Labor Market and Economic Subjects In Selected Border Regions

Karin Gajdová

Abstract—Currently within the European Union is monitored, among other things, the situation in the border regions of European countries. Within this paper it deals the situation of development of selected indicators in selected border regions. These are the regions located on the Czech-Polish border. And there is observed on the one hand the labor market and on the other hand businesses that employ the economically active population in the regions. The basic assumption, which is based on previous research, it is expected that the positive development in the regions. It was partially confirmed by the analysis in this article, but that there are significant differences in selected regions.

Keywords—Economic subjects, labor market, regions, unemployment.

I. INTRODUCTION

THIS paper is solved Czech-Polish border area. Concretely there is solved labor market and sector breakdown of economic subjects in this area. This area has business and labor market huge economic potential, as both countries together many common areas, including in particular the similarity of language, cultural and historical heritage, competitive industrial sectors (timber, construction) and more. Both countries are currently making great efforts to strengthen mutual business and trade ties, which would contribute significantly to economic development in the region [1].

At present, the border areas and the situation in the border regions to the forefront of attention, both nationally and transnationally. There are efforts to improve the situation in the border regions and that is in many ways, an example may be to promote cooperation between enterprises across state lines.

Establishing of this cross-border cooperation but still prevents existing regional disparities across countries. Therefore, it is currently paid great attention to regional disparities between regions that share a border.

This paper deals with regional disparities, and specifically in this case it is focused on the differences in the sector structure and labor market. Each country, each region is somehow unique and therefore has a different business focus. In this article, we focus on structural business data and their development in selected regions. Based on the calculation and graphical views are subsequently came to certain conclusions.

This paper focuses on the detailed analysis of the evolution

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of both the labor market and on the part of businesses. Businesses are divided into groups according to sector division and are analyzed areas in detail that are crucial sectors for the regions. At the beginning, we assume that the results of the analysis show a positive development.

II. METHODOLOGY AND DATA

For the analysis there were chosen border regions of Czech Republic and Poland. Within these regions are analyzed indicators whose values were found in public databases.

A. Selected regions

The research deals with regions that receive maximum support from the European Union for cross-border cooperation. This research deals with two countries from European Union. These are countries located in the heart of Europe: the Czech Republic and Poland. These are countries that have a very high potential in all economic, social, transport and other areas, mainly because of the location in the center of Europe. And their regions on the common borders have even greater potential. On the contrary they have a lot of problems and their economic development is not too beneficial. It is reason why the European Union and government of these countries (the Czech Republic and Poland) support these regions much in this period.

For our analysis we chose regions at the level 2, they are regions NUTS II. We chose one border regions NUTS II in the Czech Republic (region Moravskoslezsko) and two border regions NUTS II in Poland (Slaskie and Opolskie voivodship). These are regions NUTS II which only have a common border of these two countries.

B. Data

For the definition of the regional labor market, it is possible to analyze various indicators that are mentioned in the introduction. For analysis was chosen one of the basic indicator, and it is the unemployment rate. It was also analyzed indicator of job vacancies.

For our analysis we chose this indicator (unemployment rate), because we considered them to be sufficiently exhibiting indicator for the concept of regional labor markets and comparisons between these regions. For a more detailed overview can be subsequently analyzed many other indicators, but it will be part of further research. With this indicator we have worked on and we examined them in detail through the basic analytical calculations.

It has been calculated annual changes in selected indicators in the regions. The change in the selected indicators expresses

the % change in the indicator in the monitored period compared to the same period last year [2]. Subsequently, it was calculated the average growth rate of selected indicator. We measure the average rate of growth by the geometric average of annual growth rates, as in (1).

$$G(g_{x;1}, g_{x;2}, ..., g_{x;n}) = \sqrt[n]{g_{x;1}, g_{x;2}, ..., g_{x;n}} = \left(\prod_{i=1}^{n} g_{x;i}\right)^{\frac{1}{n}} \quad (1)$$

where: g = growth, annual changes,
          G = average growth rate of selected indicator.

Another part of the empirical analysis is focused on economic subjects, concretely on number of employees in selected sectors (these selected sectors are important for these selected regions). The economic subjects can be analyzed on the basis of their sectoral allocation. Every economic subject, its activities, it is included to the specific sector unit. In the European Union is defined a specific structure based on NACE. It is about a static classification of economic activities, which are used within the European Union since 1970. Using the NACE is compulsory for all member states of European Union. Narrower concept of NACE, statistics, which works with this narrower concept is called Structural business statistics (SBS). This statistic is subsequently used within analysis of economic subjects.

The Structural business statistics is founded on data about enterprises or parts of enterprises, which are often used as a regional data. Enterprises are classified according to classification of economic activities NACE. In case of that company performs more than one economic activity and the enterprise is included to the sector based on this economic activity, which brings the highest added value the economic unit.

Data which are in figures and in table are from database of European Union from Eurostat. Processing of figures and table is author´s own.

III. EMIPIRIC ANALYSIS OF LABOR MARKET AND NUMBER OF EMPLOYEES

Within social-economic analysis is necessary to analyze the regional labor market [3]. This is indicated eg. the economically active population, economically inactive population, the number of employees, the number of unemployed, unemployment rate, employment rate, the number of vacancies etc. For this part of analysis were chosen the indicators, such as unemployment, respectively unemployment rate and vacancies. For this analysis there were selected two basic indicators like Unemployment rate and Job vacancies. On the other hand of the labor market are businesses that employ the economically active population in the regions. These entities are divided by sectors. Both of these parts (businesses and unemployment) are closely related

A. Empiric Analysis of Labor Market

Unemployment is the state on the labor market when the part of supply is not able and willing to find paid employment. Generally according to the methodology of International labor organization the unemployed is not a person, who is older than 15 years, actively seeking work and is ready to start in work until 14 days.

For a more detailed analysis is monitored the unemployment rate, that is the proportion of unemployed person from all of economically active persons (i.e. employed and unemployed).

On the figure n. 1 is graphically expressed the development of unemployment rate from selected regions in the period since 2000 to 2012. In the first half of the period in the selected regions was considerably different, but since about 2007 the unemployment rate began to approach in these regions. In Czech Republic was the unemployment rate 8.8 % in 2000 and in the Poland was the unemployment ratio 16.3 % in 2000.

The utmost unemployment rate in 2000 was in region of Slaskie voivodship (18.9%) but gradual development came to 9.4 % in 2002. In Opolskie voivodship was the unemployment rate (14.6 %) in 2000 lower than in Slaskie voivodship and dropped to 9.5 % in 2012. In the region Moravskoslezsko was the unemployment rate 14.1 % in 2000 and gradually decreased to 9.5 %.

In the gradual development was resulted the significant steps mostly in Poland and in regions of Poland. The values of the unemployment rate reached on the lowest level in 2008, when e.g. in Czech Republic was the unemployment rate on 4.4 % and in Poland on 6.6 %.
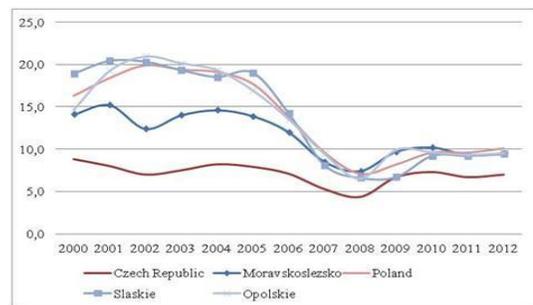

Fig. 1 The Development of Unemployment Rate In The Selected Regions (2000-2012, %)

The figure n. 2 allows the comparison of unemployment rate in 2012. Selected border regions are moving in the middle of this imaginary scale. The lowest unemployment rate is in the Czech regions, in region of capital Prague (3.1 %), in region Střední Čechy (4.6 %) and region Jihozápad (5.3 %).
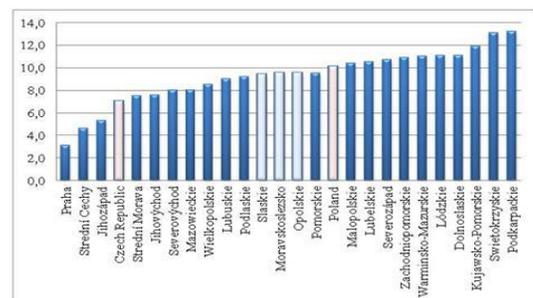

Fig. 2 The Unemployment Rate In 2012 (%)

Also for the unemployment rate has been calculated the average growth rate during 2000 – 2012. This calculation allows a better comparison of gradual development of unemployment rate in particular regions of Poland and Czech Republic. See on Fig. 3.

The most of regions have this negative indicator, which is a

positive manifestation. From 24 regions together with the average of Czech Republic and the average of Poland, only 2 regions evinces a positive average growth rate, it is the Czech region Severovýchod a Jihovýchod, that means that in these regions the unemployment is still rising, although in the other regions unemployment if falling.

At the sight of the monitored border regions is the best situation in Slaskie voivodship , where is the average growth rate of unemployment rate – 5.65 %. After it is Opolkie voivodship also with a negative growth rate – 3.51 %. And the latest (from three selected regions) is the region Moravskoslezsko with value 3.23 %.
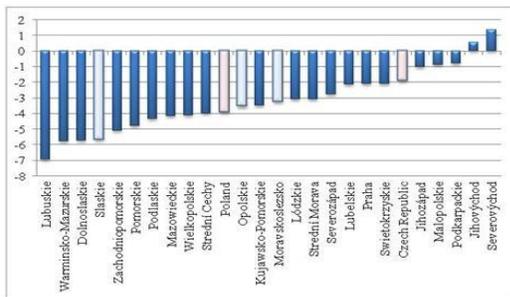

Fig. 3 The Average Growth Rate Of Unemployment Rate
(Calculation For The Years 2000 – 2012, %)

The second monitored indicator in the analysis of regional labor market is indicator of vacancies. But in this case there is a problem with data acquisition for the Poland regions. For the analysis of development vacancies was selected vacancies rate in %, which is analyzed from year 2008 to year 2013.

The vacancies rate express the proportion of vacancies in the total number of sites, expressed in percentage. The value of this rate shows a decreasing trend during the time. From year 2008 to year 2013 decreased in Czech Republic from 3.2 % to 0.09 % and in Poland decreased from 1.5 % to 0.4 %. Since year 2009 the value of vacancies is moving on the simile level of all monitored regions.
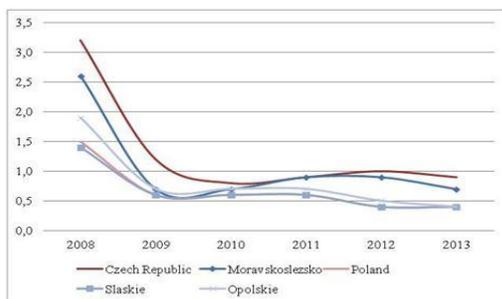

Fig. 4 The Development of Vacancies Rate (2008 - 2013, %)

B. Empiric Analysis of Economic Subjects

According to the count of economic units the most important sector is still the sector of Wholesale and retail trade, Construction, Manufacturing and Professional, scientific and technical activities. It was found the previous research [4].

On these selected key sectors is focused analysis in more detail, from the view of the count of employed people in these sectors. In the following Table I is available for the development of employment, specifically the count of employed persons in selected sectors of NACE. They introduced only followed regions Moravskoslezsko, Slaskie voivodship and Opolskie voivodship and also the total values for individual states.

In the overall view of the development in all sectors and all selected regions is mostly reported decreasing trend, i.e. it is still fewer employed people in these sectors. The highest decrease between 2008 and 2012 is in the Poland in the area of Wholesale and retail trade (G), where has been a decline of the number of employed people up to 241 304. The second highest decrease of the number of employed people can be seen again in the Poland in the Manufacturing (C), it is decrease about 224 616 of persons [5]. In the same sector is also a significant decline in the Czech Republic, i.e. about 140 536 of persons. Contrarily the highest increase of the number of employed persons in the sector of Professional, scientific and technical activities (M), in the Poland is increase between 2008 and 2012 up to 54 788 of employed persons and in the Czech Republic is increase about 15 784 of employed persons. It can say that the count of employed persons is still more important in the sector of Professional, scientific and technical activities in both selected countries. Contrarily is a significant decline in both countries in the sector of Manufacturing.

In the Moravskoslezsko region is the count of employed persons as the most important the sector of Manufacturing, but in this sector is observed the largest decline. From 161 864 of employed persons in 2008 is decrease about 16 410 of persons from a total of 145 454 of employed persons in the sector. The highest increase is in the sector of Wholesale and retail trade, i.e. about 6 503 of persons and in the sector of Professional, scientific and technical activities about 1 537 of persons.

The sector of Professional, scientific and technical activities (M) is from the point of view increase of count of the employed persons also important for the Slaskie voivodship. There is a change between 2008 and 2012 from 59 854 of employed persons to 62 622. However, in the other selected sectors is a decrease of employed persons.

The worst situation is in the region of Opolskie voivodship, where is a decrease of the employed persons in the selected sectors. The largest decline is in the sector of Wholesale and retail trade (G).

TABLE I
DEVELOPMENT OF EMPLOYMENT IN THE SELECTED SECTORS OF NACE
(NUMBER OF EMPLOYEE, 2008 – 2012).

Sector	Region	2008	2010	2012
C	Czech Republic	1 365 452	1 193 316	1 224 916
	Moravskoslezsko	161 864	143 599	145 454
	Poland	2 537 230	2 375 291	2 312 614
	Slaskie voivodship	341 685	323 772	323 623
	Opolskie voivodship	67 984	64 699	64 092
F	Czech Republic	412 713	410 352	395 093
	Moravskoslezsko	42 422	41 982	39 351
	Poland	x*	905 867	882 039
	Slaskie voivodship	x*	118 581	116 393
	Opolskie voivodship	x*	21 960	20 072
G	Czech Republic	684 444	684 170	710 737
	Moravskoslezsko	64 015	67 322	70 518
	Poland	2 475 808	2 285 222	2 234 504
	Slaskie voivodship	277 161	250 373	248 747
	Opolskie voivodship	46 951	43 714	37 677
M	Czech Republic	231 742	240 183	247 526
	Moravskoslezsko	19 497	20 501	21 034
	Poland	488 724	490 762	543 512
	Slaskie voivodship	59 854	58 919	62 622
	Opolskie voivodship	9 407	8 575	9 040

*Note: Data not available.

Another analytical part in economic entities is focused on the comparison of the count of employed persons in the selected sectors [6]. It is about a comparison between regions of the NUTS2 in both countries, i.e. a comparison of all 24 regions NUTS 2 (8 regions of the Czech Republic, 16 regions of the Poland). The data are transformed into the graphic form for the clearer comparison. The regions are aligned by region with the lowest count of employed persons in the sector for region with the highest count of employed persons of the sector. That allows the formation of a clearer imagination about the position of the region to the other regions (Manzella and Mendez, 2009). This comparison is performed for the last available year, for 2012.

The Fig. 5 contains and overview of the regions according to the count of employed persons in the sector of Manufacturing in 2012. The highest count of employed persons in the sector of Manufacturing is in the region of Slaskie voivodship and it is in comparison with all other regions in both countries, i.e. with other 26 regions. It is about 323 623 of employed persons in this sector. Moravskoslezsko region is located exactly in the average of this comparison, i.e. on the 12th place with comparison of all 24 regions. In this sector is employed 145 454 of persons. The region Opolskie voivodship is located on the penultimate place. There is employed 64 092 of persons.

In the comparison of Czech regions is on the first place the region Jihovýchod (210 396 of employed persons), the Severovýchod region and Střední Morava. The last place (in the Czech Republic) hold Prague with the total count of employed persons 81 212 in the sector.
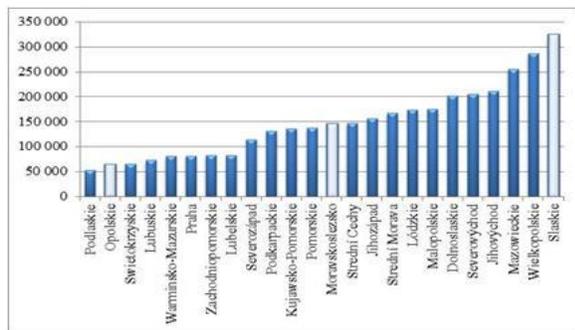

Fig. 5 Number of Employed Persons In The Sector Manufacturing In 2012

Another observed sector is the sector of Construction (Fig. 6). On the first place in the count of employed persons is in this case the region Mazowieckie voivodship, where are about 141 530 of employed persons. This region is followed by the region of Slaskie voivodship (116 393 of employed persons). The first four places of this imaginary ladder is occupied by Polish regions. At the sight of Czech regions is the best in this sector the Praha region, followed by the Jihovýchod region and Severovýchod region. On the last place of Czech regions is the Severozápad region (36 752 of employed persons). The Moravskoslezsko region is located on 8th place from the end in comparison with all regions of both countries and on the 7th place in comparison with Czech regions (it is the penultimate place in all eight regions in Czech Republic). The region Opolskie voivodship occupies the 3rd place from the end with the total count 20 072 of employed persons in the sector of Construction.
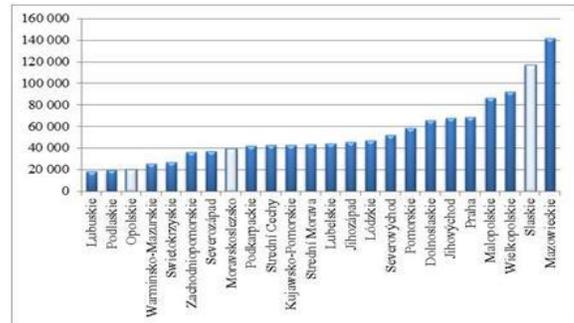

Fig. 6 Number of Employed Persons In The Sector Construction In 2012

The third analyzed sector is the sector of Wholesale, retail trade; repair and maintenance of motor vehicles. The results are shown on the Fig. 7. Within this sector the Opolskie voivodship gets on the last place in comparison with other 23 regions of NUTS 2 in both of countries. In Opolskie voivodship is in the sector in 2012 employed 37 677 persons. The Moravskoslezsko region is located on the 16th place in comparison with all regions and on the 5th place in comparison with Czech regions. It employs 70 518 persons in 2012. Slaskie voivodship is on the third place with a total count 248 747 of employed persons.

Significant rebound from other regions is clearly visible in the region Mazowieckie voivodship, where is in the area of Wholesale and retail trade employed 464 451 persons. In the Czech Republic is the highest count of employed persons in the region of Praha (171 583 persons) and in comparison with Polish regions is located on 5th place.
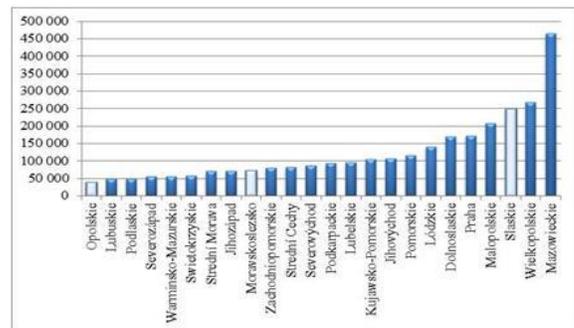

Fig. 7 Number of Employed Persons In The Sector Wholesale And Retail Trade In 2012

The last selected key sector is the sector of Professional, scientific and technical activities (Fig. 8). This sector is known for significant increase, what is important compared to other sectors. On the first two places are located both central regions of both selected countries, i.e. the region of Praha and the region Mazowieckie voivodship. These two regions are followed by region Slaskie voivodship, where is employed 62 622 persons in the sector in 2012. The region of Moravskoslezsko is located on 11th place in comparison with all other regions with the total number 21 034 of employed persons. Opolskie voivodship is on the penultimate place of this imaginary ladder with 9 040 of employed persons in the sector.
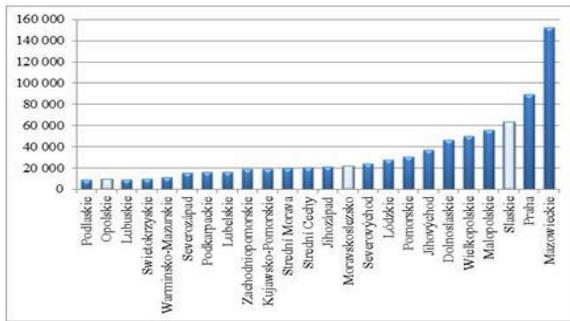
Fig. 8 Number of Employed Persons In The Sector Professional, Scientific And Technical Activities In 2012

IV. CONCLUSION

This paper that focused on border regions of Poland and the Czech Republic (Moravskoslezsko, Opolskie and Slaskie voivodship) analyzed the selected indicators. There was monitored the situation on the labor market, particularly unemployment and vacancies. On the other hand of labor market are businesses, which employ the economically active population. Therefore it is good to look at both sides of the labor market.

For the imagination about the situation on the regional labor market is found like sufficient to analyze mostly the rate of unemployment and vacancies. In the case of rate of unemployment is primarily interesting the development in Poland regions, there has been significant a decline of rate of unemployment since the year 2008.

At the beginning of the research was presumed positive development. It is also proved with some reservations. The regions are still in bad shape compared with other regions of the two countries. Even though they have a high potential to improve their situation, so it is still insufficient. It is necessary in these regions to support further employment.

ACKNOWLEDGMENT

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