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# THE EVOLUTION OF INFLATION IN THE CONTEXT OF THE PANDEMIC AND ECONOMIC-FINANCIAL CRISIS

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## Abstract

*The price issue is a delicate one. Price developments can be determined by calculating the consumer price index or the harmonized consumer price index. In general terms we are talking about inflation, when we talk about rising prices.*

*This increase in prices is somewhat fetishized in the sense that the level recorded does not correspond to the realities of the market in which the fundamental law operates, i.e. the ratio between supply and demand. The relationship between supply and demand is based on the law of the free market, but is restricted in terms of low incomes that the population has to procure all the necessities for consumption.*

*The evolution of the consumer price index shows the way in which prices evolved in the first quarter of 2021 on the three main categories of food, non-food and services.*

*The article makes it clear that in general food prices cannot be controlled, nor can non-food or service prices, because the possibility of administered prices is no longer working. In this context, it is anticipated that in the next period, due to the effects of the pandemic and economic and financial crisis, the inflation rate will increase.*

*Through the data and graphical representations used, as well as other methods of statistical analysis, the authors aim to highlight precisely this trend of the evolution of the consumer price index.*

**Keywords:** prices, market, inflation, demand, supply, crisis.

**JEL classification:** E10, E30.

## Introduction

In this article, the authors aimed to highlight how the consumer price index evolved in the first quarter of 2021. This analysis was made in close correlation with the fact that Romania is in a full pandemic and financial-economic crisis, which affects normal evolution.

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In this context, some macroeconomic correlations have been distorted, and inflation plays a rather delicate role in the sense that, by increasing prices, the real value of the obtained results decreases, respectively of the Gross Domestic Product and on the other hand the real incomes of the population decrease and consequently the living standard of the population decreases.

We used the data sources of the National Institute of Statistics and Eurostat published for this period of time. At the same time, we used the methodology currently used by the National Institute of Statistics, as well as Eurostat, and we used a series of statistical methods. Thus, we used data series we used graphical representations, comparability over time, dynamic series and others, which highlight the level and situation at a given time of the Romanian economy.

Of course, the data evenings were structured, interpreted and represented graphically in order to be more easily interpreted and assimilated by those who are interested in this rather important issue, especially now in the crisis period, such as the one that Romania is going through.

### **Literature review**

Price developments are an area that is receiving attention. The change in prices determines the reduction in real terms of macroeconomic aggregates and is measured by the consumer price index or the aggregate price index. In concrete terms, inflation affects the results recorded and that is why a significant number of researchers pay attention to it in the studies they carry out. Thus, Anghelache, C. and Capanu, I. (2000) published a paper on economic indicators for micro and macroeconomic analysis, which presents in detail the statistical variable inflation, as well as its correlation with economic growth, and Anghel, MG and others in 2018 addressed in detail the aspects related to the measurement and use of the inflation indicator in macroeconomic analyses, making clarifications also in connection with the deflation of macroeconomic aggregates. Chamberlin, G. (2011) addressed issues regarding Gross Domestic Product, real incomes and the living standard of the population, and Gheorghe, M. (2012) published an article analysing how to measure prices using the method indices. Ghic, G, and Grigorescu, C.J (2015) treat in their study the main aspects regarding the economic-financial analysis in terms of bringing data to comparability through the deflation procedure. Koulakiotis, A. et al in 2012 performed the analysis of the effect of inflation on the Gross Domestic Product in the member countries of the European Union. Also, Ollera, L.E. and Teterukovsky, A. (2007) performed an analysis on the effect of inflation on real results, in the context in which they studied the evolution over time of statistical variables.

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### Methodology

In order to facilitate the understanding of the analysis made and presented in this article, we will briefly present the main methodological aspects used by the National Institute of Statistics. Thus, consumer price indices (CPI) cover the monetary expenditure of goods and services for final consumption, for all types of resident households, except institutional households, in order to provide a more relevant and accurate picture of inflation. Consumer price indices can also be seen as a broad method of measuring the prices of a fixed-cost model.

At the same time, the Harmonized Index of Consumer Prices (HICP) is a set of consumer price indices in the European Union, calculated according to a harmonized approach and a single set of definitions. The harmonized index of consumer prices is also designed mainly to assess price stability in the euro area and the convergence of price developments in the European Union, but also for comparisons of inflation at European level. Starting with January 2016, the HICP series are published with the reference year 2015 = 100.

Measured prices are those actually borne by consumers, so they include sales taxes on products, such as value added tax. Consumer price indices are calculated based on elements that enter the direct consumption of the population and exclude: consumption from own resources representing the value of quantities of products consumed by the population from sources other than purchases (from stock, from own production, received as a gift.); investment and accumulation expenses (purchase of housing, construction materials used in the construction of new housing or carrying out capital repairs to old housing), insurance rates, fines, gambling, taxes; expenses related to the payment of labour for household production (plowing, sowing, hoeing, care of gardens and orchards, vineyards, harvesting, mowing hay, medical treatment of animals, etc.).

Consumer price indices exclude interest and credit expenditures, referring to them as a financing cost, not as consumption expenditure.

At the same time, the consumer price index uses the national principle of consumption, following the consumption expenditure of residents, whether they are made inside or outside the country, and the harmonized index of consumer prices measures changes in price and tariff developments goods and services that occurred in Romania. Thus, the domestic principle is used to build the HICP, taking into account the consumption of all households in the country, regardless of nationality, residential or social status, except for foreign embassies located in Romania.

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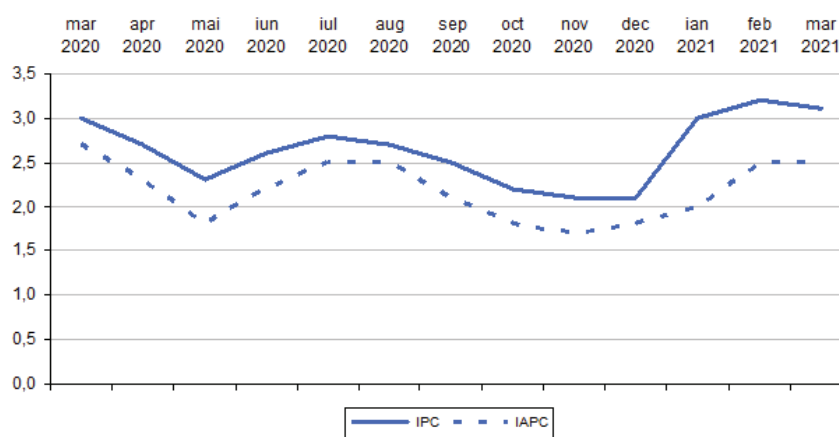
### Data, results and discussions

Interpreting the data provided by the National Institute of Statistics, we find that consumer prices in March 2021, compared to March 2020, increased by 3.1%, and the annual rate calculated based on the harmonized index of consumer prices is 2.5%. Also, the average rate of consumer prices in the last 12 months, respectively April 2020 - March 2021, compared to the previous 12 months, respectively April 2019 - March 2020, calculated on the basis of the CPI, is 2.6%. At the same time, determined on the basis of the harmonized index of consumer prices, the average rate is 2.1%.

Data on the annual change in consumer prices were processed and represented in Chart 1.

**Annual change in consumer prices (%)**

*Chart 1*



Interpreting the data from the graph above, we find that consumer prices had an oscillating trajectory in the first quarter of 2021, increasing in February and then a slight decrease in March. Also, the harmonized index of consumer prices registered at the end of February 2021 an evolving maximum, the trend changing from the ascending one that registered it starting with November 2020 to a slightly descending one in March 2021.

Table 1 structures the data on the consumer price index and the average monthly inflation rate.

### Consumer price index and average monthly inflation rate (%)

Table 1

	March 2021 to:			Average monthly inflation rate, in the period 1 I - 31 III	
	February 2021	December 2020	March 2020	2021	2020
Foodstuffs	100,37	101,46	101,59	0,5	1,0
Non-food goods	100,46	103,19	104,37	1,1	0,0
Services	100,24	100,69	102,21	0,2	0,4
<b>TOTAL</b>	<b>100,38</b>	<b>102,14</b>	<b>103,05</b>	<b>0,7</b>	<b>0,4</b>

Source: INS press release

Analysing the data structured in table number 1 we find that for food and services we recorded slight decreases in the consumer price index and inflation in the first months of 2021. Instead, inflation increased in the first quarter of 2021. Also, in total in the first quarter of 2021 compared to the same period of the previous year increased.

Table number 2 structures the data on partial indices calculated by excluding certain components from the consumer price index.

### Partial indices calculated by excluding certain components from the CPI (previous month = 100)

Table 2

	March 2021 %
(a) Total CPI excluding alcoholic beverages and tobacco	100,40
(b) Total CPI excluding fuels	100,23
(c) Total CPI excluding products whose prices are regulated	100,40
(d) Total CPI excluding vegetables, fruits, eggs, fuels, electricity, natural gas and regulated products	100,23
(e) Total CPI excluding vegetables, fruits, eggs, fuels, electricity, natural gas and regulated products, alcoholic beverages and tobacco	100,23
<b>TOTAL</b>	<b>100,38</b>

Source: INS press release

Interpreting the structured data in table number 2 we find that the partial indices calculated by excluding certain components registered increases in March 2021 compared to the previous month by a total of 0.38%.

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### Conclusions

The data underlying the writing of this article were based on a number of issues, which underwent research led to some conclusions. From the study of these data, theoretical and practical conclusions were drawn. First of all, from a theoretical point of view, it turns out that the inflation rate, although it had a lower level in 2020, at the beginning of 2021 with the approval of the new budget began to explode. Thus, revenues have frozen, and prices for energy, electricity, fuel and other current products are expected to increase by up to 20% during 2021.

This will have a very special but negative effect on the level of Gross Domestic Product expressed in real terms, the real income of the population, as well as the real living standard of the population.

From the presented data it can be deduced that the most galloping increase is the prices for food products, those for immediate and permanent use of the population. On the other hand, it also turns out that although sometimes it does not appear on the surface with its full intensity, inflation will have a period of explosion in the next period.

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