
A FORESIGHT OF THE ROMANIAN ECONOMY IN 2020 AND 2021, SCENARIZED AND CONFRONTED IN THE MAGIC QUADRANT

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Abstract

The introduction raises two questions concerning the technical recession in 2020, which can be prolonged or inertial until 2021. Then, the descriptive macroeconomic argumentation starts from 2017 and stops a little in 2019, as the reference year of the prospective view presented in the article. In order to highlight the negative impact of the recession caused by the Covid-19 pandemic in Romania in 2020 and 2021, the author selects, in a motivated manner, a set of macroeconomic statistical indicators in a magic quadrant of the Kaldor or Stoleru type, a comparative statistical one, in a dedicated diagram made by a specialized software available online at <http://www.ses.ac-versailles.fr/extras/bd/carre/carre.html>. The role of the graphs in the main section permanently stays statistical, i.e. one of confrontation or comparative analysis. Like other states in the EU or in the broader world economy, Romania, too, is already in technical recession, in an aggravating process in 2020, both in the first and second quarters of this year. The national economy is already experiencing a sharp economic decline, with many other important related imbalances in full swing. The image of the quadrant of the economic balances of the Romanian economy remains one in which the year 2020 will be a sad memory, with a GDP contracted to a level difficult to imagine at the beginning, even through a relevant graphical representation, revealing, in the most optimistic vision, an annual recession rate of -2%, according to anticipated statistical indicators, in the average version of -5%, and in the pessimistic version of successive pandemic waves of Covid-19, an inertial recession during the period 2020-2021.

Keywords: GDP, economic growth, economic decline, (technical) recession, magic quadrant, economic equilibria, economic imbalances

JEL codes: E32, F44, H11, J11, N10.

1. Introduction

The anticipatory investigation of Romania's economic evolution in the current year and the next one is the target of this paper, which outlines a prospective approach arising from two questions that are natural through the desire to know the short and medium term future of our country's welfare. The

first question started from the need to forecast the level of economic decline under the impact of the Covid-19 pandemic in Romania in 2020 and 2021, in order to delimit, conceptually and through an expected impact, whether the evolution of a number of key macroeconomic indicators describes a technical or background recession, an inertial or prolonged recession. The second interrogative issue concerns the existence of probabilistic scenarios of an optimistic, a medium and a pessimistic type in the anticipated evaluation of the national economy.

In Romania, 2019 was a *slightly unbalanced one, relatively downward compared to the evolution in previous years*, focused on a level of economic growth (4.1%), on a relatively low level of inflation, at the end of the year (4.04 %), but above the permissible limit in the EU, on a low unemployment rate of the International Labor Office – ILO (3.9%), yet also on a growing trade deficit of the current account expressed as a percentage of GDP (–4.7%), a known indicator and a piloting tool that remained negative value-wise for almost three decades (Săvoiu, 2020).

In a broader descriptive macroeconomic argumentation, the paper begins with the year 2016, grouping three successive years, from 2017 on, and dwells a little longer in the year when Covid-19 struck, i.e. 2019, which is immediately turned into the reference year of a scenarized foresight, and presented comparatively in the article, for 2020 and 2021.

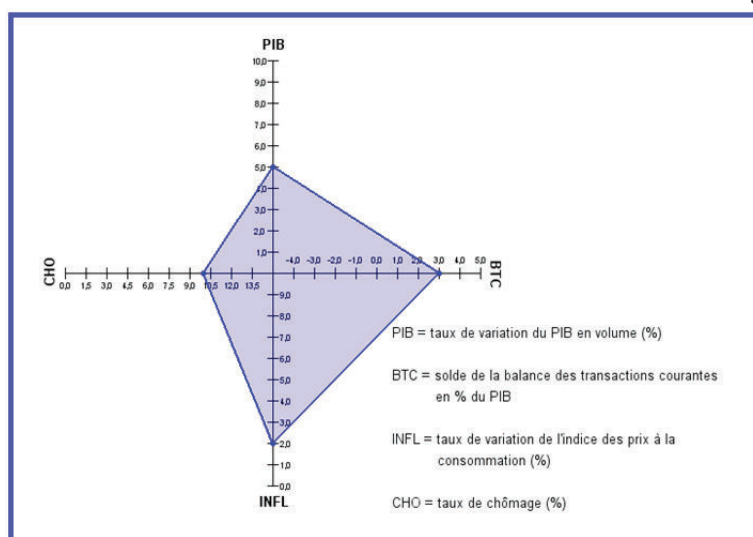
2. The prospective of the macroindicators of the Romanian economy

“Initially called the *magic quadrant* by Nicholas Kaldor, and later becoming the *carré magique* with Lionel Stolér, the system of the four major macroeconomic indicators capable of synthetically, relevantly and coherently quantifying the four major equilibria or imbalances of any economy in the world is visualized as a polar diagram, which summarizes all four objectives of macroeconomic policy: 1) balancing through economic growth; 2) balancing the economy through price stability; 3) balancing the labor market through the fullest possible employment; 4) the external balancing of the economy. The quadrant was originally called “magic” and later kept with this same name because, according to the views of Nobel laureate in economics Nicholas Kaldor, it is virtually impossible to achieve the four goals described above, at the same time. The magic quadrant practically reveals, and even accentuates the conflictuality of these objectives (Bezbakh, Gherardi, 2000, p. 36), especially those related to the fullest possible employment and price stability (theorized in the Phillips curve) or in economic growth and full employment (theorized by Okun’s law)” (Săvoiu, 2020). Extracted from the theory of classical statistics, ordinary diagrams are not able to provide images of great visuality or expressiveness of a set of essential macroeconomic indicators of economic growth or economic decline. Modern

literature clearly presents, and also with a justifiable preference, the graphic representations first exploited by Nicholas Kaldor and Lionel Stoléru, later on outlining the area of the famous magic quadrant or quadrant, which manages to promptly characterize any economic situation of a country, quarterly, annually and even multiannually. Classic radar diagrams are capable of replacing realities and dynamics that they can visually synthesize, without however covering and managing different scales on each axis, and even more, without reversing the direction of one axis in relation to the others. By intersecting the four Cartesian points placed on each of the four axes, in fact four macroeconomic indicators, an area of comparative interest is obtained, or one with a confrontational role, delimited by a quadrant which is considered magical. In this type of diagram, the larger the resulting graphical area, the more the economic health of the country will increase that it describes visually (Larue, 2013). Despite these ultra-visible qualities, the graphic solutions considered ideal or the most appropriate urgently need two other changes that are deeply necessary for the veracity of the delimited area: the scale of the inflation rate and unemployment must be reversed, starting from the limit targets to be reached, respectively 0% on each axis, thus considered completely specific (Figure 1).

**A theoretical example of the ideal magic quadrant in an economy with
5% growth, a 3% positive trade balance, a 2% inflation and a 10%
unemployment level**

Fig. no. 1

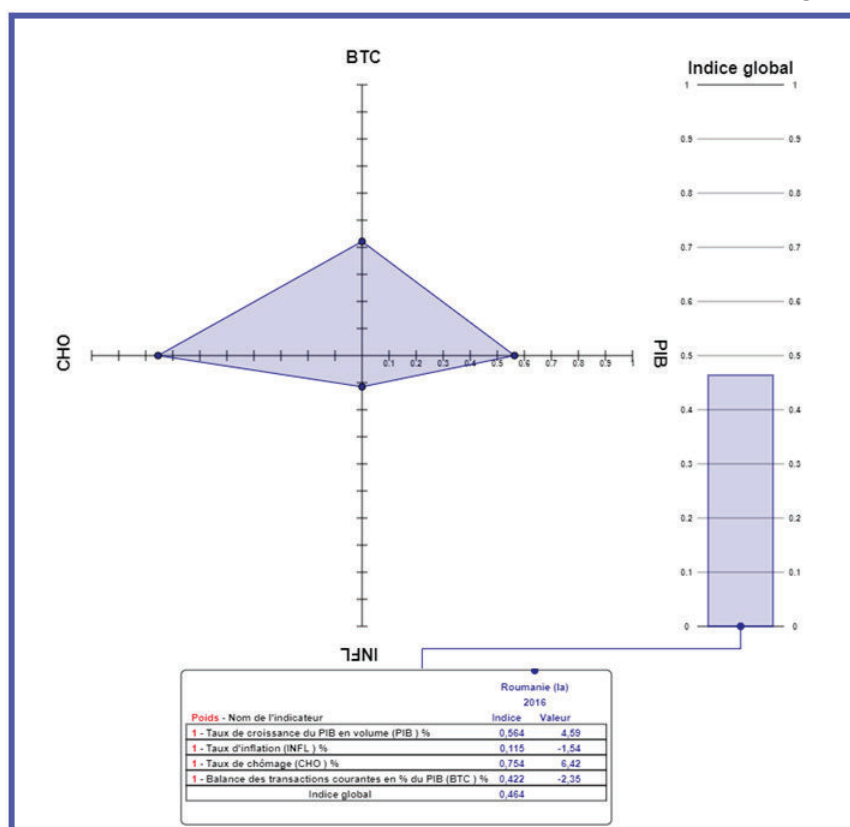


Source: Larue, 2013, also taken over by Săvoiu, 2020

The optimization of this magic quadrant can continue by adding a general index that is built using identical or differentiated weighting coefficients that are experimentally attached to the previously modified polar graph, presented before, finally representing the Romanian economy in 2016, according to the indicators specified below the special diagram on the website accessible online at: <http://www.ses.ac-versailles.fr/extras/bd/radar/radar.html>

The magic quadrant of the Romanian economy in 2016 (4.59% economic growth, negative trade balance of -2.35%, deflation of -1.54% and unemployment rate of 6.42%)

Fig. no. 2



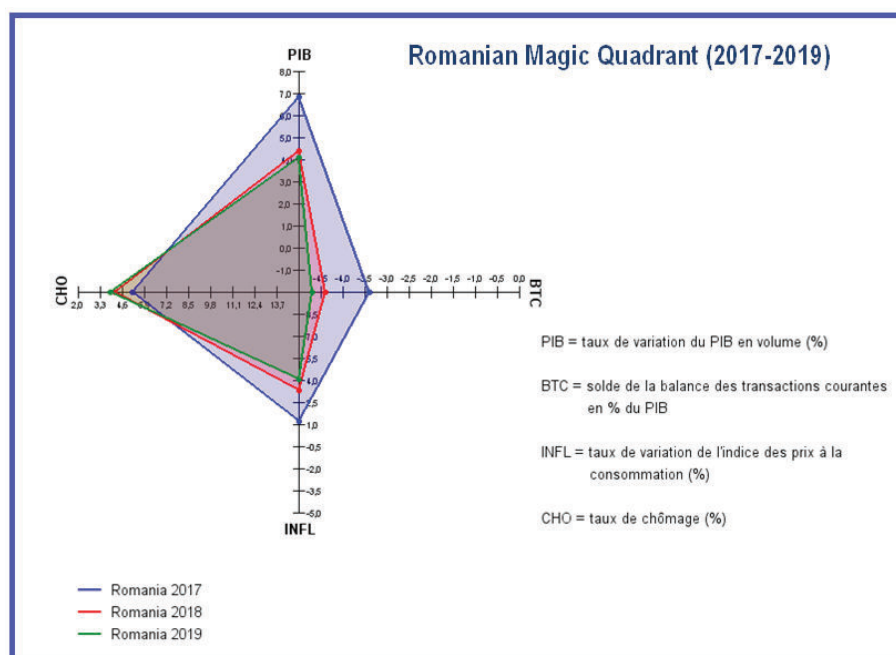
Source: Made by the author with the software available online at: <http://www.ses.ac-versailles.fr/extras/bd/radar/radar.html>

Starting from the forecasts of the National Strategy and Forecast Commission, or more precisely, from the document entitled *Winter Forecast 2020 or the projection of the main macro-economic indicators 2019–2023*, disseminated online on February 18, 2020, from which can be selected as relatively true only the values for year 2019, a magic quadrant is graphically made for the finished year. The relativity of the veracity is extended until the end of 2021, and the values of the described macro-indicators are considered provisional by all experts of the National Accounting System (the data pass on from the provisional data stage after 6 months, or one year, to the stage of semi-final data, and at the end they really become final).

However, there is another question derived from the reasoning presented, which is quite natural: *Why is all the prospective information not taken over; which is provided for the years 2020 and 2021?* The answer is a natural one, and is given by the fact that the rest of the data before the pandemic, and also referring to post-pandemic events, are severely affected by major errors, since the place of the anticipations of an economic growth is taken by the prospect of a serious recession never imagined before, or anticipated at a low level, and rather as a technical recession limited to only two quarters. In order to follow the evolution of the economy in Romania's magic quadrant, the year 2017 is capitalized as a reference point or benchmark, compared to 2018 and 2019, in a common figure or in a unique graph (Figure 3)

The macroeconomic involution of the set of economic policies, revealed by the indicators of Romania's magic quadrant in 2017, 2018 and 2019

Fig. no. 3



Source: Made by the author using the software dedicated to the magic quadrant, available online at: <http://www.ses.ac-versailles.fr/extras/bd/carre/carre.html>

Romania's magic quadrant for 2019, made after the projections of the National Commission for Strategy and Forecast (CNSP), transposes in Figure 3, beyond the worst year, from the last three actually concluded, revealing, in macro-indicators, a macroeconomic involution of all economic policies (a declining level of economic growth of 4.1%, a rising inflation level beyond the EU limits, which reaches 4.04% at the end of the year, a continuously expanding ILO unemployment rate of 3.9%, and a growing trade deficit of the current account expressed as a percentage of negative GDP of -4.7%). The whole argumentation so far has covered the instrumental description of the magic quadrant as an instrument of macroeconomic statistics, it justifies and allows to fully understand the initial statement about 2019, as *a slightly unbalanced economic year, relatively downward from previous years*.

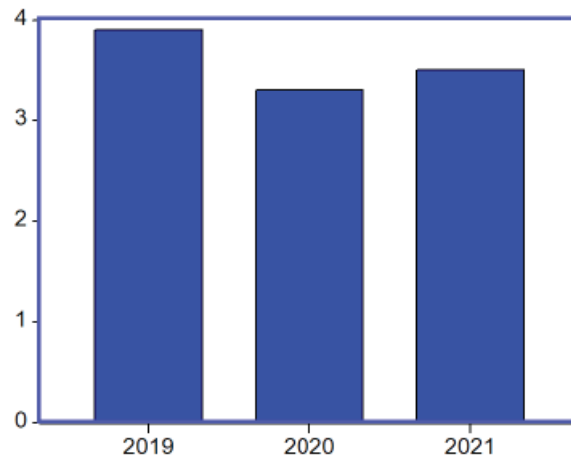
Considering the global impact of the Covid-19 virus pandemic, which experts anticipate to be major and negative, and having overlapping and involutionary effects, which are certainly more extensive and intense,

if not greater, than those of the 2008 global financial recession, then the projections for 2020 and 2021 become bleak, even in relation to the new CNSP forecast for April 2020. After the Romanian Government, through the voice of the Prime Minister, anticipated the impact of the recession caused by the Covid-19 pandemic in the national economy of 2020, as belonging to the interval between -1% and -3% (thus delimiting an ultra-optimistic scenario with a probability below 1/6), the World Bank (WB) extended the decline to -3.8% (describing an optimistic scenario with a probability also below 1/6), the International Monetary Fund brought the forecast to -5% in 2020 (outlining an average scenario with a probability below 2/6), a decline followed by an economic growth of 3.9% in 2021. In parallel, the imbalance in the labor market will worsen, and the unemployment rate will get from 3.9% in 2019 to 10.1% in 2020, and then to 6% in 2021 (Neagu, 15.04.2020). If the specific inertial behavior of the Romanian economy is inferred, according to which in the context of the last recession its real deficit was about 40% of the one anticipated by CNSP, in 2009 (10 billion euros out of 24 billion anticipated), then the expected level for 2020 will be about -2% compared to the forecast figure, returning to -4.0 in 2021.

The impact of the Covid-19 virus pandemic on the Romanian economy will also materialize in the upward change in inflation from 3.3% in 2020 to 3.5% in 2021, as shown by the results of a study conducted by the Statista Research Department entitled *Inflation rate forecast for Romania due to the coronavirus (COVID-19) outbreak from 2019 to 2021*, and dedicated to rising prices under the influence of the Covid-19 pandemic, a study summarized in the graph shown in Figure 4, available online at: <https://www.statista.com/statistics/1106097/covid-19-impact-inflation-rate-romania/>

The comparative evolution of inflation in Romania between 2019 and 2021, focusing on the data provided by the Statista Research Department

Fig. no. 4

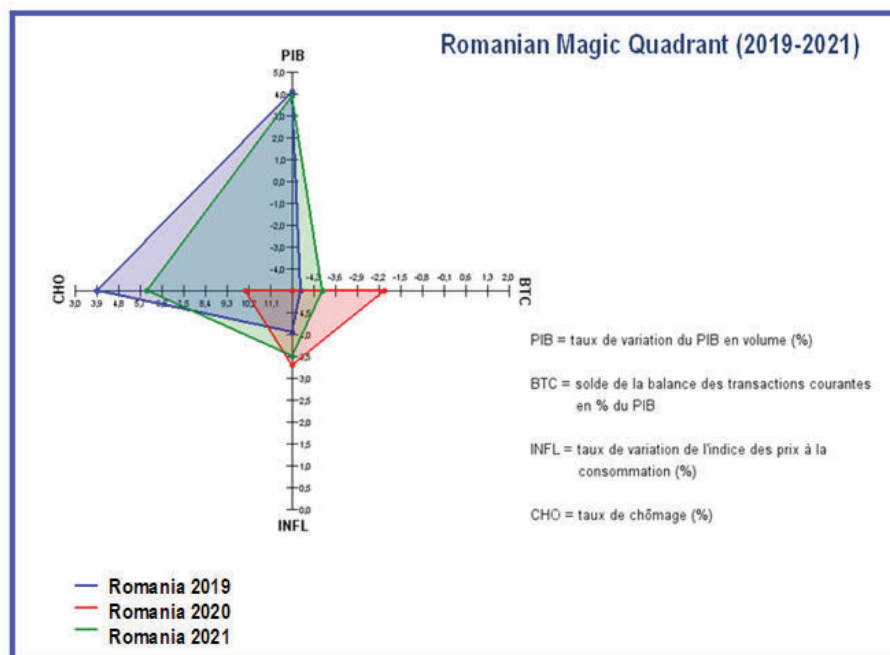


Source: Made by the author according to the data available online at: <https://www.statista.com/statistics/1106097/covid-19-impact-inflation-rate-romania/> of 24.03.2020

Reconsidering the importance of 2019, as a reference year to highlight the negative impact of the recession caused by the Covid-19 pandemic in Romania in 2020 and 2021 (by capitalizing on the average scenario with the probability placed at 2/6), another magic quadrant of confrontation is being built for 2019, 2020 and 2021, also in a common figure or in a diagram established by uniqueness and adequacy (Figure 5):

The macroeconomic oscillation of the set of economic policies, under the impact of the Covid-19 pandemic, revealed by the indicators of Romania's magic quadrant in 2020 and 2021

Fig. no. 5



Source: Made by the author with the software available at: <http://www.ses.ac-versailles.fr/extras/bd/carre/carre.html>

Romania, very much like many other economies worldwide, is in a less severe technical recession in 2020 (a decline ranging from -3.8 and -1.8% with a probability of occurrence of $1/3$), or much more severe (a decline of -5% , again with a probability of occurrence of $1/3$), in other words both in the first and in the second quarter of the year there will be a more or less accentuated downward economic trend. This time, the cause of the recession is neither related to the global economic cyclicity, although there were some involuntary trends towards the end of 2019, more clearly in the Italian economy, nor is it financial, as it happened in 2008, nor again purely economic in general (Săvoiu, 2013), but it is the pandemic generated by the Covid-19 virus, which appeared in the fourth quarter of 2019, in Wuhan (China).

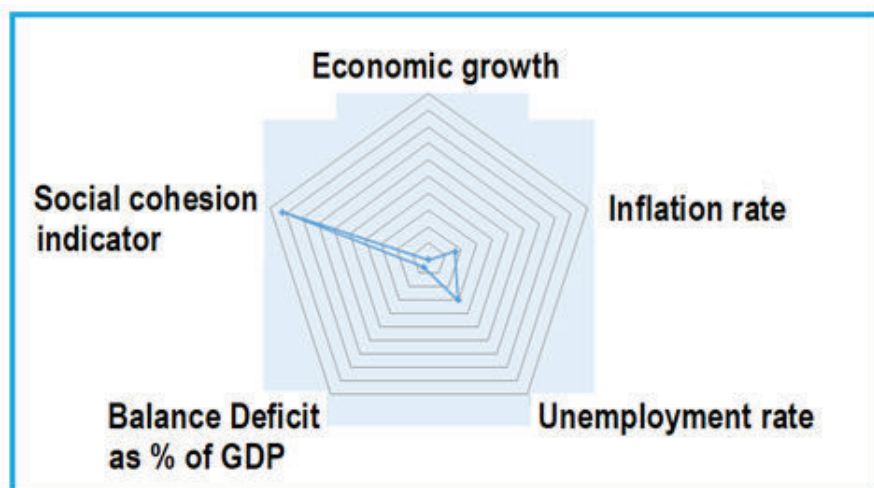
The pandemic, whose origin clearly and provably hails from China, has profoundly altered the global policies of the world's states, through major

information omissions or even errors with a recognized level of 40% in rendering the impact, but also through the time lag of several months with respect to its declaration. In this implicit way, Romania's macroeconomic policies have been severely damaged, diminishing our country's permanent effort of upward accession to the euro area and natural convergence in relation to the average development of EU countries (Săvoiu, *et al.*, 2017).

Completing the overall picture of the economy with a specific element of the balance centered on social cohesion, which would optimally characterize Romania, would involve the inclusion of an indicator able to describe the imbalances of social exclusion in our country. The option is for a percentage ratio between the minimum gross wage and the average gross wage per economy. According to H.G. 935/13.01.2019, the minimum gross salary in the economy increased in 2020 from 2,080 lei to 2,230 lei, starting with 1 January 2020. The average gross salary in 2020, according to CNSP forecasts, will be 5,405 lei, which translates into the value of a social cohesion index of 41.3%. The data included in the macroeconomic pentagon of the Romanian economy are thus those shown in Figure 6, practically surprising a technical recession that turns into a certain reality even over these months:

The macroeconomic pentagon of the Romanian economy in 2020, under the impact of the Covid-19 pandemic

Fig. no. 6



Source: Realized by author

The analysis of the indicators presented above shows an abrupt deterioration of the Romanian economy and living standards, at least in 2020, as a result of the Covid-19 virus pandemic, against the apparent background of increasing social cohesion, and also major imbalances in the labor market and in prices, but the worst is the trend of an economic decline of at least 5%.

3. Conclusions

Within the image of the magic quadrant of the Romanian economy the year 2020 is contracted at a level that is difficult to imagine, even through this relevant graphical representation, revealing, according to anticipated statistical macro-indicators, in the most optimistic vision, a technical recession in the first and second quarters, more severe (-5%) or less severe (between -1.8 and -3.8%), either of the scenarios having an equal probability of occurrence of 1/3, and in the pessimistic version of successive pandemic waves of Covid-19 (also having a probability of occurrence of 1/3), an inertial recession over two years, including, along with 2020, at the year 2021... The second variant can detail probabilistic scenarios of an optimistic, an average and a pessimistic type in the anticipated assessment of a prolonged and inertial recession of the national economy, but for such an approach a more extensive research is required in a future paper.

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