CONVERGENCES AND DIVERGENCES OF EMPLOYMENT RATE IN UE28 A STATISTICAL ANALYSIS OF 2000-2012 PERIOD

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ABSTRACT: In the European Union there is a constant concern for the implementation and support processes of convergence in all areas of economic and social development. In this regard, on 17 June 2010 the European Council adopted the Europe 2020 strategy whose major objectives aimed at education, innovation, social inclusion, employment and the environment / energy. Regarding employment target in 2020 is to achieve an employment rate of 70%. Through it would reduce the current gap in employment rates, which in some cases exceed 50 or even 60 points. The paper analyzes the developments in employment rates values of developed countries and those in developing, members of the EU. The analysis is performed both on the employment rates of people between 15 and 64 years in total and by sex and age groups. The findings highlight the existence of convergent processes, especially by groups of countries and some divergences that occurred during 2000 - 2012.

Keywords: economic convergence, employment, financial crisis, EU28

Cod JEL: C10, J08, J21

1. Introduction

The economic crisis triggered in 2009 affected labor markets in the EU, registering major imbalances, with strong impact on society as a whole, on the social life, on the family and the individual. To minimize and phase out the effects, the European Commission presented on 18 April 2012, a series of proposals to stimulate job creation such as: new jobs from the point of view of demand, through the establishment of ways in which the member states may encourage commitment by reducing wage tax revenue or through a better business support newly established. Proposals also concerns, identify economic areas with a potentially important for the creation of a considerable number of jobs, such as eco-economy, health services and information technology and communications.

In the 2001-2003 and in last few years (2007-2012) in Romania the employment of labour has been affected by restructuring of economy, our country recording discrepancies still higher than the EU average. The existing problems in the labor market are aggravated by the demographic phenomena as: the decreasing of population, the demographic ageing, the increasing rate of dependence that make the national objective, which mentioned a level of the employment rate from 70% in 2020 to be difficult to reach (Zaharia & Bălăcescu, 2013).

Labor market more generally, is the meeting place of demand and supply of labor. Labor supply consists of active persons comprises all persons aged 15 years and over, providing available labor force for the production of goods and services; it includes employed population and unemployed.(ASR 2012)

In relation to labor supply, some of them form the employed population which includes, according to the methodology of "Household labor force survey", all persons aged 15 years and over, who carried out an economic activity producing goods or services of at least one hour1) during the reference period (one week) in order to get income as salaries, payment in kind or other benefits (ASR 2012).

The activity rate is the ratio of the active population and total population aged 15 and over, and the employment rate is the ratio between employed population and total population aged 15 and over.

The source of data, for this paper, was used the labor market statistics published by Eurostat, in which it is the results of three ample statistical surveys: the labor force in the EU (EU LFS-Labor Force Survey), Survey of Income Structure and Labor Cost Survey.
2. Effects of the economic crisis on the convergence of employment rates in UE28

According with the existing data, the workforce (people aged between 15 and 64 years) in the European Union (EU-28) has increased from almost 222.6 million people, in 2002, to more than 238.3 million in 2012. During the same period of time, the rate of activity for the group 15-64 years has increased in the EU-28 from 68.5 percent to 71.6 %. (Zaharia & Bălăcescu, 2013).

If this is the situation the active population in regards rate of employment of the population between 15-64 years old, at UE28, it has evolved from 62.6% in 2002 (by 5.9 percentage points in the rate of activity) to 64.1% in 2012 (by 7.5 percentage points below the rate of activity). The main factor that increased the gap between activity rates and employment is the economic crisis started in 2009, and that since the period 2009-2012 the employment rate decreased by 1.6 percentage points while the population 15 years and over not decreased.

By analyzing the evolution of the employment rate of 15-64 year in UE28 countries taken into account (Figure 1) from 2000 to 2012, it highlights three trends in relation to the position of employment rates compared to the average of UE28: countries with employment rates above the European average, countries with employment rates around the European average and countries with employment rates below the European average.

![Figure 1 – Employment rate (15 – 64 years) total](image)

The first group includes the Netherlands, Denmark, Sweden, Germany and Austria. In 2000 their employment rates ranged from 76.3% in Denmark and 65.6% in Germany. If in 2000 the gap between the maximum and minimum was 10.7 percentage points in 2008, it is reduced to 7.8 percentage points, extremes, given, also of Denmark 77.9% and Germany 70.1%

After the economic crisis, employment rates are going through a decline and then begin to grow so that in 2012 ranged from 75.1% in the Netherlands and 72.5% in Austria, range reduced to 2.6 percentage points. For this group of countries is noted that the economic crisis had the effect of changing places occupied by them, so that if by 2008 the first place was occupied by Denmark, in 2012 it reached number four. Also Germany which was on last place (fifth), passes 3rd. In conclusion, for this group of countries, the economic crisis has not had major implications for employment rates, their tendency throughout the period being ascendant and strong convergent the interval between the maximum and minimum employment rates decreasing 4.1 times.

The second group includes the Czech Republic and Slovenia. In 2000 their employment rates, had values, 65.0% in the Czech Republic and 62.8% in Slovenia. If in 2000 the gap between them was 2.2 percentage points in 2008, it is reduced to 2.0 percentage points. After the economic crisis, although employment rates are going through a slight decline, reach 66.5% in 2012 in the Czech Republic and 64.1% in Slovenia, the range of these, increasing to 2.4 percentage points. In the case of Czech Republic and Slovenia, the economic crisis has had the effect of maintaining approximately equal to the gap between these. In conclusion, in Czech Republic and Slovenia, although the economic crisis has had some impact on employment rates, their evolution throughout the period, employment rates were maintained at UE28 average.

The third group includes Slovakia, Romania, Bulgaria, Poland and Hungary. In 2000 their employment rates ranged from 63.0% in Romania and 55.0% in Poland. If in 2000 the gap between the maximum and
minimum values was 8.0 percentage points in 2008, it is reduced to 7.3 percentage points, extremes given by Bulgaria, 64.0%, and Hungary, 56.7%. After the economic crisis employment rates after a significant decline until 2011, begin to grow so that in 2012 fell between 59.7% in Slovakia and Poland and 57.2% in Hungary, the interval reduced to 2.5 percentage points. For this group of countries, Romania has a distinct evolution. If in 2000 the value of the employment rate was 63.0%, 0.8 percentage points above the European average in 2002, it had a significant decrease, reaching 57.6% (4.7 percentage points below the UE28), and 59.0% in 2008, the gap versus UE28 average, increasing to 8.7 percentage points. Note that, in Romania, the economic crisis has had very little effect on employment rates reaching from 59.0% in 2008, to 59.5% in 2012. It can be concluded that in this group of countries, witnessing a process of convergence in terms of employment rates for the population aged 15-64 years.

![Figure 2 – Employment rate (15 – 24 years) total](image)

A first important conclusion is that, although in the three groups of countries are witnessing a convergence process, at the level UE28, there is still a divergence process. Group of developed countries converge to values of the employment rates well above the European average, while most former communist countries that are part of UE28, converge to values of the employment rates below the European average.

If the resume analysis for employed people, included in age group 15 -24 years (Figure 2) we see there are trends similar to those recorded by the employed population included 15-64 years the employment rates, recording however much lower values. We remark here two groups.

The first group includes the Netherlands, Denmark Germany and Austria. In 2000 their employment rates ranged from 68.7% in the Netherlands and 47.2% in Germany. If in 2000 the gap between the maximum and minimum was 21.5 percentage points in 2012 it reduced to 17.2 percentage points, extremes given by the Netherlands 63.8% and Germany 46.6%. Economic crisis had no significant influence on employment rates in the Netherlands, Austria and Germany. In Denmark the employment rate values after 2008, fell significantly by 11.4 percentage points, from 66.4% to 55.0% in 2012. With the exception of Denmark, in the other three countries, the employment rate values have evolved around the same time, so that for this group of countries can not speak of a process of convergence.

The second group includes Slovenia, Czech Republic, Poland, Romania, Bulgaria, Slovakia and Hungary. In 2000 their employment rates ranged from 36.4% in the Czech Republic and 19.7% in Bulgaria, if in 2000 the gap between the maximum and minimum was 16.7 percentage points in 2012, it is reduced to 8.7 percentage points, extremes given by Slovenia 27.3%, and Hungary, 18.6%. The economic crisis had different intensities influences on employment rates in this group of countries. The largest decline in the employment rate was registered in Slovenia, from 38.4% in 2008 (by 1.1 percentage points above the UE28) to 27.3% in 2012 (by 5.5 percentage points below the European average). Unlike the values recorded in employment rates of the first group of countries analyzed above, there is a process of convergence, the range between the maximum and minimum in employment rates reduced by half. Unfortunately this convergence, at least in the period under review, there is increasing gap versus UE28 average.
3. Impact of economic crisis on employment rates by gender in some developing countries, members of the UE28

As results from the analyzes in the previous chapter, the group of developing countries, members of UE28 considered in this analysis, in terms of employment rates, most of them recorded a convergence process which, unfortunately, is below the European average. Based on these findings, in the following, it refines the analysis to highlight similarities and differences in the evolution of employment rates by gender in Bulgaria, Czech Republic, Poland, Romania, Slovakia, Slovenia, and Hungary.

The evolution of employment rates for male population between 15 and 64 years is giving shown in Figure 3. For this population, employment rates in 2000 evolved into a maximum of 73.2% in the Czech Republic (2.4 percentage points above the European average) and a minimum of 54.7% in Bulgaria, the gap between them being 18.5 percentage points.

Period 2000 - 2008 is characterized by different evolutions on the values of employment rates in these countries. While in the Czech Republic, Slovenia, Slovenia and Hungary the values employment rates have a slight upward trend over the period, in Romania, Poland and Bulgaria in the first period is a significant decrease from 68.6% in 2000 to 63.6 % in 2002, in Romania, from 61.2% in 2000 to 56.5% in 2003 in Poland and from 54.7% in 2000 to 52.7% in 2001 in Bulgaria. After periods of decline, there is a significant increase in employment rates in Bulgaria (13.6 percentage points) and Poland (9.8 percentage points). In Romania, in the period 2002 - 2008 the increase is only 2.1 percentage points.

A result of these developments, the values of employment rates, fell from 75.4% in the Czech Republic and 63.0% in Hungary, the gap between the maximum and minimum employment rates dropped to 12.4 percentage points. Note that the period of economic growth have been significant changes in the hierarchy,. The most significant being registered, Bulgaria on the 7th, reaching in 2008 the 4th.

With the exception of the Czech Republic, Romania, and in some extent, Hungary, the economic crisis brings significant decreases in employment rates by 7.2 percentage points in Bulgaria, and 5.3 percentage points in Slovenia.

The way of evolved employment rates in the Czech Republic throughout the period under review, determined to loosen it from the others, its values hovering over UE28 average by 5 percentage points in 2012. Other countries continued the convergence process, the values of employment rates hovering in 2012 from a maximum of 67.4% in Slovenia (by 1.2 percentage points below the UE28) and 61.3% in Bulgaria, the gap reduced to 6.1 percentage points.

In the case of the male population between 15 and 24 years, the developments are characterized by higher amplitudes (Figure 4). For this age group, in 2000, employment rates values were below the European average, falling from a maximum of 39.3% in the Czech Republic and a minimum of 21.8% in Bulgaria, the gap being 17.5 percentage points.
During 2000 - 2008, as the male population between 15 and 64 years, developments in employment rates are different. The most significant increase was recorded in Slovenia which 35.7% in 2000 (by 3.6 percentage points below the European average), reaching 43.8% in 2008 (by 2.7 percentage points above the European average).

Significant increases in the values of employment rates were recorded in Bulgaria, where after a decrease from 21.8% in 2000 to 20.1% in 2001 to reach 29.3% in 2008. In contrast, the dramatic decrease occupancy rates are at Hungary, the employment rate values decrease from 37.3% in 2000 to 23.2% in 2008. Also, significant decreases in the values of employment rates were recorded in Romania, from 38.5% in 2000 to 29.9% in 2003 and 27.3% in 2006, reaching after a slight increase to 29.1% by 6.7 percentage points less than the in 2000

The economic crisis that started in 2009 has significant implications in this case. The most significant decrease in the values employment rates recorded in Slovenia (13.4 percentage points) from 43.8% in 2008 to 30.4% in 2012 and Croatia (13 percentage points). Regarding Romania, values employment rates fell from 29.1% in 2008 to 27.4% in 2012, the entire analyzed period the decline of 8.4 percentage points.

Developments in employment rates of female population between 15 and 64 years (Figure 5) recorded certain particularities compared to employment rates of male population.

The first feature is given by the lower values recorded both at the EU average and the countries analyzed in comparison with the values recorded for the male population. For example, in Romania, in 2000 the employment rate for the female population was 57.5% compared to 68.6% in 2008 was 52.5% compared to 64.8% and in 2012 was 52.6% compared to 66.5% in the case of the male population.

Another peculiarity is in the fact that values employment rates for female population was much less affected by the crisis than the male population. Thus, the UE28, in 2012 employment rates for female population
was only 0.3 percentage points compared to 2008, while the male population employment rates fell by 3.1 percentage points.

If we analyze the evolution of the employment rate gap between male and female population in the period under review there were two trends: one of convergence and divergence another. Exception of the countries analyzed, making the Czech Republic, the gap between activity rates of men and women in the period under review was approximately constant (16.3 percentage points in 2000, ie 16.4 percentage points in 2012).

Convergence tendencies of employment rates for male and female population in the period 2000 - 2012 were recorded in Bulgaria, the gap decreasing from 8.4 to 5.0 percentage points in Hungary from 13.4 to 10.6 percentage points and Slovenia, from 8.8 to 6.9 percentage points. The convergence trend is manifested in the UE28, from 17.1 to 11.1 percentage points.

Divergent tendencies in the period under review occurred in Poland, the gap increased from 12.3 to 13.2 percentage points, Slovakia, from 10.7 to 14.0 percentage points and Romania. In Romania the gap between the employment rates of male and female population increased from 11.1 percentage points in 2000 to 13.2 percentage points in 2008 and 13.9 percentage points in 2012.

4. A comparison of the evolution of employment rates by gender and age groups between Romania, Bulgaria and Hungary

In terms of evolutions of employment rates for the total population aged 15-64 years developments in Bulgaria, Poland, Romania, Slovakia and Hungary (Figure 1) converge to an average of about 59.9%. This comes from increases or decreases which sometimes cancel each other. To highlight such evolutions in Figure 6 shows the values of employment rates for the male population, on the three age groups, recorded in 2000 and 2012 in Romania and its neighbors with that part of UE28.

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<td>15-24 years</td>
<td>35.8</td>
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<td>20.0</td>
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Figure 6 – Males - Employment rate by ages groups

In 2000 of employment rates values in Romania were in the age group 15-24 years by 1.5 percentage points lower than in Hungary and 14.0 percentage points higher than in Bulgaria. For the age group 25-54 years, Romania overtake Hungary, by 4.5 percentage points, and Bulgaria, by 12.0 percentage points, while in the age group 54-64 years the difference was 22.8 percentage points as compared to Hungary and to Bulgaria.

Economic and social policies implemented by the governments of both countries in the run up and during the economic crisis, led to different evolutions in the values the employment rate by age for male population. While in Romania the values the employment rate declined for all age groups, the largest decrease of 8.4 percentage points being registered in the age group 15-24 years in Bulgaria the values the employment rate increased by 3.1 percentage points for age group 15-24 years, by 3.5 percentage points their age group 25-54 years, respectively, with 17.6% in the age group 55-64 years. The increases the employment rate were registered in Hungary in age groups 25-54 and 55-65 years. In the age group 15-24 years, in Hungary, the values the employment rate, lower by almost half, from 37.3% to 20.7%.
In the case of the employment rate of female population in the three age groups, the dynamics are similar. Values decline of the employment rate in Romania, however, is more pronounced than the employment rate of male population. In the age group 15-24 years, the decrease was 10.3 percentage points while in Bulgaria registered a growth of 1.0 percentage points. In the age group 25-54 years while in Romania employment rates fell by 3.4 percentage points. Increases in Bulgaria (5.5 percentage points) and Hungary (1.0 percentage points) places Romania, from the first place in 2000, on last place in 2012.

Also, significant differences were recorded in the age group 55-64 years. While in Romania employment rates fell by 10.9 percentage points in Hungary and Bulgaria increased by 20.9 and, respectively, by 31.0 percentage points.

5. Conclusions

Economic situation of the EU countries, they recorded at accession, the economic policies implemented by their governments and the economic crisis, that started in 2009, led developments, sometimes very different, even antiphrasis, in the values the employment rate.

Although on the groups of countries, we are witnessing a convergence process, at the level UE28 still exists a divergence process. Group of developed countries converge to the values of the employment rate well above the European average, while the majority of former communist countries which are part of UE28, converge to the values of the employment rate below the European average, while employment rates recorded in the Czech Republic and Slovenia evolving at the EU average..

Divergences and convergences are recorded also in the evolution of the employment rate of male and female population. Although the at the EU level in this regard, the process is convergent are the countries where the gap between the employment rates of male and female population increased both on the period before and after the outbreak of the economic crisis this. In many EU countries the gap exceeds 10 percentage points.

In terms of achieving the objective set by the European Commission Strategy 2020 to reach an employment rate of at least 70%, in Romania's case, if the current trend continues it will not be achieved. Urgent measures are needed to revitalize economic growth, job creation, especially for people between 20 and 34 years.

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