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UNDERSTANDING THE IMPORTANCE OF HUMAN CAPITAL AND LABOR MARKET COMPETITIVENESS IN THE EU CANDIDATE COUNTRIES AND SELECTED EU MEMBERS

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Abstract

Human capital is considered to be an important factor of economic growth and development, as well as one of the sources of competitive advantages. In order to attain highly skilled human capital, countries should improve their labor market competitiveness and increase investments in education, science and technology. This paper analyzes the role and the significance of human capital. Furthermore, it researches motives, effects and trends of labor migration in Europe, with special emphasis on highly qualified labor migration i.e. brain drain phenomenon. Since competitive and stable labor market is important condition for joining the EU, the purpose of the analysis was to see what level of convergence have the EU candidates reached so far. For that reason, a comparative analysis of certain labor market characteristics in Croatia, FYR of Macedonia and Turkey (EU candidate countries) and selected EU countries was made.

Key words: human capital, brain drain, labor market, labor migration, EU

1. INTRODUCTION

Today more then ever, there is a strong incentive for individuals to continuously improve themselves professionally. The emphasis on education and development of professional skills is being made as a condition of successful competition in national and global labor market. Thus, governments should create an environment favorable for human capital creation that will, in return, benefit both the country as a whole, and its individuals. Otherwise, individuals will seek better opportunities elsewhere.

Throughout the history migration motives, flows and research have changed. As trends show, the migration pressure has increased over the last years and it will probably continue to increase given the rising gap in wages and differing demographic features in developed and developing countries.

The educational structure of international migration has changed and is more and more skilled. Until the end of the World War II, migrants mostly came from the poorest and less educated classes of their home country. The highly qualified migrants were very rare. Soon after, the situation changed. New phenomenon, also referred to as the "brain drain" became a topic of interest in the 1960s and the 1970s. The main conclusions about the brain drain were that such migration results in a damaging loss of highly skilled individuals for the developing countries. By depriving the sending country of one of its scarcest resources, that is human capital, skilled migration is seen as impoverishing sending countries, whereas receiving countries are being enriched.

General economic, political and social situation in the economy can contribute to the decision of workers whether to migrate or not. Labor market characteristics are another factor that helps one to decide. Stable wages, low unemployment rates, good professional perspectives, adequate investments in education, good and transparent governance are beneficial to workers, and in general to a country's image and its long-term economic development.

This paper analyses the importance of human capital and therefore the significance and the necessity of adequate investments in the educational system as a prerequisite for a country's future progress. Furthermore, labor migration motives and impacts on sending and receiving country are analyzed together with labor migration trends in Europe. In the last section of the paper a comparative analysis of labor market characteristics and migration motives between the three EU candidate countries and selected EU members is presented. The purpose of the analysis was to determine the convergence level of the candidates and the role of the efficient labor market in their attempt to achieve the required development level and consequently join the European Union.

2. THE IMPORTANCE OF HUMAN CAPITAL CREATION

Human capital is a broad concept encompassing many different types of investment in people. In short, it can be defined as the abilities, knowledge and skills embodied in people and acquired through education, training and experience[1].

The importance of human capital is being recognized in both developed and developing countries considering that we live in the era of globalization, fierce competition, continuous technology development and innovation.

It is commonly accepted that human capital accumulation induces various externalities, especially in the area of technology and innovation. Human capital is considered to be a crucial input for the development of new technologies and a necessary factor for their adoption and efficient use. The three basic conclusions emerging from the large body of empirical work about the consequences of formal education on labor markets are that: higher levels of education are accompanied by higher wages, lower unemployment probabilities, and higher labor force participation rates. Most of the work has been done on the link between schooling and wages. This is because the resulting wage increase is the most important economic consequence of higher levels of formal education[2]. Overall, investing in the development of high quality human capital is expected to have a positive impact on employment and economic growth.

The new growth theory has stressed the existence of strong externalities related to human capital and education, showing that the social return to human capital exceeds the private return[3]. Often, these externalities are the main reason for government subsidies to education.

At the beginning of the 21st century, the gap in living standards between rich and poor nations is large and rising. It is generally accepted that deficiency in human capital is an important factor, i.e. obstacle to country's growth. If a country lacks human capital of good quality, then it has fewer opportunities for growth and development. The rapid structural change caused by globalization and technological change has increased the importance of human capital over the past years. In the rich economies, this structural change increased the pressure on the suppliers of the less qualified labor force. Physical work is substituted by machines at home and by cheaper labor input from abroad. As a reaction, rich, more developed countries can either shield themselves from globalization, which would be negative for prosperity, cut the wages of less qualified workers, accept higher unemployment, or they can raise the skills of their workers[4].

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[1]European Comission, available at: http://ec.europa.eu/social/main.jsp?catId=643&langId=en [18.10.2009.]

[2] De la Fuente and Ciccone, (2002), Human capital in a global and a global based economy. Final report. Universitat Pompeu Fabra.

[3] Docquier, F., (2006), Brain drain and inequality across nations, Forschungsinstitut zur Zukunft der Arbeit institute for the Study of Labor.

[4]Deutche bank research, (2005), Human capital is the key to growth, available at: http://www.dbresearch.com/PROD/DBR_INTERNET_ENPROD/PROD0000000000190080.PDF [18.10.2009.]

In continuation, indicators about certain areas of educational sector in the selected EU countries and the EU candidates are given. Presented records are significant for making conclusions about human capital creation potential in the analyzed countries[5].

Table 2.1 represents the data on school expectancy in the new EU member countries as well as in the three candidate countries for the period of 2004-2007. School expectancy corresponds to the expected years of education over a lifetime and has been calculated adding the single-year enrolment rates for all ages.

Table 2.1.

School expectancy and educational attainment in the selected EU countries and the EU candidate countries

	School expectancy			Educational attainment, %			
	2005	2006	2007	2005	2006	2007	2008
EUROPEAN UNION (EU-27)	17,6	17,2	17,2	69,4	70,0	70,8	71,5
NEW MEMBER COUNTRIES	16,8	16,8	16,8	71,2	72,4	73,1	73,8
Bulgaria	15,5	15,6	15,7	72,5	75,5	77,4	77,5
Czech Republic	17,1	17,1	17,3	89,9	90,3	90,5	90,9
Estonia	18,5	18,2	18,0	66,6	69,5	72,1	73,1
Cyprus	14,5	14,7	14,8	89,1	88,5	89,1	88,5
Latvia	17,9	17,8	17,6	76,4	78,1	79,2	79,7
Lithuania	18,0	18,0	17,9	87,6	88,3	88,9	90,6
Hungary	17,7	17,8	17,8	84,5	84,5	85,0	85,8
Malta	15,3	15,0	14,7	25,3	26,1	26,7	27,5
Poland	17,8	17,8	17,9	84,8	85,8	86,3	87,1
Romania	15,3	15,6	15,9	73,1	74,2	75,0	75,3
Slovenia	17,8	17,9	18,0	80,3	81,6	81,0	82,0
Slovakia	15,9	16,1	16,4	87,9	88,8	89,1	89,9
CANDIDATE COUNTRIES	13,5	13,6	13,9	:	49,7	50,5	51,2
Croatia	14,9	14,9	15,2	72,8	74,1	75,3	75,9
FYR Macedonia	13,3	13,3	13,7	:	:	:	:
Turkey	12,4	12,5	12,8	:	25,3	25,8	26,6

Source: Eurostat, available at: http://epp.eurostat.ec.europa.eu/tgm/table.do ?tab=table&init=1&plugin=1&language=en&pcode=tps00052 [01.10.2009.]

[5] See also: Bilas, V., Franc S. (2009), Labor market characteristics and migration motives of the EU candidate countries and selected EU members. Presented at: The International Conference on Economics and Administration, Faculty of Administration and Business, University of Bucharest, Romania, 14-15th November 2009.

If compared with the EU-27 average, new member states (EU-12) do not differ significantly in the school expectancy years. Among the candidate countries, Croatia had the highest school expectancy (14,9 years in 2005 and it continuously grew to 15,2 in 2007) and therefore it does not differ considerably from the EU countries.

Educational attainment is the percentage of population between the age of 25 and 64 that have completed at least upper secondary education in the twelve new EU member countries and the three candidate countries (except for Macedonia due to unavailability of data).

Average percentages of educational attainment are given for the EU-27 countries, EU-12 countries and the candidate countries. The average educational attainment in the EU-12 countries was 73,8% in 2008. On the other hand, the average educational attainment in two candidate countries in 2008 was 51, 25% of population, which is about 20% less than of the new EU-12 member states.

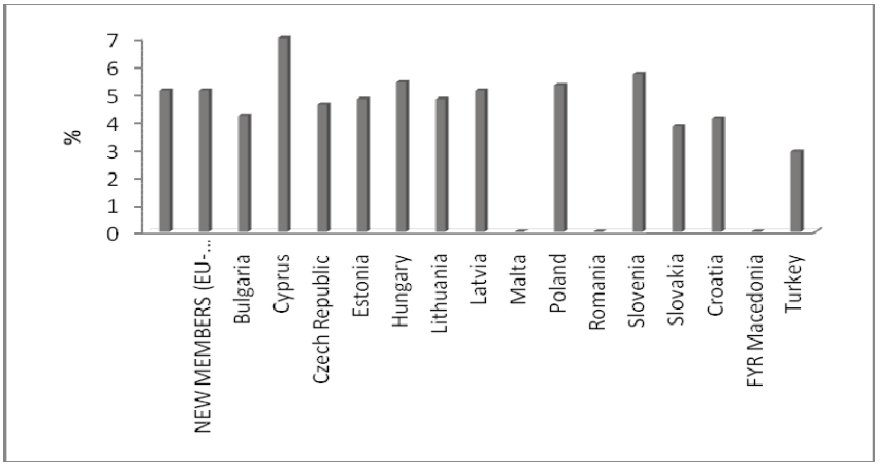
The longest compulsory schooling has Malta, and it lasts for 11 years. Czech Republic, Hungary and Slovakia have 10 years of compulsory schooling, Turkey, Slovenia, Poland, Latvia, Lithuania and Cyprus have 9 years of compulsory schooling, and the rest of the countries have 8 years[6].

The Gross Enrollment Ratio (GER) is another factor that reveals the quality of education system. It is calculated by expressing the number of students enrolled in primary, secondary and tertiary levels of education, regardless of age, as a percentage of the population of official school age for the three levels. The highest GER for tertiary level of education in 2008 has had Slovenia (85,5) followed by Lithuania (75,6) and Latvia (71,3). The lowest GER had Malta (21,4*), FYR of Macedonia (35,5), Turkey (36,3) and Cyprus (36,2)[7].

Expenditure on education is valuable data because it shows how much does the government invest in the education and training sector. Lagging behind in the development process of the educational system and insufficient investments in the creation of human capital could slow down the achievement of long-term sustainable development. As investments in education increase, students will have better opportunities, incentives and overall better quality of studying. The end result is creation of much needed human capital that is the base of the new, modern knowledge-based society.

[6] Source: Worldbank, available at: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTEDUCATION/EXTDATASTATISTICS/EXTEDSTATS/0,,contentMDK:21605891~menuPK:3409559~pagePK:64168445~piPK:64168309~theSitePK:3232764,00.html [01.10.2009.]

[7] Ibid.



Source: Eurostat, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/database

* data for Malta and Romania are for the year 2005, and data for Macedonia is from 2004. [22.08.2009.].

Chart 2.1. Expenditure on education, % of GDP or public expenditure, 2006

The average expenditure on education (chart 2.1) in the EU-12 countries was 5,1% of GDP in 2006. In the three candidate countries average expenditures constituted a smaller part of the GDP (3,5%). Cyprus had the highest expenditures on education (7,0%), and Romania had the lowest (3,4%) among all EU-12 countries. Croatia was the country with the highest expenditures on education among the candidate countries (4,1%), while Turkey had overall the lowest expenditures among all the observed countries (2,9%).

From the available records, it can be concluded that Croatia has the highest potential of creating quality human capital among the analyzed EU candidate countries.

2. LABOR MIGRATION MOTIVES

International migration represents one of the most important phenomenon of the human culture. Labor migration, as one of the forms of population migration, has played an important role in the new globalized world where borders and restrictions to free movement of people, goods and capital are being removed. Until the early 1940s, migrants came from the poorest and less educated classes of their home country. The high qualified migrants were very rare. After the Second World War, the social and economic picture has changed worldwide. There were more innovations and technological advances which led

to the new ways of production and business practice. In light of these changes, the importance of migrations of highly educated people has increased. Consequently, the phenomenon called "the brain drain" procured a lot of interest in the research literature. In the 1960s and 1970s it became the fervent subject of many researchers and economists.

Today, labor migrations are significant part of the policy agendas of many countries of origin, transit or destination. Many governments of both sending and receiving countries are increasing their regulatory capacities to manage labor mobility to the mutual benefit of the society, governments and migrants.

Migration motives are generally divided into three groups: economic, political and socio- cultural. If focused on labor migration, i.e. on the economic and demographic migration motives, then different "push" and "pull" factors can be recognized. Most common push factors are poverty, unemployment, low wages, high fertility rates, lack of basic health care and education. On the other hand, most common pull factors are prospects of higher wages, prospects for improved standard of living and personal or professional improvement[8].

Labor migration is most often considered to be driven by differences in returns to labor, or expected returns, across markets[9]. The simplest economic models of migration explain that motivation for migration comes from actual wage differentials across countries that emerge from heterogeneous degrees of labor market rigidity. There are also models that explain migration motivation more precisely, showing that migration is driven by expected rather then actual wage differentials. However, there are authors that say those simple economic models do not comprise all motivation factors of migration and therefore, have limited success in explaining it. There are number of studies that show wage and employment differentials were statistically significant predictors of migration in the expected directions only about half the time[10].

When analyzing impacts of migration it is necessary to differentiate between the impact on receiving countries and on sending countries.

The initial impacts upon the host country are quite mixed and diverse. Immigration increases the relevant labor supply. The consequences for this relevant group depend upon their own elasticity of demand and upon the elasticity of complemetarity with all other production factors. Migrations that react to imbalances of supply and demand of specific skills are likely to be beneficial on

[8] Ibid.
[9] Migration and remitances: Eastern Europe and the Former Soviet Union (chapter 3). Determinants of migration. Available at: http://siteresources.worldbank.org/INTECA/Resources/2578961167856389505/Migration_Chapter3.pdf [20.10.2009.]
[10] Ibid.

both accounts[11]. Furthermore, migration can have impact on the fiscal balance of the receiving country depending on whether migrants pay taxes, need state support, etc. Another effect of migration is the one in accelerating technological progress in an economy in terms of migration of highly skilled people and expected positive spillovers[12].

There are various economic impacts of migration on the sending country. Firstly, there is the negative impact of the brain drain phenomenon. Secondly, there is the impact on remittances which tend to be seen as the dominant benefit of home country from labor migration abroad. International remittances to the developing regions are now the largest source of financial inflow after foreign direct investments[13]. Remittances also offer a critical source of support in times of crisis and tend to increase during times of economic downturn at home, in contrast to other financial flows[14]. Thirdly, there is the impact of migration on the sending country's labor market. The withdrawal of labor can tighten labor markets, either by inducing higher wages or less underemployment for those left at home.

3. MIGRATION OF THE HIGH QUALITY HUMAN CAPITAL - THE „BRAIN DRAIN“ PHENOMENON

By the beginning of 1970s, new political and economic realities have led to even more precise definition of the brain drain, using it not only to describe the migration of individuals with a university degree or an equivalent and may be grouped in the category of intellectuals, scientists and technicians, but also to describe the problem of students from poorer countries opting to stay in the developed countries where they studied. The issue represented and still represents a global problem since the competition for attracting the best and the brightest researchers is fierce worldwide. But there are regional and national circumstances that make the highly skilled migration particularly relevant issue both for the sending and receiving countries.

As more and more governments jump into a „global war for talent“, immigration laws in many countries are being skewed to favor the entrance of the skilled over the unskilled[15]. As a result, highly skilled migration increased at a fast growing rate.

[11] Bauer, T.K., DeNew-Haisken J.P., Schmidt C.M., International labor migration, economic growth and labour markets: the current state of affairs. Available at: www.unece.org/pau/_docs/pau/PAU_2005_Publ_NDRCh07.pdf [20.10.2009.].
[12] Lucas, R.E., (2008), International labor migration in a globalizing economy. Carnegy papers. Trade, equity and development program. No 92.
[13] Ibid.
[14] Ibid.
[15] Tannock, S., (2007), Beyond National Borders: Reframing the Global Brain Drain Debate. SKOPE Research Paper No 73. ESRC funded Centre on Skills, Knowledge and Organisational Performance Cardiff and Oxford Universities

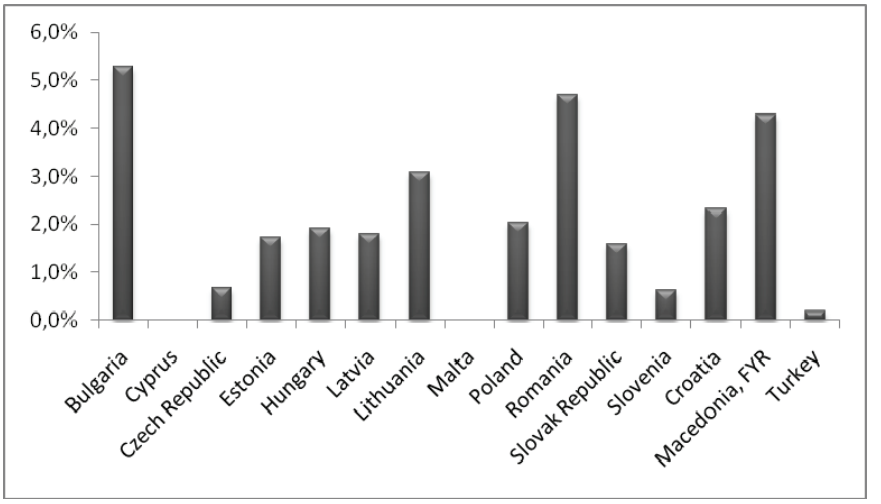
The presence of the highly skilled migrants adds to the stock of human capital in destination areas and according to most growth theories, raises the income of individuals who move[16]. By attracting highly skilled human capital, receiving countries can benefit by making available trained workers to fill vacant jobs as highly qualified works bridge gaps until more local workers are trained in jobs that require more sophisticated education. Also, receiving countries benefit from highly skilled workers by increasing their potential innovation in strategic sectors and having diverse work teams[17].

Furthermore, the brain drain debate focuses mostly on its impact on sending countries. The most obvious negative impact of losing highly skilled workers is the reduction of human capital stock which can negatively affect a countries economic growth. Moreover, the loss of highly qualified workers can make a country less attractive to local or foreign investors[18]. Emigration can cause the lack of drive, innovation and creativity in sending countries making them less competitive in the global market.

While the early literature tended to assume a negative impact on developing countries' social and economic wellbeing, resulting from a large migration of highly skilled individuals, the trend in recent years has been to seek ways in which such migration flows might result in positive outcomes for sending countries. It has been argued that such positive effects can occur via remittances, increased access to trade, investment, knowledge and technology and the return of migrants who come home with newly acquired skills and resources[19].

The highest inflow of remittances measured as a share of GDP in 2008 had Bulgaria (5,3%), followed by Romania (4,7%) and FYR Macedonia (4,3%). Inflow of remittances constituted the smallest part of national GDP in Turkey (0,2%) and Slovenia (0,6%) (see chart 3.1).

[16] Martin, L.E., (2003), Higjly skilled labour migration: sharing the benefits. International Institute for Labour Studies. Geneva. Dostupno na:
http://www.ilo.org/public/english/bureau/inst/download/migration2.pdf [02.12.2009.]
[17] Ibid.
[18] Ibid.
[19] Tannock, S., (2007), Beyond National Borders: Reframing the Global Brain Drain Debate. SKOPE Research Paper No 73. ESRC funded Centre on Skills, Knowledge and Organisational Performance Cardiff and Oxford Universities



*Source: World Bank staff estimates based on the International Monetary Fund's Balance of Payments Statistics *Data for Malta and Cyprus were not available*

Chart 3.1. Remittances (received) as a share of GDP, 2008

There are several possible causes of highly skilled migration such as violation of human rights or academic freedoms. This is often accompanied by the fact that most countries where human rights are not respected have other political, economic and social difficulties and overall do not have a stable and prosperous environment in which investment in education or science will be made.

According to Olsen, bad governance is also an important factor of highly skilled migration. He claimed that population is particularly unsatisfied when they find human rights and governance situation in their country unacceptable. Corruption, lack of freedom of speech, lack of transparency are just some of the motives for their dissatisfaction[20]. In addition, low wages, decline of prestige of intellectual labor, threat of unemployment are also important causes of brain drain.

[20] Olsen, H., (2002), Migration return and development: institutional perspective. *International migration*, Vol. 40, No 5, pp. 125-150.

4. LABOR MARKET COMPETITIVENESS AND MIGRATION MOTIVES IN THE EU CANDIDATE COUNTRIES AND SELECTED EU MEMBERS

Over the past few decades social and economic picture of the world has changed and resulted in increased mobility of individuals worldwide. The collapse of socialist regimes in Eastern Europe, differences between incomes in developed and less developed countries, other labor market characteristics, wars, terrorism and human rights violation are just some of the factors that led to increased migration flows. Worldwide globalization process has resulted in a change of the migration experience and labor market characteristics of many countries.

4.1. Labor migration trends in Europe

Most European countries have started to perceive migration as an answer to their medium term labor supply shortages and an overall ageing of the population. There are established patterns of migration that have been shaped by historical, political and economic factors. The most recent trend began after the World War II when the German fast economic recuperation was one of the main factors for the creation of South-North and East-West migration creating a precedent in European migration. Historically, most West European countries were emigration countries, but that trend began to change over the past few decades and even the countries like Italy, Spain and Ireland recently became immigration countries.

In the 1990s, there was a major population movement in the Commonwealth of Independent States (CIS) and Central and Eastern European (CEE) countries. Most of the movement in the CIS countries was the result of the collapse of the Soviet Empire, decolonization and the emergence of independent states in Asia[21]. The political changes after the fall of the Iron Curtain also initiated large scale migration flows between CEE countries. Migrations mainly occurred between neighboring countries. In the early 1990s, most of those countries represented major source countries for migrants moving to Western Europe and North America. Migration flows changed reasonably in CEE countries due to the EU enlargement as well. Those countries that experienced relatively fast economic development, such as Czech Republic, Poland, Hungary, Slovakia and Slovenia now have positive net migration rates. On the other hand, countries that lag behind like Bulgaria and Romania are still emigration countries.

Migration trends in Europe show that positive net migration accounted for about 80 percent of Western and Central Europe's total population growth of

[21] Bauer, T.K., DeNew-Haisken J.P., Schmidt C.M., International labor migration, economic growth and labour markets: the current state of affairs. Available at: www.unece.org/pau/_docs/pau/PAU_2005_Publ_NDRCh07.pdf [20.08.2009.].

almost 2 million people in 2008[22]. During the ten year period between 1998-2008, Czech Rep. experienced the biggest growth in net migration, from 9 488 (1998) to 80 778 (2008), France with negative migration balance of -1 407 in 1998 but positive balance of 62 267 persons in 2008 and Italy where net migration grew from 55 775 in 1998 to 484 464 in 2008, followed by Slovenia, Switzerland, Sweden, Slovakia and Croatia. In absolute numbers net migration in 2008 were largest in United Kingdom (203 870), Italy (484 464) and Spain (464 262)[23].

4.2. Comparative analysis of the EU candidate countries and selected EU members

In the following section a comparative analysis of labor market characteristics and possible migration motives is presented[24]. In the analysis are included three EU candidate countries: Croatia, Turkey and FYR of Macedonia and twelve new members of the EU: Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Malta, Poland, Romania, Slovenia and Slovakia which will be referred to as the EU-12 countries.

Joining the European Union is an important political, economic and social goal for the current candidate countries. It requires the fulfillment of particular criteria as well as reaching certain level of convergence in all areas of the economy and governance. Labor market and its characteristics is especially important field, so it is interesting to analyze to what extent candidate countries differ from selected current members and what level of convergence have they achieved.

In continuation, records on population, fertility rates, GDP *per capita,* labor force, employment and unemployment rates, minimum wages, income taxes and perceived corruption will be compared.

[22] Eurostat, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/population/data/database [20.08.2009.].
[23] Ibid.
[24] See also: Bilas, V., Franc S. (2009), Labor market characteristics and migration motives of the EU candidate countries and selected EU members. Presented at: The International Conference on Economics and Administration, Faculty of Administration and Business, University of Bucharest, Romania, 14-15th November 2009.

Table 4.2.1.

Population in the selected EU-12 members and the EU candidates, 000

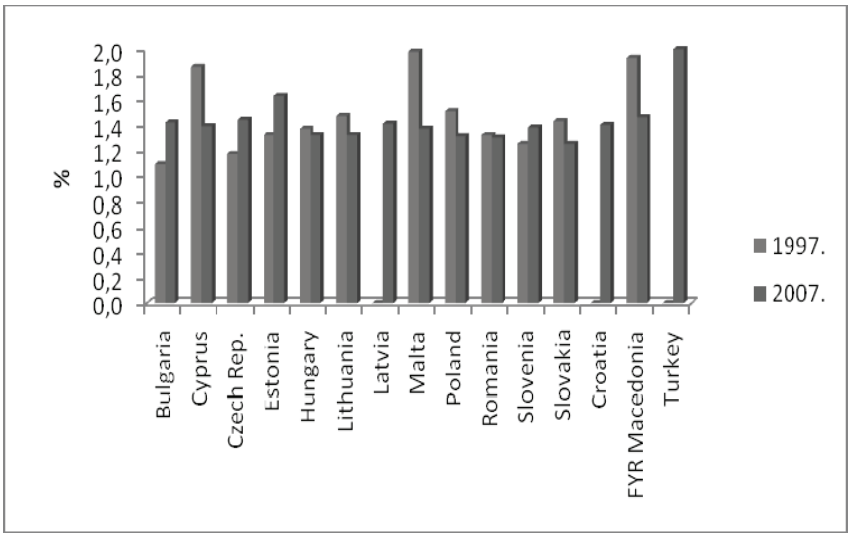
	1998	2008
EUROPEAN UNION EU-27	480.920.265	497.444.638
NEW MEMBERS EU-12	8.820.712	8.609.636
Bulgaria	8.283.200	7.640.238
Cyprus	675.215	789.258
Czech Republic	10.299.125	10.381.130
Estonia	1.393.074	1.340.935
Hungary	10.279.724	10.045.401
Lithuania	3.562.261	3.366.357
Latvia	2.420.789	2.270.894
Malta	376.513	410.290
Poland	38.659.979	38.115.641
Romania	22.526.093	21.528.627
Slovenia	1.984.923	2.025.866
Slovakia	5.387.650	5.400.998
CANDIDATE COUNTRIES	23.726.942	25.689.278
Croatia	4.536.812	4.436.401
FYR Macedonia	2.002.340	2.045.177
Turkey	64.641.675	70.586.256
MINIMUM	376.513	410.290
MAXIMUM	64.641.675	70.586.256

Source: Eurostat, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/population/data/database [20.08.2009.].

Among all analyzed countries in 2008 (table 4.2.1), Turkey had the largest population (70 586 256), and Malta had the smallest population (410 290). When comparing population in the years of 1998 and 2008 it can be seen that in half of the countries population had increased, namely in Bulgaria, Cyprus, Czech Rep., Malta, Slovenia, Slovakia, FYR Macedonia and Turkey, but in the other half the population had decreased, to be exact in Estonia, Hungary, Lithuania, Latvia, Poland, Romania and Croatia. On average, the population had decreased in the EU-12 countries from 8 820 712 in 1998 to 8 609 636 in 2008. In candidate countries the average population had increased from 23 726 942 in 1998 to 25 689 278 in 2008. To conclude, average population in 2008 in three candidate countries is about three times larger than the average in the EU-12 countries.

Following chart 4.2.1 represents data on fertility rates in the EU-12 countries and the three candidate countries. Total fertility rate represents the number of children that would be born to a woman if she were to live to the end

of her childbearing years and bear children in accordance with current age-specific fertility rates[25].



Source: Worldbank database , Eurostat, 2009

* data for Croatia, Lithuania and Turkey were not available for the year 1997.

Chart 4.2.1. Fertility rates in the selected EU-12 countries and the EU candidates

In Bulgaria, Czech Republic, Slovenia and Estonia fertility rates grew from 1997 to 2007, while in other observed countries (where records were available) fertility rates decreased in the mentioned period. Countries with high fertility rates are usually developing or less developed ones and most of their labor force is emigrating in search of better work opportunities.

[25] Worldbank, available at: http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20394872~menuPK:1192714~pagePK:64133150~piPK:64133175~theSitePK:239419~isCURL:Y,00.html [20.08.2009.].

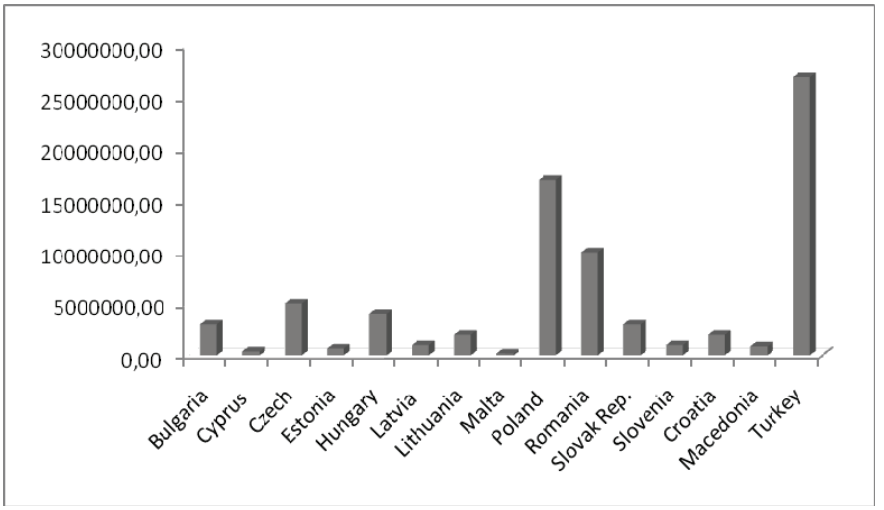
Table 4.2.2.

GDP *per capita* in the EU-12 countries and the EU candidates, EUR

	1998	2008	Index	Change Rate
EUROPEAN UNION (EU-27)	17800	25100	141,0	41,0
NEW MEMBERS (EU-12)	5283	10808	204,6	104,6
Bulgaria	1500	4500	300,0	200,0
Cyprus	13300	21400	160,9	60,9
Czech Republic	5500	14200	258,2	158,2
Estonia	3900	11800	302,6	202,6
Hungary	4400	10500	238,6	138,6
Lithuania	2900	9600	331,0	231,0
Latvia	2900	10200	351,7	251,7
Malta	9400	14000	148,9	48,9
Poland	4100	9500	231,7	131,7
Romania	1500	6400	426,7	326,7
Slovenia	10400	18200	175,0	75,0
Slovakia	3600	12000	333,3	233,3
CANDIDATE COUNTRIES	3400	7000	205,9	105,9
Croatia	4900	10800	220,4	120,4
FYR Macedonia	1700	3200	188,2	88,2
Turkey	3600	7000	194,4	94,4
MINIMUM	1700	3200	148,9	48,9
MAXIMUM	13300	21400	351,7	326,7

Source: Eurostat, available at: http://epp.eurostat.ec.europa.eu/portal/page /portalnational_accounts/data/database [20.08.2009.].

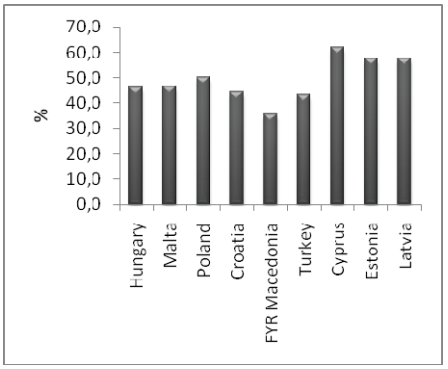
The following chart 4.2.2 shows labor force figures in the twelve new EU members and the three EU candidate countries in 2006. According to the available data, Turkey, Poland and Romania had the largest available labor force in 2006 which is in accordance with the data on the total population. On the other hand, Malta, Cyprus and Estonia recorded the smallest numbers of existing labor force.

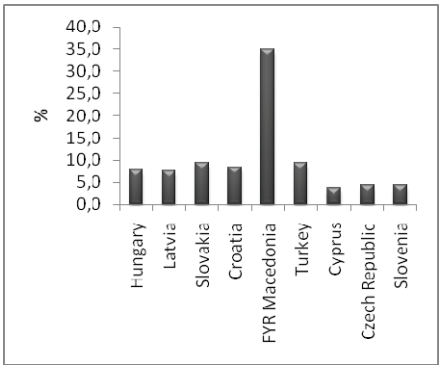


Source: World Bank. Available at: http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/0,,conteconte:21352016~pagePK:64165401~piPK:64165026~theSitePK:476883~isCURL:Y,00.htht [20.12.2009.].

Chart 4.2.2. Labor force in the selected EU-12 countries and the EU candidates 2006

Employment and unemployment rates are important indicators of labor market situation. Therefore, in the following two charts employment and unemployment rates are presented and compared among the EU-12 members and the candidate countries. It can be seen that the candidate countries have had more similar employment rates to those EU-12 countries with the lowest employment rates than to the ones with the highest rates indicating the employment problems existing in the candidate countries (chart 4.2.3.).



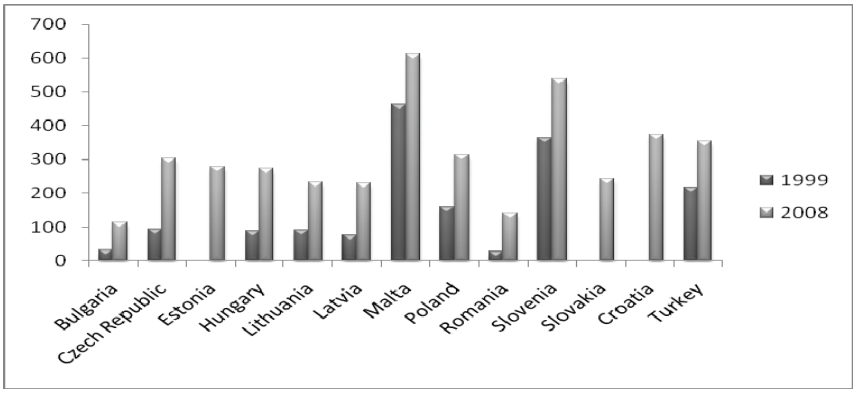


Source: Eurostat, available at: http://epp.eurostat.ec.europa.eu/portal /page/portal/employment_unemployment_lfs/data/database [22.08.2009.].

Chart 4.2.3. The EU candidate countries and EU-12 members with the highest and the lowest employment rates, 2008

Chart 4.2.4. The EU candidate countries and EU-12 members with the highest and the lowest unemployment rates, 2008

When analyzing unemployment rates (chart 4.2.4), FYR of Macedonia had the highest unemployment rate (34, 9%) among the studied countries in 2008. Slovakia (9,5%), Hungary (7,8%) and Latvia (7,5%) have had the highest unemployment rates among the EU-12 countries. On the other hand, Cyprus (3,7%), Slovenia (4,4%) and Czech Rep. (4,4%) have had the lowest unemployment rates among the EU-12 members. Croatia was the candidate country with the lowest rate (8,4%), but compared to the EU-12 its' unemployment rate is almost double.

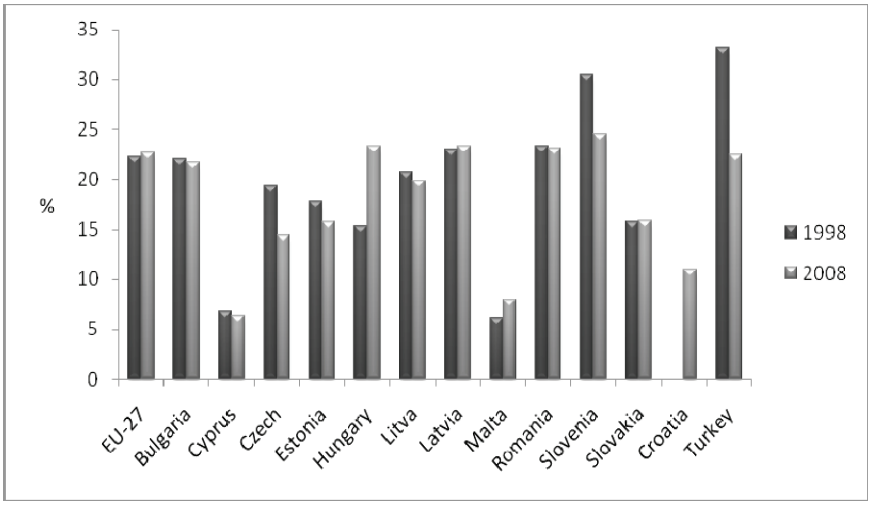


Source: Eurostat, available at:http://nui.epp.eurostat.ec.europa .eu/nui/show.do?dataset=earn_minw_cur&lang=en and ILO, Employment policy review, available at: http://www.coe.int/t/dg3/socialpolicies /socialrights/source/EPRcroatia_en.pdf

Chart 4.2.5. Minimum wages in the selected EU-12 members and the EU candidates, EUR

As shown in the above chart 4.2.5, the highest gross minimum wages during the period from 1999-2008 were recorded in Malta and Slovenia. Conversely, Bulgaria and Romania had the lowest minimum wages in the observed period. Among the current candidate countries, Turkey and Croatia have legally defined minimum wage, while Macedonia does not have such a law in force.

Income tax is additional factor that makes labor markets more or less appealing to the labor force. If having a choice, most individuals will choose to work in a country with smaller income tax because higher taxes are considered to be somewhat of a "punishment" for working individuals and are a source of public dissatisfaction.



Source: Eurostat, available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/labour_market/earnings/database

Chart 4.2.6 Income tax rates in the selected EU-12 and the EU candidate countries

Average income tax rate (chart 4.2.6.) in the new member countries EU-12 was 18,24% in 2008. Malta (8,73%) and Cyprus (6,30%) were two EU-12 countries with the lowest income tax rates in 2008. In the two candidate countries for which records were available, income tax was much higher. In Croatia the process of calculating income tax rate is rather complicated because, in addition to the basic four income tax rates (15, 25, 35 and 45%), there is an extra tax rate which is added to the basic income tax rate and is determined by the area of residence. Taken all that into account it can be said that the income tax on the

average gross wage was 10,93[26] and in Turkey it was 28,35% in 2008, which represented a significant decrease from 1998 when it was 33,22%.

Corruption level is another factor that can either improve or worsen a country's image. It is one of the factors that individuals take into account when deciding about possible migration. It is impossible to keep economic and political stability if corruption level is high. In the table 4.2.3 corruption index is presented. CPI score relates to perception of the degree of corruption as seen by business people and country analysts, and ranges between 10 (highly clean) and 0 (highly corrupt)[27].

Table 4.2.3.

Corruption perception index in the EU-12 and the EU candidates 2008

Country	**CPI score**	**Confidence range**
Bulgaria	3,6	3,0-4,3
Cyprus	6,4	5,9-6,8
Czech Republic	5,2	4,8-5,9
Estonia	6,6	6,2-6,9
Hungary	5,1	4,8-5,4
Lithuania	4,6	4,1-5,2
Latvia	5	4,8-5,2
Malta	5,8	5,3-6,3
Poland	4,6	4,1-5,2
Romania	3,8	3,4-4,2
Slovenia	6,7	6,5-7,0
Slovakia	5	4,5-5,3
CANDIDATE COUNTRIES		
Croatia	4,4	4,0-4,8
FYR Macedonia	3,6	2,9-4,3
Turkey	4,6	4,1-5,1

Source: Transpareny international available at: http://www.transparency.org /news_room/in_focus/2008/cpi2008/cpi_2008_table [23.09.2009.].

Amongst the observed countries, the lowest CPI score were recorded in Bulgaria and FYR of Macedonia (3,6), which means that those countries were percieved as highly corrupted. Slovenia (6,7) and Estonia (6,6) had the highest

[26] Average gross wage in Croatia was 7544,00 HRK and average net wage was 5210,61 HRK in 2008, according to the Croatian state ststistics department. Tax rate is determined for a single person living in Zagreb on the basis of gross and net wages figures.

[27] Transpareny international, available at: http://www.transparency.org/news_room/in_focus/2008/cpi2008/cpi_2008_table [23.09.2009.].

CPI score, which implicates that they were percieved as rather clean from corruption.

5. CONCLUSION

The importance of human capital is recognized in both developed and developing countries considering that we live in the era of globalization, fierce competition, continuous technology development and innovation. From the available records and conducted analysis, it can be concluded that Croatia has the highest potential of creating high quality human capital among current EU candidate countries.

Worldwide globalization process has resulted in a change of the migration experience of many countries. By conducting a comparative analysis of labor market characteristics and migration motives of the selected EU members (EU-12) and three candidate countries, Croatia, FYR of Macedonia and Turkey, following results were given.

Among all analyzed countries in 2008, Turkey had the largest population (70 586 256), and Malta had the smallest number of residents (410 290). Also, in 2007 Turkey had the highest fertility rate (2,0%), while in most of other countries fertility rates ranged between 1,3% and 1,6%. When comparing records on GDP *per capita*, Cyprus had the highest GDP *per capita* in 2008 (21 400 EUR), and the country with the lowest GDP *per capita* was FYR of Macedonia (3200 EUR).

Employment and unemployment rates are one of the labor market characteristics that can have the "push" effect for migration. The candidate countries had more similar employment rates to those EU-12 countries with the lowest employment rates than to the ones with the lowest employment rates in 2008, indicating problems concerning employment in candidate countries. When analyzing unemployment rates, FYR of Macedonia had the highest unemployment rate (34, 9%) among the studied countries. Slovakia (9,5%), Hungary (7,8%) and Latvia (7,5%) have the highest unemployment rates among the EU-12 countries. On the other hand, Cyprus (3,7%), Slovenia (4,4%) and Czech Rep. (4,4%) have the lowest unemployment rates among the EU-12 members.

The highest gross minimum wages during the period from 1999-2008 had Malta and Slovenia. Conversely, Bulgaria and Romania had the lowest minimum wages in the observed period. Among candidate countries, Macedonia doesn't have legally defined minimum wage.

The average expenditure on education in the EU-12 countries represented 5,1% of GDP in 2006. In the three candidate countries average expenditures have constituted a smaller part of the GDP (3,5%).

Overall, it can be concluded that the three EU candidate countries do not differ significantly in the development of the educational system and in the potential of creating quality human capital from the EU-12 members. However, in some basic economic indicators like GDP *per capita* or minimum wages, a gap still exists. When analyzing the employment and unemployment situation, Croatia has shown the best results among the candidate countries.

Taxation of income and corruption level are additional factors in migration decision making process. All three candidate countries have shown similar results in that area. Among the EU-12 countries, Bulgaria, Cyprus, Malta and Slovakia have the lowest tax rates. All the other EU-12 countries do not differentiate considerably from the three candidate countries. Concerning the corruption level, amongst all of the observed countries, the lowest CPI score have Bulgaria and FYR of Macedonia (3,6), which means that those countries were perceived as highly corrupted in 2008. Conversely, Slovenia (6,7) and Estonia (6,6) had the highest CPI score, which implicates that they were perceived as rather clean from corruption.

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SHVAĆANJE VAŽNOSTI KONKURENTNOSTI LJUDSKOG KAPITALA I TRŽIŠTA RADA U ZEMLJAMA KANDIDATIMA ZA EU I ODREĐENIM EU ČLANICAMA

Sažetak

Smatra se da je ljudski kapital ne samo važan čimbenik gospodarskog rasta i razvoja, već i jedan od izvora komparativne prednosti. Kako bi zemlje imale stručni ljudski kapital, potrebno je poboljšati konkurentnost na tržištu rada i više investirati u obrazovanje, znanost i tehnologiju. Tema ovog rada je uloga i važnost ljudskog kapitala. U radu se osim toga istražuju i motivi, učinci i trendovi radne migracije u Europi, s posebnim naglaskom na radnu migraciju visoko kvalificirane radne snage, tzv. fenomen odljeva mozgova. Budući da je konkurentno i stabilno tržište rada važan uvjet za ulazak u EU, svrha ovog rada je vidjeti koju su razinu zemlje kandidati do sad dostigle. Stoga je napravljena komparativna analiza određenih karakteristika tržišta rada u Hrvatskoj, Makedoniji i Turskoj (kao zemljama kandidatima) i u određenim EU članicama.

Ključne riječi: ljudski kapital, odljev mozgova, tržište rada, radna migracija, EU

JEL klasifikacija: J24