

THE INFLUENCE OF FINAL CONSUMPTION ON EMPLOYMENT IN ROMANIA

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The economic theory and practice proves that between the final consumption, the main component of aggregate demand and the employment level in a country, as a rule a directly proportional relationship is set. In the present study, first of all, we want to outline the main influence factors of consumption, and then to emphasize the impact of consumption over employment in Romania, in 1990-2006. According to our research it results that in Romania, a direct and significant relationship cannot be set between dynamics of consumption and dynamics of employment, and hence we may state that the Keynes's economic theory is not valid as regards the relationship between consumption and employment.

Key words: final consumption, aggregate demand, gross disposable income, employment

1. Introduction

The condition, structure, intensity and evolution of employment or non-employment are driven by *the aggregate demand of goods and services* that in its turn is influenced by quantitative and qualitative dimensions of employment. As a rule, there is a direct and bivalent relationship between the aggregate demand and employment, thus reduction of aggregate demand involves reduction of employment and inversely, as the other influence factors do not change.

Final consumption is the most important component of aggregate demand in an economy, including Romanian economy. The knowledge of consumption behaviour of population and public administrations is an important source of information to understand the short term fluctuations and long term tendencies occurring within an economy, including in the foreign financial relationships reflected in the balance of payments. 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.

On the other hand, the knowledge of the consumption and the registered tendency is important because it can determine the part of the income that it is not consumed (or the postponed consumption) that is found in the economies level, part that is available to be invested, and the investments represent the engine of the economical growth on long term. The joint setting of a dependence relationship between the current consumption and future investments play a major role in determining the macroeconomic equilibrium. Thus, in a steady market economy, in the short term, when consumption and investments rise, production and employment increase, too. In the long term, distribution of national income between consumption and investments has a major impact over sustainable economic development.

2. Analysis of main factors influencing the level and evolution of consumption in Romania, in 1990-2006

According to the national statistics actual final consumption includes goods and services acquired by resident institutional unities for the direct satisfaction of individual or collective needs, the members of the community's needs [4, 2007, pg.421].

The Keynes's theory [3] says that at the macroeconomic level, the final consumption firstly depends on the *gross disposable income* (Y_d): $C=f(Y_d)$. The incline of the consumption's function is given by marginal propensity to consume, regularly, positive and sub-unit ($c'=\Delta C/\Delta Y_d$). Given the information above we can write the *function of the consumption in the following form*: $C=c*Y_d$ Expressed in this way the consumption's function, according to the psychology rule of Keynes, has the following property: if the disposable income grows (ΔY_d), then the consumption grows also but in a lower proportion ($\Delta Y_d > \Delta C$) and in reverse if the disposable income decreases, the consumption will follow the same trajectory, but in a lower proportion.

On the other hand, the total consumption includes in addition to the consumption, determined by the disposable income, an *autonomous consumption* (C_0), that provides the satisfaction of the minimum subsistence and that is positive [2, pg.67]. The autonomous consumption is the consumption of the ones that even if they don't have an income they still consume; it is the case of people who stay at home and of the children that spend from the income of the people that support them.

Economic practice has proved that this Keynes's consumption function is proved in the short term, but is invalidated in the long term. More research emphasized the need of reconsidering the issues of consumption and the Keynes's consumption function taking into consideration some *new aspects*, in order to ensure a better analysis and estimation of consumption behaviour, the *demonstration or imitation effect*, *the memory or clichet effect*, *the inertia effect*, *the general price level etc.* [1, pg. 427-431]

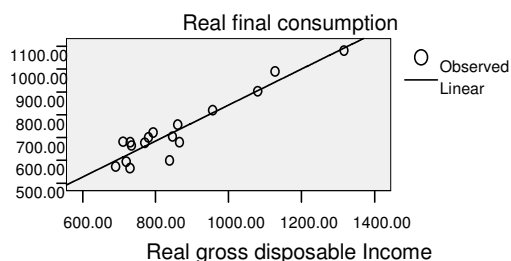
Analysing the issues of influence factors over consumption it is noticed that, in Romania, the main influence factor related to consumption is the gross disposable income. Following the actual statistic analysis (by means of software entitled *SPSS 13.0. for WINDOWS 2003*), the dependence between available gross income (Y_d) and final consumption (influence of available income over real consumption), in Romania, in 1990-2006 can be described by a linear regression as follows:

$$C_{\text{theoretical}} = a + b \cdot Y_d = 54,419 + 0,789 \cdot Y_d.$$

$$(t=0,874) \quad (t=11,037)$$

$$\sigma = 49,340 \text{ (estimated standard error)}$$

$$(F_{\text{calculated}} = 121,821; R^2 = 89\%)$$



The „a” parameter from the determined function has no economic significance, in the sense that there is an *autonomous consumption* at the national economy level, costing -80,987 billion lei, that does not depend on the gross disposable income. On the other hand, the big value of the parameter represents the influence of other factors, like the interest rate at the credits of consumption, in-house consumption, etc.

The value of the „b” parameter, from the consumption function written above, shows that there is a direct relation ($b > 0$) between the disposable gross income and consumption, and the value of 0,789 shows in the analyzed period, 1990-2006, at a modification of the disposable income with a unity the consumption would not be modified, in the same sense, with 0,789 unities, that means that at a growth of 1 billion lei the consumption grows with approximately 789 millions lei.

Value as tendency of disposition to consumption is 0.789 and some ideologists consider it typical to the economic recession period. But in 1990-2006, Romanian economy was not permanently characterized by recession, and there were two periods of economic growth during this time namely in 1993-1996 and in 2000-2006, fact that drives in this respect, too, the specific character of Romanian economy.

The value of the Pearson correlation coefficient, of 0.896, shows there is a direct, strong relationship between the two variables. The determination ratio (R^2) is 0.89, and shows that the size of consumption is influenced by the available gross income in a proportion of 80.7% and the remaining 11% is the influence of other factors such as: interest rate for consumption credits, self-consumption, price level, memory effect etc.

Years	Gross disposable income _{real} (billion lei)	Consumption _{real} (C) (billion lei)	C _{real} households (billion lei)*	I RE/ 1990 ¹ **%	IP ² /1990** %	Civil Employment (000.)
1990	865.20	679.50	557.0	100	100.0	10840
1991	838.16	599.32	464.0	81.5	74.3	10786
1992	729.64	566.02	431.7	70.8	63.1	10458
1993	690.43	572.82	435.6	58.9	56.3	10062
1994	719.33	594.56	446.7	59.1	55.0	10011
1995	780.52	700.52	505.2	66.5	61.4	9493
1996	846.33	704.64	545.9	72.7	63.1	9379
1997	770.20	677.46	525.8	56.2	50.3	9023
1998	710.58	682.22	528.6	58.4	49.2	8813
1999	733.55	665.16	522.8	57	47.2	8420
2000	730.37	679.50	523.6	59.4	44.0	8629
2001	793.12	722.31	559.2	62.4	46.6	8563
2002	860.32	756.96	585.9	63.9	48.2	8329
2003	956.10	820.16	634.6	70.8	51.6	8306
2004	1079.90	903.06	715.8	78.3	57.7	8238.3
2005	1127.36	990.03	782.8	89.5	62.3	8390.4
2006	1316.07	1081.76	872.3	97.4	683.1	8469

¹indices of real earnings IRE with fixed base 1990; ² average real pension indices IP of state social insurance pensioners with fixed base 1990; C_{real} households=Real Final consumption of households

Source: **Statistic Yearbook of Romania, INS, 2007, pg. 234, 299, Own calculation based on data from Statistic Yearbook of Romania, INS, pg. 428-429

Table no.1 Correlation between Gross disposable income, final consumption, employed population, 1990-2006

On the other hand, when analyzing consumption, as for influence factors and influence of consumption on employment, a distinction should be made between the final individual consumption of population and the final collective consumption of the public administration. The population consumption has the biggest weight in the final consumption, representing in 1990, 82.03% of total consumption and in 2006, 91%. The consumption of population had a floating development in 1990-2006, reaching a level of consumption of 56.61% in 2006 higher than that recorded in 1990.

Considering that wage is the main source of income for employed population, the relationship set between the population consumption and the real wages as well as the latter and the level of employed population recorded in Romania, in 1990-2006, are to be outlined as follows. Normally, the drop of buying power related to nominal wages, in other words, the reduction of real wages, (see table no.1) should have a negative impact over the demand of goods and services from the population. Statistically, by means of calculation and analysis of correlation factors (Pearson coefficient = 0.839 for a level of significance (sig. = 0.01) lower than 0.05) between the annual modification of population consumption and annual modification of real wages, there is a

strong, direct relation, fact that emphasizes that annual modification of real wages has driven the annual modification, to the same effect, of the demand of consumer goods from population and inversely.

The demand of goods and services from the population went down in 1990-2001 (until 2001 consumption was below that recorded in 1990) and resulted in **the reduction of pension in real terms**, particularly if we consider the number of pensioners increased very much (from 3679 thousand people in 1990 to 5785 thousand people in 2006, in 1997 being higher than the number of employees). Thus, if in 2001, real pension went down by 53.4% compared to 1990, it dropped by 31.9% in 2006 compared to 1990, so as the buying power of the pension has been 68.1% this year of that recorded in 1990. Also, reviewing the data in table no. 1, we notice that beginning with 2002, the index of average real pension improves every year, but not enough, in 2006 the level of pension representing only 62.3% of real pension in 1990 (see table no.1).

Although in 2006 both real wages and real pension were representing only a part of the level recorded in 1990 the households consumption was higher in 2006 than in 1990. The decrease of real wages and real pension should have normally lead to the drop of population consumption in 1990-2006, but this fact has not been recorded because the population consumption has as financing sources both the income of employees and pensioners, as well as other sources such as: income of other categories of employed population (entrepreneurs, freelancers etc.), income of employed population living abroad, self-consumption and credit for consumption.

If we consider the *conventional theory* of employment then reduction of real wages would have led to the rise of the number of employees. This issue is countered by increasingly low values of employed population in Romania, in 1990-2006. The rise of employment and reduction of unemployment respectively would have been possible only if there was a general balance: on the market of goods, on the market of labour and on the market of capitals. In the lack of this balance as well as the basic idea of classic liberalism that takes into account an economy with a full employment, where only volunteer unemployment is admitted, makes this theory irrelevant for the current situation of our country, where volunteer unemployment has a low weight.

Scarcity of own income to cover the needs of final consumption, has driven the consumers to use **consumption credits**, and between the size of a credit and that of a consumption is a direct relationship. Following the analysis of data in table no.2 it is noticed that in 2000-2006, the level of credit for the population rose very much every year. It is also noticed that the average active interest rate decreased by 37.02 percentage points in the aforementioned period and as a result, consumption credit increased. The weight of population credits in GDP shows a significant growth from 0.53% in 2000 to 11.39% in 2005, emphasizing a rise of the liability rate of population that may have negative effects over the entire mechanism of the national economy. We consider that not only the size of credit is alarming but its weight in GDP, and the fast growth pace of these indicators in Romania.

Indicators	2000	2001	2002	2003	2004	2005	2006
Credit to population (lei and hard-currency), in ,000 RON*	425963,4	799000	2089782	7501202	11874229	21370804	39271100
Weight in GDP* (%)	0,53	0,68	1,37	3,79	4,82	7,44	11,39
Average rate of active bank interest for non-governmental non-bank clients**	53,21	45,74	36,65	26,19	25,81	19,19	15,32

Source: *Own calculations based on data in the *Annual Report of the National Bank of Romania*, 2004, *Buletin lunar BNR* 1/2006, www.bnro.ro, *Statistic Yearbook of Romania*, INS, 2007; p. 428; ** *Buletin lunar BNR* 1/2005, 1/2006 ; and 1/2007

Table no. 2 Evolution of internal credits for population, in 2000-2005

According to the *International Monetary Fund's* opinion among the unbalances that continue to enhance in Romania, a strong rise of domestic demand is mentioned, as a result of a significant increase of consumption. The rise of consumption is based on credit that it currently continues to record a strong growth. While the increase of hard-currency based credit has slowed down its pace lately, the growth of

Romanian currency based credit has hastened. This change is due to the measures concerning the restriction of the hard-currency based credit adopted last year and the recent reduction of interest rate [7]. We consider the huge growth of population credit is a strong reason for the scarcity of own income to meet the needs of population in Romania.

3. Statistic-economic analysis of influence concerning final consumption on employment in Romania

The economic theory particularly the Keynes's theory, considers that employment is driven by the level of consumption i.e. the increase of final consumption (as the influence of the other components of aggregate demand is not taken into account) drives the growth of aggregate demand, that in its turn will stimulate the domestic production so as it meets the existing demand on the market, and consequently an additional number of jobs is created.

Following the statistic analysis based on the correlation coefficients, it is noticed the evolution of consumption, as the main component of aggregate demand, in Romania, does not influence significantly the evolution of employment, as the value of the Pearson correlation coefficient (0.117) proves that between the two economic variables (annual modification of consumption and annual modification of employed population) statistically, there isn't a significant relation (for a significance level (sig.) higher than 0.1, sig. = 0.667 respectively), fact that is in contradiction with the Keynes's theory according to which, reduction of employed population can be caused by the reduction of consumption (as a rule, there is a direct relationship between the two variables).

Based on the analysis of the data regarding the available gross disposable income, as the main factor of consumption influence, results that it is not greatly influenced by the existing level of employment in Romania and it doesn't influence significantly the level of employed population in Romania during 1990-2006. This statement is based on the Pearson correlation coefficient (0.329), achieved for a significance level (sig.) higher than 0.1 (sig. = 0.213), showing that between the modification of the available income and the employed population cannot be established a significant relationship from a statistical point of view. We have to mention that the available gross income is formed by incomes of the population employed in Romania as well as incomes belonging to the Romanian emigrants working abroad. As a result, the domestic consumption of goods and services is determined also by the income of the employed population living outside the Romanian borders

Taking into consideration that, in Romania, the growth of consumption does not drive the rise of employed population, on the contrary the employed population went down, therefore we consider the stimulation of consumption in Romania aiming to rise the extent of employment is not the best solution. In order to support these statements, we consider it is important to outline that in Romania, consumption is based **not only on domestic products but also on imported products**. In this respect, in the *Annual Report concerning the balance of foreign payments* it is mentioned that „*Maintaining the inclination to consumption of population in 2005 was ensured by imports, the demand of goods being higher and diversified than the potential of industrial sector* [5, pg. 9].

From statistic data related to evolution concerning the import of consumer goods it is noticed that contribution of imported consumer goods when meeting the demand of domestic demand of consumer goods lately, and not only, recorded a major growth, in this case, data in table no. 3 is relevant. In 2006 an increase of imported consumer goods by 103.5% was accounted compared to 2002, showing the high inclination to the consumption of these goods.

Indicators	2002	2003	2004	2005	2006
Imported consumer goods (Euro million)	2782.2	3148.7	3793.5	4742	5663
Index of imported consumer goods (%)	100	113.2	120.5	125	119.4
Weight of consumer goods in total import* (%)	16	16.1	15.6	15.8	15.1

*UNO group (from the foreign trade classification based on Major Economic Categories – The National Institute of Statistics), the import consists of raw materials, intermediary goods, capital goods and consumer goods

Source: Balanța de plăți și poziția investițională internațională a României, Raport anual 2002-2006, BNR

Table no.3 Evolution of imported consumer goods, 2002-2006

The fact that in Romania, compliance with consumption is mainly done by means of imported consumer goods and does not ensure the necessary conditions to create jobs in our country, due to reduction of domestic supply of goods and services, substitution of domestic production with supply provided by imports results in lowering employment. Therefore, the rise of import may drive the lost of jobs internally, importing not only goods and services but also unemployment, and other macroeconomic unbalances: deficit of trade balance and balance of payments, national currency depreciation etc.

4. Conclusions

The level and dynamic of the end-consumption (public and private), as main component of the aggregate demand, do not influence positively the level and evolution of the employment. Between the two macroeconomic variables, without establishing a direct and significant relationship statistically, fact that is contrary to the Keynesian theory. According to it the decrease of the employed population can be caused also by the consumption reduction (between the two variables being usually a direct relationship).

Based on this reason we consider that the impulsion of the consumption in Romania in order to rise the degree of employment is not the best solution, as it is known that the meeting of the consumption is based not only on domestic products but also on imported ones (existing a preference for these products), and under these circumstances the effects of the investment effort are reduced.

Based on the analysis of the data regarding the available Gross disposable income, as the main factor of consumption influence, results that it is not greatly influenced by the existing level of employment in Romania and it doesn't influence significantly the level of employed population in Romania between 1990-2006, between the modification of the available income and the employed population can not be established a significant relationship from a statistical point of view. We outline that domestic consumption of goods and services is driven by both income provided by employed population in Romania and income of employed population working abroad.

On the other hand, in a market economy, as the Romanian economy is required to be, the consumer should have the „king” status and a high satisfaction. In this respect, by means of a suitable economic policy, the state should ensure the price stability, increase of real wages, increase of consumer goods quality etc.

The actual tendency, at national and international level, of the growth of the consumption in the detriment of savings, represents a problem, because on long term, the formation of the capital of a country is determined by the national savings rate. As this rate is decreasing we wonder about the formation of the developing base of an economy – capital. Economy and Romanian society should promote the requirement of increasing savings by the population so this is able to face the future higher needs of money. Also the savings decline has major involvements over the investments volume and over the macroeconomic equilibrium.

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