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# STATISTICAL ANALYSIS OF THE EFFECTS OF THE CURRENT CRISES ON THE ROMANIAN ECONOMY

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## Abstract

*The pandemic crisis triggered the financial and economic crisis, then the energy crisis, the food crisis and, finally, the European security crisis appeared due to the armed conflict (war) of Ukraine – the Russian Federation.*

*In this article, I will highlight how these crises that I have mentioned, concentrated, have an effect that can become disastrous for the entire population of Europe and, why not, more broadly, of mankind.*

*In order to achieve this goal, we used the methodology that is based on statistical indicators (dynamics indicators, structural indicators, indicators of macroeconomic evolution as well as of the standard of living), logical analysis, the use of statistical-econometric models that highlight how the socio-economic life is influenced by these crises that we have to bear.*

*In presenting these aspects, based on the mentioned methodology, we also used graphical representations, synthetic tables, all obtained from the databases of the National Institute of Statistics, Eurostat, the OECD or from other sources, such as the European Union or international statistical bodies.*

**Keywords:** *economy, turnover, labor force, crises, indicators.*

**JEL classification:** *C10, E20*

## Introduction

In this article we started from the study of the crises that are currently manifested in the desire to emphasize, in the end, their combined effect on the socio-economic state. We say *economic and social state* because, as a result of the decrease in industrial, agricultural, construction, services, international trade, etc., these cause price indices to rise (consumer price index and harmonized index of consumer prices), and as a result, the standard of living of the population deteriorates.

The health crisis determined the economic and financial crisis in that, in order to protect the health of the population, a series of restrictions were imposed, going as far as reducing the creation of activity in commercial companies, the closure of activities such as HORECA, tourism, the entry under the impact of the seasonal evolution of activities such as agriculture and even constructions, context in which, starting from the idea suggested by

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the correlation between the necessary money supply and the money supply in circulation, it has led to a not exactly positive situation.

Meanwhile, given that natural resources, generally in the world and in every country, are limited especially in the field of energy, this energy crisis has also started

The energy crisis has had the effect of determining unprecedented price increases in all areas so, in other words, it has led to an increase in the consumer price index (harmonized index of consumer prices). The energy crisis has led to the same cone of insufficiency in the area of food, consumer goods and so on.

On top of all this, at present we must also mention the special but difficult to predict effect as a forecast in the immediate aftermath of the conflict caused by Russia's invasion of Ukraine. Certainly, this security crisis, which is visible on a Mondial level, also has an effect on the macroeconomic activity in all countries, including Romania, which may deter unwanted restrictions in carrying out production and activities dependent on oil and natural gas resources.

In the article, we have extensively used the graphical representations of some indicators in absolute or relative figures that substantiate and support the points of view expressed.

### **Literature review**

The economic state of each nation is a sensitive topic that has been studied by many researchers. Economic growth has been and will be influenced by the crises that continually deviate on humanity. Thus, Anghelache, C. and others (2022) highlight the negative influence that the pandemic crisis had on economic growth and implicitly on the living standards of the population. Also, Anghelache, C., Anghel, M.G., Popescu, A.M. (2021) highlight in their work the standard of living of the population that is severely affected by the pandemic and the economic and financial crisis. Anghelache C., Burea D. (2018) published a study on the state of industry development in Romania, and Anghelache C., Anghel M.G., Badiu A. (2018) published a study on the development of the Romanian industry in the context of their position as a Member State of the European Union. Atalan, A. (2020) highlights the effects of the pandemic crisis on psychology, the environment and economic prospects. Carballo, M. And others (2015) highlighted the importance of the image of the tourist destination. Cuce, E., Sudhakar, K. (2020) highlighted the impact of the pandemic on the evolution of the global economy. Ho, L.T., Gan, C. (2021) have raised the issue of foreign direct investment and the uncertainty index of the global pandemic. Grand D., Le Brun Ch., Vidil

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R., Wagner F (2016) analyzed the development of the electrical industry in the context of the evolution of the industry in general. Kladou, Giannopoulos and Assiouras (2014) studied the correlation between the type of tourism and the perception of the image of the destination. Laborda, R., Olmo, J. (2021) were concerned about the influence of the volatility of economic sectors in the analysis of economic developments under the impact of crises.

### **Methodology, resources, results and discussions**

On the national economies, at least those in Europe, they had and continue to have negative effects: the health crisis, in an unclear process of evolution, being at the end of the wave and the economic and financial crisis, triggered and accompanied by the pandemic crisis, in the context of the restrictive measures taken by the administrative management of the countries concerned, and therefore of Romania; the energy crisis that led to the escalation of prices for natural gas, oil, electricity. The two crises were combined with the crisis of primary energy resources and the agri-food crisis. This destructive effect is evidenced by the level of average annual inflation at the end of March 2022, which was 10.20%.

The armed conflict (war) has led to destruction, restrictions imposed by both sides, increased military spending, triggering the wave of refugees with additional expenses, unforeseen for the riparian countries, disruption of national economies facing the danger of destabilization, affecting the international trade in oil, natural gas, primary energy, etc. The global financial situation has also been disrupted.

The negative effects of these crises, which manifest themselves in a joint manner, will be specified by using the data provided, in the case of Romania, by the National Institute of Statistics, Eurostat and the European Union and the OECD.

Activity in the automotive industry has been restricted. The turnover in the trade in motor vehicles decreased only in January 2022 by 19.2 percentage points, compared to December 2021.

The turnover in the trade of motor vehicles and the market services provided to the population in April 2022 decreased compared to March by 12.5% as a gross series.

The volume of turnover from the trade in motor vehicles and motorcycles decreased in April 2022 as a gross series by 3.4% and as a seasonally adjusted series it still increased by 1.1%. Compared to April 2021 (gross series and seasonally adjusted series) this activity increased by 51.7% and 53.9%, respectively.

In the first five months of 2022, the turnover volume of the trade in motor vehicles and motorcycles increased compared to the same period in 2021 by 6.3% as a gross series and by 4.6% as seasonally adjusted series.

The turnover in the industry in April 2022 on the total market, domestic and foreign market, decreased in nominal terms compared to March 10,6%. Compared to April 2021, the total turnover in the industry increased by 20%, which means a rebound for 2022. In the period January-May 2022 compared to the same period of 2021, the turnover in the total industry, the domestic market and the foreign market, increased in nominal terms by 24.6%.

### Industry turnover indices (gross series)

Table 1

	APRIL 2022 in % in relation to:		01.01-30.05.2022/ 01.01-30.05.2021 - % -
	MARCH 2022	APRIL 2021	
<b>Industry - total</b>	<b>89,4</b>	<b>120,0</b>	<b>124,8</b>
<i>- by sections:</i>			
<i>Extractive industry</i>	<i>87,2</i>	<i>234,0</i>	<i>243,9</i>
<i>Manufacturing</i>	<i>89,5</i>	<i>117,0</i>	<i>121,6</i>
<i>- on the large industrial groups:</i>			
Intermediate goods industry	88,1	121,6	131,4
Capital goods industry	87,4	108,9	110,9
Durable goods industry	80,8	100,9	113,3
Industry of goods for current use	98,8	121,5	120,9
Energy industry	87,6	192,4	196,0

Source: NIS press release no. 152 / 15.06.2022

Orders from the manufacturing industry for export have been drastically reduced. The turnover in the industry has decreased, and the prices of industrial products have increased.

Industrial production prices increased by 8.6 percentage points in January 2022 compared to December 2021.

In April 2022, new orders from the manufacturing industry in total (domestic and foreign market) decreased in nominal terms compared to March by 10.7%, and compared to April 2021 they increased by 13%. For the first five months of 2022, compared to the same period in 2021, new orders from the manufacturing industry increased by 20%.

### Value indices of new orders in the manufacturing industry (gross series)

Table 2

	APRIL 2022 in % in relation to:		1.01-30.05.2022/ 1.01-30.05.2021 -%-
	MARCH 2022	APRIL 2021	
<b>Manufacturing sector working on the basis of orders – total</b>	<b>89,3</b>	<b>113,0</b>	<b>120,0</b>
<i>- on the major industrial groups:</i>			
Intermediate goods industry	86,6	114,2	132,9
Capital goods industry	91,9	112,7	112,4
Durable goods industry	70,6	101,6	130,2
Industry of goods for current use	95,1	117,0	121,3

Source: NIS press release no. 151 / 15.06.2022

Extractive production decreased by 11.4 percentage points in January 2022 compared to December 2021, and energy production decreased by 5.4 percentage points in January 2022 compared to December 2021. The import of primary energy increased by 7.3% in January 2022 compared to December 2021.

### Main primary energy resources (thousand tons of oil equivalent)

Table 3

	01.01-30.04.2022			01.01-30.04.2022 compared to 01.01-30.04.2021					
				Difference (±)			- % -		
	Total	Product	Import	Total	Product	Import	Total	Product	Import
<b>Resources – total</b>	<b>10670,6</b>	<b>6006,5</b>	<b>4664,1</b>	<b>-537,8</b>	<b>-257,7</b>	<b>-280,1</b>	<b>95,2</b>	<b>95,9</b>	<b>94,3</b>
of which:									
Net coal	1159,3	939,7	219,6	+84,6	-24,7	+109,3	107,9	97,4	199,1
Oil	3103,6	973,5	2130,1	-683,3	-61,7	-621,6	82,0	94,0	77,4
Usable natural gas	3179,2	2376,4	802,8	-205,6	-153,7	-51,9	93,9	93,9	93,9
Hydropower, wind, solar, nuclear heat, and imported electricity	1945,8	1716,9	228,9	-10,6	-17,6	+7,0	99,5	99,0	103,2
Imported petroleum products	1104,0	–	1104,0	+291,2	–	+291,2	135,8	–	135,8

Source: NIS press release no. 150 / 15.06.2022

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We find that the main primary energy resources in the period 01.01-30.04.2022, totaled 10,670.6 thousand tons of oil equivalent (toe), down by 537.8 thousand toes compared to the same period of the previous year. The domestic production amounted to 6,006.5 thousand toes, down by 257.7 thousand toes compared to the period 01.01-30.04.2021. The import was 4,664.1 thousand toes, down by 280.1 thousand toes, compared to the same period of 2021.

Electricity resources amounted to 22,156.4 million kWh, down by 1,120.5 million kWh compared to the same period of 2021. The production of the thermal power plants was 6,981.6 million kWh, down by 748.2 million kWh. The production of hydropower plants was 4,701.0 million kWh, down 1,469.5 million kWh, and that of nuclear power plants was 4,026.2 million kWh, up by 134.4 million kWh.

The production of wind power plants in the period 01.01-30.04.2022 was 3,262.5 million kWh, up by 820.5 million kWh compared to the same period of the previous year, and solar energy produced in photovoltaic installations was 523.5 million kWh, up by 61.2 million kWh compared to the corresponding period of 2021.

The total electricity consumption was 18,021.5 million kWh, and the total electricity consumption in the economy decreased by 3.9% and the public lighting had an increase of 6.8%. Population consumption decreased by 5.6%. Also, the export of electricity was 2020.0 million kWh, down 139.6 million kWh.

Agriculture, fishing and forestry are in great slippage, livestock has decreased (cattle 1,795 thousand heads, swine 3,577 thousand heads, sheep 7,740 thousand heads, goats 1,285 thousand heads, birds 77,354 thousand heads), milk production decreased by 2.6 percentage points in January 2022 compared to December 2021.

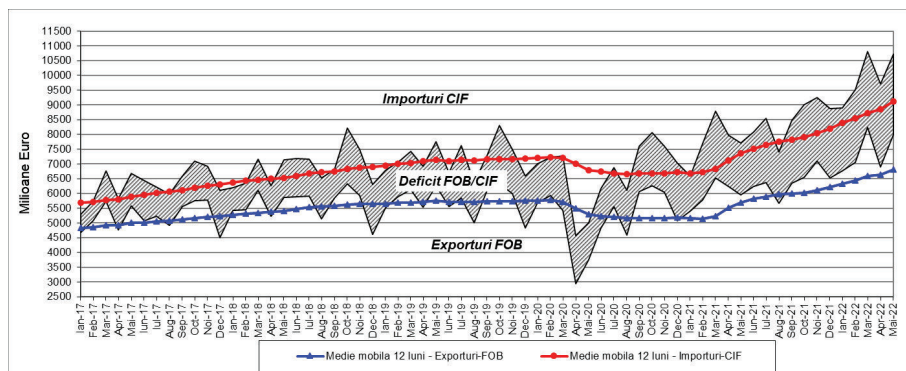
Ineffective international trade. Imports are growing faster than exports, reaching a trade balance deficit of 2,216 million euros in January 2022.

In May 2022, FOB exports recorded 7,997.4 million euros, and CIF imports amounted to 10,720.1 million euros. The monthly deficit was 2,722.7 million euros.

This must also be correlated with the fact that inflation at the end of June recorded an average annual (twelve-month) increase of 15.1%. In the first five months of 2022, comparing imports and exports, we see a faster increase in exports than in imports. The deficit of the trade balance in the period 01.01-31.05.2022 was of EUR 12,740.8 million, higher by EUR 3,891.3 million than that recorded in the same period of the previous year.

## Exports, imports and balance of trade balance between January 2017 and May 2022

Chart 1



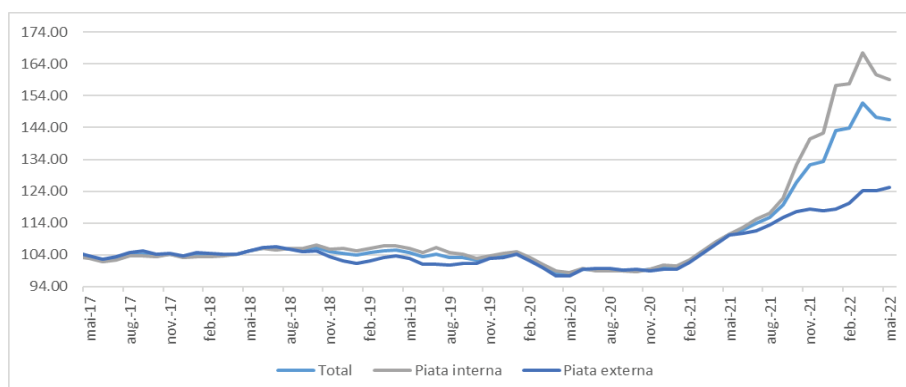
In the period 01.01-31.05.2022, important shares in the structure of exports and imports are held by the product groups: machinery and transport equipment, respectively 42.7% for exports and 32.5% for imports and other manufactured products, respectively 31.3% for exports and 29.6% for imports.

Average annual inflation exploded, reaching 10.2 percentage points at the end of March 2022.

The evolution of the consumer price index in industry was large enough and increased from month to month by 1.5%. Total industrial production prices increased from May 2021 to May 2022 by 46.6%.

## Annual index of total industrial production prices, domestic and foreign market (%)

Chart 2



### Total industrial production price index, domestic and foreign market

Table 4

Industrial production price index	May 2022 of:	
	Apr. 2022	May 2021
Total	101,49	146,55
Domestic	100,47	159,19
Foreign market	103,76	125,12

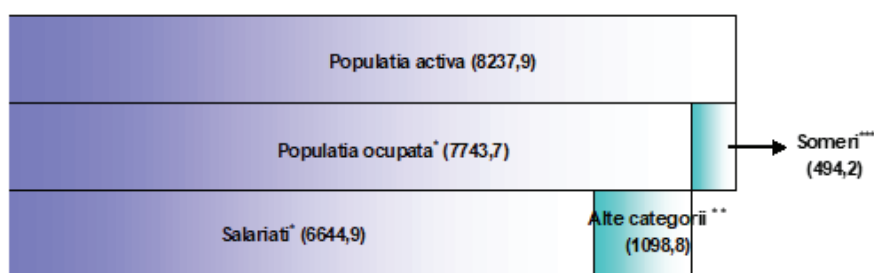
Source: NIS press release no. 169 / 04.06.2022

The turnover on the domestic market decreased by 11.7 percentage points in January 2022 compared to December 2021.

There have been negative developments in the employment of the working population, the moderation of unemployment, the use of labor through the creation of new jobs, as a result of major investments.

### Population categories in the first quarter of 2022

Chart 3



In the first quarter of 2022, the employment rate of the population aged 20-64 years was 67.8%. In the first quarter of 2022, the active population of Romania was 8,237.9 thousand people, of which, 7,743.7 thousand people were employed and 494.2 thousand people were unemployed.

Tourism recorded a rebound in the first five months of 2022 after the measures aimed at protecting the population regarding the infection with COVID-19 were suspended. Thus, the number of arrivals increased, the number of accommodations in the spaces with tourist destination, as well as the revenues that were made from tourists.

It hasn't reached the pre-pandemic level, but it's positive that there's a rebound.



**Arrivals and overnight stays in accommodation establishments  
in May 2022**

*Table 5*

	<i>Arrivals</i>			<i>Overnights</i>		
	May 2021 -thousands-	May 2022 -thousands-	May 2022 to May 2021 -%-	May 2021 -thousands-	May 2022 -thousands-	May 2022 to May 2021 -%-
<b>Total</b>	<b>609,3</b>	<b>858,3</b>	<b>140,9</b>	<b>1254,5</b>	<b>1706,7</b>	<b>136,0</b>
Romanian tourists	572,1	716,5	125,2	1168,5	1394,7	119,4
Foreign tourists	37,2	141,8	381,2	86,0	312,0	362,8
<i>of which:</i>						
- Europe	28,3	108,2	382,3	67,1	225,4	335,9
- European Union	21,4	79,8	372,9	50,8	165,6	326,0
- Asia	1,9	14,9	784,2	5,0	39,5	790,0
- America de Nord	3,7	11,1	300,0	7,1	28,8	405,6
- America de Sud	*)	1,2	-	0,6	2,9	483,3
- Africa	*)	1,1	-	0,7	3,4	485,7

\*) Data less than 0.5

Source: NIS press release no. 166 / 01.06.2022

We find that in May 2022, compared to May 2021, arrivals in tourist accommodation establishments increased by 40.9%, and overnight stays by 36.0%. Also, at the border points, the arrivals of foreign visitors increased by 153.3%, and the departures abroad of Romanian visitors by 89.8%.

### Conclusions

Some practical conclusions can be drawn from this study. Firstly, the combined evolution of the crises that I have mentioned has a particular effect on the macro-economic stability of each country and, last but not least, on the economic stability in the European Union, and even more broadly, in the world.

At the same time, the presentation made concludes that it is only through cooperation within the European Union that the effects of the crises that we have talked about can be mitigated.

The individual resources of each state are different but, in the case, in particular, of the states that have last joined the European Union, they are reduced.

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That is why a collaboration, a faster allocation of the amounts from the Community budget are particularly important, especially for the countries of central and eastern Europe.

The National Recovery and Resilience Program must be activated as soon as possible. This is in order to be able to ensure investments in priority areas, of Romania and the other states, so that the effects of the colossal crisis faced by Europe and humanity can be overcome, at least in part.

These are aspects that must be set out in the plans and strategies for macroeconomic evolution, with emphasis on maintaining, as far as possible, the macroeconomic proportions and correlations, in order to avoid entering a period of great destabilization.

Summing up these conclusions, we must specify that the effect of these crises is spilling over to the quality of life of the population.

#### **Bibliography**

1. Anghelache, C., Anghel, M.G., Iacob, Ș.V., Panait, M., Rădulescu, I.G., Brezoi, A.G., Miron, A., *The Effects of Health Crisis on Economic Growth, Health and Movement of Population*. Sustainability, 14, 4613, 2022.
2. Anghelache, C., Anghel, M.G., Popescu, A.M., *The living standard of the population is affected by the pandemic and financial economic crisis. Is the decline in living standards deepening compared to other European countries?* Romanian Statistical Review, Supplement. 3, 264-282, 2021.
3. Anghelache, C., Burea, D. (2018). Analysis of the industry evolution in Romania. Romanian Statistical Review, Supplement, 10, 117-124
4. Anghelache, C., Anghel, M.G., Badiu, A. (2018). Aspects of the romanian industry development, Economica, Scientific and Didactic Journal, 2 (104), 62-80
5. Ho, L.T., Gan, C., *Foreign Direct Investment and World Pandemic Uncertainty Index: Do Health Pandemics Matter*. Journal of Risk and Financial Management, 14, 107, 2021.
6. Kladou, S., Giannopoulos, A., Assiouras, I. (2014). Matching tourism type and destination image perceptions in a country context. *Journal of Place Management and Development*, 7 (2), 141-152
7. Laborda, R., Olmo, J., *Volatility spillover between economic sectors in financial crisis prediction: Evidence spanning the great financial crisis and Covid-19 pandemic*. Research in International Business and Finance, 57, 1-13, 2021.
8. Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir A., Iosifidis, C., Agha, M., Agha, R., *The socio-economic implications of the coronavirus and COVID-19 pandemic: a review*. International Journal of Surgery, 78, 185–193, 2020.
9. Institutul Național de Statistică, Recensământul general agricol 2020  
- \*\*\* <https://insse.ro/cms/ro>