

THE ECONOMIC-SOCIAL INFLUENCES OF THE CONSUMER PRICE INDEX: THE CASE OF POST-COMMUNIST ROMANIA

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Abstract

The consumer price index plays an important role in the current economic-financial activity because the income level is updated with the help of the rate of this index, both in the private environment and in public institutions, which means that if the level of the index is high, salaries or pensions are increased accordingly. The objective of this paper is to examine the impact of the most important aspects related to the consumer price index and some of the most important macroeconomic determinants in Romania. The authors consider this research proposal necessary because it has been observed that the consumer price index influences the economic situation within a country and causes changes in unfavorable directions on macroeconomic indicators. The study is based on a set of statistical data covering the period 1990-2021. The result of econometric model indicates that all the proposed independent variables - economic growth, labor productivity, invested capital, gross salary, net salary, have a significant impact on the consumer price index - the dependent variable. Our opinion is that the consumer price index influences to a large extent the economic and social activity of Romania because following the results of the econometric analysis it was found that Capital investment and Grosswages are the main factors that led to the increase of the Consumer Price Index, while the study presents and some unfavorable directions (Economic Growth, Labour productivity, Net wages) with direct influence on Consumer Price Index.

Keywords

Consumer Price Index; regression analysis; Ordinary Least Square; macroeconomic factors; Romania case

JEL Classification

L16, E31, F37, F47

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Introduction

Among many economists around the world, the relationship between the consumer price index and multiple other variables has been analyzed at the macroeconomic level and is considered a very important chapter both theoretically and empirically.

In the 1990s, inflation and implicitly the consumer price index represented, according to the Inflation Reports presented by the National Bank of Romania, a major problem arising as a result of the initiation of liberal economic reforms. After this, as prices and exchange rates were gradually liberalized, the consumer price index began to rise. According to the statements given by the Leader of the Fiscal and Legal Assistance department, EY Romania, Alex Milcev, inflation during the 1990s was very difficult to understand because money lost its value in a short time. At the same time, it shows that during that period most entrepreneurs faced the effects of high inflation, but the reality was different, loss. These effects appeared as a result of "the deterioration of economies, especially in the conditions of a negative real interest rate, a phenomenon doubled by the continuous devaluation of the national currency, which, paradoxically, allowed the permanent indexation of prices, since they were calculated according to the exchange rate currency".

The 2000s show the harmonized index of consumer prices with a modest return, but without managing to reach the level targeted by the National Bank of Romania. But the battle of consumer prices was far from over, on the contrary, it seemed to become even tougher with the onset of the international financial crisis that led to explosive price increases. However, we did not reach the hyperinflation of the 1990s, but as can be seen the topic of inflation is easily reopened to any negative economic change that involves the increase in consumer prices to the same extent. Based on the analyzes undertaken, it could be observed that the change in price behavior, in general, was caused by both exogenous and endogenous factors. Therefore, the research will try to provide certain pertinent answers regarding the influence of several factors on the consumer price index.

The outbreak of the coronavirus pandemic marked a change in the direction of the consumer price index. According to the statistics of the National Institute of Statistics, in 2020, with the start of the COVID-19 pandemic in Europe, there was a fast increase in consumer prices due to some international factors, among which we can mention: the sharp increase in energy prices, the increase in raw materials in global markets and also multiple changes in investment decision making have been identified. The desired direction, however, seems not to have appeared even in the current period, because a new extreme shock wave appeared through the Russian invasion of Ukraine. The consumer price index therefore shows a sudden increase in an already difficult economic context, given that the countries involved in the war are some of the most important in the exports of goods at the global level.

We believe that these 32 years after Romanian communism were years of transition and development of the economy that brought a positive trend, a development of the business environment and an improvement in the living standard of the population.

Graphically presented the consumer price index exposes the following evolution in Romania during the last 32 years.

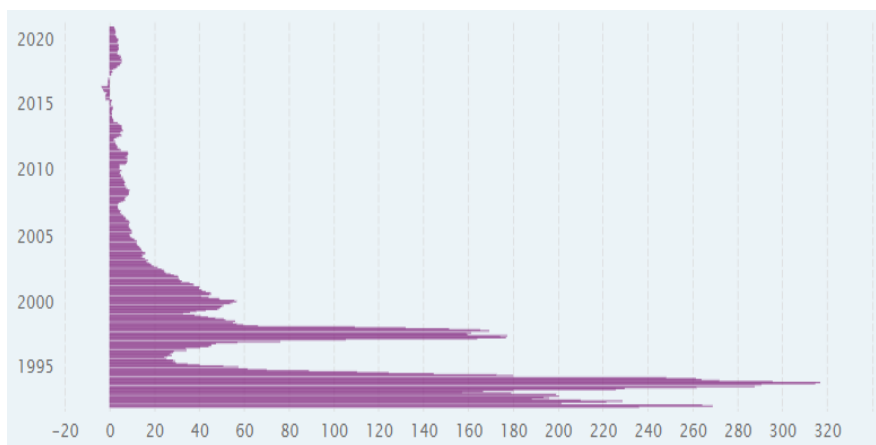


Chart 1: Evolution of Consumer Price Indices in Romania - Monthly

Source: Own processing according to the National Institute of Statistics, www.insse.ro

The result of the Romania Consumer Price Index (CPI) - Monthly series, measures the oscillating values with a maximum of 317.0% in November 1993 and a minimum of -3.5% in May 2016 (see Chart 1). According to our analysis, the consumer price index shows an increase in the general level of prices for both goods and services, in the period 1991-1993 as a result of the post-communist influences to which Romania was subjected during that period. After that period, a plateau line of the consumer price index can be observed at the level of Romania, this fact means that at the macroeconomic level there is an attempt to decrease this index, although we believe that inflation will represent a sustainable problem at the global level still many years from now.

Summarizing the evolution of inflation and the consumer price index in the post-communist period in Romania, due to the events we identify a series of causes that present the trend:

- following the initiation of liberal economic reforms in 1990, as prices were gradually liberalized, inflation began to rise;
- inflation records in Romania, with a peak recorded in 1993;
- following the elimination of subsidies, a new inflation crisis occurred in 1997;
- the beginning of the economic-financial crisis, year 2008, causes an increase in the consumer price index;
- the year 2014 brought the annual inflation to a historical minimum;

- the COVID-19 pandemic changed the usual consumption habits and with them also the consumer prices, in 2020;
- against the background of the imbalance between demand and supply, in the year of the war, 2022, there was a sudden increase in consumer prices.

The present research paper is further organized as follows: section 2 provides a review of previous literature on the consumer price index and influencing factors, followed by a description of the statistical data analyzed and the methodology used further in section 3. Section 4 presents the results of the proposed model as well as their interpretation by the authors of the paper, following that in the last section 5, the conclusions of the study and its limits will be highlighted.

1. Review of the scientific literature

Presented in a broad perspective, the consumer price index (CPI) is considered to be a detailed indicator for determining inflation at the national level. As a reliable measure of inflation, the consumer price index is the way that responsible macroeconomists use it to keep record of how prices vary in the economy. According to the documentary materials issued by the European Central Bank, most continental countries present a simple and judicious approach to measuring inflation - by using - the consumer price index, which is shown to measure the variations in the consumer prices of goods and services. However, the CPI is not the only index of prices in an economy, and there is another index of similar economic importance, called the producer price index - which measures changes in selling prices, operated over time by producers of goods and services.

Determined as a Laspeyres-type index, the CPI follows exactly the methodology presented in the Manual of Consumer Price Indices, which is developed by the International Labor Office, the International Monetary Fund, the Organization for Economic Cooperation and Development, the Statistical Office of the European Communities and the World Bank.

Many researchers, Volodymyr Shinkarenko, Alexey Hostryk, Larysa Shynkarenko, Leonid Dolinskyi (2021); Chaitanya Singla, Pradeepta Kumar Sarangi, Sunny Singh, Ashok Kumar Sahoo (2019); Adi Widya Prayogo, Tri Haryanto (2020); Hossein Hassani, Emmanuel Sirimal Silva (2018) see the consumer price index as a more efficient way of calculating the inflation rate, as well as a weighted average of the prices of an exhaustive list of goods in the economy. Therefore, the consumer price index covers monetary expenditure on goods and services for final consumption, for all types of resident households, except for institutional households, in order to provide the most relevant and accurate picture of inflation. The CPI can be seen as a way of broadly measuring the prices of a fixed expenditure model.

By consulting the empirical studies we have identified a wide range that investigates the link between the consumer price index and the other variables taken into analysis, but also other variables not included in the present study, such as money supply, interest rates Umaid A. Sheikh, Muzaffar Asad, Aqeel Israr, Mosab I. Tabash & Zahid Ahmed,

David McMillan (2020), monetary aggregates, discount rate, exchange rate affect inflation Dušan Cogoljević, Milan Gavrilović, Miloš Roganović, Ivana Matic, Ivan Piljan (2018). The first line of research focuses on investigating the correlation between the consumer price index and economic growth. Many international researchers have investigated the relationship between the consumer price index and economic growth in developing countries. The research works on the correlation of the consumer price index and economic growth present approaches that can be divided into two categories. The first category refers to the positive correlation where Mallik and Chowdhury (2001) through empirical research found that in Bangladesh, Pakistan, India and Sri Lanka there is a positive and significant relationship between inflation and economic growth, and Muhammad Nasir, Lianti Lianti, Muhammad Syuib, Hamdani Hamdani, Safaruddin Safaruddin (2021) identified the positive relationship between the two indicators also in Indonesia. In a study from the year 2004, Sweidan (2004) following the investigations carried out in the analysis of the exposed correlation, found that in Jordan there is a significant relationship between the two variables under analysis. On the other hand, other works in the literature show a negative relationship between the consumer price index and economic growth, as we find in the study from China presented by Pan, L.; Amin, A.; Zhu, N.; Chandio, A.A.; Naminse, E.Y.; Shah, A.H. (2021). For example, an extensive study carried out for a sample of 140 countries, carried out by Khan and Senhadji (2001), shows that with the increase in the consumer price index, a negative effect of economic growth is found. Moreover, the relationship of the two variables studied in Bangladesh by Ahmed and Mortaza (2005) shows a long-term negative correlation that could produce repercussions on the development of total factor productivity.

An important number of studies in the specialized literature have focused on studying the correlation between the consumer price index, labor productivity and wages. Bédia F. Aka and P. Pieretti (2008) found that the consumer price index is negatively related to labor productivity, but wages are not significant in explaining the behavior of the consumer price index in Luxembourg. In Chor Foon's (2014) study, the relationship between labor productivity, wages and consumer price index in Malaysia is examined by using bounds testing approach for cointegration and causality. The results of this study suggest that the consumer price index is negatively related to labor productivity, rather it shows a bilateral causality in the short and long run. We find that the study of the index of consumer prices, labor productivity and wages is also analyzed within the narrow framework, on certain branches of the industry. One such research work is that of Turkey, where the interrelationship of variables is studied in the manufacturing industry over a long period of time. Researcher Zekeriya Yildirim (2015) found that the consumer price index has a greater effect on labor productivity than on wages. Moreover, the causality test shows that there is a strong relationship between inflation and labor productivity, which means that inflation policymakers should follow labor productivity.

Nasir Iqbal and Saima Nawaz (2010) investigated the impact of consumer price index on economic growth with the possibility of two threshold levels for Pakistan over a period of 45 years and also investigated the non-linear relationship between inflation

and investment. They found that the consumer price index below the threshold has a positive but insignificant impact, while above the threshold it has a strong negative and significant impact on investment. Jakob B. Madsen in his study shows that inflation limits investment, because depreciation for tax purposes is at historical costs and at the same time the liquidity of companies is constrained by decreasing leveraged accounting profits. On the other hand, Ana Čuvak, Žilvinas Kalinauskas (2009) and Max Gillman, Michal Kejak (2011) found evidence that the consumer price index increases the investment rate. This leads to lower and lower investment which ultimately causes capital to fall relative to labor and the interest rate to rise.

Therefore, our scientific contribution is a broad one, because it uses a vast sample, for a period of 32 years, which offers the possibility of selecting the econometric model that best approximates the relationship between the proposed variables in the case of Romania, and also it allows us to assess the influence of the indicators. So, unlike previous studies, which examine short periods of time and mainly with the consumer price index as an independent variable, in our study we use panel estimation techniques based on the history of the variables at the level of Romania to detect potential relationships between the variables the model.

2. Research methodology

In order to achieve the research objectives, we believe that accurate statistical data collection and appropriate model construction are essential to bring valid empirical results.

In addition to the theoretical approach presented in the previous paragraph, the research methodology also includes the practical approach to study the index consumer prices through econometric methods. The data under analysis were taken from the statistics of the National Institute of Statistics, covering the period after communism until now, 1990-2021.

The model uses important macroeconomic indicators at the national level. The dependent variable is the consumer price index, and the independent variables are the following indicators: Economic Growth – A. H. M. Yeaseen Chowdhury, Md. Kaysher Hamid, Rowshonara Akter Akhi (2019) which investigates the impact of macroeconomic variables on the economic growth of Bangladesh; Uzma Khan, Arif Mohammad Khan, Md. Shabbir Alam, Nauf AlKatheeri (2022) which examine the causation between consumption, export, import, and economic growth for the Sultanate of Oman using yearly time series data collected from the World Bank for 2000-2018; Asma Fiaz, Nabila Khurshid, Ahsan ul Haq Satti (2022) which assesses the impact of macroeconomic variables on Pakistan's economic growth, Labor Productivity - Guzel Salimova, Alisa Ableeva, Aygul Galimova, Ramzilya Bakirova, Tatiana Lubova, Aidar Sharafutdinov, Irek Araslanbaev (2021) which study and analysis productivity of the labor force in agriculture as an important industry for ensuring the sustainable development of the country; Geert Woltjer, Michiel van Galen & Katja Logatcheva (2021) which examines the relationship between firm-level innovation and employment growth for industrial firms in the Netherlands, Capital Investment - Nicolas Crouzet

Janice C. Eberly (2019); Vanja Grozdić, Marić Branislav, Radišić Mladen, Jarmila Šebestová, Marcin Lis (2020) which examines the effects of capital investment on firm performance using panel data analysis; Sharif N. Ahkam, Khairul Alom (2019) which investigates the relationship between current ratio, the level of investment in working capital, and profitability of firms in Bangladesh for the years 1998-2014, Gross Salary and Net Salary - Emilia Herman (2020) which empirically investigate the labour productivity-wages nexus in the Romanian manufacturing industry; Çiğdem Ekiz (2022); Suhányi Ladislav, Alžbeta Suhányiová, Jaroslava Kádárová, Jaroslava Janeková (2023) which emphasizes the significance and importance of the manufacturing sector in the countries' economy. The dependent and independent variables are provided in Table 1.

Table 1: Variables Description

	Symbol	Description
Dependent variable		
Consumer Price Index	<i>CPI</i>	covers monetary expenditure on goods and services for final consumption, for all types of resident households, except for institutional households, with the aim of providing the most relevant and accurate picture of inflation
Independent variables		
Economic Growth	<i>EG</i>	the positive change in the production of goods and services in an economy over a specified period, which is usually over a long period
Labour productivity	<i>LP</i>	measures the efficiency of the work performed in a certain period within the economic activity
Capital investment	<i>CI</i>	the amount of money raised by issuing securities to stockholders and debt to bondholders
Grosswages	<i>GW</i>	the expenses that an employer has with each individual employee and which include the employee's remuneration (3,000 lei per month in 2023)
Net wages	<i>NW</i>	the sums of money that the employee receives, being in fact the gross salary corrected with the mandatory deductions (payroll taxes, fees, contributions)

Source: Own processing according to the National Institute of Statistics, www.insse.ro and the National Bank of Romania, www.bnr.ro

To identify the impact of macroeconomic variables on Consumer Price Index in Romania following hypothesis are considered:

H0: Macroeconomic variables don't have significant impact on the Consumer Price

Index of Romania

H1: Macroeconomic variables have significant impact on the Consumer Price

Index of Romania

We consider the research method used (econometric quantitative method) to be suitable for our study because it allows the evaluation of the intensity of the link between the Consumer Price Index and specific independent variables.

The proposed econometric analysis is a multiple regression analysis where several variables are estimated using the statistical package Eviews 12. The selection of variables was carried out by studying the specialized literature, so according to all the research carried out and the critics we obtained at the following multiple regression model, represented by the following empirical function:

$$CPI = f(EG, LP, CI, GW, NW) \quad (1)$$

A summary table of statistics for these variables is given below in Table 2. Looking at the data presented in Table 2, we find that the average rate of the consumer price index is 137.78%, while the rest of the variables require a detailed evaluation. From the analysis of the 32 years through descriptive statistics, the results suggest that the gross salary and the net salary present a more unstable structure compared to the rest of the indicators of the econometric model. It can be seen that the specified ones are supported by the values of Skewness - GW (2.22) and NW (2.21), Kurtosis - GW (6.85) and NW (6.85). At the same time, the findings are also supported by the highly significant value of the Jarque-Bera statistic - GW (46.20) and NW (45.97). Through extensive Skewness analysis, it has values greater than 0 for consumer price index, labor productivity, invested capital, gross wage and net wage. Therefore, these indicators have a left-skewed distribution, and with values lower than 0 we only have the labor productivity indicator that presents a right-skewed distribution. The Kurtosis indicator shows that most variables (with the exception of labor productivity) have positive values and a normal distribution.

Table 2: Descriptive statistics

Statistics	CPI	EG	LP	CI	GW	NW
Mean	137.7780	2.574063	40562.24	25.57219	1010434.	742739.8
Median	107.2050	3.280000	30204.50	24.41500	5033.000	3299.0000
Maximum	356.1000	10.43000	124420.1	40.70000	8183317.	5986386.
Minimum	98.45000	-8.770000	215.6000	15.65000	968.0000	746.0000
Std. Dev.	64.96735	4.404223	39376.82	5.026510	2117409.	1541196.
Skewness	2.230037	-0.683149	0.602201	1.032200	2.226644	2.214819

Kurtosis	6.942043	3.194740	2.136848	4.639361	6.850406	6.854367
Jarque-Bera	44.28996	2.539595	2.927489	9.265665	46.20988	45.97046
Probability	0.000000	0.280889	0.231368	0.009727	0.000000	0.000000
Sample	1990-2021					
Observations	32					

Source: authors' processing

The proposed model for analyzing the factorial influence of independent variables on the consumer price index is presented by the following multiple linear regression model, expressed in the form of the following linear relationship:

$$y = \beta_0 + \beta_1 \times x_1 + \beta_2 \times x_2 + \beta_3 \times x_3 + \beta_4 \times x_4 + \beta_5 \times x_5 + \varepsilon \quad (2)$$

in which: y – the value of the dependent variable; β_0 – the regression constant; $\beta_1 \dots \beta_5$ – parameters of the regression model; $x_1 \dots x_4$ – the values of the independent variables; ε – error

to improve the proposed model, it is transformed by logarithmizing the variables of labor productivity and wages, as follows:

$$\log(y) = \beta_0 + \beta_1 \times x_1 + \beta_2 \times \log(x_2) + \beta_3 \times x_3 + \beta_4 \times \log(x_4) + \beta_5 \times \log(x_5) + \varepsilon \quad (3)$$

The continuation of the research requires analyzing the presence of unit roots through the Unit root test – Augmented Dickey-Fuller (ADF) to determine the order of integration of each series of statistical data.

Table 3: Unit root test – Augmented Dickey-Fuller

Test Statistic	CPI	EG	LP	CI	GW	NW
t-Statistic	-	-	4.628220	-	-	-
Probability*	0.0020	0.0054	1.0000	0.0005	0.2277	0.2240

Source: authors' processing

*MacKinnon (1996) H_0 = Variables is one-sided p-values

From the information provided in Table 3, the variables are integrated and not stationary at a significant level. This fact can be demonstrated by the fact that the critical value is greater than the Augmented Dickey-Fuller value, which means that the model variables do not show stationary values. The p-value of the investigated variables presents in most cases values below the allowed limit, which makes the variables stationary, the exception being the Labor Productivity indicator.

3. Results and discussions

In this section, an estimation check was performed in order to see the validity of the proposed econometric model and the significance of the variables investigated by the method of least squares. The equation of the multiple regression model (3) which had as dependent variable \log (CPI), and as independent variables EG, \log (LP), CI, \log (GW), \log (NW) and the constant variable C, requires correlation analysis. The estimation of the regression parameters and the test results are presented below:

Table 4: Estimating the parameters of the linear regression model for the CPI dependent variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.895758	0.518691	11.36660	0.0000
EG	-0.017461	0.007079	-2.466564	0.0212
LOG(LP)	-0.164305	0.026965	-6.093188	0.0000
CI	0.015518	0.010543	1.471849	0.1541
LOG(GW)	0.567995	0.531486	1.068692	0.2958
LOG(NW)	-0.564170	0.533100	-1.058281	0.3005
R-squared		0.823913		
Adjusted R-squared		0.787228		
F-statistic		22.45918		
Prob (F-statistic)		0.000000		

Source: authors' processing

From Table 4 we can see that the summary of the least squares (OLS) test indicates that the model is well adapted, and the R-squared determination coefficient value shows that 82.39% of the LOG(CPI) variation is explained by the EG, log(LP) variations, CI, log(GW), log(NW), the rest of the percentage being the influence of other undefined factors that have considerable control over the consumer price index. Only variables that make a favorable contribution to increasing R-squared were logarithmized. S.E. of regression presents a value of $S = 0.16$; a fact that represents another confirmation of the fact that the multiple regression model is representative of the relationships between the considered variables. Analyzing table no. 4, it is observed that the variables CI and log(GW) show the existence of a direct link between log(CPI) and the stated variables, while there is an inverse link between log(CPI) and EG, log(LP), log(NW). Other confirmations of the obtained model are given by F-statistic, and Prob(F-statistic). The F-statistic value for which the variation explained by the model, the residual variation and the total variation was determined shows that the model is significant for a probability of 95%, with an F-statistic value of 22.46. Additionally, all model variables are successively statistically significant as Prob (F-statistic) is 0.000000. The test results also demonstrate that there is no multicollinearity among the independent variables of the EG model, log(LP), CI, log(GW), log(NW). The Durbin–Watson test statistic in our model has a test value of 1.76 - positive linear dependence. This fact demonstrates that a general increase in the values of the independent variables leads at the same time to an increase in the consumer price index.

From a macroeconomic perspective, it is important to study the relationship between CPI and EG, which according to our results shows that a 1% decrease in EG causes a 0.017% decrease in log(CPI). This fact was also noted by Mamo Fikirte (2012) who shows through the estimation results of his study, the fact that inflation was negatively and significantly related to economic growth. This fact represents that inflation has a

negative effect on economic growth and at the same time gross domestic product per capita and inflation have an opposite trend.

Similar to the results obtained regarding the relationship between the consumer price index and labor productivity, Rohini Dunuwita Liyanage (2021) found that there is a negative relationship between inflation and labor productivity in the short term, just as it is found in our study. Through the study of Rohini Dunuwita Liyanage it is observed that labor productivity and inflation are identified as highly endogenous and exogenous variables respectively and there is no granger causality between the variables. At the same time, a negative relationship between inflation and labor productivity is identified, which indicates that inflation can be effectively used to achieve higher labor productivity.

In addition, multiple linear regression results show that a 1% decrease in $\log(NW)$ leads to a 0.564% decrease in $\log(CPI)$. These are in line with the research of Ioan Dolca and Mirela Nicolov (2013) who studied the relationship between net salary and consumer price index and concluded that there is an inverse intensity relationship between variables with strong connections between variables.

Our results show that Grosswages is one of the major determinants of the consumer price index (see Table 4), and shows that a 1% increase in $\log(GW)$ will lead to a 0.567% increase in $\log(CPI)$. Therefore, there is a direct and positive relationship between the consumer price index and Grosswages. The coefficients of the regression model are presented in table 4 for each proposed independent variable. So the regression model presents the following function and measures the contribution of EG, $\log(LP)$, CI, $\log(GW)$, $\log(NW)$ to $\log(CPI)$:

$$\begin{aligned} LOG(CPI) = & .89575845479 - 0.0174605471668 * EG - 0.164304598203 * LOG(LP) + \\ & 0.0155175514685 * CI + 0.567994764308 * LOG(GW) - 0.564169889903 * LOG(NW) \end{aligned} \quad (4)$$

We note that the signs of the coefficients are different depending on the case of the variables. However, this fact leads us to the premise that the model provided us with consistent estimates for this period of analysis of the consumer price index in post-communist Romania (1990-2021).

We mention that, in the context of the similar studies identified, poorly presented by simple regression methods, no common opinions were identified for the entire study conducted to confirm the own results obtained. Therefore, we are of the opinion that the designed study represents the novelty of the researched field that combines through the multiple regression model simple opinions developed by the researchers presented in Research Methodology.

An evaluation of the forecast of the dependent variable considered for the calculation period is graphically represented below:

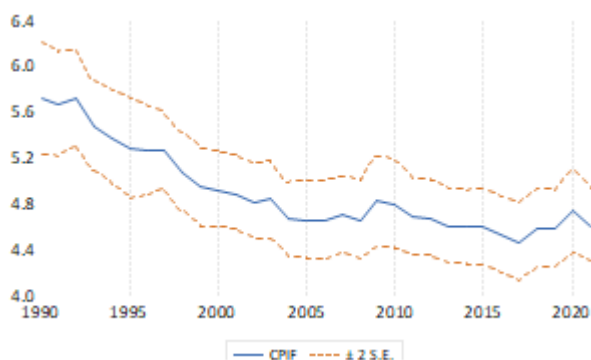


Chart 2: The results regarding the CPI forecast

Source: own adaptation according to Eviews

The findings revealed that for a one-unit increase in invested capital, the consumer price index rate will increase by 0.015%, while a one-unit increase in gross wages will at the same time lead to an increase in the consumer price index rate by 0.568% (see Chart 2). On the other hand, there is a decrease in economic growth, which shows a reduction in the consumer price index rate by 0.017%; the decrease in labor productivity also shows a decrease in the rate of the consumer price index by 0.164%. At the same time, the decrease in the net salary negatively influences the rate of the consumer price index, through a decrease of 0.564%. Last but not least, an important influence is also observed from the constant variable which causes a decrease of 5,896 units due to the impact of the factors on the dependent variable - CPI.

Conclusions

The current research study investigates the association between the consumer price index and several macroeconomic influencing factors, presented at the level of Romania with data series for the period 1990-2021. The selection of the consumer price index in the extensive study rests from the need to know its course, because in the last period, since 2020, with the beginning of the rapid expansion of the COVID-19 pandemic, there has been a continuous decrease of the CIP. We believe that this decrease is mostly due to the slowdown in economic activity and as a result of the decrease in consumption determined by changes in consumer behavior. The particularities of the consumer price index do not fall under the influence area of the central bank and are presented by Emilia Mihaela Costescu. The most important particularities refer to changes in taxes, price regulations, the influence of adverse climatic conditions on agricultural production, various shocks on the international oil market.

In the study, the multicollinearity between all variables was investigated and no collinearity between the consumer price index and the dependent variables. In the above analysis, it is observed that 82,39% variation of the CPI consumer price index, can be characterized by the macroeconomic variables in the econometric model - EG, LP, CI,

GW, NW. However, the relation is found statistically significant at 95% confidence level. Finally, we come to the conclusion that:

H0: Macroeconomic variables don't have significant impact on the Consumer Price Index of Romania - Rejected

H1: Macroeconomic variables have significant impact on the Consumer Price Index of Romania - Accepted

By using the various econometric techniques included in the study, among which the most important - Ordinary Least Square (OLS), helped us to reach pertinent results, which are generally comparable to the results of studies of this kind for other countries. The econometric analysis of the determinant presented in this paper - the CPI consumer price index, shows that the gross salary and invested capital were the variables that led to the increase in inflation in Romania during the years 1990-2021. By applying the econometric model to the research study, we managed to identify the factors that influence the CPI in Romania, and through the obtained results, we can identify relationships between the consumer price index and macroeconomic factors. In addition to these, the unit root test showed that all variables in the model were stationary at the first level of significance. The analysis of the consumer price index through the influence of macroeconomic factors presents a series of changes that took place in Romania during the years 1990-2021. The conclusions of this paper show that the stability of the consumer price index is essential for a good economic development of Romania, this fact also being revealed by the econometric findings of the analysis carried out, which show that approximately 82% of the variation in economic growth, labor productivity, invested capital, gross salary and net salary were explained by the consumer price index. We therefore consider that the fluctuation of consumer prices has a positive effect on Romania's macroeconomic factors.

Studying the consumer price index through the econometric analysis performed shows its usefulness because it manages to form a macroeconomic picture of the decision-makers. The CPI must be studied continuously as it puts pressure on monetary, economic and social aspects. At the same time, it also brings obvious negative influences such as generating a decrease in the population's savings, contributes to discouraging investments, but it can also bring advantages such as favoring the transfer of capital into assets in order to obtain income.

We believe that the results of the study make important contributions to the specialized literature because they provide a source of information with multiple areas in order to ensure the stability of consumer prices and to maintain them over time at a low level or with relatively small deviations. In essence, it is preferable that in future in-depth studies focus attention on those variables that in the presented model had a significant influence on the CPI. The desired can facilitate the work of theorists and practitioners because it provides an overview of the consumer price index from a practical point of view, for a period transited by multiple negative events of post-communist Romania.

The limits of the paper refer to the fact that any change in the level of consumer prices will at the same time cause fluctuations in the macroeconomic factors proposed in the analysis carried out. This fact is evident from the results, which have critical

implications for decision-makers in Romania. So, we can say that controlling the level of inflation and implicitly, the consumer price index is essential for long-lasting and sustainable development.

As future research directions, we can suggest the detailed study of the aspects that cause the increase in the consumer price index, by distributing it according to activity sectors such as the agricultural or oil sectors, etc., with the aim of implementing appropriate policies that help to the economic development of Romania. In addition to these, we believe that the research could be extended at the level of the European Union, of Europe in general and even globally.

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