

# Developments of regional gross domestic product and the unemployment rate in Romania during 2000-2012

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## Abstract

Economic development of territorial units can be characterized by measuring the ability of producing goods and services and by measuring labor force in the area. The capacity of producing goods and services is measured by calculating the gross domestic product indicator. This article presents a comparative analysis of the evolution of regional GDP and the ILO unemployment rate at the level of the eight regions in Romania for a period of 13 years. The presented data come from the National Institute of Statistics of Romania.

**Keywords:** regional gross domestic product, GDP deflator, registered unemployment, ILO unemployment, unemployment rate.

## 1. Introduction

In recent years, Romania held extensive processes of economic and social changes, influenced by external and internal factors. Changes in the economic branches of activities, changes of the legislation, internal migration from the rural to urban area, emigration of some parts of the labor force, while international economic and political changes, have led to fluctuations of the main macroeconomic indicators. As shown in various books on macroeconomics, "one of the main objectives of economic policy in any country is that of full employment of labor"<sup>1</sup>). It is considered full employment of labor force when unemployment has an acceptable level. In national and international statistics are pursuing both the number of unemployed, and the unemployment rate. Over time, many economists have tried to highlight a link between indicators measuring unemployment and the economic indicator that summarizes the results produced within a territorial unit, the gross domestic product. This article tries to emphasize key moments in the evolution of this two macroeconomic indicators: unemployment at regional level and the regional gross domestic product, between 2000- 2012.

## 2. Considerations on regional GDP in the period 2000-2012

Analyzing the dynamics of GDP in the period 2000-2012 it can be seen as positive developments by 2009. After this year, lower economic growth was recorded at national level. The same trend is observed in the four macroregions. To analyze the dynamics of regional gross domestic product, the national GDP deflator was used at regional level. The distribution of GDP at counties level reveals large differences between the contributions of such administrative units in forming national GDP. The county that produce almost a quarter of the total national gross domestic product is Bucharest. The following counties, which produce around 4% of total GDP are Cluj and Constanta and the counties of Brasov, Prahova and Timis provide each about 3% of GDP.

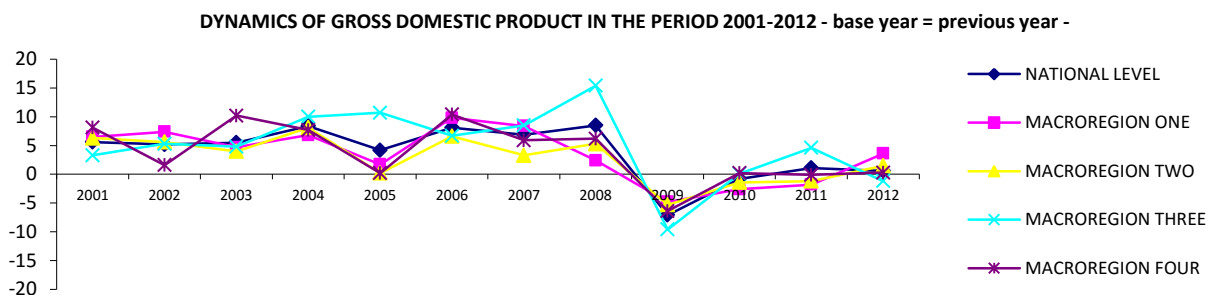


Fig. 1. Dynamics of GDP in the period 2001-2012 at national and regional level

<sup>1</sup> Capanu I, Wagner P, Secareanu C, "Statistical Macroeconomy", Economic Editure, 380, 1997, pg 66

Until 2009, GDP growth rates are positive. During this period, we notice some growth rates that exceeded 10%: in 2003 and 2006 at the Macroregion four level, and in 2004 and 2005 at the Macroregion three level. Also, we can see several inflection points, such as lowering the growth rate of GDP at the level of Macroregion three from 8.1% in 2001 to 1.6 in 2002, followed by an increase in the rate next year to 10.2%. This was due to the evolution of economic activity in the counties such: Dolj, Mehedinti, Olt and Valcea, which in 2002 produced nearly 6% of national GDP. In the year 2005, the growth rate of regional GDP from Macroregion two and Macroregion four reach up to 0.2%, then increase next year to 6.6% and 10.4%. After the 2008 financial crisis effects are felt at the level of our country. Thus, in 2009 as against the previous year, gross domestic product decreases in all regions of the country. The largest decrease, 9.6% was observed in the macroregion three, where Bucharest's gross domestic product has recorded a decrease of 13.4% percent. The data in the following years show an improvement in these indicators, showing a slight recovery of the economy.

### 3. Considerations on the registered unemployment rate in the regions of Romania during 2000-2012

Unemployment is a complex phenomenon that is closely related to all aspects of economic, social, political and psychological life. The number of unemployed registered at the National Agency for Employment (NAE) had a downward trend until 2008, when from the value of 403 thousand people at the end of 2008 increase sharply to 709 thousand people at the end of 2009. The registered unemployment rate follows the same trend, the 2009 level being 3.4% higher than in the previous year. The lowest registered unemployment rate is steady at Macroregion three, this being due to particularly low values of Bucharest-Ilfov region. Values above the national average of this index were recorded in Macroregion two, where Vaslui county has the highest unemployment rates, with values oscillating around 10%.

Unemployment registered rate in the period 2001-2012

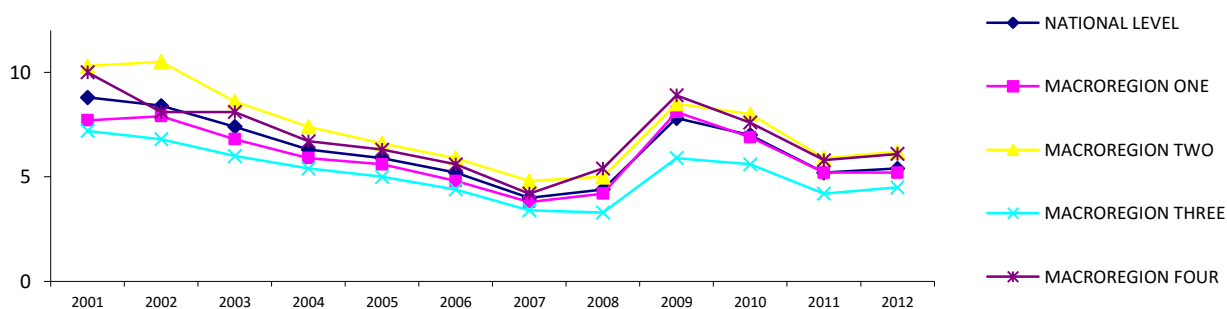


Fig. 2. Unemployment registered rate in the period 2001-2012

### 4. Considerations ILO unemployment rate in the regions of Romania during 2000-2012

In contrast to data of unemployed registered at the National Agency for Employment, the data obtained as recommended by the International Labour Office provides a broader picture of this phenomenon. Unemployed according to the international definition of International Labour Office (ILO) criteria, are persons aged 15-74 years who, during the reference period, simultaneously meet the following conditions: have no job and are not carrying out any activity in order to get income; are looking for a job, undertaking certain actions during the last four weeks (registering at employment agencies, or private agencies for placement, attempts for starting an activity on own account, publishing notices, asking for a job among friends, relatives, mates, trade unions a.s.o.); are available to start work within the next two weeks, if they immediately find a job. Between 2000 and 2012 in Romania, ILO unemployment rate has fluctuated between 5% and 10%. If in 2000 this indicator was 6.9%, in 2012 reached almost the same value: 6.8%. It may be noted that in 2007-2008, the values of this indicator in the regions are almost equal. Also, for this period, we can make a few observations: in Macroregion four unemployment rate was below the national level, while the unemployment rate in the Macroregion three was higher than the value of the whole country.

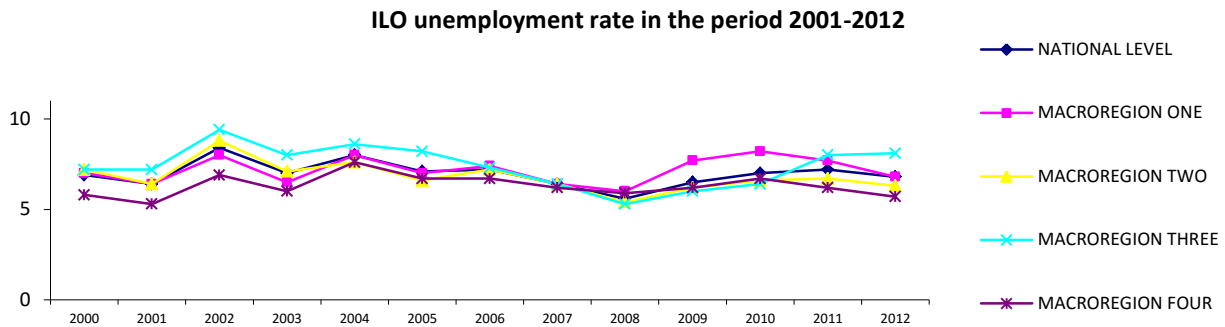


Fig. 3. ILO unemployment rate in the period 2001- 2012

#### 4. Comparison between regional unemployment rate and regional gross domestic product in the period 2000-2012

Following the evolution of these indicators over thirteen years, we can find that in the years when the growth rate of gross domestic product declines, the unemployment rates rose. This happens in all regions. We present some graphs illustrating the connection between the evolution of unemployment and gross domestic product in the four macroregions.

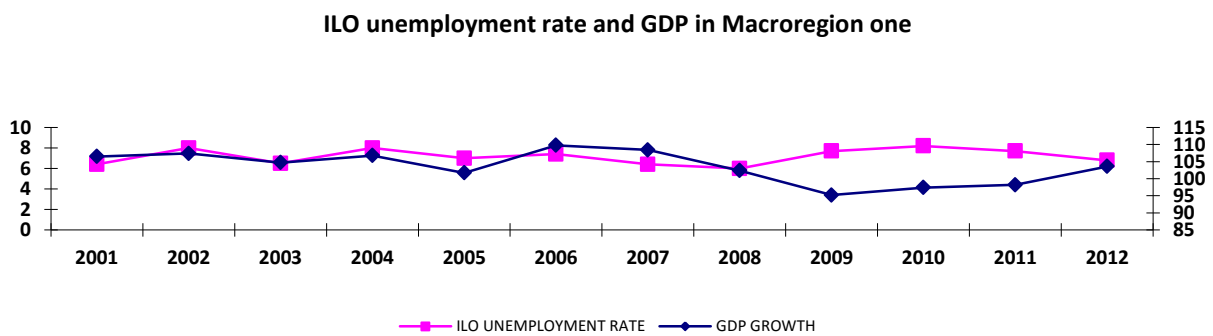


Fig.4. ILO unemployment rate and gross domestic product in Macroregion one

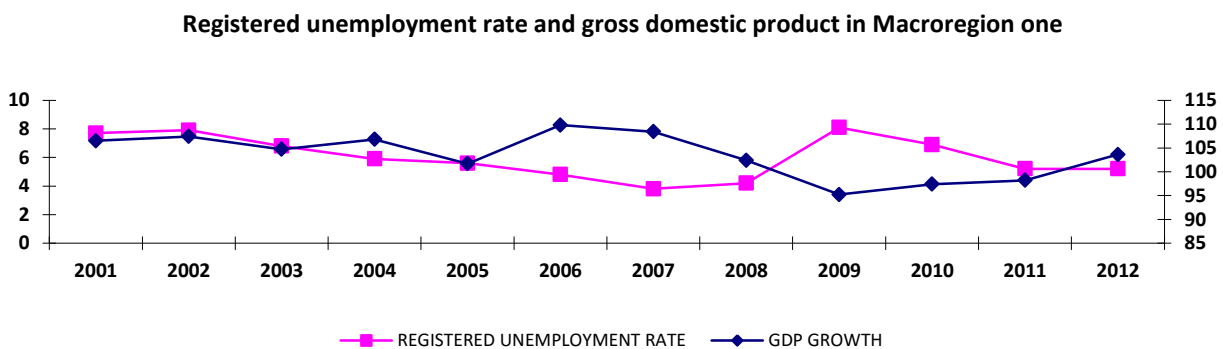


Fig.5. Registered unemployment rate and gross domestic product in Macroregion one

Although the registered unemployment rate values are slightly different values ILO unemployment rate, both indicators have almost the same trend. In this region we notice downward trend in unemployment in the North-West, while the Centre Region are maintained unemployment rates higher than the national level.

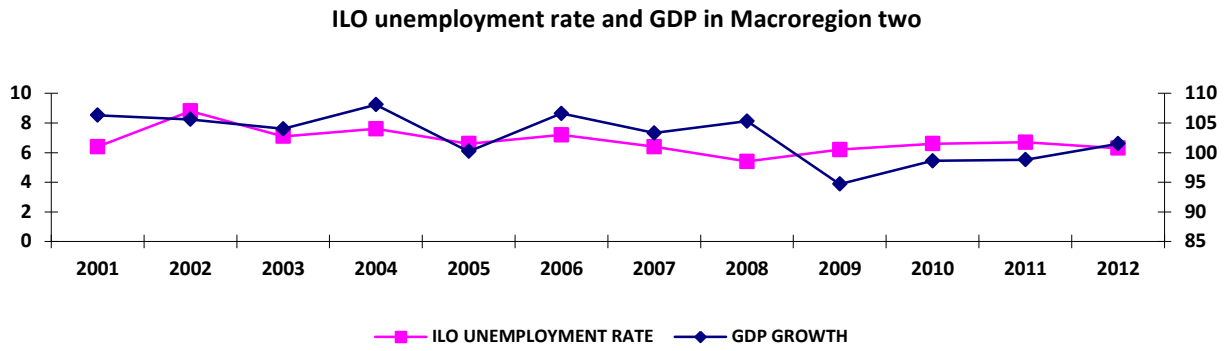


Fig.6. ILO unemployment rate and gross domestic product in Macroregion two

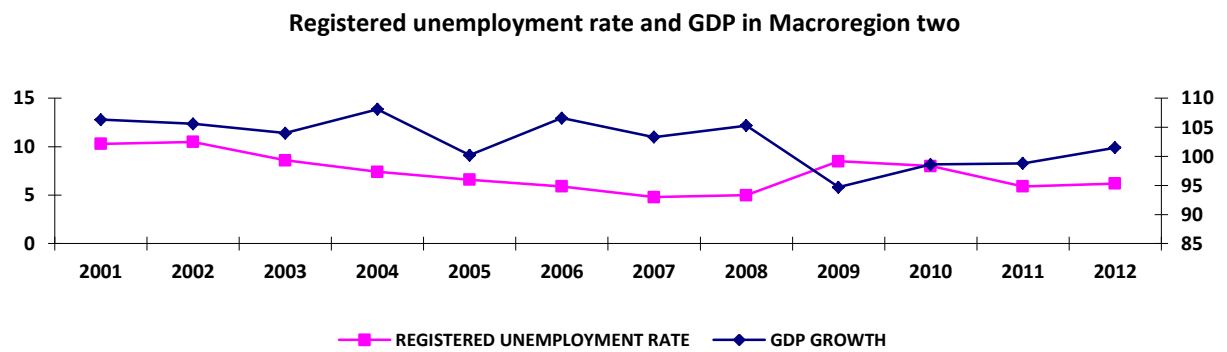


Fig.7. Registered unemployment rate and gross domestic product in Macroregion two

In Macroregion two, the registered unemployment rates are higher than those calculated according to the International Labour Office. But the downward trend until 2008 and the increasing trend after this year can be seen on both indicators.

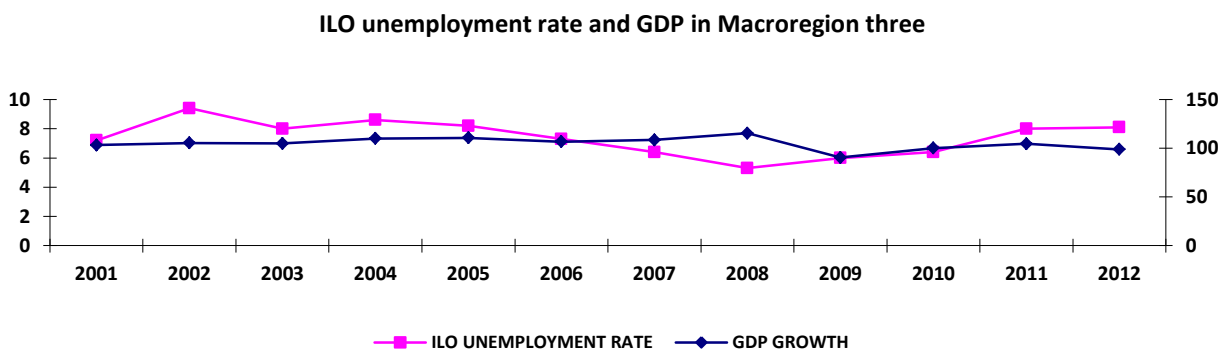


Fig.8. ILO unemployment rate and gross domestic product in Macroregion three

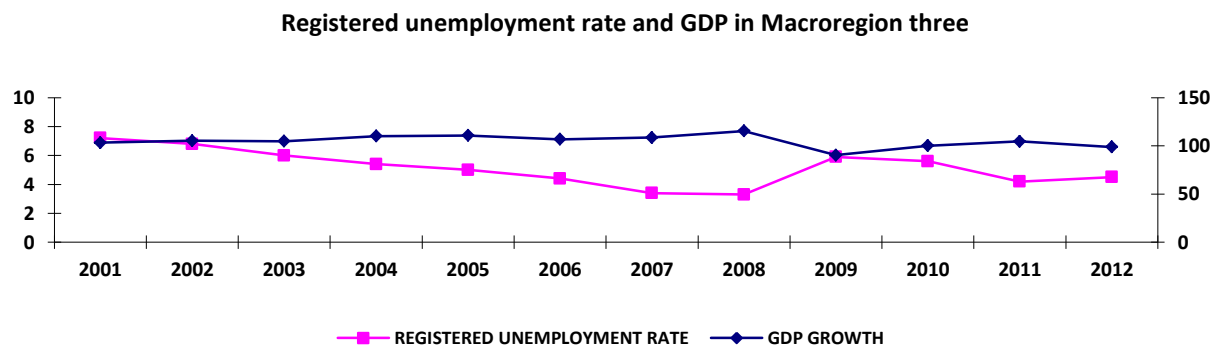


Fig.9. Registered unemployment rate and gross domestic product in Macroregion three

At this macroregion level is found in recent years a tremendous difference between the two indicators data that measure unemployment. In 2012, this difference is 4% in both regions: South - West Oltenia and West.

ILO unemployment rate and GDP in Macroregion four

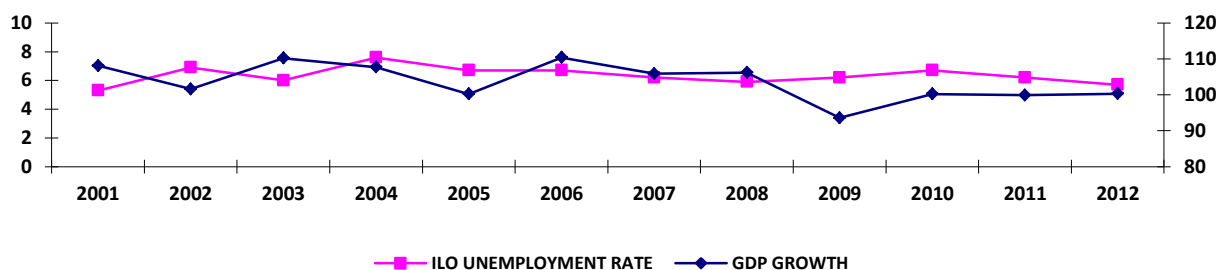


Fig.10. ILO unemployment rate and gross domestic product in Macroregion four

Registered unemployment rate and GDP in Macroregion four

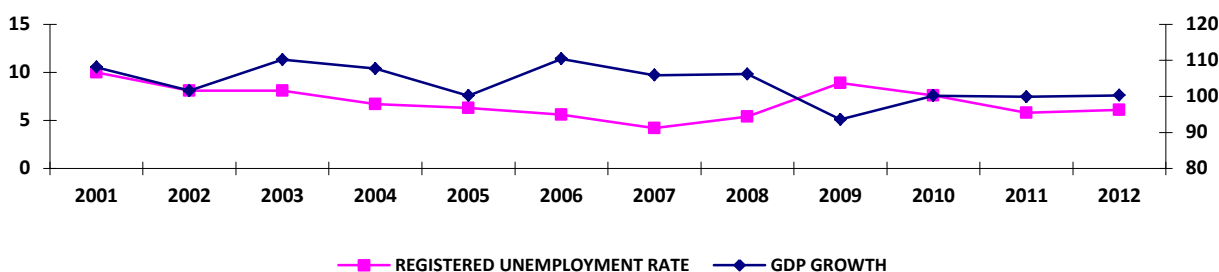


Fig.11. Registered unemployment rate and gross domestic product in Macroregion four

Evolution of the two indicators at Macroregion four captures the connection between them. The differences between the ILO unemployment rate and registered unemployment rates are much lower.

## 5. Conclusions

As highlighted in "Romania in figures - statistical abstract", "in the context of economic transition, Romania labor market has undergone significant changes in the volume and structure of the main indicators of labor". Thus, there was a process to reduce employment, while emphasizing the phenomenon of unemployment, especially since the second half of 2008. Analysis phenomenon of unemployment is necessary, because it has implications not only economic but also social. Many studies aimed at measuring the impact of unemployment on quality of life. As shown in recent studies EUROSTAT, 46.9% percent of unemployed in the European Union is below the poverty line. "Over this relatively place are the unemployed in Malta, Bulgaria, Hungary, Luxembourg, Romania, UK Latvia, Lithuania, Estonia, Germany. The lowest rates of poverty for the unemployed are registered in Denmark, Cyprus, the Netherlands, Belgium, Ireland, France and Porugalia"<sup>2</sup>). But it is not enough just analysis at national level. An analysis should be made at territorial level in order to find territorial disparities between the different administrative units. So, "the regional statistics plays an important role in formulating, implementing and evaluating the regional policies" as is shown in "Regional national accounts 2008-2012".

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<sup>2</sup> "Dimensions of social inclusion in Romania, in 2013", National Institute of Statistics of Romania, Bucharest, 72, 2014, pg 35

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