RECENT MIGRATION DEVELOPMENTS IN THE EUROPEAN PERSPECTIVE

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Abstract

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The aim of the paper is to evaluate the development of international migration in relationship to the recent economic situation in member countries of the European Union using quantitative methods including cluster analysis. The number of immigration in Europe has declined since the start of the global recession. The main reason was the decrease of demand in many sectors of the national economy, for instance the demand for retail and construction workers. Despite the drop in new immigration, labour markets of the EU countries were hit very severely. Unemployment rates in the most of European countries increased much more in the category of migrants than among natives. Despite the general decline in immigration in Europe during the economic crisis, the number of immigrants employed in educational sector and health care has increased. Also the number of female immigrants has been growing. The cluster analysis uses a multidimensional variable that includes GDP, unemployment, inflation rate and also net migration. We can distinguish two main clusters in 2010. The majority of highly developed West European countries are a part of the first cluster; the second cluster includes the group of post-communist countries. The latter countries form two sub-groups. A relatively independent sub-cluster is formed by some of the EU15 countries that were hit by the financial crisis the most. In general, the main two clusters illustrate that the economic division of established and new member countries of the European Union is still present.

immigration, economic crisis, European Union, cluster analysis

One of the economic explanations of reasons why people migrate are so called Lee's laws. Lee (1966) divides factors causing migrations into two groups of factors: push and pull factors. Push factors are things that are unfavourable about the area of origin and pull factors are things that attract one to another area. We can identify three major kinds of push and pull factors: economic, cultural and environmental. Most people migrate for economic reasons. Cultural, political and environmental factors also induce migration, although not as frequently as economic factors. But if we look back to the 20th century, political factors were one of the most significant ones. There were many forced international migration waves because of political instability and persecution resulting from cultural diversity in Europe, for instance refugees from the World War I, World War II, the communism era, the nationalism rise and civil wars in the Balkans. But also recent developments point out the importance of political factors, e.g. the consequences of the so called "Arab Spring", a political turmoil in Arab countries in 2011.

Political conditions can also operate as pull factors but with the election of democratic governments in Eastern Europe during the 1990s, Western Europe's political pull has disappeared as a migration factor for those countries. However, Western Europe kept pulling an increasing number of migrants from Eastern Europe for economic reasons. People also migrate for environmental reasons, pulled toward physically attractive regions, seaside areas in the Mediterranean, warm climates, etc. And on the other side people are pushed from hazardous regions by adverse natural disaster risks (floods, drought, pollution).

A popular misconception of migratory flows is migration as an invasion. The media present alerting news that Europe is being invaded and people coming from Africa and other regions are poor, uneducated and bring their poverty and high crime rates with them. That's what the media are putting over and that leads to policy responses which cannot bring solutions for the 21. century's problems. As it regards higher crime rates of migrants, the statistics of migration confirm that most of the migrants are young males, with lower level of education. And who commits the most of crimes according to the crime statistics? Young, non educated males. So migration can really lead to a rise in crime but usually only in the frame given by mentioned statistics. It is also obvious that ghetoization, open and hidden racism that lead to a social exclusion can make this situation much worse. A recent example is the exodus from Northern Africa after the "Arab Spring" in 2011 and thousands of immigrants were heading for the Italian island Lampeduza and other places close to African coast that present a gate to the European Union. Some EU member countries were strongly affected, esp. Italy and France and they started to deliberate over re-imposing of border controls inside Schengen area. This for me is not a responsible and durable solution of the problem of human mobility which presents an integral part of globalization.

This and many other cases show that Europe at the level of the European Union wasn't prepared for these eventualities and particular countries tend to adopt ineffective short-term measures that cannot solve the patterns linked to human mobility. The European Union should start to look beyond its own borders and Europe's strongest interest should be to promote the stability in the surrounding regions that would prevent such situations with serious economic and social consequences for both host and origin countries. The aim of the paper is to evaluate the development of international migration in relationship to the recent economic situation in member countries of the European Union using quantitative methods including cluster analysis.

RESULTS AND DISCUSSION

The data of Eurostat (2011) indicate that the total number of international immigrants in the countries of the European Union in 2010 reached 43 million which presents 8.5 percent of the population. Of the total 43 million, 14 million was the number of authorised international immigrants from other member countries; the rest was from the outside of the European Union. The new immigration in the European Union reached 3.2 million, there of 43 percent from other member countries and 57 percent from the outside the European Union. In some countries the foreign born population reached quite high levels, for instance in Austria (15 percent) or Ireland (15 percent).

The overall figures seem to be quite high at the first sight but the reality is that a few decades ago, many of the member countries have already achieved the barriers of their extensive growth and desperately needed migrants as an important precondition for achieving sustainable economic growth rates. Thus, migration was absolutely crucial to all developed economies of the European Union. On the other hand there are also countries with a relatively low share of the foreign born population, e.g. Finland (4 percent) or Czech Republic 4 percent). But the dynamics of changes in immigration in countries with relatively lower total share of foreign born populations is often very high.

As it regards the turmoil in the Arab world in 2011, it created a regional immigration wave but the general trend appears to be the opposite. According the newest OECD report on migration (OECD, 2011) the number of immigration in Europe has declined since the start of the global recession. The main reason was the decrease of demand in many sectors of the national economy, for instance the demand for retail and construction workers. In 2009, when the recession peaked, immigration numbers in the European Union were 22 percent lower than in the previous year. Despite the drop in new immigration, labour markets of the EU countries were hit very severely which is illustrated in Fig. 1., which shows changes in unemployment rates of nationals and foreigners in selected European countries in 2008 and 2009. Unemployment rates in the most of European countries increased much more in the category of migrants (shown as black columns in Fig.1.) than among natives (grey columns). Thus, impacts of the crisis were much more severe and stronger for migrants than for the native population.

The total number of immigrants in the European Union is estimated on 3.2 million (Eurostat, 2011). According to the data published by the Eurostat, 43 percent of immigrants in the European Union in 2009 were from other member countries, and 57 percent came from the rest of the world. The number of new immigrants wasn't decreasing in Europe only but also in other parts of the world. The downward immigration trends were reported in Japan, Turkey, Australia or South Korea. One of exceptions from these developments is presented by Germany which kept attracting migrants despite the crisis and also its recovery was faster than in other economies.

Despite the general decline in immigration in Europe during the crisis, the number of immigrants employed in educational sector and health care has increased. Also the number of female immigrants has been growing which may be partly explained as an effort of women trying to find an additional income for their families after their husbands lost their jobs. An important role is also played by changing demand for health care workers and other sectors with a traditionally high female employment. The highest increase in the female immigration has been observed in Greece and Hungary but other

countries experience similar developments in this area.

The report of OECD (2011) said that given the extent of the crisis, it had estimated even sharper drop in migration where the number of immigrants decreased only slightly during the crisis and once markets are recovered, it will increase again. It is possible to agree with these statements in the OECD report and it is very probable that the immigration will resume because of the ever growing globalization trends and the lacking workforce in Europe. The integration of immigrants should be seen as a long-term investment, rather than from a short-time horizon emphasizing only provisional costs of migrant integration and not taking its benefits in the long-term. However, currently there is a growing political problem of an ever increasing support of populist parties campaigning for anti-immigration policies all over Europe. There were voices calling for a revision of the Schengen treaty on free movement of people from some of the member countries of the European Union, for instance in France, Italy, Germany or Denmark. The crisis has made these anti-immigration moods stronger but it isn't something new. Already in the past, most of the EU15 countries applied their right to forbid the access of workers from the new member countries to their labour markets for up to seven years. Another statement of the OECD report points out that the best side of immigration is the fact that immigrants tend to be more entrepreneurial than the local population, above all in France, Czech Republic or
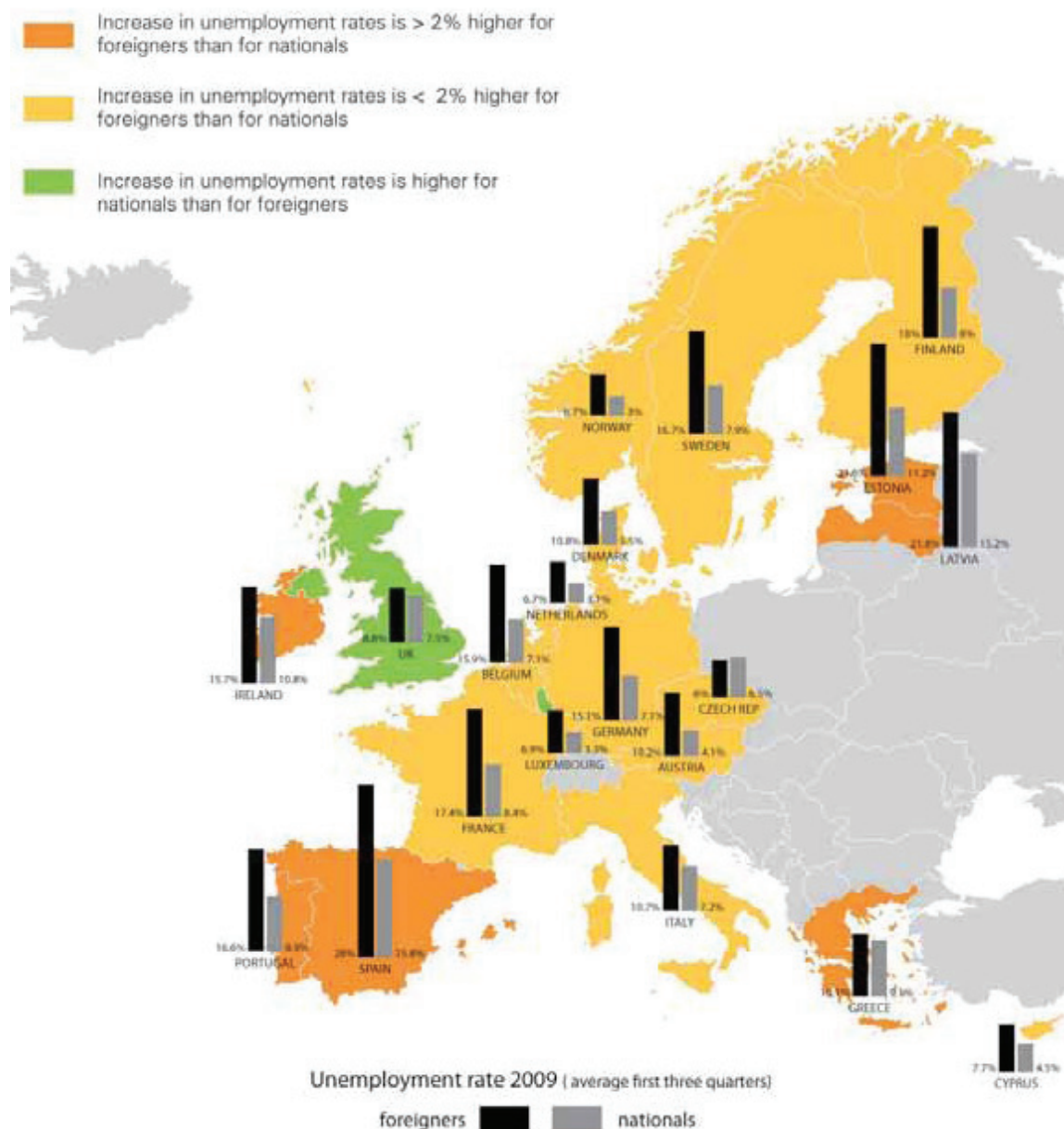
1: *Changes in unemployment rates of nationals and foreigners in selected European countries in 2008 and 2009*
Source: IOM (2010)

Poland. But despite the fact that this last statement complies with available data on growing number of self-employed migrants, the right interpretation of these data might be a bit different. For these immigrants, having a trade licence is a more stable strategy to assure a permit to stay even under inconvenient conditions in the labour market. In comparison, only about 10 per cent of EU/EEA citizens are trade licence holders. The vast majority of EU citizens have an employment contract (CZSO, 2011).

According to the estimates of the Institute for International Migration (IOM, 2010) between a third and two thirds of news jobs in OECD countries (which includes also United States, Japan or Korea as well) were filled by migrants in the last decade. Thus, migrants present an important part of the labour force and a precondition for sustainable economic growth. There are many clichés about migrants but the reality is that most migrants enter and work legally. Another cliché is that migrants are uneducated but the reality is that migrants bring human capital. The overwhelming majority of them aren't poor desperate people but they bring skills, high educational level, human capital and contribute to a great deal to economies they enter. In many countries, migrant workers have higher qualification profile than local-born ones. New migrants with tertiary education create over 40 percent in Belgium, Luxembourg, Sweden and Denmark, around 35 percent in France and 30 percent in the Netherlands. This is just to illustrate that many migrants are actually much better qualified than the receiving population. A durable problem in this area remains the degree recognition. It is not an unusual situation when teacher or technician from Ukraine works as a bricklayer at the construction site which presents a total waste of human capital he s got and educational expenses that were spent in his country of origin.

Immigration and economic development

Immigration leads to an increase in labour supply which lowers wage inflationary tendencies and this may result in lower inflation in general. Moderate wage pressures and low price inflationary tendencies in general present a suitable economic environment for low interest rate policies of the central banks that promote investment and growth. This all presents positive cost changes for firms in a short-term period. But self-evidently not only for firms. As lower wages result in lower production costs and in effect this may lead to lower retail prices of goods and services for final consumers. The inflow of migrants leads also to an immediate increase in aggregate supply. Thus, an increase of population from migration can add to economic growth in the short run and economic benefits from migration can be still visible also in the long-term growth. Admitting of high-skilled migrants (working for instance in finance, IT or research) contribute to the economic and technological advancement of the receiving country and may create new job opportunities for natives.

An interesting but not very often mentioned effect of migration is its connection with housing market. Foreign workers usually migrate in a larger extent to some specific areas of the country (esp. big cities) and the increased migration influx may have an influence on housing market in these areas. The increase of the demand for housing pushes up the living costs which results in higher wage requirements of the employees and an increase in wage inflation potentially (for instance in the booming economy of Ireland in Dublin before the crisis stroke). This example shows that consequences of mass immigration are much wider and cannot be reduced only on growth and productivity issues but have to be considered in wider economic and socio-cultural context.

Economic causes of international migration were dealt in detail by Palát (2011) but let's have a look briefly at some other areas as for instance demographic development, transportation or globalization. The demographic development and the population ageing is a time bomb that is about to explode in twenty or thirty years from now on if nothing happens. Also the transportation makes current migration (including circular migration) much easier. One can get anywhere within a couple of hours for relatively low prices. The transport is quicker because of a dense highway network, hi-speed trains and low-cost airlines. Moreover, a highly competitive environment in transportation pushed the prices of tickets to historical minimums. And then the all-embracing globalization is also an issue that becomes the reality of our everyday's life when we consume goods and use services and labour from all over the world.

So the question is: Is a mass migration inevitable in the coming future? Nobody is able to give an unambiguous answer to this question because the extent of migration depends on many other circumstances. Let's have a look at the problem of factor mobility from the view of economics. In developed countries, there are capital surpluses but there is a lack of available labour. In developing countries, the situation is opposite. So migration looks like a one and unique solution of this situation satisfying the growing needs in labour markets of developed countries and diminishing existing surpluses of labour in developing countries. However there is another tool that satisfies the growing needs for labour by capital movements. And this is also happening at present but the extent might be much higher and should include especially countries that rank among the areas of emigration.

So this is what I meant when I mentioned before that it is absolutely crucial to promote economical and political stability of the neighbouring regions of the European Union or any other developed economic areas. This can come true by implementing such economic policies that remove restrictions on trade, customs duties and promote

economic cooperation and development. There were several agreements existing since 1995 under the Barcelona Process and the associated Euro-Mediterranean Partnership (EMP). After the Big Enlargement, the European Union required a new approach towards its neighbouring countries which was formulated in the European Neighbourhood Policy (ENP) and which includes much wider group of neighbouring countries (not necessarily directly neighbouring with some of the EU-states). Those countries are situated in regions of Eastern Europe, the Middle East, the Mediterranean and Central Asia.

The main idea is the offer to integrate into specific EU structures without being member of the European Union. This may bring the solution how to maximize the potential welfare gains for both the European Union and its neighbours. And some authors (Hoekman, Özden, 2009) see those partnerships, for instance in trade in services as an alternative to migration. The gains from it are higher employment and sustaining growth in partner countries and a solution of the labour market shortages in developed EU countries. It is obvious that this approach might help but it isn't large enough to address immense demographic challenges. And moreover, even if we move some of our services abroad (and it is already happening in IT, call centres, customer service), this approach is not solving that part of low-skilled labour shortages that stem from the Dual Labour Market Theory (see for example Massey,1993) with the existence of jobs

where the locals are not motivated to take them because of a low status of those jobs in the society.
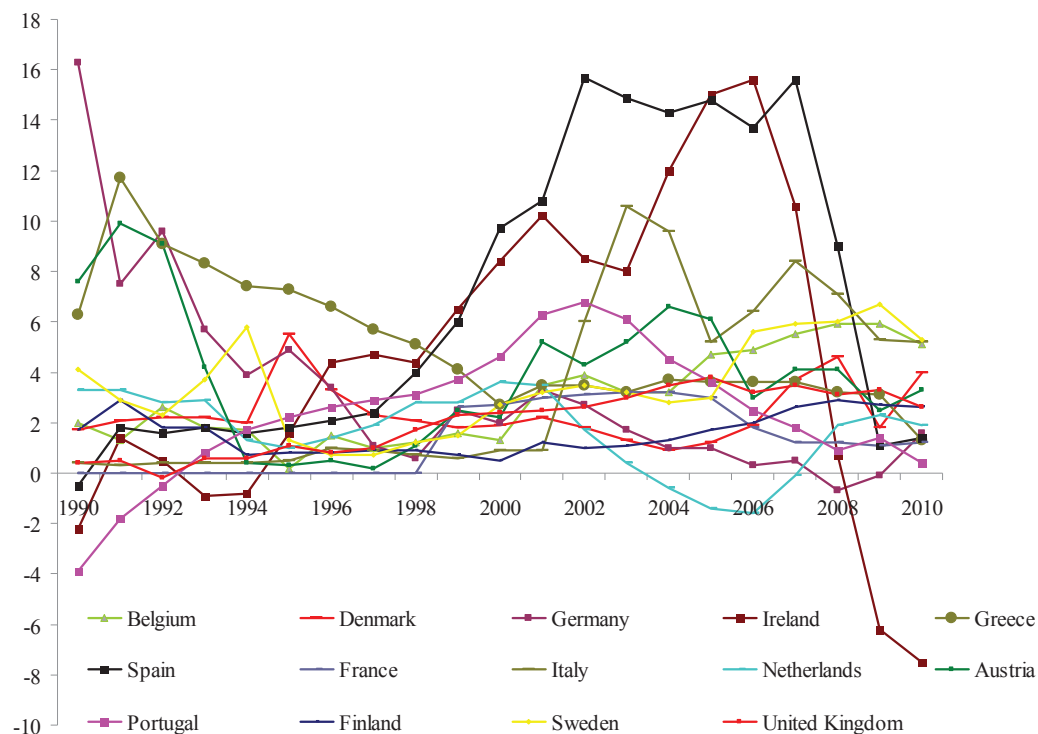
Net migration flows in member countries of the European Union

The Development of the crude rate of net migration in new member countries of the European Union during the reference period 1990–2010 is evident from Fig. 2. Presented developmental trends in new member countries differ very significantly. The red line in Fig. 2 indicates values of this indicator for the EU27 and as we can see, the values of the crude rate of net migration in particular new member countries fluctuate under this EU-average level with a few negligible exemptions. The situation kept improving during the pre-crisis period of economic growth when some Central and Eastern European economies were booming and achieved a stable state or positive values of net migration. But when the crisis stroke, values of net migration retured back to zero. In Lithuania, the decline was much deeper because of its overheated economy followed by a serious economic downturn in this country during the financial and economic crisis in 2008–2010. The less fluctuating values of the net migration can be observed in Hungary despite its economic difficulties during the last crisis because of its traditionally low mobility of labour.

The Development of the crude rate of net migration in established member countries of the European Union during the reference period 1990–2010 is evident from Fig. 3. Presented developmental trends in established member countries also
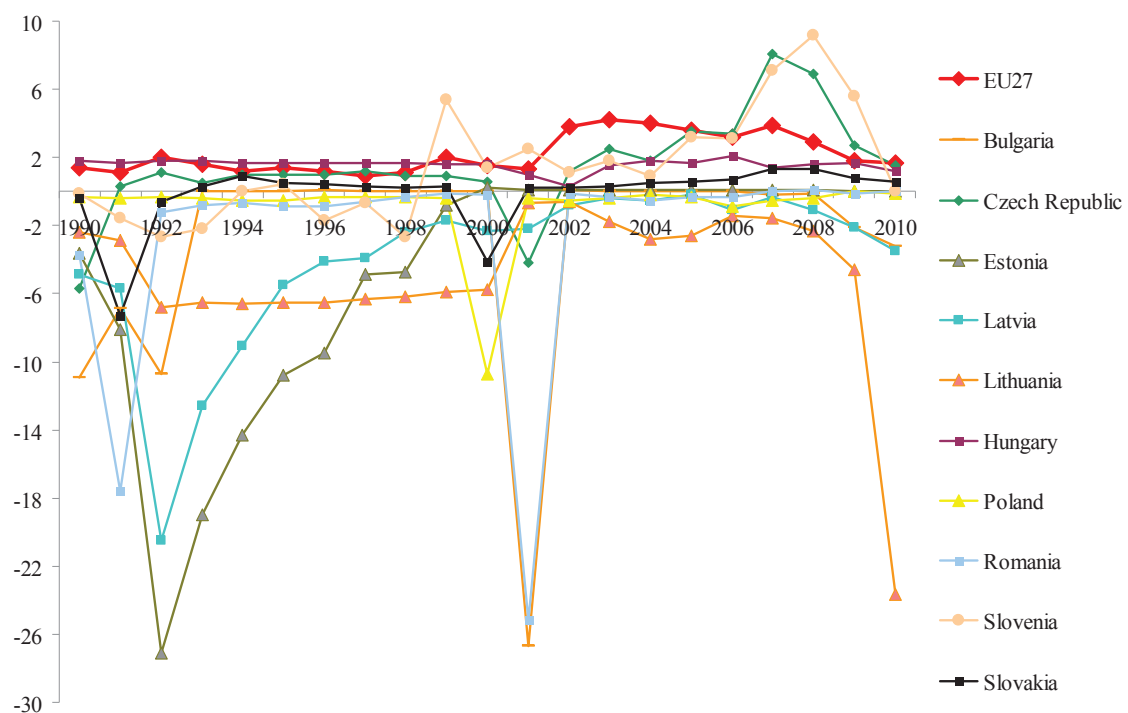
2: *The development of the crude rate of net migration in the new member countries of the European Union in the period 1990–2010 in %*
Source: own processing

3: *The development of the crude rate of net migration in the established member countries of the European Union in the period 1990–2010 in %*
Source: own processing

differ very significantly but with a few exemptions fluctuate in positive values. Only severe economic impacts of the last financial and economic crisis caused a steep decline under the stable state into the negative figures of the net migration as for instance in Ireland.

Multidimensional analysis of migration and key economic indicators

Fig. 4 presents a dendrogram based on cluster analysis. It is a multidimensional method that allows to divide the units based on their multidimensional similarity into homogeneous subgroups so that similar statistical units are categorized into the same group (by the specific values of the particular multidimensional property), while the statistical units in different subgroups will be as diverse as possible (by the values of the same multidimensional property). This analysis has many advantages. Such methods do not require pre-calculation adjustments of the data and they allow us to uncover extreme deviations in the registered values of the multidimensional property. At the same time, these values will form a separate cluster after the calculation. The application of the cluster analysis and other quantitative methods were explored, for example, by Jajuga *et al.* (2002). There is a wide choice of clustering methods available. I use hierarchical clustering, specifically the method of the furthest neighbour with Euclidean measure of distance, which determines the distance

between clusters by the distances between two furthest units from different clusters. The results of the hierarchical clustering process can then be transparently represented by dendrograms that serve as the graphical results illustration.

This will allow the usage a multidimensional variable that includes GDP, unemployment, inflation rate and also net migration and divide the units based on their multidimensional similarity into homogeneous subgroups by both economic and migratory indicators to get a comparative overview on the situation in the European countries. Fig. 4 presents the dendrogram from crude rate of net migration, GDP per capita in PPS, rate of unemployment, inflation rate and net earnings in PPS in 2010. According to the multivariable characteristics, we can distinguish two main clusters. The majority of highly developed West European countries are a part of the first cluster; the second cluster includes the group of post-communist countries. The latter countries form two sub-groups. The Czech Republic is in a group together with Slovenia, Estonia, Slovakia and Poland and experience prevailingly positive economic developments as it regards observed multivariable characteristics. Hungary forms another cluster together with the rest of the Baltic (Lithuania and Latvia), Bulgaria and Romania. This group is facing serious economic problems that are reflecting also in migration patterns. A relatively independent sub-cluster is formed by some of the EU15 countries that
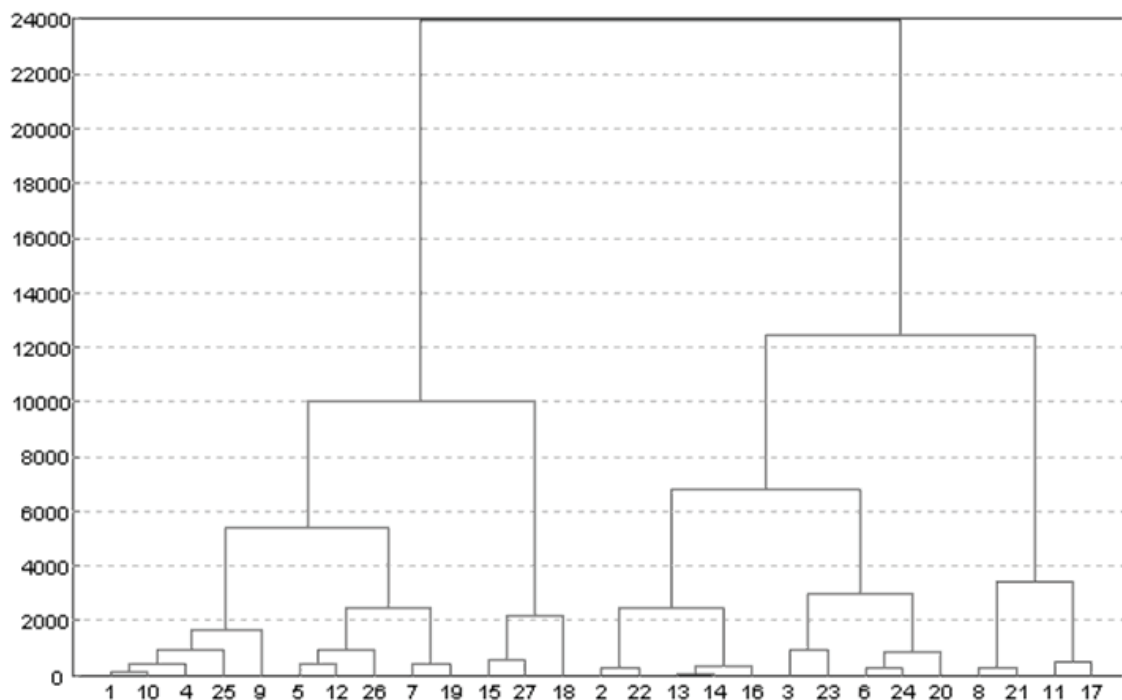
4: *Dendrogram from crude rate of net migration, GDP per capita in PPS, rate of unemployment, inflation rate and net earnings in PPS in 2010*
(1 – Belgium, 2 – Bulgaria, 3 – Czech Republic, 4 – Denmark, 5 – Germany, 6 – Estonia, 7 – Ireland, 8 – Greece, 9 – Spain, 10 – France, 11 – Italy, 12 – Cyprus, 13 – Latvia, 14 – Lithuania, 15 – Luxembourg, 16 – Hungary, 17 – Malta, 18 – Netherlands, 19 – Austria, 20 – Poland, 21 – Portugal, 22 – Romania, 23 – Slovenia, 24 – Slovakia, 25 – Finland, 26 – Sweden, 27 – United Kingdom)
Source: own processing

were hit by the financial crisis the most (Portugal and Greece). But in general, the main two clusters in Fig. 4 illustrate that the division of established and new member countries of the European Union is still present.

CONCLUSIONS

The total number of international immigrants in the countries of the European Union in 2010 reached 43 million people. This seems to be high at the first sight but the reality is that a few decades ago, many of the member countries have already achieved the barriers of their extensive growth and desperately needed migrants as an important precondition for achieving sustainable economic growth rates. Thus, migration was absolutely crucial to all developed economies of the European Union.

The number of immigration in Europe has declined since the start of the global recession. The main reason was the decrease of demand in many sectors of the national economy, for instance the demand for retail and construction workers. In 2009, when the recession peaked, immigration numbers in the European Union were 22 percent lower than in the previous year. Despite the drop in new immigration, labour markets of the EU countries were hit very severely. Unemployment rates in the most of European countries increased

much more in the category of migrants than among natives. Thus, impacts of the crisis were much more severe and stronger for migrants than for the native population.

Despite the general decline in immigration in Europe during the crisis, the number of immigrants employed in educational sector and health care has increased. An important role is also played by changing demand for health care workers and other sectors with a traditionally high female employment. The highest increase in the female immigration has been observed in Greece and Hungary but other countries experience similar developments in this area. A statement of the OECD report (2011) points out that the best side of immigration is the fact that immigrants tend to be more entrepreneurial than the local population, above all in France, Czech Republic or Poland. But despite the fact that this last statement complies with available data on growing number of self-employed migrants, the right interpretation of these data might be different as for these immigrants, having a trade licence is a more stable strategy to assure a permit to stay even under inconvenient conditions in the labour market.

The cluster analysis applied on the member states of the European Union uses a multidimensional variable that includes GDP, unemployment, inflation rate and also net migration. We can distinguish two main clusters in 2010. The majority

of highly developed West European countries are a part of the first cluster; the second cluster includes the group of post-communist countries. The latter countries form two sub-groups. The Czech Republic is in a group together with Slovenia, Estonia, Slovakia and Poland and experience prevailingly positive economic developments as it regards observed multivariable characteristics. Hungary forms another cluster together with the rest of the Baltic (Lithuania and Latvia), Bulgaria and Romania. This group is facing serious economic problems that are reflecting also in migration patterns. The main two clusters illustrate that the division of established and new member countries of the European Union is still present. Migrants present an indivisible part of the labour force and a precondition for sustainable economic growth of many highly developed countries of the European Union. There are many clichés about migrants but the reality is that they bring skills, high educational level, human capital and contribute to a great deal to economies they enter.

SUMMARY

The aim of the paper is to evaluate the development of international migration in relationship to the recent economic situation in member countries of the European Union using quantitative methods including cluster analysis. The number of immigration in Europe has declined since the start of the global recession. The main reason was the decrease of demand in many sectors of the national economy, for instance the demand for retail and construction workers. In 2009, when the recession peaked, immigration numbers in the European Union were 22 percent lower than in the previous year. Despite the drop in new immigration, labour markets of the EU countries were hit very severely. Unemployment rates in the most of European countries increased much more in the category of migrants than among natives. Thus, impacts of the crisis were much more severe and stronger for migrants than for the native population. Despite the general decline in immigration in Europe during the crisis, the number of immigrants employed in educational sector and health care has increased. Also the number of female immigrants has been growing. An important role is also played by changing demand for health care workers and other sectors with a traditionally high female employment.
The cluster analysis applied on the member states of the European Union uses a multidimensional variable that includes GDP, unemployment, inflation rate and also net migration. A hierarchical clustering has been used, specifically the method of the furthest neighbour with Euclidean measure of distance, which determines the distance between clusters by the distances between two furthest units from different clusters. According to the multivariable characteristics, we can distinguish two main clusters in 2010. The majority of highly developed West European countries are a part of the first cluster; the second cluster includes the group of post-communist countries. The latter countries form two sub-groups. The Czech Republic is in a group together with Slovenia, Estonia, Slovakia and Poland and experience prevailingly positive economic developments as it regards observed multivariable characteristics. Hungary forms another cluster together with the rest of the Baltic (Lithuania and Latvia), Bulgaria and Romania. This group is facing serious economic problems that are reflecting also in migration patterns. The main two clusters illustrate that the division of established and new member countries of the European Union is still present.

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