THE FIRST QUARTER OF 2021 MAY BE A TURNING POINT IN ECONOMIC DEVELOPMENTS

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Abstract

The quarterly gross domestic product, calculated for the first three months of 2021, highlights two aspects, one of which is encouraging and another that calls for more caution.

We say this because compared to the fourth quarter of 2020 we record an increase in real terms of 2.8%. This, of course, starts from the fact that for the whole year 2020 we had a decrease of 3.9% and in mathematical terms, uninterpretable from an economic-logical point of view we could say that 2.8 percentage points of the 3.9.

On the other hand, comparing the results of the first quarter of 2021 with the similar quarter of 2020, we find that we register another decrease compared to a year ago, of 0.2%. This percentage is not high, it is not small, but it still expresses a timid activity in the total economic field.

In this article we analyse, from several points of view, the gross domestic product made in the first quarter of 2021 in order to identify, what is the trend of evolution in the next period of the indicator of complex results of Romania.

Analysed by resources, the gross domestic product shows a rather small contribution of agriculture, but it is normal that this is a seasonal activity that in the first quarter does not have much contribution to the formation of gross domestic product and, consequently, to its growth. It is essential that the industry has a small percentage of contribution of 0.4% to growth and the constructions, also with a somewhat seasonal activity, have a contribution of 0. Of course, the other resources, respectively services and net taxes on the product, continued to have the contribution the largest amid the decline of the others.

The same situation is encountered if we analyse as factors of evolution of the gross domestic product the uses in the formation of the gross domestic product. And from this point of view we find that there is a slow evolution, rather constant. This aspect is not very negative, but it is still to be considered whether

these increases in gross domestic product compared to a much more disastrous period in the fourth quarter of 2020 should not be interpreted in terms of comparison with Romania's current external debt at over 100 billion euros.

The article highlights through statistical methods and means, using a concrete methodology the evolution of this quarterly gross domestic product. We ask ourselves in the middle of the road if this can be a turning point, so that in the following periods we can register quarterly and then annually, a sustained or at least constant increase to reach the forecasts that are made and that predict an increase of about 7%, which would mean an increase over last year's level of 3.1%.

Keywords: GDP, indicators, developments, resources, uses.

JEL classification: E30, F40

Introduction

This article is based on a study limited to the results obtained in the first quarter of 2021 which, compared to the evolution in the fourth quarter of 2020, with the similar quarter of the previous year, i.e. the first quarter of 2020, and then by a 12-month interpretation consecutive to draw some conclusions.

In principle, it results that, both as a raw data series and as a seasonally adjusted series, the data moved a little in the sense that some somewhat constant evolutions appeared. But we still need to see if it's the same course.

In this article we presented the evolution of the gross domestic product quarterly for the last two years and a quarter, since the pandemic and economic and financial crisis. We analysed the raw series and the seasonal series in order to determine what their trend is.

Also, in the article we made an assessment of how the resources contributed to the formation and growth of the gross domestic product, noting that the industry is still at a level of 18.8%, agriculture and construction had seasonal activity, and the share almost services and net taxes on the product were total.

At the same time, we interpreted the contribution of uses to the formation and growth of gross domestic product, noting in this case that, again, the total final consumption is and represents the large share, gross capital formation increased slightly, the variation of stocks remains at a approximately identical level, and the net export brings loss again to the total gross domestic product.

Through graphs and tables we sought to highlight as strongly as possible the contribution of factors (resources and uses) to the formation of gross domestic product.

Literature review

Economic growth is being watched with great interest in the current pandemic and financial-economic crisis. In 2020 there was a decrease in gross domestic product in December 2020 there was a reduction of 3.9 percentage points compared to December 2019. In all environments such analyses are performed. Many researchers and specialists give ample space to such analyses. Anghelache, C. (2015) and others analyse in a study the evolution of the gross domestic product under the influence of consumption. Anghelache, C. and Anghel, MG. (2016) refer to these aspects in the paper Basics of economic statistics. Anghelache, C. and others (2016) conducted a study on the use of the Arma model to predict the evolution of the economy. In another study, in 2016, Anghelache, C and others published an article on the correlation between the growth rate of GDP, the inflation rate and unemployment. Biji, M., Biji, E.M., Lillea, E. and Anghelache, C. (2002) publish a statistical treatise in which they refer to the gross domestic product, the most complex indicator of results, from all statistical points of view. Censolo, R. and Colomco, C. (2008) publish a study on consumption and growth. Dornbusch, R, Fischer, S. and Startz, R. (2007) refer to these aspects in their study of macroeconomics, and Davidson, R. and Mackinnon, I.G. publishes a study on econometric models used in the study of economic growth. Deschenes, D. and Greenstone, M. (2012) conduct a study on the impact of climate change on economic growth, and Goodwin, N.R. (2008) publishes a paper addressing these issues, regarding the macroeconomic evolution in the 21st century. Lee, J. and Brahmasterne, T. (2013) investigate in an article the influence of tourism on economic growth, Patton, A. (2013)) refers to the volatility of comparisons over time, and Usher, D. (1980) lays the groundwork for real measurement of economic growth.

Methodology

In order to facilitate the understanding of the aspects studied and presented in this article, we have further extracted some methodological aspects used by the National Institute of Statistics and Eurostat. Thus, the quarterly gross domestic product at market price (GDP), the main macroeconomic aggregate of the national accounts, represents the final result of the production activity of the resident production units, during a period, respectively a quarter. The quarterly gross domestic product is estimated by three methods, briefly described below: the production method, the expenditure method and the revenue method.

a) *production method*: PIBT = VAB + IP-SP,

where: GVA = gross value added at basic price;

IP = taxes on the product;

SP = subsidies per product

b) *expenditure method*: GDP = CF + GFC + E-I,

where: CF = actual final consumption;

FBC = gross capital formation;

E = export of goods and services;

I = import of goods and services.

c) *income method*: GDP = R + EBE + IMP-SUB,

where: R = remuneration of employees;

EBE = gross operating surplus;

IMP = taxes on production and imports;

SUB = subsidies on production and imports.

The main data sources used to estimate the quarterly gross domestic product are sub-annual surveys on industrial production, construction, services, trade; the production account of agriculture calculated on the basis of data provided by the Ministry of Agriculture; sub-annual surveys on earnings and the number of employees; balance sheets of financial institutions and the execution of the state budget and local budgets, as well as the state social insurance budget; Balance of external payments.

The estimation of production in current prices is obtained for non-financial corporations (enterprises), households and non-profit institutions serving households is estimated, by industry, by extrapolating in volume and price, or in value, the production in the corresponding quarter of the previous year, using available volume, price and value indices from statistical data sources.

For financial companies and public administrations it is determined directly based on data sources (balance sheets and budget executions).

At the same time, intermediate consumption is obtained for non-financial corporations (households), households and non-profit institutions serving households is estimated, by industry, by applying the share of intermediate consumption in production calculated for the corresponding quarter of the previous year, for that there were complete and detailed data sources, based on the assumption of constant technological coefficients and for financial companies and public administrations is determined directly based on data sources (balance sheets and budget executions).

In this sense, the gross value added is calculated as the balance between production and intermediate consumption. Also, the calculation of taxes and subsidies on the product is based on data from budget executions.

The quarterly gross domestic product is estimated in current prices, in the prices of the corresponding period of the previous year and in average prices of the year 2000. The estimates in the average prices of the year 2000 are calculated by chaining the volume indices.

In addition to the gross quarterly gross domestic product estimates, seasonally adjusted estimates are also calculated using the regressive method, also used by Eurostat.

The seasonal adjustment aims at eliminating the seasonal effects from the data series in order to highlight the real economic evolution from consecutive periods.

To adjust the series of main aggregates on the basis of which GDP is estimated by the three methods, the JDEMETRA software package version 2.2.0 is used. It estimates the seasonal effect (events that occur at the same time, with the same magnitude and direction each year, such as: seasons, holidays, etc.), the number of working days different from one month to another and the effect of the calendar, such as Orthodox Easter, leap year and other national holidays) as well as identifying and correcting extreme values (occasional, transient or permanent level changes) and interpolating missing values.

The quarterly national accounts in Romania generally have a strong seasonality, being adjusted according to the number of working days and calendar even if the effect of the latter is insignificant.

The seasonally adjusted series was obtained by removing the seasonal effect from the raw series, with the help of correction coefficients, established according to the regression model used (additive or multiplicative). The additive or multiplicative model used for regression is automatically identified by the JDemetra program depending on the nature of the series subject to adjustment.

Seasonally adjusted GDP is obtained by the direct method, which leads to a statistical discrepancy between GDP and the sum of its seasonally adjusted components independently.

Seasonally adjusted series for the last 5 years and available quarters in the reference year are recalculated each quarter following the revision of the gross series of quarterly and annual data, as statistical and administrative data sources with a higher degree of coverage and coverage become available accuracy, the introduction in the data series of the last available observation, the modification of the adopted models and the regression parameters.

The closure or reduction of some economic activities, starting with the second half of March, as a result of the epidemic with the Corona virus, was different from other more or less recent economic crises. The establishment

of the State of Emergency and the emergency ordinances issued by the government in order to protect the population against infection and reduce the risk of spreading the virus had an important impact on the economy of Romania, as well as other countries. Thus, the national statistical institutes had to face new challenges related to the collection of statistical data through infra-annual surveys and to ensure the best possible quality of the indicators produced.

A methodological section has been opened on the Eurostat website to support European statisticians, but not only, in which have new methodological guidelines and notes been presented. A methodological note dedicated to the quarterly national accounts was also posted in this section.

Data, results and discussions

Compared to the same quarter of 2020, the Gross Domestic Product decreased by 0.2% on the gross series and did not register any change on the seasonally adjusted series.

Table number 1 shows the evolution of the quarterly gross domestic product in the period 2019 - 2021, calculated as gross series and seasonally adjusted series.

Evolution of the quarterly gross domestic product

Table 1

		Quarter I	Quarter II	QuarterIII	Quarter IV	year
- in% compared to the corresponding period of the previous year -						
Gross series	**2019**	105,0	104,4	103,0	104,3	104,1
	2020	102,4	90,0	94,4	98,6	96,1
	2021	99,8	-	-	-	-
Seasonally adjusted series	**2019**	105,2	104,2	103,4	103,7	-
	2020	102,8	90,0	94,5	98,0	-
	2021	100,0	-	-	-	-
- in% compared to the previous quarter -						
Seasonally adjusted series	**2019**	101,7	100,7	100,4	100,9	-
	2020	100,7	88,2	105,5	104,6	-
	2021	102,8	-	-	-	-

*Source: INS communiqué number 141 / 08.06.2021*

We find that the Gross Domestic Product, seasonally adjusted data, estimated for the first quarter of 2021, was 284971.4 million lei current prices, increasing, in real terms, by 2.8% compared to the fourth quarter of 2020 and at the same level as registered in the first quarter of 2020.

We specify that the level of GDP registered in the first quarter of 2021 compared to the fourth quarter of 2020 shows an increase, but registered a decrease of 3.9% in the fourth quarter of 2020 compared to the fourth quarter of 2019.

Graph number 1 shows the evolution of the quarterly gross domestic product and resources in the period 2000-2020

Evolution of quarterly gross domestic product and resources in the period 2000-2020

Chart 1
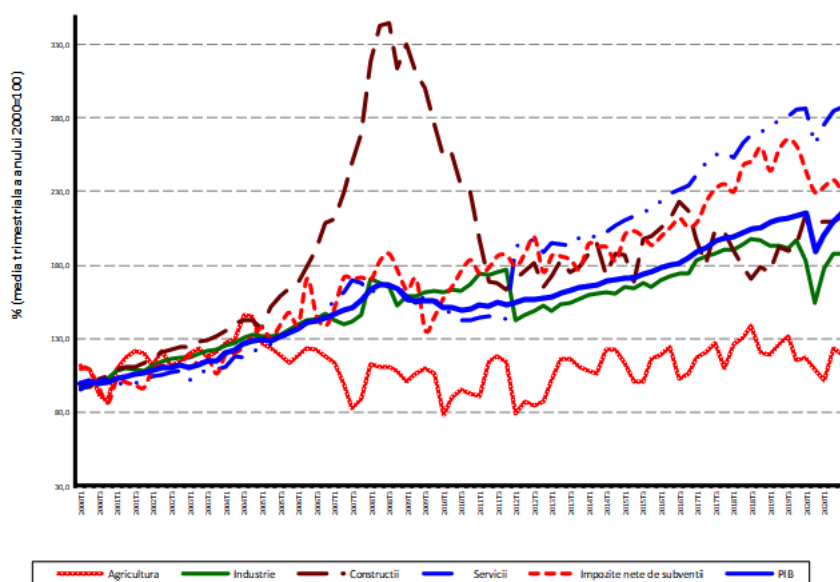
The estimated Gross Domestic Product for the first quarter of 2021 was 223479.2 million lei current prices, decreasing, in real terms, by 0.2% compared to the first quarter of 2020.

Table number 2 structures the data regarding the contribution of the resource categories to the modification of the Gross Domestic Product.

Contribution of resource categories to the modification of the Gross Domestic Product

	Contribution to GDP formation -%	Contribution to GDP growth -%
	Provisional (1)	Provisional (1)
Agriculture, forestry and fishing	1,8	0,0
Industry	18,8	0,4
construction	3,6	0,0
Wholesale and retail trade; repair of motor vehicles and motorcycles; transport and storage; hotels and restaurants	20,3	0,1
Information and communications	8,0	0,8
Financial intermediation and insurance	2,6	0,0
Real estate transactions	8,2	-0,1
Professional, scientific and technical activities; administrative service activities and support service activities	6,6	-0,7
Public administration and defence; social insurance in the public system; education; health and social assistance	17,6	0,0
Entertainment, cultural and recreational activities; repairs of household products and other services	2,8	-0,5
Gross value added - total	**90,3**	**0,0**
Net taxes on the product	**9,7**	**-0,2**
Gross domestic product	**100,0**	**-0,2**

Source: INS communiqué number 141 / 08.06.2021

We find that the following sources contributed to the decrease in GDP in the first quarter of 2021 compared to the first quarter of 2020: real estate transactions (-0.1%), with a share of 8.2% in the formation of GDP and which recorded a decrease in volume activity by 1.3%; professional, scientific and technical activities; administrative service activities and support service activities (-0.7%), with a share of 6.6% in GDP formation and which registered a decrease in the volume of activity by 9.7%; entertainment, cultural and recreational activities; repairs of household goods and other services (-0.5%), with a share of 2.8% in the formation of GDP and which registered a decrease in the volume of activity by 16.4% and net taxes on the product (- 0.2%), with a share of 9.7% in the formation of GDP and which registered a reduction of their volume by 1.9%.

Positive contributions to the formation and growth of GDP in the first quarter of 2020 had: industry (+ 0.4%), with a share of 18.8% in GDP formation and which recorded an increase in the volume of activity by 2.2%; wholesale and retail trade; repair of motor vehicles and motorcycles; transport

and storage; hotels and restaurants (+ 0.1%), with a share of 20.3% in the formation of GDP and which registered an increase in the volume of activity by 0.4% and information and communications (+ 0.8%), with a share of 8.0% in the formation of GDP and which registered an increase in the volume of activity by 10.6%.

Table number 3 structures the data regarding the contribution of the use categories to the modification of the Gross Domestic Product.

Contribution of use categories to the modification of the Gross Domestic Product

Table 3

	Contribution to GDP formation -%	Contribution to GDP growth -%
	Provisional (1)	Provisional (1)
Total effective final consumption	**86,9**	**1,1**
Effective individual final consumption at	74,0	0,7
households	65,1	0,5
Expenditure on final consumption of	0,5	0,0
households	8,4	0,2
Final consumption expenditure of	12,9	0,4
non-profit institutions in the service	**18,8**	**1,7**
households	**1,1**	**-0,4**
Final consumption expenditure	**-6,8**	**-2,6**
individual of public administrations	49,6	0,3
Effective final collective consumption of	56,4	2,9
public administrations	**100,0**	**-0,2**

Source: INS communiqué number 141 / 08.06.2021

We find that from the point of view of the use of GDP, the decrease of the contribution was mainly due to the net export (-2.6%), consequence of the increase of the volume of imports of goods and services, by 5.4%, compared to that of the volume of exports. goods and services, of only 0.6%.

Positive contributions were: final consumption expenditure of households, whose volume increased by 0.8%, contributing by 0.5% to GDP growth and gross fixed capital formation, whose volume increased by 9.9%, contributing 1.7% to GDP growth.

Conclusions

The study that was the basis for writing this article, quite extensive, led to some theoretical and practical conclusions. Thus, a first conclusion is that the gross domestic product must be analysed and in close accordance with the external debt which has reached over 50% of the presumed value of the gross domestic product, i.e. over EUR 100 million.

Undoubtedly, the National Recovery and Resilience Program, which can be launched towards the end of the year, can make some contribution to the completion of resources for some activities that have been presented as activities with a high negative effect on Romania's economic growth.

It would not be excluded that the evolution in this context, until September-October when the allocations from the National Recovery and Resilience Program will be unblocked, will be needed for other credits that can put the national situation in a worrying situation, in the sense that after 50-60% is a delicate process for the Romanian economy, many specialists calling it the beginning of collapse or pre-bankruptcy.

It is obvious that the country level can fall with an effect on the interest rates charged by external banks (we cannot even discuss the domestic ones due to the very high interest rates to which they allocate loans), which are considering the possibility of recovering the loans they undertake to presents to Romania.

Another conclusion is that from the simple study of the resources and uses underlying the formation and growth of the gross domestic product, it is found that deepening imbalances that can have a total negative effect on household income and living standards.

In fact, we are going through the moment when the possibilities of increasing the income of the population in all areas of activity are practically frozen, not being excluded that this blocking process will continue in the next period or even turn into some reductions.

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