THE EVALUATION OF ECONOMIC BENEFITS FROM MIGRATED LABOUR IN V4 COUNTRIES

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Abstract

This given study deals with the issue of economic benefits from migrated labour forces in V4 countries, the importance of managing migration flows appropriately, which may significantly influence the economic development of a country by increasing labour productivity, the demography in development and sustainability of retirement systems. Based on statistical data and mathematical calculations it introduces an evaluation system of economic benefits from immigration in V4 regional labour markets as well as the selected macro-economic indicators as introduced. Moreover, it shows the saved costs on education and profession preparation of such labour force and the incomes from GDP or VAT produced by immigrants. In conclusion, it evaluates the balance of benefits and shows a further profit from saved costs on health and social care, childcare while preparing for a profession, incomes from income and consumption taxes, but also payments to social and health insurance agencies from immigrant salaries. A crucial benefit from labour force immigration is that it has a significant development potential in both the economy and society.

Key words

Immigration, labour migration, work force, labour market, V4 region

JEL Classification: F22, F23, F24

Introduction

Labour migration has become an economic and social phenomenon for V4 countries after the fall of Communism. Regarding Slovakia and the Czech Republic, it has been a phenomenon since 1993. After their accession to the EU in 2004, countries have started to perceive it as a problem. Other important milestones are the accessions of other countries to the Schengen area and the expiration of temporary actions that protect the labour markets of the original integrated member states in Europe. Over a long period V4 countries have evinced the character of a source country in regards to migration. High unemployment rates, low wages and the slow pace of creating job vacancies are all factors which push the home workforce (migration theory of push and pull factors) (Blanchflower, Shadforth, 2009). After overcoming the economic crisis in 2011, persistent economic growth has become evident in an increasing workforce demand. For the last two years, workforce demand has been so high that it is impossible to meet the workforce demand with the country´s own resources. This record high includes people who do not want to work, the long – term unemployed and those who have lost their working habits and therefore are unemployable. For several years the labour market in Slovakia, similar to other European countries, has experienced a significant lack of highly skilled employees, primarily IT technologists, technical and constructional technologists within engineering and electrotechnical industry, as well as, doctors and nurses (Adepoju, Van Noorloos, & Zoomers, 2010). Nowadays, there is a lack of skilled and unskilled labourers in the production and service industries. The Slovak Republic has exercised a purely formal approach in relation to migration – the acceptance of Conception of integration of foreigners in Slovakia (2009, 2011), the Migration policy of SR with the prospect till 2020 (2011) or minor changes in the field of foreign employment from third-world countries. Representatives of the policies declared an anti-migration approach in 2015 in connection with the migration crisis in Europe. Economic development during the last year compels the expert and laic public to change the point of view of migration. The administrative obstacles and the complex process of employing foreigners from third-world countries opens an area for immigration from poorer countries of European Union, where there is a level of wages deeply under the average of Slovakia. The saturated demand in the workforce by way of migration opens the questions in the political, expert and laic sphere which have been overlooked up until now. It requires a thorough analysis and examination with the aim of knowing the pros and cons of work migration from each member country within the European Union, as well as, third-world countries. Only by knowing both the motives and the consequences, it is possible to effectively manage the migration fluxes in a country.

The main goal of this study is to find out the influence of migration on selected macroeconomic

indicators and evaluation of economic contributions of work force migration on the target countries which are V4 countries, by means of correlation and regression analysis.

The realization of this goal requires:

- Selection of economic evaluation indicators from labour emigration
- Processing time-lines for the selected indicators
- Processing of correlational matrixes and consecutive regression analysis of the influence of immigration and GDP
- Evaluation of economic contributions of labour immigration in V4 countries

Goal and Methodology

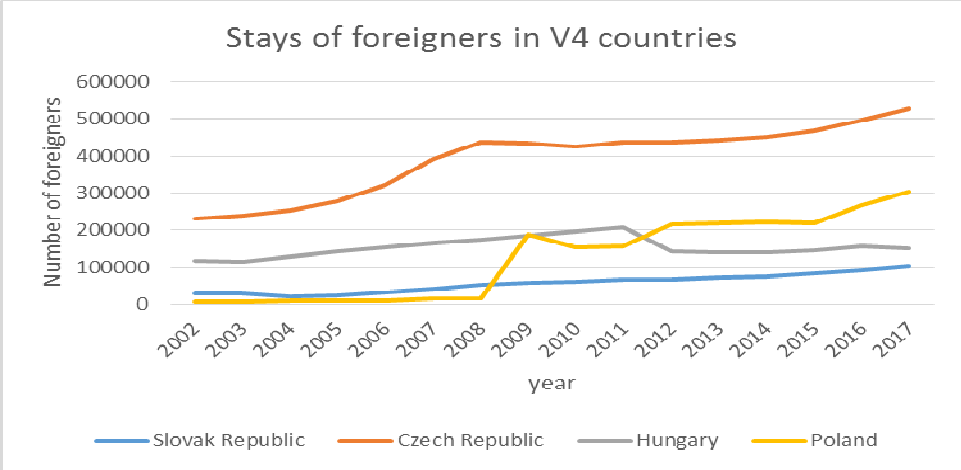
The calculations used in this study are based on accessible statistic data of Eurostat, WTO and national statistics published by Statistical offices in V4 countries. The scientific methods as an induction, deduction, abstraction, comparison, analysis and synthesis of selected factors, phenomenon and processes were used in this study. The mathematical-statistical methods (regression and correlation analysis) and other auxiliary calculations were used in order to recalculate the data.

Bases of evaluation of the immigration and GDP in V4 countries

Labour immigration represents the work-force coming from abroad to another country with the aim of finding a job based on intellect or manual labour (Andrijasevic, Sacchetto, 2016). Work performance assumes gaining the knowledge, developing the skills and gaining the skilfulness during the process of education and preparation for an occupation. Thanks to labour immigration, a country gains prepared work force in the productive age and foreigners are willing to work for an offered wage without any costs (Kazlauskienė, Rinkevičius 2006; Daugeliene, 2007; Lee, 2008). With the retirement age in mind, assuming it will be 65, an immigrant will produce the added value for approximately 35 – 40 years for such target country (based on average age of immigrants coming to V4 countries). The immigrant will pay income taxes, levies to the health and social insurance, increase the consumption and pay indirect taxes in the price of goods. In case of staying in the country and starting a family, the immigrant represents a reproductive potential. These are the most significant economic benefits of immigration (Cekanavicius, & Kasnauskiene, 2009).

In the past, Slovakia, much like other V4 countries, was originally an emigration country – meaning citizens left Slovakia due to various reasons. More significant changes came up in 2004 with the accession of countries to the European Union to A8 as it is called and the accession of countries to the Schengen area.

Graph 1. Development of the valid stays for foreigners in years 2009 – 2017 in V4 countries



Source: Eurostat

The highest number of foreigners with a permission for staying in the Slovak Republic in 2017 was 104451, representing 1.92% of the population. Since 2004, when the Slovak Republic accessed to the European Union, the number of legal immigrants has increased nearly fivefold. In spite of this positive development, Slovakia has the fifth lowest share of foreigners from the countries in the European Union. After Slovakia, in succession there are Bulgaria, Croatia, Lithuania and Romania with the share is not

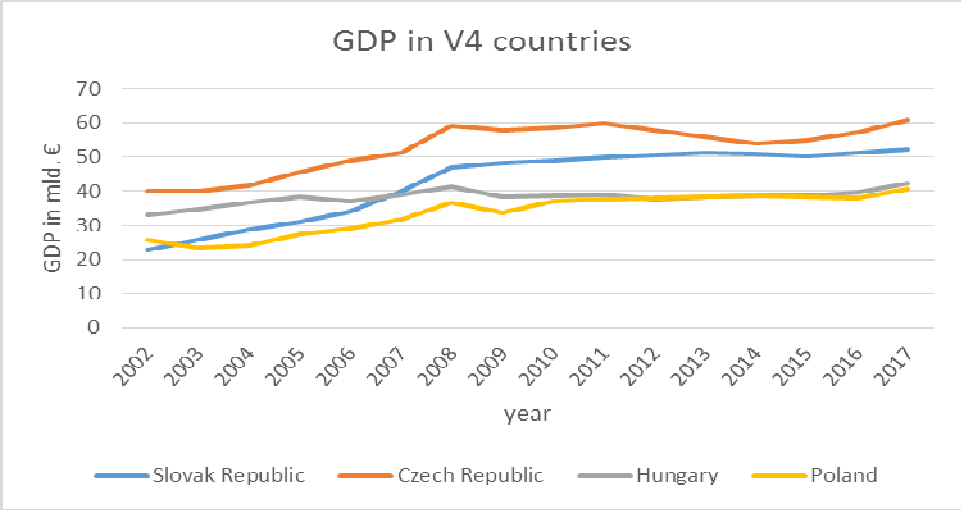
even 1%. The Slovak Republic is a target country for the citizens in neighbouring countries, which might be a result of the deeper working, family and other social connections. Immigrants from the Czech Republic, Hungary, Poland and Austria comprise 45% of the total number of immigrants in Slovakia. Another significant group is made up of citizens from the South-European countries, mainly Romania, Bulgaria and Serbia. An incentive for these citizens to immigrate is primarily employment.

In accordance with a citizenship of migrants from the third-world countries, most came from Ukraine, Serbia and Russia. Other countries include Vietnam, China, Korea, Iran, Macedonia, The United States and Turkey.

The course of the number of foreigners who stay in the Czech Republic continues to rise, but in Hungary, it is decreasing. Poland has recorded the most significant increase as foreigners have shown the biggest interest in this country. By monitoring the monthly increase of work migrants, we found out that in the Czech Republic there was a rapid increase of immigrants during the last months. At the same time, workers from Ukraine, Serbia, Bulgaria and Romania are on the front burner.

Immigrants in the target country produce an added value – appraised as a percentage when speaking about GDP (graph 2), which represents the number of goods and services that are produced in a country in one year.

Graph 2. Development of GDP in years 2009 – 2017 in V4 countries



Source: Eurostat

The most significant increase of GDP records is the economy of the Czech Republic, afterwards Slovakia. Development of GDP in Poland and Hungary has a mild increasing tendency.

The relation between immigration and selected macroeconomic indicators

To find out the connection, we chose GDP as the main macroeconomic indicator, which shows the number of goods and services produced in a country over one year. Development of this indicator in a time-line represents the condition of the economy in the given country. We consider employment, unemployment and job vacancies in order to appraise a situation in the labour market. According to economic theories, the unemployment and lack of job vacancies in a country of origin are important pull factors in the process of making a decision of a potential migrant. Supply and demand for work in the labour market determine the stature of wages. Empirical research shows the most important incentive for a person to migrate abroad for work is right the wage level (Vojtovič et al., 2016). Given macroeconomic indicators were subjugated to correlational analysis.

Table 1. A correlational matrix of immigration and selected macroeconomic indicators in Slovakia

	GDP	employment	unemployment	immigrants
GDP	x			
employment	0,23632	x		
unemployment	-0,68011	-0,32419	x	
immigrants	0,88501	0,63352	-0,68444	x

Source: own processing, Excel
Data: Eurostat
* significance level α = 0,05

The correlation matrix of dependents in the selected economic indicators and immigration during the examined years 2002 – 2017 for the Slovak Republic (table 1) reveals a very strong dependence on the immigrants in the correlation with GDP. Immigrants participate in the production of GDP. The higher the growth of GDP in a country, the more attractive it is for other potential immigrants to immigrate and thus the pull factor for GDP is stronger. There is a great dependence on the correlation between immigrants and employment and a strong negative correlation between immigrants and unemployment.

Table 2. A correlation matrix of immigration and selected macroeconomic indicators in the Czech Republic

	GDP	employment	unemployment	immigrants
GDP	x			
employment	0,40752	x		
unemployment	-0,59566	-0,69375	x	
immigrants	0,94458	0,64637	-0,74302	x

Source: own processing, Excel
Data: Eurostat
* significance level α = 0,05

The correlational matrix of immigration and selected macroeconomic indicators in the Czech Republic in an examined period (table 2) reveals almost perfect dependence between immigrants and GDP. Strong dependence is examined as well between immigrants and employment, which means the more immigrants come to the country, the higher the employment rate is. There is a strong negative dependence between immigrants and unemployment, which is contrary to the dependence between immigration and employment.

Table 3. A correlation matrix of immigration and selected macroeconomic indicators in Hungary

	GDP	employment	unemployment	immigrants
GDP	x			
employment	0,57870	x		
unemployment	0,02313	-0,45532	x	
immigrants	0,63439	0,96062	-0,44806	x

Source: own processing, Excel
Data: Eurostat
* significance level α = 0,05

Examination of selected indicator dependencies in Hungary (table 3) reveals nearly an absolute dependence between the number of immigrants coming to the country and employment and a mean value of dependence with unemployment. There is a strong dependence between immigrants and GDP.

Table 4. A correlation matrix of immigration and selected macroeconomic indicators in Poland

	GDP	employment	unemployment	immigrants
GDP	x			
employment	0,73305	x		
unemployment	-0,91034	-0,59456	x	
immigrants	0,84000	0,91498	-0,72240	x

Source: own processing, Excel
Data: Eurostat
* significance level α = 0,05

In Poland (table 4), there we can see almost complete dependence between immigrants and employment, a very intense positive dependence in regards to the number of immigrants on GDP. There is a strong negative correlation dependence between immigrants and unemployment.

It is important to look into the dependence between immigrants coming to V4 countries and macroeconomic indicator GDP using the regression analysis because there is a very high level of correlational dependence in every examined country. The number of immigrants is an independent variable X and GDP per inhabitant is a dependent variable Y. Assuming that the higher number of work immigrants contributes to the production of a higher added value which means the increase of GDP.

The regression function for the Slovak Republic is y = 0.000362x + 21.87. It means, if the number of foreigners in Slovakia was 0, the GDP would represent the value of 21.87 billion € (value Intercept – b0). If the number of foreigners increases by 1, the GDP would increase by 36.2 thousand € (value X Variable 1). The p-value for the locating constant is $7.71*10^{-6}$ which is <0.05 and the regression coefficient is $5.23*10^{-6}$ which is <0.05. The regression coefficient and the locating constant also express the statistical significance of the chosen dependence. The correlation coefficient is 0.885 and the determinative coefficient is 0.7832. The significance F is smaller than the significance level α ($5.23*10^{-6}$ <0.05). The model is on the basis of F-test statistically significant and selected correctly.

The regression function for the Czech Republic is y = 0.0000719x + 24.52. Meaning, if the number of foreigners in the Czech Republic were 0, the GDP would represent the value of 24.52 billion € (value Intercept – b0). If the number of foreigners increases by 1, the GDP would increase by 71.9 thousand € value X Variable 1). The p-value for the locating constant is $2.94*10^{-7}$ which is <0.05 and the regression coefficient is $3.72*10^{-8}$ which is <0.05. The regression coefficient and the locating constant also express the statistical significance of the chosen dependence. The correlation coefficient is 0.9446 and the determinative coefficient is 0.8922. The significance F is smaller than the significance level α ($3.72*10^{-8}$ <0.05). The model is on the basis of F-test statistically significant and selected correctly.

The regression function for Poland is y = 0.0000442x + 28.07. Meaning, if the number of foreigners in Poland were 0, the GDP would represent the value of 28.07 billion € (value Intercept – b0). If the number of foreigners increases by 1, the GDP would increase by 44.2 thousand € (value X Variable 1). The p-value for the locating constant is $2.66*10^{-12}$ which is <0.05 and the regression coefficient is $4.66*10^{-5}$ which is <0.05. The regression coefficient and the locating constant also express the statistical significance of the chosen dependence. The correlation coefficient is 0.84 and the determinative coefficient is 0.7056. The significance F is smaller than the significance level α ($4.66*10^{-5}$ <0.05). The model is on the basis of F-test statistically significant and selected correctly.

The regression function for Hungary is y = 0.0000946x + 34.88. Meaning, if the number of foreigners in Hungary were 0, the GDP would represent the value of 34.88 billion € (value Intercept – b0). If the number of foreigners increases by 1, the GDP would increase by 94.6 thousand € (value X Variable 1). The p-value for the locating constant is $5.16*10^{-14}$ which is <0.05 and the regression coefficient is 0.0083 which is <0.05. The regression coefficient and the locating constant also express statistical significance of the chosen dependence. The

correlation coefficient is 0.6344 and the determinative coefficient is 0.4025. The significance F is smaller than the significance level α (0.0083 <0.05). The model is on the basis of F-test statistically significant and selected correctly.

Discussion

V4 countries seem to be anti-migration oriented due to their migration policy, which is patterned on the historical, cultural and political context. The approach to immigrants has not changed in spite of integrated processes examining what countries have gone through during the last three decades. Macroeconomic indicators in the period of transformation pointed out the tough economic situation in which the countries were found. High unemployment rates, the small number of job vacancies, low rates of creating new job vacancies, low wages and so on, are rather push factors for immigrants, not something attractive. There has been a better economic situation in V4 countries thanks to the development of these countries, but in comparison to other European Union countries, Slovakia is still behind. This trend has considerably left its mark on the development of immigration, which has significantly improved during the last ten years and the number of work immigrants is radically growing. Economic growth, creating new job vacancies and lack of labour force account for a pressure on politicians so that they change the approach to immigration and simplify the rules of employing immigrants. Nowadays, it makes no sense of protecting the labour market as much. By not meeting the demand for labour force causes deceleration of economic growth and threatens its long-term sustainability.

On one hand, the significant benefits of immigration are apparent when countries without costs, profit from a prepared work-force. Labourers come to these countries in need of work and thus produce an added value which affirms the results in the correlation and regression analysis. Migration from Western European countries mostly presents a qualified work-force coming to V4 countries with foreign investments in an enterprise, occupy jobs where a higher added value is produced. Work migration from the countries in Southern and Eastern Europe is a benefit for V4 countries in respect to saved funds for education and preparation in a profession, as well as the health and social insurance provided during their education and job preparation. Although they are employed in lower work positions, creating a lower added value. The immigrants occupy job vacancies which could not be occupied by the home labour force due to the lack of interest in such work, low provided wages or insufficient qualifications.

Countries should create such a migration policy that would stabilize the home labour market situation by managing migration in accordance with the needs of their economies.

Conclusion

The evaluation of work migration consequences testifies to the lack of exact data and statistics concerning the extent and intensity of work migration, the causes and motives for immigrants to immigrate and the social and demographic statistics about immigration not just in V4 countries but also in other European Union countries. The missing data would enable a deeper examination. On the basis of the thorough analysis, it would be possible to create approaches to control the migration with the idea of maximising the benefits and minimising the losses for the society of each country.

The consequences of work immigration from European Union countries are in favour of the benefits. With a prepared skilled work-force without any costs in the age of producing the highest added value, is a huge benefit for the country, especially when these same immigrants would pay income taxes, VAT and other indirect taxes, thus increasing the consumption in the country of origin and stimulating the economy by means of the multiplier effect. With the right approach to migration policy and the coordination of immigration, it is possible to a certain extent, to minimise the losses and maximise the benefits of work immigration. In order to keep the sustainable economic development, it is necessary to fill job vacancies which cannot be filled by the home work-force.

The only economic point of view regarding the consequences is not sufficient because it does not provide a complete concept of all the consequences for a country and its society. The complexity of this given issue requires an evaluation of social aims and other factors of society from a human, moral, psychological, cultural or demographic point of view.

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