# THE ECONOMIC EFFECTS OF EMIGRATION OF YOUNG HIGHLY EDUCATED ROMANIANS

Professor Ph.D. **Dorel AILENEI**Bucharest University of Economic Studies, Romania
<a href="mailto:dorulilenei@gmail.com">dorulilenei@gmail.com</a>

Associate Professor Ph.D. **Liana BADEA**Bucharest University of Economic Studies, Romania
liana.nutu.badea@gmail.com

Assistant Professor Ph.D. **Cristina DIMA**University Politehnica of Bucharest, Romania
<a href="mailto:cristina.visan0187@gmail.com">cristina.visan0187@gmail.com</a>

#### **Abstract:**

Migration is one of the oldest phenomena that accompanied the development of human society, sometimes causing clashes between peoples, cultures and civilizations. Recent events or from a not too distant past of Europe show that tensions created by migratory movements often have an impact on political and economic relations between countries, cultures and religions.

The Romanian reality shows that after 1989 the resident population experienced a decline. According to the National Institute of Statistics, in the period 1989-2012, Romania's population decreased by about 3.1 million, this reduction being due to both migration phenomenon and negative natural increase of population. Some statistic records also show that the extremes are usually among those who decide to emigrate. On the one hand those who are choosing this path are individuals with low income and a low or medium level of education; on the other hand, we can find the phenomenon of brain drain. It is alarming that among those who choose to emigrate are registered young people able to work, this generating the problem of funding on medium and long term the social services.

Starting from such aspects, this paper aims to highlight key issues regarding the intention of emigration of highly educated young people. Using quantitative and qualitative methods the authors of this paper aim to identify some possible causes that may determine the highly educated youth to emigrate, evaluate some possible effects due to this phenomenon and to find proposals to limit the negative effects of demographic decline.

**Key words:** migration, demographic decline, labor market, social assistance, brain drain.

JEL classification: J69, R10.

### 1. LITERATURE REVIEW ABOUT MIGRATION

Migration phenomenon has existed for a long time, and history is the witness. From the theoretical standpoint, the issue of migration has been widely debated, however, it can not be asserted that the last word has been said about it. The field is complex, with economic, social, political, demographic and even psychological implications. As the researcher Joaquin Arango said, it appears that the extend of the phenomenon in the last two centuries has led to new research: "Building of theories in this field is basically an issue of the '20<sup>th</sup> century and especially its last third part. The most contributions before 1960s are now only for historical interest, exception for a number of contributions to migration vocabulary and a special significance of a few notable precursors" (Constantinescu, 2002, p.94).

However, current achievements are based on theories from many centuries ago. Thus, the migration issue has begun to be debated in scientific circles even before the mercantilists. The fact is that Jean Baptiste Colbert and Thomas Mun, representatives of mercantilism, emphasized the interdependence between migration and economic growth, highlighting the need of keeping under control emigration from the origin country to colonies. To have a strong labor supply is one condition which can determine a significant economic growth. Subsequently, classical school

highlights more nuanced the migration problem. Adam Smith, the father of economics, showed the need for free movement of goods and people, as prerequisites for growth of wealth. (Smith, 1992). Among liberals, the mobility issue of population has been approached by J.S. Mill, Th. Malthus, and so on, all of these showing that a high mobility of labor provides acces to new markets. Migration has been studied regardless of doctrinal orientation. For example, in the case of Marx, the main factor triggering economic development, population mobility or changing all aspects of social life is mass industrial production, therefore migration appears to be driven by industrial evolution (Marx, 2009).

The 20th century comes with a number of dedicated migration theories. The table below summarizes some of these, the literature proving to be really complex (table 1).

**Table 1. Some references on migration in the literature** 

Year	Researchers concerned with the study	The main studied aspects
	of migration	
1957	D. Massey	Migration can be seen as a process of self-sustaining
	G. Myrdal	capacity through the mechanisms which itself gives birth.
1960	O. Stark	Migration can be analyzed from the perspective of
	M.P. Todaro	individual rational decision. This kind of person will be
	J.R. Harris	able to assess prospects for increasing revenues.
1962-1964	G. Becker, Th. Shults, L.A.Sjaastad	Migration can be regarded as an investment process in
		human capital of migrants.
1966	E.S. Lee	Starting from the "laws of migration" discoverd by
		Ravenstein in the 19th century, Lee proposed push-pull theory of migration. It identifies four broad categories of
		decision determinants for emigration: factors associated
		with the origin area, factors associated with the destination
		area, obstacles and personal factors.
1979	L. Basch, M. J. Piore	Migration has to be studied as an effect of labor demand in
		the secondary sectors in developed countries.
1987	D. Massey, L.P. Goldring, J. Durand	Migration is analyzed in terms of capital formation
		mechanism.
1989	E. Taylor, O. Stark, P. Arnold, D.	Migration - family strategy directed to minimizing risks of
	Massey	revenues reduction by diversifying their sources of
		achievement.

Source: Processings of authors

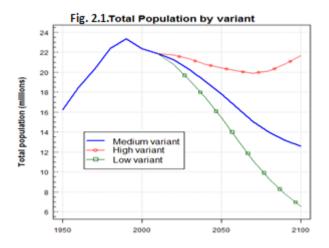
Lately, the study of migration research begins to focus on specific issues such as the phenomenon of brain drain. The main stream of migration literature stressed that the brain drain represents a loss of human capital (Beine, Docquier and Rapoport, 2001), producing only negative effects on the country of origin (Wong and Yip, 1999 Bhagwati and Wilson, 1989). Another part of the literature shows that the brain drain phenomenon brings with it a number of long-term advantages, such as remittances sent by migrants to their countries of origin (Cinar and Docquier, 2004), additional knowledge and skills brought by persons repatriated to their country of origin (Postel-Vinay Dos Santos, 2003), closer trade relations by creating new business networks (Mesnard and Ravallion, 2001), increased foreign investment, etc. The literature has introduced new concepts such as Brain Drain, Brain Gain, Brain Waste, and a sub-branch of study migration occurred quite rapidly - "new economy brain drain" (Docquier and Rapoport, 2004).

## 2. THE MIGRATION PHENOMENON IN ROMANIA

After 1990, Romania had suffered the greatest loss of population in times of peace, in its history. The main causes of population reduction were: international migration, family planning and high mortality (INS, 2014).

Since 2014 the resident population of Romania registered for the first time values below 20 million. During the period 1989-2012 the resident population decreased by 3.1 million, more than 77% of its negative growth (2.4 million) being determined by emigration. By 2009 this reduction was driven predominantly by the migration phenomenon and since 2010 by the negative natural increase. International migration has led to an average annual reduction of Romania's population of 104,200 people in 1990-2012 (INS, 2014). The factors that led to the current situation are numerous and fit into different categories, starting with those of economic and social nature and reaching the psychological ones. Interesting is that recent statistics indicate that besides the known factors leading to the current demographic decline there are some others - the increasing average age of mother at the first birth from 23.7 years in 2000 to 26.2 years in 2012 and the decrease of the fertility rate of a Romanian woman (according to Eurostat).

Unfortunately Romania's situation proves not to be exceptional. The estimations made by the United Nations shows a downward trend for our country in terms of the evolution of the population residing in Romania, as can be seen in the chart below. The three scenarios considered by the Department of Economic and Social Affairs show that in the best situation, in 2050, our country will have a resident population of about the same size as today, while the pessimistic scenario suggests that people will decrease below 16 million (Fig. 2.1.).



Source: United Nations, Department of Economic and Social Affairs, *World Population Prospects. The 2012 Revision*, http://esa.un.org/wpp/Demographic-Profiles/pdfs/642.pdf

As shown, the trend is one of diminishing the population of Romania, an aspect of real concern both for the evolution of the labor market and for the economic, social and political implications. In addition, studies carried out in recent years show a propensity in the case of Romanian youth towards finding a job abroad. According to a study conducted by the Romanian Institute for Evaluation also Strategies, 51.6% of youth aged between 18 and 35 wish to work abroad, and 75% of respondents with higher education in all age groups also state that they would like to emigrate (IRES, 2013). According to data provided by the National Institute of Statistics, in 2012 the Romanians preferred the following destination countries: Italy, Spain, Germany, UK etc. In the last years, there was observed a trend, according to which those with higher education decide to leave the country, thus the phenomenon of brain drain gaining momentum.

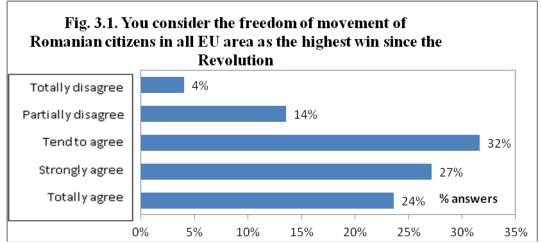
Based on the situation above presented, this paper aims to identify the intention to emigrate in 2015 of the Romanian youth with higher education.

# 3. RESEARCH REGARDING THE INTENTION TO EMIGRATE OF THE YOUNG ROMANIANS WITH HIGHER EDUCATION

Starting from the need to identify migration intentions of Romanian youth with higher education, we conducted a pilot survey. Thus, during March-April 2015 was distributed a questionnaire containing 18 questions on the intention of Romanian young people to emigrate in the short term. The sample consisted of 199 respondents, all of them being students at some of the most prestigious universities in the country: Bucharest Polytechnic University (with a total of 25,382 students as of academic year 2013-2014) and Bucharest University of Economic Studies (with a total of 23,678 students as of academic year 2013-2014). In a first phase, we needed to develop a pilot survey in order to track the tendencies of young economists and engineers, and based on their responses to determine trends and elements needed to expand this research to other groups of young people with higher education.

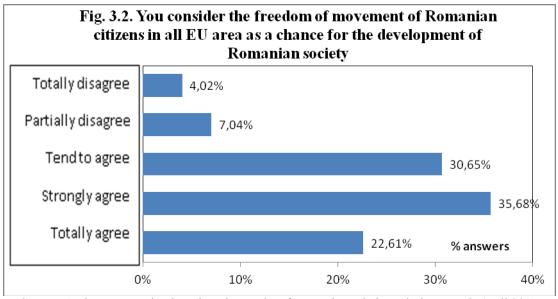
Of the total number of questions included in the survey, there have been selected only a few for presenting some relevant determined issues.

The first part of the questionnaire concerned respondents' opinion on the phenomenon of migration. Thus, the statement "You consider the freedom of movement of Romanian citizens in all EU area as the highest win since the Revolution", the majority (51%) of the respondents said that they are totally agree or strongly agree. Only 4% of the respondents were classified in total disagreement, as can be seen in Figure 3.1.



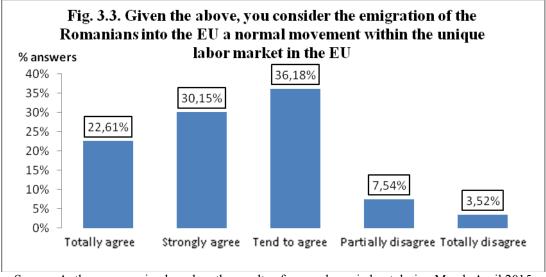
Source: Authors processing based on the results of research carried out during March-April 2015.

Given that most of the respondents were represented by people born after 90s, who did not have the opportunity to live in the communist regime, but to whom the communist period was presented as one characterized by the deprivation of the Fundamental Rights of the citizen, it is not surprising that freedom of movement within the European area is perceived as a fundamental right. This is reinforced by the results in the case of the second claim, which seeks to highlight the extent to which social and legislative plan (bounded by the right of free movement) is complemented by the development opportunities generated by the existence of this right ("You consider the freedom of movement of Romanian citizens in all EU area as a chance for the development of Romanian society").



About 58% of young surveyed students consider the free movement of Romanian citizens in the EU a chance for the development of Romanian society ("Totally agree" or "Strongly agree") (Fig. 3.2). They take into account the possibilities for the personal, social and professional development that emigration can offer. If 58% of respondents consider free movement of the Romanian citizens in the Community as a great opportunity for the development of Romanian society, it is noted that a similar percentage of people consider this as being a great win.

Emigration is usually associated by young people with so-called "recipe for success" and success, most often is viewed through the prism of the existence of a well-paid job. Therefore, whenever discussing migration, labor market cannot be regarded otherwise than closely connected with the phenomenon of migration. For the third statement "Given the above, you consider emigration of the Romanians into the EU a normal movement within the unique labor market in the EU", 52.76% of the respondents considered themselves as being totally agree and strongly agree, considering thereby generated labor market fluctuations as being normal (Fig. 3.3.).

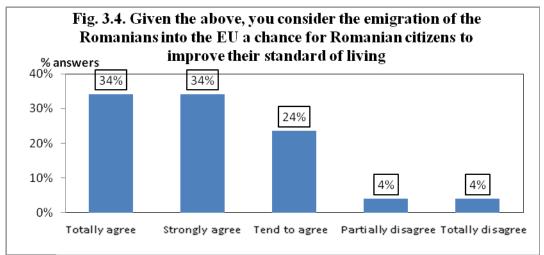


Source: Authors processing based on the results of research carried out during March-April 2015

Undoubtedly obtaining the right of free movement caused an intensified emigration in the case of the citizens of a country where the need for expressions of freedom and other economic opportunities was so stringent that the results were clearly seen in its demographic evolution. The problem in this situation is related to how will succeed the labor market in Romania to rebalance

itself in the context of labor supply reduction. The way it will stabilize will impact on a number of other macroeconomic variables that are influenced by the labor market, such as social security budget, unemployment, low consumption, investment, etc.

Given that the Romanian citizens, who are working abroad, have the chance to improve their standard of living and frequently resort to sending significant amounts of money to their relatives in the country, we asked a question to determine the perception of migration as a phenomenon that leads to an improvement of living standards ("Given the above, you consider emigration of Romanians into The EU a chance for of Romanian citizens to improve their standard of living").



Source: Authors processing based on the results of research carried out during March-April 2015

Compared with only 8% of respondents who have the perception that emigration does not lead to improving the living standards, 68% of respondents say their leaving for a foreign country will bring a better life for sure, while 24% tend to agree with the statement that emigration will lead to higher standards of living (Fig. 3.4.). The perspective covers both Romanians who have left the country to seek a favorable environment for personal development and better living standards, but also Romanians who remained in the country and who are receiving financial support from abroad, support that can be used for different purposes and that is reflected in the microeconomic level and at global level.

Many times a certain type of behavior draws the same type of conducts. Building on the success that emigrated friends and relatives have obtained, many of those who remained in their home country can question themselves to imitate the behavior of those who have decided to emigrate. To see if there are incentives that can lead to faster the decision making to emigrate, there was formulated the question "Do you have relatives / acquaintances who have moved to another country and if so, where?".

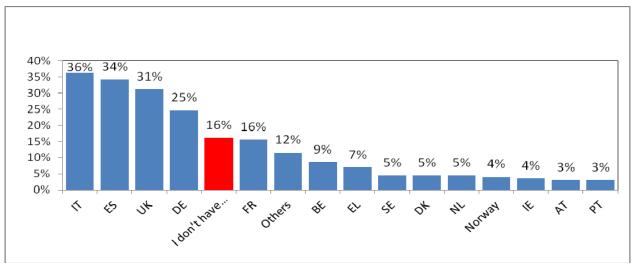


Fig. 3.5. Do you have relatives / acquaintances who have moved to another country and if so, where?

First, the results point out the high percentage of people who have relatives left in another country (84% of those who responded), as can be seen in Fig. 3.5. Of these, 36% have relatives in Italy, 34% in Spain, 31% in the UK and in Germany 25% of the individuals have relatives or acquaintances. These are the countries with which Romania has intense commercial exchanges and in the case of Spain and Italy, the language is not an impediment, as both are countries of Latin origin. Italy and Spain, the countries of the first two places, present a lot of cultural similarities, which may explain why they have attracted a significant percentage of emigrants coming from Romania.

Starting from the mirage provided by foreign lands and from the positive experience gained by acquaintances or relatives with immigrant status, 76.38% of the people questioned respond affirmatively to the question "Have you ever thought to emigrate?". Only 23.62% say that they never thought to emigrate, as shown in Fig. 3.6.

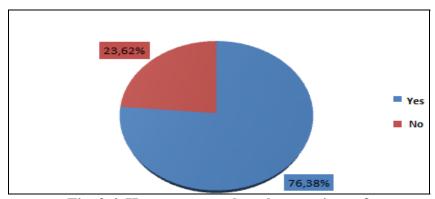


Fig. 3.6. Have you ever thought to emigrate?

Source: Authors processing based on the results of research carried out during March-April 2015

It is interesting to note that although only 58% of respondents largely agree that emigration is a chance for the development of Romanian society, a considerable share of 76.38% of respondents have sought to emigrate. These results can be interpreted to mean that those who want to emigrate do not necessarily believe in a Romanian society development, but rather see emigration as an improvement in their personal situation and in their living standards (68% of respondents consider emigration as a chance to improve the standard of living).

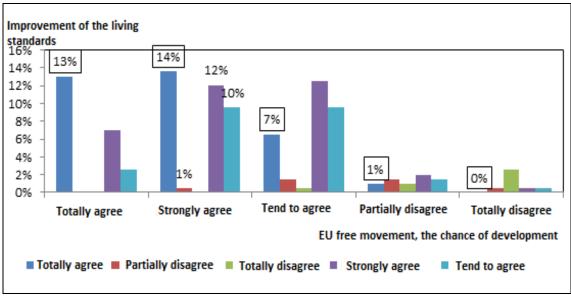
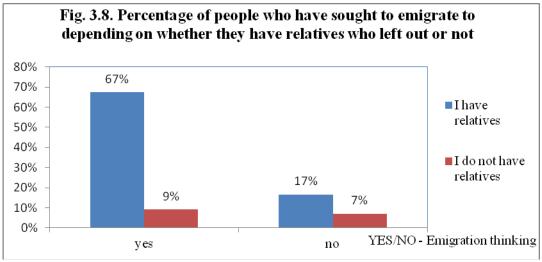


Fig. 3.7. To what extent it is considered that the emigration is a chance for the society development and for the improvement of the living standards?

Of the respondents who are "strongly agree" that free movement in the EU is a development opportunity of the country (37%), a major percentage (27%) is "totally agree" that free movement means improving living standards (Fig. 3.7).

The last two questions of the above were analyzed using a graphical correlation between their answers (Fig. 3.8.).



Source: Authors processing based on the results of research carried out during March-April 2015

Of the total of 84% of people who have relatives / acquaintances who have gone abroad, 67% have thought to emigrate and only 17% have considered this option. Of the 16% of respondents who do not have relatives living abroad, a major percentage was also thought to leave Romania. The result shows a general desire to emigrate among youth in Romania, which may generate an overall imbalance of the entire society if the subject is not treated with the utmost attention.

When asked "To what extent do you think you could have a better standard of living in another country?", 84% of respondents believe that their departure could bring a better life (Fig. 3.9.).

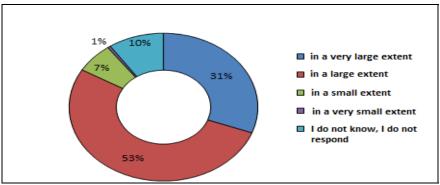


Fig. 3.9. To what extent do you think you could have a better standard of living in another country?

There is an overwhelming percentage of people who have thought to emigrate (76%) and an even higher percentage of people who felt that they could have a better life in another country in a large and very large extent (84%). The difference is represented by people who, although are aware of the chances to raise the standard of living settling in another country, did not thought to emigrate. The latter represents a very stable category form the demographic perspective.

Beyond the mirage of offered by foreign lands, there are several factors on which public policies might focus in order to keep young people in the country. To the question "What would be the reasons why you choose to stay in Romania?", 92% of respondents indicate family and friends, as shown in Fig. 3.10.

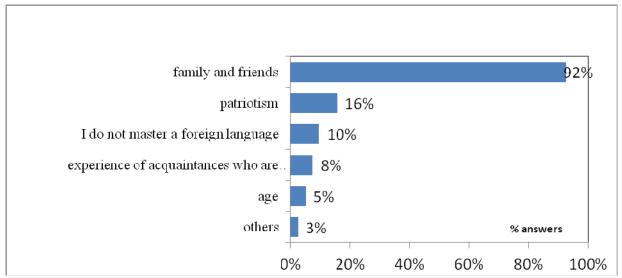
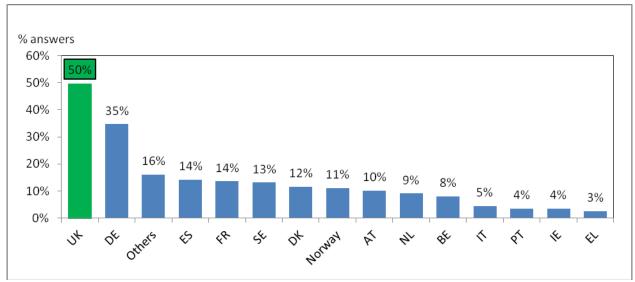


Fig. 3.10. What would be the reasons for which you choose to stay in Romania? Source: Authors processing based on the results of research carried out during March-April 2015

On the second place is to be found a 16% of the respondents, which indicate the patriotism as a reason for not leaving the natal country. 10% of respondents stated that they would not emigrate because do not master a foreign language, while 8% range from the unfortunate experience of acquaintances. The high percentage of those who decide to stay in the country for their family and friends highlights a culture of a people attached to others. From this point of view, in order to reduce the migration phenomenon, the state should develop a set of policies that emphasize the importance of family in society and that raise the living standards of their members.

When asked "What country would you choose in the situation you decide to emigrate?", the young people had more possibilities to reply, which included EU countries and a further embodiment response to those who have other preferences than EU.



**Fig. 3.11. What country would you choose in the situation you decide to emigrate?** Source: Authors processing based on the results of research carried out during March-April 2015

The responses show that students, future economists and engineers prefer western countries, especially the UK and Germany (Fig. 11). Italy is not preferred by Romanian young people with higher education, although it is among the countries where they have relatives / acquaintances, which shows that the "snowball effect" does not operate in any situation.

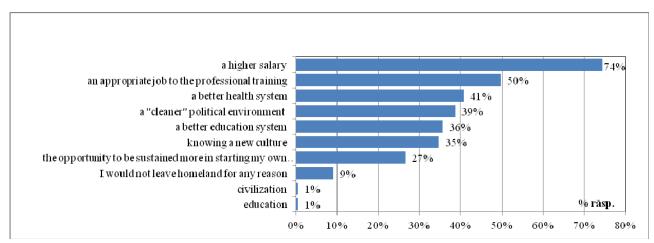
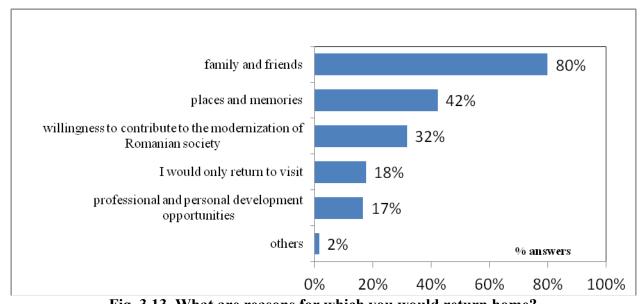


Fig. 3.12. What are the reasons for which you choose to emigrate? Source: Authors processing based on the results of research carried out during March-April 2015

Among the reasons that would cause Romanian students to work abroad, the prevailing ones are related to wage earnings, the matching between the graduated studies and the occupied job, a better health and educational system and a "cleaner" political environment. Majority of respondents would emigrate for a higher salary (74%) and for an appropriate job (50%) (Fig.3.12.). These responses do nothing else but to bring to the fore issues the Romanian economy is facing.

The aspirations of young people, seen here as incentives for leaving home land, show what are the areas which dissatisfy them in Romania. Thus disparity, often highlighted in the recent literature, between the Romanian educational system and labor market requirements, the shortcomings of a health system already considered "sick", wages that do not allow for a decent living are just some of the issues that any individual should face. Therefore, those who do not find a job according to their professional training have two possibilities regarding leaving the home country: either to look abroad for a job in which they had been trained, either to settle to work in another area, but being paid more than would be paid in Romania in the field for which they have been trained.



**Fig. 3.13. What are reasons for which you would return home?** Source: Authors processing based on the results of research carried out during March-April 2015

The reasons why students in the event that they decide to emigrate would return home are largely the reasons why some of them decide to stay in the country. It's about family and friends (80%), places and memories (42%), the desire to contribute to the modernization of Romanian society (32%) (Fig.3.13.). These are reasons that future generations of Romanian children born abroad will not consider so strong to want a return to the country of origin of their parents because the sense of belonging of future generations will be increasingly reduced.

#### 4. INSTEAD OF CONCLUSIONS

Pilot survey results can be considered a warning signal. They generally show a clear intention of Romanian young people to emigrate. The causes are multiple, from those of a personal nature, relating in particular to living standards, and reaching significant deficiencies in the health and educational system, legislative and political environment etc.

Therefore, the Romanian state spending on education and health provision dealing with young people who leave their native country can be considered losses. On one side are sometimes amounts recovered, on the other hand, in the internal market can create a shortage of labor. One of the sources for covering the loss of population due to migration is represented by the flow of immigrants, who are increasingly coming more to the European Union, with the risk of cultural and social differences. It is estimated that these flows will be increasingly greater with the development of Romania because our country will become more attractive for foreigners seeking a country of adoption. The trend in net inflows of immigrants in the EU is growing - from 36.000 people in 2013 to 1.360.000 persons in 2040 (European Commission, 2014).

However, following the rise of the phenomenon of emigration, the effects that occur in the country of origin are obvious. They can be positive, and we mention here just the remittances and know-how that people working abroad can bring nationally. Studies over time show that migration can lead to lower the tensions on the labor market in countries with a high unemployment rate. In addition, from migrants working in rich countries come often significant amounts in the form of remittances, which even if they are directed to consumption, can induce a positive effect of multiplication.

What worries are actually the negative the effects, among which may be mentioned: the emergence of a shortage of labor force in the home country, the reduction in income to the state budget of Romania, increasing social and political tensions, potential intensification of criminal activities (enhancing human trafficking, drug trafficking etc.) etc.

Therefore, starting from the negative effects of emigration and from the dire projections on economic and demographic future of Romania, the lack of public policies to support young graduates who choose to stay and work in the country and the lack of investments with the purpose of preservation the valuable human capital, can lead us to a critical situation, which will obviously be reflected in the quality of public services, healthcare system, to the education and living standards in general.

Therefore, tackling the problem can be done from two perspectives. A first option would be to take sustainable actions and effective for stopping the exodus of young people. The solution of the annual economic growth of 4-5% higher than in the developed European countries could keep a part of the workforce, but even so the aging European population and economic growth of 2-3% in developed countries will still absorb labor from Eastern European countries, including Romania. Therefore, enabling the creation of well-paid jobs, corresponding to the preparedness of young people could change the course of events.

The second option can go on the idea that migration is a mechanism for regulating the labor market. In this case, via bilateral agreements could be made temporary migration programs between the country of destination and country of origin (state or private environment) with the requirement for knowledge transfer so that the relationship between the host country and the native country to turn into one of the type win-win. Besides measures to facilitate the return of skilled migrants would have a significant multiplier effect. Diaspora should be encouraged to promote home country by participating in transnational networks of knowledge.

Nationally it seems that time has come to take serious measures so that economic, social and political stability not to be affected in the future.

#### **BIBLIOGRAPHIC REFERENCES**

- 1. Beine, M., F. Docquier and H. Rapoport (2001), *Brain Drain and economic growth: theory and evidence*, Journal of Development Economics, 64(1), pp. 275–289.
- 2. Bhagwati, J. and J. D. Wilson (ed) (1989), *Income Taxation and International Mobility*, Cambridge, MA Mitt Pres.
- 3. Cinar, D and F. Docquier (2004), *Brain drain and Remittances: implications for the source country*, Brussels Economic Review, Vol. 47, Issue 1, pp. 103-118
- 4. Constantinescu M. (2002), *Teorii ale migrației internaționale*, Sociologie Românească, nr. 3-4. Polirom, pp. 93-114.
- 5. Docquier, F. and Rapoport, H. (2004), *Skilled migration: the perspective of developing countries*, Policy Research Working Paper Series 3382
- 6. Dos Santos, M.D, Postel-Vinay, F. (2003), *Migration as a source of growth: The perspective of a developing country*, Journal of Population Economics, Springer, vol. 16(1), pp. 161-175.
- 7. European Commission (2014), *The 2015 Ageing Report. Underlying Assumptions and Projection Methodologies*, Brussels, Belgium, <a href="http://ec.europa.eu/economy\_finance/publications/european\_economy/2014/pdf/ee8\_en.pdF">http://ec.europa.eu/economy\_finance/publications/european\_economy/2014/pdf/ee8\_en.pdF</a>, [accessed March 20, 2015]
- 8. Institutul Național de Statistică (2014), *Migrația internațională a României*, București, <a href="http://www.insse.ro/cms/files/publicatii/pliante%20statistice/Migratia%20internationala%20">http://www.insse.ro/cms/files/publicatii/pliante%20statistice/Migratia%20internationala%20</a> a%20Romaniei.pdf, [accessed February 14, 2015]
- 9. Lee, E.S. (1966), *A Theory of Migration*, Demography, 3(1), pp. 47-57, <a href="http://links.jstor.org/sici?sici=0070-3370%281966%293%3A1%3C47%3AATOM%3E2.0.CO%3B2-B">http://links.jstor.org/sici?sici=0070-3370%281966%293%3A1%3C47%3AATOM%3E2.0.CO%3B2-B</a>, [accessed March 15, 2015]
- 10. Marx, K. (2009), *Critica economiei politice. Procesul de producție al capitalului*, vol.I, Alexandria Publishing House, Suceava

- 11. Massey, D. et all (1987), Return to Atzlan: The Social Process of International Migration from Western Mexico, University of California Press, Berkeley, US
- 12. Massey, D. (1990), *The Social and Economic Origins of Immigration*, Annals of the American Academy of Political and Social Science, Vol. 510, pp. 60-72, http://www.jstor.org/pss/1046794
- 13. Mesnard, A., Ravallion, M. (2001), Is inequality bad for business: a non-linear microeconomic model of wealth effects on self-employment, Research working paper, WPS no.2527.
- 14. Piore, M. J. (1979), *Birds of Passage: Migrant Labour and Industrial Society*, Cambridge, UK: Cambridge University Press
- 15. Romanian Institute for Evaluation and Strategy (IRES). (2013), *Perceptions and attitudes of the Romanian population regarding working abroad*, Research Report, <a href="http://www.ires.com.ro/articol/221/perceptions-and-attitudes-of-the-romanian-population-regarding-working-abroad">http://www.ires.com.ro/articol/221/perceptions-and-attitudes-of-the-romanian-population-regarding-working-abroad</a>, [accessed March 16, 2015]
- 16. Sjaastad, L.A. (1962), *The Costs and Returns of Human Migration*, The Journal of Political Economy, no.5, Vol. 70, pp. 80-93. http://webkuliah.unimedia.ac.id/ebook/files/human%20capital%204.pdf
- 17. Smith, A. (1992), Avuţia naţiunilor cercetare asupra naturii şi cauzelor ei, Editura Universitas, Chişinău
- 18. Stark, O., Taylor, E. (1989), *Relative deprivation and international migration*, Demography, no. 1, vol. 26, pp. 1-14.
- 19. United Nations, Departament of Economic and Social Affairs, *World Population Prospects*. *The 2012 Revision*, <a href="http://esa.un.org/wpp/Demographic-Profiles/pdfs/642.pdf">http://esa.un.org/wpp/Demographic-Profiles/pdfs/642.pdf</a>, [accessed March 24, 2015]
- 20. Wong, K., C. K. Yip (1999), *Education, Economic Growth and Brain Drain*, Journal of Economic Dynamics Control, vol. 23 (5-6), pp. 699-796.