Secondary with maturita, higher vocational and tertiary education	Education Index
Bardejov	0.71	0.90	1.04	2.28	1.26	1.41
Humenné	0.67	0.88	1.01	2.05	1.21	1.35
Kežmarok	0.88	0.87	1.18	1.81	1.29	1.38
Medzilaborce	0.70	1.06	1.04	1.83	1.16	1.27
Poprad	0.75	0.87	1.13	1.47	1.21	1.27
Snina	0.63	0.94	1.12	1.89	1.25	1.35
Stará Ľubovňa	0.70	0.89	1.12	2.43	1.35	1.50
Stropkov	0.72	0.86	1.12	1.97	1.25	1.36
Svidník	0.68	0.94	1.09	1.85	1.22	1.32
OVERALL	0.72	0.91	1.09	1.93	1.24	1.35
Prešov Region	**0.73**	**0.91**	**1.07**	**1.79**	**1.21**	**1.31**

Note: The shares of population counted per 100 inhabitants older than 15 years
Source: own processing based on the Statistical Office of the Slovak Republic data

Table 3 The population share growth index according to the degree of highest education achieved in 2002, 2011 in the border powiats of the Malopolskie and Podkarpackie Voivodeship

Powiat	Primary education	Secondary without maturita	Secondary with maturita, higher vocational	Tertiary education	Secondary with maturita, higher vocational and tertiary education	Education Index
Gorlicki	0.76	1.00	1.01	1.79	1.15	1.24
Nowosadecki	0.80	0.96	1.06	2.06	1.21	1.32
Nowy Sacz	0.72	1.00	0.88	1.61	1.05	1.15
Nowotarski	0.77	0.91	1.00	1.65	1.12	1.20
Tatrzanski	0.81	0.87	0.96	1.46	1.07	1.14
Malopolskie v.	**0.76**	**0.91**	**1.00**	**1.70**	**1.17**	**1.28**
Bieszczadzki	0.84	0.85	1.08	1.94	1.24	1.35
Jasielski	0.77	0.94	1.03	1.78	1.18	1.28
Krosnienski	0.77	0.90	1.05	2.04	1.23	1.35
Sanocki	0.73	0.90	0.95	1.73	1.11	1.22
Leski	0.78	0.91	0.97	1.90	1.13	1.24
Krosno	0.66	0.94	0.90	1.46	1.06	1.15
Podkarpackie v.	**0.77**	**0.91**	**1.09**	**1.71**	**1.14**	**1.25**

Note: The shares of population counted per 100 inhabitants older than 13 years
Source: own processing based on the Central Statistical Office (GUS) Poland data

average value in the region. In the case of Malopolskie Voivodeship powiats, the index values vary from 41-52%, while the lowest value was reached by the Nowotarski powiat (at the same time the lowest value within the whole border area) and the highest was in the Gorlicki Powiat. The education index values were higher in the Podkarpatskie Voivodeship – ranging from 51- 58%, the lowest value in the Leski Powiat and the highest value in the Sanocki powiat. Overally higher education index was recorded in the powiats of the Podkarpatskie Voivodeship – as much as four of them ranging from 53-58% (Jasielski, Krosnienski, Bieszczadzki and Sanocki).

Based on the found data we can make the following conclusions with respect to the educational structure development in the period between the two censuses:

- in the regions in the eastern part of the Slovak-Polish border the educational level of population increases – in the period between the census in 2001 or 2002 and the census in 2011 the population education index increased in all the districts and powiats,
- the share of university educated people increased which is reflected in the fastest growth rate in the group,
- minimum changes are recorded in the number of inhabitants with secondary education with maturita,
- the number of people with primary education as the highest education achieved and secondary education without maturita,
- from the point of territorial distribution, the regions with the biggest share of population with tertiary and secondary education with maturita are found in towns-powiats (Nowy Sacz and Krosno) and powiats of the Podkarpackie Voivodeship excluding the Leski Powiat on the Polish side and on the Slovak side there are the Humenné and Poprad District.

Unemployment rate development in the researched region

The analysed region disposed of 59.5% of economically active population (EAP). There are notable changes observed between the Slovak and the Polish part. In the districts, the share of EAP was 49%. In the Polish powiats we register as much as 63% EAP (2011). This value was significantly higher. The differences are observed also in the main domains of the population employment. While in the Slovak districts the main employers were engineering, electrical engineering, textile, leather manufacturing and shoemaking industries, in the Polish powiats it was oil, gas, glass-making and wood processing industries. The analyzed region can be considered as an industrial-agricultural territory with a significant representation of services (Venglár 2013).

The development of the EAP number and their share on the total number of inhabitants in the researched area has a decreasing tendency similarly in the Prešov Region and in Slovakia. It is due to a progressive manifestation of population ageing and the advance of the good-sized population to the older age level. The

decrease of EAP share on the total population size can be monitored on the whole researched territory, but mainly in the Slovak part districts. The lowest EAP share in 2011 was observed in the following district: Medzilaborce (43.2%), Kežmarok (44.4%) and Stará Ľubovňa (44.5%), the highest share was in Svidník (47.2%) and Humenné (47.1%).

The important part of the EAP in the Prešov Region and the researched region consists of the Romany population whose low qualification structure fails to meet the requirements of the economy orientation mainly to qualitative priorities. The highest share of unemployed Romanies in individual districts negatively influences the social-economic development of towns and municipalities. The important factor when directing such labour force will decidedly lie in a different pre-setting of the primary and primarily secondary education system considering the specifications of the Romanies. The high share of Romany population also indirectly influences the concentration of economic activities, while prevail those that do not require any higher forms of labour force educational level. This fact consequently reflects in the possibilities of labour force implementation on the labour market. Within the selected economic activities in the Prešov Region, the dominant position is observed in the industry providing work opportunities to as much of one third of the total employed people in the Prešov Region. Agriculture and construction have their important positions, however their importance continuously decreases. Other selected economic activities are of only supplementary importance when solving the problem of population employment. However, there is an interesting fact that, despite notable potential of the territory for recreation and tourism, the local hotels and restaurants have a small share of the total employees from the given territory and region. Here can be observed the considerable difference when compared to the Polish part of the region where a significant part of EAP works in services, business and agriculture.

The average nominal wage of the employees working in the researched region by the end of 2016 was EUR 864. In the Slovak part, the average monthly wage was EUR 830, in the Polish side EUR 897. Both the countries, Slovakia and Poland, show one of the highest unemployment rates in the EU on the long-term basis. The monitored border districts and powiats belong to the regions suffering from unemployment in their countries.

The basic specific feature characterising the unemployment development in the monitored region is mainly permanently high unemployment rate. In the beginning of the 1997-2003 period analyzed by us, we observe the unemployment rate ranging from 15.2-25.1%. However, there are differences between the Slovak and Polish part of the territory. While the unemployment rate in the Slovak monitored districts exceeded 20% only in one case, on the opposite side – in our northern neighbours, the unemployment rate did not decrease in the monitored powiats under 20% and was oscillating between 23.5-25.1%.

Year 2003 was characterised by a high unemployment rate on both sides, the Slovak and the Polish one. Alike in Slovakia, many restrictive economical measures were taken by the government during the period, the unemployment rate was lower in the Slovak districts. The following period was accompanied by a successive decrease of the unemployment rate in the entire region (by 1 up to 3 percentage points). Despite broadly increased unemployment, in the Polish powiats was this decrease slower. The unemployment rate in the border region is continually decreasing until 2008. It is connected with the countries' accession to the EU.

In 2005-2008 there is a positive effect observed in both economies due to their accession to the EU, that was supported by increased foreign investments causing the formation of higher number of job vacancies. Despite this, the unemployment rate is Slovakia was decreasing only slightly. By contrast, on the Polish side, the decrease is more dynamic. While in the Slovak researched district the unemployment decreased in average by 1-2%, in powiats it was as much as by 7-8%. Year 2008 is considered revolutionary because for the first time we observe a higher unemployment rate in the Slovak districts than in Polish powiats. In the following period, the unemployment rate in the region starts to be influenced by the economic and financial crisis which caused its growth. Exclusive of Svidník and Stropkov, it does not reach the level as in 2003. The development after 2010 continues with a progressive slight increase of the unemployment rate that has something to do with the still felt crisis influence. The region has recorded turnaround in the unemployment rate development since 2013 when it started to level down and the trend practically continues until now. (Figure 6).

The unemployment rate values in all the districts (excluding Poprad, Stará Ľubovňa and Humenné) and the territory of the Prešov region as a whole exceed or significantly exceed the level of Slovak average and are one of the highest in the Slovak Republic with significantly negative impact mainly on the social situation of inhabitants (especially in the district: Kežmarok, Medzilaborce, Svidník and Bardejov). The high unemployment rate of the region does not indicate any positive prospects even in the long-term tendencies (Figure 6). The similar trend is observed in the monitored powiats (Figure 7) where the only ones with lower values of the unemployment rate are the powiats with the important centres that also influence their wider surroundings (those are the following powiats: Krosnienski, Nowosadecki, Tatrzanski and Sanocki). The powiats of the Podkarpackie Voivodeship show higher unemployment rate on a long term basis than the powiats of western Malopolskie Voivodeship.

The permanent problem is the formation of new job vacancies (mainly on the Slovak part of the researched region). The new job vacancies formation in the area is insufficient for a long time and this situation needs to be sorted out on the national level also in the form of a more notable support for small and middle business undertaking at the expense of big investments. At the same time, the

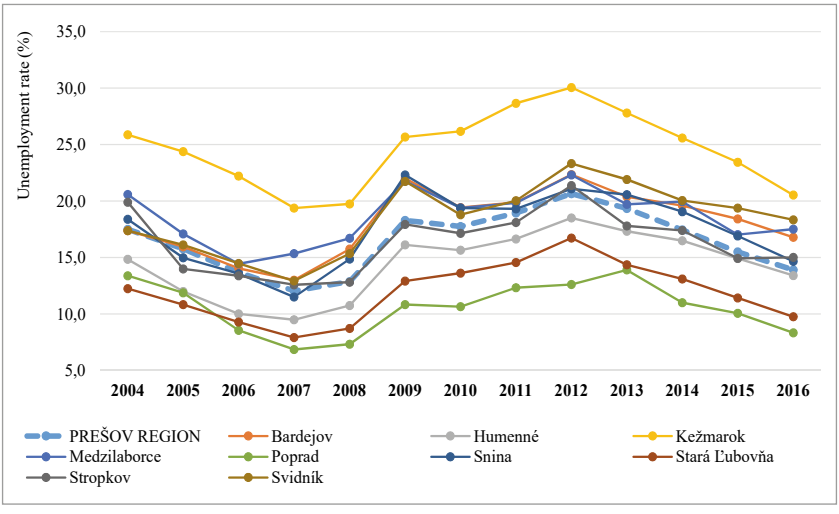

Figure 6
Unemployment rate development in the Slovak part districts
of the researched territory 2004-2016
Source: own processing based on the Offices of Labour,Social Affairs and Family of the Slovak Republic

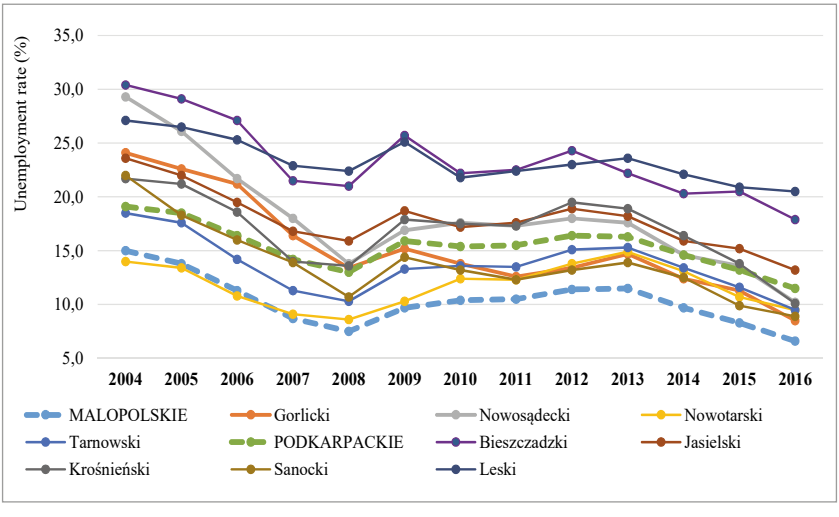

Figure 7
Unemployment rate development in the Polish part powiats
of the researched territory 2004-2016
Source: own processing based on the Central Statistical Office (GUS) Poland data

stability of job vacancies is considerably higher. Only the Districts of Poprad, Stará Ľubovňa and Humenné show a long-term positive development of the unemployment rate in the context of monitored territory. Here, we monitor substantially different trend on the Polish side of the researched region where the majority of work opportunities is offered by small and middle business undertakings. The stability and long-term sustainability of the work positions is higher which results in the positive development of the unemployment rate in the northern part of the researched territory.

The structure of the unemployed is also very important. The structure of the unemployed shows certain groups of persons who are more endangered within the researched region and they need priority solutions (Tej 2012).

In 1997-2003 we observe an interesting difference in the share of men and women unemployment on the Slovak and Polish side. While in the Slovak districts men unemployment significantly prevails (55-59%), in the Polish powiats, there is an opposite situation: the women unemployment is higher 51-54%. This disproportion most likely concerns the different structure and the orientation of economy in the researched regions on the Polish and Slovak side. The continuous improvement of the economic situation causes the decrease of men unemployment in both countries. Despite the crisis in 2008, a similar development in men's and women's employment is observed in this region not earlier than in 2009. As they are less efficient regions, the crisis manifested itself later compared to economically developed areas. Since 2010, there has been a more significant growth in the share of men unemployment in all the monitored regions. The highest growth is seen in the Krosno Powiat (increase from 37.3% to 46.5%), similarly high growth, almost by 10% can be observed in the Bardejov District. Before the crisis burst, the share of unemployed men was decreasing. The main reason was the increased employment of men in industry. After the economic crisis, the fundamental industrial sectors employing men were affected. This situation is typical for the border region. There are no significant differences in the development on the Polish or the Slovak side.

From the point of job seekers structure based on gender, women are endangered group for a long time. This statement applies to all the districts in the area exclusive of Kežmarok. In case of Kežmarok (specific population structure – younger population = higher men share, significant influence to the fact has also the higher share of Romany ethnics in the district population) unemployed men prevail.

The general trend is that, currently, men have more favourable conditions to succeed on the labour market than women. Especially women with little children are considered a marginalised group on the labour market. Employers prefer men labour force. It is the result of men being less loaded with household shores and parental duties, higher men's territorial mobility is also the important factor (Buchtová et al. 2002).

With regard had to the absent data from Poland in 1997-2004, we compared both parts of the researched region until 2005. During the whole period of 2005-2010 we observe the differences in unemployment of individual age categories between the Slovak and Polish part of the border region. Basically, the following generalisation applies: the Polish powiats have higher unemployment in younger groups up to 24 years and 25-34 aged persons (mainly the second mentioned group). Together they make more than 50% of the unemployed. The age group of 35-44 is characterised by a very similar level of unemployment rate in all the districts and powiats. This group makes some kind of a transition between the younger and older age groups. As for the older age groups of 45-54 and over 55, the Slovak districts show a higher share of the unemployed. The differences in both parts of the region are caused by a different economic structure. While in the Polish border region the higher employment percentage is in agriculture, in the Slovak districts the base of employment is in industrial production (older age groups after the job loss find harder another one). In the whole region the important role in employment is played by services and trade (Mitríková 2014). Another problem of older employees is their lower flexibility and decreased mobility to work.

The difficult situation is also in the age group of up to 24 years, because they are the unemployed without professional qualification with completed or incomplete primary education as well as school graduates who, when not employed shortly after their study completion, lose their motivation to work or to make it in the field they studied. There is a big presumption that these candidates for work will to the large extent be included in the group of the long-term unemployed persons.

Similarly as in age, the unemployment development can be generalized according to the education achieved in 2003-2010. During the whole monitored period the category of the unemployed without education and with primary education was characterised by the higher share of unemployment in Slovak districts as well as in the Polish powiats. The only deviation was found in the Gorlice Powiat that, compare with the Slovak districts, regularly showed the 3-times lower and with the Polish ones 2-times lower unemployment share. The category of training school and apprentice school graduates without maturita showed a slightly higher unemployment share than the Polish powiats. While this group share was progressively decreasing in the districts, it had a sinusoidal character in the powiats. The unemployment in the third group represented by training schools, secondary vocational schools with maturita and grammar school graduates (secondary education with maturita) was higher in the powiats. While unemployment in the districts oscillated usually up to 30%, in powiats, it exceeded 30% in a majority of cases. The last group made of the unemployed with higher, tertiary education and scientific qualification naturally showed lower unemployment rate compared with all the categories. Also here we can observe a higher unemployment share in the Polish part of the researched region. In this group, the problem is the trend of progressive

unemployment increase (more notable in the Polish part of the region) compared to the previous years.

As for fresh graduates, the most endangered group in the whole region are secondary vocational school with maturita and secondary training school with and without maturita graduates. The least endangered groups are university and grammar school graduates. These school graduates in the region have considerably less opportunities to find an adequate job position in the region. One of the reasons is the discordance between the study branches structure and the job vacancies structure; the second one is insufficient formation of new job vacancies on the weakly functioning regional labour market.

Based on the degree of achieved education the biggest share of the unemployed in the region are the groups of trained people, with primary education and with complete secondary education with maturita. This trend can be observed in Humenné, Snina, Medzilaborce, Svidník and Stropkov. In the districts of Bardejov, Stará Ľubovňa and Kežmarok, the most endangered group is the category of people without education instead of the group with the complete secondary education with maturita. The job seekers structure according to achieved education is one of the most important partial structures of the unemployed. There is a general rule that along with growing education level the opportunities to make it on the labour market grow.

A special attention was paid to the structure of the unemployed according to the length of their unemployment. In the beginning of the researched period (2003), the Slovak districts showed in the first category (up to 3 months) a higher share of the unemployed that Polish powiats. The unemployment was significantly lower in the Polish powiats. It did not reach even 20%, while in three districts on the Slovak part it exceeded 30%. The proportion between these two parts of the border area progressively changed. In 2010, we observed in average a doubled unemployment share in the Polish powiats than in Slovak districts. On the Slovak side, the unemployment share in this group (up to 3 months) oscillated between 13.5-18.6% while in Poland it was 26.4-31.0%. Unemployment lasting up to three months is called frictional unemployment. It is related to labour market functioning and labour force natural mobility. It is not a problematic element in unemployment and a higher share of this group does not cause a social problem. We can state that the situation is improving on the Polish side of the border area and, to the contrary, it is worsening on the Slovak side. The second category of unemployment (lasting 4-12 months) was generally stabilized during the whole period and its values were similar in the entire region. Certain changes occurred in 2009 and 2010. Progressively, we observed the increase in this group of the unemployed on the Polish side. While in Slovak regions the share does not exceed 30%, in Poland this level is exceeded in each powiat. The third group (unemployment lasting 13-24 months) records the lowest unemployment rate in all categories. In the Polish powiats

unemployment did not exceed 20%, not even once in the years. Slovak districts exceeded the level only in some cases and that was mainly in the last year of the analysed period. The last category lasting more than 24 months formed the highest unemployment share. There were differences between the Slovak and Polish part of the region. While in our part it decreased, the unemployment share in this group was growing in the beginning of the period, in the middle period it stagnated and in the last years it decreased, in powiats there was a long-term decrease. Currently, long-term unemployment on the Polish part of the region shows significantly lower amounts than on the Slovak part and for powiats, this kind of unemployment does not represent any risk. Quite the opposite, for the researched Slovak districts the long-term and extremely long unemployment make problematic elements in unemployment and represent a big social risk. The Slovak Republic is not able to solve and decrease this king of unemployment on a long-term basis. This our indicator represents first places in the EU for a long time. During long-term unemployment a person progressively loses qualification presumptions and work habits. His placement into a work process is then much more complicated and as well more financially demanding.

Long-term unemployment was most represented by auxiliary and unqualified workers and unemployed without any work classification (according to KZAM – Job Classification), workers in construction (according to OKEČ – Economic Activities Industrial Classification). The highest long-term unemployment share (over 12 months) is observed in the Kežmarok District. The remaining districts of the monitored area have relatively high levels of long-term unemployment. All possible solutions fail when employing the long-term unemployed.

Especially problematic part of long-term unemployment is very long unemployment that lasts more than 24 months. The indicator of very long unemployment in the Slovak Republic is approximately 4-times higher when compared to the EU-25 average, it is significantly higher also when compared to the V4 countries. The long-term unemployment does not affect alike all age groups. Its load in the form of extremely long forms (more than 4 years) affects mainly polar age groups i.e. the age cohort of 15-24 years and the age cohort of more than 50 years of age and older (Kostolná, Hanzelová 2007).

The negative trend of long-term unemployment rate development in the region in the last years are the increased differences between men and women, which just proves the intensification of long-term women unemployment and tendencies of long-term unemployment feminisation. Long-term unemployment rate indicators in the group of the unemployed without school education and in the unemployed with primary education are higher when compared to the indicators of other education groups. The long-term unemployment rate according to the degree of achieved education points to the fact that the distribution of the long-term unemployment risk is inversely proportional to the degree of education

i.e. the lower education level of the unemployed person, the higher risk of long-term unemployment. The growth of education level of the unemployed causes the decrease of their long-term unemployment (Kostolná, Hanzelová 2007).

CONCLUSIONS

The area of the researched region is beyond the reach and influence of agglomerations of metropolitan European importance. This is also the only reason of lacking development impulses mainly in the peripheral areas of the territory. The main economic flows are predominantly concentrated around the transport systems and important water resources. The whole researched area creates cross-border periphery.

The peripheral location, weaker infrastructure and problematic transport accessibility into centres make an impact on progressive migration of the younger and educated population for work to other regions (this migration is more notable on the Slovak part). Migration influences progressive population ageing. Older population with lower education stays in the region (or problematic groups in the sphere of employment). These population groups are typical for lower flexibility and willingness to commute to work or it is more complicated for them to adapt to changed conditions on the dynamically changing labour market.

Slovakia and Poland show ones of the highest unemployment rates within the EU countries. The monitored border districts and powiats are in their countries ones of those that are considerably suffering from unemployment. From the point of unemployment rate development, we observe some common and different features in both parts of the border region. The common trend was similar unemployment rate development; the differences were in the changes of positions of the Slovak and Polish side.

The unemployment and labour market development on the Slovak and Polish side had their specific features. In both parts of the region the labour markets were developing rather separately, without any significant mutual connection. Their development is bond to their territorial and economic position within their countries. The mutual influence of both parts of the researched region is considerably weaker. In the researched region no common cross-border market has been formed yet. There are two relatively isolated labour markets with their own specific features.

The structure of the unemployed is very important and we observe a significant share of the long-term unemployed and relatively big representation of registered unemployed people with primary education and trained people without maturita, from the point of economic activities they are people working as auxiliary or unqualified workers. This fact is influenced by more factors, e.g. peripheral territorial location, historical aspect (little developed region in the past), narrow and unsuitable industrial structure, industry in individual districts based on one key company

that has economic problems in the majority of districts now (dismissals), slow industrial restructuring, decrease in construction, disorganisation of agricultural cooperatives etc.

The most problematic element of unemployment is long-term and extremely long unemployment (over 12 months or 24 months and more). This type of unemployment is mostly experienced by the Slovak part of the researched region while the Polish powiats succeeded to solve the problem effectively despite similar starting position. The Slovak Republic fails to deal with the situation and decrease unemployment on a long term basis. Right here, the cross-border cooperation offers the possibility of how to resolve the problem. The options lie in the implementation of experiences and concrete programs used to solve long-term unemployment in Poland.

The both parts of the cross-border region show similar monthly wage levels. This fact influences lower mobility for work. Just small differences in the average monthly wage are not sufficiently motivating for people with respect to commuting to work. The border between the both parts of the region is not made of any significant barriers and does not influence the labour market development as it was in the past. However, the legislative barriers are much more noticeable (e.g. when using purpose funds for the region in both countries) or problematic transport accessibility between the Slovak and the Polish part of the researched region. As for the activities of cross-border cooperation only to a small extent there are such that would be focused on the development of cross-border labour market and their main task is to intermediate and exchange information.

From the point of presumed population development we can expect a progressive decrease in natural population migration that is reflected in lower share of young population and higher share of older population. The result of the development is worsening of the population age structure with which the decrease of population reproduction is connected (in compliance with Slovak and European trends). The population ageing in the districts of the researched region and its worse reproduction function is significantly influenced by negative migration balance, especially emigration of productive-aged population due to unfavourable work conditions in the region (whereby the region becomes a storage of labour force for other Slovak regions or foreign countries). For another period progressive ageing of population as a whole and also ageing of labour force is presumed which will eventually have a negative effect to the quality of such labour force. Progressively, in the whole region the size of middle-aged population rises and that is higher on the Polish side. The Slovak part disposes of younger population, but compared to the Polish side, its ageing is faster. This is how the share of older population groups generally grows and thereby also their social dependence. The positive trend lies in the increase of education level of population and that namely in the group of university educated population. However, the problem is

that the districts with the highest educational structure have a negative development of age structure within which the older population share increases. To the contrary, the districts with positive population development are, regarding the national composition, not perspective for the labour market from the point of labour force age and educational structure which has negative impacts on the region's economy.

Considering the continuous trend of decreasing population migration, it is important to focus the future development on the support of young people and their stabilisation in the region, on family national policies and programs to create new job vacancies in order to maintain the productive population in the region.

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