THE UNPRECEDENT DISRUPTION OF THE CORONAVIRUS PANDEMIC TO THE ECONOMY AND FOREIGN TRADE OF THE BIHOR COUNTY

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Abstract: *The appearance of Coronavirus pandemic in the European Union has led to the state of emergency declaration in almost all countries, with a few Nordic exceptions. This state of emergency has led to the temporary closure of certain economic activities from different branches of the national economies. The consequences of this measure have led to either job losses or sending employees into technical unemployment. Short-term economic forecasts are not at all encouraging for the European economy. Being the main export market for Romanian products and services, the economic means and measures that will be taken for the European economy to recover must be taken and pursued with a close eye on macroeconomic indicators. The present paper wants to point out the negative effects of the European economic shutdown on the Bihor county companies that register foreign trade activities, mainly exports on the European markets. Based on the data provided by AJOFM, the Bihor county employment agency for the following months January, February, March, April, several factors will be analyzed that determined the Bihor county companies with foreign trade activities to temporarily suspend their activity and work contracts for their own employees. One factor analyzed follows the typology of companies that have either reduced their foreign trade activity or have completely suspended their activity, in terms of their size: micro-enterprises, small enterprises, medium-sized enterprises, large enterprises. Another factor taken into consideration follows the number of external contracts that the companies had, that can reveal the number of customers for whom they produced. This factor leads to the following one which analyzes whether there is a temporal difference in the temporary or total activity suspension between enterprises with a single foreign customer compared to those that produce for several customers. The next factor analyzed concerns the period in which companies start asking for help and registering all their employees for technical unemployment or only partially reducing their activity. Certain elements of a financial nature will also be taken into account, which could have prevented the period of temporary or total suspension of activity. Finally, conclusions will be drawn and proposals will be made to prevent such a phenomenon.*

Keywords: *coronavirus; pandemic; exports; enterprises; foreign trade.*

JEL Classification: *F16; F61; F66.*

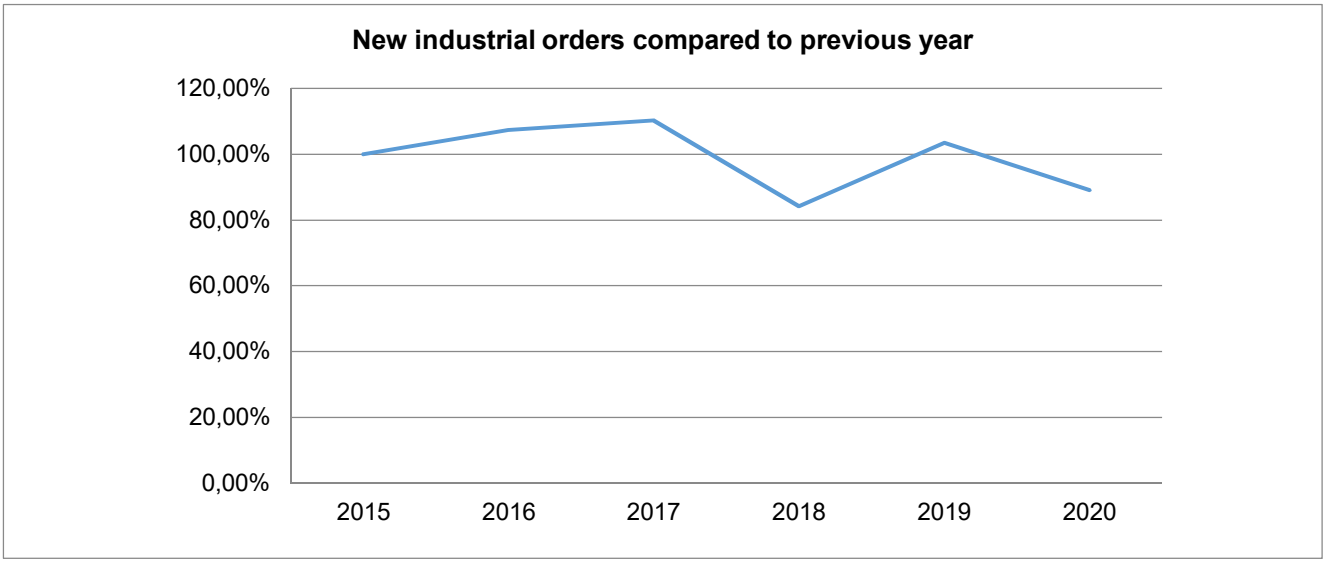
1. Introduction

Krugman, P. (2008) states that it is pretty difficult to predict the next economic crisis, not because the macroeconomic indicators wouldn`t be accurate, or would be useless, but because the economy is influenced by a lot of things happening in other fields of activity. Even though in the economy certain movements can be predicted at some extent due to their cyclical nature, it's impossible to be able the give an exact date of the next economic crisis outburst.
Economists agree that the following indicators are being the most important ones when talking about an economic crisis: new industrial orders, industrial production and unemployment. Besides these three indicators there are also other factors that can contribute to the ignition of an economic crisis like consumer behavior, access to capital and loans, or simply other external factors. Most of the economists nowadays agree that when major changes take place in the way people manage their credit and debt, soon there will be a major change in the economy as a whole.
Economists like Lewis, M. (2010) and McLean, B (2010) state that there is no system that will guarantee a date at which to expect an economic crisis to burst, although there are some early signs that show us the economy is not doing well like the ones mentioned above. But in order to see them and to interpret them properly and not to wake up in a world where the economy is blowing up, analyses must be able to rely on economic models based on regulations and norms, otherwise the ciclicity will mean falling from an economic crisis into another.
Based on the information from analyzing the macroeconomic indicators a clear picture can be seen of where the economy is at the moment of the analysis, and even more than that, predictions can be made on the tendencies of the economy. Roubini, N. (2010) considers that the information above combined with a historical research could give an idea if a crisis is close or not, but the data collected should be very carefully gathered and based on well-known and trust worthy sources.
This paper starts concentrating on the practical approach to an economic crises and analyzes the evolution of macroeconomic indicators like: new industrial orders, industrial production and unemployment since 2000 until the present day (where there was data available) for Romania. They are correlated and closely linked because new industrial orders pave the way for months in industrial production and henceforth the creation of new jobs. But, going in the opposite direction, less new industrial orders means future lower industrial production, meaning less jobs in the future.

2. New industrial orders

New industrial orders is an important economic indicator that helps businesses in a country decide on what to produce and whether or not to continue producing goods. Giurgiu A. (2008) considers that typical new industrial orders come from clients at home or abroad, direct or indirect importers, exporters, distributors, retailers, and others. An increase in the evolution of this indicator shows that the economic sector of that certain country is doing well, whilst a decrease in new industrial orders

signifies that the economic sector my is going to in a bad stage in the future, after the actual orders are being produced. Simply put, the consumers do not want the commodities produced in that sectors of the economy in the future so that companies stop placing new orders.
In Graph no 1, we can observe the evolution of the new industrial orders in Romania between 2015 -2020 compared to previous year. As can see below, if the year 2015 is taken as reference, the observed trend shoes that in 2016 and 2017 there are plenty of new industrial orders. A significant effect is placed on the external factors because the vast majority of Romanian exports head to other EU members, and at that specific moment, the European Central Bank ECB started its quantitative easing measure that boosted consumption in the EU19 area that Romania and its industrial sector gained from. All good but after that between 2017 - 2018 something has happened. In Romania at that time occurred some major shifts in the fiscal sector, with an increase of the minimum wage and the comprising of taxes paid by the employers and employees. If costs are added to the industrial production process that means the industrial products are becoming more expensive on foreign markets.

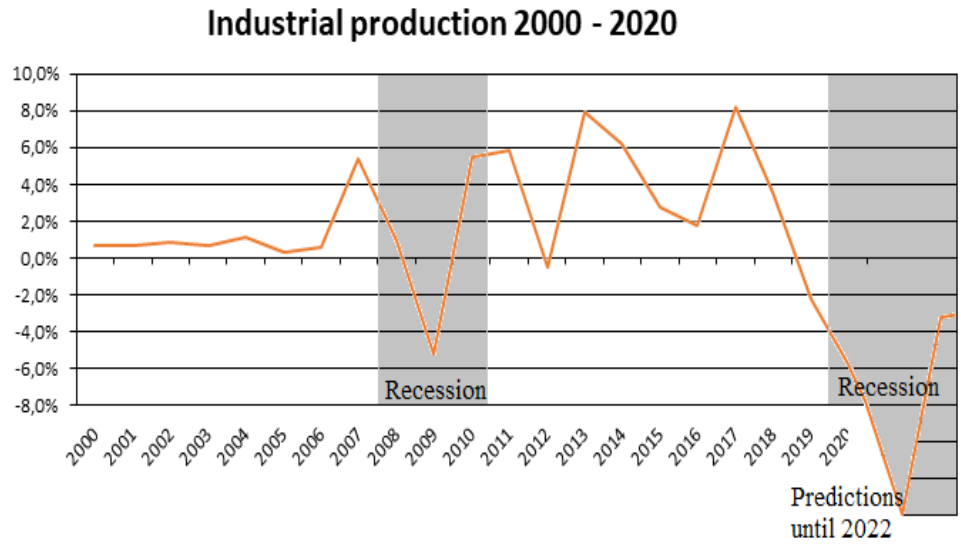


Graph no 1: New Industrial orders in Romania between 2015 -2020 compared to previous year
Source: Graph created by the authors based on information from *https://insse.ro/cms/ro/tags/comunicat-comenzi-noi-din-industrie* accessed at 20th May 2020, dates available until March 2020

In 2018 things looked like they were getting better, but since the second half of 2019 the new industrial orders Romania are getting lower and lower. A significant effect is placed on the external factors again because a trade war is looming between continents, meaning less industrial products being shipped abroad.

3. Industrial production index

According to the industrial production index (IPI) it measures real output in the manufacturing, mining, electric and gas industries monthly/yearly, relative to a base month or a base year, depending on measured requirements. This type of information is valuable to government officials, managers and investors that that need to take decisions, that would like to or have already put their money into these industries, but, in the meanwhile, it is a valuable indicator that shows economists like Schiff, P.; Schiff, A. (2010) critical information about the ongoing of the economic sector and a country's economy as a haul. The reason for this is that, changes in the industrial sector determine a big part of the fluctuations in the economy as a haul.
The evolution of the industrial production in Romania has been relatively at the same level until 2007, as we can observe in Graph no. 2. The IPI is calculated as mean/year based on the monthly evolution but not revealing the highs and lows of those years.



Graph no. 2: Industrial production in Romania between 2000-2020, mean/year and predictions
Source: Graph created by the authors based on information from: *https://insse.ro/cms/ro/tags/comunicat-indicii-productiei-industriale* accessed at 20th May 2020. The predictions are made based on the contraction happend in the last recession, taking into consideration the years between 2008-2011

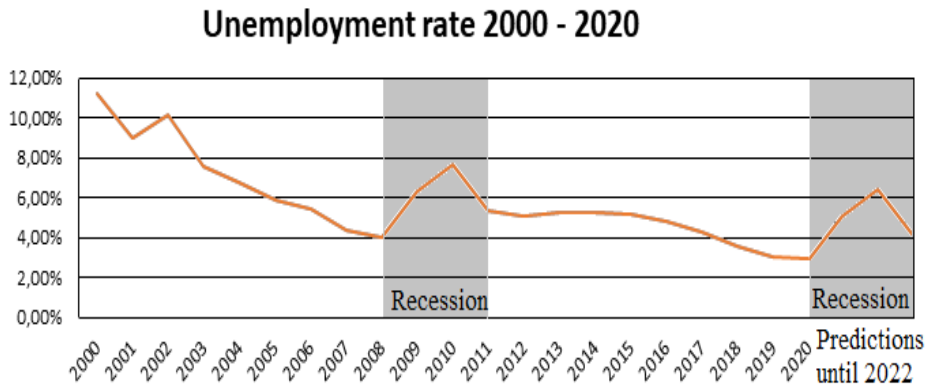
Paying attention shows that starting in February 2007 the sector reaches a rate of 6% increase, but only two months later, there was only a 2.3 % value of IPI. The process that follows is going to be a steep decrease in industrial production.

This way, it can be observed that the lowest value of IPI between 2000 and 2020 was reached in 2009 (-6%), after consumption started a severe contraction in the developed economies starting in 2008 - 2009, pulling the rest of the world after them. It is the time when the industrial production index of Romania reaches its first negative value.
The moment consumption got back on its feet in the EU based on the measures taken by the western countries to support it took their place, in April 2013, the industrial production index of Romania reached its highest value of this indicator (8%), which showed that things started to go back to normal after the crisis hit.
The steep decrease that is being seen in August 2019 (-6.7%) and if this one is easily explainable due to the fact that in August a lot of people take days off, the beginning of 2020 doesn`t look very well considering that in March Romania had an IPI of -12.7%.
Future predictions based also on the previous graph point to a steep decrease in new industrial orders that translate into a decrees in the industrial production index. If predictions are being made for the next period of time until 2022 the graph will show like this: a decrease in the IPI mean/year by 14% for this year 2020 and between -8% and -6% for 2021 and 2022. Only in 2023 a recovery is going to be sighted.
The predictions are being made by assuming that a decrease will happen exactly the same way it did between 2008-2011. Considering the proactive measures that are being taken now by the central banks regarding quantitative easing measures, stimulus packages and fiscal deductions, the decline should be less pronounced and the recovery should feel more reinvigorated.
Nonetheless, this situation is going to have repercussions on the employment market, issue that is going to be debated next.

4. The employment market

In Graph no. 3 can be observed the big fluctuations of unemployment in Romania during the observed period of time. From this graph one can conclude that the start of 2000 meant there was a decrease in unemployment until 2008. The combination between a vast economic boom and EU accession that opened the borders for Romanian workers to go abroad and find a better paid job laid down the foundations for the elegant decrease that represented the golden age for the unemployment rate indicator.
After 2008, when the economic crisis erupted, the unemployment has touched peaks unseen since the early 2000s. In 2009 (7%) and respectively in 2010 (8%) it was the highest recorded unemployment data. This indicator shows how hard the Romanian people were hit by the crisis. This type of activity was also depicted in Kimberly, A. (2008) work regarding the effects of the former 2008 crisis.
The austerity measures taken by the government in that period of time, regarding VAT increase to 24% and slashing governmental employees' wages by 25%, affected the economic recovery of the economy.
Since 2011, things started to look better, but even though unemployment rate started decreasing year after year since then, it was anchored until 2016 near the 5%

indicator. Finally, the index reached a value of around 3% in 2019 and keeping the trend in the early months of 2020.



Graph no. 3: The Romanian unemployment rate evolution between 2000-2020, mean/year
Source: Graph created by the authors based on information from *https://insse.ro/cms/ro/tags/comunicat-somaj-bim* accessed at 20th May 2020. The predictions are made based on the contraction happend in the last recession, taking into consideration the years between 2008-2011

Again future predictions based also on the previous graph point to a steep decrease in new industrial orders that translate into a decrees in the industrial production index that translate also into an increase of unemployment rate. If predictions are being made for the next period of time until 2022 the graph will show like this: a decrease in the IPI mean/year by 6% for this year 2020 and between 6% and 5% for 2021 and 2022. Only in 2023 a recovery is going to be sighted.
The predictions are being made by assuming that a decrease will happen exactly the same way it did between 2008-2011. Again considering the proactive measures that are being taken now by the central banks regarding quantitative easing measures, stimulus packages and fiscal deductions, the decline should be less pronounced and the recovery should feel more reinvigorated.

5. The Coronavirus pandemic and its impact on Bihor County economic activity: measures and implications

In order to protect the health of their citizens, many governments decided to take a huge risk in implementing lockdowns all over the world, knowing how much it could affect the economy. The thought that choosing the most direct measure to cope with "evil" in order to save their populations the governments cannot be blamed for it. No medical system in the world was capable of dealing with such a number of infected people with COVID-19 or any other disease at the same time, and neither were any of the medical systems in the world capable of taking care of their patients with other

medical records, so in order for lives to be saved, in this case the economy had to take the hit.
Correlating the links between mass shut downs affecting the world economy with the effects registered by the industry and unemployment rate in Romania and making a few economic predictions based on the information gathered, the paper moves forward to observe the evolution of the same macroeconomic indicators at a smaller scale, meaning in Bihor County.
Based on the data provided by AJOFM, the Bihor county employment agency for the following months January, February, March, April, several factors will be analyzed that determined the Bihor county companies with foreign trade activities to temporarily suspend their activity and work contracts for their own employees. One factor analyzed follows the typology of companies that have either reduced their foreign trade activity or have completely suspended their activity, in terms of their size: micro-enterprises, small enterprises, medium-sized enterprises, large enterprises. This factor leads to the following one which analyzes whether there is a temporal difference in the temporary or total activity suspension between enterprises with a single foreign customer compared to those that produce for several customers. The next factor analyzed concerns the period in which companies start asking for help and registering all their employees for technical unemployment or only partially reducing their activity.
The following CAEN codes have been selected because they represent the main industrial production activities correlated with export operations:

- 13 manufacture of textiles
- 14 manufacture of clothing
- 16 Woodworking, manufacture of wood and cork products, except furniture; manufacture of articles of straw and plaiting materials
- 20 Manufacture of chemicals and chemicals
- 22 Manufacture of rubber and plastic products
- 24 Metallurgical industry
- 26 Manufacture of computers and electronic and optical products
- 27 Manufacture of electrical equipment
- 28 Manufacture of machinery, machinery and equipment n.c.a.
- 30 Manufacture of other means of transport
- 31 Manufacture of furniture
- 32 Other industrial activities n.c.a.

After establishing which are the main export oriented sectors of industrial production, the paper goes on to the next step establishing the relevant data and examining the number of companies which operate in these sectors and the total number of employees that they have.
In Table 1 below, based on the data provided by AJOFM, at 31.12.2019, the companies were classified by the number of employees in four categories: between 0-9, between 10-49, between 50-249 and over 250. The picture for the 11 export oriented industrial sectors stands like this: there are 1.122 companies that are operational and they employ almost 23.000 people. The vast majority of companies

are SMEs, the below classification showing that there are 860 micro companies, 188 small companies, 60 medium companies and 14 big companies.

Table 1: Companies classification based on SMEs standards, the number of companies and the number of employees at 31.12.2019

	13	14	16	20	22	24	26	27	28	31	32	Total Companies
Between 0 - 9	34	195	172	21	150	22	16	9	19	115	107	860
Between 10 - 49	12	46	29	6	38	2	2	3	8	22	20	188
Between 50 - 249	4	23	1	2	10	1	2	3	1	9	4	60
Over 250	0	1	0	0	3	0	3	1	1	4	1	14
Total Companies	50	265	202	29	201	25	23	16	29	150	132	1122
Total Employees	659	3946	1171	331	4340	279	5109	670	893	4127	1319	22844

Source: data provided by AJOFM. Disclosures were being requested in order not to give companies names and the amount of government help they received.

The main export oriented sectors are 14 manufacture of clothing, 22 manufacture of rubber and plastic products, 31 manufacture of furniture. For sector 14 manufacture of clothing Romania had a competitive advantage after the year 2000 but after that lost it to other countries in Asia. This particular sector had a positive result in the trade balance, adding each year after 2000 only trade surpluses. The same thing can be said for sector 31 manufacture of furniture.
Even though at the end of 2019 things were relative stable and the first two months of 2020 brought a steady output increase, nobody believed that the Coronavirus pandemic will hit the economy with such fierce and would create havoc in the future. In March a lot of European countries started to impose lockdowns, and basically hit the export oriented sectors of Bihor County. The table of March total lockdowns of non-essential economic activities in the West is as follows: 11.03.2020 Italy, 14.03.2020 Spain, 15.03.2020 Romania, 16.03.2020 Austria, 17.03.2020 Ireland, 18.03.2020 Belgium and Denmark, 22.03.2020 Germany, 24.03.2020 Britain and Portugal
Since the four main export partners of Romania imposed lockdowns on non-essential economic activities what can be seen in Table 2 is the result of early lockdowns on several export oriented sectors that were feeling the first early signs of a consumption contraction in the West.
Since the lockdowns started after the middle of March, the results are encouraging, since only 72 companies ask for governmental help in supporting the cost with suspended employees' contracts. But at closer look, even if the figures are low, three sectors suffer the brunt of consumption contraction in the West and at home, being 14 manufacture of clothing, 22 manufacture of rubber and plastic products, 31 manufacture of furniture. These sectors show signs of distress because the big

companies and the medium ones that employ 20% of staff for sector 14, and more than 50% for sector 22 and respectively 31, are affected.

Table 2: The number of companies that received governmental help at 31.03.2020

March	13	14	16	20	22	24	26	27	28	31	32	Total Companies
Between 0 - 9	3	8	4	1	6	2	0	1	0	3	7	35
Between 10 - 49	0	5	1	1	3	0	0	0	0	2	3	15
Between 50 - 249	0	3	1	0	4	0	0	2	0	4	1	15
Over 250	0	1	0	0	3	0	0	0	0	2	1	7
Total Companies	3	17	6	2	16	2	0	3	0	11	12	72

Source: data provided by AJOFM. Disclosures were being requested in order not to give companies names and the amount of government help they received.

This is only the gathering of the clouds, because the economic storm is at the corner for the world economy, but also for the case study at hand: Bihor County.

Table 3: The number of companies that received governmental help at 31.05.2020

April	13	14	16	20	22	24	26	27	28	31	32	Total Companies
Between 0 - 9	32	189	163	20	145	22	15	9	17	109	101	822
Between 10 - 49	11	38	28	5	35	1	2	3	7	19	19	168
Between 50 - 249	4	18	1	1	10	1	2	3	0	8	3	51
Over 250	0	0	0	0	2	0	3	0	1	4	1	11
Total Companies	47	245	192	26	192	24	22	15	25	140	124	1052
May	13	14	16	20	22	24	26	27	28	31	32	Total Companies
Between 0 - 9	33	193	170	21	147	22	16	9	18	112	104	845
Between 10 - 49	12	40	28	6	37	1	2	3	9	20	20	178
Between 50 - 249	4	22	1	1	10	1	2	3	1	9	3	57
Over 250	0	1	0	0	2	0	3	0	1	4	1	12
Total Companies	49	256	199	28	196	24	23	15	29	145	128	1092

Source: data provided by AJOFM. Disclosures were being requested in order not to give companies names and the amount of government help they received.

In Table 3 which comprises the available economic dates for all the sectors in April and May shows the horror that the lockdowns created. It is a complete nightmare for local and national officials that see the staggering number of companies that have suspended contracts and asked for government relief.
What can be seen in Table 3 is that all the sectors are affected. Almost 90% of the companies have suspended contracts and asked for government relief and the figure is climbing. The brunt force of consumption contraction due to lockdowns affected everybody.

Table 4: Total number of suspended working contracts and total value in RON of awarded benefits at 31.05.2020 for the entire Bihor County

	Total number of suspended working contracts	Total Value in RON of awarded benefits
March	16.432	8.672.823
April	37.625	61.866.592
May	32.173	44.213.216

Source: data provided by AJOFM. Disclosures were being requested in order not to give companies names and the amount of government help they received.

The measures taken by local and governmental officials through AJOFM came in support and relieve the financial burden for the effected companies and sectors. In Table 4 the consequences of local and governmental officials through AJOFM actions can be seen. If in March only 16.432 got their contracts suspended and AJOFM paid 8.672.823 RON, in April and Main the picture gets gloomier. The number of suspended contracts rise to 37.625 and the economic relief to 61.866.592 RON, an increase of more than 700%. In May things appear better, but still severe, with 32.173 suspended contracts and a cost of 44.213.216 RON for the government.

6. Conclusions

From the economical point of view, there were businesses that had to cut off staff, some of them even closed due to the Coronavirus pandemic, and some economists even thought that this would cause a huge economic crisis. Even though it is way too early to come to a conclusion if COVID-19 will cause a global economic meltdown, it is clear that it has already affected Bihor County entire export oriented sectors for like 14 manufacture of clothing, 22 manufacture of rubber and plastic products, 31 manufacture of furniture which were hit badly and forced to either close factories or suspend contracts for their employees, causing further supply chain disruption and ultimately a decrease in demand.
The full extent of the impact of the Coronavirus pandemic to the economy, won`t be something to see before the end of 2020, due to the fact that most of the big industries work based on orders placed months ahead or even years sometimes.

The proactive measures taken by the government in order to support the financial relief of companies with their workers will be seen at the beginning of 2021. If the measures only supported zombie companies and industries than it will a very difficult situation in the future, because some big names could go bankrupt, affecting further the supply chain and creating disruptions.
If the Western economies bounce back to the consumption level before the pandemic, the sentiment is that companies from the 11 export oriented sectors from Bihor County will further produce vendible goods.
In the end it was proven that even if all the macroeconomic indicators were showing no signs of economic distress at the horizon, an event such as the Coronavirus pandemic can turn the economy upside-down.

References

1. Krugman, P. (2008) *The Return of Depression Economics and the Crisis of 2008,* W.W.Northon & Company, New York
2. Lewis, M. (2010) *The bBig Short: Inside the Doomsday Machine,* W.W.Northon & Company, New York
3. McLean, B (2010) *All The Devils are Here: The Hidden History of the Financial Crisis,* Penguin Press, London
4. Roubini, N. (2010) *Crisis Economics: A Crash Course in the Future of Finance,* Penguin Press, London
5. Giurgiu A. (2008) - *Comerț internațional și politici comerciale,* editura Universității din Oradea, Romania
6. Schiff, P.; Schiff, A. (2010) *How an economy grows and why it crashes,* John Wiley & Sons Inc., Hoboken
7. Johnson, L. *Making Volatility Our Friend: Trading the Kitchin Cycle, http://www.capitalwealthadvisors.com/2014/05/making-volatility-our-friend-trading-the-kitchin-cycle/ ,* accessed at 19th March 2020
8. Kimberly, A. (2008) *Financial Crisis: The Causes and Costs of the Worst Crisis Since the Great Depression, https://www.thebalance.com/2008-financial-crisis-3305679 ,* accessed at 19th March 2020
9. Vermeulen, Chris, *The Financial Winter is Nearing, http://www.thegoldandoilguy.com/financial-winter-nearing/ ,* accessed at 19th March 2020
10. Institutul Național de Statistică, *https://insse.ro/cms/ro/tags/comunicat-indicii-productiei-industriale accessed at 20th May 2020*
11. Institutul Național de Statistică, *https://insse.ro/cms/ro/tags/comunicat-comenzi-noi-din-industrie accessed at 20th May 2020, dates available until March 2020*
12. Institutul Național de Statistică, *https://insse.ro/cms/ro/tags/comunicat-somaj-bim accessed at 20th May 2020*