LABOR MIGRATION BETWEEN THE CZECH REPUBLIC AND SLOVAKIA

JOLANA VOLEJNÍKOVÁ – RADKA KNĚZÁČKOVA

Abstract
This article deals with labor migration between the Czech Republic and Slovakia, which has always been specific and different from labor migration with other states due to historical and political events. Slovak workers have long represented a major proportion of the workforce on the Czech labor market. The article describes the key features of migration between the two countries with attention being focused on the development of migration flows after 1993, i.e. after the split of the former Czechoslovakia. The aim of the analysis is to further capture the key features of the development of migration policies of the Czech Republic and Slovakia and the changes that occurred after the accession of the two countries to the European Union. The number of Slovak citizens living in the Czech Republic and Czech citizens living in the Slovak Republic is compared with other nationalities living in both countries. Labor migration is then analyzed at a regional level. A comparison of the workforce in each region is made in terms of official statistical classification – Classification of economic activities and job classification. The method of statistical clustering was also used to compare regions. The conclusion of the article deals with the possible future evolution of migration flows between the Czech Republic and Slovakia. The statistical method of regression analysis was used for the prediction.

Key words: migration, labor migration, migration policy migratory flow, Czech Republic, Slovak Republic, labor force, labor market, region, European Union.

Classification JEL: M12 – Personnel Management, J61 – Geographic Labor Mobility; Immigrant Workers

1 Introduction
For many years the Czech Republic and Slovakia were one country and both countries have undergone many significant changes over the last twenty years. The transition from a centrally planned economy to a market economy, the overall transformation of the two economies, the division of former Czechoslovakia and the creation of two independent states, the accession of both countries to the European Union and the opening of their borders. These changes and historical events have had a key influence in shaping the nature and intensity of the migration flows of both countries. Among them, bilateral labor migration has long dominated and is now an integral part of the labor market in these countries.

The submitted article analyzes in detail the development of labor migration between the Czech Republic and Slovakia. The objectives of our research were to perform a quantitative and qualitative analysis of labor migration between the two countries, a comparison of the nature of labor migration flows with an emphasis on their regional and qualification diversity and a prediction of the possible development of labor migration between the two countries. Preparation of the analysis used statistical data on labor mobility between the Czech Republic and Slovakia, statistical methods, cluster and regression analyses were used to meet the research objectives.

2 Migration between the Czech Republic and Slovakia
Migration and the government’s approach to this issue depend on the political, economic and social conditions of the country and the standard of living of its population also plays an important. The development of migration policy in the modern history of the Czech and Slovak Republics is proof of that. During the centrally planned economy migration activity was severely limited; immigration was strictly controlled and was usually granted only to citizens of other socialist republics. These were mainly temporary students, apprentices and workers who
acquired education and work experience in the former Czechoslovakia. The transition to a market economy has gradually opened up labor markets for all foreigners and employment for foreigners has been restricted by issuing work permits. Transformational changes after 1989 had a major impact not only on the change in the volume of migration, but also the reasons why people moved. Temporary migration, seasonal labor migration and migration for study came into prominence. After the dissolution of Czechoslovakia in 1993, domestic migration changed into international migration. Its key themes are still education, skilled job opportunities and better-paid manual labor. Accession to the European Union (EU) has brought more new migration policy changes. Besides the unification of legislation, this brought the possibility of free movement of people and work in EU countries. Today, citizens of all EU Member States enjoy the same rights on the labor market as domestic residents.

It can be said that migration policy remains one of the most dynamic and emerging EU policies. Employment of citizens from EU member states is governed by Council Regulation (EEC) No. 1612/68 on freedom of movement of workers within the Community and Council Directive 90/365/EC on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States and Commission Regulation EEC No. 1251/70 on the right of workers to remain in the territory of a Member State after having been employed in that State. Given that the Czech and Slovak Republics have been part of the Schengen area since 2008, there are now no barriers between them that would prevent migration. The legislation in the Czech Republic regulates the employment of foreigners by Act. No. 326/1999 Coll. of Laws. Migration rules are formed by Ministry of the Interior of the Czech Republic, Ministry of Labor and Social Affairs, Ministry of Foreign Affairs of the Czech Republic and Ministry of Industry and Trade (Drbohlav, 2010; Burcin, 2010; Franc, 2006).

The development of the total number of foreigners in the Czech Republic since 1994 is shown in the following chart (Figure 1). The number grew in the Czech Republic until 1999. The decrease between 1999 and 2000 was primarily due to the adoption of new laws governing the stay of foreigners in the country.\(^3\) Visas were introduced for residents of certain states, for example, for citizens of the Ukraine and Russia whose share in the total number of foreigners was pronounced. The graph shows that after accession to the EU there has been a continuous increase in the number of foreigners. Decreases were recorded in 2008 in connection with the ongoing financial crisis. It is clear that citizens from Slovakia have long represented a strong ethnic group in the Czech Republic. At the end of 2010, there were a total of 426,423 foreigners in the Czech Republic, of which 30% were of Ukrainian nationality (124,367 people), 17% of Slovak nationality (71,780 people) and 14% of Vietnamese nationality (61,115 people) (Horáková, 2010).

The Slovak Republic, like the Czech Republic, has gradually changed from a transition to a destination country. The main source of data on international migration in Slovakia is the Úrad hraničnej a cudzineckej polície – Evidencia cudzincov. The statistics on foreign migration in the Slovak Republic include persons with usual residence, who are expected to reside for at least a year. This is therefore a permanent residence or registered residence for citizens of the European Economic Area or temporary residence with a duration of more than one year.\(^4\) The methodology of measuring migration has also changed over the years. The last major change was in 2004.

---

\(^3\) Act No. 326/1999 Coll. on the residence of foreigners on the territory of the Czech Republic and Act No. 325/1999 Coll. on asylum.

\(^4\) Usual residence – according to Regulation (EC) No 862/2007 of the European Parliament and of the Council of 11 July 2007 on Community statistics on migration and international protection, the place at which a person normally spends the daily period of rest, regardless of temporary absences for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment or religious pilgrimage or, in default, the place of legal or registered residence, lasting or expected to last for at least a year.
which is the reason why the data that we have collected was available from this year (Katerinková, 2011).

Figure 1: Development of the number of Slovaks in the Czech Republic in comparison to the total number of foreigners
Source: www.czso.cz/cs, 2012; own processing

The development of migration in Slovakia after 1993 can be divided into three phases. The first phase ran from 1993 to 1994 and was characterized by significant migration of people between the Czech Republic and Slovakia. Migration of people between the two countries reached 88% of the total volume of international migration. Between 1994 and 2003 there was a gradual increase in the number of foreigners in the Slovak Republic. There was a much steeper growth during the third stage, which began in 2004 with the accession of Slovakia into the EU, when the relevant legislation changed and the right of free movement of persons began to be exercised. An increasing number of foreigners in the country is evident from the graph below (Figure 2). Between 1994 and 2010, the number of foreigners in the country increased threefold (from 16,946 to 67,976 persons), (Portal.statistics.sk, 2008).

Figure 2: Development of the number of foreigners in Slovakia
Source: Portal Statistics.sk, 2012; own processing

People from the Czech Republic are among the highest representation of foreign citizens in the Slovak Republic. In 2010, there were a total of 9,040 usual residents recorded in the Slovak Republic, more than 13% of the total number of foreigners. Their number is constantly growing in the country, since its accession to the EU their absolute number has increased by 5,428 persons. The second highest represented nation is the Ukraine, followed by Romania and Poland.
Whilst Vietnamese are strongly represented in the Czech Republic, in the Slovak Republic this group represents only a 3% share of foreigners.

The migration flow between the Czech Republic and Slovakia has always been higher than the migration flows from other countries due to the minimal administrative barriers. Migration flow was strongest after the Second World War when the people of Slovakia inhabited largely depopulated areas in Czech border areas. Whereas before the Second World War there was a stronger migration flow from the Czech Republic to Slovakia, the opposite occurred after the war. In 1951, a total of 36,804 Slovaks immigrated to the Czech Republic and a total of 24,398 Czechs left to Slovakia. The Czech Republic has maintained a positive net migration to-date, even if the annual growth rate has ceased to reach such values. A comparison of the number of immigrants and emigrants between the Czech Republic and Slovakia since the emergence of independent states is shown in the following chart. It is clear that after 1993 there was a drop of immigration by almost half in both countries and this number did not change significantly until 2000. The turning point came after 2001, when there was a sharp increase in the number of Slovak citizens in the Czech Republic. In 2003, a total of 24,385 Slovaks immigrated to the Czech Republic. The number of Czech immigrants in Slovakia has long ranged around 1,100 people. In 2010, a total of 71,780 Slovaks lived in the Czech Republic; the number of Czechs having a habitual residence in Slovakia is eight-times lower (9,040 Czechs), (Srb, 2004; Burcin, 2010).

![Figure 3: Migration flow between the Czech Republic and Slovakia](source: Portal Statistics, 2012; ČSÚ, 2011; own processing)

2.1 Labor migration

Thanks to labor migration people leave their country for more advanced areas, where they have a chance to obtain the same job for higher wages. Labor migration brings many positive effects not only for the immigrants but also for the target country which acquires a skilled labor force having to expend resources on their training. Immigrants are willing to work for lower wages than the local population and thus represent cheap labor for the host country (Vavrečková, 2005).

The positive migration balance of the Czech Republic with Slovakia has been determined long by the greater economic and social situation of the country. For example, it is known that Slovak university students greatly exceed the number of Czech students in Slovakia. Almost 70% of them will decide to remain and work in the Czech Republic, meaning that a considerable intellectual potential coming to the Czech Republic from Slovakia. Although the current economy is growing strongly in Slovakia (in 2010 it showed a lower rate of inflation and higher growth in GDP than the Czech economy) and the country is becoming more attractive and sought-after for foreigners, the main reason for the migration of Slovak citizens to the Czech Republic is still jobs for higher wages than in their home country. Until 2004, the number of
Slovak workers followed the trend in the number of foreigners working in the Czech Republic and Slovaks represent half of employed foreigners. A change occurred after 2004, not due to a decrease in the interest of Slovak workers in the Czech labor market but due to a growing migration flow from other countries, mainly from the Ukraine and Vietnam. In 2010, there were a total of 5,268,900 economically active people in the Czech Republic; Slovak citizens contributed about 1.91% of the labor force. In this period, labor offices registered a total of 100,727 people of Slovak nationality and 10,681 of them worked based on a trade license (Horáková, 2010).

Most Slovaks work in the capital city of Prague and its vicinity - in the Central Bohemia region, reflecting the overall positive economic situation of the locality. In other regions there is a significant difference between the district labor offices of regional cities and other areas. The least amount of employed Slovak citizens is in the Karlovy Vary region. In districts bordering with Slovakia – Břeclav, Hodonín, Uherské Hradiště, Zlín, Vsetín and Frýdek Místek, the number of working Slovaks is not as high as in the district labor offices of regional cities; however, it exceeds the average value of the remaining districts.

If we look at the situation from the opposite perspective, the Slovak Republic employed a total of 18,247 foreigners in 2010. Distinct ethnic groups in the Slovak labor market are people from Romania (16% of the total number of employed foreigners) and Czech Republic (15.5% of the total number of employed foreigners). In this period, a total of 2,706,500 economically active people were registered, while the share of Czech workers in total labor force amounts to only 0.1%. Unfortunately, the number of employed Czechs in Slovakia cannot determine from the available statistics because the Slovak authorities do not record this information. Whereas, in the Czech Republic the number of working Slovaks exceeded the number of residing Slovaks, in the Slovak Republic the total number of Czechs with their usual residents registered at the labor office is only less than a third. In Slovakia most working Czechs are concentrated in large industrial centers and more economically developed regions, particularly in the capital city. If we move further to the east, the number of Czechs in the regions decreases, which is associated with the increase in distance but mostly with a worse economic situation of the eastern Slovak regions.

3 Regional analysis of labor migration between the Czech Republic and the Slovak Republic

3.1 Slovak workers on the Czech labor market

The number of Slovak citizens in the Czech Republic continues to grow. In 2010, the labor office registered a total of 100,725 Slovaks, which is an increase of 40% compared with 2004. A total of 10,681 Slovaks worked in the Czech Republic based on a business license in the same period. The following map shows the distribution of Slovaks registered at labor offices in the Czech Republic in 2010. The lower economic activity in the border areas is evident; in contrast the highest is in Prague (34.6%) and the Central Bohemia region (16.2%). The least number of Slovak workers are working in the Karlovy Vary region (a total of 1,154 workers, i.e. 1.1% of the total).

A comparison of absolute data from 2004 and 2010 shows that the number of working Slovak citizens increased in all 14 regions of the Czech Republic, the most in Prague (by 19,089 people), Central Bohemia (by 6,845 people) and Southern Moravia (by 4,941 people). The preferential arrangement of regions, however, was different in 2004. Whereas in 2004, 30.25% of Slovaks worked in the Moravian territory, in 2010 the figure was only 25.07%, the largest decline was recorded in the Moravskoslezský Region (-3.6% points) and in the Zlínský Region (-1% point). Conversely, the proportion of Slovaks working in Prague for the six year period increased from 26.3% to 34.6%.
Not only the stratification of the number of employed Slovaks in the Czech Republic is uneven, but significant differences can even be seen within a single region. When comparing the data from each district labor office it was found that the greatest concentration of Slovak workers is in the districts of regional cities, i.e. in areas with the highest concentration of industries and economic activity. The biggest differences between the districts of regional cities and other districts were found in South Moravia, where a total of 7,937 Slovaks were employed in the area falling under the city district of Brno – City in 2010, in all six other areas of the region there were only 4,388, with the least amount registered at the labor office in Znojmo. Large differences were also found between areas in the Plzeňský region, in the Pardubický region and the Moravskoslezský region.

Figure 4: Slovak workers by region
Source: www.mpsv.cz, 2012; own processing

According to the CZ-NACE classification of economic activity most Slovak workers in the Czech Republic are employed in manufacturing. According to the statistics, 1/3 of employed Slovaks work in industry, another 20% work in the manufacture of automobiles and their engines, 18.5% in the manufacture of structural metal products and 14% in the manufacture of electronic components.

Slovak citizens also work in wholesale and retail, as well as in construction. Mainly craftsmen and skilled manufacturers migrate to the Czech Republic (22.4% of the total), and machine operators and support workers also make up a significant group of people. These three groups together constitute 58% of the workforce from Slovakia. The remaining 42% is significantly represented by scientists and academics (11.25%), technicians, healthcare workers and teachers (11.96%) and service workers (9.78%). In terms of ISCO work qualifications, people with low skills mainly come to the Czech Republic or they gain employment where high skill levels are not required; these are mostly support workers, and plant and machine operators. The distribution of workers according to the ISCO classification in 2010 is shown in Figure 5. The left graph characterizes the labor force coming from Slovakia to the Czech Republic, and the right graph shows the opposite migration flow.
3.2 Czech workers on the Slovak labor market

The number of Czech workers in Slovakia is increasing over the long-term. Between 2004 and 2010 their number increased fourfold (from 631 Czechs in 2004 to 2,819 workers in 2010). Distribution of the Czech labor force in Slovakia is not uniform and is closely related to unemployment in these regions. Most Czechs work in the Bratislava region (42.28%), where the unemployment rate has long been below the national average (the overall unemployment rate in the Slovak Republic in 2010 was 14.4% and 6.1% in the Bratislava region), followed by the Nitranský region (15.5% of the total working Czechs). The least number of Czechs work in the Prešovský region (1.28%). Compared with 2004, the highest absolute increase of Czechs was recorded in the Bratislava region. Comparing the relative numbers, the highest increase is in the Nitranský region, i.e. 11.7% points.

The percentage has also increased in the regions of Košický and Prešovský. In other regions there has been a relative decrease. A higher qualified workforce leaves the Czech Republic to Slovakia. According to the ISCO classification this is usually positions of group two and three, i.e. positions that require higher skill levels. Most Czechs working in Slovakia are employed in construction (20.4% of employed Czechs), followed by manufacturing (15.7% Czechs), wholesale and retail trade (15.3% Czechs). Approximately one fifth of Czechs seeking work in Slovakia are from the branch of science and engineering professionals, followed by plant and machine operators (18.7%) and technicians, heath and teaching professionals (16.9%), legislators and senior officials (16.2%). The least amount of Czech workers in Slovakia is from the branches of agriculture and forestry. Stratification by qualification of Czech workers in Slovakia is shown in the figure above (Figure 5).

For a more detailed comparison of the regional labor migration flows we have used the statistical method of cluster analysis from the point of view of the qualifications of employees. Theoretical information for cluster analysis is based on statistical books (Kubanová, 2003; ...
řezanková, 2009). Input data was information on labor migration between the two countries in 2010. The regions of the Czech Republic were divided into 4 clusters in terms of the degree of similarity of the qualifications of Slovak workers on the Czech labor market. The first cluster was formed by the regions (sorted by degree of similarity) of Moravskoslezský, Olomoucký, Ústecký, Karlovarský and Jihomoravský. Most employees from Slovakia are in group ISCO 7 - Craft and related trades workers. Another feature of the cluster was a high percentage of employed executives, researchers and technical, medical and teaching professionals. The second cluster comprised the regions of Královéhradecký, Jihočeský, Vysočina, Zlínský and Liberecký. The main characteristics of this cluster was a high number of employed Slovaks in groups ISCO 8 – Plant and machine operators and ISCO 7 – craft and related trades workers, between the groups there was no significant difference in terms of percentage.

![Figure 6: Czech workers by region](http://www.upsvar.sk)

The third cluster consisted of the regions of Central Bohemia, Plzeňský and Pardubický. These are regions with a strong predominance of the groups ISCO7, ISCO8 and ISCO9, in which over 80% of Slovaks worked. The Capital City of Prague differs greatly from the remaining regions; hence it forms a separate cluster. People with a higher level of qualifications come to Prague, i.e. administrative staff, teachers, health professionals and managers.

In Slovakia the regions were divided into three clusters, the distance of connection was greater than in the regions of the Czech Republic. In terms of the distribution of skills of Czech workers the Slovak regions are not so similar. A certain similarity can be found for the regions of Košický and Prešovský, to which we can gradually add the regions of Banskobystrický and Žilinský. These are regions with a higher proportion of skilled Czech workers. In the second cluster a similarity can be traced for the regions of Trnavský and Trenčiansky. The Nitriansky region joins this cluster at a higher distance. In these regions more Czechs are working in less skilled positions. Similarly as in the Czech Republic, the region of the Slovak capital is very specific. More than ¼ of employed Czechs in the Bratislava region work in the first five qualification groups.
3.3 Trends in labor migration between the Czech Republic and Slovakia

To estimate the potential future development trend of labor migration between the Czech Republic and Slovakia we used the available statistical data and the statistical method of regression analysis.

The first estimate was made for the total number of Slovaks in the Czech Republic in 2015 (Figure 7a). The current development best matches a time series trend with the formula \( y = 24,559 \times 0.3747 \) with \( R^2 = 0.7176 \). Based on trend elongation, a total of 78,196 Slovaks could live in the Czech Republic in 2015, an increase of nearly 9,000 more than in 2010. However, the estimate is not sufficiently accurate due to the low \( R^2 \) coefficient. By creating a band of confidence (Figure 7a) – a dashed line, it was found that with 95% probability the estimate will range between 69,988 and 87,367 people. The prediction is shown with a dash-dot line on the same level as the confidence. Figure 7b) shows the prediction of the number of Slovaks working in the Czech Republic. The value in 2015 was interpolated based on the equation \( y = 3,096.1 \times +44,108 \) with \( R^2 = 0.6537 \).

Given the lower value of \( R^2 \), bands of confidence (dashed line) and prediction (dash-dot line) are shown. The point estimate of the number of Slovak citizens working in the Czech Republic according to the calculations amounts to 112,221 workers. A band of confidence of 95% for the point estimate is from 103,469 to 120,973 and the band of prediction for the same probability is from 89,258 to 135,184 workers. The distribution of workers from Slovakia in the Czech Republic according to the calculations does not significantly change. Nevertheless, a
higher proportion of persons will likely come to work in the regions of Prague, Central Bohemia, Plzeňský and Moravskoslezský.

Conversely, the number of people working in the regions of Karlovarský, Liberecký and Královéhradecký is likely to decrease. The ratio of skilled workers should not significantly change. According to the prediction, the proportion of skilled craftsmen and manufacturers or support staff is likely to increase. The proportion of Slovak health, teaching, science and professional workers and people working in services could also increase. On the other hand the proportion of administrative staff and skilled workers could decrease. In the case of Czechs in the Slovak Republic, their number grows at a linear rate which can be described by the equation $y = 1,079.9 \times x + 2,720.9$ with $R^2 = 0.9913$. According to this, in 2015 a total of 14,600 Czechs could be registered in the Slovak Republic, an increase of almost 5,000 people compared with the state in 2010. Due to there being no significant fluctuations in time series in the past, the value of $R^2$ is high and the bands of confidence and prediction range close to the estimate. Based on the results of the regression analysis it can be said that the value for 2015 will come with a 95% confidence interval 14,233 to 14,967 people.
The number of Czechs cannot be accurately estimated. The development of Czech employees can be described as an exponential equation 

\[
y = 544.48 e^{0.2425x}, \quad R^2 = 0.9869
\]

according to which in 2015 there is likely to be 9,996 Czechs working in Slovakia. The band of prediction is wider than the estimate of the total number, with 95% probability the value in 2015 will range between 8,880 and 11,253 Czech workers. From the results we can also conclude that the ratio between Czech workers and the total number of Czechs with usual residence in the Slovak Republic will increase. Compared with 2010, the number doubles. Over the years, there is likely to be a difference in the number of Czechs between the regions. While in 2010, 42% of Czechs worked in the Bratislava region in 2015 it could be only 26%. Conversely, the proportion of Czechs working in the Nitriansky region should increase. A similar situation should occur in the regions of Košický, Žilinský and Trnavský. In subsequent years the qualification structure of Czechs working in Slovak Republic should also change. According to the current development the dominant group will become plant and machine operators. The second largest group will be craft and related trade workers. The proportion of executives, technicians, health professionals, teachers and clerks will be greatly reduced.

4 Conclusion

Labor migration between the Czech Republic and Slovakia has a long tradition. The common history and mentality of people, the closeness of language, culture and habits determines the higher intensity of bilateral labor migration. The question is how the labor migration between the two countries will develop in the future. Based on data from previous years it can be estimated that the number of Slovak citizens in the Czech Republic will increase. However, the growth rate is likely to be lower than the number of Czech workers in the Slovak Republic. Based on regression analysis, we predict that in the Czech Republic, Slovaks will be more concentrated in the capital and its vicinity. In the Slovak Republic, the number of employed Czechs in regions of Nitriansky, Trnavský and Košický is likely to increase. There will not be any major changes in the qualifications of Slovak workers in the Czech Republic, but the proportion of Slovak health, teaching, science professionals, professional workers and people working in services could rise in the Czech Republic. On the other hand, the proportion of administrative staff and skilled workers is likely to fall. In subsequent years the qualification structure of Czechs working in the Slovak Republic should also change. According to current developments, the dominant group will become plant and machine operators. The second largest group will be craft and related trade workers. The proportion of executives, technicians, health professionals, teachers and clerks will be greatly reduced.

Acknowledgement:

This article came about with the financial support of science and research activity – Student Grant Competition of the University of Pardubice, SGA grant No. SGFES01 Economic Policy and Administration at the Faculty of Economics and Administration. Detailed statistical data on the regional movement of Czech workers on the Slovak labor market was obtained through major cooperation with Assoc. Prof. Alžbeta Kucharčíková, MSc, Ph.D. from the Faculty of Management and Informatics at the University of Žilina.

References:


Addresses of authors:
Assoc. Prof. Jolana VOLEJNÍKOVÁ, PhD. Institute of Economic Science Faculty of Economics and Administration University of Pardubice Studentská 95 532 10 Pardubice Czech Republic e-mail: jolana.volejnikova@upce.cz

Radka KNĚZÁČKOVÁ, BSc Institute of Economic Science Faculty of Economics and Administration University of Pardubice Studentská 95 532 10 Pardubice Czech Republic e-mail: radka.knezackova@seznam.cz