



The Influence of the Economic Growth Process on Romanian Employment

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ABSTRACT

The aim of this paper is to analyse the influence of the economic growth process on the Romanian employment, in the 1990-2010 period. The results of this study highlight, on the one hand, the existence of a negative employment intensity in Romania (expressed by the employment elasticity of economic growth). This fact invalidates the economic theory, which states that there is a direct relationship between employment and economic growth, but of different intensity from one period to another and from one country to another. On the other hand, these results also underline the profound changes that have happened in terms of employment intensity over the last two decades, as well as the factors that have determined these changes.

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1. Introduction

One of the main problems of the national economies is their small capacity to generate employment under the conditions of the existence of an economic growth process.

The economic literature and practice proves the fact that a high rate of economic growth is a previous condition necessary for economic development, poverty reduction respectively, but the socio-economic impact of economic growth is different in terms of the effect that this growth has on employment (employment intensity of growth). Employment is considered a key mediator between economic growth and poverty reduction, being the one that makes the significant difference in terms of the impact of economic growth on human development.

The way in which employment growth is affected by economic growth has become an issue extensively debated. One of the reasons for this is that most of the countries have a persistent job deficit and they have to deal with the problem of unemployment, and on the other hand, because employment does not grow enough while the economy is growing (phenomenon called jobless growth).

As a result of the influence of some factors, such as the rhythm of introducing technical progress, institutional changes specific to the labour market, wage policies, etc, [4] the effect that economic growth has on employment has changed in time and space.

For this reason, in this paper, which is structured in five parts, we aim to highlight the employment intensity, through a theoretical approach as well as an empirical one. Thus, after the introduction, a literature review regarding the relationship between employment and the economic growth process is presented, and then a description of the used research methodology follows. Our study continues with the economic-statistical analysis of the data on the evolution of employment and economic growth in Romania (the 1990-2010 period) aiming to identify the impact of the economic growth process on the evolution of employment. On the other hand, we aim to answer the basic question: has employment intensity (expressed by employment elasticity in relation to economic growth) changed over the last two decades in Romania? The conclusions indicate the recommendations regarding some measures that need to be taken in the Romanian economy so that the process of economic growth generates new jobs.

2. Literature review

There is a rich literature devoted to the relationship between employment and economic growth. Generally, the research on this relationship starts from the hypothesis according to which there is a direct, strong relationship between employment and economic growth, meaning that economic growth generates new jobs.

A series of theoretical and empirical studies focused on estimating the impact of economic growth on employment for different periods and different countries, by using the employment elasticity of growth (called hereafter – employment elasticity),

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Kapos [9], analysing employment intensity (the effect of economic growth on employment or the employment intensity of economic growth), between 1991 and 2003, for 160 countries, from different regions of the world, shows that, at global level, *employment elasticity has decreased*, fact that reflects the employment performance following the global economic slowdown. According to the author's estimations, at regional level, the highest employment elasticity is to be found in Africa and the Middle East, but here the labour productivity growth is extremely reduced. Therefore, the number of poor workers has continued to increase in this region. The analysis of employment elasticity together with economic growth, productivity growth, unemployment and poverty evolution shows that, in the regions in Asia and the Pacific and particularly in East Asia, the rapid economic growth has led to important earnings in labour productivity as well as in employment growth, contributing to the increase in living standards.

Other studies state that *employment elasticity had a growth tendency* from one period to the other. Thus, Padalino and Vivarelli [13] catching the effect of the technological changes on employment intensity show that employment elasticity increased in the 1980-1994 period compared to the one between 1960 and 1973 (period in which the main production method was Fordist). In the same study, the authors notice significant differences in employment elasticity between the big seven countries of the OECD (employment elasticity in Japan of +0.1, and in Germany of +0.78). This fact, the authors say, does not prove dissociation between economic growth and employment, but rather the fact that the effect of economic growth on employment differs enormously from one country to another.

Examining the effect of economic growth on employment in 11 Transition Economies in Central and Eastern Europe (CEE) and the Commonwealth of Independent States (CIS) for the period 1989-1998, Saget [15] identifies three types of elasticity patterns in the region. First of all, in countries such as Poland, Hungary and Slovenia, employment growth appears closely linked with GDP growth, as evidenced by relatively high employment elasticity. In the second group, including the Baltic States, the Slovak Republic and the Russian Federation, the elasticity is much lower. In the third group (Bulgaria, Romania and Ukraine), a statistically significant relationship between employment and GDP was not identified. The authors consider the high share of national output in the informal economy responsible for the weak relationship between employment and economic growth.

Although some studies claim that in economy the phenomenon of "jobless growth" emerges, the authors of other studies struggle to provide empirical evidence that prove the contrary. Thus, Döpke [4] demonstrating the close relationship between aggregate production growth and employment growth, shows that the relatively poor performance of employment in Europe (compared to the USA) is partially due to the low employment intensity. Through the comparative analysis of the data for the 1971-1999 period, on the OECD countries, the author proves that the countries which are successful in the fight against unemployment, for example the USA, generally have a lower unemployment threshold. On the other hand, the results of the study suggest that there is no evidence that supports the existence of jobless growth.

The explanation for the existence of a different employment intensity, must be looked for in many directions. The rhythm of job creation in relation to economic growth can be explained by the type of economic growth (extensive or intensive), which has suffered important changes lately. The GDP growth (aggregate production) as reaction to the aggregate demand growth can be achieved in different ways: either the quantity of inputs (labour force, capital etc) increases and then we talk about extensive growth, or the production factors productivity increases (intensive growth), or a combination of the two possibilities [16].

It is stated, in the economic literature, that the shortage of labour demand is based on the fact that economic growth and development predominantly take place based on the intensive factors, labour productivity having an important role.

Conceptually, employment intensity of economic growth (as measured by the elasticity of employment with respect to output) is inversely related to labour productivity. However, if employment-intensive growth were achieved through higher growth of labour-intensive sectors, it would not necessarily imply the reduction of labour productivity altogether, being able to combine high elasticity of employment with some increase in labour productivity. On the other hand, the studies [5] prove the fact that there is no contradiction between, on the one hand, the necessity to increase labour productivity in the sectors that take part in the international competition, and on the other hand, the necessity for the share of the sectors with a slower productivity growth to increase. It is important for the wealth resulted from increasing productivity in the first sectors to be distributed to the benefit of the entire society.

Recent analyses [4] highlight that the different employment intensity is due to the factors that influence it: relative cost of labour (especially for unskilled work) and capital, working time including part-time work, the sectoral composition of employment, technological progress, the institutions specific to the labour market, the micro and macroeconomic context, etc.

As far as the institutions specific to the labour market are concerned, as factor which influences employment intensity, Flaig and Rottmann [6], prove that these have an important role in changing employment intensity (expressed by the employment threshold – the minimum growth rate which keeps employment constant). The authors demonstrate that, for a sample of 17 OECD countries, between 1971 and

2002, rigidity in the field of employment, taxes on high salaries, the existence of some barriers in negotiating wages, led to the growth in employment threshold and the reduction in employment intensity.

The employment sectoral structure as factor that differentiates employment intensity from one country to another is highlighted in the studies carried out by the Kiel Institute of World Economics [10] and by Döpke [4]. Here, it is shown that in the economies in which services are predominant, there is higher employment intensity, compared to the ones in which the other sectors are predominant. Therefore, any policy adequate for promoting the employment structural change in favour of the services sector could help fighting against unemployment.

The evolution of the labour real cost is considered an important factor that influences the employment threshold, under the conditions in which the long-run difference between the US and the EU performance on the labour market cannot (or only to a very small extent) be attributed to diverging rates of real economic growth. This is rather attributed to the differences recorded in the evolution of the real wage [10]. Döpke [4] identified a negative relationship between the labour real cost and employment elasticity. Moreover, Choi [3] shows that the apparent labour saving by substituting it with capital, on its own, cannot be considered responsible for the slowdown of employment growth, and labour supply elasticity in relation to wage can be considered an important determinant of the effects that economic growth has on employment.

We can draw a conclusion by saying that the economic literature generally states the existence of a positive relationship between employment and economic growth, but of different intensity from one period to another and from one country to another, thing which reflects the different response of the labour market to the economic growth process.

3. Research methodology

The effect of economic growth on employment or the employment intensity of economic growth (called hereafter – employment intensity) can be measured through employment elasticity in relation to the economic growth (called hereafter – employment elasticity of growth).

Elasticity is a statistical derived indicator that shows by how many percents the value of the endogenous (dependent) variable is changed as a result of changing the exogenous (independent) variable by a percent [18]. This can be expressed by the correlation between the rhythm of changing the endogenous variable and the one of changing the exogenous variable. The correlation we get is called *elasticity coefficient* and is “a statistical measure which characterises the intensity of the dependence between two characteristics as well as the way in which this dependence is manifested and expressed by a real number” [2].

The quantitative estimation of employment elasticity is based on the assumption that employment is a result of production (measured by the gross domestic product – GDP) and is calculated according to the formula:

$E = \text{Employment elasticity coefficient in relation to GDP} = (\Delta \text{EMP}\%) / (\Delta \text{GDP}\%)$

where $\Delta \text{EMP}\%$ is the rhythm of change of the endogenous variable (employed population), and $\Delta \text{GDP}\%$ is the rhythm of change of the exogenous variable (GDP).

The value of the elasticity coefficient reflects the relationships that are set between the employment rhythm of change, economic growth and labour productivity (LP), according to the table below.

Table 1. Interpreting employment elasticity of economic growth

Employment elasticity	GDP growth	
	Positive GDP growth	Negative GDP growth
$E < 0$	(-) employment growth ($\Delta \text{EMP}\%$) (+) productivity growth ($\Delta \text{LP}\%$)	(+) employment growth ($\Delta \text{EMP}\%$) (-) productivity growth ($\Delta \text{LP}\%$)
$0 \leq E \leq 1$	(+) employment growth ($\Delta \text{EMP}\%$) (+) productivity growth ($\Delta \text{LP}\%$)	(-) employment growth ($\Delta \text{EMP}\%$) (-) productivity growth ($\Delta \text{LP}\%$)
$E > 1$	(+) employment growth ($\Delta \text{EMP}\%$) (-) productivity growth ($\Delta \text{LP}\%$)	(-) employment growth ($\Delta \text{EMP}\%$) (+) productivity growth ($\Delta \text{LP}\%$)

Source: Remaking according to Kapos [9]

In our study we aim to check if there is a strong and positive relationship between economic growth and employment in the context of the Romanian economy, in the last 21 years (1990-2010). We will use data on the the evolution of civil employed population and GDP, provided by the National Institute of Statistics [11] and the National Forecast Commission [12].

4. The influence of the economic growth process on Romanian employment, between 1990 and 2010

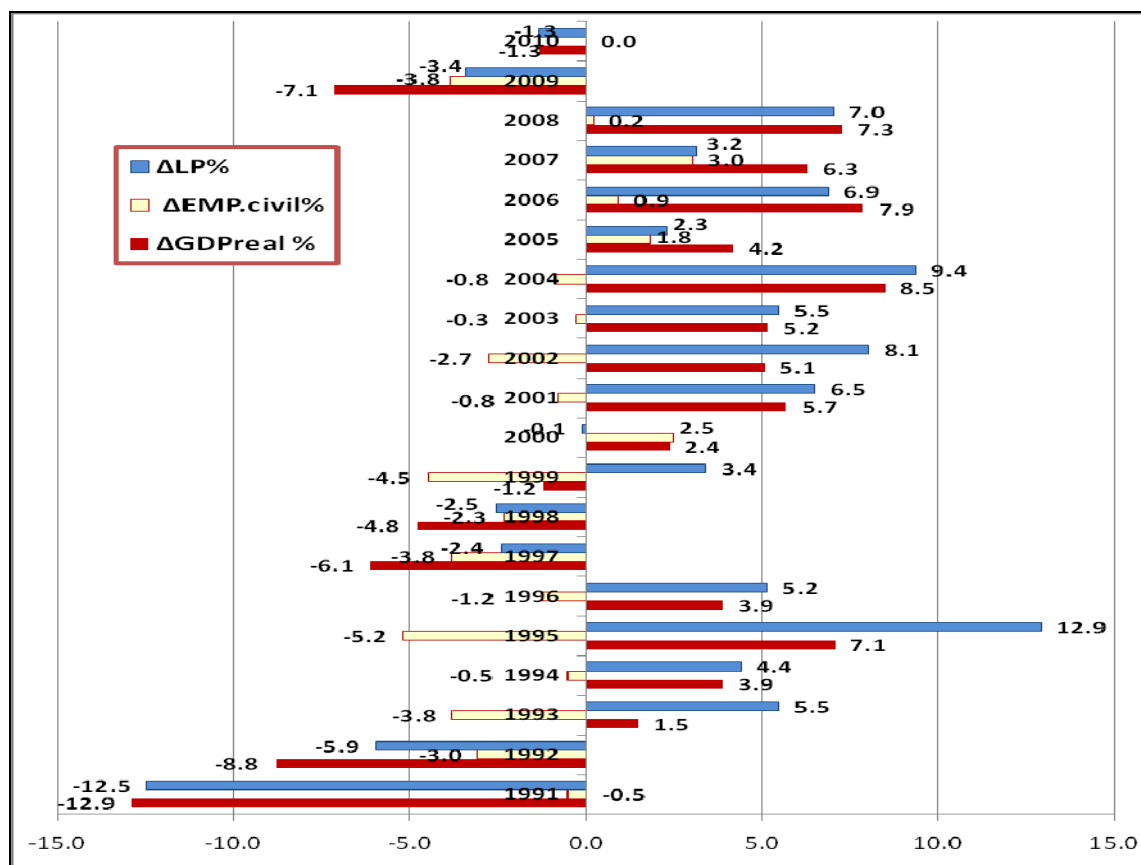
Based on the data on the variation of the civil employed population and the GDP variation, in Romania (1990-2010), we intend to verify if economic growth had a positive impact on employment, meaning the

creation of new jobs. On the other hand, we aim to answer the basic question: has employment intensity (expressed by employment elasticity of economic growth) changed over the two last decades in Romania?

Combining employment (the extensive side of economic growth) with labour productivity (the intensive side of economic growth) has been and will remain one of the most difficult problems of economic growth. The relationship of inverse proportionality that is set between productivity and employment in the economic activity has the most different shapes, expressing the character of economic growth.

From the analysis of data in figure 1, it results that in most of the years when the Romanian economy was characterized by economic recession, 1991, 1992, 1997, 1998, 2009 and 2010 respectively, the following relationship ($\Delta LP\% < \Delta GDP\%$ and $\Delta LP\%, \Delta GDP\% < 0$, then $\Delta EMP\% < 0$) was set between employment, production and productivity, according to table 1. Moreover, all variables recorded a negative evolution.

Figure 1. The annual average variation of GDP, the civil employed population (EMP.) and labour productivity (LP), in Romania, 1990-2010



Note: Labour productivity was calculated as ratio between GDP and civil employed population

Source: Author's calculations based on the data in [11] and [12]

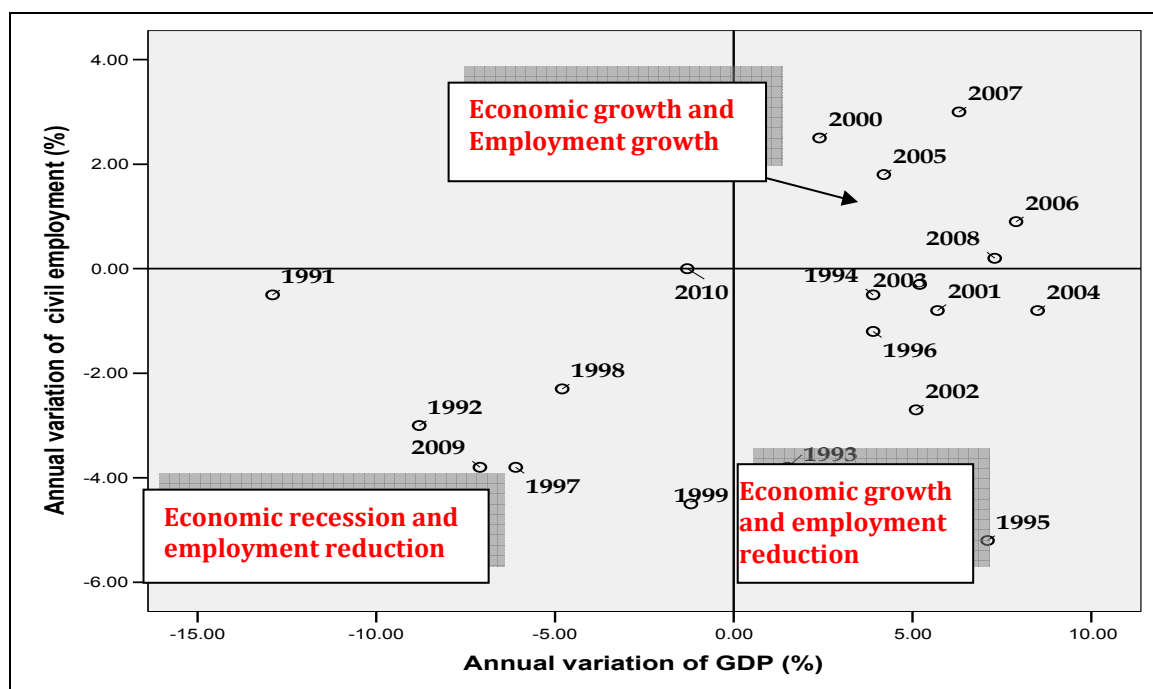
According to Răboacă [14] this relationship is less likely to be met in practice, being the result of other factors, such as the fiscal and public expenditure policy, the monetary and exchange policy, etc, factors which are specific to an economy in transition. Practically, these years are grouped in the below-left quadrant of figure 2, where both the GDP variation and the employment one are negative.

Moreover, in the periods of economic growth (1993-1996 and 2001-2004), the following relationship is set ($\Delta LP\% > \Delta GDP\%$ and $\Delta LP\%, \Delta GDP\% > 0$, then $\Delta EMP\% < 0$), between production, employed population and productivity, according to table 1. This reflects the predominance of intensive changes, under the circumstances in which economic growth is associated with an increase in labour productivity and a decrease in employment, and productivity growth is superior to economic growth (figure 1 and the below-right quadrant, figure 2).

In 2000, the relationship ($\Delta EMP\% > \Delta GDP\%$ and $\Delta LP\% < 0$, $\Delta GDP\% > 0$ then $\Delta EMP\% > 0$) indicates an extensive economic growth, under the conditions of a decrease in labour productivity and an increase in employed population.

In the 2005-2008 period, between the three macroeconomic variables the following relationship ($\Delta LP\% < \Delta GDP\%$ and $\Delta LP\%, \Delta GDP\% > 0$, then $\Delta EMP\% > 0$) was set, fact which created the conditions specific to the extensive-intensive growth of aggregate supply. We mention the fact that employment increases only if the rhythm of economic growth is superior to the one of labour productivity (figure 1 and the above-right quadrant, figure 2).

Figure 2. The relationship between economic growth and employment, 1990-2010, in Romania



Source: Author's calculations based on the data in figure 1

In order to understand the long-run employment-economic growth relationship better, we consider it is opportune to distinguish between two periods: 1990-1999 and 2000-2010.

In the first decade of transition to the market economy (1990-1999), Romania was characterized by an average rhythm of negative economic growth (of -1.77%), accompanied by an annual average decrease in the civil employed population of 2.23% and an increase in the recorded unemployment rate from 3% in 1991 to 11.8% in 1999. The employment elasticity of growth was positive (according to data in table 2), showing a direct, strong relationship between the two variables, but the GDP variation as well as the one of the civil employed population was negative in that period. Thus, the value of 1.26 of the elasticity coefficient reflects the fact that the annual average reduction of GDP by one p.p. (percentage points) determined an annual average reduction of the civil employed population by 1.26 p.p., having negative effects on economic and human development.

Table 2. Employment elasticity of economic growth in Romania, 1990-2010

Years	Economic growth	Employment growth	Employment elasticity
1990-1999	-1.77	-2.23	1.26
2000-2010	4.91	-0.25	-0.05
1990-2010	1.29	-1.12	-0.87

Source: Own calculations based on data in figure 1

The explanation can be given by the ample reform and restructuring processes in the Romanian economy in transition, which generated major disequilibrium, with socio-economic costs and the erosion of the living standard. In Romania, the industry's restructuring and privatization, not always having the hoped results, led to a decrease in industrial production without being compensated by the results obtained in other sectors of the national economy. This fact contributed to the reduction of the real GDP in the 1990-1992 and 1997-1999 periods. Although in the 1993-1996, the real GDP increased, in 1999, after a decade of transition to the market economy, Romanian did not manage to reach the GDP level obtained in 1990. Only in 2004, the country managed to exceed the GDP level recorded in 1990 by 6.71%, from 857.9 billion lei in 1990 to 918.6 billion lei in 2004, constant prices – according to own calculations made based on data from NIS [11]. Through the predominantly negative economic growth rhythms achieved in the 1990-1999 decade, the Romanian economy recorded significant losses, estimated as being bigger than the ones caused by the Second World War [1]. The recovery of these losses is a major responsibility of the Romanian economy, and the recovery period is inversely proportional to the annual rhythm of economic growth, thus high rhythms of economic growth being needed.

Based on the decrease in the industrial production, and not only, the number of the employed population fell continuously throughout the entire period (according to figure 1). The most visible effect of the faulty

management of the labour resources consists in *the persistent decline in employment volume*, its precariousness and degradation, atypical, uncompetitive structural movements, qualification, skill, knowledge losses, briefly, the severe decapitalization of human capital, capital considered as one of the few best cards that Romania possessed on the long road of transition. We mention the fact that, between 1990 and 1999, the civil employed population decreased from 10840 thousand persons to 8420 thousand persons, and the number of employees from 8156 thousand persons to 4761 thousand persons [11]. The cost of companies' privatization implied a massive redundancy (in the 1990-1999 period, the number of employees almost halved) and a corresponding decrease in employment.

Employment intensity in Romania was influenced, on the one hand, by factors that are related to employment (the real cost of labour, sectoral and professional employment structure, legal norms that regulate the labour market, etc.), and, on the other hand, by the economic growth model specific to the Romanian economy, based on consumption.

Regarding the employment sectoral structure in Romania, as a factor which influences employment intensity, statistical data [11] show that this suffered significant and atypical changes in the first decade, which determined the change in the employment's profile from an industrial-agricultural one to an agricultural-industrial one. Thus, the share of employment in agriculture in total employment increased from 43.46% to 28.4%. A higher share of employed population in agriculture compared to the one employed in the secondary sector, after a decade of transition, denotes the fact that agriculture absorbed people laid off after the privatization of state enterprises in secondary sector, people came back to rural origins, with or without state compensatory payments. The consequence of this fact is found not only in the field of employment but also in the field of labour productivity, agro industrial produce competitiveness on the domestic market and EU's market [7].

On the other hand, these tendencies were also reflected on the employment intensity in agriculture and the secondary sector. The negative elasticity of employment in agriculture of -1.16 (table 3) shows the inverse relationship between the evolution of employment and gross value added (GVA) in this sector, manifested by the GVA decrease and the increase in employment, agriculture practically being "the saving solution" from unemployment of the workforce made redundant in the secondary sector. Also, the positive value of employment in the secondary sector, of 1.08, cannot be interpreted as a positive aspect, under the circumstances in which both employment and GVA decreased in this sector. In the services sector an average employment growth of 1.04% was recorded, under the circumstances of an average GVA growth of 9.37%. This evolution had as result a positive elasticity (+0.11). The highly reduced level of the elasticity coefficient confirms the fact that in the services sector between 1990 and 1999 labour productivity rose, conditions of the relationship ($\Delta LP\% < \Delta GDP\%$ and $\Delta LP\%, \Delta GDP\% > 0$, then $\Delta EMP > 0$) being manifested, fact which reflects an economic growth of an intensive-extensive type.

Table 3. Employment elasticity of economic growth, by sectors, in Romania, 1990-2009

Years	Agriculture, etc.			Industry and construction			Services		
	EMP ¹	GVA ²	Elasticity	EMP ¹	GVA ²	Elasticity	EMP ¹	GVA ²	Elasticity
1990-1999	4.20	-3.62	-1.16	-3.46	-3.22	1.08	1.04	9.37	0.11
2000-2009	-3.08	-4.34	0.71	0.45	0.51	0.88	3.70	0.70	5.28
1990-2009	-0.23	-3.42	0.07	-1.72	-1.17	1.46	2.77	5.39	0.51

¹Annual average variation of the share of employment in sector in total employment (%)

²Annual average variation of each sector's contribution to total GVA (%)

The 2000-2010 period was characterized by economic growth, except for 2009 and 2010. The rapid economic growth, generated mainly by the consumption demand and characterized by a strong negative contribution of net exports proved unsustainable, and the result of this phenomenon was macroeconomic disequilibrium (inflation, internal and external deficit). It is also noticed that the annual average rhythm of economic growth in the 2000-2004 period, of 5.4%, was not enough to stimulate employment. On the contrary, according to data in figure 1, in this period the employed population continued to fall (except for 2000). Although, in the next period of economic growth (2005-2008), new jobs managed to be created (508.7 thousand jobs), the economic recession in 2009 almost annulled this growth (in 2009, there was a decrease in the civil employed population of 336 thousand compared to the previous year). Overall, in the 2000-2010 decade, an annual average rhythm of economic growth of +4.91 was achieved, but accompanied by a slight employment reduction (-0.25%), reason for which employment elasticity in relation to economic growth is negative and low. The value of the elasticity coefficient of -0.05 reflects the inverse correlation between employment and economic growth: for an annual GDP growth of one p.p. an annual average employment reduction of 0.05 p.p. took place.

From the comparative analysis of employment elasticity for the two periods, we can notice that in the 2000-2010 period the employment intensity was reduced compared to the previous period, moreover, it changed direction, fact that suggests the incapacity of the national economy to create jobs considering the existence of an economic growth process. We can state that the employment – economic growth relationship suffered profound changes in Romania, after 1990.

As far as the influence of the employment sectoral structure on employment intensity is concerned, data in table 3 shows that, between 2000 and 2009, a higher elasticity (+5.28) was recorded in the services sector, compared to the secondary sector and the primary one, where elasticity was positive, but below one. In 2009, the services sector became the main supplier of jobs (42.8% compared to 28.5% in the secondary sector and 28.7% in the primary sector) and GVA (54.7% compared to 38.2% in the secondary sector and 7.1% in the primary sector). Thus, the economic theory [4] according to which a higher employment intensity of growth is due to a prominent role of services sectors is confirmed.

The analysis of employment elasticity by sectors highlights the advantages that the services sector possesses compared to the other sectors. Thus, between 1990 and 2009, the positive value of employment elasticity in services of +0.51 is the result of the average growth in jobs of 2.77% and in GVA of 5.39%. On the contrary, the positive and below one value of elasticity in the secondary sector of +1.46 reflects the deindustrialization process in the Romanian economy in the last two decades: average decrease in employment of 1.72% and in GVA of 1.17%. Apparently, also in agriculture, the economic growth has a positive impact on employment, if we take into consideration the positive value of the elasticity coefficient of +0.07, but here the decrease in employment and GVA was recorded, as well as the decrease in labour productivity ($\Delta LP\% < \Delta GDP\%$ and $\Delta LP\%, \Delta GDP\% < 0$, then $\Delta EMP\% < 0$, according to tables 1 and 3).

The evolutions of GDP and employed population in the two periods analysed above determined the Romanian economy, in the entire reference period (1990-2010), to record an annual average rhythm of economic growth of +1.29%, followed by a negative annual average rhythm of employment (-1.12%), fact which proves the unsustainability of the economic growth process during the last two decades. The inverse relationship between employment and economic growth is indicated by a highly negative, but below one (-0.87) elasticity, reflecting the fact that for an annual GDP growth of one p.p., in Romania, an annual reduction in the employed population of 0.87 p.p. took place. Thus, the economic theory, according to which between the two variables there is a direct relationship, is invalidated.

One of the causes for not respecting the positive correlation between economic growth and employed population, especially in the first decade of transition to the market economy, consisted in the restructuring of the Romanian economy, the inconsistencies of the social-economic reform, the policy errors made in employment, the predominantly passive policies, which were more preoccupied with treating the effects and less with eliminating the causes. All these and plenty others increased the risk of lay-offs for a high number of employees and created the conditions for the reduction of the employed population. The negative employment elasticity in Romania also reflects that fact that the rigidity existing on the labour market and the high cost of the labour force determined the substitution of labour with other production factors, in the process of national output growth.

Another important cause that determined the negative relationship between economic growth and employed population in Romania, especially in the last decade, is the model of economic growth based on consumption. In the economic theory [17] it is stated that consumption, by means of changes occurring in its evolution and structure, influences the size and dynamics of aggregate demand, that in its turn drives the level and development of production and finally, the labour employment level in that country. Taking into consideration that, in Romania, in the analysed period, the consumption growth did not cause growth in employed population (since most of the consumed products were imported and credit was the most important financing source of consumption), on the contrary, a decrease in employed population was recorded [8], in our opinion, stimulating consumption in Romania aiming to increase the level of employment is not the best solution.

5. Conclusions

The economic literature generally highlights the positive effect of economic growth on employment, but with a higher or lower intensity from one period to another and from one country to another, which reflects the different response of the labour market to the process of economic growth.

The results of the economic-statistical analysis based on the employment elasticity coefficient in relation to economic growth highlights that, in Romania, between 1990 and 2010, the economic growth produced negative effects on employment, practically, the hypothesis according to which there is a positive relationship between employment and economic growth, being invalidated. Although the number of jobs in 2010 was lower compared to 1990, it does not mean that jobs were not created in the Romanian economy in this period. On the one hand, jobs were created in the services sector, but they were reduced in the other sectors, and on the other hand, based on the privatization that took place predominantly in the first decade of transition, jobs in the private sector were created, but jobs were lost in the public sector.

The results of the study highlight that employment intensity in Romania was modified between 2000 and 2010 compared to the first decade of transition, being influenced, on the one hand, by factors related to

employment, the employment sectoral structure respectively, and on the other hand by the economic growth model specific to the Romanian economy, based on consumption. In Romania, the change in the sectoral employment structure, in order to increase employment in services, has positively influenced the intensity of growth. In the services sector, a higher elasticity has been registered, compared to the secondary and primary sectors (especially after 2000). Thus, the theory according to which a higher employment intensity of growth is due to a prominent role of the services sector is confirmed.

Under these circumstances, in order for the economic growth to generate jobs, we consider that in Romania two things have to happen. On the one hand, there is need for the improvement of the employment structure, in order to assure the increase in employment elasticity, and on the other hand, we need to reconsider the economic growth model, an economic growth based on investment respectively, which should favour an efficient employment structure and at the same time more jobs.

Combining employment (the extensive side of economic growth) with labour productivity (the intensive side of economic growth) has been and will remain one of the most difficult problems of economic growth. When we analyse the intensive or extensive character of economic growth, we have to take into consideration that the decrease in the employed population rather than the increase in the achieved production formed the basis of labour productivity in Romania (especially in the first decade of transition).

In order for the process of economic growth to generate new jobs, it is necessary to take and implement some measures that should stimulate investments, that should allow the combination of employment with labour productivity growth, so that the impact of economic growth on human development to be maximum.

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References

1. Adumitrăcesei, I. D., (2001), *Fapte și idei economice: despre români și pentru români*, Ed. Economică, București
2. Andrei, T., Stancu, S. (1995), *Statistică și econometrie*, Ed. Economică, București
3. Choi, C., (2007) *The employment effect of economic growth: Identifying Determinants of Employment Elasticity*, Available at: <http://faculty.washington.edu/karyiu/confer/busan07/papers/choi.pdf>.
4. Döpke, J. (2001), *The Employment Intensity of Growth in Europe*, Kiel Working Paper No. 1021, Available at: <http://www.ifw-members.ifw-kiel.de/publications/theemployment-intensity-of-growth-in-europe/kap1021.pdf>
5. European Commission (1993), *Growth, competitiveness, Employment. The challenges and ways forward into the 21st century*, White Paper, ECSC-EEC-EAEC, Brussels, Available at: http://europa.eu/documentation/official-docs/white-papers/pdf/growth_wp_com_93_700_parts_a_b.pdf
6. Flaig, G., Rottmann H., (2007), *Labour Market Institutions And The Employment Intensity Of Output Growth. An International Comparison*, Cesifo Working Paper No. 2175. Available at: [Http://www.Cesifo-Group.De/Portal/Pls/Portal/Docs/1/1187292.PDF](http://www.Cesifo-Group.De/Portal/Pls/Portal/Docs/1/1187292.PDF)
7. Herman, E. (2011a), *The Impact Of The Industrial Sector On Romanian Employment*, *Journal of Knowledge Management, Economics and Information Technology*, Volume I, Issue 6, October 2011.
8. Herman, E. (2011b), *Implications of aggregate demand on employment: Evidence from the Romanian economy*, *The Young Economists Journal*, Year IX, no.16/2011
9. Kapsos, S. (2005), *The Employment Intensity of Growth: Trends and Macroeconomic Determinants*, *Employment Strategy Papers*, 2005/12. ILO, Geneva
10. Kiel Institute of World Economics, (2002), *Growth and European Labour Markets, Final Report*, Available at: <http://ec.europa.eu/research/social-sciences/pdf/finalreport/hpse-ct-99-00002-final-report.pdf>
11. National Institute of Statistic-NIS (2011), *Romanian Statistical Yearbook, 1990-2009 time series*
12. National Forecast Commission-NFC (2011), *The projection of the main macroeconomic indicators for the period 2011-2014*, May 2011, Available at: www.cnp.ro
13. Padalino, S., Vivarelli, M. (1997). *The Employment Intensity of Economic Growth in the G-7 Countries*, *International Labour Review* 136: 191-213
14. Răboacă, G., (1988), *Ocuparea deplină și folosirea eficientă a forței de muncă*, Ed. Politică, București
15. Saget, C. (2000), *Can the level of employment be explained by GDP growth in Transition Countries (theory versus the quality of data)*, ILO Development Policy Group, ILO, Geneva
16. Schmid, G. (2008), *Full employment in Europe: Managing labour market transitions and risks*, Edward Elgar Publishing Inc., UK
17. Stiglitz, E., Walsh, C. E. (2005), *Economie*, Ed. Economică, București
18. Țarcă, M. (1997), *Tratat de statistică aplicată*, Ed. Didactică și Pedagogică, București