THE INVESTMENTS IMPACT ON THE EMPLOYMENT IN ROMANIA

Herman Emilia

„Petru Maior" University, Faculty of Economics, Law and Administrative Sciences, Tg Mureş, 69, Livezeni street, emilia_herman@yahoo.com , 0745-258520

The first part of the present study identifies the main problems found in the field of employment. In the second part of the study we are aiming to analyse the statistic correlation that is set between the level and structure of investments, on one hand, and the level and structure of employment in Romania, on the other hand. From the results of our research it results that to increase employment steps should be taken in order to growth of private and public investments in all sectors of activity,but with a special focus on the service sector.

***Key words**: investments, aggregate demand,Gross domestic product, employment*

1. Introduction

Employment – is the *main content, foundation of existence and operation of labour market,* its tough core. In relation to labour demand, employment is a dependent variable, derived from the status, structure and functionality of the other markets (market of goods and services, market of capital etc.), that are in interaction.

According to the economic theory (especially the Keynes's theory) the level, structure and evolution of employment or non-employment in a country are driven by the level, structure, and evolution of ***aggregate demand*** (made of consumption, investment and net export), that in its turn is influenced by the quantitative and qualitative dimensions of employment [3]. As a rule, there is a direct and bivalent relationship between employment and aggregate demand. Also, the reduction of domestic supply of goods and services by replacing domestic production with supply provided by imports results in the reduction of employment. Under these circumstances, at the level of national economy, **investments** should be seen as having a double role: first of all, as a main component of the aggregate demand, they influence production in the short term and implicitly, labour employment, and secondly they drive the growth of production in the long term by influencing the formation of capital over potential production and aggregate supply [1, pg.102]

In our research, investment is to be analysed, as a component of aggregate demand, in order to outline the effect of its modification over labour employment in Romania, in 1990-2006. A first step in our research will be the identification of the main problems related to employment, in order to reason the requirement of increasing investments within the national economy, especially of investments in the private sector.

2. Main problems of employment in Romania

The year 1990 meant for Romania the beginning of the transition process to the market economy, the making of its main components. As before this period Romania didn't have a real labour market, the process of its creation according to new criteria specific to the market economy, was a difficult one and generated unfavorable effects on labor force employment and efficient use.

Following the analysis of statistic indicators that size the labour market, the following employment related problems in Romania were identified in 1990-2006.

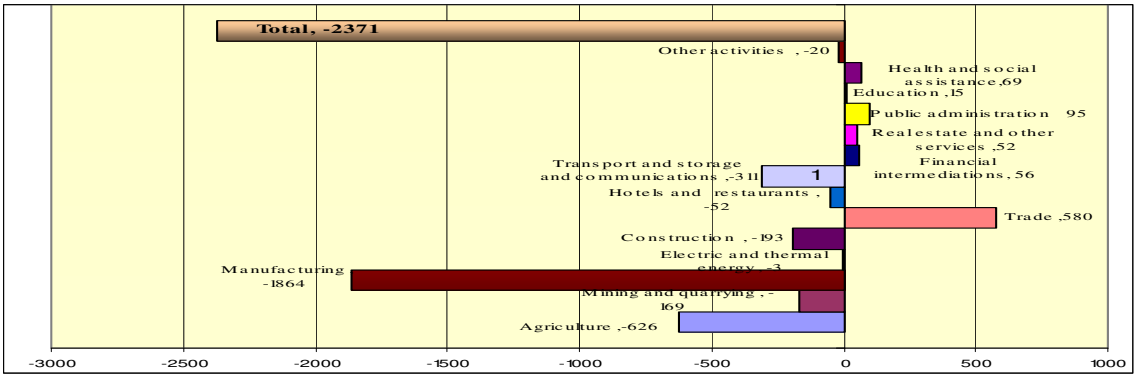
2.1. In Romania there is an accelerated degradation process of employment expressed by the drop of active population, both in absolute size and relative size. In 2006 employed persons were by 2371 thousand people less than in 1990, by 21.87% respectively, employment being close to the level of the'50s, when a number of 8377.2 thousand persons were employed. The reason for this employed population decrease must be analyzed from different perspectives. As part of human resources, of total population, the employed population doesn't do anything else but follow the trend of total population, which, compared to 1990,

decreased in 2006 by 6.99%, namely by 1622.3 thou persons. However, the demographic factors cannot totally justify the decline of employed persons.

We consider that the main contribution to this decline was given by the restructuring of Romanian economy, the dissembling of economic and social reform elements, the errors of employment policies which were mainly passive and concerned more with recovering the effects than with removing the causes; all these, and many others, raised the risk of firing a large number of employees and created the conditions for increasing unemployment.

2.2. Employment structure by sectors of national economy in 1990-2006 highlights a structure typical to an emerging economy where most people work in activities having a low labour productivity. On this line we are laying stress on the following three key aspects:

- Deindustrialization of employed population, by diminishing the employed population in industry, in 1990-2006 by 2036 thousand people (according to figure no.3);
- A relatively low capability of the service sector to create jobs (484 thousand jobs were created in the tertiary sector) for population released from industry (industry fired 2036 thousand people).
- Increase of population working in agriculture, expressed by raising the weight of employed population in agriculture (from 29% in 1990 to 41.4% in 2000 and 29.7% in 2006).



Source: *Own calculations based on data contained in the Statistic Yearbook of Romania, INS, 2007, p. 138-139*

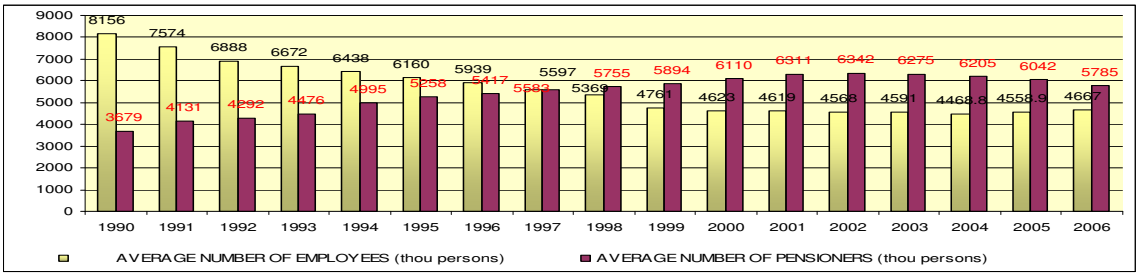
Figure no.1. The evolution of employment, by activity of national economy, 1990-2006

2.3. One of the most difficult problems on employment in Romania and not only, is ***the reduction of both the number of employees and of their share among the employed population.*** Although in the countries with a functional market economy the tendency is to develop the paid work, our country has an atypical situation with highly dangerous economic and social effects. We mention that in 2006 compared to 1990, the number of employees dropped, in absolute size, by 3489 thousand people (absolute annual average -205.24 thousand people), and in relative size, by approximately 42.78% (according to own calculations based on data in figure no.2.). The weight of employees in civil employed population also dropped from 75.2% (in 1990) to 55.1 % in 2006. At the same time, the weight of the other categories of employed population dropped (non-paid familial worker, a member of an agricultural society or of a co-operative farm, self-employed worker) from 24.8% to 44.9%.

The negative consequences of the decrease of employees number and the increase of the other category of employed people are to be found in the income's level, structure and security, in the capacity for saving and investing, in the social insurance and educational system, in the budgetary income creation, all in all in the macroeconomic equilibrium.

2.4. ***Existence of an increasing tendency of economic dependency rate*** concerning active population both in relation to employed population and the number of employees.Inactive population is higher, particularly due to the rise of retired people and the rise of unemployed people who are not willing to look for a job being considered in the category of discouraged people. We mention that in 1997, the number of

employees was higher than retired people, with direct consequences over social burden related to employed population that support inactive population (see figure no.2)



Source: Statistic Yearbook of Romania,INS, 2007,pg.141 and pg.296

Figure no. 2 Evolution of number of pensioners and employees in Romania, 1990-2006

To solve these problems of the labour market, we consider some measures should be taken in order to bring thorough changes as regards the level and structure of labour employment in Romania. That is why, the importance that should be given to real investments, as the main measure of increasing employment and at the same time increasing productivity, is emphasized below.

3. Statistico-economic analysis of correlation between investments and employment, in Romania, during transition to market economy

Investment, a major component of aggregate demand, is the most floating cost element, made of costs for change in inventories („*Change in inventories*") and fixed capital („*rough formation of fixed capital*"). As the weight of „inventory variation" in GDP lowered from 10% in 1990 to 0.8% in 2006, in order to simplify, the present study analyses only the first component of investment, that is the most important, namely the gross fixed capital formation (GFCF), that is further called real investment. According to the Keynes's economic theory [2] investments depend on the aggregate level of production, found in the level of GDP (Y)**.** The level of investments is influenced by a series of factors, of which interest rate, investment cost, predictions of investors regarding the development of economy situation and estimated income, fiscal policy and public cost policy etc.

The real income of companies (actual GDP), as a factor indubitably influencing the level and evolution of investments, in 6 years of the 17 surveyed, the highest annual reduction was recorded in 1991, by 12.9%. As regards the evolution of real income, two periods of economic recession can be mentioned: 1990-1992 and 1997-1999. As a rule, this reduction of income has resulted in a modification of real investments to the same effect. Based on the data in Table no. 1, the Pearson corrrelation factor was calculated in order to outline the type of connection set in Romania, in 1990-2006, between the level of real investments and the level of GDP. The value of 0.9 shows that a very strong statistic relationship was set between the two macroeconomic variables and the level of investments in Romania, in 1990-2006.

In 1990-2006, the weight of rough formation of fixed capital (GFCF or rough investments) in GDP or the ***investment rate*** (GFCF/GDP*100) developed in the range of values of minimum 15.5% in 1991 and maximum 34.4%, in 2006. In 2006 compared to 1990, the weight of rough formation of fixed capital rose from 19.8% to 34.4%, showing a growth of fixed capital in total end products used, prerequisite of economic growth and at the same time, the rise of employed population. The economic theory considers that the rise of investment rate conveys the intensive growth of capital, and this conveys the rise of production/worker (productivity) and thus economic growth [4, pg. 536-539].

Years	Real GDP	Real GFCF	Real GFCF/GDP (%)	Employed population**	ΔGFCF%	ΔGDP%
1990	857.9	169.8	19.8	10840	-	-
1991	747.2	116.1	15.5	10786	-31.6	-12.9
1992	681.2	128.9	18.9	10458	11.0	-8.8
1993	691.5	139.6	20.2	10062	8.3	1.5
1994	718.9	168.4	23.4	10011	20.7	4.0
1995	770.4	180.2	23.4	9493	7.0	7.2
1996	801.3	190.3	23.8	9379	5.7	4.0
1997	752.4	193.6	25.7	9023	1.7	-6.1
1998	716.3	182.5	25.5	8813	-5.7	-4.8
1999	707.8	173.7	24.5	8420	-4.8	-1.2
2000	723.5	183.3	25.3	8629	5.5	2.2
2001	764.8	201.8	26.4	8563	10.1	5.7
2002	804.5	218.5	27.2	8329	8.3	5.2
2003	846.5	237.2	28.0	8306	8.6	5.2
2004	918.1	263.6	28.7	8238.3	11.1	8.5
2005	956.5	296.9	31.0	8390.4	12.7	4.2
2006	1031.0	354.3	34.4	8469	19.3	7.8

*indicators are expressed in billion Lei, steady prices (1990); **Thousand people; GFCF=Gross fixed capital formation

Source: *Own calculations based on data in Statistic Yearbook of Romania, INS, 2007, pg.428-430*

Tabel no.1 Evolution of GDP, Investments and Civil Employment in Romania, 1990-2006

Analysing the *effect of real investments over employed population in* 1990-2006, in Romania, it is noticed that statistically, a significant, direct relationship cannot be set between the annual modification of real investments and modification of employed population, and this fact proves the rise of investments in Romania during the entire analysed period was not enough to create the necessary jobs. This situation is statistically outlined by the value of the Pearson correlation factor, i.e. 0.176 for a significance level (sig.= 0.515) higher than 0.01.

Analysing the data in table no.2 it is noticed that in 1990-2006 the weight of investments in services increases from 32.24% to 47.2% and it increases from 3.33% la 15% in constructions. At the same time, the weight of investments in agriculture goes down from 18.11% to 5.3%, and in industry from 46.3% to 32.5%. We consider the level and evolution of investments on different activities of the national economy influences and should influence the labour employment on both activities and the whole national economy.

Considering data in the table no.2, following the statistic analysis carried out based on the correlation coefficients, it is noticed that statistically, a significant correlation between the weight of employed population in ***agriculture*** in total employed population and the weight of net investments made in this activity in total investments at the level of national economy, in Romania, in 1990-2005, cannot be set because the value of the Pearson parametric correlation coefficient is (-0.184) for a significance level higher than 0.1 (sig.= 0.48), practically showing an insignificant relationship. These statistic values prove that the level and evolution of investments made in this sector in Romania do not find counterpart at the level and evolution of employed population in agriculture, the latter being influenced by other factors.

Following the calculation and analysis of the correlation factors between the weight of employed population in ***industry*** in total employed population and weight of net investments made in this activity in total investments at the level of the national economy, it was noticed there is a direct, strong, statistically and economically significant correlation between these indicators (the Pearson correlation factor = 0.724 for a significance level of 0.003). In other words, in 1990-2006 in Romania, the reduction of weight concerning net investments made in industry is driven by the drop of employed population in this sector (a fall of 2036 thousand jobs, by 50.84% in 2006 compared to 1990 respectively [5, pg. 138-139]).

Years	Agriculture		Industry		Constructions		Services	
	Employment	Net Investments	Employment	Net Investments	Employment	Net Investments	Employment	Net Investments
1990	29.0	18.1	36.9	46.3	6.5	3.3	27.5	32.2
1991	29.7	10.1	35.3	54.6	4.6	2.1	30.4	33.3
1992	32.9	10.8	31.6	56.6	5.5	2.6	30.0	30.1
1993	35.9	7.0	30.1	50.0	5.7	2.8	28.3	40.3
1994	36.4	19.1	28.8	36.9	5.6	5.4	29.2	38.6
1995	34.4	10.9	28.6	41.6	5.1	5.2	32.0	42.3
1996	35.4	11.6	29.2	43.9	5.1	6.3	30.3	38.3
1997	37.6	6.5	27.2	44.8	4.9	8.3	30.4	40.4
1998	38.1	6.8	26.3	45.6	4.4	7.0	31.2	40.6
1999	41.2	7.1	24.4	44.3	4.0	6.9	30.4	41.7
2000	41.4	7.9	23.2	39.5	4.1	8.5	31.3	44.1
2001	40.9	6.4	23.5	40.0	4.0	6.5	31.6	47.1
2002	36.2	11.7	25.5	38.5	4.4	6.5	33.9	43.3
2003	34.8	5.9	24.8	37.6	4.8	9.6	35.7	46.9
2004	32.0	5.5	24.9	40.1	5.1	9.3	38.0	45.1
2005	31.9	3.9	23.5	32.4	5.5	14.5	39.1	49.2
2006	29.7	5.3	23.2	32.5	6.1	15	41	47.2

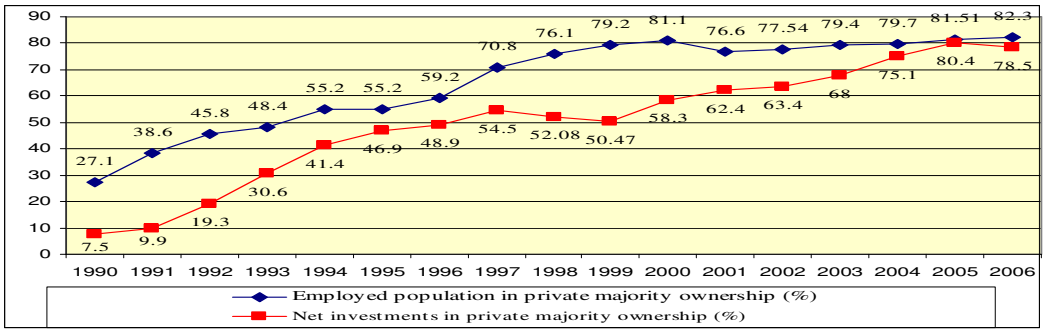
Source: *Statistic Yearbook of Romania,INS, 2007*, pg 138-139, pg.470-471

Table no. ***2. Correlation between weight of employed population and weight of net investments, on sectors of national economy, 1990-2006(%)***

Between the weight of net investments made in the sector of ***constructions*** and the weight of employed population in this sector, in Romania, in 1990-2006, a statistically significant relationship cannot be set, the Pearson correlation coefficient is (-0.04), for a significance level of 0.879 higher than the significance level of 0.1 for which the coefficient is significant, fact that emphasize that reduction of population in this sector is driven by other factors. We also have to mention that employed population in this activity in 1990-2006 reduced considerably from 706 thousand people to 513 thousand people, by 27.3% respectively [ASR, 2007, pg. 138-139].

Sector of services has proved the only sector within Romanian economy that at the end of 2006 compared to 1990 registered a excess of jobs, approximately 484 thousand (in this sector jobs rise from 2985 thousand in 1990 to 3469 thousand in 2006). In the same sector it is noticed a direct, strong correlation between the weight of net investments and the weight of employed population, fact statistically emphasized by the Pearson correlation factor of 0.726 for a significance level lower than 0.01. The growth of net investments made in the sector of services resulted in the rise of labour employment, in this sector, from 27.5% registered in 1990, to 41% registered in 2006.

Among other things, transition to the market economy resulted in the rise of employed population weight in the private sector from 27.1% to 82.3%. We consider that the growth of net investment weight in the private sector contributed to this development, from 7.5% in 1990 to 78.5% in 2006, according to figure no.3.



Source: *Statistic Yearbook of Romania, INS, 2007, pg. 140 and 473-474*

Figure no.3 Correlation between civil employment and net investments, by type of ownership (%)

In Romania, in 1990-2006, a very strong, direct relationship (Pearson correlation coefficient =0.934 for a significance level lower than 0.01) was set between the weight of employed population in the ***private sector*** in total employed population and the weight of net investments made by private companies, in total investments. This fact outlines the positive influence of net investments over labour employment, and as a result, 6970 thousand jobs were created, by 4573 thousand more than in 1990, by 90.7% respectively.

We consider that, on the whole economy, investments made in the private sector have proved insufficient to absorb the labour released by the public sector, without succeeding to create enough jobs to absorb those jobs diminished in the public sector.

4. Conclusions

In Romania, real investments, the second component of aggregate demand, in 1990-2006, have not proved enough to create new jobs. Following the statistic analysis made, and as regards the economic correlation set in Romania between investments and employment, according to ownership and sector of activity, as a conclusion it can be said that in order to increase employment it should act to rise the private and public investments in all sectors, but with a special focus on the sector of services.

For the investment to have the authentic stimulating role of Romanian economic sector, it is necessary to elaborate, and apply an efficient investment mechanism, to determine the economy actors, on the other hand, to mobilize as high investment funds as possible and from diversified sources and, on the other hand, to guide the funds concerned to other efficient activities of real economy. [2, p.246].

As a result, creation of new jobs by increasing investments is a healthy solution, the state should involve more and support the development of SMEs. The establishment and development of *small and medium sized enterprises,* is a solution comprised in the most efficient active policy of employment. On the other hand, when we sustain the need of developing the SMEs sector we should take into consideration that transition from the current economy to the *economy based on knowledge* assumes both increase of labour flexibility and *enterprise's flexibility,* dimensionally, structurally and functionally, and small and medium sized enterprises are considered to be the most flexible and adaptable.

References

1. Băcescu M., etc, *Macroeconomie intermediară,* Ed. Universitară, Bucureşti, 2004
2. Iancu Aurel, *Politică şi Economie. Repere ale unui sistem economic performant*, Centrul Român de Economie Comparată şi consensuală, 2000
3. Keynes J. M., *Teoria generală a folosirii mâinii de lucru, a dobânzii şi a banilor*, Ed. Ştiinţifică, Bucureşti, 1970
4. Stiglitz Joseph E., Walsh Carl E., *Economie*, Ed. Economică, Bucureşti, 2005
5. *Statistic Yearbook of Romania,INS, 2007*