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## Article

# Unemployment and the Migration of the Romanian Labour Force. Causes and Effects

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## UNEMPLOYMENT AND THE MIGRATION OF THE ROMANIAN LABOUR FORCE. CAUSES AND EFFECTS

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### Abstract

Ensuring the set of rights and freedoms that are part of the Treaty of Accession to the European Union (EU) seems to be a double-edged sword. If in 2000s, these rights and freedoms were the main catalyst for accession to the European common market, currently these rights are generating consistent disputes among the Member States (MS). Geopolitical tensions that currently exist, along with the political changes that have occurred in certain MS have fuelled pessimism and lack of confidence in the ability of the European common market and the EU to deliver smart, sustainable and inclusive growth. We reached a point in which the very elements that underpinned the common market create suspicion regarding the future of the EU. Therefore, some opinions, (especially from politics) are in favour of a restricted or controlled access to these rights and freedoms in order to maintain stability in the EU, and the framework for growth. The significant increase of xenophobia, terrorism threats, migration crisis, populism, nationalism, and the Brexit are all elements covered by the public agenda and exerting a major pressure on the organization and functioning of the EU in general, and especially on the future of the Cohesion Policy. The development scenarios for Europe have been recently publicly released for debate, and they are a consequence of the concerns about the inability of the European development model to remain competitive globally.

Our analysis was aimed at the phenomenon of migration of the Romanian labour force in the frame of the current socio-economic climate; concretely, we made an analysis of the Romanian labour market, focused on social tensions manifested at this level, and on the one hand, and on the other hand, we analysed the minimum wage in Romania and other EU member states, namely the unemployment and the factors that influence it. The information we used came from multiple sources, such as economic literature, recent studies of various national and international bodies; statistical institutes of EU member states, etc. The economic analysis of unemployment has been completed by the utilization of a multiple linear regression model.

The research first proposes a set of theoretical and methodological elements and aspects related to migration in general, and to international migration, in particular. Then, the paper analyzes the specificity of the labor market in Romania, proposing a more in-depth analysis of unemployment, which also includes an econometric model. The research enumerates the variables that determine and justify, at the same time, the emigration of Romanian workers. Also, the paper presents aspects related to the administration of the labor market in Romania, the social tensions emerging on this market, and the ratio between the minimum wage and the subsistence expenses. The number of Romanian emigrants is analyzed as well, having as source the diplomatic missions of our country in the host countries, and the national statistical institutes.

**Keywords:** labour market, Romania, minimum wage, unemployment, migration.

**JEL Classification:** J08, J11, J61

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## **Introduction**

Major differences between the dynamic of production factors generated mainly by technological progress and catalyzed by globalization have highlighted a series of discrepancies in the EU. Although technological progress generates added value and higher productivity, access to innovation and the latest technology is lower in the East compared to the West, and this has strengthened the development gap. This fuelled a situation that allowed Eastern Europe to develop an economy largely based on technological dependency, relying on Western economies, where the overall concern is to manufacture in Eastern Europe the innovations from Western Europe. Given that the capital comes mainly from western countries and access to innovation in Eastern countries is extremely limited, the capacity of the countries in Eastern Europe to get out of this vicious circle and develop themselves is really challenging.

Differences in development and accumulation of capital within the EU favoured a situation where capital moves from West to East, while labour moves in the opposite direction. This difference in dynamic between the capital and labour allowed the capital, which is more dynamic and flexible than work, to put pressure on certain MS to generate a propitious environment for growth and multiplication.

Limiting the employees' rights, reforming the industrial relations system and social dialogue, marginalization of unions, obstructing access to collective bargaining – these were the natural consequences of the capital's circulation speed, which is much than that of labour. Labour failed to organize as effectively as the capital. The existence of operationally weaker representative bodies at European level, differences from one country to another in terms of the rights of employees, etc. limited a strong and effective reaction of the labour vs. capital behaviour. In concrete terms, most of the workers, determined by the lack of options, low wages, poverty chose to migrate to more developed countries, diminishing the development opportunities in their home countries. This was the case of migration from East to West within the EU.

To counterbalance the differences in dynamics between labour and capital inputs, the European Commission substantially funded labour mobility: from the Erasmus package of programs for students, entrepreneurs etc. to intra-Community mobility programs, they have all been substantially funded. However, balancing the differences in dynamics between labour and capital was a difficult task. The difficulty derives from the fact that although labour mobility was encouraged, at least politically, in the EU, the situation was actually viewed with scepticism by MS, particularly those in Western Europe. A worker, although meeting the parameters of the policy laid down by the European Commission (beneficiary of mobility grants, for instance) was still considered a migrant worker in the destination country, and the opacity of the MS labour markets became increasingly higher. Although at the legislative level there were no barriers to entry, a range of cultural barriers have affected the effective integration of migrant workers into the labour market.

Human migration has accompanied human history from ancient times. People have moved from one area to another, from one region to another, mainly in order to secure their nourishment (Dufoulon și Rostekova, 2011). Official statistics showed that in the 2000s, the number of international migrants (who have moved to another country for at least one year) ranges between 185 and 192 million people (UN, 2004). The number of migrants increases, according to the same sources, by 2% per year, including both voluntary

migration and forced migration.

The characteristics of the current migration phenomenon are the diversification of countries of origin and host countries, and the forms of migration (Cohen, 1996). It is estimated that remittances sent by migrants to their home countries are at least equal, if not greater than the financial aids paid by the rich countries to poor countries (World Bank, 2006). Experts in demography believe that the phenomenon of migration will be a major challenge in the coming decades, given the forecast that the population will exceed the threshold of 9 billion people by 2050. In addition, climate change will significantly influence the direction and intensity of international migration (UN, 2004).

Migration tides are classified according to the determining causes. Thus, there are economic migration (sometimes called labour migration), involving the movement of workers from one geographic area to another, and forced migration caused by wars, famine, etc.

From an economic perspective, migration is above all a phenomenon of redistribution of labour. In the classical theory, Adam Smith, explains that migration is the result of differences occurring in demand and supply of jobs in different geographical areas / spaces / places. These authors are clearly in favour of lifting all barriers that impede the movement of workers from low-wage regions to other regions where payment is higher. Smith argues for the total freedom of international movement of capital, labour and goods, thus allowing the market forces to ensure maximum economic development (Leon, 1978).

The neoclassical theory demonstrates further that countries endowed with a high labour input compared to capital input will probably have a labour market with a balance at a low wage level, while countries with a low endowment in terms of the labour input will have a labour market with high levels of wages. Wage differences will encourage the employees in countries with low wages to move to countries with higher wage levels. Therefore, the labour supply will decrease and wages will increase in the countries of origin, while in the host countries the labour supply will increase and wages will fall. This convergence situation means that, under normal circumstances, international migration should stop by itself. Originally, this theory is based on the hypothesis of homogeneity of labour and full employment of labour force in those countries. Moreover, the capital will move from rich countries to poor countries, seeking higher yields, and human capital will have to follow the same route (Sauvy, 1984).

Subsequent theoretical developments have shown that in fact, the relevant element that we must consider is the expected / estimated difference in income rather than the differences in real wages in absolute terms. Every moment, expected revenues are the result of the real income levels that migrants can expect to get based on their skill levels and likelihood of getting a job in the host country. The probability of getting a first job turns out to be low for migrants if the sector in which they are interested has a low rate of employment. Therefore, the difference in estimated revenues may be reduced to justify and maintain a strong migratory tide. However, migration is a phenomenon that is not measured point by point but it is unfolded throughout a long period of time. The likelihood of finding a job will increase over time, with a better knowledge of the labour market by migrants. It is necessary to take into account the differences between the estimated revenues of migrants throughout their entire stay in the host country. Thus, a situation that seems less favourable in the short-term for the movement of workers can become profitable in the long-term, and vice versa. The logic arising / resulting from these models is that there shouldn't be an

international mobility in the absence of estimated income differences, and that these movements between countries should cease once the differences disappear (Migration Advisory Committee, 2012).

The theoretical analysis of the phenomenon of international migration can be done from multiple perspectives: anthropological, geographical, sociological, and political and obviously, economic. Thus, the analysis covers a broad scope, which includes the countries of origin and the host countries; causes of migration and their consequences; migrants and the reasons that lead to migrate, etc. (Feld, 2008). First, when we analyze the phenomenon of international migration, it is necessary to identify the difference between "the reasons" of the host country and those of the migrants. The person who migrates may have different motivations, of political or economic nature. From the point of view of the host country, public policy, and not only that, highlights the useful migration, i.e. easier acceptance of the labour force possessing a high level of competence in areas demanded by the respective market. The economic impact of this migration differs depending on the work performed (Global Commission of International Migration, 2005).

The consequences of economic migration are noticeable in the demographic structure of the two countries: the country of origin and the host country. Frequently, economic migration is aimed at young people, and in these circumstances, we are witnessing a higher rate of economic dependence in the country of origin because the active population able to support the needs of the inactive population decreases and this leads to lower rates in the host countries (Potot, 2017). Obviously, one can consider the case of countries with high unemployment or adequate manpower available; for these, migration is beneficial (reduced public spending and increased remittances sent home by migrant workers). On the other hand, migrants with an uncertain status or with low qualifications are often integrated in informal structures (illegal work), thereby increasing the public "load" in the host countries.

### 1. The labour market in Romania – between tensions and flexibilization

*Currently, the labor market in Romania has some tensions.*

Changes in the labour code and social dialogue regulations have fundamentally altered the administration of the labour market. The disappearance of the national collective agreement and of the obligation to negotiate a collective agreement at sectoral level, as well as the integration in the law of a substitute at company level (the employees' representatives) were the grounds for very flexible labour relations. Basically, it was a transition from a centralized management system, which involved protection for all employees in Romania, to a flexible system whose base is reflected by the employer. Currently, salaries and other elements involved in the employee-employer relationship are established only at company level and not at sectoral or national level. It is important to note that although the change in legislation has occurred, it was not followed by an institutional management system designed to ensure a coherent framework for the industrial relations system. A natural consequence was the excessive straining of industrial relations, and the disappearance, almost entirely, of collective agreements at sector level. The coherence of such measures arise from the fact that the main element of competitiveness of the economies in Eastern Europe is given by the reduced labour costs related to the workforce level of skills.

Flexible labour relations resulted in increased flexibility in wage setting. Basically, one of the main elements of redistribution of added value at company level disappeared, and the direct consequence was the constant precarization of social dialogue and, implicitly, of the working conditions, because the capital position in relation to labour has become much stronger and consolidated. Although the concept of social justice was considered a strategic objective, competitiveness remained the most relevant dimension. In 2014, in Romania, only 15% of collective agreements concluded at company level were negotiated with trade unions, and in 2015 only 18%, the rest being negotiated with the employee representatives. By 2015, only 23% of the employees were covered by a collective agreement at company level (European Foundation for the Improvement of Living and Working Conditions, 2016).

Tensions on the labour market derive also from mismanagement and noncompliance of the demand-supply ratio in terms of skills. Reduced interconnection of labour market institutions (lack of coherent institutional synergies), weak correlation between the needs and demand in the labour market, with strong impact in certain regions (in the West, in the second quarter of 2016 there were 2.5 unemployed / 1 job vacancy, and in 2 of the 8 regions the number of vacancies that required higher education was higher than the number of unemployed with higher education recorded) according to official statistics (INS, 2016), weak capacity of the Public Employment Service (PES) to implement employment measures (the budget for estimated unemployment in 2017 provides a surplus of 38% of total revenues), low investment in the human capital, especially for the low and medium skilled workforce (the need of workforce in Romania will be 4-fold higher, by 2025, in the case of those with low-skill level than in the case of highly skilled workers) (European Commission, 2015) – all these are factors inducing a poor management of the labour market.

## **2. Minimum wage in Romania and in the Member States - an important indicator for regulating the labor market**

*Minimum wage is an indicator with an important contribution to the regulation of the labor market, which has a direct impact on unemployment and migration.*

The principles deriving from the freedom of movement have been for a long while on the public agenda; we are referring at the principle of equal treatment in terms of employment, working conditions and other advantages which could help to facilitate the integration of the workers in the host country are such examples. From the public debate on the minimum wage applied to truck drivers within each MS, to the minimum wage applicable to posted workers, these are all elements that underpinned the debate about the need for a minimum wage in the EU as a factor able to stop the migration tide and reduce unbalances between East and West.

The minimum wage has increased considerably over the past three years, but it remains one of the lowest in the EU. Leaving aside the link between the minimum wage and productivity, raising the minimum wage was considered by the Government urgently needed to stop the migration of the Romanian workforce. In January 2016, 22 of the 28 EU member states had a minimum wage set by law at national level. On January 1, 2016, the fluctuation of the minimum gross monthly wage was significant, ranging from 184 Euro in Bulgaria to 1,923 Euro in Luxembourg, i.e. a ratio of 1:9 (Table no.1).

**Table no. 1: Minimum wages in EU Member States (Euro)**

Member state	Minimum wage, 2016
Bulgaria	184
Romania	277
Lithuania	300
Czech Republic	332
Hungary	333
Luxembourg	1,923
Belgium	1,502
Netherlands	1,502
Germany	1,473
Ireland	1,462

*Source: Eurostat, 2017.*

In our country, the low level of economic competitiveness, put pressure on the labor force, is generating a substantial taxation of work. The tax wedge on labour cost increased from 41% in 2010 to 43.5% in 2012, and in 2015 it reached 41.8% (INS, 2016). The lack of infrastructure and efficient public services maintained this behaviour from the Government side. Basically, the increase of the minimum wage favours the government, amid a substantial tax burden and less employees. Coupled with a flexible system of industrial relations, the number of employees paid with minimum wage has increased steadily, also due to significant increases in the level of minimum wage over the last three years. In 2011, there were 8% work agreements registered with minimum wages, and in March 2016 the percentage was 44%, although Romania has recorded a constant growth after the economic crisis, but this was due to a number of austerity policies and not least, in spite of an increase in productivity per person (by 20.3% higher than in 2010) and increased labour costs by 22.33%, in 2015, compared to 2010 (INS, 2016).

The minimum wage has been transformed from an instrument designed to ensure a minimum level of income able to ensure a decent living for employees in a genuine tool for tax collection for the government, and a less motivating tool as well, at least for certain categories of workers. Given that there is no differentiation by level of education, employers are able to use the same minimum wage both for workers with higher education and for those with other types of education.

Marginalization of the unions made the minimum wage the only tool for redistributing the added value in economy to the employees. Raising the minimum wage did not guarantee an increased welfare or income for the employees as the system of personal allowances applied for the employees did not follow the minimum wage trend. In fact, raising the minimum wage eliminates from the personal allowances scheme the most vulnerable employees, affecting the growth and reinforcing inequalities. The statement on expenditure, based on the minimum wage is shown in Table 2.

Table no. 2: Gross minimum wage and minimum expenditure necessary to survive (lei)

Indicator	2008	2009	2010	2011	2012	2013	2014	2015
Food expenses	178.94	191.57	191.84	200.32	210.63	221.25	221.82	223.24
Expenses on basic services	466.35	510.84	521.65	528.75	557.87	584.75	606.03	614.97
Minimum gross wage	540	600	600	670	700	800	900	1,050
Differences in income-expenses	105.29	102.41	113.49	59.07	68.5	6	-72.15	-211.79

Source: INS, 2016 and authors calculation.

The analysis of the data found in Table 2 shows that the difference between the minimum gross salary and expenses decreased steadily over the past five years, as the minimum wage increase came as a natural consequence, meant to cover at least the basic expenses of employees.

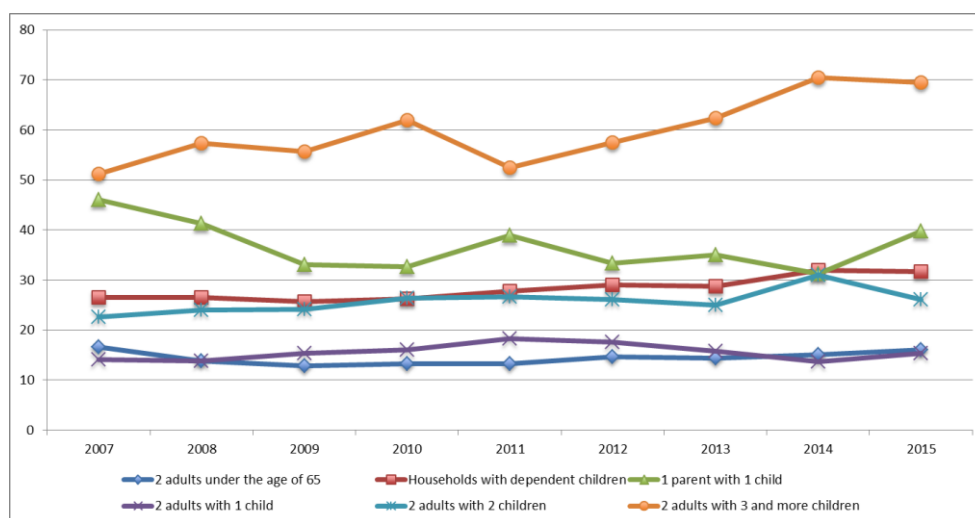
The minimum wage in 2017 is higher by 400 lei than in 2015, thus ensuring a fair correlation between the income of employees and the minimum subsistence expenses. Basically, the minimum wage can only ensure survival, excluding items such as personal development, leisure, etc. In 2015, in Romania there were 1,227,239 people in this situation, according to the Ministry of Labour and Social Justice. One of the reasons why Romanian labour force decides to migrate is that wages in Romania cannot secure decent living standards. The percentage of employees who find themselves at risk of poverty is 15.9% of the population. Romania is ranked last in this top (Eurostat).

Employment saw significant fluctuations over the last 20 years. So in a very different economic structure, employment stood at 9,379 000 people in 1996, and in 2002 it stood at 8,329,000 people. When Romania joined the European Union employment amounted to 8,725,000.9 people. This level has declined over the next four years, mainly due to the compression of economies, reaching in 2010 only 8,410,000.7 people and 8,365,000.5 people in 2012. Also in 2014, compared to 2013 the number of employed persons was lower by 98,900 thousand persons and by 91.1 thousand persons lower in 2015 than in 2014 (NSI, 2016). However, earnings saw a steady increase since 2007 until now. In 2015 earnings were by 183% higher than in 2007 and by 129% higher than in 2011. Also, in 2005 earnings amounted to 968 lei, and in 2015 the amount was 2,555 lei (INS, 2016). The reason to tackle the minimum wage and wage income derives from the fact that these variables have a direct action on unemployment and poverty. Both unemployment and poverty are synergistic with the mix of elements that influence the migration of the Romanian labour force.

Poverty is one of the biggest challenges in the overall EU market. Tackling at political level the impact of poverty involved the inclusion of 3 out of the 5 pillars aimed at workforce and poverty in the Europe 2020 Strategy. Poverty is, according to research, the most powerful factor determining migration. The Social Justice Index ranks Romania on the last place in the EU28, having a value of 3.69, while the EU28 average is 5.60 (Pană, 2014). Romania ranks among the last places even in terms of the extremities of the labour market. The share of poor young people in Romania is 52.2%, and the EU28 average is 28.8%. Regarding



persons aged 65+, the share of poor in Romania is 35.7 compared to the EU28 average of 21.7% (INS, 2016).



**Chart no. 1: Relative poverty, by type of family**

Source: INS, 2016

The link between the Labour Code and inequalities is dynamics that the ratio of income inequality S80/S20 has had. In 2007-2011, inequalities, as described in the report mentioned above, decreased from 8.1 in 2007 to 6.2 in 2011, and then after the changes in the labour code, inequality of income increased to 8.8 in 2015 while the EU average was 5.2 in 2015 (Pană, 2017).

Severe material deprivation rate<sup>1</sup>, although it recorded a fluctuant evolution, decreased considerably from the moment when we joined the EU, from 38% in 2007 to 22.7% in 2015. The rate of relative poverty<sup>2</sup> is specifically aimed at families with at least 3 children and single-parent families with more than 2 children and 2 adults and children. This indicator is still at high levels and growing, compared to 2014, for certain categories (Chart no. 1). Regarding single-parent families, the relative poverty rate increased from 31.3% in 2014 to 39.7% in 2015 (INS, 2016).

<sup>1</sup> The severe material deprivation indicator depicts the proportion of people in severe deprivation in the total population. According to the definition of the National Institute of Statistics, people in severe deprivation are generally 18 years of age and older, and cannot afford - due to the lack of financial resources - at least four of the following: timely payment of current utilities / obligations; payment of a one-week annual holiday away from the place of residence; eating meat at least once every two days; the coverage, from own resources, of unforeseen expenses; possession of a mobile phone; possession of a color TV; possession of a washing machine; possession of a personal car; payment of adequate heating of the dwelling.

<sup>2</sup> Relative poverty rate or poverty risk rate is the proportion of poor people in the total population. Persons living in households with a disposable income per adult which is below the poverty line are considered poor.

### 3. Unemployment in the current economic context - inequalities generator

*The economic model adopted by Romania, based on labour competitiveness, in a context where economic growth no longer generates welfare, catalyzed the inequalities in the labour market and they have become increasingly visible. Differences in the labour market are clearly identified as linked to urban and rural areas, and to certain economic sectors.*

Unemployment, in January 2017, stood at 4.80%. 80% of the unemployed have primary education, 15.6% have high school education, and 4% have a university degree; 22.35% get the unemployment allowance, and 77.65% are not getting any allowance and youth unemployment rate stands at 21.7% according to Eurostat, slightly higher than the EU28 average (Eurostat). If in 1996 the number of unemployed persons was 657,564, it reached 460,495 people in 2006, and 709,383 in 2009, and 436,242 in 2015 (INS, 2016).

We should mention a feature of the labour market in Romania, namely that people employed in the subsistence agriculture and people working in their households are not classified as unemployed. Thus, although statistically the unemployment situation is not alarming, the reality is different. This phenomenon is clearly revealed by the fact that the number of people who have never worked compared to the number of people without a job increased steadily since 2010 and has maintained the proportion between urban and rural areas. If in 2010, 32% of the people without a job have never worked (28% in urban areas, 41% in rural areas), in 2015 this indicator stood at 46% (40% in urban areas, 55% in rural areas), while the industrial relations have a flexible character and the demographic trend is downward (INS, 2016).

The number of job vacancies increased steadily since the end of the crisis, but the quality of employment decreased in the context of labour market flexibility. In this context, we noted the behaviour of employers who prefer not to declare job vacancies, although it is required by law, in order to have the freedom to use gray or illegal work, or simply because the effectiveness of the Public Employment Service to correlate the demand with the offer in the labour market is limited. The European Commission (EC) acknowledged this by making some recommendations through the country reports, which are an integral part of the European Semester (European Commission, 2017).

The number of vacancies is another significant element that is found in the aggregation of variables that affect the migration phenomenon. Immediately after joining the EU, the number of jobs began to decline due to the effects generated by the common market and the economic crisis. If in 2008 there were 92,222 jobs available, in 2011 the number was 26,057. Basically, they decreased by 71.74%, but in the next few years, their numbers began to grow, reaching 49,952 in 2015, and 60,652 in the fourth quarter of 2016. The distribution by activities of the national economy in the fourth quarter of 2016 placed on top the manufacturing industry (14,497 vacancies), wholesale and retail trade, repair of motor vehicles and motorcycles (5,665), activities of the administrative services and activities of the support services (10,513), and health and social assistance (9,780). Most vacancies can be found in Bucharest-Ilfov region: 17,195 and in the western part of the country (North West 8,235 and West 8,291). Regarding the distribution of employment by occupation requested, please note the workers in services (8,908), skilled workers (6,732) and unskilled workers (7,282). On the other hand, the demand for specialists in different fields of activity stood at 18,874 people (INS, 2016).

Globalization, a catalyst for migration, the impact of fundamental rights and freedoms on the European labour market, and the demographic decline have affected the number of unemployed in Romania, along with the economic growth.

The demographic danger, that Romania will have to face, is powered by two elements: one aimed at the decreasing population, and the second at labour migration. Despite the fact that technological progress enhances productivity by mechanization of the production, the dynamics of this process is not sufficiently broad to recover the costs of the demographic decline. The aging of the population is a phenomenon demonstrated by the statistics, and the trend has been strengthened and rising. Romania's population structure, by age groups, is shown in Table. 3.

**Table no. 3: Structure of population by age groups**

Age group	2003	2007	2016	2016/2003 (%)	2016/2007 (%)
<b>0-19 years</b>	5,433,766	5,035,568	4,148,072	76.33	82.37
<b>20 - 39 years</b>	6,505,886	6,301,402	5,281,717	81.18	83.81
<b>40-59 years</b>	5,494,336	5,526,392	5,549,010	100.90	100.40
<b>60+</b>	4,193,521	4,267,141	4,781,515	114.02	112.05

Source: INS, authors calculation

There is a downward trend in the population in the age range 0-39 years, together with a sharp increase in the population over 60 years. Natural growth remained negative during 2003 - 2015, recording 54,116 people in 2003, 37,237 in 2007, and 60,674 in 2015. The birth rate decreased from 9.5% in 2007 to 9% in 2015, and the death rate decreased from 4.7% in 2007 to 3.7% in 2015. At the same time, average lifespan increased from 72.61 years in 2007 to 75.39 years in 2015. The labour resources fell by 1,29 million people in 2015 compared to 2007 and by 1.06 million compared to 2003. The active population was lower by 187,600 people in 2015 compared to 316.9 in 2015 compared to 2007. The economic impact of labour force migration is quantified by the central and eastern European states on average at 7% of GDP, according to IMF data, which anticipated an impact of up to 9% of GDP over the next 14 years if the current trends of migration will remain similar (Eglitis, 2016). The demographic situation of Romania is disquieting, placing Romania on a trend that requires efforts and structural policies able to ensure the sustainability of pension systems. However, the decrease of contributions and the transfer of the share from Pillar 1 to Pillar 2 will contribute to the increase of the pension system deficit, thereby creating major problems at social level.

Joining the EU has brought many benefits to the Romanian economy, but also a number of challenges for the public administration and political actors in Romania. One of these benefits is certainly the cohesion policy. The European financial resources invested in the Romanian economy to reduce the economic disparities and also for the structural shift in the economy towards the convergence targets comprised a capital injection which positively influenced positively the Romanian economy. However, at the end of the first European programming period, Romania relied increasingly on the competitiveness of work, unable to move from an economic model based on low wages and low added value to one that puts forward the quality of the workforce generating products with high added

value. Moreover, the common market allowed migration and with it, the loss of just those people who could act as catalysts for the structural shift in the economy.

EU membership has increased the attractiveness of the economy and facilitated investment. Since 2007, the investment level was the highest in the period 1996-2015, reaching the level of 99,526,000. This was followed by a decrease in investment in the economy, mainly due to the policies of austerity, economic contraction and overall context of the economic crisis. In 2012, investments reached 89,092,000, and 98,369,000 in 2015. Compared to the 90s, investments increased significantly in Romania, multiplying considerably. From 12,499,000 in 2001 it reached 68,828,000 in 2006, and 86,160,000 in 2014.

A similar trend was recorded by the Gross Domestic Product (GDP). It saw significant growth in the last 20 years: if in 2000 the value was 56,808,000.2, in 2006 it rose to 313,889,00.3, so that in 2015 it reached the value of 694,454,000.9 lei. Unlike the level of investment, GDP has been growing steadily, even during the economic crisis.

Using the available data on labour market developments in Romania during 1996-2015, we developed the following multiple linear regression model to identify the influence of the main factors affecting unemployment:

$$\text{Number\_unemployed}_t = a * \text{GDP}_t + b * \text{population}_{\text{employed}_t} + c * \text{investment}_t + d + e_t \quad (1)$$

Given that unemployment is influenced also by other factors that were not taken into account in the model, we used variable  $e_t$  which measures their influence.

The estimation of the model parameters was performed using the software package Eviews applying the method of the smallest squares. The method of the smallest squares allows the calculation of estimators  $\hat{a}$ ,  $\hat{b}$ ,  $\hat{c}$ ,  $\hat{d}$  corresponding to the parameters  $a$ ,  $b$ ,  $c$ ,  $d$ , so as to minimize the function:

$$W = \sum (\text{Number\_unemployed}_t - a * \text{GDP}_t - b * \text{population}_{\text{employed}_t} - c * \text{investment}_t - d)^2 \quad (2)$$

The optimum necessary conditions lead to:

$$\frac{\delta W}{\delta a} = 0 \Rightarrow \sum 2(\text{Number}_{\text{unemployed}_t} - a * \text{GDP}_t - b * \text{population}_{\text{employed}_t} - c * \text{investment}_t - d)(-\text{GDP}_t) = 0 \quad (3)$$

$$\frac{\delta W}{\delta b} = 0 \Rightarrow \sum 2(\text{Number}_{\text{unemployed}_t} - a * \text{GDP}_t - b * \text{population}_{\text{employed}_t} - c * \text{investment}_t - d)(-\text{population}_{\text{employed}_t}) = 0 \quad (4)$$

$$\frac{\delta W}{\delta c} = 0 \Rightarrow \sum 2(\text{Number}_{\text{unemployed}_t} - a * \text{GDP}_t - b * \text{population}_{\text{employed}_t} - c * \text{investment}_t - d)(-\text{investment}_t) = 0 \quad (5)$$

$$\frac{\delta W}{\delta d} = 0 \Rightarrow \sum 2(\text{Number}_{\text{unemployed}_t} - a * \text{GDP}_t - b * \text{population}_{\text{employed}_t} - c * \text{investment}_t - d)(-1) = 0 \quad (6)$$

By solving these equations using the data available for the years 1996-2015, we get the following:

$$\text{Number\_unemployed}_t = -0.221 * \text{GDP}_t - 0.833 * \text{population}_{\text{employed}_t} - 4.050 * \text{investment}_t + 863854.4 \quad (7)$$

Based on information provided by Eviews on the regression equation, we can formulate the following assessments:

- the coefficients of all three explanatory variables considered in the model (gross domestic product, employment and investment) are negative, reflecting an inverse relationship relative to the number of unemployed. Thus, an increase in these explanatory variables causes a reduction in the number of unemployed;
- the constant term in the regression equation is  $d = 863,854.4$  and it represents the point at which the explanatory variables (GDP, employment and investment) are equal to 0, that is, the number of people unemployed would be 863,854.4 if the three variables are 0;
- the intensity of the link between the variables analyzed revealed by the coefficient of determination ( $R^2$ ) is 0.7154, which indicates that 71.54% of the variation in unemployment is determined by these three variables: GDP, employment and investment.

#### 4. Migration of Romanian workers - from economic necessity to social phenomenon

*Romanian labour force migration began with the fall of the communism; however, in time it saw several changes in terms of routes.*

Worker mobility is an integral part of the EU Accession Treaty. Eliminating barriers on the free circulation was achieved gradually, a situation agreed by Romania when it signed the Treaty; Ireland eliminated these barriers in January 1st, 2012, followed by Norway in June 2012, and Switzerland eliminated all restrictions in June 2016. However, since January 2014 Romanian workers are free to circulate in the EU, except for Switzerland. The status of European citizen involves granting certain rights which derive from the fundamental EU rights and freedoms, such as the right to seek employment in another member state, to work in another member state, the right of residence for work purposes, and the right to settle in another member state.

In 1990-1995, the favourite destinations of Romanians were countries such as Israel, Turkey, Italy, Hungary, and Germany. During 1996-2000, the main destinations were these countries plus Spain and Canada. After 2002, migration was mainly for work abroad, mostly to Spain and Italy, followed by Great Britain, Ireland and the Nordic countries, according to statistics on the presence of workers/Romanian citizens in the EU territory (source statistics from the Directorate of Employment Policies, Skills and Mobility).

Romanian labour force migration adapted itself to the specific structure of labour demand in the host countries. Italy integrates Romanian labour force in hotels and restaurants, Spain in agriculture, especially on a seasonal basis, while Germany, Norway and the UK are using highly qualified labour force (such as doctors, engineers, etc.). Romanian migrants prefer to keep their employment sector but they change the country of destination, where they practice the same job or take up something similar.

Regarding the distribution of the Romanian labor force by EU countries, there is not a very exact situation, especially because many people do not work with legal forms. The situation of persons registered with legal forms for work in other EU states is presented in table 4.

**Table no. 4: Registered Romanian migrants**

Country	Estimated number of people registered on 01.01.2016
Spain	715,136
Italy	1,151,395
France	250-300,000
UK	234,000
Ireland	29,026
Germany	452,718
Austria	40,062
Greece	46,523
Cyprus	32,939
Netherlands	13,000
Denmark	23,226

*Note:* \* France does not issue work permits, so the figure is only estimated

*Source:* National Statistics Institutes of the host countries, embassies in the host countries, the Romanian Ministry of Labour and Social Justice

The approximate number of Romanian workers living in other MS for labour purposes amount to 3 million. There is a major gap between the data shown by the Romanian NSI and the data provided by the national statistics offices of the host countries or by the Romanian embassies in the host countries. According to the NSI, the number of Romanian citizens who migrated in 1990 - 2015 is 504,363, of which 173,587 in Germany, other 44,300 in Italy, 22,844 in Spain and 20,445 in France.

The number of female Romanian citizens who have migrated for good was higher than that of men. In 2003 the number of women who migrated was higher by 1,847 than the number of men, in 2007 by 2,654, and in 2015 by 2,193. Regarding the counties from which the labour force left, according to the NIS, the main ones are Cluj (14,103 people), Brasov (19,539 people), Sibiu (21,493 people), Suceava (9,444 people), Iași (9,625 people), Bacau (8,274 people), Arad (13,118 people), Timis (31,275 people) and Caras Severin (10,302 people). Regarding the age characteristics of the Romanian labour force who migrated permanently, 16.5% are in the age group 25-29 years, 14.1% between 30-34 years, and 11.3% in the age group 35-39.

A phenomenon much better shaped than permanent migration is the temporary migration, the kind of labour mobility which is highly promoted by the European Commission to cover the deficit of jobs in Western Europe. During 2008-2015 a number 1,642,488 people migrated temporarily. It is the same trend as for permanent migration, with 17.03% of the total number of emigrants is in the age range 25-29 years, 12% are between 30-34 years old, and 9.88% are between 35-39 years old. A particularity of temporary migration is the fact that the age range 20-24 years represents 17.7% of the total number of people

migrating temporarily. Most likely these people are included in tertiary education. Regarding gender dynamics, we noticed that during 2008-2015, the number of women who migrated temporarily decreased continuously from 151,632 in 2008 to 100,023 in 2012, reaching 90,018 in 2015. This trend was not the same among men, who recorded a downward trend during 2008 (151,164) - 2013 (65,303) but then the number increased and exceeded the number of women in 2015, reaching 104,700. In 2008-2011 there have been steady declines in terms of temporary migration, from 302,796 in 2008 to 161,755 in 2013. After this period temporary migration increased, reaching a number of 194,718 people in 2015. Regarding the counties from which the labour force leaves for temporary migration, the trend is similar with the permanent migration. In 2015 the most significant levels of permanent migration were Cluj – 6,758 people, Suceava – 6,005 people, Constanta – 6,973 people, Timis – 6,750 people. In 2015 the number of emigrants exceeded by 21,847 people the number of people who migrated in 2014, and by 32,963 people more than in 2013.

The general profile of the workers who migrate permanently is an active person from a poor area (North-East) or regions that used to have a strategic geographic location (West), mostly women, and the preferred countries of destination are Germany, Italy, Spain and France; they are aged between 18 and 44, have upper secondary education, and they are housewives, pupils / students or skilled workers with income up to 150 € / month / person or with no income.

The reasons for migration and those underlying migration, according to the study “Impact of the economic crisis on the Romanian labour force migration”, are the lack of income or the low level income, absence of jobs, the desire to have decent living conditions and a better life in the future. The same study emphasizes the reasons underlying the return home: nostalgia for the native land, longing for children or relatives, and the fact that they achieved what they had planned. For a certain category of migrants, who have partially achieved the targets that triggered the departure, such as building a house and saving money, staying in the host country is worthwhile if the job they perform enables them to keep saving money, and not just cover their living expenses. When this requirement cannot be satisfied anymore, and the other objectives of migration are partially achieved, the decision to return home is very likely. Upon their return, their objectives are aimed at building a house, accessing European funds, obtaining unemployment benefits or embarking on agricultural activities (Friederich Ebert Stiftung, 2011).

The negative impact of migration is somewhat mitigated by the resources sent back home by the Romanians who have migrated. According to Eurostat, Romanians in Diaspora sent home in 2014, 1.58 billion Euro, an amount which is lower than the amount in 2013 (1.755 billion Euro). The financial resources sent in Romania were directed to daily comfort and everyday life. Specifically, the resources were used for everyday expenses (72%), debts (47%), and children's education (18%).

The economic situation of the destination countries is an important element of attraction for workers. Thus, Germany is the most developed country: it has the highest GDP per capita (34,200 Euro in 2015), the highest employment rate (78% in 2015), and the lowest unemployment rate (4.6 % in 2015); on the opposite side there is Spain, faced with high unemployment (22.1% in 2015), GDP per capita lower than in other countries of destination for the Romanian workforce (23,700 Euro in 2015) and a low employment rate (62% in 2015).

The integration difficulties in the labour market of the countries commonly used as a destination for the Romanian workforce vary from one country to another. For people who have managed to be integrated into the labour market, according to Eurostat, in 2014, the main problems were linked to the language barrier (9.8%) and non-recognition of diplomas (20.6%); in Spain, these values reached 3.7% and 9.7%, while in Italy they reached 12.1% and 25.2%. The situation is slightly different for people who have migrated but failed to join the formal labour market. The two main problems, even for these people, are the lack of language skills and non-recognition of diplomas. In 2014, in Germany, 7.4% of the failed employability cases were due to the fact that people didn't know the language. In Italy the percentage was 11.9 percent, and in Spain it was 4.6%. Non-recognition of diplomas is considered a problem for 8.1% cases in Germany, in 2014, for 1.8% in Spain and 5.3% in Italy. Spain and Italy are considered to be the most permissive countries in terms of employability of migrants. In 2014, in Italy, 61.2% of migrants believed that there are no barriers in terms of employability and 28.2% in Spain.

### **Conclusions**

The status of the Romanian workers deteriorated continuously, particularly in the last five years, and this has affected the workers' welfare while limiting at the same time their future options and confidence in their future in the Romanian labour market. Constant and increased tension of the labour market, generated by the flexibility of industrial relations and the marginalization of the representative structures, catalyzed the deterioration of the status of the workers in the labour market. The differences in development and wages within Romania, and the differences between Eastern and Western Europe consolidated the inequality and poverty, generating several elements that motivate migration. In the short-term, the economic impact of Romanian labour force migration is not worrying. Remittances sent back to Romania by the emigrants ensure a level of aggregated demand which allows the economic growth to rely on demand.

Unemployment behaves inversely proportional to the GDP, employed population and investment. Romania's economic situation has improved, as unemployment decreased, investment and GDP grew and these are the determining factors of migration. The migration tide continued consistently, especially the temporary migration. Low unemployment rates - amid economic growth, increases in the GDP and investment - have not stopped the migration tide. The existence of some job options on the Romanian labor market does not guarantee stopping the labor force emigration. The need to increase the quality of jobs, to match the revenues with quality and cost of living, and also generating wage policies ensuring an inclusive labour market are factors that could contribute to the halting of migration, and would direct in a coherent manner the labour mobility, thus ensuring a correlation between the demand and supply of labour force.

In the long-term, due to a sharp demographic decline, the negative effects of the Romanian labour force migration will generate substantial social effects, especially in areas linked to the pension fund, namely in the health system and social security. The sound and effective management of the labour market could offset the demographic risks aggravated by migration.

In our paper, the fact that we are addressing the correlation between unemployment, GDP, employed population and investment is a novelty element, given that an immediate



consequence of migration is the decline in unemployment in the country of origin, and these are the main indicators determining the emigration. The limitations of this research arise from the need to identify the extent to which the labour market characteristics, quality of jobs, and income can influence migration positively because growth alone, in the frame of the Romanian economy, is unable to influence it.

We believe that our research generated a number of proposals imperatively necessary for a proper understanding of the effects and impact of migration. Thus, analyzes aimed at immigration and migration must take into account the labour market flexibility and labour market protectionism, as variables that influence the migration tide. Also, the features of migration should be addressed separately, meaning that permanent migration is weaker in intensity than short term migration, and their economic impacts should be addressed differently. It is very important, in the current setting, to identify the level of economic growth and its characteristics, so that economic growth should be able to reduce the migration of the Romanian labour force.

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