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## THE MAIN ASPECTS REGARDING THE EVOLUTION OF THE INDUSTRY

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### Abstract

*The authors set out to analyze the evolution of industrial production by February 2023. It was found that due to the crises that have befallen Romania, the industry has reduced its activity by showing decreases, which is also reflected in the results recorded by the Gross Domestic Product. The study highlights the fact that in the next period, too, the industry will maintain a downward trend. Of course, the industrial activity as well as the one in the entire economy has effects on other statistical indicators calculated, such as the unemployment that can deepen and especially the unoccupied population determined by the return to the country of over one million Romanian citizens who worked abroad, inflation, incomes and much more. The interpretation and analysis were made on the basis of the series of statistical data made available by the National Institute of Statistics and Eurostat.*

**Keywords:** industry, production, resources, economic growth, prices.

**JEL classification:** E20, E30

### Introduction

In the analysis of the main aspects regarding the evolution of the industry until February 2023, it was started from the analysis of the evolution of the annual index of industrial production prices in total, the internal market and the external market for the period February 2018 – February 2023. Based on graphic representations and data series, we can notice the special fall of the industrial production starting with August 2022, the trend being a downward one and further.

Further, the index of prices of industrial production in total, domestic and foreign market in February 2023 compared to the previous month and the same month of 2022 was studied, noting that the industrial production in February 2023 registers decreases compared to the previous month (January

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2023), thus maintaining the downward trend, but if we refer to the same month of 2022, it still records higher values.

The analysis continued with the study of the evolution of the index of industrial production prices in total (domestic and foreign market), on the large industrial groups in February 2023 compared to the previous month and the same month of 2022, with decreases on most industrial groups compared to the previous month of 2023, but higher values compared to the same month of 2022.

The article is accompanied by a series of tables and graphic representations that aim to make it easier to understand the analyses made by the authors.

### **Literature review**

The various aspects regarding the activity in the industry in Romania are analyzed by Iacob Ș.V., Dumbravă Ș.G. (2020). Aspects related to the methodologists of Eurostat for estimating discrepancies in international trade statistics are analyzed by Anghelache C., Marinescu R.T., Samson T. (2019). In the same vein, Anghelache C., Samson T., Stoica R. (2019) are concerned about the European Union's policies on industry development. Anghel M.G., Anghelache C. (2019) are concerned about the effect of the balance of external payments on economic growth, and the main aspects of gross domestic product development in the super centralized period are treated in their work by Anghel M.G., Anghelache C., Mirea M. (2018). Erosa A., Gabrillana A. (2008) were in charge of analyzing the role of labor productivity on economic growth, and Grand D., Le Brun Ch., Vidil R., Wagner F (2016) analyzed the development of the electrical industry in the context of the evolution of the industry in general. Heberg G., Phillips G. (2016) were in charge of analyzing the evolution of the industry in various aspects. Lee D., Shin H., Stulz R. (2016) conducted and published studies on the development of the industry internationally.

### **Methodologies**

In order to facilitate the understanding and interpretation of this study, we have summarized some essential aspects of the methodology of the National Institute of Statistics. Thus, the industrial production index (IPI) is a volume index and measures the evolution of the results of industrial activities in one period compared to another. Also, the indices of industrial production describe the evolution of the industry on the total, sections such as extractive industry, processing and the production and supply of electricity and heat, gas, hot water and air conditioning, NACE Rev.2 divisions, as well as on the large industrial groups.

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As regards the calculation of indices, it is based on a sample of representative products grouped in 718 elementary subclasses CPSA 2015, for which quantitative data on the output achieved are recorded. At the same time, the aggregation of primary indices is achieved through a system of successive weightings; the first aggregated indices are those at the level of the NACE Rev.2 subclass, the following levels being determined as a weighted arithmetic average of the indices of the next lower level.

With the calculation of the sudden indices of industrial production, the indices adjusted for the number of working days and seasonality are calculated monthly, by the regressive method, using the JDEMETRA+ v2.2.0 software package (TRAMO/SEATS method).

As regards new orders in the industry, they represent the value of the contracts concluded in the reference month between a producer and a customer, concerning the deliveries of goods and services related to the manufacturer, regardless of the period during which they are to be honoured. This does not include taxes related to products (such as VAT), rebates and discounts when they are granted contractually. The nominal value indices of new orders are Laspeyres type indices and measure their evolution in current prices, on total, NACE Rev.2 divisions, as well as on large industrial groups.

Referring to the turnover, this represents the total revenues recorded by the enterprise in the reference period, arising both from the main activity and from the secondary activities carried out by it. The turnover does not include VAT and income from the sale or transfer of fixed assets, and the value indices of the turnover are Laspeyres type indices and measure its evolution by total, sections, NACE Rev. 2 divisions, as well as by large industrial groups.

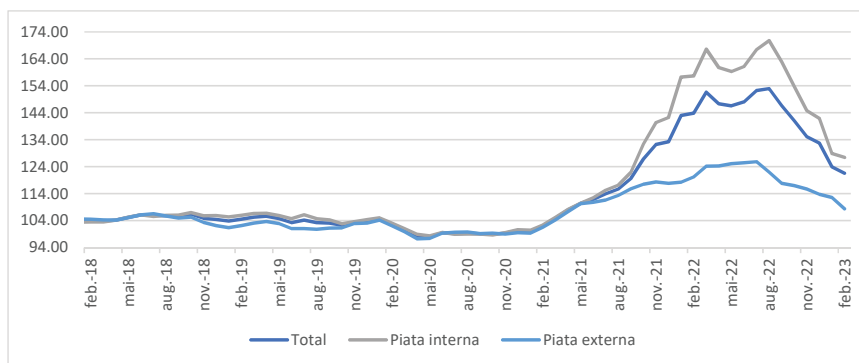
### **Date, results and discussions**

In February 2023, the prices of industrial production in total (domestic and foreign market) decreased by 0.3% compared to January 2023. Also, in February 2023, compared to February 2022, the prices of industrial production in total (domestic and foreign market) increased by 21.6%.

Chart number 1 shows the annual evolution of industrial production prices in total, domestic and foreign market for the period February 2018 – February 2023.

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

Chart 1



Source: NIS press release no. 81 / 4 April 2023

Interpreting the data presented graphically, we find that the industrial production both on the total and on the domestic and external market has registered decreases since August 2022 until now, the trend being a further downward one.

Table number 1 presents the data on the incidences of industrial production prices in total, domestic and foreign market in February 2023 compared to the previous month and the same month of 2022.

### Total industrial production price index, domestic and foreign market (%)

Table 1

Industrial production price index	Feb. 2023 to:	
	Ian. 2023	Feb. 2022
Total	99,71	121,58
Domestic	99,92	127,45
Foreign market	99,18	108,35

Source: NIS press release no. 81 / 4 April 2023

According to the data presented in table number 1, we find that the industrial production in February 2023 registers a decrease compared to the previous month (January 2023), thus maintaining the downward trend, but if we refer to the same month of 2022, it still registers higher values.

Table number 2 presents the data on the incidences of industrial production prices in total (domestic and foreign market) – by large industrial groups in February 2023 compared to the previous month and the same month of 2022.

**Total industrial production price index (domestic and foreign market) –  
by large industrial groups (%)**

*Table 2*

Industrial production price index	Feb. 2023 to:	
	Ian. 2023	Feb. 2022
Total	99,71	121,58
Intermediate goods industry	98,54	109,35
Capital goods industry	99,51	107,35
Durable goods industry	100,59	111,31
Industry of goods for current use	99,91	117,70
Energy industry	100,32	139,90

Source: NIS press release no. 81 / 4 April 2023

The evolution of industrial production in total (domestic and foreign market) – on the large industrial groups is somewhat similar, with decreases in most industrial groups compared to the previous month of 2023, but higher values compared to the same month of 2022.

In table number 3 are presented the data on the initials of the prices of industrial production in the total (internal and external market) – by sections and divisions NACE Rev.2

**Index of prices of industrial production in total (domestic and foreign  
market) – by sections and divisions NACE Rev.2 (%)**

*Table 3*

Industrial production price index	Feb. 2023 to:	
	Ian. 2023	Feb. 2022
<b>Total</b>	<b>99,71</b>	<b>121,58</b>
<b>Extractive industry</b>	<b>97,87</b>	<b>78,80</b>
Extraction of upper and lower coal	-	-
Extraction of crude oil and natural gas	96,50	68,13
Extraction of metal ores	-	-
Other extractive activities	101,06	114,97
Activities of services related to the extraction	100,02	109,86
<b>Manufacturing</b>	<b>99,20</b>	<b>110,01</b>
Food industry	98,94	122,94
Manufacture of beverages	100,70	119,44
Manufacture of tobacco products	100,19	86,45
Manufacture of textile products	100,20	108,04
Manufacture of apparel	100,74	109,91

Tanning and finishing of skins; manufacture of travel and leather goods, harnesses and footwear; preparation and dyeing of fur	99,99	108,94
Woodworking, manufacture of wood and cork products, excluding furniture; manufacture of articles of straw and other plaited vegetable materials	99,23	118,01
Manufacture of paper and paper products	97,59	116,97
Printing and reproduction of recordings on media	100,27	106,11
Manufacture of coke oven products and products obtained from the processing of crude oil	98,59	102,09
Manufacture of chemicals and substances	93,87	112,86
Manufacture of basic pharmaceutical products and pharmaceutical preparations	102,35	109,69
Manufacture of rubber and plastic products	99,25	109,45
Manufacture of other products from non-metallic minerals	99,26	118,65
Metallurgical industry	98,36	95,01
Industry of metal constructions and metal products, excluding machinery, machinery and installations	99,43	106,85
Manufacture of computers and electronic and optical products	100,25	111,55
Manufacture of electrical equipment	99,87	108,15
Manufacture of machinery, machinery and equipment n.e.c.	98,86	106,81
Manufacture of road transport vehicles, trailers and semi-trailers	99,57	106,96
Manufacture of other means of transport	100,59	103,68
Manufacture of furniture	100,64	111,22
Other industrial activities n.e.c.	99,97	111,97
Repair, maintenance and installation of machinery and equipment	100,64	114,87
<b>Production and supply of electricity and heat, gas, hot water and air conditioning</b>	<b>100,84</b>	<b>159,95</b>
Production and supply of electricity and heat, gas, hot water and air conditioning	100,84	159,95
<b>Water distribution; sanitation, waste management, decontamination activities</b>	<b>100,00</b>	<b>123,55</b>
Water abstraction, treatment and distribution	100,00	123,55

Source: NIS press release no. 81 / 4 April 2023

Analyzing the data on the incidences of the prices of industrial production in total (internal and foreign market) – by NACE Rev.2 sections and divisions, we find that the most significant decreases compared to the previous month of 2023 were recorded in the extraction of crude oil and natural gas (96.5%) and in the extraction of substances and chemicals (93.87%). Compared to February 2022, the most significant decreases were in the evolution of crude oil and natural gas (68.13%), and the most important increases in the production and supply of electricity and heat, gas, hot water and air conditioning (159.95%).

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### Conclusions

The study carried out on the basis of data provided by the National Institute of Statistics and Eurostat revealed some theoretical and practical conclusions. From a theoretical point of view, it is revealed that the industry continues to represent the main source of realization and growth of the Gross Domestic Product.

The second conclusion is that the data submitted to the study shows that the total industrial production (domestic and foreign market) has decreased. We remember the results recorded as a result of the economic and financial crisis of 2008-2010 and now during the period in which we are doing this analysis, we realize what are the effects of the combined crises that have befallen Romania and not only.

Another conclusion is that Romania's industry in its structure, especially the companies working in this field, especially SMEs, must be supported, encouraged, subsidized in order to be able to return to a level as close as possible to the needs of the national economy.

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