
THE IMPACT OF UNEMPLOYMENT ON ECONOMIC GROWTH IN ROMANIA, DURING THE CRISIS

PhD Lecturer Lavinia Ștefania ȚOȚAN
PhD Candidate Barbu Bogdan POPESCU
PhD Professor Silvia Elena CRISTACHE
Academy of Economic Studies, Bucharest

Abstract

The paper identifies the main factors that influence unemployment in Romania based on achieving an econometric model. In terms of the labor market, unemployment is a macroeconomic employment opposite, representing a surplus working population relative to the population likely to be engaged in viable conditions imposed by the market. Unemployment became a problem, with industrial development, since the second half of the eighteenth century, in times of recession, when industrial companies shrinking their production and, therefore, issued a significant number of workers who became unemployed. In Romania, unemployment has its origin in part, and changes in the structure of the national economy, the criterion of efficiency, in order to adapt to the competitive environment.

Key words: unemeployment, econometric model, employment.

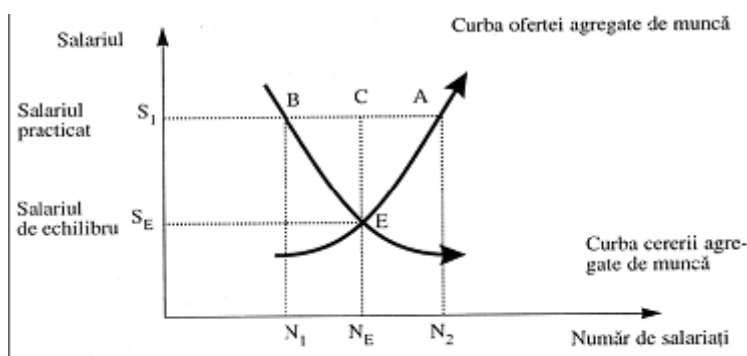
In Romania, the economic crisis of long-term unemployment has generated a large scale with little prospect of reintegrating the unemployed.

Changes in the structure of industries and economic activities under the impact of diversification demand for goods, the economic crisis for a long time inevitably lead to the reduction of work requests. Immigration - emigration affects also the labor market. Immigration active part of the population to engage in different countries will increase demand for labor within them. Emigration has the opposite effect, lowering labor in the home. Unfavorable international economic and political situation, economic growth rate due to oscillations, armed conflict, embargo promote policies adversely affect economic relations aimed at import - export, damaging economic activities in countries of the region and contributing to high unemployment. Romania embargo against Iraq and Yugoslavia in the early 1990s, had negative effects on exports, which led to the withdrawal of many different business units, losses are tens of millions of dollars. However, the causes of unemployment are analyzed, starting from their group: causes

of imbalance and generating unemployment and causes of unemployment generating steady.

Causes of the unemployment imbalance depend on supply and demand imbalance aggregate employment and specifically how they are interrelated.

The forming of the unemployment imbalance



The aggregate demand curve shows the interest of the company to hire fewer people or to replace labor with other factors of production, as practiced salary is higher than the equilibrium wage.

The aggregate supply curve shows the number of people willing to work to commit to a change in salary. When practiced salary is higher than the equilibrium wage means that the labor market is in disequilibrium, defending a surplus of labor, unemployment called imbalance.

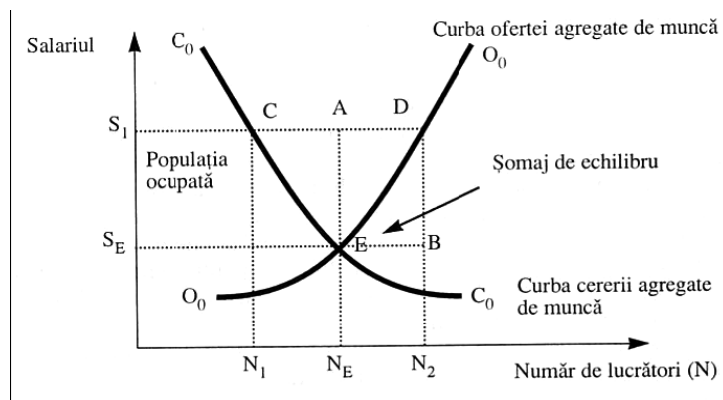
The unemployment imbalance is caused and the use of new technologies in the economic units. This is that the company is able to save and therefore a higher profit if the new technology expenditures are lower than expenditures for salaries, resulting in reduced demand for labor.

The **causes of unemployment that generating economic imbalance** are complex social processes, such as the negative development of economic activities or substitution of labor by capital, pressure from trade unions on increasing the minimum wage, increasing labor supply, especially from young people who have aged required by law to engage, which is in disagreement with the increase wages, increase the labor supply of middle-aged people.

The causes of the unemployment steady state are mostly from the basic economic activities, micro.

The equilibrium unemployment occurs when overall economic activity part of the active population is not immediately available job. However, a number of people continue to search the available jobs for which to obtain higher wages, so that there is an additional supply of labor.

The forming of the equilibrium unemployment



Econometric model for characterization of the unemployment from Romania

Based on the statistical data on the labor market have led derived indicators, which enable the phenomenon of unemployment in different periods:

-Total employment population

The annual average total employment in the period 1997-2011 was 9.686 million people with a representation that does not exceed 35%: with a certain degree of dispersion 6.8% (659 thousand) which makes the coefficient asymmetry of 0.80 thousand people to show that the average total employment than median 9.313 million people.

-Gross Domestic Product

A macroeconomic indicator that reflects a country's production has averaged 77.535 billion euro in the period 1997-2011, as unrepresentative value of uniformity coefficient (52.55%), high level due to the economic crisis started.

-Foreign Direct Investments

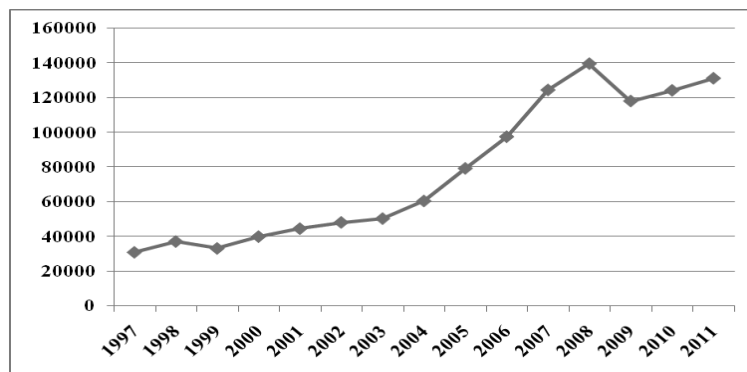
The Average foreign direct investment was 1.972 billion euro/ year, also confirmed unrepresentative indicator of uniformity coefficient of 65.97%.

- Number of registered unemployed

The average number of unemployed in the period 1997-2011 was 712 thousand persons The variance or scattering in the area is modest (65 thousand people), very high homogeneity ($V_x=9,22\%$) . The asymmetry was reduced and positive ($C_{as}=0,03$).

The graphical representations presented below are suggestive analysis of the evolution of important indicators (absolute data)

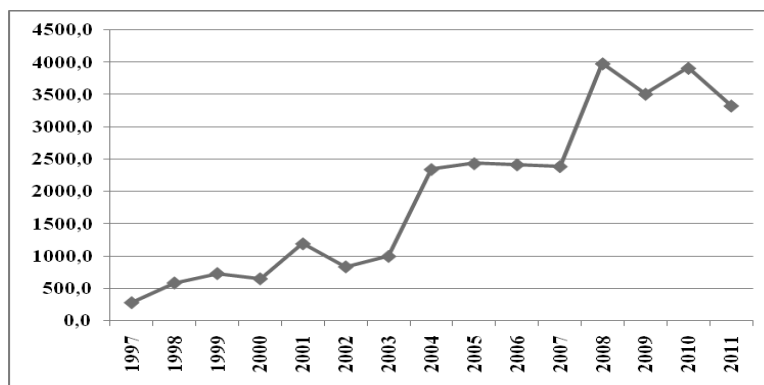
Gross Domestic Product between 1997 and 2011



Foreign Direct Investments between 1997-2011

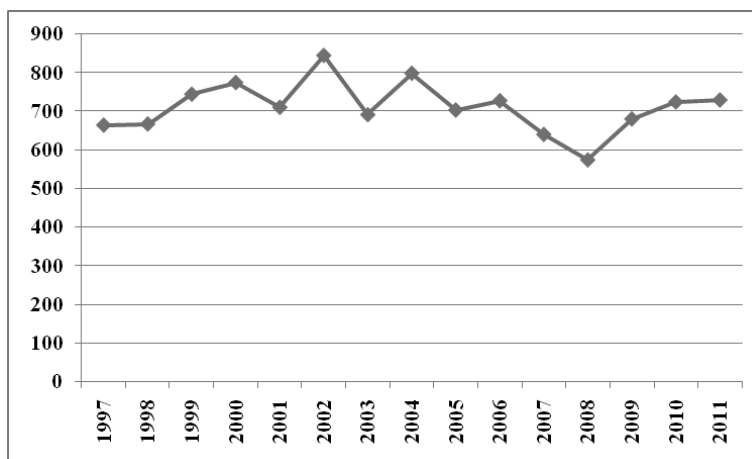
The Gross Domestic Product in the period 1997-2011 showed an increasing trend. It is noted that in 2009 and then fell a slight increase. The foreign direct investments, in Romania, after the economic crisis began to decline.

The unemployed persons between 1997-2011

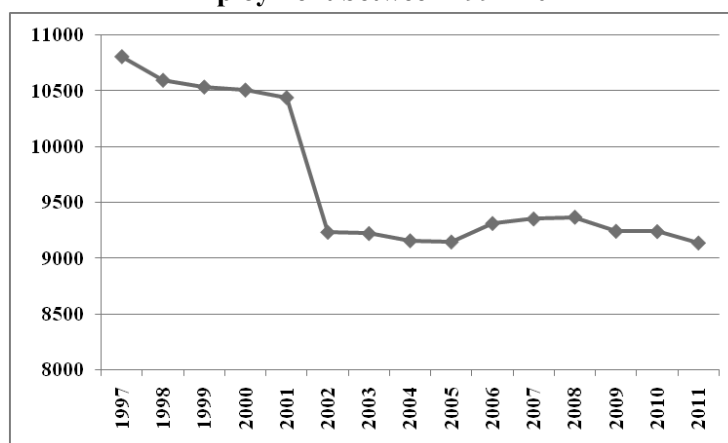


Employed population showed the greatest decrease in 2002. The downward trend was maintained after the economic crisis. The number of unemployed began to rise with the economic crisis.

The employment population between 1997-2011



Employment between 1997-2011



The largest decrease of employment population was in 2002. The downward trend was maintained after the economic crisis. The number of unemployed began to rise with the economic crisis. We implement the initial data in EViews and we estimate parameters of the regression model by LS method (least squares) gave results in the table below.

The results of the econometric model

Coefficients of regression model	Coefficient	Standard Error	t test	Probability
Intercept	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
Employment coefficient	-1.0166	0.0321	31.43	0.0275

The form multiple linear regression model for unemployment is:
 $unemployment_t = \alpha + \beta_1 * GDP_t + \beta_2 * FDI_t + \beta_3 * Employment_t + e_t$
 $t=1,2,\dots,T$, where $T=15$.

The predictive equation:

$$UNEMPLOYMENT=1469.71-1.0018*GDP-1.0143*FDI-1.0166*EMPLOYMENT$$

The GDP coefficient is negative and significant, largely determining the number of registered unemployed (endogenous variable). The gross domestic product is higher, the number of registered unemployed was lower.

The FDI coefficient is negative and significant. As expected, where there is investment in the economy, the number of registered unemployed decreased.

The Employment coefficient is negative and significant. The number of employees was high, the number of registered unemployed was lower.

In this case $R^2=0.9684$ and we can say that the regression Model was good. Approximately 96.84% of the registered unemployed explained by multiple linear regression model chosen.

How Fisher test value is 212.96 and the probability is 0.00000, we can accept that the overall multiple linear regression model is good.

It notes that the Jarque Bera test and the probability p (JB) = 0.7242. We accept the assumption of normality of errors because the probability is quite high. The value of Durbin Watson test $DW = 2.05$. For a level of significance $\alpha = 0,5$, number of exogenous variables is $k = 3$, and the number of observations $n=15$, from Durbin Watson table, the values are: $d_1 = 0,9$ and $d_2 = 1,54$.

Because $d_2 = 1,54 < DW = 2,05 < 4 - d_2 = 2,46$, can accept the hypothesis of independence of the residual variable values. Applying the White test, it appears that we accept the hypothesis of homoskedasticity errors.

Therefore, we can say that the model is valid, correctly identified the statistically.

Because the unemployment is a self-perpetuating, will quickly find ways to create new jobs through incentives that may employ the unemployed, by providing incentives to companies setting up or increasing service sector. At the same time, to stimulate small and medium business (SMEs), which under full transition to a market economy can provide jobs.

Unemployment - a contemporary phenomenon, complex, comprehensive, which includes in its economic, social, political, psychological and moral. It should be noted that the concept of unemployment comes from the word "chomage" in French, taken from the Greek "Caum" which meant "high heat" because any activity is interrupted.

Unemployment occurs only as a result of labor supply and labor demand is not considered. Only in matching supply and demand of jobs can appreciate the situation on the labor market, whether or not unemployment. A concomitant increase in supply in demand causes a deterioration in employment. Unemployment, if there was a time to appear, and if there intensifies. Conversely, increasing demand and decreasing supply of labor leads to a decrease in unemployment.

Labor market may encounter: a state of balance, which reflects the optimal employment of labor and a state of disequilibrium, reflecting a degree of underemployment or over employment labor. The social policies promoted by governments of all countries, it tends towards a degree employment rate as close to full employment. According to the opinions of various Romanian and foreign economists, achieving a level of full employment is considered almost impossible satisfactory occupancy is 97-98% and 2-3% vacancy. Often, unemployment is considered as the aggregate of all those people who have status (official) unemployed. In this case, it refers to the person - unemployed.

According to most economists, an unemployed person is a person seeking paid employment without having currently.

Unemployed, according to the criteria of the International Labor Organization (ILO), are people over 15, who during the reference period satisfy the following conditions: have a job and not engaged in for-profit, are looking for a job in the last four weeks using different methods to: registration at employment and training agency or private agency placement, steps to start an own business, publishing and responses to ads, are available to start work within the next 15 days, if he could immediately find a job.

There are also included: unemployed people available to work, waiting to be recalled to work or who found a job and will start work at a later period; persons usually do of the inactive population (pupils, students, pensioners), but said they are looking for work and available to start work.

There are several economic theories about causative factors of unemployment:

The classical theory supports the idea that unemployment exists only for those who want to engage, but with a salary higher than that established in the labor market. Considering the insufficient information provided in the labor market, they prefer to evaluate their own set of opportunities based on calculations of cost / benefit (cost - lack of employment and job advantage = better).

John Maynard Keynes's theory supports the idea that involuntary unemployment exists if, when a slight increase, relative to nominal wages, the prices of goods they consume employees and total demand for workers willing to work at the current nominal wage and total demand for labor at that wage would be greater than the existing volume of employment. The cause of involuntary unemployment is the lack of consumer demand.

The neoclassical theory claims that unemployment would result in the very processes of growth, which gives the character of phenomenon "natural". Unemployment arising from labor mobility and labor market information conditions. Statistics show a decrease in the average employment period, respectively, an increase in the average duration of unemployment due to the extended period of two employments.

The economic crisis, characterized by decrease or stagnation of economic activity, increases the number of unemployed, and their integration in the boom may be low. Integrating a large number of unemployed up to the real possibilities of each country to stimulate economic growth capital investments in the capacity of resource-efficient economic crisis conditions.

Conclusions

Existence in Romania of a long-term chronic unemployment, which generated employment crisis, necessarily requires, in our opinion, an active employment policies aimed at micro and macro level objectives.

Economically, there are negative consequences of unemployment nationally and at individual level - family.

- Nationally, exclude any influence of labor to GDP growth in that training, qualification of unemployed expenses assumed by the individual and society that will not be recovered in the event of long term unemployment, this

force work out of the active employed population does not contribute to GDP growth, unemployment costs the company incurs on account of contribution to the unemployment fund of firms, employees, the existence of long-term unemployment especially among young people, can generate documents violence, crime, crime may increase, affecting the entire society.

- At the individual level-family, unemployment negatively affect income.

Unemployment benefit is less than the salary. Extending unemployment erodes the savings, if any. The deteriorating quality of the workforce and is harder to find a job. It plays a special role moral and psychological condition that affects the individual became unemployed more than the economic side. Invalidity complex appear to society and family. Unemployment status can affect a family cohesion and harmony. However, chronic and long-term unemployment, poverty generating an important group of the working population can lead to profound social conflicts. It is understood that “the upheaval of social and family can cause a real identity crisis.”

The many negative effects of unemployment for society and the individual fully justified concern to the governments of the world of this scourge and concern to find solutions to the employment of labor to a higher degree.

Bibliography

- Boeri T., Brucker H., “The impact of Eastern Enlargement on Employment and Wages in the EU Member States(Berlin and Milan : European Integration Consostium), 2000;
- Ciucur D., Gavrilă I., Popescu C.-“Economie-Manual universitar” (ediția a II-a), Editura Economică, București, 2001;
- Neugart M.,Schomann K., eds., “Forecasting Labour Market in OECD Countries:Measuring and Tackling Mismatches(Cornwall:MPG Books), 2002;
- Samuelson N. – “Economie politică”, Editura Teora, București, 2000;
- Von Misses L.-“Capitalismul și dușmanii săi”, Editura Nemira, București, 1998;
- Visco I., “Ageing Population Economic Issues and Policy Challenges”, paper presented at Conference OECD “Economic Policy for Ageing Societies”, Paris, OECD, 2001;
- Voineagu V. și colectiv-“Teorie și practice econometrică”, Editura Meteor Press, 2007;
- ***-Romanian Statistical Yearbook, National Institute of Statistics, 2000-2012.