
THE EVOLUTION OF THE INDUSTRY UNTIL NOVEMBER 30, 2020 IN THE CONTEXT OF THE PANDEMIC AND FINANCIAL-ECONOMIC CRISIS

Prof. Cristian Marian BARBU PhD (*barbu_cristianmarian@yahoo.com*)

Artifex University of Bucharest

Assoc. prof. Ana Maria POPESCU PhD (*notariat.dejure@gmail.com*)

The Academy of Economic Studies in Bucharest

Daniel DUMITRU PhD Student (*dumitru.teticdaniel@gmail.com*)

The Academy of Economic Studies in Bucharest

Abstract

Industry has always been the branch (activity) that has had the highest contribution to the formation of Gross Domestic Product. From this point of view, the extractive and processing industry had some syncope in 2020 due to the effects of the sanitary and economic-financial crisis, which put their stamp on the normal development of industrial activity. In the conditions of crisis, of course, the internal and external market also suffered some limitations, some narrowing, determined precisely by this impossibility of sales, of the population's income and especially of the population's prudence to carry out expenses carefully so as not to end up in special situations.

In highlighting the industrial activity, a study was made on industrial production in November on the main economic activities and we also referred to the extractive industry and the processing industry. An important element of the industrial activity is the level of turnover, which in November continuously followed a downward trend, of course determined by the narrowing of the activity of some branches, the technical unemployment that manifested itself and many others.

Last but not least, the new orders from the manufacturing industry were discussed in the sense that the activity in the industry can only be carried out on the basis of orders to avoid over-demand stocks and then to reduce losses the production itself is reduced and this as due to smaller orders.

Of course, a comparison was made with October, but also with the entire nine-month period in 2020, January-September, with a similar period in 2019. It is obvious that in the three segments of the analysis there were reductions, some more moderate. others large enough to reveal the special and negative effect that the health crisis (coronavirus) has and this combined with the economic and financial crisis that is unfolding at a very fast pace.

From this study can be drawn some conclusions regarding the perspective of the evolution of the industry in the next period, both as a level

of achievement, but especially as a level of contribution to the formation and especially the growth of the Gross Domestic Product. It can probably be shown fetishically that the share in the formation and growth of the Gross Domestic Product remains important and sometimes increasing compared to the previous short monthly periods, but compared to similar periods of 2019, 2018, 2017, to have a much lower weight.

Keywords: industry, GDP, economic branches, turnover, orders, losses, crises.

JEL classification: E23, E31

Introduction

The analysis of the evolution of the industry in Romania is important from the point of view of the possibility to identify the way in which the coronavirus and economic-financial crisis influenced the activity in this important field of the national economy. Of course, the industry was and although its share in the formation of the Gross Domestic Product was reduced, it remains the most important branch of creation and growth of the Gross Domestic Product in our country. From this point of view, the situation from November 2020 was analysed compared to the previous month, with a similar period from the previous year, but also a monthly analysis from January 2015 to November 2020.

From the graphical representations and tables we used, it results that the industrial production had a positive trend until April, after which there was a quite important decrease with slight resumes, but without reaching the level of 2019.

Regarding the new orders from the manufacturing industry in November, we find that compared to the previous month there were some recoveries, but not sufficiently conclusive and that during the last months they even started to increase compared to 2015, in an analysis made on January 2015 - November 2020. There were substantial decreases in March, April, May, with other falls in September and November.

The data are also analysed in terms of industry turnover, which decreased both compared to the previous month and compared to the similar period in 2019 or over a longer period of time in previous periods.

The article shall be accompanied by representative graphs and tables containing significant data on the extractive and manufacturing industries, with references to each of these activities. The data were analysed as a gross series, as well as a seasonally adjusted series according to the number of days worked.

Literature review

Industry continues to be the branch with the largest contribution to the formation and growth of Gross Domestic Product, even in the current health and financial-economic crisis. Anghelache C., Dumbrava S.G., Dumitru D., Marinescu A.I. (2019) published an article referring to the evolution of the industry in 2018. Anghelache C. (2019) analysed the evolution of the industry in Romania, in an international context in 2019. Anghelache C., Burea D. (2018) published a study regarding the stage of development of the industry in Romania. Anghelache C., Anghel MG, Badiu A. (2018) published a study on the development of Romanian industry in the context of the position of a member state of the European Union, and Anghelache C. (2018) published an extensive paper on Romania's economic balance at 100 years since the great union. Erosa A., Gabrillana A. (2008) analysed the role of labour productivity on economic growth, and Grand D., Le Brun Ch., Vidil R., Wagner F (2016) analysed the development of the electricity industry in the context of evolution industry in general. Heberg G., Phillips G. (2016), as well as Iacob S.V., Dumbrava S.G. (2020) dealt with the analysis of the evolution of the industry in various aspects. Khan ME., Mansur ET. (2013) and Lee D., Shin H., Stulz R. (2016) conducted and published studies on the development of the industry internationally. Restuccia D. (2010) carried out an extensive analysis of the new European Union regulations on the development of industry in the member countries.

Methodology

In order to facilitate the understanding and interpretation of this study, we have synthesized 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 from one period to another. Also, the indices of industrial production describe the evolution of the industry as a whole sections, such as extractive industry, processing and production and supply of electricity and heat, gas, hot water and air conditioning, CANE Rev.2 divisions, as well as large industrial groups.

Regarding 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 realized production are recorded. At the same time, the aggregation of the primary indices is done through a system of successive weights; the first aggregate indices are those at the level of the CANE subclass Rev.2, the following levels being determined as a weighted arithmetic mean of the indices of the immediately lower level.

Once the gross indices of industrial production are calculated, the indices adjusted with the number of working days and seasonality is calculated monthly, by the regressive method, using the JDEMETRA + v2.2.0 software package (TRAMO / SEATS method).

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

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

Data, results and discussions

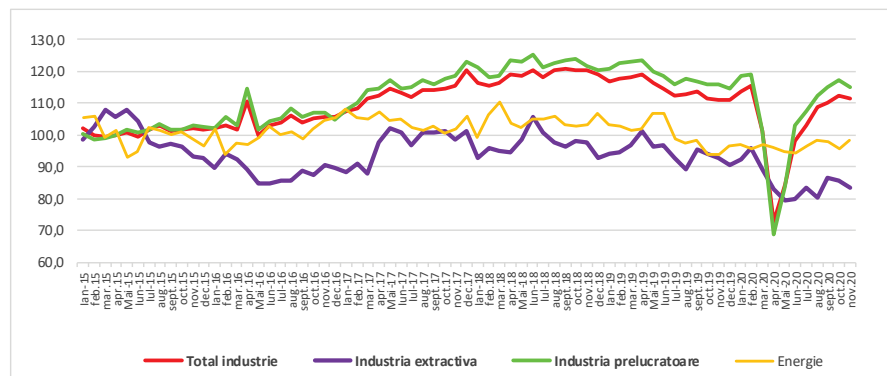
Industry, the most important branch in the formation and growth of the Gross Domestic Product, continued in 2020 to remain in this position, but with lower contributions, determined by the health and financial-economic crisis.

The analysis is performed for the first nine months of 2020, compared to the same period in 2019, but also for a longer period, starting from January 2015 to date. Also, in order to highlight the evolution of the industry, the level of production (in total and by branches), the evolution of the turnover, as well as of the new orders from the manufacturing industry were analysed.

Thus, the monthly evolution of industrial production, by total industry, extractive industry, manufacturing industry and energy, in January 2015 - November 2020 is outlined in graph number 1 (series adjusted according to the number of working days and seasonality).

Monthly evolution of industrial production, January 2015 - November 2020 (2015 = 100)

Graph 1



We find that in November 2020, apart from energy, which increased slightly, all other sections decreased compared to the previous month. Table 1 set out the data on industrial production indices, total and by industry sections.

**Industrial production indices, total and by industry sections
(percentages)**

Table 1

Industrial production index - IPI		November 2020 to:		01.01-30.11.2020/
		October 2020	November 2019	01.01-30.11.2019
TOTAL	B	95,2	96,6	89,8
	S	99,4	100,4	89,5
Extractive industry	B	95,6	89,9	89,5
	S	97,3	90,2	90,0
Manufacturing industry	B	93,1	95,9	88,7
	S	98,3	99,2	88,6
Energy	B	110,6	104,4	96,6
	S	102,5	104,7	96,1

Note: B = gross series; S = series adjusted according to the number of working days and seasonality

Source: INS communicated number 11/13 January 2021

Interpreting the data presented in table number 1, we find that industrial production decreased in November 2020 compared to the previous month by 4.8% as gross series and by 0.6% as series adjusted according to the number of working days and seasonality. Also, industrial production decreased compared to the corresponding month of the previous year by 3.4% as gross series, but increased by 0.4% as series adjusted according to the number of working days and seasonality.

In the first eleven months of 2020, respectively the period 01.01 - 30.11.2020, compared to the period 01.01 - 30.11.2019, the industrial production was lower by 10.2% as gross series and by 10.5% as series adjusted according to the number of working days and seasonality.

Industrial production, gross series, was in November 2020 lower than the previous month by 4.8%, due to the decreases registered by the manufacturing industry of 6.9% and the extractive industry of 4.4%. At the same time the production and supply of electricity and heat, gas, hot water and air conditioning increased by 10.6%.

Industrial production, series adjusted according to the number of working days and seasonality, decreased compared to the previous month by 0.6%, due to the decreases of the extractive industry of 2.7% and the processing industry of 1.7%. The production and supply of electricity and heat gas, hot water and air conditioning increased by 2.5% during the period.

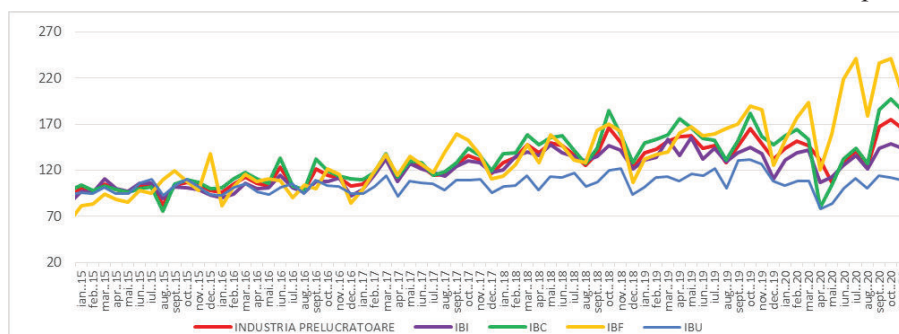
The industrial production, gross series, was lower in November 2020 compared to the corresponding month of the previous year by 3.4%, being the result of the decreases registered by the extractive industry of 10.1% and the processing industry of 4.1%. Production and supply of electricity and heat gas, hot water and air conditioning increased by 4.4%. During the same period, industrial production, series adjusted according to the number of working days and seasonality, increased by 0.4%. Also, the production and supply of electricity and heat, gas, hot water and air conditioning was higher by 4.7%, while the extractive industry and the manufacturing industry decreased by 9.8% and 0.8%, respectively. %.

In the first eleven months of 2020, respectively the period 01.01 - 30.11.2020, compared to the period 01.01 - 30.11.2019, the industrial production, gross series, was lower by 10.2%, due to the decreases registered by the three industrial sectors and namely: the manufacturing industry decreased by 11.3%, the extractive industry decreased by 10.5% and the production and supply of electricity and heat, gas, hot water and air conditioning decreased by 3.4%. Also, the industrial production, series adjusted according to the number of working days and seasonality, in the period 01.01 - 30.11.2020, compared to the period 01.01 - 30.11.2019, decreased by 10.5%, due to the decreases in the manufacturing industry with 11.4%, from the extractive industry by 10.0% and the production and supply of electricity and heat, gas, hot water and air conditioning by 3.9%.

Graph number 2 shows the monthly evolution of new orders in the manufacturing industry in total and by large industrial groups in the period January 2015 - November 2020.

**Monthly evolution of new orders in the manufacturing industry during
January 2015 - November 2020 (2015 = 100)**

Graph 2



Note: Intermediate Goods Industry (IBI); Capital goods industry (IBC); Durable Goods Industry (IBF); Current Goods Industry (IBU)

We find that in November 2020, the total orders from the manufacturing industry, in total (internal market and external market), in nominal terms, decreased compared to October 2020 by 5.8%.

The data on the value indices of new orders in the manufacturing industry are structured in table number 2.

Value indices of new orders in the manufacturing industry (percentages)

Table 2

	NOVEMBER 2020 in% compared to :		01.01- 30.11.2020/ 01.01-30.11.2019 -%-
	OCTOBER 2020	NOVEMBER 2019	
Manufacturing industry working on orders - total	94,2	110,9	94,5
- on large industrial groups:			
Intermediate goods industry	96,7	103,9	94,3
Capital goods industry	93,4	117,9	94,2
Durable goods industry	83,8	108,9	120,3
Current goods industry	97,9	86,1	88,3

Source: INS communicated number 15/14 January 2021

Interpreting the data contained in table number 2 we find that in terms of new orders from the manufacturing industry in November 2020, compared to October 2020, they decreased by 5.8%, being the result of decreases in all

major industrial groups, respectively industry durable goods fell by 16.2%, the capital goods industry fell by 6.6%, the intermediate goods industry fell by 3.3% and the current goods industry fell by 2.1%.

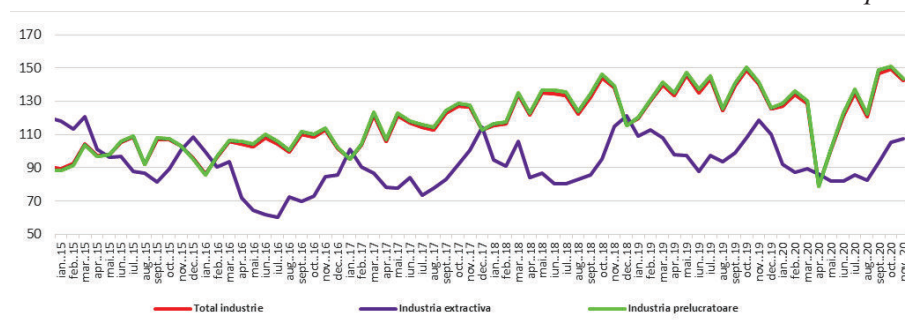
Also, new orders in the manufacturing industry in November 2020, compared to the corresponding month of the previous year, increased by 10.9%, due to increases in the capital goods industry of 17.9%, in the durable goods industry of 8.9% and in the intermediate goods industry of 3.9%. During this period, the current use goods industry decreased by 13.9%.

Analysing the evolution of new orders in the manufacturing industry, in the period 01.01-30.11.2020, compared to the similar period in 2019, we find that they decreased by 5.5%, due to decreases in the current use industry of 11.7%, in the capital goods industry of 5.8% and in the intermediate goods industry of 5.7%. However, in the period under analysis, the durable goods industry registered an increase of 20.3%.

Given that an important element of the industrial activity is the level of turnover in the industry, it was considered necessary to analyse this aspect and in this sense the graph number 3 was sketched.

Evolution of turnover in industry between January 2015 and November 2020 (2015 = 100)

Graph 3



We find that in November 2020, compared to October 2020, the total turnover of the industry and that of the manufacturing industry decreased, and the extractive industry had a slight increase.

In table number 3 are structured the data regarding the value indices of the turnover in the industry, gross series.

Value indices of industry turnover (percentages)

Table 3

	NOVEMBER 2020 in% compared to:		01.01-30.11.2020/ 01.01-30.11.2019 -%-
	OCTOMBER 2020	NOVEMBER 2019	
Industry - total	95,4	101,2	92,4
- by sections:			
<i>Extractive industry</i>	102,1	90,5	87,9
<i>Manufacturing industry</i>	95,2	101,6	92,5
- by major industrial groups:			
Intermediate goods industry	93,5	101,6	96,2
Capital goods industry	97,0	113,2	91,4
Durable goods industry	93,0	106,6	102,6
Current goods industry	94,0	92,0	96,9
Energy industry	102,8	69,5	66,2

Source: INS communicated number 14/14 January 2021

Interpreting the data contained in table number 3, we find that in November 2020, the total turnover of the industry, the internal market and the external market, decreased compared to the previous month by 4.6%, and compared to the corresponding month of the previous year by 1.2%. Also, in the period 01.01-30.11.2020, compared to the period 01.01-30.11.2019, the total turnover in the industry decreased by 7.6%.

If we analyse the decrease, in total, of the turnover in the industry in November 2020 compared to October 2020, we find that it is due to the decrease registered in the manufacturing industry of 4.8%, although the energy industry had a slight increase, namely 2.1%. Also, there were decreases on the large industrial groups, namely: the durable goods industry of 7.0%, the intermediate goods industry of 6.5%, the current use goods industry of 6.0% and the capital goods industry of 3.0%. At the same time, the energy industry grew by 2.8%.

In terms of turnover in industry, in November 2020, compared to November 2019, it increased by 1.2%, due to the increase in the manufacturing industry of 1.6%, although the extractive industry decreased by 9, 5%. Also, on the large industrial groups there were increases: the capital goods industry of 13.2%, the durable goods industry of 6.6% and the intermediate goods industry of 1.6%. At the same time, there were decreases in the energy industry of 30.5% and in the current goods industry of 8.0%.

In the period 01.01-30.11.2020, compared to the period 01.01-30.11.2019, the turnover in the industry decreased by 7.6%, as a result of the decrease in the turnover of the extractive industry by 12.1% and that of the manufacturing industry by 7.5%. Also, on the large industrial groups there were decreases in turnover in the period under analysis in the following sectors: energy industry of 33.8%, capital goods industry of 8.6%, intermediate goods industry of 3.8% and the current use goods industry of 3.1%. At the same time, in the durable goods industry the turnover increased during the mentioned period by 2.6%.

Conclusions

From what is presented in this article, some theoretical conclusions can be drawn, but especially practical ones. A first conclusion is that the current pandemic and economic and financial crisis had significant effects in 2020 on industrial production. It is expected that in the next period the same rate will be recorded in which both the level of production, turnover and orders in the manufacturing industry will continue to decrease. Here we must also consider the export possibilities, which were much lower than in previous periods.

A second conclusion is that the industry does not have the necessary financial resources to pursue growth through investment, job creation and thus align with the requirements of the European market, the European Union or even more globally.

Another conclusion is that the capitalization of the labour force, the human potential that Romania has is still reduced due to the restrictions that the producers in this activity have imposed on themselves. Thus, there is still a population in technical unemployment, there are companies that have reached the level of liquidation, I am referring primarily to SMEs, those that ensure the creation of social status in a country. At the same time, due to the resources, no other possibilities were created to initiate and improve the branches of the national economy.

A final conclusion is that the necessary care must be taken for the next period as the unemployed population may not yet find a remedy and there may be enough situations in which companies reduce their activity, profitability will be very low, and in among SMEs there should be many situations of insolvency and even liquidation. Measures are urgently needed to support industrial units regardless of whether they are multinational, national or even small and medium-sized enterprises.

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