The Impact of Unemployment on the Economic Growth in Romania

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Abstract

Unemployment is a macroeconomic indicator that reflects the inability of an economy to fully utilize labor resources. The phenomenon itself is based on the concentration of the social-economic activity, the improvement of the means of production with high efficiency, the greater supply of people able to occupy the available places in the economy than their real number or the synchronization of the labor supply and the available places at regional or national level. The number of unemployed, has two negative effects: the economic effort of the payment of unemployment aid and the existence of a percentage of the labor resource that cannot be used to increase the production of goods and services. The analysis of the data series regarding the unemployment rate reveals the labor market availability and the inability to assimilate the national economy, which we'll analyze using some suitable econometric models.

Key words: unemployment, economic growth, productivity, labor market.
J.E.L. classification: E23, J64

1. Introduction

Unemployment reflects the inability of a country economy to fully utilize labor resources. The lack of conversion of the labor force increases the number of unemployed and, consequently, the unemployment rate. The increase in the number of unemployed in Romania has two negative effects: the financial effort to pay the unemployment benefits, with some of the labor resources that cannot be used to increase the production of goods and services. Interpreting the data series on the unemployment level established by the ILO or AMIGO system, it expresses the capacity of the labor market and the inability to assimilate the national economy. Unemployed, according to the international definition (BIM), are persons aged 15-74 years who simultaneously fulfill the following 3 conditions: (i) they do not have a job; (ii) are available to begin work within the next two weeks; (iii) have been actively searching for a job, at any time during the last four weeks. Unemployment rate represents the share of the unemployed in the active population. The economically active population includes all persons who provide the labor force available for the production of goods and services during the reference period, including the employed population and the unemployed. Registered unemployed are the persons in the records of the National Agency for Employment (ANOFM), who benefit from the provisions of the legislation regarding the social protection of the unemployed. The two sets of statistical indicators (monthly unemployment according to the international definition and the registered unemployment) are not comparable because the data sources, the measurement methods, the concepts, the definitions and the scope are different. The analysis of data from both series, however, offers a complete and real picture on the Romanian labor market.

2. Literature review

Aaronson, et al., (2010) analyze the factors that have generated the long-term unemployment growth and the implication for the future economic evolution. Couch et.al. (2013) approach a similar topic, focusing on the economic and health consequences, namely on incomes, benefits related to disability and mortality. Michaillat (2012) is concerned with the role of friction matching in influencing and, therefore, in explaining unemployment, proposes a search and matching model, Daly et.al. (2012) develop a close topic, their research question is focused on increasing the natural rate of unemployment. Anghelache and Manole (2015) develop on the correlation between inflation and unemployment. Lalive (2007) offers evidence on the correlation between unemployment benefits, unemployment duration, based on the idea that the benefits tend to increase the duration of unemployment, his study follows the Austrian system, while Le Barbanchon (2016) studies, in an approach similar, the French case.

Åslund et al., (2010) offer a modern approach to the importance of accessing to jobs. Kroft and Notowidigdo (2016) evaluate the link between unemployment insurance and the unemployment rate. Krueger & Mueller (2010) provide new evidence on the intensity of job search measured for unemployed people in the United States, through the time devoted to this activity. Inderbitzin, et al., (2016) measure the impact of extended unemployment benefits on the behavior of older workers towards retirement, in particular early retirement. Agrawala & Matsab (2013) consider the effect of the risk of unemployment on the decision-making process when financing corporations. Chetty (2008) shows that the benefits of unemployment insurance affect job search behavior.

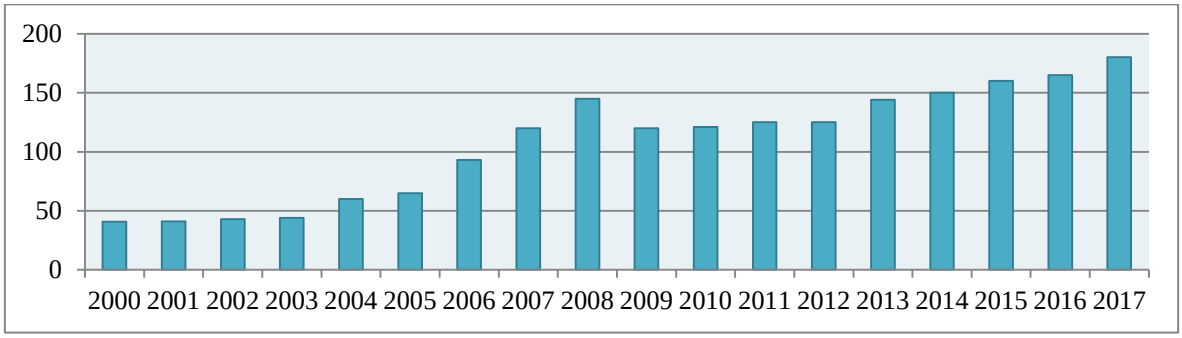
In Romania, the long-term economic crisis has generated high unemployment with low prospects for the reintegration of the unemployed. Changes in the structure of the branches and economic activities, the sub-impact of diversifying the demand for goods, of the economic crisis, have inevitably led for a long period to the reduction of the work demands. Immigration - emigration also influenced the labor market. The migration of the active population provide labor force for that country. Emigration had the opposite effect, of decreasing labor force in the country of origin. The economic situation and the unfavorable international politics, due to the oscillations of the economic growth rate, the armed conflicts, the promotion of embargo policies have negatively influenced the economic relations regarding the import - export, deteriorating the economic activities in the countries of the area and contributing to the increase of the unemployment rate.

3. Research methodology

Based on the existing statistical data regarding of the labor market, the derived indicators were determined, which allowed the characterization of the unemployment phenomenon from different periods:

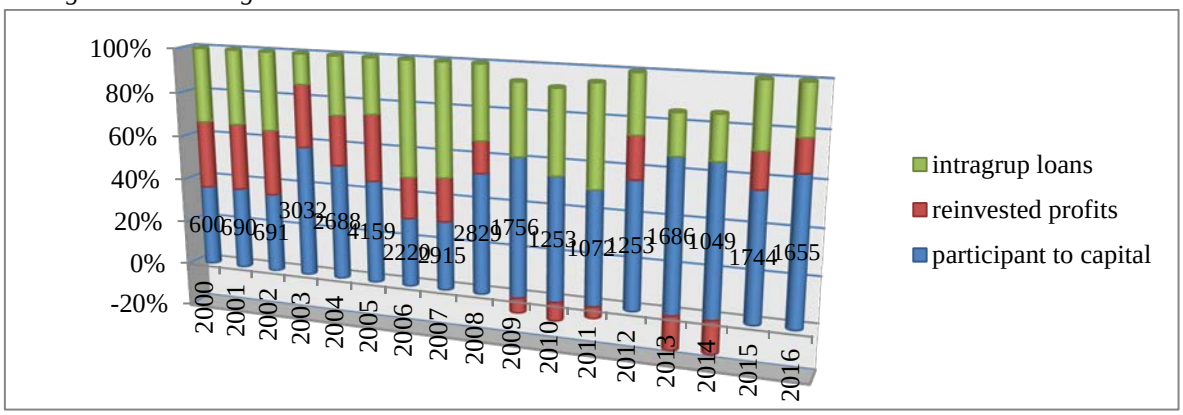
- The annual average of the total occupied population during the period 2000-2017 was 9686 thousand persons with a representativeness that does not exceed the threshold of 35% due to a dispersion degree of 6.8% (659 thousand people), which makes the asymmetry coefficient of 0,80 thousand people to show that the average value of the total occupied population exceeds the median value of 9313 thousand people.
- Macroeconomic indicator, which reflects the production of a country, Gross national product registered an omission of 77535 million euros during the period 2000-2017, an unrepresentative value because the homogeneity coefficient (52.55%) has a high level, due to the onset of the economic crisis.
- The average of foreign direct investments was 1972 million euros / year, a non-representative indicator also confirmed by the coefficient of homogeneity of 65.97%.
- The average number of unemployed during the period 2000-2017 was 712.000 persons, the dispersion respectively the scattering in the area being modest (65.000 people), and the homogeneity very high (Vx = 9.22%). The asymmetry was reduced and positive (Cas = 0.03). The graphical representations presented below are suggestive for analyzing the evolution of important indicators - absolute data.

Figure no.1. Gross Domestic Product- billons euro – 2000-2017



Source: own calculations according to the data provided by AMECO.

Figure no.2. Foreign Direct Investments – 2000-2017

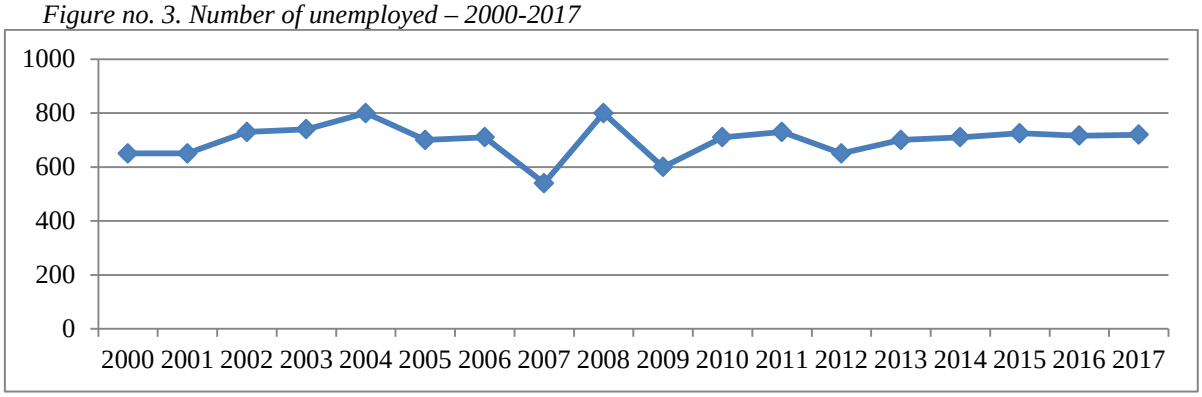


Source: own calculations according to the data provided by World Bank

Gross Domestic Product (Figure no.1) in the period 2000-2017 registered a trend growth. It can be seen that in 2009, the GDP decreased and then a slight increase is constant. Foreign direct investments in Romania, after the economic crisis, started to decline (Figure no.2). Throughout the analyzed period, 2000-2017, there is a continuous increase of the foreign direct investment balance, but starting with 2008, when the economic and financial crisis also felt on the Romanian economy, we can observe a balance of foreign direct investments cumulated with very low increases.

It can also be noticed that the value of loans has increased over the entire period, indicating a negative situation, leading to the idea that foreign firms have significantly decreased or even suspended investments from net realized revenues, some of these companies being significantly affected of the losses suffered.

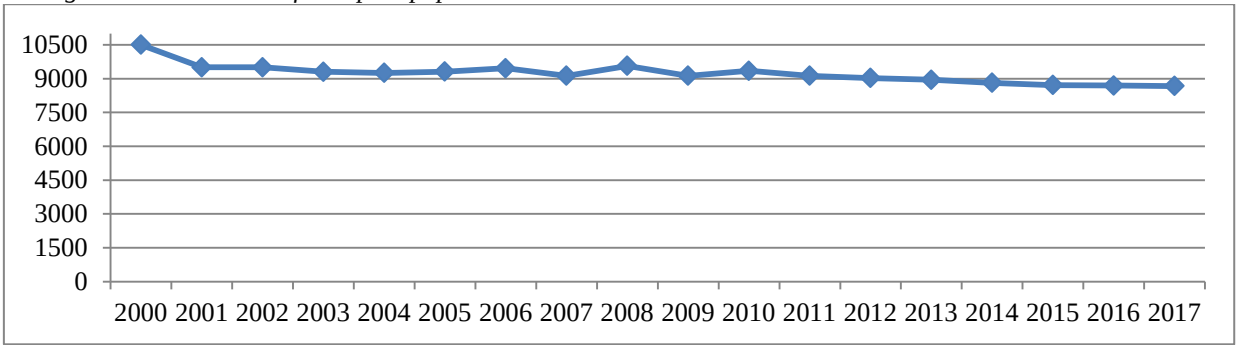
Figure no. 3. Number of unemployed – 2000-2017



Source: own calculations according to the data provided by AFOM

The employed population registered the largest decrease in 2002 (Figure no.3). The downward trend continued even after the economic crisis started. The number of unemployed people started to increase with the onset of the economic crisis. As we can see in Figure no.4 the number of occupied population is declining since 2001. One of the explanation is that a very large numeber of people choose to work abrod.

Figure no. 4. Number of occupied population – 2000-2017



Source: own calculations according to the data provided by World Bank

Multiple linear regression model for unemployment used in the analysis is:

- $unemploed_t = \alpha + \beta_1 * GDP + \beta_2 * FDI + \beta_3 * pop\_occupied_t; + e_t;$ t=1,2,…,T, where T=18

4. Findings

By implementing in Eviews the initial data and estimating the regression model parameters using the LS (least squares) method, the results were obtained.

Table no.1: Results of the analysis

The coefficients of the regression model	Coefficient	Standard deviation	T test	Probability
Free term coefficient	1469.71	337.09	4.35	0.0011
GDP coefficient	-1.0018	0.0105	-939.24	0.0074
FDI coefficient	-1.0143	0.0347	29.2	0.0003
Occupied population coefficient	-1.0166	0.0321	31.43	0.0275

Source. Own results

Predictive equation:

Unemployed = 1469,71-1.0018 * GDP-1,0143 * FDI-1,0166 * Pop_Occupied

The coefficient of gross domestic product was negative and significant, largely determining the number of registered unemployed (endogenous variable). The higher the gross domestic product, the lower the number of registered unemployed. The coefficient of foreign direct investment was negative and significant. As expected where there were investments in savings, the number of registered unemployed decreased. The coefficient of the employed population was negative and significant. The higher the number of employed population, the lower the number of registered unemployed. In this case R^2 = 0.9684 and we can say that the regression model was good. About 96.84% of the number of registered unemployed was explained through the chosen multiple linear regression model. As the Fisher test value was 212.96, the multiple linear regression model is relevant..

Jarque Bera test value and probability is p 0.7242. We can accept the hypothesis of normality of errors, because the probability was quite high. Durbin Watson DW test value is = 2.05. Working with a significance threshold a=0.5, the number of exogenous variables is k= 3, and the number of observations n = 15, from the Durbin-Watson distribution table, the values are: d1= 0.95 and d2=1.54. Because d_2 = 1.54 < DW = 2.05 < 4 - d_2 = 2.46, the hypothesis of independence of the

residual variable values can be accepted. Applying the White test, it turns out that the hypothesis of homoscedaticity of the errors is verified. We can say that the model is valid, correctly identified from a statistical point of view. Unemployment being a self-reproducing phenomenon, means of quickly creating new jobs will soon be found through the co-interest of those who could employ the unemployed, by providing facilities for setting up companies or by increasing the scope of services. At the same time, the activity of small and medium-sized enterprises (I.M.M) should be stimulated, which, under full market economy conditions, can provide new jobs.

5. Conclusions

The existence in Romania of a long-term chronic unemployment, which triggered the crisis of employment, requires, in my opinion, an active employment policy, which aims at micro and micro-economic objectives. On the economic level, the negative consequences of unemployment at national level and at individual - family level are distinguished. At the national level, the exclusion of a part of the workforce influences the dynamics of the GDP size, in the sense that the training, the qualification of the unemployed have meant expenses from the individual and the society, which will not be recovered in the situation of long-term unemployment; this labor force, coming out of the active working population, did not contribute to the GDP growth; the company bears the costs of unemployment on the contribution to the unemployment fund, from the economic agents, the employees; the existence of long-term unemployment especially in the backgrounds, can generate acts of violence with an impact on the whole society.

The unemployment benefit is lower than the salary. The extension of the duration of unemployment also erodes the savings, if any. The quality of work force is deteriorating and it is harder to find a job. A particular role rests with the moral and mental state, which affects the unemployed individual more than the economic side. Useless complexes appear for society and family. Unemployment can affect family cohesion and harmony. At the same time, chronic and long-term unemployment, which generates the poverty of an important group of the active population, can cause deep social conflicts. The multitude of negative effects of unemployment for society and fully justifies the concern of the governments of the world's states in the face of this scourge and the concern to find employment solutions at a higher level.

6. Acknowledgement

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