

# INFLATION PROCESS IN ROMANIA AFTER 1990: MONETARISTE OR NEO-KEYNESISTE CAUSES?

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*Abstract*

*Our paper represents a study on the inflation process in Romanian economy after 1990. The purpose is to identify which are the most important factors that caused and sustained the inflation's evolution in our country. In order to achieve our purpose, we will start our research analysing the statistical data, observing the impact of the economic factors on the evolution of inflation. Using the data analysis results, we will emphasize which of the most two known theories on inflation causes, monetariste or neo-keynesiste theory, represent the main cause of Romanian inflation process.*

*Key words: inflation, monetariste theory, neo-keynesiste theory*

## 1. Introduction

During the time, the inflation process represented a problem, always actually, in the economic debates. This situation is explained by the economists' interest to better understand the inflation phenomenon and to find new solutions in order to manage and decrease the inflation level. In the economic theory they have been developed two visions on the inflation's causes: the monetariste theory and the neo-Keynesian theory.

The monetarism is an economic theory which focuses on the macroeconomic effects of the supply of money. This vision was formulated by Milton Friedman and Anna Schwartz in their paper "Monetary History of the United States 1867-1960", where they argued that "inflation is always and everywhere a monetary phenomenon". Their point of view was that an excessive expansion of the money supply is inflationary and that monetary authorities should focus only on maintaining price stability by keeping the supply and the demand of money at equilibrium.

The neo-Keynesianism is an economic theory which sustains that inflation represents the result of the disequilibrium situations appeared in the real economy. Economists like Paul Krugman, Joseph Stiglitz or Robert Gordon argue this theory, and by their works, they illustrated that inflation is caused by:

- a higher aggregate demand (the sum of total demands from economy: consumers' consumption, firms' investments, public expenditures and net exports) for goods than the aggregate supply (the total supply of an economy) – named demand-pull inflation;
- the unexpected and uncontrollable evolution of production costs – named cost push inflation or supply shock inflation, because is also caused by the supply shocks;
- the trade off between unemployment and inflation - named Phillips Curve;
- the wage bargain, in order to keep up the nominal wages with inflation, causes a vicious circle – named price – wage spiral;
- peoples' expectations about what will happen with inflation. They based their expectations on what has happened in the past and on all the information available at the present moment.

Now, knowing the causes that might determine the evolution of inflation, we will analyze separately each factor presented by these two theories in order to find out their relevance in Romanian case.

## 2. Inflation and the monetarist causes

According to the quantity theory of money, there is a positive relationship between the broad money and the general level of prices of an economy. It is known that the level of prices is rising only in the situation when the real Gross Domestic Product (GDP) growth rate is lower than the broad money growth rate:

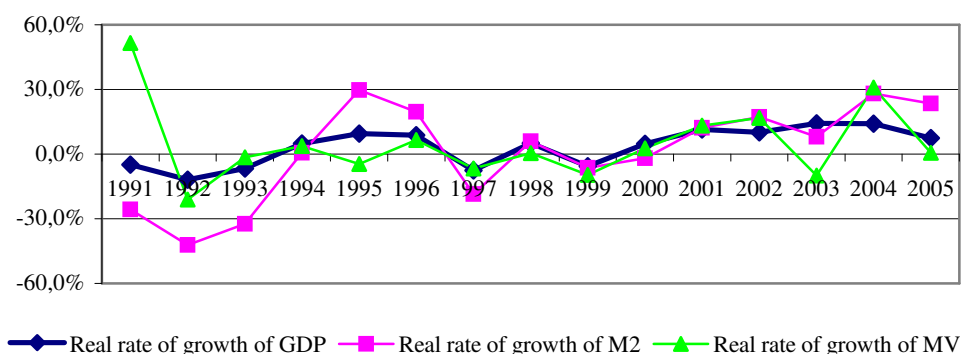
$$(1) \quad M \cdot V = P \cdot Q$$

where: M – broad money, V – velocity of money, P – general level of prices and Q – GDP.

Taking into consideration the analysed data, after 1990, in Romania, we found that the influence between inflation and the broad money was developed in two directions: the broad money influenced the level of inflation and the inflation influenced the level of broad money. Looking on the graph 1, we observe that only in 1995, 1996, 2002, 2004 and 2005 the real growth rate of GDP is lower than the real growth rate of

M2, while, in these periodes, the inflation rate is decreasing. Owing to this situation, the economy's degree of monetization, computed as M2/GDP ratio, recorded very low values (21.4% in 1994 – represented the lowest value). So that, we consider that the evolution of M2 was not, in most of the cases, inflationary, because all along this period his level was under the suitable value.

**Graph 1 – The evolution of real rates of GDP, M2 and MV**



Source: NBR – Annual Reports 1998-2004, Monthly reports: December 2000-2006

Due to the fact that in the specific period the velocity of money has suffered consistent changes, we considered that it is important to analyze the evolution of real rate of growth of MV, also. The money velocity reached very high levels (7.48 rotations/year in 1994 – was the biggest value), which has reflected the decrease of peoples' confidence in the national currency and the economy's demonetization. According to (1) the inflationary pressures appear only when the growth rate of MV is greater than the growth rate of GDP. Looking on the graph 1 we observe that only in 1991, 1993, 2002 and 2004 the real growth rate of GDP is lower than the real growth rate of MV. So that, we consider that the evolution of MV was only in a few cases inflationary.

Using the regression analysis, we identify that there is a very strong correlation between the evolution of Consumer Price Index (CPI – used for inflation estimation) and the evolution of M2 in real terms ( $R = -0.902$ ), but the evolution of M2 influence only in  $R^2 = 81.39\%$  the evolution of CPI.

As a conclusion, we argue that the inflation process in Romania had not a strong monetary character and it was not only a negative effect of the monetary policy weaknesses.

### 3. Inflation and the neo-Keynesian causes

#### 3.1. Demand-pull inflation

The demand-pull inflation had developed in Romania as a result of the expansion of the intern credit, growth of the budgetary deficit and increase of the current account deficit.

In order to help their development, at the beginning of 90's, National Bank of Romania (NBR) was constrained to borrow money with preferential interest to agriculture and energetic sectors. These loans did not help much the results obtained in these areas, because the producers were not stimulated to become more competitive. Adding the fact that the loans were covered by monetary emission, we consider that this situation determined inflationary pressures on economy.

Another stage on the growth of the internal credits has been recorded starting from 2000. After this year, as a result of the economic recovery, the firms and the consumers raised their demand for consumption: on one hand, the companies borrowed more money because they needed to invest in modern technologies, in order to become as competitively as the European Union standards requires, and on the other hand, the consumers, with a greater level of income, raised their demand for credits on long (used to purchase long term use goods) and short term (consumption credits). According to the National Institute of Statistics, after 2000, the level of internal credits is rapidly raising, situation which exert, in our opinion, a very powerful inflationary pressure on the prices. Our view is sustained by the actions taken by the NBR in 2004 – 2006, in order to attenuate the credits' growth.

As was presented, the credit evolution create inflationary pressure, on short term, by monetary emissions and by raising consumption, but on long term it sustains the growth of GDP, helping to the reduction of inflationary pressures. Due to this two opposite influences, when we calculated the correlation index, between the real rate of growth of credits and CPI, we obtained the value  $R = -0.811$ , which means that

between this two variables there is a powerful negative correlation. The determination index ( $R^2 = 65.85\%$ ) shows that the evolution of credits influence the evolution of CPI in a proportion of 65.85%.

Along the specific period, the Romanian government chose to spend more than it receives from taxes. Due to this fact, the budgetary deficit recorded higher values every year. In the 90's, while inflation was reducing the purchasing power of population, the government raised his expenses in order to stimulate the economic growth. This aspect can be observed if we take a look on the statistical data: during the 90's, the budgetary deficit as a percentage in GDP recorded levels greater than 2.5% from GDP, reaching in 1996 the higher value, 4.9% from GDP.

Studying the correlation between the budgetary deficit and CPI we obtained a correlation index  $R = -0.585$ , which means a very weak correlation between this two variables. In consequences, we sustain that as graters are the budgetary expenses than incomes, the inflationary pressures are higher, but, in our case, the budgetary deficit had not a great influence on the evolution of CPI.

Another macroeconomic variable that illustrates the differences between the aggregate demand and aggregate supply is the current account of the balance of payments. In Romania, along the specified period, the current account recorded only deficits, which means that the imports were greater than exports, the goods demand being greater than goods supply. Before 1997 NBR using a fixed exchange rate mechanism any differences between the imports and export created the inflationary pressures on the demand side, while, after 1997, NBR using a managed floating exchange rate the current account deficits determined inflationary pressures on the supply side (cost push inflation).

The determination index between the real evolution of current account and CPI,  $R^2 = 17.51\%$ , shows that current account had a very weak influence on the evolution of CPI.

As a conclusion, having these results on the factors that create demand-pull inflation we think that, in Romania, the phenomenon of demand-pull inflation was not so intense during the 90's. After 2000, when the purchasing power of the population started to rise, the growth of the goods' demand has accentuated. This aspect was confirmed by the NBR, which affirms that, at this moment the demand-pull inflation represents the biggest threat for his strategy of reaching the inflation target.

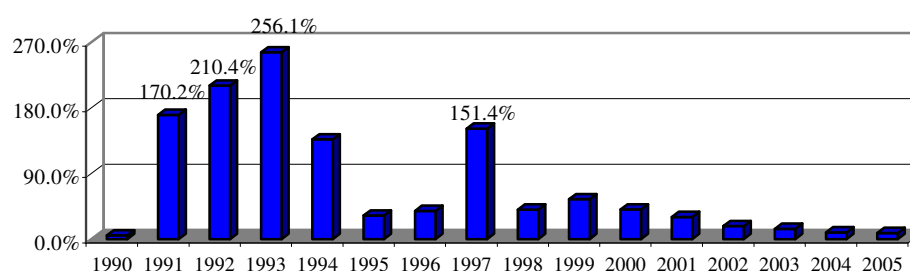
### 3.2. Cost push inflation and price-wage spiral

The cost push inflation appeared in Romania as a result of inadequate strategies for the price liberalization policy, wage policy and exchange rate policy.

In the process of passing from a centralized economy to a market economy, the Romanian government chose to change the economic system by the gradualist steps strategy. In order to protect the people from the loss of their purchasing power they implemented a process of gradualist liberalization of prices. No matter if it was realized by subsidies reduction, exchange rate devaluation or wages indexation, every stage implemented, in the process of prices' liberalization, determined generalized rising of prices. The process started in November 1990 and has developed in four stages: the first one, from November 1990 until March 1991, the second, from April until November 1991, the third, from September 1992 to 1994 and the last one, in February 1997.

As we can see on the graph 2, the impact of prices' liberalization was significant, the inflation rate reaching very high values during these periods. We consider that, the situation was the result of peoples' mentality, which expects that when the prices of some essential goods are rising, most of the goods' prices will rise, even if they are not directly affected.

**Graph 2 – Inflation rate in Romania: 1990 – 2005**



Source: NBR – Annual Reports 1998-2004, Monthly reports: December 2000-2006

The Romanian wage policy applied after 1990 was totally inadequate being one of the main causes of the inflation. The problem was that the correlation between labor productivity and wages' evolution was very weak. In most of the cases, the wage raises were greater than the productivity raises, so, the firms were confronted with higher costs. Especially in 90's, the wage raises were the result of the syndicalism pressures, most of the branches with strong syndicalism structures obtaining unjustified salary raises.

We consider that the wage policy had a great influence on the evolution of inflation raising the production costs. Our conclusion is sustained by the results obtained for the correlation and determination indexes. The correlation index between the nominal wage and CPI illustrates the existence of a very strong correlation ( $R = 0.975$ ), while the evolution of nominal wage influenced the evolution of CPI in a proportion of  $R^2 = 95.11\%$ . We believe that we obtained such a high value for the determination index because the strikes represented the beginning point of a price-wage spiral. In our opinion, this phenomenon had developed very well because the Romanian governments, being dedicated to the gradualist steps strategy, had not the capacity to decline strikers' demands.

Another element that had an important influence on the evolution of inflation was the exchange rate policy: when the national currency devaluates, the imported goods are more expensive, the production costs of the firms which use imported materials are raising and the prices increase. NBR had to follow two goals in the coordination of exchange rate policy: on one hand, to support the disinflation process and, on the other hand, to maintain the competitiveness of the Romanian goods on the foreign markets (government desire). Due to the fact that it is impossible to achieve both goals one at time (to support the disinflation process the national currency must appreciate, while to support the goods competitiveness on foreign markets the national currency must devalue), the NBR realized a trade off between this two goals. Although the Romanians were very sensitive to the changes appeared in the value of the exchange rate (because they used, all along this period, the foreign currencies to hold their savings), NBR chose, in some cases, to put on the first place the foreign competitiveness of goods risking to amplify the population's inflation expectations. We sustain that these decisions of NBR reduced the populations' confidence in his capacity to control and to reduce the level of inflation, amplifying their expectations.

The strong correlation existent between the evolution of exchange rate and CPI can be very easy observed analyzing the statistical data. Not only their trends are identical, but the determination indexes showed that the evolution of dollar influenced the CPI in a proportion of 79.01%, while the evolution of euro influenced the CPI in a proportion of 63.67%.

As a conclusion, we consider that the cost push inflation process and the price-wage spiral were very intense in the 90's, period when the correlation between the fiscal policy, wage policy, exchange policy and monetary policy was very fragile. After 2000, when the policy mix became more consistent than before, the process of cost push inflation reduced his intensity and the government gained the power to decline some of the syndicalism demands in order to sustain the stability of prices.

### **3.3. Phillips Curve**

The economic theory sustains that, on the short term, the governments are able to make a trade off between the inflation and unemployment. Analyzing the evolution of inflation and unemployment, in Romania, after 1990, we consider that their evolution respects the economic theory. More than that, we consider that the Romanian governments tried in the 90's to apply this theory. Looking on the statistical data, we think that our governments tried "to spend against the wind", as Keynes suggested, the goal of inflation being left on the second place. They tried to create economic growth by: running budgetary deficits, according subsidies to the unproductive branches, conducting a very lax wage policy and decreasing unemployment.

Starting from 2000, the situation has changed: the economic environment became more stable, and it was no longer necessary to stimulate the GDP growth by the measures used before. Taking into consideration the inflation targeting strategy, adopted in 2004, NBR could not afford anymore to let the inflation target on the second place.

## **4. Conclusions**

In our opinion, the inflation process in Romania had his roots on the neo-Keynesian theory. The demand-pull inflation, cost push inflation and the wage-prices spiral were present in our economy: in the 90's we experimented, more intense, the cost push inflation and wage-price spiral, while after 2000, we experimented, more intense, the demand-pull inflation. We do not reject the inflation's monetarist causes, but we believe, that in the Romanian case, their influence was a low one.

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