ABSTRACT. We find it interesting and useful to examine regional differences in labor force and here we focus on the comparison of regional differences in Slovakia and Czech Republic, the countries that are very close in terms of population mentality and way of life. A significant share of highly skilled labor force in both countries in question leaves homes, thus external migration.

Labor force is beginning to be a serious problem for both economies. In this study our objective is to evaluate and compare regional differences in labor force migration in Czech Republic and in Slovak Republic.

We used the questionnaire method with a random selection of respondents. Further, we used descriptive statistics and our hypotheses have been evaluated by means of chi-square method.

We have found that attitudes differ considerably between the respondents in Czech Republic and Slovakia.

JEL Classification: R23, F22, O15

Keywords: Regional disparities, migration, labor, salary conditions.

Introduction

Experts today define labor migration in much wider contexts. Labor migration can be viewed from several perspectives. We can talk about migration for work purposes when the place of residence is changed, and also about those types of labor migration when residence remains unchanged. Here we can include seasonal migration, especially among farm workers who go abroad for seasonal work. Another type of labor migration can be circular migration, in which change of the permanent place of residence does not occur, it is actually about overcoming the distance between home and place of work or study. These are mostly daily or weekly movements of citizens with the work or study purposes (Jurčová, 2008; Thomas, 2016; Divínský, 2005; Vojtovič, 2013; Strielkowski, Bilan, 2016).

Labour migration can have both negative and positive impacts, both in the country of origin and the country of immigration. To the negative impacts of labor migration we can include brain drain, for example. Particularly developing countries are losing a lot due to this leakage of highly qualified workforce, these countries have spent a lot on education of young people, and later the young leave the country after graduation, thus those countries are losing the potential benefits from these educated people could create. In this case, we can talk about
the negative impacts of labor migration, which represent obvious economic losses for the country. It should also be noted that this is a very serious problem, because educated and highly skilled population is the key to success and prosperity for the country and it is also to some extent the reflection of a certain level of country’s development (Bartolini et al., 2017; Fitzpatrick, Jones, 2016).

We think it is very interesting to examine regional differences in the labor force and therefore we focus on the comparison of regional differences in Slovakia and Czech Republic in the present study. These countries are very close in terms of mentality and life style.

This is a positive fact that the workforce rapidly integrates and adapts to the way of life and it is involved in the production of goods and services within Czech economy. There is a lack labor force in almost all sectors in Czech economy these days. This phenomenon of labor shortage appeared in Slovakia too, back in 2016, moreover, Bratislava region began to create competition to Czech labor market and working conditions in some sectors are becoming today even more attractive. Development of migration flows is difficult to predict currently because significant impact will surely have the upcoming exit of the Great Britain from the European Union.

Development of both Slovak and Czech societies today has positive and negative aspects. The negatives mostly concern the process of leaving skilled labor, especially in the category of university educated people as well as among certain blue-collar professions. Slovak Republic has not been sufficiently prepared for this phenomenon. For example, till now there are no integration programs for returning labor force to Slovak labor market. This problem become especially pressing at the time of ongoing financial and economic crisis (Fendel, 2016).

At the same time, Slovak Republic has one of the most dynamic index of aging in the EU and if the trends of labor migration to Czech Republic continue to develop with the same pace as before it will have a very negative impact not only on the economy but also on social development in Slovakia. The attractiveness of Czech labor market can be explained by the minimum distance from Slovak Republic, and also by the absence language barrier which also indirectly means that social integration in a new venue takes place very quickly.

1. Methodological approach

For these reasons, it is necessary to examine any relation of labor emigration to Czech Republic. In identifying the hypotheses, we used the research objective of mapping and comparing regional differences in labor migration between Czech and Slovak Republics.

Based on this goal, we have set the following hypotheses:

Hypothesis H1:
The region from which the respondents came affects the choice of the region in which they wish to work. Indicators: the region from which the respondents came, the region in which they wish to work.

Hypothesis H2:
The respondents with secondary education have more experience of working abroad as compared to the respondents with university education. Indicators: experience with working abroad, education level achieved.

Hypothesis H3:
The most common reason for labor migration is better wage assessment, regardless the region from which the respondents come from. Indicators: reasons for labor migration, the region from which respondents came.

Hypothesis H4:
The respondents prefer moving to work within the country rather than relocating abroad for the same purpose. Indicators: moving for work inside the country, moving abroad.
As stated in Chráska (2007), the hypothesis can be confirmed or rejected on the basis of extensive data collection, its further sorting, processing and evaluation. We will obtain the necessary data with empirical methods, namely, questionnaire. The basic set (or alternatively the population) "consists from all entities covered by the results of the research“ (Elektronická učebnica pedagogického výskumu, 2016). In other words, the basic set represents a population that can be explored. In our research the basic set consists of a population capable or prepared to work, and since the number is very high, it is not realistic to organize research with the whole basic set. Also Chráska (2007, p. 20) considers that it is not possible in the research "that we will examine each individual (or situation) that interest us. Our findings are based only on knowledge about sample (selection). The point is that the properties of selected samples were as far as possible the same as for the whole group (people or situations) that we examine“. Therefore, only a certain selection is made from the base set, which is called the selection set.

We have chosen a selection not based on probability, namely occasional choice. For this kind of selection was chosen because the sample is available for us and we have access to it. The sample included 387 respondents, of which:

- 207 respondents were from Slovak Republic,
- 180 respondents were from Czech republic.

The sample consists of respondents from Czech Republic and Slovakia in the productive age. They were contacted by random selection based on their profile through social networks. Designed questionnaires were distributed to the respondents electronically.

Mathematical statistics represents important place in the processing of data by Chráska (2007), we used descriptive statistics and hypotheses were evaluated by chi-square method.

3. Discussion

The main objective of the research was to compare regional differences in labor migration in Czech Republic and Slovakia. We dealt with verification of hypotheses in this part.

**Hypothesis H1:**

*The region from which the respondents came affects the choice of the region in which they wish to work.*

The respondents came from all regions of Slovakia and Czech Republic in a research set. We examined region in which respondents live and in which they wish to work. The following Table 1 gives an overview of the current and preferred region in terms of places to live for respondents from Slovakia.

<table>
<thead>
<tr>
<th>Current region</th>
<th>n</th>
<th>%</th>
<th>Preferred regions</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bratislava</td>
<td>29</td>
<td>14.00</td>
<td>Bratislava</td>
<td>48</td>
<td>23.19</td>
</tr>
<tr>
<td>Trnava</td>
<td>26</td>
<td>12.56</td>
<td>Trnava</td>
<td>37</td>
<td>17.79</td>
</tr>
<tr>
<td>Trenčín</td>
<td>20</td>
<td>9.66</td>
<td>Trenčín</td>
<td>18</td>
<td>8.70</td>
</tr>
<tr>
<td>Prešov</td>
<td>38</td>
<td>18.36</td>
<td>Prešov</td>
<td>18</td>
<td>8.70</td>
</tr>
<tr>
<td>Košice</td>
<td>33</td>
<td>15.94</td>
<td>Košice</td>
<td>13</td>
<td>6.28</td>
</tr>
<tr>
<td>Žilina</td>
<td>19</td>
<td>9.18</td>
<td>Žilina</td>
<td>28</td>
<td>13.53</td>
</tr>
<tr>
<td>Banska Bystrica</td>
<td>25</td>
<td>12.08</td>
<td>Banska Bystrica</td>
<td>14</td>
<td>6.76</td>
</tr>
<tr>
<td>Nitra</td>
<td>17</td>
<td>8.21</td>
<td>Nitra</td>
<td>31</td>
<td>14.98</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>207</td>
<td>100.00</td>
<td></td>
<td>207</td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Source:* own processing.
Table 1 shows that the respondents from regions with low GDP per capita prefer regions of West Slovakia, especially Bratislava (23.19%), Trnava (17.79%) and Nitra region (14.98%). Conversely, the least of the respondents had choosen as a place to live in Banska Bystrica (6.76%), Košice region (6.28%). The most common reason for the respondents is especially enough job opportunities in preferred region. The rule becomes in Slovakia that residents of Eastern Slovakia and Banska Bystrica region (region of deep poverty), are trying to find job in labor market, especially in the wealthier regions. One of the solutions to avoid threat of unemployment is escape from hometown due to lack of opportunities, particularly for young Slovaks.

Table 2 Current and preffered region of respondents – CR

<table>
<thead>
<tr>
<th>Current region</th>
<th>CR</th>
<th>n</th>
<th>%</th>
<th>Preferred region</th>
<th>CR</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital city Praha</td>
<td>20</td>
<td>11.11</td>
<td></td>
<td>Capital city Praha</td>
<td>37</td>
<td>20.56</td>
<td></td>
</tr>
<tr>
<td>Central Bohemian</td>
<td>19</td>
<td>10.56</td>
<td></td>
<td>Central Bohemian</td>
<td>32</td>
<td>17.78</td>
<td></td>
</tr>
<tr>
<td>South Bohemian</td>
<td>18</td>
<td>10.00</td>
<td></td>
<td>South Bohemian</td>
<td>5</td>
<td>2.78</td>
<td></td>
</tr>
<tr>
<td>Plzeň</td>
<td>16</td>
<td>8.89</td>
<td></td>
<td>Plzeň</td>
<td>4</td>
<td>2.22</td>
<td></td>
</tr>
<tr>
<td>Karlove Vary</td>
<td>12</td>
<td>6.67</td>
<td></td>
<td>Karlove Vary</td>
<td>5</td>
<td>2.78</td>
<td></td>
</tr>
<tr>
<td>Ústí nad Labem</td>
<td>10</td>
<td>5.56</td>
<td></td>
<td>Ústí nad Labem</td>
<td>4</td>
<td>2.22</td>
<td></td>
</tr>
<tr>
<td>Liberec</td>
<td>12</td>
<td>6.67</td>
<td></td>
<td>Liberec</td>
<td>3</td>
<td>1.67</td>
<td></td>
</tr>
<tr>
<td>Hradec Králove</td>
<td>14</td>
<td>7.78</td>
<td></td>
<td>Hradec Králove</td>
<td>14</td>
<td>7.78</td>
<td></td>
</tr>
<tr>
<td>Pardubice</td>
<td>9</td>
<td>5.00</td>
<td></td>
<td>Pardubice</td>
<td>7</td>
<td>3.89</td>
<td></td>
</tr>
<tr>
<td>Vysočina</td>
<td>15</td>
<td>8.33</td>
<td></td>
<td>Vysočina</td>
<td>11</td>
<td>6.11</td>
<td></td>
</tr>
<tr>
<td>South Moravian</td>
<td>7</td>
<td>3.89</td>
<td></td>
<td>South Moravian</td>
<td>29</td>
<td>16.11</td>
<td></td>
</tr>
<tr>
<td>Olomouc</td>
<td>9</td>
<td>5.00</td>
<td></td>
<td>Olomouc</td>
<td>5</td>
<td>2.78</td>
<td></td>
</tr>
<tr>
<td>Zlin</td>
<td>10</td>
<td>5.56</td>
<td></td>
<td>Zlin</td>
<td>2</td>
<td>1.11</td>
<td></td>
</tr>
<tr>
<td>Moravian-Silesian</td>
<td>9</td>
<td>5.00</td>
<td></td>
<td>Moravian-Silesian</td>
<td>22</td>
<td>12.22</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td>100.00</td>
<td></td>
<td>-</td>
<td>180.00</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>

Source: own processing.

Similar findings achieved by the research among Czech respondents. Summary of answers of respondents about the current and preferred region in terms of places to live in the Czech Republic are presented in Table 2. For respondents is attractive Prague (20.56%), Central Bohemia (17.78%) South Moravia (16.11%) and the Moravian-Silesian Region (12.22%). These regions produce a high proportion of GDP in Czech Republic. Conversely, respondents prefer at least Liberec (1.67%) and Zlin region (1.11%). Even in this case, it was confirmed that respondents prefer regions with higher proportion of GDP per capita.

Based on these findings, we observed that for respondents are attractive regions from the viewpoint of labor migration with a higher share of GDP per capita, the regions where industry and services are concentrated, this indicates abundance of jobs. This fact was confirmed and we identified the reason for migration for work that sufficient of employment opportunities leads in respondents' views.

Based on these findings, we confirmed that the current region of respondents affects the selection of the region in which they wish to work. We therefore confirmed the hypothesis H1.

Hypothesis H2:

The respondents with secondary education have more experience of working abroad as compared to the respondents with university education.

The respondents with completed secondary education were most represented in the research group (Slovak Republic: 37.68%, Czech Republic: 45.00%) and the secondary without
GCE (Slovak Republic: 25.12%, Czech Republic: 27.22%). 8.70% of respondents in Slovak Republic and 12.22% of respondents in Czech Republic were with the university education of the second degree. 20.29% of respondents in Slovak Republic and 11.11% of respondents in Czech Republic were with the university education of the first degree.

As we found, the respondents from Slovak Republic have more experience in working abroad. 71.98% of Slovak respondents had such experience, while only 38.89% of Czech respondents had the same. Different unemployment rates is the key reason for these findings. The unemployment rate reached on average 5.5% in Czech Republic, this is the lowest rate in the European Union in 2015. Czech respondents have enough jobs at home, so they are not so much compelled to go for work abroad as compared to Slovak respondents.

Another research result is that 33.82% of the respondents in Slovak Republic would like to travel for work again, 18.84% would do so only if they could not find work in Slovak Republic and 10.14% would prefer a different country. Czech respondents would not travel for work (16.67%), because they want to work at home. On the other hand, 6.11% of the respondents conceded the possibility of re-traveling. 10.56% of the respondents would do it, if they could not find work at home.

We verified the hypothesis H2 through the test of good correlation (chi-square) in the statistical software SPSS (see Table 3).

Table 3. Test of good correlation – hypothesis H2

<table>
<thead>
<tr>
<th></th>
<th>value</th>
<th>asymp. sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>10.777</td>
<td>0.019</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>3.214</td>
<td>0.050</td>
</tr>
</tbody>
</table>

Source: own processing.

It was confirmed that the respondents with secondary education have more experience in working abroad as compared to the respondents who have university education. We, therefore, confirm the hypothesis H2 at the significance level of 0.05. In this context, we complemented other research results that the respondents are mostly interested in performing crafts and construction works, because there is no demand for university education and work of the related level.

Hypothesis H3:
The most common reason for labor migration is better wage assessment, regardless the region from which the respondents come from.

The research has shown that the respondents are motivated to labor migration due to various reasons such as more favorable valuation, enough job opportunities, higher living standards and levels of health and social care etc. As we have found here, the greatest motivator for labor migration is labor valuation, as reported by 29.47% of the respondents in Slovak Republic and also by 21.67% of the respondents in Czech Republic. This is related to enough job opportunities (Slovak Republic: 8.21%. Czech Republic: 4.44%) and higher living standards (Slovak Republic: 16.43% Czech Republic 2.22%).

We also tried to find an answer to the research question what reasons would convince the respondents to find a new job at home and thus continue working in their home country. Again, it is confirmed that a well-paid job would be the reason for such a choice for 54.59% of the respondents in Slovakia and 44.44% of the respondents in Czech Republic. We were surprised by the finding that 38 respondents in Slovak Republic reported as the reason for staying in SR the improvement of political situation in the country.
Table 4.2 Test of good correlation – hypothesis H3

<table>
<thead>
<tr>
<th></th>
<th>value</th>
<th>asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>18.050*</td>
<td>0.002</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>1.234</td>
<td>0.201</td>
</tr>
</tbody>
</table>

*Source: own processing.*

Based on Table 4, we confirmed that the most common reason for labor migration is better salaries, regardless of the region from which respondents came at the significance level of 0.05. We therefore confirm the hypothesis H3.

The survey of the Business Alliance of Slovakia showed the reasons for which people leave to work abroad most often. More than 75% of the respondents said that they went to work abroad because they found better salary conditions and economic conditions of life there. Almost half of the respondents said better professional development opportunities as the reason. According to this survey more than 300-thousand Slovaks are working abroad and more than 30 thousand are studying at universities abroad. 9% of the respondents want to go home and 70% want to stay permanently abroad (Pilz, 2015).

Thousands of people go from Slovak Republic each year and they refuse to return because bad working conditions are there. So state loses future taxpayers and payers of insurance. The Youth Strategy for the period 2014 – 2020 (In Trebulová, 2014) indicated a survey according to it, more than 70% of young people prefer live in another country. According to this document, more than half of young people are unemployed in long term. They begin work after the age of 25, they do not have funds to start their own business. Economic and social exclusion is the consequence that causes different mental disorders.

Hypothesis H4:
The respondents prefer moving to work within the country rather than relocating abroad for the same purpose.

71.98% of the respondents in Slovak Republic and only 38.89% of the respondents in Czech Republic had experience working abroad as mentioned above. 33.82% of the respondents in Slovak Republic of them wish to working abroad again, 18.84% of them would go only if they could not find job in Slovakia and 10.14% of the respondents would prefer different country. The fact is noteworthy also that only 60.87% of the respondents in Slovak Republic is planning migrate to working abroad in the future. Only 38.33% of the respondents marked this possibility in Czech Republic. We did not consider this finding based on previous answers of the respondents as surprising. Slovak respondents had experiences with working abroad and their attitude was not averse to move abroad because there are more opportunities, better treatment and better living standards especially.

37.68% of the respondents in Slovakia thought about working abroad for a longer period, 12.56% for a shorter period and 10.63% of them were able to working abroad permanently. 64.73% of the respondents in Slovakia and 84.44% of respondents in Czech Republic conceded the possibility of working abroad, but only if they would not have work and family at home. 70.53% of the respondents in Slovak Republic would be willing to move to the region in which they would like to work. 18.36% of the respondents said the opposite view and 1.11% of the respondents answered the option "I do not know". 50.56% of the respondents in Czech Republic would be willing to move to this region.
Table 5. Test of good correlation – hypothesis H4

<table>
<thead>
<tr>
<th></th>
<th>value</th>
<th>asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>15.050a</td>
<td>0.002</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>1.633</td>
<td>0.206</td>
</tr>
</tbody>
</table>

Source: own processing.

Table 5 shows that we confirm hypothesis H4 at the significance level of 0.05. Respondents preferred move for working in the country from which they originated before moving to other countries. However, if they will not find a job, they are willing to move for work.

Conclusion

Migration is one of the main components of population development for most European countries. The issue of free movement of labor have emerged in the Treaty of Rome. It specifies that area without borders, within which it is possible the free movement of goods, persons, services and capital. International Organization for Migration adds that it is necessary that migration should be managed and migration responds to labor market needs. For this reason "Network was established for cooperation between the European Commission and the national public employment services, in order to facilitate free movement of workers within the European Economic Area (EU countries plus Norway, Iceland and Liechtenstein) and Switzerland" (Divinský, 2011, p. 42).

Migration flows are integral part of regional processes, because these are important factors, which affect the demographic, socio-economic and settlement structures (Mitze, Schmidt, 2015; Fendel, 2016; Bilan, 2016, 2012). The theme of international migration of the Slovak population has become highly topical when Slovak Republic has joined the EU. Population and Housing Census gives accurate information about the number of citizens working abroad, or the number of foreigners working in Slovak Republic, which takes place every 10 years. Census gives information about the number of outgoing workers and commuters for work in Slovak Republic, daily commuting to work by comparing the place of residence with place of work (Jurčová, 2008). With regard to internal migration in Slovak Republic, migration is understood as a ‘change of residence of the village, and we understand by changing also movement within urban areas of Bratislava and Košice.’ Districts of Bratislava and Košice are the most attractive, but rural part of Košice reported decrease of population. Bratislava region is considered as the most advanced economic entity in Slovak Republic, migration flows evidenced in this region. This region is considered as the most attractive in the context of internal migration in the long term, because the average annual flow represents about 2,300 people per year. Losses are increasing in Prešov, Košice, Banská Bystrica region (Jurčová, 2008).

We found in research that attitudes to moving for work between Czech Republic and Slovak Republic respondents differ significantly. More than half of respondents in Slovak Republic would like to stay to work in their district, but they can imagine commuting to job in another district or region and almost quarter of them can imagine to move for work, the situation is different according to respondents in Czech Republic. More than half of Czech respondents would not move because they had sufficient job opportunities in the country. Slovak respondents lean toward the possibility of moving abroad more if they would have the opportunity to find job. 71.98% of respondents in Slovak Republic and only 38.89% of respondents in Czech Republic had experience in working abroad.
One third of the respondents in Slovak Republic would like to work abroad again, simultaneously only 6.11% of the respondents in Czech Republic considered this possibility. We find it alarming that 60.87% of the respondents in Slovak Republic want to migrate abroad for labor in the future, and only 38.33% of the respondents in Czech Republic marked this possibility. The Slovaks think about working abroad for longer time, where we see a certain degree of skepticism, because most probably these respondents are aware that they will not even find adequate jobs at the domestic labor market even in the future.

71.67% of the respondents in Czech Republic are not considering the option of working abroad (as compared to 39.13% of the respondents in Slovak Republic). Different attitudes to working abroad between Czech and Slovak Republic respondents are thus confirmed.

Certain common characteristics of labor migration were observed between the respondents. Better wage assessment is the most common reason for work today's situation requires more support for regional development (mainly for the regions with low GDP per capita, the so-called „hungry valley“). It is necessary for any region to be able to exploit its potential for further economic growth. The national project "Supporting the development of regional employment" is dedicated to support regions, but today’s situation requires more comprehensive measures. Support for the regions should include the possibility for depreciation of costs spent on jobs’ creation and on research and development etc.

- **Support for regional development** - more support is needed for the dual system of education, including offers of study programs according to the real needs of the regional labor market. This requires raising awareness among the parents of today’s pupils, not only among pupils themselves. It is necessary for the schools to be more focused on specific occupations relevant to their particular regions.

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